

Introduction

SOLO Server™ is the central licensing server for the SoftwareKey System. The SoftwareKey System is an extremely powerful, flexible, and scalable software licensing system that contains a variety of tools, ranging from client components that are used in your distributed application to sophisticated online licensing and e-Commerce services to automate your customer and license management.

SOLO Server is available in three different packages; you can choose from two managed services or a self-hosted server:

- **SOLO Server Shared / Custom URL** - Managed service gets you up and running in minutes using our IT infrastructure and domain. Common for companies who typically prefer the hands-off nature of managed SaaS applications.
 - Shared URL: secure.softwarekey.com
 - Custom URL: [\[your brand\].softwarekey.com](https://[your brand].softwarekey.com)
- **SOLO Server Dedicated URL** - Managed service using your domain name on our IT infrastructure with advanced customizability & integration options, and also portability to your IT infrastructure in the future. Provides a hybrid solution for those companies who prefer the hands-off nature of managed SaaS applications but not to be locked into them.
- **SOLO Server Self-Hosted** - Royalty-free use of the application on your own IT infrastructure for complete autonomy. (see the [Installation/Configuration manual topics](#) for more information)

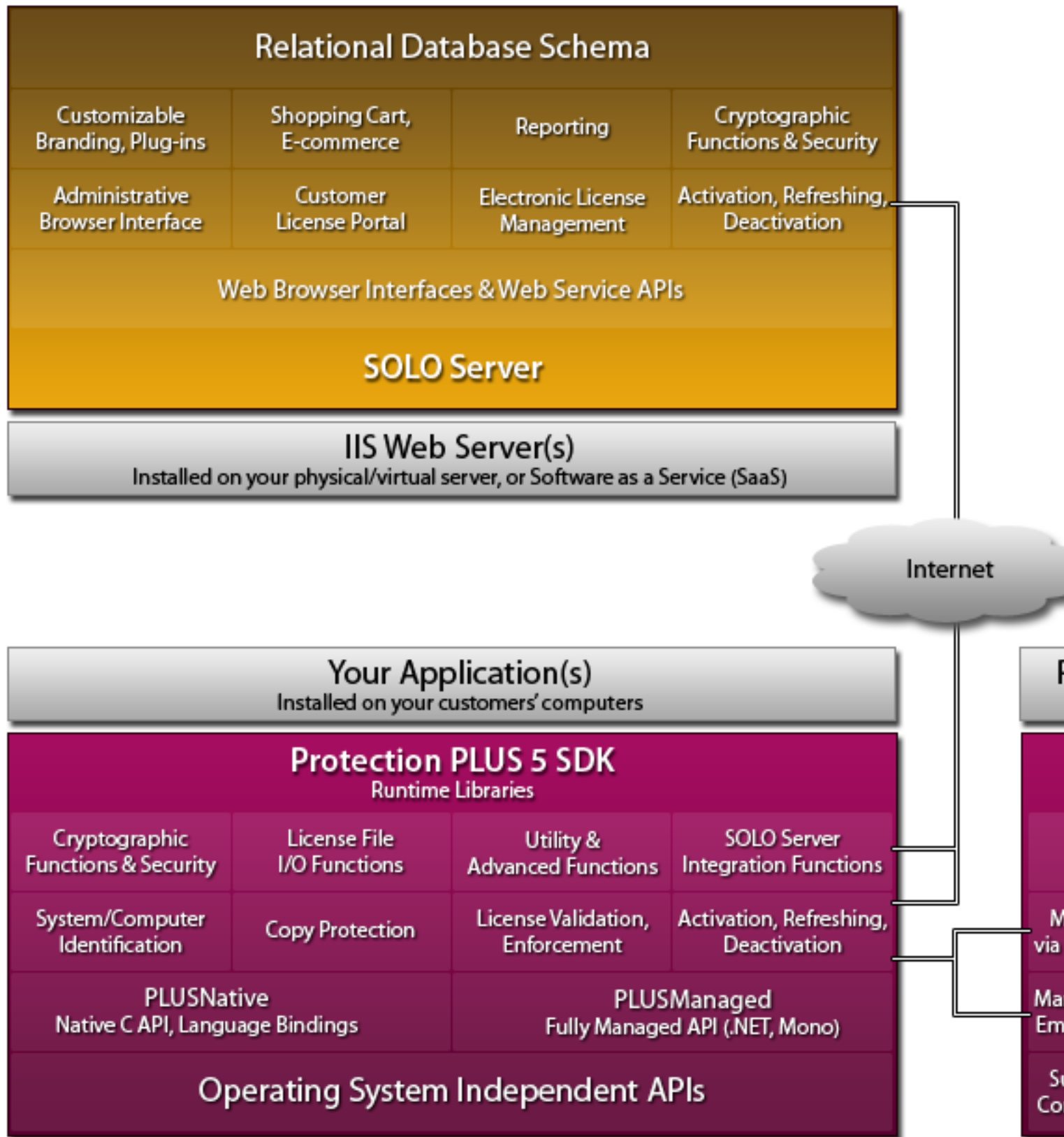
Each package is equipped with the same **core features**.

SoftwareKey System

For an overview, please view our webinar: [Introduction to and Benefits of the SoftwareKey System](#).

- **Protection - Protection PLUS™** is the industry standard client component for software licensing and copy protection. It is your key to protecting your investment in your intellectual property and puts you in the driver's seat to sell your software and enforce license compliance. Protect software in minutes by changing little to no source code using Instant Protection PLUS 3 or take more control by using Protection PLUS 5 SDK and implement the licensing to your exacting needs.
- **Automation - SOLO Server** is the server component and power packed with features including Electronic License Activation (ELA) which allows your customers to activate their software 24 hours a day while Electronic License Management (ELM) allows you to maintain control over license compliance. You can also utilize SOLO Server's optional e-Commerce features for a one stop solution to automate the sales of licenses to your customers. Alternatively, you can use SOLO Server just as the licensing server and integrate your own e-Commerce solution or not use any e-Commerce solution if your product is not sold online.

The following stack graphic illustrates a high level summary of the Protection PLUS 5 SDK and SOLO Server components:



About This Manual

The bulk of this manual is geared towards independent software vendors (ISVs) using SOLO Server as part of the SoftwareKey System.

For information on our licensing clients, please refer to the appropriate online manual:

- **Protection PLUS 5 SDK Online Manual**
- **Instant Protection PLUS 3 Online Manual**
- **AutoCrypt SL Online Manual**
- **Protection PLUS 4 SDK Online Manual**

This manual was last updated Thursday, March 19, 2026.

Software Integration and Signup

The SoftwareKey System is comprised of:

- **Protection** (licensing client: Protection PLUS or AutoCrypt SL)
- **Automation** (licensing server/service: SOLO Server)

You get the most powerful overall solution driven by combined technologies: the speed of traditional software e-commerce (optional), the hands-free automation of Electronic License Activation (ELA), and centralized controls for license enforcement with Electronic License Management (ELM).

STEP 1 - Protecting Your Software

The first step of using the SoftwareKey System is to add one of our licensing clients into your applications. Once this step is taken, the system will start working to **increase your revenue** by **enforcing license compliance** with your customers along with many other features.

STEP 2 - Automating License Management

Once you have protected your software using Protection PLUS, the next step is to **automate your licensing management** through SOLO Server.

Getting Started

If you want to evaluate the features of Protection PLUS or SOLO Server, the first step is to sign up for a free, no-obligation SOLO Server Shared URL trial account. This process can be completed in a matter of minutes, without having to install anything on your server! Once you sign up for a trial account, you will receive a welcome email with instructions for downloading trials of both our simple wizard based licensing clients as well as our advanced Protection PLUS 5 SDK licensing clients, along with instructions to sign up for a free trial account for SOLO Server Shared URL.

[Start Your Free Trial](#)

Choosing the SOLO Server Role

You can choose how you want to use SOLO Server to add and distribute licenses. Your customers will need to obtain a license to activate your application, and you control how licenses are created and distributed.

Each license generated in SOLO Server has a numeric License ID and alphanumeric Activation Password. The License ID and Activation Password needs to be provided to the customer so that they can activate your application. SOLO Server will validate the License ID and Activation Password they enter and **activate your application** with the proper entitlements.

You can choose to use any combination of the following license distribution methods:

- Use SOLO Server's **integrated e-Commerce** to automatically sell and distribute licenses through our customizable online storefront.
- Login to the SOLO Server author interface through a web browser and manually **add licenses**, which can then be emailed, printed, loaded into your own shopping cart, or given to a distributor.
- Use our **web services** to interact directly with SOLO Server via HTTP, which can used to integrate with another e-Commerce solution.

For additional details on how customers and licenses are managed in SOLO Server, view our topics on **adding and editing customers** and **adding licenses**.

Logging In

The SOLO Server author interface is accessed through a web browser, and each developer or staff member at your company will need their own login credentials.

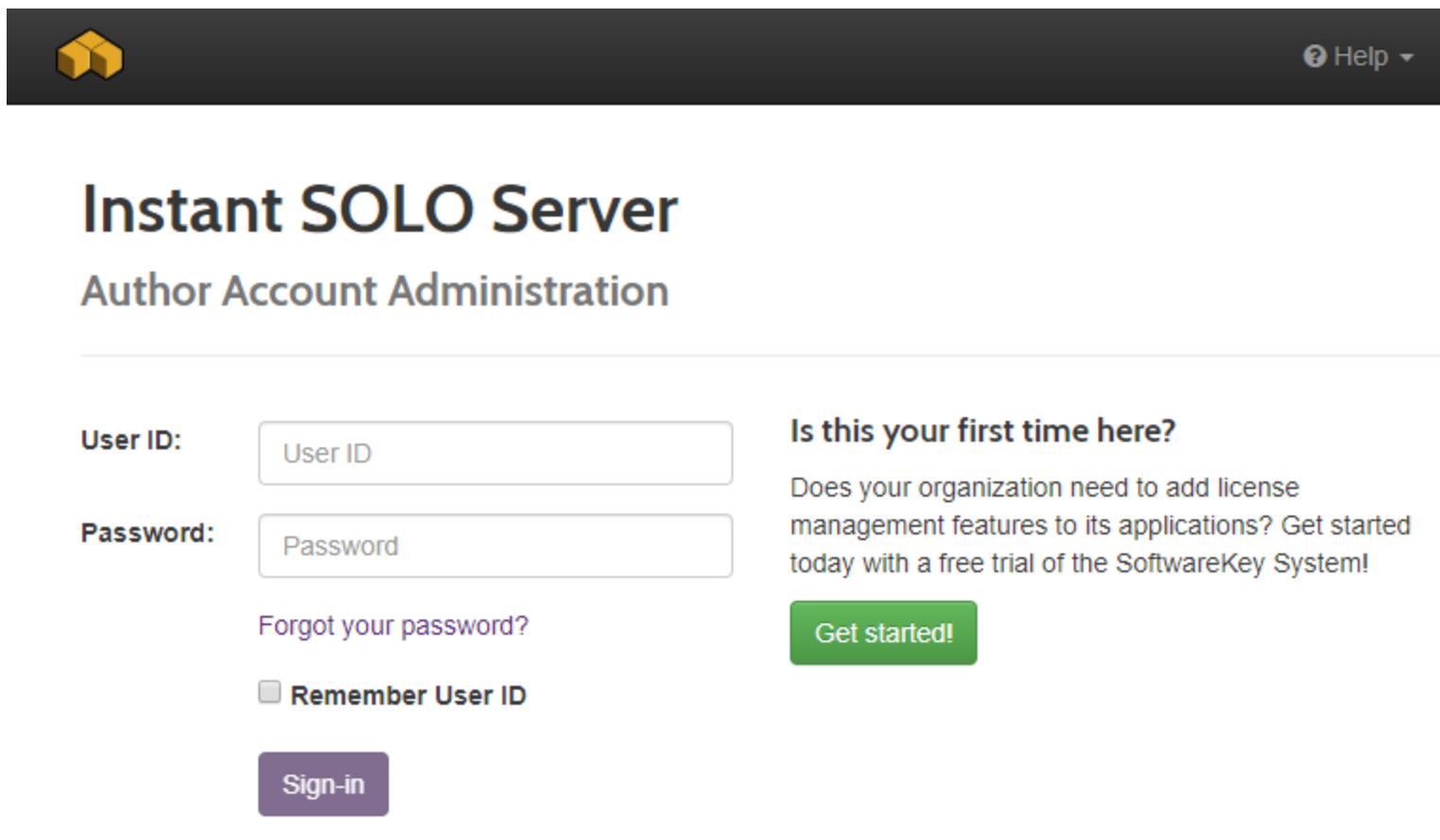
When you sign up for a SOLO Server Shared URL account (which starts as a free trial), the account will be assigned a numeric Author ID, which will be sent to you in a welcome email.

You will pick your first User ID and Password login credentials when you sign up for your SOLO Server Shared URL account. In the past, the first User ID was automatically set to be the same as your Author ID.

SOLO Server Shared URL

Use the following URL to log into SOLO Server Shared URL:

- <https://secure.softwarekey.com/solo/authors/default.aspx>



The screenshot shows the login interface for the SOLO Server. At the top, there is a dark header bar with a yellow cube icon on the left and a 'Help' link with a dropdown arrow on the right. Below the header, the main heading reads 'Instant SOLO Server' in a large, bold, dark blue font, followed by 'Author Account Administration' in a smaller, grey font. The login form consists of two input fields: 'User ID' and 'Password', both with placeholder text. To the right of these fields, there is a section titled 'Is this your first time here?' with a paragraph asking if the user's organization needs license management features, followed by a green 'Get started!' button. Below the password field, there is a link for 'Forgot your password?' and a checkbox labeled 'Remember User ID'. At the bottom of the form is a purple 'Sign-in' button.

If you don't have a SOLO Server account yet, you can login to our generic Test Author account with the following credentials:

- User ID: test
- Password: test

The sample projects included with our licensing clients are pre-configured to use this account.

Other SOLO Server Login URLs

If you are not using SOLO Server Shared URL, you will need to adjust the login link:

<https://secure.softwarekey.com/solo/authors/default.aspx>

- When using SOLO Server Shared / Custom URL, replace *secure* with your custom subdomain.
- When using SOLO Server Dedicated URL, replace *secure.softwarekey.com* with your domain.
- When using SOLO Server Self-Hosted, replace *secure.softwarekey.com/solo* in the URL with the path to your SOLO Server instance.

Please **contact us** if you need assistance determining the correct URL.

Administrator User

The first user is equipped with full SOLO Server administrative privileges for your company by being placed in the Administrator "Group". This user will have authority to create, update, and delete login IDs for other employees (or "Users") within your company. See **Managing Users, Groups, and E-Mail Notifications** for more details.

Separate Login Credentials as a Customer

If you have a customer record with SoftwareKey.com, please do not confuse this with your separate SOLO Server author account. **More information on the differences between these accounts can be found here.**

Navigating to the Online Manual

Once logged into the SOLO Server administration interface, there are two ways to obtain help. Click on the Help / **Manual** menu on the top right to open the full contents of the SOLO Server manual (which is what you are currently viewing). Here, you can browse topics or search for topics.

Furthermore, most SOLO Server pages have a "**? Help**" link. This is located on the top right side of the screen below the menu, and links to manual topic pertaining to the current page.

For guidance on getting help in other ways, please refer to the **Getting Help** topic.

SOLO Server Video Tutorials



SOLO Server video tutorials!

A series of video tutorials covering a wide range of topics we have crafted to accelerate your familiarity with the features of SOLO Server. We'll keep adding more, so check back often.

An example of a few of the topics covered include:

- Logging in to SOLO Server
- An introduction to SOLO Server security features and how to manage user permissions
- How to add a single customer and grant a single License ID
- How to add bulk licenses
- How to add and utilize test licenses
- How to use the SOLO Server search facility to find a license

Getting Help

Online Resource

Our **support center** offers a variety of resources that make valuable information available to you immediately. This includes resources like ticket submission, online chat, a knowledge-base, product documentation, newsletters, and more. These resources can give you near-instant answers to the questions and/or issues you encounter, and can therefore save you a great deal of time. For more complex requests, opening a ticket is the best choice, and a support representative will respond as soon as possible.

Getting Assistance

Evaluations or Test Account

If you are new to our system and are evaluating our products and services, you will have access to guidance via email support during your evaluation period to help ensure you are acquainted and confident with our products and services.

Maintenance Subscriptions

Technology is constantly changing, and although this brings much excitement, it is understood that changes often result in unforeseen problems. Furthermore, keeping up with changes in various platforms, architectures, and frameworks requires a great deal of effort. Customers with active maintenance subscriptions have access to the following benefits for the products and services purchased:

- The latest compatibility updates around constantly-changing operating systems and development tools. Keeping up-to-date with the latest versions of our libraries minimizes the risk of encountering bugs and incompatibilities as things change.
- Online technical support.
- The latest and greatest improvements and features we are constantly adding to our products and services.

To check the status of your subscription, renew it, or download version updates, please sign-in to our **Customer License Portal**. If using SOLO Server Shared or Dedicated URL or SOLO Server Dedicated URL, maintenance is automatically included for SOLO Server related support and updates.

Professional Services

If your needs exceed that of our standard technical support services, we offer personalized professional services which may be used to further help you with a customization or diagnosis. Should you find yourself in need of such services, please visit our **support center** and **open a ticket** to submit your request.

Gathering Information

Our products and services are designed to make life in the licensing and e-commerce world easier, and we take pride in fulfilling that same goal with technical assistance. If you've encountered a problem and could not find any information about the problem in our **support center resources**, you can get answers much more quickly by taking the time to ensure your ticket request includes all of the information we need. In many cases, it may simply be a matter of configuring the proper settings.

Here are some common points to address in your support request:

Behavior

- What behavior was experienced, and how does it differ from the behavior expected?
 - Did the error occur during application startup or during an activation attempt?
 - If any error/exception messages were displayed, please include the exact text and/or a screen shot.
- Who experienced the problematic behavior?
 - Did you, one of the application developers, and/or one of your customers experience the problematic behavior?
 - Is there a discrepancy between who experienced the behavior versus who should have (or should not have) experienced the behavior?

- When does this behavior occur?
 - Does the behavior occur consistently or intermittently?
 - Does the behavior occur from a specific line of code, area, and/or function or method call in your application?
- How can we reproduce this behavior?
 - Explain the steps taken to reproduce this behavior.
 - Include any screen shots if available.
 - If relevant, provide a complete sample project (with source code) which can be used to reproduce the behavior.

Submitting Inquiries

To submit your request for assistance, please visit our [support center](#) and [open a ticket](#). When doing so, making sure you include any relevant information including, but not limited to, items listed above.

New SOLO Server Version Notification

When a new version is released for our managed service, SOLO Server Shared and Dedicated URL users will receive a notification message upon logging in which will include a link to a blog post detailing the changes in the new version.

All users can also monitor our [blog](#) and the [release notes page](#).

Evaluating the SoftwareKey System

The SoftwareKey System is comprised of **Protection** (the licensing client) and **Automation** (the licensing server). We provide a free trial so you can fully evaluate our solution and be confident in making purchase decision.

To start, you will need to **choose which licensing client(s)** best suit your needs:

- Instant Protection PLUS 3
- Protection PLUS 5 SDK
- AutoCrypt SL

Each of these licensing clients can be used with our central license server, SOLO Server Automation. There are two ways to evaluate SOLO Server:

- Use our "Test Author" SOLO Server account which has pre-configured Products settings. Many of our included samples and tutorials are configured to use our Test Author account.
- Sign-up for your own free SOLO Server evaluation account. This allows you to create your own Product catalog and test most of the main functionality of our solution. The evaluation period is 30 days.

You can quickly test our main licensing functionality by using one of our licensing clients and the Test Author account, and then can perform a more in-depth evaluation by creating your own account and testing the licensing functionality in your own applications.

Limitations on SOLO Server Evaluation Accounts

There are absolutely no charges or other hidden fees associated with signing up for a SOLO Server Shared URL evaluation account. Please be aware, however, there are certain restrictions imposed upon the account until it is fully activated for use in the production environment. These limitations are as follows:

- Only *test* licenses are permitted to be added to the system. (see "Regarding Test Licenses" below for more details)
- Use of the cart functionality to process payment methods other than credit card (using a test credit card number supplied by us) is strictly prohibited. Payment Plans are also disabled.
- Adding bulk licenses (via the **Customers / Add Multiple Licenses** menu option) is not allowed.
- Manually adding invoices to customer records is not allowed.
- Uploading files and other custom-tailoring of the cart functionality is prohibited.
- Cloud-Controlled Network Floating Licensing can only be tested through our Test Author account. We include sample projects that are pre-configured to connect to that account.
- The Encryption Key Data on your account will automatically expire at the end of your evaluation.

Regarding Test Licenses

You can only generate test licenses with a test account, and test licenses are automatically purged monthly (at the end of each calendar month). There is no fee for test licenses while you have a test account.

After you activate, you can continue to generate test licenses for internal testing purposes, and they will continue to be automatically deleted each month. Their use will not be counted as standard activations, but each activation of a test license will instead be counted as an API Transaction.

DO NOT issue test licenses to actual customers because they will ultimately be purged. Production/non-test licenses should be used instead.

To Activate Your Account

Just below the menu on the Author Home page, click on the **activate your account!** link in the yellow test mode message area and you will be re-directed to the Account Activation page at our Web site. Follow the instructions provided to request official activation of your account.

All of the data created during testing will be maintained, so you can rest assured that you will not lose any of your hard work.

Most customers purchase one of our standard monthly plans, which includes a hosted SOLO Server account. See our **Purchase Questions and Information** topic for more details.

Support through Professional Services

When implementing a licensing system, there are many considerations and key decisions to make.

To learn more about how we can help you, [start with these questions!](#)

SOLO Server Installation and Configuration Overview

SOLO Server is available in three different packages; you can choose from a self-hosted server or two managed services:

- SOLO Server Self-Hosted
- SOLO Server Shared URL or SOLO Server Dedicated URL

Important

Only if you are using SOLO Server Self-Hosted will you need the information in this *Installation/Configuration* section. If you are using one of our managed services for SOLO Server, the topics in this section will *not* apply to you.

SOLO Server System Requirements

If you are using our SOLO Server Shared / Custom URL or SOLO Server Dedicated URL services, there are no hardware or software requirements. The author interface can be accessed through a web browser.

Requirements for self-hosting SOLO Server

The system requirements for self-hosting SOLO Server are as follows:

- Supported operating systems include:
 - Windows Server 2016
 - Windows Server 2019
 - Windows Server 2022
- Regardless of Windows server version, it must be a U.S. English version of Windows and the server must be configured with U.S. English regional settings.
- Supported database management systems include:
 - Microsoft SQL Server 2016
 - Microsoft SQL Server 2017
 - Microsoft SQL Server 2019
 - Microsoft SQL Server 2022
- SQL Server Agent is strongly recommended to run SOLO Server's jobs. Although SQL Server Agent is not included with Express Editions of Microsoft SQL Server, it is possible to use third-party software or Windows Task Scheduler in place of SQL Server Agent to run SOLO Server's database jobs as needed.
- A valid SSL Certificate for HTTPS (secure) connections. Note that SOLO Server makes internal web service calls to itself in some areas. It is possible to disable SSL for these internal calls, but if SSL is used for them, then the SSL certificate must validate for these calls to work. (Certificates that are self-signed, for a different domain name, or that have expired, will fail to validate on the server and causes these internal calls to fail.)
- 200MB of hard drive space is required to install SOLO Server. However, the amount of space required to host SOLO Server varies on the amount of use it gets and the server configuration. Factors that impact actual space used include (but are not limited to) things like: database growth, log file growth, files uploaded via SOLO Server, etc.. For additional guidance on server requirements, we recommend that your organization's information technology (IT) resources (whether internal or a third-party consultant) establish the requirements for your server based on expected use and growth.
- An SMTP server is required to send emails. SOLO Server can be configured to use an existing SMTP server, so it may not be necessary to install an SMTP service on the web server.
- Microsoft .NET Framework 4.7.2.

Requirements for Integrated eCommerce

To process e-Commerce transactions, SOLO Server requires a merchant account and a compatible payment gateway service provider. See the **Merchant Account and Payment Gateway** topic for more details.

Installed Components

This summary outlines the components that are installed with SOLO Server, and also supplements the license agreement by categorizing components by the type of license granted. Note that each file or directory name listed below may represent more than one version or build of a file with the given name, as different versions/builds are necessary when supporting different operating systems, processor architectures, etc...

Server Tools and Components

Description	File Names
SOLO Server installer and uninstaller	• SOLOServer.exe • SOLOServer_ActOnly.exe • C:\SWKey\unins000.exe
License Agreement	• eula.rtf
SOLO Server Release Notes	• ReleaseNotes.htm • ReleaseNotes.txt
SOLO Server installation helper application.	• SOLOInstallHelper.exe
Database installation and update scripts.	• C:\SWKey\SOLO\Database*
Components, libraries, and default templates.	• C:\SWKey\SOLO\DLLs*
Web interface front-end/GUI files.	• C:\SWKey\SOLO\HTML*
SOLO Server Manual	• C:\SWKey\SOLO\HTML\authors>manual*

Fresh Installation - Windows Server 2012 / 2016 / 2019 / 2022

Pre-Installation

Before getting started, please review the **SOLO Server System Requirements**.

Important

SOLO Server requires a U.S. English version of Windows. Both the Web server and the database server **MUST** use the generally accepted U.S. date format, MM/DD/YYYY. Using other date formats (for example, the European date format DD/MM/YYYY, where specification of the day precedes the month) will result in date interpretation problems! This means that U.S. English regional settings are required for Windows and the SQL Server instance. Furthermore, the SOLO Server database **MUST** use SQL_Latin1_General_CP1_CI_AS collation.

Install Dependencies

If installing on Windows Server 2012, prior to installation, SOLO Server requires the following software to be installed on both the web server and the database server.

.NET Framework 4.7.2

This is available from Microsoft, and can be found [here](#). Once installed, be sure to run Windows Updates and install any updates related to the .NET framework.

SQL Server Native Client 11 (Recommended)

This is available from Microsoft, and can be found [here](#). Note that if you are installing the web server and the SQL server on the same machine, this can also be installed during SQL Server installation by checking the Client Tools Connectivity option on the Feature Selection page of the SQL Server installer. If not installed SOLO Server will revert to using the older OLE DB driver for data access.

There are no dependencies to install on Windows Server 2019 and later as they ship with all required dependencies.

General Web Server Set-up

Before you can begin installing SOLO Server on your web server, you must first make sure the server is properly configured with the Web Server (IIS) role along with several related Role Services. To configure or verify your server configuration, follow these steps:

- Log into the server as an administrator.
- Open Server Manager, and then choose *Add Roles and Features* from the *Manage* menu on the upper right to open the Add Roles and Features wizard.
- Click Next on the *Before you begin* page.
- On the *Select installation type* page, choose *Role-based or feature-based installation* and click Next.
- Select the local server on the *Select destination server* page, and then click Next.
- On the *Select server roles* page, check the *Web Server (IIS)* checkbox if not already checked.
- Drill down into the *Web Server (IIS)* role and check the following Role Services if not already checked:
 - Web Server:
 - Common HTTP Features:
 - Default Document
 - HTTP Errors
 - Static Content
 - HTTP Redirection
 - Health and Diagnostics:
 - HTTP Logging (recommended)
 - Request Monitor (recommended)
 - Performance:
 - Static Content Compression (recommended)
 - Security:
 - Request Filtering (recommended)

- Application Development:
 - .NET Extensibility 4.5 (Windows Server 2012) / .NET Extensibility 4.6 (Windows Server 2016) / .NET Extensibility 4.7 (Windows Server 2019) / .NET Extensibility 4.8 (Windows Server 2022)
 - Application Initialization (recommended)
 - ASP
 - ASP.NET 4.5 (Windows Server 2012) / ASP.NET 4.6 (Windows Server 2016) / ASP.NET 4.7 (Windows Server 2019) / ASP.NET 4.8 (Windows Server 2022)
 - ISAPI Extensions
 - ISAPI Filters
- Management Tools
 - IIS Management Console
 - IIS 6 Management Compatibility
 - IIS 6 Metabase Compatibility
 - IIS 6 Scripting Tools
 - IIS 6 WMI Capability
 - IIS Management Scripts and Tools
- If no changes were required, simply cancel out of the wizard, otherwise, click Next through to the *Confirm installation selections* page, verify the changes, and click Install to perform the installation.

Please note that the IIS 6 Management Compatibility options are required for the SOLO Server installer to work properly for installation and upgrades.

Next, some additional pre-installation configuration steps are also required for IIS.

- Create a Windows user account to be used by SOLO Server:
 - Begin by adding the user to the system by choosing *Computer Management* from the *Tools* menu in Server Manager.
 - Expand *Local Users and Groups* on the left, right click the *Users* section, and choose *New User...*
 - Proceed to add the user account. **It is very important to uncheck "User must change password at next login", and check both the "User cannot change password" and "Password never expires" options.**
 - Alternatively, you may create the user as a domain user account. This is especially convenient if the web server is separate from the database server, and if multiple/redundant servers are being used. If you create the user in a domain instead, the same restrictions apply where the "User cannot change password" and "Password never expires" options must be checked.
 - Next, right-click on the user you just created, click properties, and then click on the *Member Of* tab. Add the user to the *IIS_IUSRS* group, and then remove the user from the *Users* group.
- Create an Application Pool for SOLO Server:
 - Open Internet Information Services (IIS) Manager.
 - On the left, drill down to and right click on the *Application Pools* option for the local server, and choose *Add Application Pool*.
 - Enter a name, choose .NET Framework v4.0.30319 for the *.NET Framework version*, and select the *Integrated Managed pipeline mode*. If present, also check the *Start application pool immediately* checkbox.
 - Once the application pool is created, right click on it and choose *Advanced Settings*, and make the following changes:
 - Set *Enable 32-Bit Applications* to True.
 - Set *Start Mode* to Always Running.
- Determine whether SOLO Server will be installed as a standalone web site, or as part of an existing web site.
 - If you are installing SOLO Server as a new standalone web site:
 - Create a folder for the new site on the file system.
 - In IIS Manager, on the left, drill down and right click on the *Sites* option for the local server, and then choose *Add Web Site...*
 - Set the *Site name* to your new web site's domain name (e.g. *secure.mydomain.com*).
 - Click the "Select..." button to the right of the *Site name* and select the newly created Application Pool for SOLO Server.
 - Click the "..." button in the *Content Directory* section and select the folder you created for the web site.
 - Also under the *Content Directory* section, click the "Connect as..." button. Select *Specific User* and click "Set..." Set this user to the Windows user account you created earlier. When done, click the "Test Settings..." button to make sure the credentials work and that the user has access to the folder you created.
 - You should also bind the web site to a specific IP address, as this is required for SSL, which you will be required to configure later. If you already installed the SSL certificate for your web site, you may change the binding type in this dialog to *https* and select the installed SSL certificate.
 - Ensure the *Start Website immediately* checkbox is checked, if present.

- Click OK to create the new web site in IIS.
- Once the web site is created, verify the file system folder created in the first step does not contain a web.config file. It is possible that IIS will automatically create a web.config file in this directory during the web site configuration. If a web.config file is found, rename it as the presence of an existing file will prevent the installer from recognizing the install is a fresh install and result in the configuration files not being correctly initialized. Any content in this file can be merged back in to the new web.config file created when installing SOLO Server.
- If you are installing SOLO Server in an existing web site, it is strongly recommended to configure SOLO Server as an application within the existing web site located in a unique subfolder within the web site. To do so:
 - In the file system, create a new subfolder for SOLO within the existing web site.
 - In IIS Manager, on the left, drill down to the new folder in the existing web site, right-click on the folder, and click *Convert to Application*.
 - Click the "Select..." button to the right of the *Site name* and select the newly created application pool for SOLO Server.
 - Click the "Connect as..." button. Select *Specific User* and click "Set..." Set this user to the Windows user account you created earlier. When done, click the "Test Settings..." button to make sure the credentials work and that the user has access to the folder you created.
 - Check the *Enable Preload* checkbox if present.
 - Click OK to create the new application in IIS.
 - Once the application is created, verify the file system folder created in the first step does not contain a web.-config file. It is possible that IIS will automatically create a web.config file in this directory during the application configuration. If a web.config file is found, rename it as the presence of an existing file will prevent the installer from recognizing the install is a fresh install and result in the configuration files not being correctly initialized. Any content in this file can be merged back in to the new web.config file created when installing SOLO Server.
- Determine how the SOLO web files will be installed within the web site. There are 2 ways which the SOLO web files can be installed:
 1. **Subdirectory Installation (Recommended)** - The SOLO root is located in a subdirectory of the web site root, and each of the SOLO subdirectories are off of this subdirectory (e.g. www.company.com/solo/authors, www.-company.com/solo/customers, etc.).
 2. **Web Root Installation** - The SOLO root matches the web site root, and each of the SOLO subdirectories are off the root directory (e.g. www.company.com/authors, www.company.com/customers, etc.).
- Next, the newly created Site or Application needs some additional configuration. In IIS Manager click on the new Web Site or Application on the left and double-click the *ASP* icon under the *IIS section* on the right. Verify or modify the settings as follows (**and shown here**):
 - Set the *Enable Buffering* and *Enable Parent Paths* options to *True*.
 - Under *Services*, expand the *Session Properties* item and set *Enable Session State* to *False*.
 - Optionally, if you need to troubleshoot issues or errors, you may expand *Compilation* section, expand *Debugging Properties*, and set the *Send Errors to Browser* property to true. We recommend enabling this for the duration of the SOLO Server installation to ease troubleshooting any installation issues that may arise; however, you should disable this feature once installation has been completed.
- Configure SSL for your web site:
 - For **production SOLO Server deployments**, we strongly recommend using a commercial SSL certificate provider for whatever DNS name is used for the application e.g.) secure.yourcompany.com or license.yourcompanyname or solo.yourcompany.com
 - When **evaluating SOLO Server**, an SSL certificate is still required. You can request a free SSL trial certificate from many SSL certificate providers (one offer is prominently displayed at <http://www.thawte.com/>) or use an inexpensive Standard SSL certificate from **GoDaddy.com** which can be issued in minutes. Another alternative is to create a self-signed SSL certificate in the IIS Management Console as described in **this helpful article**. Note that while you can use a self-signed SSL certificate to administer SOLO Server through a browser (a certificate exception will likely be displayed by your browser), you cannot use Instant Protection PLUS 3 or the Protection PLUS Automation Client library to connect via SSL with this type of certificate.
 - If you did not have an SSL certificate to choose from when creating the web site, you will need to install your SSL certificate on the server and configure the web site to use this as follows:
 - In IIS Management Console, drill down to the web site on the left, right click on it, and choose *Edit Bindings...*
 - Click the Add button, choose a *Type* of https, select the IP address to bind the site to, optionally specify the *Host name*, choose the SSL certificate, and click OK.

General Database Server Set-up

The installer does not create the database. To create the database:

- Open SQL Server Management Studio (SSMS) as an Administrator.
- In the Object Explorer, right click on Databases and select *New Database* to bring up the New Database dialog.
- On the General page of the dialog:
 - Choose an appropriate name for the database.
 - If necessary, modify the paths to the data and log files.
 - Adjust the *Initial Size* and *Autogrowth* settings appropriately for the data and log files. A few things to note:
 - The proper values for these settings are dependent on SOLO Server usage.
 - The SQL Server defaults (unless overridden in the model database) for these values are very small, and should not be used, as these can quickly lead to fragmentation and related performance issues.
 - If you are unsure, we recommend starting at no less than 50 MB *Initial Size* and 50 MB *Autogrowth* to start, and then monitoring things and resizing and/or adjusting the autogrowth settings as needed once usage patterns are established.
- Click OK to create the new blank database.
- Once the database is created, create a SQL Server login for SOLO to use to connect to the database:
 - In SSMS, return to Object Explorer, expand the *Security* option, right-click on *Logins*, and click *New Login...*
 - Create a login for the Windows user created for SOLO Server previously, or alternatively, you may set up a SQL account for SOLO Server to use to authenticate with the database instead. This user should not ever be required to reset the password (as this could prevent SOLO Server from connecting to the database).
- Finally, map the login created in the prior step to a user named SOLOServer in the SOLO database. To do so:
 - In Object Explorer, drill down to *Security/Users* for the newly created SOLO database, right click on *Users*, then select *New Database User*. Choose the login from step prior to this as the login name, and enter "SOLOServer" as the user name. This user will be used for all of SOLO Server's database access. Make sure the user's only permission is the Public role.

Installation

You are now ready to install SOLO server.

- First, make sure that there is not any web.config file present in the target website/application folder. If one is present, rename it prior to running the installer. After installation is complete, you may then manually merge any settings into the newly installed file as necessary.
- Begin the installation by running the installer SOLOServer.exe (for licenses including the eCommerce module) or SOLOServer_ActOnly.exe (for licenses without the eCommerce module).
- Click "Next" on the welcome screen.
- Select the installation location. The application will be installed in a SOLO subdirectory of the selected directory. The default is C:\SWKey, and it is highly recommended that this be used. Click "Next" once the installation directory is selected.
- On the "Select Components" screen, choose "WebServer & Database" and click "Next".
- On the "Select WebSite Destination" screen, you can choose to install SOLO Server to a particular web site and/or virtual directory by selecting the "Specify WebSite Configured in IIS" option. This option is the recommended one. Alternatively, you may choose the "Specify folders to copy files" to configure several directories to copy the files to, though this is generally not necessary. **Important:** you cannot use an application virtual directory as a subdirectory!
 - If you selected the option to "Specify WebSite Configured in IIS", select the web site or application virtual directory to be used as the web site root on the left. If you wish to install SOLO to a subdirectory of the web site root, select the subdirectory on the left, or type the name of the subdirectory (if it doesn't already exist) you wish to use. You do not add a leading slash to your subdirectory on this screen. (So for example, use "solo" and not "/solo".)
 - If you selected the option to "Specify folders to copy files," use the Folder Browser and the arrow buttons to create a list of directories to copy the files to.
- On the "Configure SMTP" screen, enter the credentials needed for the web server and/or the database server to connect to a mail server for sending emails. This dialog allows you to specify the email address used by SOLO Server to send error reports as well as the email address that should receive these error reports (only 1 email address can be used). Make sure that relaying is enabled for this web server's IP address.
- On the ASP.NET application identity settings, enter the credentials for the user account SOLO Server will use for access to the file system and the database. This should be the same account as the web site user created above.
- On the "SQL Server Connection" screen, enter the SQL login credentials for an account which has DBO access. Please note that with SQL Express, the server name must be the instance name, which is usually formatted like [MACHINE_NAME]\SQLEXPRESS. This must be filled out even if you're not planning on installing the database (i.e. if the database has

already been installed when you installed on one web server, and you're following these instructions again for a redundant web server).

- On the "Database Operation" screen, select "Install SOLO Schema and Objects to the Database" and click Next. If you are installing SOLO Server on a second web server and the schema was already set up on the database, choose "Do Nothing" and click Next.
- On the "WebSite Connection Details" screen, enter the database user created for SOLO in the "General Database Server Setup" section.
- The next screen summarizes the actions which will be done to install SOLO Server and opens the release notes for review. Click the "Install" button when you are ready to proceed with the installation.
- Restart, if necessary.

Post-Installation

Verify File System Permissions

Important

Starting with SOLO Server Version 1.9.4.4, all file system permissions are set automatically by the installer on new installations. However, if you have trouble logging on for some reason, please double check the file system permissions as noted below.

Set file system directory permissions for the windows user created for use by SOLO (IIS user). The directories and required permissions are as follows:

- Full control to C:\Windows\Microsoft.NET\Framework\v4.0.30319\Temporary ASP.NET Files\.. This is required to allow ASP.NET to compile the aspx pages within SOLO.
- Read access to the Custom HTML, Custom XML, Custom XSL, and WebComponentPages directories in the SOLO\DLLS sub-directory of the install folder.
- All permissions but full control for the SOLO\ESD subdirectory of the install folder.
- All permissions but full control for the SOLO\Temp subdirectory of the install folder.
- Read access to the web site/application folder.
- All permissions but full control for the \products\custom\ directory off of the SOLO root.
- Depending on the location of the web folder, it may also be necessary to grant read permission to the web folder to the user the application pool is running under. With IIS 7, Application Pools receive their own hidden identity by default, and these hidden user accounts are members of the IIS_IUSRS group. If you are unable to log in below and see Access Denied errors from ASP.NET in the application event log, try granting this permission to the IIS_IUSRS group.

Set-up Configuration Files

SOLO Server uses a combination of 2 configuration files, both of which are shared between the classic ASP and ASP.NET code. If you installed into an empty destination folder, the SOLO Server installation should have set up the necessary configuration to log in, and you can jump down to the **Launch your browser to login section**. Later you can come back to tweak the configuration parameters to your liking.

If you install into an existing WebSite that has these files (not recommended), they will NOT be overwritten by the installer. Instead, you need to merge the SOLO Server configuration parameters in with your existing files. The base versions are located in the HTML subdirectory of the install folder (C:\SWKey\SOLO\HTML by default). The files are as follows:

- **SOLO.config** - XML file containing configuration parameters related to database maintenance, HTTP request validation, and error reporting. This file is referenced by web.config. Since this is not a standard IIS configuration file, it can simply be copied from the install directory to the web root and edited, with no need to worry about merging with an existing file. Be sure the correct path for this file is used in the web.config file. Information/instructions on setting up this file can be found in the **SOLO.config File Options** topic.
- **global.asa** - Standard classic ASP configuration file. The SOLO Server version of this file uses STARTSOLO.inc to parse the web.config file for all application variables. If no global.asa file is present in the web root, a customized version is installed automatically with values needed for SOLO Server to run. Information/instructions on setting up this file can be found in the **Global Application Options** topic.
- **web.config** - Standard ASP.NET configuration file, which is also used by the classic ASP code in SOLO Server. If no web.config file is present in the web root, a customized version is installed automatically with values needed for SOLO Server

to run. However if an existing web.config file is present, the contents of the file in the install directory must instead be merged with the existing file. Information/instructions on setting up this file can be found in the **Web.config File Options** topic.

Sign-in

Once you have completed all of the above steps, launch your browser to <https://secure.yourcompany.com/solo/authors/> (or whatever folder you installed into). You may log in with username of **Master** and password of **password**. Upon logging in:

- You will be prompted to activate SOLO Server. Click the Activate link, and enter your SOLO Server License ID and Password.
- To activate online when outbound internet access is available on the web server, simply choose the Activate Online option and click Activate.
- If outbound internet access is restricted on the web server, choose the Activate Manually option, click Activate, and follow these steps:
 - Copy the content of the Request text area to the clipboard.
 - Open a browser and navigate to the manual activation page at <https://secure.softwarekey.com/solo/customers/ManualRequest.aspx?AuthorID=2451871>
 - Paste the copied content the text area on the manual activation page and click Submit.
 - Copy the content of the Response text area from the manual activation page to the clipboard, and then paste this response in the Response text area in SOLO Server and click Activate.
- If any errors occur during the activation process, contact support@softwarekey.com
- Next, you will prompted to accept the terms and conditions and click the Agree button.
- Once you have accepted the terms and conditions, you will next be prompted to change your password.
- After changing your password, you will be directed to the author home page.

At this point, you should create a new user account so that you can remove the default account. To do this, follow these steps:

- From the user menu at the top right (which will read master for the current user), choose Users.
- Click the Add New link on the manage users page.
- Enter the required information in the General Information section.
- In the settings section:
 - Select the Administrators group
 - Uncheck Change Password
 - Check Master User ID (this is important - if you do not check this you will have no easy way to grant this permission once the default user is removed).
- Click Save to save the new user.
- Next, log out, and then log back in with your new User ID and password.
- You'll be prompted to accept the terms and conditions again on the new user account.
- After accepting the terms, return the manage users page. Delete the default Master user account.

Note that if you use Instant Protection PLUS 3 or Instant Metering to log into SOLO Server, you will also need to know your Author ID. The default Author ID for a fresh installation of SOLO Server is always **2451871**.

If you see the message "**An error has occurred in this application. An administrator has been notified.**" then check the mailbox that you configured to receive email error notices and see why the server is unhappy.

Pointing your browser to the top folder of <https://secure.yourcompany.com/solo/> will display nothing because we don't know if the customer is an administrator or a customer. You may create a default.asp or default.htm file that redirects the user where you want to go or display a friendly message.

Secure Internal Web Services and Encrypted Cookies

SOLO Server includes several web services intended only for internal use when communicating between portions of SOLO Server developed using ASP/COM and portions developed using ASP.NET. In order to prevent outside access to these web services, you need to set an internal username and password which SOLO Server will use for authentication during these internal web service calls. In addition, SOLO Server uses encryption to secure several cookies, and requires specifying an encryption key. To configure these, simply edit the web.config file and enter values for the InternalWebServiceUsername, InternalWebServicePassword, and CookieEncryptionKey entries. Note that if during installation, if no web.config file was

present in the web site root, the installer will have automatically populated these web.config entries with random 20 character strings and you can skip this step.

Generate Encryption Keys

The XmlActivationService web methods use public/private key cryptography to encrypt/decrypt and sign/verify both the request and response data to ensure the data is not tampered with. Since these keys need to be uniquely generated by the server, they are not populated by the installer, and must be manually generated. To generate the keys, simply navigate to the [Author Encryption Keys page](#) and the server will generate the keys and store them in the database.

Customize HTML Files

Several static HTML files used by SOLO Server can optionally be customized as follows:

- The HTML template files used to generate the headers and footers within each section of SOLO Server can be customized to create a unique look/feel. For more information this, see [Customizing SOLO Server HTML Files](#).
- In order to prevent any issues with browsers rejecting SOLO Server cookies due to security settings, you should set up a compact privacy policy. To do this, edit the files in the W3C folder in the root of the SOLO Server installation directory, replacing any parameters within brackets ([]) with your company specific values. If you already had a compact privacy policy set up at this location, you need to do nothing as the install will not overwrite these files.

Finalize the Database Configuration

- Set up maintenance jobs for the database files (both full database and optionally transaction log backups, depending on the recovery model chosen for the database). Jobs for these purposes are not installed by SOLO Server because this is a task best left to the local database administrator, who can come up with a maintenance plan geared specifically around the available resources and needs of the customer. We recommend [Ola Hallengren's maintenance solution](#).

Important

Note: It is very important to properly configure the maintenance plan based on the recovery model of the database. By default, SQL Server creates new databases configured to use the Full recovery model. If the recovery model is retained, it is **EXTREMELY IMPORTANT** to configure transaction log backups on a regular basis in addition to full database backups. The transaction log is a circular log file, and when the database is in full recovery mode, portions of this file are cleared for reuse by transaction log backups. If no transaction log backups are taken, space in the log file will never be marked for reuse, and the log file will continually grow, which can eventually lead to running out of disk space.

- Verify/reconfigure database mail (if using SQL Express, skip this step, as database mail is not included in SQL Express). By default, SOLO Server will create a Database Mail account and profile, both named SOLOServer, using the error email and mail server settings entered in the installer. The installer assumes many default settings (port 25, anonymous access, etc.), and it may be necessary to reconfigure things depending on your environment. To test/configure database mail:
 - In SQL Server Management Studio, expand the Management section in object explorer.
 - Right click on the Database Mail icon, and then select "Send Test E-Mail".
 - Enter the email address you specified to send error notifications to as the To address, and click "Send Test E-Mail".
 - Verify the email is delivered.
 - If the email is not delivered, double click on the Database Mail icon. Click next on the welcome page if it appears.
 - Next, select "Manage Database Mail Accounts and profiles", click next, and then select "View, change, or delete an existing account".
 - Select the SOLOServer account, and adjust the Outgoing mail server and SMTP Authentication properties as needed.
- Configure the database jobs. Refer to [SOLO Server Database Jobs](#) for this portion of the install.
- Log in to SOLO Server, choose Daily Processes from the Admin menu, and then edit the default Daily Maintenance process and check the Active checkbox.
- Set the seeds for the Customers, Invoices, and Licenses tables. These will determine the initial Customer ID, Invoice Number, and License ID generated by the system.
 - First, go to the Customers, Invoices, and Licenses tables in SQL Server Management Studio, right click and select Design Table, then highlight the first column. At the bottom, set the Identity Seed to your desired initial values.

- You may get an error attempting to save the changes in the previous step as later versions of SQL Server/SSMS do not allow this. If this is the case, use DBCC CHECKIDENT with the RESEED option by running the following 3 commands against the database, replacing the final parameter in each command with your chosen seeds.
 - DBCC CHECKIDENT ('dbo.Customers', RESEED, 1000000);
 - DBCC CHECKIDENT ('dbo.Invoices', RESEED, 1000000);
 - DBCC CHECKIDENT ('dbo.Licenses', RESEED, 1000000);
- Determine if you would like to enable global Distributors/Affiliates. Enabling this will cause any additions, modifications, or deletions of any distributors/affiliates or distributor types to be replicated across all authors. In addition, when a new author is added to the system, they will have the distributor types and all distributors/affiliates automatically associated with their account. If you decided to enable this feature, follow these steps:
 - Make sure the database is set to not allow recursive triggers (this is the default). To check whether recursive triggers are enabled, from SSMS, highlight the database, right click on it and then choose properties. Go to the options tab and make sure the "Recursive Triggers" checkbox is unchecked.
 - From SQL Server Management Studio, run all of the trigger (*.sql) files in the \SOLO\Data-base\Triggers\GlobalDistributors subdirectory of the installation directory.
- Determine if you would like to enable auditing of the Licenses table in the database. Note that enabling this may have performance implications in database which contain a large number of licenses. To enable auditing of Licenses:
 - From SQL Server Management Studio, run the \SOLO\Database\Triggers\Auditing\dbo.SOLO_TRIG_LicensesUpdate.sql script.
 - Update the EnableLicenseAudits **web.config** entry to True enable the audits in the SOLO Server administration interface.

Optional Steps

Configure Request Filtering

We recommend installing and enabling Request Filtering in IIS on your web server to help protect against attacks.

- If not installed, install the Request Filtering role service as described above in the "General Web Server Setup" section.
- Refer to our **sample request filtering configuration** for the remaining steps.
- If SOLO Server is installed on a dedicated web server with no other web sites present, you can simply replace the default request filtering configuration with our sample configuration as follows:
 - Create a backup of C:\Windows\System32\inetsrv\config\applicationHost.config.
 - Open notepad as an administrator.
 - In notepad, open C:\Windows\System32\inetsrv\config\applicationHost.config
 - Replace the configuration\system.webServer\security\RequestFiltering node with the requestFiltering node from the sample configuration.
 - Save the change.
- If SOLO Server is installed on a web server hosting other web sites, using the sample configuration at the server level has the potential to cause issues with other web sites running on the server. In this case, a careful analysis must be made of the current request filtering settings and the sample settings need to be merged in accordingly at either the server, web site, or application level in IIS.

Harden non SOLO Server Databases

By default, all SQL Server databases contain a default Public role which is inherited by all database users. This role is granted numerous permissions by default, including the ability to access the system tables and views. To close this hole, the database installation automatically revokes all permissions from the Public role in the SOLO database and moves them to a new FormerPublic role.

It may also be desirable to lock down any other databases on the server in the same manner, including the system databases. Several helper scripts are installed to accomplish this - they are located in the Database/SecurityScripts folder of the install folder. To lock down the Public role on a database, run the LockDownDatabase.sql script against the database (the change can be undone by running RestorePublicFromFormerPublic.sql). If SOLO Server's database is the only database running on the server, it is safe to run this on all of the system database. If other databases are running, however, you should investigate whether making this change will break any other applications before applying to the system databases.

In addition to those two scripts, two other security related scripts are also included:

- InspectSQLSecurity.sql - Returns info on the current security permissions on a database
- LockDownSQLServer2005.sql - This will lock down numerous settings on a server wide basis. Be sure to carefully analyze this script and only run portions of it that will not break any current applications.

Uninstalling SOLO Server

First, restart IIS so all DLLs will be unloaded. Click Start / Programs / SoftwareKey Licensing System / SOLO Server / Uninstall SOLO Server. Follow the prompts.

Installing Upgrades

Upgrade Instructions

Installing a new build of SOLO Server is quite simple in most cases, and depending on processor speed and current server workload, should take just minutes. **Note that IIS will be stopped during this upgrade.** Follow these steps to upgrade:

- Find the version of your currently-installed SOLO Server by scrolling to the bottom of the Author Home page.
- Download the latest SOLO Server installer by logging in to the **Customer License Portal**, clicking Downloads, and then locate your SOLO Server license and click the Download button.
- Extract the files from the zip file that is downloaded.
- Open the ReleaseNotes.htm file in a browser, and view the Important Upgrade Notes section. This section is a supplement to the release notes containing information which must be considered when upgrading SOLO Server, including configuration changes, merging of changes into user customizable files, and other additional steps which may be required outside of running the installer. Failure to review these notes prior to upgrading may result in SOLO Server not functioning properly after the upgrade is complete.
- Make note of any manual steps which must be taken prior to performing the upgrade. In most cases, this involves adding/updating configuration file entries in web.config. The installer does not modify configuration files. Apply any of these changes. You can use the blankWeb.config file as a reference when updating the web.config file.
- If you have customized any of the images, back up your /images/solo directory.
- Run SOLOServer.exe or SOLOServer_ActOnly.exe.
- On the "Select Components" screen, choose "WebServer & Database" if updating the web server or a combined web/database server, or "Database" if upgrading a dedicated database server, then click "Next".
- If performing a web server upgrade, on the "Select WebSite Destination" screen, choose **"Specify WebSite Configured in IIS"** option. The installer will remember the websites, virtual directories, and subdirectories that were previously used during installation.
- On the "SQL Server Connection" screen, enter the SQL login credentials for an account which has DBO access. This must be filled out even if you're not planning on installing the database (i.e. if the database has already been installed when you installed on one web server, and you're following these instructions again for a redundant web server).
- On the "Database Operation" screen, you will be presented with options to "Do Nothing" or "Upgrade the SOLO Server Database" depending on the schema version that is installed on your database server. A special note may also appear with instructions. If updating a dedicated web server, choose Do Nothing, otherwise choose to Upgrade if the option is available.
- If any customized stored procedures were found, a list will be displayed by the installer. Note the names of the customized stored procedures.
- The release notes will be displayed in the default web browser. These are the same notes mentioned above - you can close the browser if you do not need to review anything.
- The next screen summarizes the actions which will be done to install SOLO Server. Click the "Install" button when you are ready to proceed with the installation.
- Restart, if necessary.
- At this point the installation is complete.
- If you backed up your /images/solo directory, restore it.
- Apply and further manual changes described in the Important Upgrade Notes section of the release notes.
- Log into SOLO Server administration area with a browser, go to Author Home page and verify the correct build number is listed on the bottom of the Author Home page.

SOLO Server Database Jobs

General Information:

- The SOLO Server database installation installs all jobs as disabled, so they must be manually enabled by the user in order run. To enable the jobs if using a non Express version of SQL Server:
 - Connect to the database server using SQL Server Management Studio (SSMS).
 - In Object Explorer, expand the *SQL Server Agent* node, and then the *Jobs* node.
 - Right click on the job and click *Enable*.
- Express versions of SQL Server do not include SQL Agent (used to automate the running of these jobs), so an alternate method is needed to run these jobs on SQL Express:
 - You can use a 3rd party replacement for SQL Agent.
 - You can set these up to be launched as a scheduled task using Windows built in task scheduler. To configure the jobs to run through Task Scheduler:
 - In Windows Task Scheduler, choose *File, Create Task*.
 - On the *General* Tab:
 - Specify a *Name* and optionally a *Description*.
 - Click *Change User or Group...*, and change the user account to the account the web site is running under.
 - Select the *Run whether user is logged in or not* option.
 - On the *Triggers* tab:
 - Click *New...*
 - Use the default *Begin the task* option of *On a schedule*.
 - Select *Daily* and set a *Start* time (see recommendations below).
 - Click *OK*.
 - On the *Actions* tab:
 - Click *New...*
 - Use the default *Action* of *Start a program*.
 - Enter the *Program/script* to run (see file details below).
 - Click *OK*.
 - The defaults on the remaining tabs should be OK. Click *OK* to save the task.
 - Verify functionality by manually running the task.
- SOLO Server jobs are scheduled to run in the early morning. They have been scheduled with no overlap to avoid job conflicts. Any custom jobs added, including maintenance scripts, should follow the same approach. The recommended script windows are as follows:
 - Midnight - 3AM: Database maintenance jobs (backups, integrity checks, optimizations, transaction log backups).
 - 4AM - 5AM - Reserved for SOLO Server jobs. All standard SOLO Server jobs are scheduled by default to run in this time frame.
 - 5AM onward - Custom job scripts

SOLO Server Daily Processing

- Description - Runs all active **Daily Processes**.
- Schedule: Daily at 4:00AM.
- Executable file: %InstallDir%\SOLO\Database\Jobs\DailyProcessor\DailyProcessor.exe. The **DailyProcessor.exe.config configuration file** in the same directory as this must be set up with the proper values after installation. The file contains comments on each variable that needs to be configured. When configuring this job using Windows Task Scheduler, you can simply navigate to and select this file using the *Browse...* button.

SOLO Server Process Payment Plan Payments

- Description: Processes all payment plan payments scheduled for a given day. This job only needs to run if payment plan items are being sold through SOLO Server.
- Schedule: Daily at 4:30AM.
- Script file: This job calls a vbs script file which will need to be manually configured. The file is located at %InstallDir%\SOLO\SQLJobs\ProcessPaymentPlans.vbs on the database server. All configurable variables are located at the very top of the file as constants, and comments in the file describe each of them. When configuring the job in task scheduler this should use the 32 bit version of cscript.exe to call the script as follows (replacing %InstallDir% with the SOLO Server installation directory):

- For 32 bit operating systems, enter `cscript.exe "%InstallDir%\SOLO\SQLJobs\ProcessPaymentPlans.vbs"`
- For 64 bit operating systems, enter `C:\Windows\SysWOW64\cscript.exe "%InstallDir%\SOLO\SQLJobs\ProcessPaymentPlans.vbs"`

Global Application Options

The global.asa file is used to set up application variables referenced in the classic ASP code of SOLO Server. The **web.-config** file contains the application settings used for the ASP.NET code of SOLO Server. The searching rules for these files are specified by your configuration of IIS and web directory structure. Refer to the **installation topic** for more information.

The **SOLO.config** file also contains application settings for SOLO Server. The location of this file is specified in the Web.-config file under the application settings SOLOConfigPath, HttpRequestValidatorConfigurationPath, HttpErrorHandlerConfigurationPath. Typically the same SOLO.config file is used for all 3 variables.

Starting with SOLO Server Build **1.6.0.72**, all classic ASP application variables are read from the web.config file. This avoids duplication of parameters and the chance of conflict and confusion.

How The Global.asa Application Variables are Initialized

Include Directive - At the very top of the global.asa file, outside of the Application_OnStart subroutine, a server side include to StartSOLO.inc is included. This script handles reading values from the web.config and SOLO.config file and load them into the respective application variables. The syntax for this include is as follows:

- `<!--#include file="StartSOLO.inc"-->`

In cases where the SOLO Serverroot is a subdirectory of the web root, the file must be referenced with a relative path. For example, if SOLO Server is installed in the "SOLO" subdirectory off of the web root, the syntax would be as follows:

- `<!--#include file="SOLO/StartSOLO.inc"-->`

Single Application Variable - A single application variable needs to be defined inside of the Application_OnStart subroutine of global.asa. The Application("SOLOWebConfigPath") variable must contain the full path and name of the Web.-config file used by your website.

LoadApplicationConfiguration The final entry in the Application_OnStart event is a call to LoadApplicationConfiguration. This method is located in the StartSOLO.inc file described earlier, and loads the application variables that are derived from the web.config and SOLO.config files.

Changing Values in web.config

Important

If any changes are made to the web.config file, be sure to save global.asa, so that IIS sees a new timestamp on this file. When it does, it will run the Application_OnStart subroutine to re-load configuration parameters from web.config. Alternatively, you may reset IIS or recycle the application pool to force the new parameters to be read.

See Also:

- [Web.config File Options](#)
- [SOLO.config File Options](#)

Web.config File Options

The web.config file contains several global application options used throughout both the ASP.NET and classic ASP code of SOLO Server. When you install SOLO Server in a new website root or virtual directory (as recommended), many of the settings are already configured to allow the application to run. You can later come back to adjust the global settings as needed.

Changing Values in web.config

Important

If any changes are made to the web.config file, be sure to save global.asa, so that IIS sees a new timestamp on this file. When it does, it will re-load configuration parameters from web.config for the classic ASP code to see. Alternatively, you may reset IIS or recycle the application pool to force the new parameters to be read.

<system.web> section

This section contains standard ASP.NET settings. You must set up identity impersonation in this section to allow the site to run as the user mapped to the SOLOServer user on the database. This is taken care of automatically by the installer on fresh installs. To change or edit the user, modify the following entry in the file, filling in the username/password of the SOLO Server user.

- `<identity impersonate="true" userName="[WebUserName]" password="[WebUserPassword]"/>`

<system.webServer> section

This section contains several sections to configure SOLO with IIS:

- modules - The entries here wire in HttpModules with IIS:
 - `HttpErrorHandlerModule` - Global error/exception handler for .NET portions of SOLO Server.
 - `HttpRequestValidatorModule` - Enables ASP.NET request validation for non-.NET based web pages within SOLO Server.
 - `HttpCookieSecurer` - Hardens all response cookies by setting the `HttpOnly`, `Secure`, and `SameSite=Lax` attributes.
 - `HttpIPAddressMasker` - This module is commented out by default. When uncommented, injects a `MASKED_IP` header into the request with the content being the client IP address with the final octet masked. When used in conjunction with IIS Advanced Logging (IIS 7-8.5) or IIS Custom Logging (IIS 10), this can be used to only log a masked version of the IP Address to the IIS logs, which can reduce exposure under the **EU GDPR**.
 - `AuthorFileManagerValidator` - Handles session authentication for the `FileUltimate` module used for file management on the server.
- handlers - The entries here wire in HttpHandlers with IIS for handling extensionless URLs on specific paths within SOLO Server which require this functionality.
- staticContent - The entries here define MIME mappings for the `.woff` and `.woff2` file extension, which are not defined by default in IIS.

<location> sections

By default, the web.config will be configured with three location sections. The first location section configures the IIS request filtering feature to allow the PUT and DELETE verbs for the API used for certain pages in the administrative interface. This will be commented out by default, and must be uncommented if using request filtering. The second location section configures custom error handling for custom uncompiled classic ASP scripts:

- The section targets the custom products/custom directory off of the SOLO root directory.
- Within this section, a `system.WebServer/httpErrors` node is configured to route all 500.100 errors to the `customerrorhandler.asp` script in the root of the custom directory.

The third location element configures file upload size limitations for ESD and storefront files uploaded through SOLO. The section contains two subsections which configure IIS to allow uploads of up to 300 MB.

- system.web - contains an httpRuntime entry telling IIS to allow up to a 300 MB maximum request length (value is in KB).
- system.webServer - contains a security/requestFiltering entry telling the request filtering feature of IIS to allow a maximum content length of 300MB (value is in bytes). By default, this section is commented out, as request filtering is not a default feature of IIS. If using request filtering, uncomment this section.

<runtime> section

This section defines assembly bindings for several dependencies.

<connectionStrings> section

This section contains the database connection string for SOLO features leveraging the Entity Framework.

<appSettings> section

Several SOLO Server specific settings are defined in this section as follows:

ASP.NET Settings

ValidationSettings:UnobtrusiveValidationMode

Controls how classic ASP.NET web forms validation functions. Should always be set to None.

External Configuration Settings

SOLOConfigPath

File system path and filename to the common SOLO.config file shared between the ASP and ASP.NET portions of SOLO Server. This is generally installed in the web root directory, but this is not required.

HttpRequestValidatorConfigurationPath

File system path and filename to the configuration file for the HttpRequestValidator component. This should typically match the path specified in SOLOConfigPath. Custom implementations can use a separate configuration file if necessary.

HttpErrorHandlerConfigurationPath

File system path and filename to the configuration file for the HttpErrorHandler component. This should typically match the path specified in SOLOConfigPath. Custom implementations can use a separate configuration file if necessary.

Web Service Settings

InternalWebServiceUsername

The username used to secure and authenticate communications to the internal web services.

InternalWebServicePassword

The password used to secure and authenticate communications to the internal web services.

Database Settings

ConnectionString:

The connection string to the SOLO Server database.

DatabaseApplicationName

Optional name to pass as the Application Name in the connection string.

ConnectionProvider

Data provider for ADO in the COM based portions of SOLO Server. By default, SOLO Server will use SQL Server Native Client 11 (SQLNCLI11), falling back to the older OLE DB provider (SQLOLEDB.1) if the native client is not installed. This can be used to override the default and use a specific provider.

LongRunningQueryTimeout:

The timeout value (in seconds) to allow long running queries to execute on .NET web pages. If set to 0 or omitted, the default value of 30 seconds is used. Currently this will affect the timeout for searching on customer details and for any .NET based reports. This should be left at 0 unless you are experiencing database timeouts searching for customers or running .NET based reports. Also note that if you increase this near or above 90 seconds, you should also set the executionTimeout property of the httpRuntime element in the web.config value to a value slightly greater than this value to prevent ASP.NET timeouts from occurring.

CorruptedConnectionDetectionEnabled

Advanced option. Whether to attempt to detect and log corrupted connection state in the classic ASP connection pool. These states can occur when the database server goes offline, but ASP does not detect connections that have been severed. Requires granting the application user permission to write to the application event log.

Web Site Options

SOLODirRoot

Folder that contains SOLO Server root directory. If during installation you chose to install SOLO Server at the web site root directory, this parameter should be "". Otherwise, if SOLO Server was installed in a subdirectory below the web root, this parameter should be the path to that directory from the root - i.e. "/solo". **Note:** Internally this value is used within SOLO Server when setting the path property on several http cookies. Since web browsers treat cookie paths as case-sensitive, this value is also case-sensitive. For this reason, we recommend always using lower case for this value and treating all paths within SOLO Server as lower case.

EnableAffiliateSignup

True/False as to whether the affiliate signup page should be enabled.

AffiliateMasterAgreementName

This should be set to the name of the agreement that the master identity hosting the server uses for Affiliates to review before signing up. Example "Concept Software Network Agreement".

AffiliateMasterAgreementURL

The document containing the master affiliate network agreement. This will be displayed on all authors' affiliate sign-up pages.

SOLOAffiliateSecure

Set to True to require affiliate pages to require a secure login through https.

Email Settings

EmailDeliveryMethod

The email delivery method. Can be one of the following:

- Network - Email sent using network mail delivery through the specified SMTPRemoteHost/SMTPRemotePort.

- PickupDirectoryFromIis - Emails are written to the default local IIS pickup directory.
- SpecifiedPickupDirectory - Emails are written to the specified file system directory.

SMTPRemoteHost

The SMTP server for Network mail delivery.

SMTPRemotePort

The remote port to use for Network mail delivery.

SMTPUseSsl

Whether to use an SSL connection for Network mail delivery (true or false).

SMTPUser

The SMTP user name, if necessary.

SMTPPassword

The SMTP user password, in necessary.

EmailAlwaysLogToQueue

When using Network as the EmailDeliveryMethod, set this to True to always log emails to the EmailPickupDirectory in addition to sending the email.

EmailPickupDirectory

The pickup directory for the SpecifiedPickupDirectory delivery method. When using Network delivery, this is also the location of the queue folder where the files will be written should the network server become unavailable.

SMTPGenericSenderEmail

When set, all outgoing emails to customers will use this address as the From address, and the original From address is moved to the Reply-To header.

EMailAdminName

From name used in administrative email messages to authors.

EMailAdminAddr

From email address used in administrative email messages to authors.

EmailOrderError

Email address to display to customer to contact when their account can't be found in the **Customer License Portal** lost password script or during other error conditions that typically never happen. In the case of the lost password script, the user can be directed to a support URL by specifying a value for the configuration parameter ErrorSupportURL.

EmailOrderSubject

Subject for default new order confirmation email.

EmailErrorLogPath

File system path to the log file where email errors are logged. Generally this is in the SOLO Server temp directory, but this is not required. Note that the user the website is running under should have permission to write to the directory.

File System Settings

SOLOCustomRootDir

File system root directory where customizable HTML, XSL, XML, and WebComponentPages templates/resource file root folders are located. This is set by the installer to point to the /SOLO/DLLS subdirectory off of the install root directory. In a default configuration, SOLO Server will assume each of the template directories to be the CustomHTML, CustomXSL, CustomMSL, and WebComponentPages subdirectories of this directory when loading template files from the file system.

SOLOCustomHTMLDir

Optional file system root directory for Custom HTML files to override the default directory of SOLOCustomRootDir\CustomHTML. The directory must allow the web site user read access.

SOLOCustomXSLDir

Optional file system root directory for Custom XSL files to override the default directory of SOLOCustomRootDir\CustomXSL. The directory must allow the web site user read access.

SOLOCustomXMLDir

Optional file system root directory for Custom XML files to override the default directory of SOLOCustomRootDir\CustomXML. The directory must allow the web site user read access.

TempDir

File system root directory to store temporary files. This directory must exist and the web site user must have read/write access. Note that a trailing backslash should NOT be specified.

FileStorageRoot

File system root directory for ESD files. This directory must exist and the web site user must have read/write access to it. This folder is typically not accessible via HTTP through any web site.

FileUltimate:DisableVideoThumbnails

Whether to disable the video thumbnails feature of the FileUltimate control used for managing storefront and ESD files. This feature is known to result in crashes of the IIS worker process in certain scenarios. Setting this to 1 will disable this feature and eliminate the crash issue.

Amazon Web Services Settings

UseAWSForESD

True/False as to whether to use Amazon Simple Storage Service (S3) for electronic software delivery.

AWSBucket

The AWS bucket name.

AWSRegion

The AWS region.

AWSAccessKey

Access Key for the AWS bucket.

AWSSecretKey

Secret Key for the AWS bucket.

Web Component Pages Settings

WebComponentPagesRoot

Optional file system root directory for Custom XSL files to override the default directory of SOLOCustomRootDir\WebComponentPages. The directory must allow the web site user read access.

WebComponentPagesDatabaseIdentifier

Application specific database identifier for database objects used by the WebComponentPages objects. This should always be "SOLO".

Cookie Settings

CookieEncryptionKey

Encryption key used when encrypting cookie values. A random string should be used here. If omitted, the default key will be used.

EnableLaxSameSiteCookies

Whether to mark all cookies as SameSite=Lax

EnableSecureCookies

Whether to mark all cookies as Secure

EnableHttpOnlyCookies

Whether to mark all cookies as HttpOnly

Fraud Control Settings

FraudIPAutoInsert

Set to True to enable automatic insertion of the IP address into the FraudIP table when HOLD is returned by bank.

FraudIPDaysToBlock

Number of days to block an IP address after insertion into the FraudIP table.

WorldPay Payment Gateway Options

WorldPayTest

Test value to pass when in test mode for the WorldPay payment gateway. Use the following values:

- 101 - Test mode returning a decline
- 100 - Test mode returning an approval
- 0 - Live mode

PayPal Payments Standard Options

PayPalLog

Set to "Yes" to enable PayPal logging.

PayPalBNCode

For use with the PayPal Partner program. The PayPal Partner BN Code. When specified, this value will be included as the bn form input on the .NET cart PayPalRedirect.aspx page.

PayPal Payments Pro Settings

PayFlowServer

The live PayPal Payments Pro processor host - currently payflowpro.paypal.com. Note that https:// should NOT be specified.

PayFlowTestServer

The test PayPal Payments Pro processor host - currently pilot-payflowpro.paypal.com. Note that https:// should NOT be specified.

PayFlowPort

The port to use when communicating with the PayPal server, typically 443 (for https).

PayFlowTimeout

The time in seconds to allow before timing out a connection to the PayPal server.

PayFlowProxyServer

The proxy server to use when connecting with the PayPal server (if applicable).

PayFlowProxyPort

The port on the proxy server to use when connecting with the PayPal server (if applicable).

PayFlowProxyUsername

The proxy username to use when connecting with the PayPal server (if applicable).

PayFlowProxyPassword

The proxy password to use when connecting with the PayPal server (if applicable).

PayFlowBNCode

For use with the PayPal Partner program. The PayPal PayFlow Partner BN Code. When specified, this value will be included in payment request to the PayFlow gateway.

Standard PayFlow API entries

The remaining entries here are the standard PayPal Payments Pro API configuration settings for tracing/logging and are not specific to SOLO Server. See the PayPal Payments Pro API documentation for more details.

Authorize.NET Settings

AuthorizeNETServer

The URL to the live Authorize.NET processor - currently https://secure2.authorize.net/gateway/transact.dll

AuthorizeNETTestServer

The URL to the test Authorize.NET processor - currently https://test.authorize.net/gateway/transact.dll

Stripe Settings

StripeConnectMasterMerchAcctID

For the Instant SOLO Server Shared URL instance, the MerchantAcctID of the Stripe master account.

Payment Server Web Service Settings

PaymentGatewayLogPath

The file system path to store payment gateway log files on the server. If left blank, no logging will be performed. The user account the web site is running under should have permissions to create and write files in the specified directory.

PaymentGatewayTimeout

The timeout (in seconds) for credit processing to wait for a response from the PaymentServer web service. Omit or set to 0 to use the default value of 3 minutes. Only set this value if you are having timeout issues due to slow responses from the payment gateway.

Avalara AvaTax Settings

AvalaraLogPath

The file system path to store Avalara AvaTax log files on the server. If left blank, no logging will be performed. The user account the web site is running under should have permissions to create and write files in the specified directory.

AvalaraLoggingLevel

Avalara AvaTax logging level. Two types of logging are supported. To use the logging built in to AvaTax, use "Avalara", which will create a single AvaTaxAPI.log file logging each request and response to/from Avalara. To use SOLO Server logging, use "SOLO", which will log the response JSON of each request to a separate file, formatted with indenting and newlines for easier readability. To use both logging methods, use "Avalara|SOLO".

Plugin Settings

PluginAssemblyPath:

The file system path to the location of the plugin assembly files on the server.

QuickBooks / accounting options

The following are advanced options. For more information, [contact us](#).

QBBankName

The default bank name used by tptqbbatchexport.asp and rptqbcheckexport.asp

Custom HTML Options

ProductCustomHTMLSearchType

Determines the method SOLO Server uses to find the custom HTML headers and footers in the ASP cart ordering process. Can take any of the following values:

- DatabaseFirst - The database is checked first, followed by the file system. This is the default setting.
- FileSystemFirst - The file system is checked first. Offers improved performance but reduced flexibility.

- FileSystemOnly - Only the file system is checked.

Reporting options

RptRecentOrdersDays

The number of days of orders to display in Recent Orders report. Set to 0 to only display the current day's orders.

SOLOUnshippedGlobal

Set to True to show all Unshipped Orders from all Authors for global users.

SOLORptRefresh

The number of seconds between automatic client refresh on reports that support automatic refresh. Set to "" to disable automatic refresh.

MaximumReportingDays

Set to the maximum number of days to allow reports to be run for.

MonthlyFeesMode

The mode for calculating monthly fees. Used by SoftwareKey internally for SOLO Server Shared or Dedicated URL billing.

Customer License Portal Settings

CustomerServiceNetRedirect

Set to True to automatically redirect to the .NET **Customer License Portal** when accessing an older customer service center page.

CustomerServiceNetAlwaysGlobal

If true, data shown in the .NET **Customer License Portal** includes data for all authors regardless of whether it is running in author mode.

CustomerServiceListingRecordCount

The number of records to display on any listing pages in the **Customer License Portal** which support pagination (currently the license, payment, and installation history pages). If omitted or set to 0, the default value of 15 will be used.

Miscellaneous Settings

MagicChargeNumber

This is the magic credit card number which will always be approved. It must be a valid credit card account number. The default is 4442780423232.

ScriptTimeout

Maximum Script timeout value (in seconds) for pages that send files.

DefaultMerchantAcctID

Default Merchant Account ID.

DefaultTestMerchantAcctID

Default Merchant Account ID associated with new author online signups.

SOLOListAuthorName

Set to True to display the Author name on appropriate pages such as the What to do Next area of the order confirmation. Set to False to remove the Author name from these places and make the site more generic. Set this option to False to make the ordering pages more anonymous.

OfferProductChkBox

Custom text for the label of the product updates checkbox on register page during checkout.

OfferPartnerChkBox

Custom text for the label of the new product and special offers checkbox on register page during checkout.

PriorityCodeMode

Set to True to display Priority Code Option on payment page.

CartCookiePermanent

Setting this to 1 causes the cookie used for maintaining state during cart orders to become permanent, allowing the user to return and be able to see their existing cart. This is set to 0 by default so only a temporary cookie is used.

AllowStoreCreditRefund

Setting this to 1 allows authors the option of issuing store credits for refunds instead of simply crediting the customer's card. See [Store Credits](#).

LogPaymentGatewayTraffic

Set this to True to log traffic between the payment gateway and SOLO Server.

DefaultImageUnavailable

Name of the image located in the images/solo subdirectory of SOLO Server do display when there is an error displaying an uploaded image. Defaults to "blank_image.gif". To customize, place the custom file in the SOLO Server image directory and update the filename here.

MaximumImageUploadBytes

Maximum size in bytes of image uploads for products/options as well as the storefront logo image. If set to 0, the default of 2MB (2097152 bytes) is used.

ServerIdentifier

When running in a load balanced environment, this can be used to add an identifier to the page title in the authors directory. The identifier will appear before the remainder of the title, and will also be included in any error email or declined order email notifications. Use the reserved value of MACHINE_NAME to automatically use the web server computer name.

LoginRedirect

If present, when logging in to the authors interface, users will be redirected to the specified URL with UserID and UserPW querystring parameters. Meant for use when migrating to a new SOLO Server URL.

InactiveMessage

A message to be displayed below the header in the authors interface for authors who have not completed signup.

UnrestrictedUploadsAllowed

True/false as to whether Master Users should be allowed to upload unrestricted content to the custom web directory.

ErrorSupportURL

The URL users should be directed to for general support when a problem occurs, such as when their email address can't be found in the customer database. If not defined, the user is referred to the email address defined in the variable EMailOrderError.

InternalWebServiceUseSSL

Whether internal web service calls should use an SSL connection.

EncryptedWebMethodSystemClockThreshold

The number of minutes difference in system time between the client and the server allowed by encrypted web methods (set to 0 to disable system time check).

OmitEncryptionKeyIDValidation

Whether the web methods on the XmlActivationService, XmlLicenseFileService, and XmlNetworkFloatingService web services omit the verification of the EncryptionKeyID against the AuthorID. When omitted, this is assumed to be false.

SendSpamErrorNotifications

true/false as to whether to send an error notification email when the hidden captcha on the author, affiliate, or trial signup pages is triggered.

EnableCartErrorNotifications

true/false as to whether to enable detailed email error notifications for exceptions handled by the cart.

AllowCrossAuthorPromotions

true/false as to whether bundles and upsells can be configured across authors, as well as whether items from multiple authors are allowed on the shopping cart. When set to true, the product and option drop downs on the bundled product and upsell configuration pages will display products/options from all authors rather than filtering on the current author, and the shopping cart will allow adding an item from an author other than the cart author.

SOLOInstanceType & ManagedAddAuthors

Applicable only for SOLO Server Shared and Dedicated URL instances. Controls several features specific to these instances.

EnableLicenseAudits

true/false as to whether auditing is enabled on the Licenses table. See [Audit Features](#) for more information.

CustomSSLHeader

Used when running SOLO Server behind an SSL offloading appliance. When running in this configuration, the appliance should be configured to inject a custom header into the request before forwarding it to SOLO Server, and this entry should be updated with the name of the header. SOLO Server will then consider traffic containing this header as secure.

CustomSSLPortEquivalent

Used when running SOLO Server behind an SSL offloading appliance. When running in this configuration, the appliance should be configured to forward SSL traffic to SOLO Server on a unique port, and this entry should be updated with that port number. SOLO Server will then consider traffic on this port as secure.

SwitchAuthorMode

Used to override the default behavior of the author switching functionality in the administrative interface. Can be set to the following values:

- None - All author switching functionality is hidden. Set to this value for instances where only one author account is present.
- AutoSearch - Upon opening the switch author dialog, the list will be automatically populated with open author accounts. Set this value when only a handful of author accounts are present.

IPLookupURL

The URL to use for IP address lookups within the administrative interface. Leave blank to use the default lookup at whois.arin.net. Use [varIPAddress] as a placeholder for the IP address.

ParentCatalogAuthorID

AuthorID of the parent author when running in **Multi-Tenant Catalog Mode**.

EnableAuthenticatedWebServiceLogging

Whether to enable usage logging for web service endpoints requiring authentication.

New Feature Settings

The following are advanced options used to control new features as they are incrementally introduced into production use. These settings should be left alone unless instructed otherwise by SoftwareKey support.

EnableExtendedFraudScreeningGlobal

True/False as to whether to enable extended fraud screening during order processing on a global basis.

NETOrderProcessorEnableGlobal

True/False as to whether to enable the new .NET based order processor on a global basis.

NETOrderProcessorStep

The processing step to transfer processing from the older ASP processor to the new .NET based order processor when processing online orders.

NETOrderProcessorStepOverride

The processing step to override the NETOrderProcessor step setting. Used for testing on an instance level when using a shared configuration file among multiple SOLO instances.

NETPayPalOrderProcessorStep

The processing step to transfer processing from the older ASP processor to the new .NET based order processor when processing PayPal orders.

NETPayPalOrderProcessorStepOverride

The processing step to override the NETPayPalOrderProcessor step setting. Used for testing on an instance level when using a shared configuration file among multiple SOLO instances.

NETOrderProcessorBCCList

Meant for QA testing purposes. A comma separated list of email addresses to BCC on all email notifications sent by the .NET order processor.

NETOrderProcessorPluginTestMode

Meant for QA testing purposes. The result to be returned by when testing plugin processing in the .NET order processor (Success, Error, or Exception).

EnableNETLicenseDetailsPage

Whether to enable the new .NET based license details page in the administrative interface. Not yet supported.

EnableNETCustomerPasswordReset

Whether to enable new functionality in the customer license portal to allow customers to generate a password reset request rather than recovering their existing password.

DisableNewAuthorHomePage

Whether to disable the new author home page and revert to the older version.

EnableServiceUsageBilling

Applicable only for SOLO Server Shared and Dedicated URL instances. Controls whether overage billing for service usage transactions is enabled.

DisableNETPricingEngine

Whether to revert to the older COM based pricing engine in the order processor.

SOLO.config File Options

Several configuration entries related to database maintenance, HTTP request validation, and error reporting are shared between the classic ASP and ASP.NET portions of SOLO Server and are located in the SOLO.config file. The file is an XML file with a root element of <SOLOSettings> and the following child elements:

DatabaseEnabled

True/False as to whether the database is on or offline.

MaintenanceEnableIPAddr

The range of IP addresses that can enable/disable the database. Entered in the following format IP:Mask with each entry separated by a "|" character. The IP address or subnet of your corporate office should be used for this parameter.

MaintenanceMessage

Message to display when the database is taken offline for maintenance.

HttpRequestValidatorConfiguration

Configuration section for the HttpRequestValidator component, which performs additional request validation on the classic non ASP.NET resources to prevent cross site scripting attacks. Typically no changes are needed to this section if installing with SOLO Server Build 1.6.0.71 or later into a fresh website or virtual directory using the "Specify Website Configured in IIS" option of the installer. If this is not the case and SOLO Server is installed in a subdirectory rather than in the web root, uncomment the commented Folder element under the AllowedPaths element as well as its closing element, and update the Name attribute with the subfolder path to the SOLO root. For example, if the path to SOLO Server is http://www.company.com/solo/, the Folder element should be **<Folder Name="SOLO">**.

HttpErrorHandlerConfiguration

Configuration section for the HttpErrorHandler component, which handles any unhandled exceptions thrown in the .NET portions of SOLO Server. Typically no changes are needed to this section if installing with SOLO Server Build 1.6.0.71 or later into a fresh website or virtual directory. The only changes that should be made to this section is the addition of any additional Email elements in the ReceiverEmails section. You may optionally remove the default entry for SOLOErrors@softwarekey.com if you do not want SOLO Server to send error notification emails containing diagnostic information (which may contain customer data) to our error logging system.

Changing Values in SOLO.config

Important

If any changes are made to the SOLO.config file, be sure to save global.asa and web.config so that IIS/ASP.NET sees new timestamps on this file and re-loads the configuration parameters from SOLO.config. Alternatively, you may reset IIS or recycle the application pool to force the new parameters to be read.

DailyProcessor.exe.config File Options

The DailyProcessor.exe.config file contains several application options used by the DailyProcessor.exe application which runs SOLO Server's daily processes. Before enabling the SOLO Server Daily Processing **Database Job**, this file needs to be configured. The configuration options are as follows (note that in most cases, you can simply copy over the corresponding values from the web site's web.config file).

Database Settings

ConnectionString:

The connection string to the SOLO Server database.

QueryTimeout:

The timeout value (in seconds) to allow queries to execute on. If set to 0 or omitted, the default value of 30 seconds is used. The default is 300 seconds (5 minutes).

Web Server Settings

HttpHost

The SOLO Server domain name. Do not include the http or https prefix.

SOLODirRoot

Folder that contains SOLO Server root directory. If during installation you chose to install SOLO Server at the web site root directory, this parameter should be "". Otherwise, if SOLO Server was installed in a subdirectory below the web root, this parameter should be the path to that directory from the root - i.e. "/solo". **Note:** Internally this value is used within SOLO Server when setting the path property on several http cookies. Since web browsers treat cookie paths as case-sensitive, this value is also case-sensitive. For this reason, we recommend always using lower case for this value and treating all paths within SOLO Server as lower case.

Email Settings

EmailDeliveryMethod

The email delivery method. Can be one of the following:

- Network - Email sent using network mail delivery through the specified SMTPRemoteHost/SMTPRemotePort.
- PickupDirectoryFromIis - Emails are written to the default local IIS pickup directory.
- SpecifiedPickupDirectory - Emails are written to the specified file system directory.

SMTPRemoteHost

The SMTP server for Network mail delivery.

SMTPRemotePort

The remote port to use for Network mail delivery.

SMTPUseSsl

Whether to use an SSL connection for Network mail delivery (true or false).

SMTPUser

The SMTP user name, if necessary.

SMTPPassword

The SMTP user password, in necessary.

EmailAlwaysLogToQueue

When using Network as the EmailDeliveryMethod, set this to True to always log emails to the EmailPickupDirectory in addition to sending the email.

EmailPickupDirectory

The pickup directory for the SpecifiedPickupDirectory delivery method. When using Network delivery, this is also the location of the queue folder where the files will be written should the network server become unavailable. Note that the user the database job is running under should have permission to write to the directory.

EMailErrorLogPath

File system path to the log file where email errors are logged. Generally this is in the SOLO Server temp directory, but this is not required. Note that the user the database job is running under should have permission to write to the directory.

File System Settings

StorefrontFilesRoot

The file system path to the web site custom directory. Only applicable for SOLO Server Shared or Dedicated URL.

ESDFilesRoot

The file system path to the web site ESD directory. Only applicable for SOLO Server Shared or Dedicated URL.

ArchiveRoot

The file system path to the archive directory. Only applicable for SOLO Server Shared or Dedicated URL.

Web Component Pages Settings

WebComponentPagesDatabaseIdentifier

Application specific database identifier for database objects used by the WebComponentPages objects. This should always be "SOLO".

Plugin Settings

PluginAssemblyPath:

The file system path to the location of the plugin assembly files on the server.

Misc Settings

Test Mode

True/False as to whether to run in test mode.

AdminSenderEmail

The email address to override the default email used as the sender email for administrative notifications. The default is the constructed from the HttpHost entry detailed above as SOLOServer@[HttpHost].

AdminEmails

List of emails to send summary notifications to (split by , or ;).

ErrorEmails

List of emails to send summary notifications to (split by , or ;) when an exception occurs during processing. Note that the exception information will also be included in the emails specified in the AdminEmails entry, so they need not be duplicated here. You may optionally remove the default entry for SOLOErrors@softwarekey.com if you do not want SOLO Server to send error notification emails containing diagnostic information (which may contain customer data) to our error logging system.

Directory Descriptions

SOLO Server employs several top-level directories for various functions as described below:

Affiliate

A basic affiliate tracking system. Affiliates can sign up to promote your software and log in to review sales statistics.

Authors

Administration interface for all SOLO Server functions.

Customers

Customer self-service portal. Customers can log in, reprint receipts, download software, purchase upgrades, etc. [Click here for more info!](#)

Postings

Collects usage data from applications.

Products

Online store and cart pages.

Templates

Directory to hold the HTML templates for use in generating online invoices.

Unlock

Provides activation codes to applications (Electronic License Activation).

WebServices

Several Web service interfaces for programmatic access to SOLO Server.

For example, to access the administration interface, use the following naming convention: **<https://secure.softwarekey.com/solo/authors/>**

Note that if you are hosting SOLO Server internally, the above naming convention may be different. Contact your IT administrator for the correct SOLO Server base URL.

Customizing SOLO Server HTML Files

Customizing HTML files

In addition to the configurable Virtual Storefront for every Author and Distributor, the six areas of SOLO Server (Affiliates, Authors, Customers, Postings, Products, and Unlock) can also be customized in the file system in several different ways. Use of the file system customizations is outlined below:

Overview

Each of the six areas of SOLO Server have their own customizable HTML "Top" and "Bottom" files (CustomersTop.htm, CustomersBottom.htm, etc). The default files (located in the root of the SWKey\SOLO\DLLs\CustomHTML directory) use the SoftwareKey.com graphics. These files can be used as a baseline for any customizations, so make sure to back them up to a safe location. The files are used by SOLO Server as follows:

- The "Top" HTML file is output to the browser.
- The page-specific information is rendered and output to the browser.
- The "Bottom" HTML file is output to the browser.
- Note that there are multiple files for the authors and products directories (ProductsTopNET.htm, Product-sBottomNET.htm, etc.). Due to the differing default markup output by ASP.NET, these additional files are required for certain pages which use .NET rather than ASP.

Through tables, you can fully customize the look and feel of the page - top, left, bottom, and right.

Do NOT edit these files in an HTML editor other than Notepad as intelligent editors tend to add HTML when it sees missing tags. Through this mechanism, you or your webmaster can control the entire look and feel of all of the pages. Some of the files have variable fields and javascript that should not be altered. The variable fields all start with **[var.** Be sure to backup the files before modifying them in case you make a mistake. Also note that it is required to have both a "Top" and "Bottom" custom file available for a given area, or the system will assume there are no files. Note that any links in your custom html that link into a SOLO Server subdirectory, such as a link to view the cart or to the **Customer License Portal** pages must access the SOLO Server subdirectories with the subdirectory name in all lower case (for example <http://secure.softwarekey.com/solo/customers> and not <http://secure.softwarekey.com/solo/Customers>). If mixed case subdirectory names are used, you will experience problems with cookies being set in the browser.

File Locations

The DLLs use App.Path to determine the directory where the top and bottom HTML files are located unless the Application variable SOLOCustomHTMLDir is defined in the global.asa file. These files are NOT in the normal directory structure of the web site. HOWEVER, the graphic files that are referenced by these top and bottom HTML files must be in the directory structure of the web site. If you use relative paths for the image files, the path will be relative to the current area of SOLO Server that the customer is in. For example, if you modify CustomersTop.htm to include an image as `<img src=c="images/graphic1.gif">` and the **Customer License Portal** page is at www.company.com/customers/, the browser will look for the image directory below the customers directory. If you were to specify ``, the browser will look for the graphic in the www.company.com/images/ directory.

Default Files

The default "Top" and "Bottom" files located in the CustomHTML root directory will be used when custom html cannot be found in either the database or the file system by any other method. These are useful for setting the look and feel of each directory on a server wide basis.

Host Name Based Files

If several domains are running against an installation of SOLO Server, it is also possible to set up custom html files on a domain name basis. To do so, create a subdirectory in the custom html directory with a name matching the applicable host name (for example, secure.softwarekey.com) and create custom files there. The files in this folder will be used for any pages run on that host name.

Cookie/Querystring Based Files

Custom HTML can also be determined by passing a `ch=XXXX` querystring parameter on links into SOLO Server. This will cause a cookie to be set on the users browser storing the `ch=XXXX` parameter. Create a subdirectory from the CustomHTML root named after the XXXX parameter. When the cookie or querystring parameter is present, the files from this directory will be used.

Note that SOLO Server first tries to use the cookie/querystring method, and if no cookie or querystring parameter is found or no matching directory is found, it next tries to use the domain name method. If no domain directory is found, the root level custom HTML files are used. Also note that if custom ordering HTML is set up for the storefront in SOLO Server, the ordering pages will not use either of these methods, and will instead output the custom html that is entered in SOLO Server.

Changing Search Type for the Cart Ordering Pages

To maximize efficiency, it is possible to run the custom html search code on the cart ordering process in three different ways. This is controlled by the `ProductCustomHTMLSearchType` application variable, which can take the following values:

- **DatabaseFirst** (default): The database search for author/distributor/product virtual storefront code is performed first. If nothing is found, the filesystem is then checked, falling back to default files if nothing is found there.
- **FileSystemFirst**: The file system search is performed first, and if nothing is found, the database search is performed, falling back to the default filesystem files if nothing is found. This offers increased performance as the database query will not need to run as often, but sacrifices flexibility.
- **FileSystemOnly**: Only the file system is checked. Use this for maximum performance as the database will never be queried. Offers relatively little flexibility.

Upgrading SOLO Server

Be sure that when any new version of SOLO Server is installed that you backup any of the customized HTML files and restore after the new version is installed. The installer should not update these files, but in the event it does, you will have a backup.

Customizing and Extending SOLO Server

SOLO Server offers many options to extend and customize its default functionality. Possible custom implementations range from simply changing the look and feel of portions of SOLO Server to more advanced implementations such as customized cart workflows and customized plugins. A brief overview of these options follows:

Templates and Resource Files

Many portions of SOLO Server's web interface are generated from template or resource files which can be overridden to implement a different look and feel. There are four types of these files:

- **HTML Templates:** Template files containing HTML markup which are used to render the default header and footer in each section of SOLO Server.
- **XML Resource Files:** Resource files containing XML data used to render certain portions of SOLO Server.
- **XSLT Templates:** Template files containing XSLT transformations used to render certain portions of SOLO Server from xml data.
- **WebComponentPages Templates and Resource Files** - A majority of the ASP.NET web pages in SOLO Server are implemented using our "WebComponentPages" framework. From a high level perspective, this framework renders each web page by generating an XML document containing dynamic data, combining this with a static XML resource file, and then transforming this xml document into HTML using an XSLT template file. This allows customizing the static data (such as form label text) as well as the way the page renders in the browser with no need to change any compiled code.

The default versions of these files are installed into the SOLO/DLLS/[SubFolder] subfolders of the install directory (by default C:\SWKey\):

- CustomHTML
- CustomXML
- CustomXSL
- WebComponentPages

To override the default versions of these files, follow these steps:

- In the root folder of the file type to be overridden, create a Custom subfolder.
- Copy all files from the root folder of the file type to this new subdirectory.
- Update the applicable web.config entry (SOLOCustomHTMLDir, SOLOCustomXMLDir, SOLOCustomXSLDir, or WebComponentPagesRoot) to point to the file system location of this new folder. This will override the default location from which SOLO Server reads these files.
- Customize the applicable files within the new directory. It is highly recommended that detailed notes on the customizations be kept for future reference when upgrading.
- Specific details of the actual customizations are out of the scope of this topic.

When upgrading SOLO Server to a newer version, special steps need to be taken when customized templates are in place:

- First, identify which template/resource files have been customized.
- Next, view the SOLO Server release notes. For each release of SOLO Server, any template/resource files which have changed will be listed in the Upgrade Notes section of the release notes. Identify if any of the files that have been customized are listed as changed between the currently installed SOLO Server version and the version being upgraded to.
 - If no files were identified that are both customized and changed between versions, then after installing the upgrade it is necessary to copy all of the changed files to the Custom subdirectory. After running the installer, simply copy all changed files from the root directory to their corresponding location in the Custom subdirectory.
 - If files were identified, it will be necessary to identify any changes to the default versions which need to be merged into the customized version, and then to perform the merge and deploy the new files.

Database Stored Procedures

Several stored procedures in the SOLO Server database contain customization hooks to allow implementing a custom version of the stored procedure. For example, the stored procedure used to retrieve the data for generating a printable invoice contains a customization hook. This could be overridden to return additional data, which could then be used in conjunction with a custom XSL Template to generate a customized invoice using the additional data.

Custom Plugins

SOLO Server contains several places where a customized plugin can be called to perform additional processing not supported by SOLO Server. For example, when integrating with a 3rd party shipping provider, a plugin could be implemented and configured to run after an order is processed through the cart which would submit shipping information in real time.

Custom Web Pages

SOLO Server supports running completely custom web pages within a special "custom" subdirectory within the web site. These custom pages can be tightly integrated with the standard SOLO Server pages, and SOLO Server offers several mechanisms which can be used to tie these pages into the standard SOLO Server interface. Some examples include:

- The cart has support to insert additional custom pages into the checkout process both after customer registration/verification as well as after order processing. This can be used to achieve things such as collecting additional customer data after registration or displaying a customized receipt page after purchase.
- You can specify customized markup to display on the customer details page within the authors interface. A custom web page could be created to allow performing an administrative task against the customer, such as sending a notification email. Markup could be entered to display an "Email Customer" link or button on the customer details page to take the user to the custom page.

Business Continuity and Failover

SOLO Server Dedicated URL customers may optionally sign up for our Business Continuity Plan. This includes:

- One SOLO Server Self-Hosted license to use for setting up a failover instance of SOLO Server on your own infrastructure or cloud provider of choice.
- Automated daily off site backups of your SOLO Server SQL Server database, including a weekly full backup and daily differential backups.

If you are a SOLO Server Dedicated URL customer interested in this service, please contact us at support@softwarekey.com.

Configuring Off Site Database Backups

The first step in setting up business continuity is configuring off site backups from our data center to your location of choice. Currently, we support Amazon S3 and Azure blob storage, but may be able to support other endpoints if needed.

- After we process setting things up on our end, we will reply to the ticket opened during your request for the service asking for details on the Amazon S3 or Azure blob storage account where the off site backups will be copied.
- Once we have this information, we will perform an initial synchronization between your backup directory on our infrastructure and the off site location.
- After the initial synchronization, we will then configure an automated daily sync which will copy over any new backup files to the off site storage and optionally remove older backup files, and will monitor this going forward.

Failover Server Setup

In order to prepare for the unlikely event that requires failing over to your infrastructure, the next step is to set up a SOLO Server failover server on your infrastructure as follows:

- There will be several instances where you will need to correspond with our support staff for additional details specific to your SOLO Server instance. Before starting, open a ticket at support@softwarekey.com with the title "SOLO Server Business Continuity Setup". You should receive a confirmation email. Going forward, reply to the email thread for the ticket, which will keep all correspondence in one ticket in our ticketing system.
- Provision the necessary infrastructure based on the SOLO Server **System Requirements**.
- Log in to the **Customer License Portal**, click on the *Downloads* button, locate the download for SOLO Server, and download the installer package.
- Perform a fresh install of SOLO Server against a blank database following the **Installation Instructions**. Some additional notes:
 - **IMPORTANT:** By default, all SOLO Server Dedicated URL instances are installed into the solo subdirectory off of the web site root. Be sure to also specify the solo subdirectory for the web site when installing SOLO Server.
 - For the SSL configuration, SOLO Server Dedicated URL instances use SSL certificates provided through **Let's Encrypt**, which expire after 90 days and are automatically renewed every 60 days. For the failover server, you will either need to obtain a certificate from a commercial provider, or be prepared to obtain one through Let's Encrypt in the event of a failover (since Let's Encrypt will not be able to issue you a certificate until DNS has been pointed to the failover server and your SOLO Server domain is accessible on the failover server over the internet).
 - Though you can use any name for the database, it may be desired to use a name matching that in production. In addition, you may also want to configure database authentication to match production. If so, reply to the ticket and we can provide that information.
 - Similarly, while you can set the install and web directories to any locations on the file system, it may also be desired to set these to match production. If so, reply to the support ticket and we can provide that information as well.
 - For SMTP, SOLO Server Dedicated URL instances use **SMTP2GO** for mail delivery, however you must provide your own SMTP server or service for the failover server. SMTP2GO offers a free plan which allows sending up to 1000 emails per month which can easily be upgraded to a paid plan in the event of a failover.
 - The Setting up Configuration Files step can be skipped. The installer will initialize these files, and after installation you can reply to the support ticket with these files attached. We will then merge in values from production and provide updated versions that can be swapped in.
 - For signing in, you will need to use a hosts file entry to point your SOLO Server domain to the failover server. This is important, as when SOLO Server is activated, the activation is tied to the domain name.
 - After activating SOLO Server, you can skip the step on removing the default master user account, as the database restore later on will take care of this.

- The Secure Internal Web Services and Encrypted Cookies step can be skipped, as this will be taken care of when we merge in the values from production into the configuration files.
- Similarly, the Generate Encryption Keys step can be skipped, as this will be taken care of by the database restore later on.
- For the Customize HTML Files step, reply to the support ticket for instructions. Most likely we'll simply need to provide you the files to swap in to the W3C directory, but if any further changes are needed we will provide instructions.
- For the Finalize the Database Configuration section:
 - Setting up maintenance jobs is not necessary until failover has occurred, however it is recommended to have this in place ahead of time and tested and then left disabled until failover occurs.
 - For configuring the SOLO Server database jobs, reply to the support ticket for further instructions. We will examine your current production jobs and provide instructions for the initial configuration. It is important to not enable any of these jobs, as this may result in customers receiving emails that they are not meant to receive.
 - All of the steps after configuring the database jobs can be skipped, as they will be handled by the database restore.
- Next, restore your production database to the failover server:
 - From your backup store where the database backups are copied, locate the most recent full backup and differential backup files and copy them to the server. Only the most recent differential is needed since this will include all differences since the last full backup - including any changes in any interim differential backups.
 - Restore the full backup over the existing database, choosing the options WITH REPLACE and RESTORE WITH NORECOVERY.
 - Next, restore the differential backup, choosing the option RESTORE WITH RECOVERY.
 - Restore the user permissions to the restored database by running the following SQL script, replacing server_loginname with the login name used during installation:
 - ALTER USER [SOLOServer] WITH LOGIN = [server_loginname];
- At this point, you should be able to log in to SOLO Server with your production user account using a hosts entry and perform any testing/verification.
- Any customizations as well as ESD or Storefront files uploaded to your production SOLO Server instance must next be synced to the failover server.
 - For any customizations, reply to the ticket and we will provide instructions.
 - To sync any ESD or Storefront files, navigate to the **Manage Files** page on the production server, download all files from both the ESD Files and Storefront Files directories, and then upload them to the failover server using the same directory structure. The easiest way to do this is to select all files from each directory, choose the Add to Zip option to add them to a zip file, download the zip file, then upload the zip to the failover server and unzip it.

Failover Procedure

In the unlikely event a failover is required, follow these steps:

- Repeat the above steps to refresh the database from the most recent full and differential backup files. Note that the data will only be as recent as the last backup, so it is possible that the data will be slightly out of date.
 - From your backup store where the database backups are copied, locate the most recent full backup and differential backup files and copy them to the server. Only the most recent differential is needed since this will include all differences since the last full backup - including any changes in any interim differential backups.
 - Restore the full backup over the existing database, choosing the options WITH REPLACE and RESTORE WITH NORECOVERY.
 - Next, restore the differential backup, choosing the option RESTORE WITH RECOVERY.
 - Restore the user permissions to the restored database by running the following SQL script, replacing server_loginname with the login name used during installation:
 - ALTER USER [SOLOServer] WITH LOGIN = [server_loginname];
- Update DNS:
 - Remove the CNAME record pointing your SOLO Server domain to solo.yourdomain.softwarekey.com.
 - Add an A record pointing your SOLO Server domain to your failover server IP.
- Enable any SQL Server database maintenance jobs.
- Enable the SOLO Server SQL Server database jobs.
- Once DNS has propagated, failover should be complete.

Ongoing Maintenance

New versions of SOLO Server are released on a regular basis which may contain database schema changes, and SOLO Server Dedicated URL instances are always kept on the latest version. Thus, it is necessary to keep the failover instance of SOLO Server up to date with the latest version of SOLO Server to maintain compatibility between the application and the database.

- In the ticket opened for the initial setup, we will ask you to provide an email address to contact when a new version of SOLO Server is released.
- When notified of a new SOLO Server release, you will need to upgrade the failover server to the new version of SOLO Server.
- To upgrade, follow the [Upgrade Instructions](#).

In addition to keeping SOLO Server up to date, any customizations as well as ESD or Storefront files uploaded to your production SOLO Server instance must also be kept in sync on the failover server.

- To keep ESD and Storefront files in sync, simply be sure that any changes made through the [Manage Files](#) page in production are duplicated on the failover server.
- For any customizations, we will contact you at the same email specified for new SOLO Server releases with instructions.

Administration Overview

SOLO Server is accessed by **logging in** with user credentials. You can designate administrator users with the permissions to manage your account and other users.

The topics in the Advanced Administration section only apply to account administrators or to those who are self-hosting SOLO Server.

Managing Users, Groups, and Email Notifications

Staff members who need to log into SOLO Server must be assigned their own User ID and Password. Each user can be assigned specific permissions and notifications within SOLO Server, such as the ability to add or edit licenses. The User ID is also logged for certain actions performed in SOLO Server, allowing you to see who added or last modified a record.

Users can also be placed into groups, and will inherit any permissions given to the group. Any additional permissions given to a user will override the group settings. This allows administrators to quickly assign a unique set of permissions while still having flexibility to enable additional permissions per user.

The first User ID assigned to an Author account has the permission to add and manage other users as well as groups.

Important

For SOLO Server Dedicated URL instances hosted by SoftwareKey, SoftwareKey Support Users cannot be edited and are not included in the active user count.

Adding a New User

You can access the Users page through the top-right menu: *(User Name) / Users*

A listing of current users will be displayed. Press the *Add New* button to add a new user. Here is an example screenshot:

View Users Add New Export Users List Active Users: 2				
	User ID	Name	Master ID	Group Name
[View] [Edit] [Del]	SWK_admin	admin		Administrators
[View] [Edit] [Del]	Test	Test User		NONE

When adding a new user, you can optionally send a custom Welcome Mailing that you have configured. See [Configuring Custom Mailings](#) and [User Welcome Mailings](#) for details on supported search/replace parameters for this mailing.

We recommend enabling the *Force Password Change* property when adding a new user or changing the password for an existing user. The user will be prompted to change their password once they successfully login with the password you provided them.

For setting the other properties, it is easiest to simply assign the user to a group since the user will inherit all the enabled group properties. By default, SOLO Server automatically creates the Administrators, Power Users, and Customer Service Rep groups with appropriate properties enabled for each. You can review and adjust these default groups and/or create new groups for the various departments across your organization. You can access the Groups page through the top-right menu: *(User Name) / Groups / Roles*:

View Groups Add New Manage Users		
	Group Name	Description
[View] [Edit] [Del]	Administrators	Has global access to all areas
[View] [Edit] [Del]	Customer Service Rep	Has access to most customer service activities
[View] [Edit] [Del]	Power Users	Has global access except user administration

See the [Properties](#) section below for more details on each property. The properties that start with "Notify" will send an email notification to the user based on specific circumstances.

Important

For security reasons, certain SOLO Server **web services** require the following to be passed to the web method:

- Author ID
- API User ID
- API User Password

If you are using any of the web methods that require these values as inputs, you need to create a user with the *Integration User* property enabled. An Intergration User will be used **exclusively** for the web services, and **cannot** log into the SOLO Server author interface.

See the **Web Service Security section** for more details on adding an Integration User.

Resetting a Locked User Account

SOLO Server performs a velocity check against failed logins by both User ID and IP Address, and will automatically lock out a User ID and IP address which makes multiple failed login attempts in a short period of time. This prevents brute force attacks to gain access to the SOLO Server administrative interface. Unfortunately, this sometimes results in a user being locked out inadvertently. When this occurs, you can unblock the user account by pressing the *Reset Login Check* button at the top of the page when viewing the user details.

View User Audit History

All changes to user accounts are audited. To view the audit history for a user, simply click the "View Audit History" button in the page heading. See **Viewing Audit History** for more details.

Properties

Users and groups are defined by the following properties (note that some properties are not shared among users/groups - this will be noted):

General Information - Users

User ID

This is what the user will use to log into the administration interface. This is typically a number or last name and first initial. This is only editable when creating a new user. Once the user is created, this cannot be changed.

Password

The user's password, used to log into the administration interface along with the User ID. When adding a new user, this is a required field. When updating an existing user, leave this field blank to leave the password as is, or enter a new password to change the password. By default, when adding a new user, this will be pre-populated with a random password. Click "Generate New Password" to generate a new random password. When creating a new user or changing the password on an existing user, be sure to record the password prior to saving the change, as the password cannot be displayed once saved.

Last Login

Read only. The date/time of the last login for the user.

Last Login IP

Read only. The IP address of the last login for the user. Click the IP address to perform a lookup on the IP address in a new window.

Entered By/Entered Date

Read only. The User ID which entered the user and the date/time the user was entered into the system.

Modified By/Modified Date

Read only. The User ID who last modified the user and the date/time the modification was made.

User Name

The user's real name.

E-Mail

The user's email address. This is the email address any notifications the user is signed up for will be sent to.

Welcome Mailing

When adding a new user, optionally choose a mailing to send to the new user after account creation. See [User Welcome Mailings](#) for details on supported search/replace parameters for this mailing.

General Information - Groups

Group Name

The name of the group.

Entered By/Entered Date

Read only. The User ID which entered the user and the date/time the user was entered into the system.

Modified By/Modified Date

Read only. The User ID who last modified the user and the date/time the modification was made.

Settings - Users

Group

The group the user is assigned to.

Order Level

Order Level can be used to restrict users from not having access to certain products. Users must have at least the order level specified on a product to have access to the product. For example, if you set a product's order level to 10 and you leave a users order level at 0, that user will not see the product.

Outside Access

This can be used to only allow a user to log in from a certain IP address or range of IP addresses. It requires you to enter an IP address and subnet mask. It must be entered in the following format xxx.xxx.xxx.xxx:yyy.yyy.yyy.yyy|xxx.xxx.xxx.xxx:yyy.yyy.yyy.yyy. The | (pipe) separates the IP addresses. If you give a subnet of 255.0.0.0 and IP of 65.12.12.12, anyone with a 65. IP address will be allowed to enter. Note that currently only IPv4 addresses are supported.

Change Password

Check this to force the user to change their password the next time they log in.

Enabled

Whether the user is enabled. If this box is not checked, this user will not be allowed to log in. When editing your own user account, you will be prompted for confirmation if you uncheck this, as you will immediately be locked out of your account upon saving the setting.

Master User ID

Grants access to senior level administrative functionality and access to all authors on the system. Master User access is not available to authors using SOLO Server Shared URL.

Global Access

If this box is checked, the user has global access for reports and customer searching.

Read Only

If this box is checked, the user has read only access - they can view anything allowed by other permissions, but cannot change anything. When editing your own user account, you will be prompted for confirmation if you check this, as you will immediately be locked out of making any further changes in SOLO upon saving the setting.

Integration User

Whether the user account is used for an integration with SOLO Server web services. When set, the user account can only be used for web service calls to SOLO Server and cannot be used to log in to the administrative interface. In addition the user account will be assigned API credentials to use for authenticating with the web services as outlined below. Note that this will be hidden when editing your own user account to prevent accidentally locking the account out of SOLO Server.

API Credentials

Available when the user is marked as an integration user. Credentials for use authenticating with SOLO Server web service methods which require user authentication. These will be automatically generated when marking a user as an integration user. To generate new credentials, click the Generate New Credentials button. Note that generating new credentials will immediately invalidate the existing credentials, which will cause integrations using these credentials to stop working until they are updated with the new credentials.

API User ID

The API User ID for web service API calls. This is passed in the userID parameter for parameterized web methods, and the UserID element for XML based web methods.

API User Password

The API User password for web service API calls. This is passed in the userPassword parameter for parameterized web methods, and the UserPassword element for XML based web methods.

Settings - Groups

Description

A short description of the group.

Outside Access

This can be used to only allow a user to log in from a certain IP address or range of IP addresses. It requires you to enter an IP address and subnet mask. It must be entered in the following format xxx.xxx.xxx.xxx:yyy.yyy.yyy.yyy|xxx.xxx.xxx.xxx:yyy.yyy.yyy.yyy. The | (pipe) separates the IP addresses. If you give a subnet of 255.0.0.0 and IP of 65.12.12.12, anyone with a 65. IP address will be allowed to enter.

Read Only

If this box is checked, the group has read only access - users in the group can view anything allowed by other permissions, but cannot change anything.

Master User ID Only - Users and Groups

The following permissions/notification settings can only be set by users with Master User access - they will not be displayed for other users. Master User access is not available to authors using SOLO Server Shared URL.

Accounting Reports

Whether the user has permission to access advanced accounting reports.

Issue Chargeback

Whether the user has permission to issue a credit card chargeback.

Issue RMAs

Whether the user has permission to issue RMAs.

View Password

Whether the user has permission to view customer passwords. Note that implementation of this permission is currently a work in progress.

View CC Numbers

Whether the user has permission to view credit card numbers. If this is not checked, users will only see the last 4 numbers of credit cards.

Upload Storefront Files

Whether the user has permission to upload files for the virtual storefront.

Notify Registrations

Whether the user will receive email notification email when a customer registers a product.

Notify Chargebacks

Whether the user will receive email notification of any chargebacks.

Notify Errors

Whether the user will receive email notification of any errors generated during credit processing of online check-outs.

Notify Referrals

Whether the user will receive email notification of any referrals returned by the payment gateway.

Notify Duplicates

Whether the user will receive email notification of any duplicate charges run against the payment gateway.

Notify Author Signups

Whether the user will receive an email notification when a new author signs up.

Report Access - Users and Groups

Report Access

Whether the user has access to basic reports.

Financial Access

Whether the user has access to extended sales and financial reports.

Shipping Reports Access

Whether the user has access to shipping reports.

Sales Reports Access

Whether the user has access to sales reports.

Pending & Declined Reports

Whether the user has permission to view the pending orders and declined orders reports.

User Permissions - Users and Groups

Manage Account

Whether the user has permission to update company contact information. For SOLO Server Shared or Dedicated URL, this also controls whether the user also has permission to update company billing information. Users with this permission will also receive email notifications when either the contact or billing information of their author account is updated.

This can only be granted by users with either Master User or Manage Account permission.

Add Tickets

Whether the user has permission to add new tickets.

Edit Tickets

Whether the user has permission to edit existing tickets.

Ticket FAQ KB

Whether the user has permission to mark tickets to be included in the FAQs and the Knowledge Base.

Manage Storefront

Whether the user has permission to manage the virtual storefront.

Manage Records

Whether the user has permission to transfer licenses, merge customers, and edit ticket notes.

Manage Users

Whether the user has permission to manage users. When editing your own user account, you will be prompted for confirmation if you uncheck this, as you will immediately be unable to make any further permissions changes upon saving the setting.

Manage Groups

Whether the user has permission to manage groups.

Reset Activation Count

Whether the user has permission to reset the activation count on licenses whose activations have run down to zero.

Issue Store Credit

Whether the user has permission to issue store credits.

Manage Mailings

Whether the user has permission to view and edit mailings.

Override Rules

Whether the user has permission to override product option rules that are marked "Allow User Override".

Customer/License Access - Users and Groups

Add Single Customer

Whether the user has permission to add a single customer.

Add Multiple Customers

Whether the user has permission to add multiple customers/licenses.

Edit Customers

Whether the user has permission to edit customer records.

Add Licenses

Whether the user has permission to add licenses.

Edit Licenses

Whether the user has permission to edit licenses.

Bulk Modify Licenses

Whether the user has permission to bulk modify licenses.

Activate Licenses

Whether the user has permission to activate licenses.

Manage Installations

Whether the user has permission to deactivate/reactivate installations.

Add Invoices

Whether the user has permission to add invoices.

Edit Invoices

Whether the user has permission to edit invoices.

Void Invoices

Whether the user has permission to void invoices.

Invoice Charge Credit Card

Whether the user has permission to charge credit cards on the invoice add/edit page.

Issue Refund

Whether the user has permission to issue a refund.

Notify Emails - Users and Groups

Notify Trial DL

Whether the user will receive an email notification when a customer downloads a trial.

Notify Orders

Whether the user will receive an email notification when a customer makes a purchase. Note that this cannot be checked if Notify Orders Shipping is checked.

Notify Orders Shipping

Whether the user will receive notification email when a customer purchases a product that has a shipping amount greater than zero. Electronic orders are not notified. This could be used for a user in the shipping department who does not need to know about electronic orders. Note that this cannot be checked if Notify Orders is checked.

Notify Affiliates

Whether the user will receive an email notification when a new affiliate signs up to sell your product

Notify Logins

Whether the user will receive an email notification when a SOLO Server user logs into SOLO Server.

Notify Ticket Assignments

Whether the user will receive an email notification when a ticket is assigned to them.

Notify Hard Declines

Whether the user will receive email notification of any hard declines.

Notify Soft Declines

Whether the user will receive email notification of any soft declines.

Notify Forgot PW

Whether the user will receive email notification when a customer is unable to recover a lost password.

Products/Distributors - Users and Groups

Add Distributors

Whether the user has permission to add new Distributors/Affiliates.

Edit Distributors

Whether the user has permission to edit Distributors/Affiliates.

Export Distributors

Whether the user has permission to export the Distributor/Affiliate list.

Add Products

Whether the user has permission to add products and product options.

Edit Products

Whether the user has permission to edit products and product options.

View Products

Whether the user has permission to view products.

Edit Catalog

Whether the user has permission to edit the product catalog (not used yet - reserved for future product catalog).

Manage Inventory

Whether the user has permission to view the Manage Inventory page and update inventory levels.

Payment Plans - Users and Groups

Create Payment Plan

Whether the user has permission to create payment plans.

Edit Payment Plan

Whether the user has permission to edit payment plans.

Edit Payment Plan Instance

Whether the user has permission to edit payment plan instances.

Create Stored Payment

Whether the user has permission to create stored payments.

Edit Stored Payment

Whether the user has permission to edit stored payments.

Notify Successful Payment Plan Payments

Whether the user will receive email notification for successful payment plan payment installments.

Notify Declined Payment Plan Payments

Whether the user will receive email notification for declined payment plan payment installments. In addition, users with this permission will receive an email notification when a customer updating their recurring payment details through the **Customer License Portal** encounter a decline from the test authorization performed to verify the credit card details.

Notify Final Declined Payment Plan Payments

Whether the user will receive email notification for the final declined payment plan payment installment. In addition, users with this permission will also receive email notification when a payment plan instance is canceled either by an administrator or by the customer through the **Customer License Portal**.

Author Contact Details

The Author Contact Details page contains all company contact information. It also allows specifying a company description which is displayed on the author listing page. This page is accessible only to users with the **Manage Account permission**.

Menu: [User Name] / Contact Details, or click the *Update Contact Information* button on the Author Home page.

Field List

Company Name

Your legal company name.

Important

You may notice that you cannot change your company name through this page. SOLO Server Shared or Dedicated URL customers who need to change their company name must contact support@softwarekey.com with their request.

Contact Name

The contact person for all inquiries. This will not be displayed publicly.

Contact E-Mail

The contact person's email address. This will not be displayed publicly.

Address 1

The company street address.

Address 2

The company city, state, and zip.

Address 3

Extra line for additional address information.

Country

The company country.

Toll Free

Toll free phone number, if available.

Voice

Telephone number.

Support Phone

Telephone number for support inquiries, if different from other calls.

Fax

Fax number, if available.

Sales E-Mail

Email address for sales inquiries.

Support E-Mail

Email address for support inquiries.

Web Site

Web site home page. Must begin with http:// or https:// - e.g. http://www.company.com

Support Site

Web site for technical support, if available. Must begin with http:// or https://

Description

Company description. This should be a short paragraph or at least one or two sentences.

Support HTML

When a customer completes an order through the SOLO Server cart, the invoice displayed and emailed to the customer contains details about how to contact you for product support. Placing your HTML-formatted text and contact information in this field will override all of the default information shown on the bottom left side of the invoice. See **Customizing Invoices and Order Confirmation Emails** for details.

Merchant information displayed on the bottom right of invoices is **configured separately**. SOLO Server Shared and Dedicated URL customers should **contact us** to change merchant account information.

Master users also have the following additional options:

Bypass Notification

Checking this will bypass sending the notification email regarding the change.

Author Billing Details

The Author Billing Details page is only available in SOLO Server Shared and Dedicated URL and contains all company billing information regarding the credit card kept on file.

Menu: [User Name] / Billing Details, or click the *Update Billing Details* button on the Author Home page.

You may be automatically redirected to this page if your credit card on file is declined during our monthly credit card verification test. In this case, you must provide new details for the credit card on file before you can continue. When you submit changes on this page, an authorization for \$1.00 will be placed against the credit card. Depending on your card issuer, this may result in a **temporary** hold being placed on your card for these funds which may last for several days. This will NOT show up on your statement as a charge.

Field List

Billing Name

Name on the credit card.

Billing Email

Billing email address of the credit card holder.

Update Credit Card

Check this to update the credit card details. When checked, the credit card related fields below will be enabled for editing.

Billing Street Address

Billing address the credit card statement is mailed to. Only requires numerical values, but the full address is suggested.

Billing Postal Code

Billing postal code of the credit card statement is mailed to.

Card Number

Credit card number.

CVV2 Number

For American Express, this is a 4 digit number at the upper right on the front of the card. For Visa/Mastercard, this is a 3 digit number to the right of the card number on the back of the card. Enter 000 for other card types.

Expire Month/Year

Credit card expiration date.

Master Users also have the following additional options:

Bypass Authorization

Checking this will bypass the authorization (as well as the AVS/CVV2 checks) and update the billing information with no verification.

Bypass AVS Check

Checking this will bypass the mismatch check on the AVS result returned from the authorization.

Bypass CVV2 Check

Checking this will bypass the mismatch check on the CVV2 result returned from the authorization.

Bypass Notification

Checking this will bypass sending the notification email regarding the change.

Notices

SOLO Server allows Master User administrators to post important information as notices when users log in.

If you are using SOLO Server Dedicated URL or Self-Hosted, you can post your own notices to users, including to a specific author account when using our **Multi-Tenant feature**. Use the menu *Admin / Notes and Notices*, and then click the *Add* or *Add Global* button.

Depending on the nature of the notices, the user may be required to take corrective action before being allowed to continue use of SOLO Server.

Notices fall into three categories as follows:

	Critical notices cannot be dismissed and result in an account lockout. For SoftwareKey customers, you must contact us to resolve the issue and continue using SOLO Server.
Critical	Configuration: Enable <i>Critical Message</i> , disable <i>Dismissible by Author</i> , and enable <i>Display at Login</i> .
	Warning notices must be explicitly acknowledged and dismissed in order to continue using SOLO Server.
Critical Warning	Configuration: Enable <i>Critical Message</i> , enable <i>Dismissible by Author</i> , and enable <i>Display at Login</i> .
	Informational notices require no action and may optionally be dismissed before continuing. If not dismissed, the notices can be revisited using the Notices link at the top of the administration interface.
Informational	Configuration: Disable <i>Critical Message</i> , enable <i>Dismissible by Author</i> , and enable <i>Display at Login</i> .

Upon logging in to SOLO Server, any new notices will automatically be displayed for review, and any critical or warning notices must be addressed or acknowledged before continuing.

Privacy & GDPR Options

The Privacy & GDPR Options is used to configure options related to customer privacy, as well as account information related to the **European Union General Data Protection Regulation** (EU GDPR or GDPR). The GDPR applies to anyone doing business with customers in the European Union. It can be reached through the *Configure / Privacy & GDPR Options* menu option.

SOLO Server Shared or Dedicated URL customers who subscribe to the GDPR Module are able to use our services to process data regulated by the GDPR. This entails support for GDPR related requests from data subjects (your customers) and regulators.

General Settings

Privacy Policy URL

The URL to the privacy policy on your web site. (e.g. <https://your.domain.com/privacy>)

Privacy & Terms HTML

HTML markup regarding privacy policy and/or terms and conditions to be displayed on customer registration pages for new customers. When populated, this will be displayed alongside a checkbox on the cart and customer license portal registration page which must be checked in order for the customer to continue. See the sample content and screenshot below.

Enable Offer Checkboxes

If this is checked, checkbox options asking the user to opt-in to offers for products and partners (corresponding to the Notify Product and Notify Partners settings on the customer) will be displayed on the shopping cart registration page and the **Customer License Portal** customer edit page.

Offers Default Checked

Available when Enable Offer Checkboxes is set. When checked, for new customers, the offer checkboxes will be checked by default. Note that for GDPR compliance, this setting should NOT be enabled.

Offer Product HTML

HTML markup for the label for the Offer Product checkbox displayed on customer registration pages. When specified, this will override the default label of "Notify me of product updates related to my purchase".

Offer Partners HTML

HTML markup for the label for the Offer Partners checkbox displayed on customer registration pages. When specified, this will override the default label of "Notify me of new products and other special offers".

Privacy & Terms HTML Sample Content

HTML

```
We respect your privacy, and only ask for information that is needed to process your order and manage your license.
Our customer data is a valuable part of our business, and so we protect it, treat it as confidential, and do not sell it on.
Please check here to agree to <a href="https://www.company.com/privacyandterms/" target="_blank">our website terms and privacy policy</a> and continue.
```

This will appear on the cart registration page as follows:

*Country: UNITED KINGDOM

*Phone Number: 123-456-7890

Fax Number:



We respect your privacy, and only ask for information that is needed to order and manage your license. Our customer data is a valuable asset and so we protect it, treat it as confidential, and do not sell it on. I agree to [our website terms and privacy policy](#) and continue.

GDPR Module / GDPR Settings

The GDPR Module is an opt-in feature on SOLO Server instances hosted by SoftwareKey and is referred to as the GDPR Module, while for SOLO Server Self-Hosted the feature is included as part of the standard feature set and is referred to as GDPR Settings.

Data Processing Addendum

For SOLO Server Shared or Dedicated URL users, upon first reaching the Privacy & GDPR Options page, you will be prompted to review and agree to the Data Processing Addendum (DPA), which is an extension to the standard Terms of Service outlining the obligations between SoftwareKey and your organization regarding the GDPR. To begin the opt-in process:

- Click the *Review DPA and Request Pricing* button, which will open a dialog.
- Review the DPA in the dialog (for easier reading, click the *View in New Window* button to view a larger version).
- Check the *I fully read, understand, and agree to the DPA above* and *I accept the additional monthly fee of...* checkboxes.
- Click the *I Agree* button.

We will contact you within two business days regarding the next steps for enabling the GDPR Module. Once enabled, the additional fields outlined on this page will become available. You will need to enter information for the following fields:

- Privacy Policy URL
- Categories of Data Processed
- Categories of Data Subjects
- EU Representative (if applicable)
- Data Protection Officer (DPO) (if applicable)

On occasion, it may be necessary to update the DPA, in which case upon next viewing the page, you will be prompted to re-accept the DPA. You can also review the DPA at any time using the *Review DPA* button.

Categories of Data Processed and Data Subjects

Categories of Data Processed

A list of all categories of data processed (one per line), such as contact data (e.g. email, address), biographical data (e.g. name), and financial data (when using the shopping cart) is assumed as applicable, including any special categories (e.g. religious or political beliefs, etc...).

Categories of Data Subject

A list all categories of data subjects processed above (one per line), such as customers, prospects, employees, patients, etc.

EU Representative

If your organization has appointed a representative in accordance with Article 27 of the GDPR, contact details for the representative can be entered in this section.

Data Protection Officer (DPO)

If your organization has formally appointed a Data Protection Officer (DPO), the contact details for the DPO can be entered in this section.

Account Options

The account options page allows you to edit the account options available to your authors.

Menu: *Admin / Account Options*

Important

This page is available to Master User Administrators only. Master User access is not available to SOLO Server Shared URL authors.

Account Options

Enabled

Enables or disables this Author.

Hidden

Hides this Author from the online product directory.

Include In Global

Specifies whether the author is included in global searches.

Credit Cards Enabled

If checked, allows credit card transactions to be processed for the author.

Payment Plans Enabled

Specifies whether payment plans will be processed for the author.

Bypass IP Velocity Check

If checked, the author login velocity check will not be performed on the IP address of the login. This should be checked for any authors who may have a call center where multiple users will be originating from a single IP address.

Use .NET Cart

Check this to enable the .NET shopping cart for the author. When checked:

- The view catalog page will link to the .NET shopping cart.
- The Get Ordering URLs functionality will present links to the .NET shopping cart.
- The old cart pages will automatically redirect to the corresponding page in the .NET shopping cart.

Use NET Processor

Check This to enable the .NET order processor for the author. Note that the .NET order processor is currently in beta, and this should not be used in production.

Enable Tickets

Whether to enable the ticketing portions of SOLO Server for the author. Note: The ticketing features will be removed in a future version of SOLO Server, so it is not recommended to enable this setting or use the ticketing features.

Merchant ID

The Merchant Account responsible for the credit card processing of this author's products.

Single Note

Any notes associated with the author.

Marx OLM Access Keys

Access keys for Marx Online License Management (OLM). For use with Marx CryptoBox hardware keys.

QuickBooks Options

QB Tax Integrated

Enable if this author is using the main Merchant Account. Disable if this author has their own Merchant Account configured.

QB Account Shipping

The QuickBooks account that should receive all shipping charges for this author.

QB Account Tax

The QuickBooks account that should receive all sales tax entries for this author.

Adding a New Author

If your SOLO Server license permits, you may configure multiple authors in the system.

Menu: *Admin / Add a New Author Account*

Fill out the form with new company contact information as well as optionally specifying a company description which is displayed on the author listing page. Note that this functionality is only accessible to users with Master User permission. The fields are as follows:

Company Name

The legal company name.

Contact Name

The contact person for all inquiries. This will not be displayed publicly.

Contact E-Mail

The contact person's email address. This will not be displayed publicly.

Address 1

The company street address.

Address 2

The company city, state, and zip.

Address 3

Extra line for additional address information.

Country

The company country.

Toll Free

Toll free phone number, if available.

Voice

Telephone number.

Fax

Fax number, if available.

Password

Password for the default user account.

Confirm Password

Re-enter the Password for confirmation.

Sales E-Mail

Email address for sales inquiries.

Support E-Mail

Email address for support inquiries.

Web Site

Web site home page. Must begin with http:// or https:// - e.g. http://www.company.com

Support Site

Web site for technical support, if available. Must begin with http:// or https://

Description

Company description. This should be a short paragraph or at least one or two sentences.

Audit Features

Database auditing is the ability to continuously monitor, record, analyze and report on user-level database activity. SOLO Server can audit several key tables in the database, including Authors, Customers, Licenses, Products, and Product Options, and Users.

Customer record auditing has been available in SOLO Server for many years. Every time a customer record is modified, an audit record is created with the full contents of the customer record prior to the update. This audit data can be viewed at the bottom of the Customer Information screen. Clicking on an Audit ID will display the customer details at previous times prior to modifications being made.

Audit support for **Authors, Licenses, Products, Product Option, and User records** uses a new mechanism. With this mechanism, when certain changes are made to a field in one of the monitored tables, an audit record is inserted into a separate table that contains:

1. The ID of the record which was changed.
2. The logged-in user who made the change.
3. The timestamp of the change.
4. A list of fields changed (including the old and new values).

Note that the database trigger on the Licenses table can potentially cause performance issues in high traffic/load scenarios. For this reason, this feature is not enabled by default. We have also taken special care in the design of this trigger to only audit records under the following circumstances:

1. When a table is changed through the administration interface by a logged-in user.
2. When a single record is updated at a time. If an update statement is performed that affects multiple rows at the same time, the trigger will not run.

License Auditing Availability

For customers using SOLO Server Shared URL, auditing is not enabled on Licenses. Customers using SOLO Server Dedicated URL who wish to enable auditing on Licenses can **contact us** and request to enable it. For customers using SOLO Server Self-Hosted, auditing on Licenses must be enabled by following the instructions below.

Accessing the Auditing Data In the Authors Interface

Auditing data is accessible to users based on the following permissions:

- Authors: Master User
- Customers: No permissions required.
- Licenses: No permissions required.
- Products: View Products
- Product Options: View Products
- Users: Manage Users

The audit data can be **viewed** through the SOLO Server authors interface as follows:

- Authors: From the menu, select *Admin / Audit History*.
- Customers: Audit data is listed in the Audit Data section at the bottom of the customer details page.
- Licenses: On the license details page, use the *Licenses* dropdown and choose *View Audit History*.
- Products: On the product details page, use the *Actions* dropdown and choose *View Audit History*.
- Product Options: On the product option details page, use the *Actions* dropdown and choose *View Audit History*.
- Users: On the user configuration page, click the *View Audit History* button in the page heading.

Audit data can also be **exported** in xml format as follows:

- From the menu, click *Reports*, and then select the audit type to export from the Audit Exports section.
- On the license details page, use the *Licenses* dropdown and choose *Export Audit History* to export data for a specific License ID.

Installing/Enabling License Auditing

As noted above, auditing on the Licenses table is not enabled by default due to the potential performance impact in high traffic/load scenarios. Follow these steps to enable license auditing:

- Install the auditing trigger in the database:
 - On the database server, open SQL Server Management Studio (SSMS) and connect to the SOLO database.
 - Open and run the trigger installation script in SSMS. The script is located at SOLO\Data-base\Triggers\Auditing\dbo.SOLO_TRIG_LicensesUpdate.sql relative to the install location (generally C:\SWKey).
- Update the EnableLicenseAudits **web.config** entry to True.

Viewing Audit History

Audit history can be viewed through the view audit history page. This page can be reached as follows for each audit type:

- Authors: From the menu, select *Admin / Audit History*.
- Licenses: On the license details page, click the *Actions / License / View Audit History* menu in the page heading. Note this is only available when license auditing is enabled.
- Products: On the product details page, click the *Actions / View Audit History* menu in the page heading.
- Product Options: On the product option details page, click the *Actions / View Audit History* menu in the page heading.
- Users: On the user configuration page, click the "View Audit History" button in the page heading.

On first load, the audit history page will display a listing of audit records sorted by the date. 20 results are shown at a time - use the arrows along the right at the top/bottom of the page to browse through the history. To view details on a specific audit entry, click the View link. The view page will display basic information on the audit record such as the date and user who made the modification, followed by a listing of all changed database columns with the old and new values. Note that the ColumnName in the listing is the name of the column in the database and may not directly map to the label displayed in the user interface.

If any clarification is needed on the column names, **contact us** for additional information.

Processing Chargebacks

SOLO Server has built-in features for handling the case when a merchant bank inquires about a customer charge or charges it back to you. Perform a Customer Search using the credit card account number. Select the Customer ID then select the license or invoice in question. If the License Status is set to 'OK', select [ChgBk] option.

To simply send a notice to the appropriate author asking them to investigate, choose a mailing from the first dropdown and click the Send Mailing button.

If the bank has charged back the order to your merchant account, process the chargeback as follows:

- Verify the Chargeback Amount and specify the Chargeback Bank Fee
- Select a mailing from the second drop down to send to the author.
- Click the Chargeback or Chargeback-Fraud button to process the chargeback. Both options will set the license status to FRD. Choosing the Chargeback-Fraud option will additionally add the credit card number and customer email address to the fraud lists which will block future orders from the credit card and/or email address.

Author Advanced Account Options

View and edit the advanced account options.

Menu: *[User Name] / Advanced Account Options*

Field List

Max Store Credit Expiration Days

The maximum number of days from the current date allowed as the expiration date when entering a store credit for a customer. If left blank, no maximum is enforced.

Force DistributorID on Catalog

Checking this field will cause the view catalog page to require entering a Distributor ID when placing an order. If there is no Distributor ID, the user must enter 0000 to place an order on the view catalog page.

Custom Customer Options

Can be used to add custom HTML on the Customer Details page, which is useful for posting data to another system. Contact support for additional information. The following search and replace values can be used in the HTML code:

- [varCustomerID]
- [varPassword] **Important Note:** We strongly recommended *not* using this. In a future version of SOLO Server, the [varPassword] search/replace field will be updated to replace this with an empty value for customers who have chosen their own password.
- [varCompanyName]
- [varFirstName]
- [varLastName]
- [varContactName]
- [varMailAddr1]
- [varMailAddr2]
- [varCity]
- [varStateProvince]
- [varPostalCode]
- [varCountry]
- [varVoice]
- [varFax]
- [varEMail]
- [varEMailDomain]
- [varLinkedAuthorID]

By default, the markup will be displayed on the customer details page with a light gray background. To suppress this behavior, you can include the html comment `<!--NoRowClass-->` within the markup.

Custom Data

Additional data to be included within the Author/CustomData element in the xml license file when using Protection PLUS 5 SDK. This can be a string or xml data.

Default License Tab

Default active tab on the license details page.

Fraud Credit Card Accounts

SOLO Server can be programmed to decline orders using specified Credit Card accounts. If an administrator sees a customer using fake user information and a valid credit card, they can void the transaction and add that credit card account to this list so future orders will automatically be declined. To administer fraud credit card accounts, from the Store menu, select Fraud Control, and then choose Credit Cards.

To add a new number, simply enter the card number and an optional reason, and click "Add Card Number". To edit or delete an existing card number, click the edit or delete links in the table.

When orders are processed with a credit card account in the Fraud CC Accounts table, an entry is automatically added to the Fraud EMail Address table with their specified EMail address so if the customer attempts to use another card, it will automatically be declined.

There are 2 editable fields for a Fraud Credit Card as follows:

Card Number

The credit card number.

Reason

Optional description for the reason this card number was added.

Fraud Countries

SOLO Server can be programmed to decline or queue for review orders from customers from specified countries. If an administrator sees that many fraudulent orders are originating from a certain country, that country can be added to the Fraud Country list. To administer fraud countries, from the Store menu, select Fraud Control, and then choose Countries.

To add a new country, simply select the country from the drop down, add an optional reason, and click "Add Country". To edit or delete an existing country, click the edit or delete links in the table.

There are 2 editable fields for a Fraud Country as follows:

Country

The country.

Reason

Optional description for the reason this address was added.

Fraud Email Addresses

SOLO Server can be programmed to decline orders using specified Email Addresses. If an administrator sees a customer using fake user information and a valid credit card, they can void the transaction and add that Email Address to this list so future orders will automatically be declined. To administer fraud email addresses, from the Store menu, select Fraud Control, and then choose Email Addresses.

To add a new email address, simply enter the email address and an optional reason, and click "Add Email". To edit or delete an existing email, click the edit or delete links in the table.

When orders are processed with a credit card account in the Fraud CC Accounts table, an entry is automatically added to this table with their specified EMail address so if the customer attempts to use another card, it will automatically be declined. When an order is processed with an email address in this table, an entry is automatically added to the Fraud CC Table so future attempts with another email address will be declined.

There are 2 editable fields for a Fraud Email Address as follows:

Email

The TCP/IP address.

Reason

Optional description for the reason this address was added.

Fraud Email Domains

SOLO Server can be programmed to decline or queue for review orders from customers with email addresses from specific domains. If an administrator sees that many fraudulent orders are originating from a certain email domain, that domain can be added to the Fraud Email Domain list. To administer fraud email domains, from the Store menu, select Fraud Control, and then choose Email Domains.

To add a new domain, simply enter the domain and an optional reason, and click "Add Email Domain". To edit or delete an existing domain, click the edit or delete links in the table.

There 2 editable fields for a Fraud EMail Domain are as follows:

Email Domain

The domain.

Reason

Optional description for the reason this domain was added.

Fraud IP Addresses

SOLO Server can be programmed to decline orders originating from specified TCP/IP addresses. If an administrator sees a customer attempting to place a fraudulent order, they can add this TCP/IP address to the list so future orders will automatically be declined. To administer fraud IP Addresses, from the Store menu, select Fraud Control, and then choose IP Addresses.

To add a new IP address, simply enter the IP Address, select the subnet mask from the drop down, and optionally enter a description, and click "Add IP Address". To edit or delete an existing email, click the edit or delete links in the table.

When the bank returns an approval code starting with **HOLD**, this TCP/IP address will automatically be added into the list by the server.

When orders are processed with an IP address in this table, an appropriate entry is automatically added to the Fraud CC and Fraud EMail address tables so if the customer attempts to use another card, it will automatically be declined.

Entries with a green background are active, whereas the others are outside the window defined by Application ("FraudIPDaysToBlock").

There are 3 editable fields for a Fraud IP Address as follows:

IP Address

The TCP/IP address.

IP Mask

The subnet mask that should be used to identify the address. If the IP Address is 172.19.25.10 and the mask is 255.255.255.0, the entire range of 172.19.25.0 through 172.19.25.255 will be rejected.

Reason

Optional description for the reason this address was added.

Fraud Profile

SOLO Server has a globally configured fraud profile which determines all of the settings for each of the fraud screen filters (see **Fraud Screening**). To update the fraud profile, from the Store menu, select Fraud Control, and then choose Fraud Profile. **Note:** This is still a work in progress and only the credit card, email, and IP address lists filters are currently used during order processing.

The setting for each of the filters in the profile are described below:

Credit Card List Filter

This filter checks if the credit card number for an order is in the fraud credit card list. It has the following settings:

- Enabled - Check to enable the filter

Email List Filter

This filter checks if the email address for an order is in the fraud email address list. It has the following settings:

- Enabled - Check to enable the filter

IP Address List Filter

This filter checks if the IP address for an order was entered in the fraud IP address list with the last Application ("FraudIPDaysToBlock") day. It has the following settings:

- Enabled - Check to enable the filter

Email Domain List Filter

This checks if the email domain for an order is entered in the fraud email domain list. It has the following settings:

- Enabled - Check to enable the filter
- Action - Action to take when this filter is triggered
 - Review - Place the order in the pending order queue
 - Reject - Decline the order

Country List Filter

This checks if the country for an order is entered in the fraud country list. It has the following settings:

- Enabled - Check to enable the filter
- Action - Action to take when this filter is triggered
 - Review - Place the order in the pending order queue
 - Reject - Decline the order
- Include Customer - Check to include the customer address in the check
- Include Shipping - Check to include the shipping address in the check
- Include Billing - Check to include the billing address in the check

Item Count Ceiling Filter

This checks if the total item count for an order is above a specified ceiling amount. It has the following settings:

- Enabled - Check to enable the filter
- Action - Action to take when this filter is triggered
 - Review - Place the order in the pending order queue
 - Reject - Decline the order
- Ceiling - The count at which the filter is triggered

Total Cost Ceiling Filter

This checks if the total cost for an order is above a specified ceiling amount. It has the following settings:

- Enabled - Check to enable the filter
- Action - Action to take when this filter is triggered
 - Review - Place the order in the pending order queue
 - Reject - Decline the order
- Ceiling - The dollar amount at which the filter is triggered

Credit Card Velocity Filter

This filter performs a velocity check on the credit card number. It has the following settings:

- Enabled - Check to enable the filter
- Action - Action to take when this filter is triggered
 - Review - Place the order in the pending order queue
 - Reject - Decline the order
- Count - The count at which the filter is triggered
- Duration - The number of minutes to perform the velocity check against

Email Address Velocity Filter

This filter performs a velocity check on the credit card number. It has the following settings:

- Enabled - Check to enable the filter
- Action - Action to take when this filter is triggered
 - Review - Place the order in the pending order queue
 - Reject - Decline the order
- Count - The count at which the filter is triggered
- Duration - The number of minutes to perform the velocity check against

IP Address Velocity Filter

This filter performs a velocity check on the IP address. It has the following settings:

- Enabled - Check to enable the filter
- Action - Action to take when this filter is triggered
 - Review - Place the order in the pending order queue
 - Reject - Decline the order
- Count - The count at which the filter is triggered
- Duration - The number of minutes to perform the velocity check against

Cart Velocity Filter

This filter performs a velocity check on the CartID. This is useful to stop people who are getting multiple declines on a given cart because they are trying different card numbers each time. This filter has the following settings:

- Enabled - Check to enable the filter
- Action - Action to take when this filter is triggered
 - Review - Place the order in the pending order queue
 - Reject - Decline the order
- Count - The count at which the filter is triggered

Address Check Filter

This filter performs match checking against the customer, shipping, and billing address of an order. It has the following settings.

- Enabled - Check to enable the filter
- Action - Action to take when this filter is triggered
 - Review - Place the order in the pending order queue
 - Reject - Decline the order
- Include Customer - Check to include the customer address in the check
- Include Shipping - Check to include the shipping address in the check
- Include Billing - Check to include the billing address in the check

International Address Filter

This filter will be triggered when an address is from a foreign (non US) country. It has the following settings:

- Enabled - Check to enable the filter
- Action - Action to take when this filter is triggered
 - Review - Place the order in the pending order queue
 - Reject - Decline the order
- Include Customer - Check to include the customer address in the check
- Include Shipping - Check to include the shipping address in the check
- Include Billing - Check to include the billing address in the check

Fraud Screening

This feature is still under development.

Whitelist IP Addresses

If using the IP address velocity check of the fraud screening system, it may be necessary to whitelist IP addresses that place orders frequently (such as from call centers, etc.). To administer Whitelist IP Addresses, from the Server Setup menu, select Fraud Control, IP Address Whitelist.

To add a new IP address, simply enter the IP Address, select the subnet mask from the drop down, and optionally enter a description, and click "Add IP Address". To edit or delete an existing email, click the edit or delete links in the table.

There are 3 editable fields for a Whitelist IP Address as follows:

- **IP Address** - The TCP/IP address.
- **IP Mask** - The subnet mask that should be used to identify the address. If the IP Address is 172.19.25.10 and the mask is 255.255.255.0, the entire range of 172.19.25.0 through 172.19.25.255 will be rejected.
- **Reason** - Optional description for the reason this address was added.

Merchant Account Field List

A Merchant Account is a bank account set up to accept credit card payments. SOLO Server can support one or more merchant accounts. Each Author can be configured to use the same or different Merchant Account. The following fields are available when configuring a merchant account.

Type

The Merchant Account Type can be one of the following:

- Authorize.NET (<http://www.authorizenet.com>)
- DIBS Debittech (<http://www.dibspayment.com/>)
- DIBS Debittech Web (<http://www.dibspayment.com/>)
- First Atlantic Commerce (<http://www.firstatlanticcommerce.com/>)
- Network Merchants (<http://www.networkmerchants.com>)
- PayPal Payments Standard (can be used simultaneously with other gateways or as a primary account) (https://cms.paypal.com/us/cgi-bin/marketingweb?cmd=_render-content&content_ID=merchant/wp_standard)
- PayPal Payments Pro (PayPal is no longer creating new PayPal Pro accounts, but existing accounts are still supported).
- RBS WorldPay (<http://www.worldpay.com>)
- Stripe (<https://stripe.com>)

Note that Dibs Debittech Web, PayPal Payments Standard, RBS Worldpay, and Stripe are not compatible with **Payment Plans**. In addition, if using Authorize.NET, you must store full credit card information in order to use the payment plan feature (which is not recommended).

Login Information

The login information varies for each account type, and will be described separately for each account type below. **Note:** This page requires javascript to be enabled in your web browser in order to dynamically show/hide and relabel the login information based on the selected account type. If javascript is not enabled, you will instead see the following fields rather than those described below:

- Account ID
- Account Credential
- Additional Data 1-5

These fields correspond to the fields listed for the individual account types in the same order. For example, for Authorize.NET, the Account ID is the API Login ID, and the Account Credential is the Transaction Key.

PayPal Account

The PayPal Payments Standard account to be used in conjunction with the merchant account. Paypal Payments Standard can be used in conjunction with any other payment gateways to give customers multiple payment options.

Login Information - Authorize.NET

API Login ID

The API Login ID assigned by Authorize.NET. This can be found in the Authorize.NET interface by choosing Settings from the left menu on the home page, and then choosing "API Login ID and Transaction Key" in the Security Settings section.

Transaction Key

A Transaction Key generated through the Authorize.NET interface. To obtain a transaction key in the Authorize.NET interface, choose Settings from the left menu on the home page, and then choose "API Login ID and

Transaction Key" in the Security Settings section. You may choose to use an existing transaction key or generate a new one.

Login Information - DIBS DebiTech/DIBS DebiTech Web

API UserName

API UserName provided by DIBS.

API Password

API Password.

Shop Name

Shop Name assigned by DIBS.

MAC

MAC assigned by DIBS.

DIBS Acquirer

Acquirer assigned by DIBS.

Web URL

Web URL. Applicable to Web only. The URL for SOLO Server to direct customers to for payment on the DIBS servers.

Web Pageset Prefix

Web Pageset Prefix. Applicable to Web only.

Login Information - First Atlantic Commerce

Merchant ID

The Merchant ID assigned by First Atlantic Commerce.

Merchant Password

The Merchant Password assigned by First Atlantic Commerce.

Login Information - Network Merchants

Username

The Username assigned by Network Merchants.

Password

The password for the Username.

Login Information - PayPal Payments Standard

Email

The email address associated with the PayPal account.

Notify URL

The URL where PayPal should post instant payment notifications (IPNs). Currently, this page should be set to go to the /products/b1_processpaypal.asp page in your SOLO Server website (you need to prepend rest of the url to your SOLO Server installation to this).

Return URL

The URL that PayPal should redirect the customer to when they complete the transaction in PayPal. Currently, this page should be set to go to the /products/PaymentStatus.aspx page in your SOLO Server website (you need to prepend rest of the url to your SOLO Server installation to this).

Cancel URL

The URL that PayPal should redirect the customer to when they cancel a transaction in PayPal. Currently, this page should be set to go to the /products/ConfirmOrder.aspx or products/Cart.aspx page in your SOLO Server website (you need to prepend rest of the url to your SOLO Server installation to this).

Login Information - PayPal Payments Pro

User

PayPal User ID. If you set up one or more additional users on the account, this value is the ID of the user authorized to process transactions. If, however, you have not set up additional users on the account, User has the same value as Vendor

Password.

User password.

Vendor

Your merchant login ID that you created when you registered for the account.

Partner

The ID provided to you by the authorized PayPal Reseller who registered you for the your PayPal account. If you purchased your account directly from PayPal, use PayPal.

Login Information - WorldPay

Installation ID

The Installation ID assigned by WorldPay.

Callback Password

The Callback Password configured on the WorldPay account.

Login Information - Stripe

Publishable Key

The publishable API key from your Stripe Dashboard. This key is used client-side to initialize the Stripe checkout form. Found in Stripe Dashboard under Developers > API keys.

Restricted/Secret Key

The secret API key from your Stripe Dashboard. This key is used server-side to create checkout sessions and process payments. Keep this key confidential. Found in Stripe Dashboard under Developers > API keys.

Webhook Signing Secret

The webhook signing secret used to verify webhook events from Stripe. Found in Stripe Dashboard under Developers > Webhooks after creating a webhook endpoint. The webhook endpoint URL should be set to the /products/StripeWebHook.aspx page in your SOLO Server website.

Return URL

The URL where customers are redirected after completing payment. Should be set to the /products/StripePaymentStatus.aspx page in your SOLO Server website (you need to prepend the rest of the URL to your SOLO Server installation). Include {CHECKOUT_SESSION_ID} placeholder which Stripe replaces with the actual session ID. Example: https://yourdomain.com/solo/products/StripePaymentStatus.aspx?session_id={CHECKOUT_SESSION_ID}

Display Information

Display Name

Internal use.

Statement Name

The name that will appear on the customer's credit card statement. This is displayed in "Your credit card will be charged by..." message on the cart credit card payment page and the recurring payment update page in the **Customer License Portal**.

Address 1, 2, & 3

Address information displayed on the printable invoice.

Phone

Phone number displayed on the printable invoice.

FAX

Fax number displayed on the printable invoice.

Order Support Email

Support email address. This is displayed on invoices as well as on the cart credit card payment page and the recurring payment update page in the **Customer License Portal**.

Order Support URL

Support URL. This is displayed on invoices as well as on the cart credit card payment page and the recurring payment update page in the **Customer License Portal**.

Accepted Credit Card Types

The credit card types supported by the payment gateway. Not applicable for PayPal Payments Standard. The available options are as follows:

- American Express
- Diners Club
- Discover
- Maestro
- Visa/Mastercard

Phone Order Label

Text to override the default "Phone" label for the phone order option in the "Choose a Payment Method" section of the shopping cart payment page.

Phone Order Icon HTML

HTML to override the default telephone icon for the phone order option in the "Choose a Payment Method" section of the shopping cart payment page.

Phone Order Instructions

HTML instructions to display on a phone ordering page for the ordering process. If this field is populated, an Order By Phone button will appear on the payment page of the ordering process, and will link to a page displaying these instructions. The following search and replace tags are supported:

- [varAffiliateID] - The Distributor/Affiliate ID associated with the purchase.
- [varGrandTotal] - The grand total for the order
- [varCartID] - The CartID. The Author can ask for this value when the customer orders by phone and complete the existing cart by entering this as an existing cart ID on the view catalog page.

Mail Order Label

Text to override the default "Mail" label for the mail order option in the "Choose a Payment Method" section of the shopping cart payment page.

Mail Order Icon HTML

HTML to override the default mailbox icon for the mail order option in the "Choose a Payment Method" section of the shopping cart payment page.

Mail Order Instructions

HTML instructions to display on a mail ordering page for the ordering process. If this field is populated, an Order By Mail button will appear on the payment page of the ordering process, and will link to a page displaying these instructions. The following search and replace tags are supported:

- [varAffiliateID] - The Distributor/Affiliate ID associated with the purchase.
- [varGrandTotal] - The grand total for the order
- [varCartID] - The CartID. The Author can look for this value when the customer orders by mail and complete the existing cart by entering this as an existing cart ID on the view catalog page.
- [varBillCompany] - The customer's company
- [varBillFirstName] - The customer's first name
- [varBillLastName] - The customer's last name
- [varBillAddress1] - The customer's address line 1
- [varBillAddress2] - The customer's address line 2
- [varBillCity] - The customer's city
- [varBillStateProvince] - The customer's state/province
- [varBillPostalCode] - The customer's postal code
- [varBillCountry] - The customer's country
- [varEmail] - The customer's email address
- [varShipCompany] - The shipping address company
- [varShipFirstName] - The shipping address first name
- [varShipLastName] - The shipping address last name
- [varShipAddress1] - The shipping address line 1
- [varShipAddress2] - The shipping address line 2
- [varShipCity] - The shipping address city
- [varShipStateProvince] - The shipping address state/province
- [varShipPostalCode] - The shipping address postal code
- [varShipCountry] - The shipping address country

Support HTML

HTML markup containing support contact information. When specified, this will override the default contact information displayed on the lower right of online invoices.

Miscellaneous Information

Currency Code

The currency code for transactions for the account. Currently only supported for DIBS, PayPal Payments Standard, PayPal Payments Pro, Stripe, and WorldPay.

Save Credit Card Info

This setting controls how credit card information is stored on invoices. Not applicable for DIBS Debitech Web, PayPal Payments Standard, Stripe, and WorldPay. There are three options:

- Do not save any credit card information - when this is selected, no credit card information will be stored on the invoices (this includes billing address information along with credit card details).
- Save entire card numbers - when this is selected, the entire card number will be stored along with all of the billing address information.
- Save partial/truncation card numbers - when this is selected, the first digit and last 5 digits of the card number will be stored and the remaining numbers will be masked with "*" characters. Billing address information will also be stored.

Changing this on an existing account to a setting which stores less information WILL NOT cause information to be truncated or purged on existing invoices.

Enabled

When checked, the merchant account is enabled.

Test Mode

Check this to put the merchant account in test mode. This will cause all transactions to be submitted to the gateway to either go through the test gateway server or send specific test parameters. Not applicable for PayPal. For Stripe, test mode uses the test API keys from your Stripe Dashboard.

Use Extended Fraud Screening

Whether to use extended fraud screening when processing auth/capture transactions. When enabled, additional fraud checks are performed when processing auth/capture transactions in the shopping cart, with the results included in the author notification email. This is currently in beta.

Using a Merchant Account not Currently Supported by SOLO Server

There may be cases where you wish to use a payment gateway that is not currently supported by SOLO Server. In these cases, contact our support department at support@softwarekey.com. We will work with you to perform the custom payment gateway programming and integration.

Taking Database Server Offline

SOLO Server has a mechanism to give a friendly error message when the database server is offline. This friendly message will be output to the browser wherever SOLO Server attempts to connect to the database. The Protection PLUS Automation Client will look for the words "database, down, maintenance" and will return a special error code for certain functions so you can display a friendly message to the user.

The SOLO Server SOLO.config file contains two parameters which must be configured first:

MaintenanceEnableIPAddr

A set of IP addresses and subnet masks which are allowed to take the database offline or bring it back online. Entered in the following format IP:Mask with each entry separated by a "|" character. e.g.)
10.10.0.0:255.255.255.0|192.168.25.0:255.255.255.0

MaintenanceMessage

Default message to be displayed when the database is taken offline. This can be changed at the time the database is taken offline.

Taking the database offline

1. If you are using load-balanced web servers, take all but one web server out of the cluster.
2. From a computer in one of the MaintenanceEnableIPAddr address ranges, log into SOLO Server with Master User permissions.
3. Sign-in to the Authors interface, and use your browser's address bar to manually navigate to the authors/DBEnableToggle.aspx page.
4. Change the database down message, if appropriate and click Yes at the bottom of the screen.
5. The database is now offline.
6. DO NOT CLOSE THE BROWSER WINDOW. Doing so will remove your User ID and Permissions cookie and you will not be able to enable the database.
7. If you have other SOLO Server instances connected to the same database, repeat the same procedure for the other SOLO Server URLs, using a new window for each one.

Hint: To permanently take the database down (despite IIS restarts or server reboots), edit the SOLO.config and set Application("DatabaseEnabled") = False.

Bringing the database online

1. In the window that you left open from taking the database offline, click **Enable Now**.
2. The database should be re-enabled and you should be directed to Author Home.
3. If for some reason you closed the browser window, you must restart IIS, which will cause IIS to reread the values from the SOLO.config file.

Mall Configuration

Setting up a mall in SOLO Server allows a product catalog to be configured with products belonging to multiple authors. This catalog can then be used to drive a custom external product catalog web site which interfaces with the SOLO Server database, and catalog specific properties can be edited through a streamlined interface from within SOLO Server.

Each mall is defined by the following properties:

Mall Name

The name of the mall.

Mall Author

The author which "owns" the mall. Only users set up on this author or global access users will have access to the mall.

Included Authors

The authors included in the mall. Enabled products/options from each included author are included in the mall catalog.

To configure malls in SOLO Server, click *Store / Malls*. A list of any existing malls will be displayed. To view, edit or delete existing malls, click the View, Edit or Del links. To add a new mall, click the *Add New* button at the top of the listing. To manage the mall catalog, click the mall name. Note the following:

- The Included Authors are configured separately from the Mall Name and Mall Author. To add/remove Included Authors, click the View link, and then click the Remove icon to remove an Included Author, or select a new author to add from the drop down and click the Add button to add a new Included Author.
- When adding a new mall, the Mall Author will be automatically added as the first Included Author. After adding the Mall, the view page for the new Mall will be displayed allowing you to configure the Included Authors.

After configuring a Mall, the next step is to configure the mall catalog through the catalog management interface.

- Click the mall name on the mall listing page. This will load the Product list page of the catalog management interface. From here:
 - Optionally configure categories for the catalog using the Manage Categories link along the top of the page.
 - Configure/verify the catalog settings on the catalog products. To edit product properties, click the "P" quick link from the listing page. Note that these settings come from the actual product record and ARE NOT unique to the catalog. Any changes here will also be reflected for the product when not being accessed through the Mall.
 - Configure/verify the pricing on the catalog product options. To edit pricing, click the "P" quick link from the listing page. Note that the pricing comes from the product option record and IS NOT unique to the catalog. Any changes made here will also affect the pricing of the items when not being accessed through the Mall.
 - Configure catalog specific upsells on the products/options. To configure the upsells on the product, click the product name, then use the Add, Edit and Del links in the Upsell Options section of the page. To configure the upsells on the options under each product, click the View Options link on the product details page and use the Add, Edit, and Del links in the Upsell section of the page for each option. Note that the upsell options ARE unique to the mall. These will only be shown in the cart when accessed through the mall, and will not be displayed when the cart is accessed directly through the product author.

The final step is to integrate your custom product catalog website with the SOLO Server database. This is beyond the scope of this article - contact support@softwarekey.com to request further details.

Plugin Processors

Plugin processors allow custom processing actions to be integrated into SOLO Server. Currently, SOLO Server supports custom order processing plugins which are called during checkout after standard order processing has completed, custom activation plugin processors which run during activation attempts, as well as **custom daily processing plugins** run by the **daily processor**.

Order Processing Plugins can be specified in three places:

- Cart Options - The plugin will be called for all orders.
- Distributor - The plugin will be called only for orders associated with the given distributor.
- Warehouse - The plugin will only be called if the order contains items associated with the given warehouse.

Activation Processing Plugins can be specified on the product option as follows:

- Activation Threshold Plugin - The plugin is run in place of the standard SOLO Server activation logic which determines if the activating computer matches a previously activated computer on the same license.
- Pre-Activation Plugin - The plugin is run prior to the standard SOLO Server activation logic to perform additional processing and verification of the activation. This type of plugin can prevent activation.
- Post-Activation Plugin - The plugin is run after the standard SOLO Server activation logic to perform additional processing.

Daily processing plugins are configured by setting the process type of a given daily process to Custom Plugin, and then selecting the appropriate plugin from the drop down which appears.

Depending on the plugin type, it may be necessary for an administrator to upload files to the PluginAssemblyPath specified in the **web.config options** and/or apply updates to the SOLO database.

To configure plugin processors, choose *Admin / Plug-ins* from the menu. This will display a list of existing plugins, with an option to view, edit, or delete for each plugin. To add a new plugin, click the *Add New* button. Note that if you delete a plugin, it will automatically be disassociated from any product options, distributors, warehouses, or cart options records it is tied to, and this action cannot be undone.

The plugin configuration fields are as follows:

Name

Friendly display name for the plugin. This will be displayed in the drop downs where plugins can be selected.

Type

The Plugin Type, which can be one of the following:

- .NET Assembly - Plugin logic is implemented in a .NET assembly file.
- Database Stored Procedure - Plugin logic is implemented in a SQL Server stored procedure. Note that only order processing plugins currently support this plugin type.

Assembly Path

Relative path to the plugin assembly from the root of the Plugin Assembly Path. Applicable only to .NET assembly plugin types.

Interface Name

The interface name to load from the plugin assembly. Applicable only to .NET assembly plugin types.

Stored Procedure Name

The name of the database stored procedure to call. Applicable only to database stored procedure plugin types.

Description

Extended description of the plugin.

Security Settings

To prevent brute force attacks on activations and author user login attempts, SOLO Server performs velocity checks on these actions which automatically lock things out after a specified number of failed attempts within a given time frame. The settings for these velocity checks can be accessed through the Setup menu by choosing the Security Settings option. The settings are as follows:

Activation Settings:

The following settings apply to the velocity check performed by the activation process. This check will reject any activation for a given License ID or IP address, with settings for each configured independently.

License Velocity Check Duration:

The duration in minutes of the failure velocity check by License ID as well as the lockout period. Specify 0 to disable LicenseID velocity checking.

License Velocity Check Count:

The failure count that should not be exceeded for the License ID velocity check.

IP Address Velocity Check Duration:

The duration in minutes of the velocity check by IP address as well as the lockout period. Specify 0 to disable IP address velocity checking.

IP Address Velocity Check Count:

The failure count that should not be exceeded for the IP address velocity check.

Activation Password Length:

The length of system generated license activation passwords. Must be between 8 and 15.

Author Login Settings:

The following settings apply to the velocity check performed by the author login process. This check will reject any user login for a given User ID or IP address. For this check, the same settings apply to both the User ID and IP address checks.

Author Login Velocity Check Duration:

The duration in minutes of the failure velocity check as well as the lockout period. Specify 0 to disable velocity checking.

Author Login Velocity Check Count:

The failure count that should not be exceeded for the velocity check.

Session Timeout:

The number of minutes of inactivity allowed before online sessions are timed out and the user is forced to log back in.

Product Catalog Overview

In SOLO Server, you can define the products you are licensing and/or selling using various settings. This is done through a Product Catalog with a two level hierarchy: Products and Product Options. Each Product can have multiple Product Options.

For software, the **Product is the name of your software**, and the **Product Option refers to a specific version or license of that product**.

Product Options can be sold/distributed to customers, and each Product Option can be configured with different settings to result in different licenses, upgrades, or renewals such as:

- Non-expiring License
- One Year Subscription License
- Lite Version License
- Enterprise Version License
- Upgrade from Lite to Enterprise Version License
- Single-User License
- Network 5-User License
- Software Maintenance Subscription Renewal
- etc.

Some of the settings you choose will be dependent on which SoftwareKey licensing client you are using, and how you have implemented the licensing into your software.

E-Commerce

If using SOLO Server's **integrated e-Commerce**, you can choose what Product Options new customers are allowed to buy through the shopping cart, and only include those purchase links on your website.

You can also configure **Rules** to restrict the purchase of certain Product Options based on chosen criteria, such as needing to have purchased a "Lite Version License" to be eligible to purchase the "Upgrade from Lite to Enterprise Version License". This is enforced by having existing customers log into the **Customer License Portal** to access these upgrade or renewal Product Options.

Adding Products and Product Options

To add a Product or Product option, the SOLO Server user will need to have the **Add Product permission** enabled. To begin, click the *Configure / Products* menu item then use the *Actions* dropdown and choose *Add Product Wizard*.

Create or select a Product...

This screen in the "Add Product Wizard" allows you to create a new Product, or add an Option to an existing Product.

When adding a new Product, you also have the option to copy all settings from an existing Product; however this does not copy the existing Product's Options, Upsells, or Updates.

Note that all steps after this one in the the "Add Product Wizard", a new panel will show at the top titled "Summary of current selections..." until you reach the end of the wizard (at which point this is all that is displayed). This panel provides a helpful summary of the selections you made as you progressed through the wizard, and is also very helpful in summarizing combinations of certain settings.

Configure your new Option...

This panel allows you to create a new Option from a blank template, or create a new Option that has all settings copied from an Existing option. When you choose to copy all settings from an existing Option, this will not copy Extended Pricing, Priority Codes, Shipping, Upsells, and Rules. If you need to make a copy of an existing Option that also copies these additional settings, use the **Duplicate Product Option page** instead.

The selection you make in "Type of Product" field should describe the nature of the item that is being sold. Always select "Licensed Software/Application" if you are selling a license that may be activated with SOLO Server via a supported licensing client (configured on the next screen). You may still configure download and shipping settings after selecting "Licensed Software/Application."

Configure your licensing settings...

Selecting your licensing client

You may be asked to select the licensing client you use. Supported licensing clients include the following:

- Instant Protection PLUS 3 provides a wizard-based interface, and requires little to no source code changes to add the most commonly used licensing and activation features to your application.
- AutoCrypt SL can protect your software quickly and effortlessly, without writing a single line of code and without needing access to source code.
- Protection PLUS 5 SDK includes various application programming interfaces (APIs) and supporting applications to streamline integration of licensing into your application while providing the highest level of flexibility.
- Protection PLUS 4 SDK allows you to protect your software in a short amount of time by changing little to no source code or by using an SDK loaded with useful options to program precisely as you need

Important

If you are not sure which licensing client to choose, **contact us** for help!

The remaining licensing settings presented on this section will vary based on your licensing client selection (noted above).

- The "Type of license" you select controls how a license issued for this Option will activate using Instant Protection PLUS 3 **Trigger Codes**.
- The "Type of license" you select controls how an activated license will behave when protected with AutoCrypt SL . For those familiar with our other licensing clients, this uses the Trigger Code Number field on the Option to define the type of license issued.
- Protection PLUS 5 SDK licensing is based entirely on the needs of your software and how you **define your licensing requirements**. Consequently, you must select the Option Type and Trigger Code Number appropriate for the behavior defined in your application's source code.

- Protection PLUS 4 SDK
 - When using **EZTrigger** , the "Type of license" you select controls how a license issued for this Option will activate.
 - When using custom trigger codes, you must select the Option Type and Trigger Code Number appropriate for the behavior defined in your application's source code.

Configure download settings...

This screen allows you to configure a file that may be downloaded via SOLO Server's **ESD features**, or a download page hosted on your company/product web site, which can be provided to the user from SOLO Server's **Customer License Portal** and **invoices**.

Configure e-commerce settings...

In this screen, you may configure basic settings for SOLO Server's e-commerce, such as the price and unit of measure.

Important

Setting the price to zero allows anyone to use the shopping cart to process an order without entering a credit card, even if you are not using the e-commerce engine of SOLO Server. It is strongly recommended that you set the price to a value greater than zero unless you specifically want to allow this or have configured a shopping cart rule to verify eligibility for a free upgrade.

Configure miscellaneous settings...

This screen allows you to configure miscellaneous settings, such as whether the new Product and Option are hidden and enabled.

Review and save

This screen provides a final summary of your settings and selections, and allows you to save your new Product and Option.

To Edit a Product or Product Option:

To edit a product or product option go to the menu *Configure / Products*. This will display a list of all products and product options. To edit the product or product option, simply click on the name of the product or product option and the corresponding product or product option page will appear. At the top of the page, use the *Actions* dropdown to choose *Edit* . Product options can also be edited from the Current Options tab at the bottom of the bundled product page by clicking the option name.

Add Product Wizard (Legacy)

Important!

This topic is for the old/legacy version of the Add Product Wizard, which has been deprecated. We strongly recommend you use the new version by clicking the *Configure / Products* menu, followed by clicking *Actions / Add Product Wizard*.

To easily add a new product into SOLO Server, enter values for the following fields:

I am using

The system you are using to implement licensing features into your application. This could include the Protection PLUS API (where you make source code modifications to your application), Instant Protection PLUS 3, or Instant Metering.

Product Name

The name of your product.

Description

The description of your product.

Option Name

The name of your Product Option. (eg. Enterprise Version, Purchase 1 License, CD-ROM, Download)

Option Description

The description of the Product Option.

Price

Price of the Product Option per unit of measure (quantity) purchased.

Activations Allowed

How many times customer can activate per unit of measure purchased/licensed. You can choose any value for this number and it can be changed at any time (only affects new customer purchases). Typically, customers are allowed 1-3 activations per purchase.

Issue Installation ID

Whether to issue an InstallationID for activations through the ActivateInstallation method of the **XmlActivationService** web service or through offline activation.

Allow Deactivations

Whether to allow deactivation through the DeactivateInstallation method of the **XmlActivationService** web service. This can only be set if Issue InstallationID is also set.

Deactivations Allowed

The number of deactivations allowed through the Deactivate Installation method of the **XmlActivationService** web service. This can only be set if both Issue InstallationID and Allow Deactivations is set. A value of -1 specifies unlimited deactivations.

Allow Reactivations on Same Computer

Only available when Issue InstallationID is set. When checked, during activation the server will search for an existing activation on the license with matching ActivationData (indicating the same computer on the previous activation). If found, the new activation will be granted with an exception of <TH and the activation count will not be decremented. In addition, the InstallationID from the original matching activation is moved to the new

activation rather than creating a new InstallationID. The original activation is then deactivated and its Related InstallationID is set to the InstallationID moved to the new activation record.

IP Activation Mode

Choose one of the following values for restricting activations by IP Address:

- No restrictions - No IP address restrictions will be enforced, regardless of whether Allowed Activation IPs is specified on the license.
- No restrictions (allow override) - No IP address restrictions will be enforced unless the Allowed Activation IPs field is populated on the license.
- First activation IP - If the Allowed Activation IPs field is not set on the license, activation will be allowed for any IP address and that IP address will be set on the license Allowed Activation IPs field along with the IP Mask.
- Specified activation IP - Only IP addresses specified on the Allowed Activation IPs field on the license can activate.

IP Mask

IP mask to set on the license Allowed Activation IPs field during the first activation when IP Activation Mode is set to First Activation IP.

Activation Threshold

Only available if Issue InstallationID is not set. This value controls whether to grant activation without decrementing the activation count if a previous activation with a matching or nearly matching ComputerID is found in the activation history. The value of this represents the allowable difference between ComputerID values to allow when determining if a previous activation is a match to the current activation request.

- Setting this to -1 will disabled this feature.
- Setting this to 0 will require an exact match on ComputerID.
- Setting this greater than 0 will cause any existing activation with a ComputerID within +/- the value to be considered a matching activation. When using the **Protection PLUS Enhanced Computer ID Algorithms**, set this value to 65535 to allow re-activation on the same computer hardware.

When the value here is 0 or greater and a match is found, the new activation will be granted with an exception of <TH and the activation count will not be decremented.

Trigger Code

Protection PLUS Trigger Code Event ID to generate. If you're unsure, it can be a number between 1 and 50. If this property is not displayed, SOLO Server already knows the proper value.

Trigger Code Seed

Protection PLUS Trigger Code seed. This randomizes the Trigger Code algorithm. Choose a number between 1 and 99999. A random number is generated for you automatically.

Event Data Seed

Protection PLUS Trigger Code Event Data Seed. This randomizes the Trigger Code algorithm. Choose a number between 1 and 255. A random number is generated for you automatically.

Offline Activation Key

Enter a random series of letters and numbers to randomize the **Activate from another Computer** feature. A random string of characters is generated for you automatically.

Adding a Bundled Product and Product Option

The SOLO Server integrated shopping cart allows bundled items to be sold. A bundle is basically a group of items that acts as a single item on the cart and it allows discounts to be applied. When an order is completed, all products in a bundle are broken out into the individual items.

Bundles work just like regular products, which consist of a product with multiple product options. Each product option has its own price and rules behind its availability.

Bundles will display on the cart with a breakdown of the included options, as well as a message stating the bundle discount if applicable.

To Add a Bundled Product:

1. Go to the menu *Configure / Products*. On the product list page, use the *Actions* dropdown and choose *Add Bundle*.
2. Fill in the appropriate fields. Refer to **Product Field List** to see definitions for all fields. Note the bundled products have far fewer fields than regular products, so all of the fields listed in the Product Field List will not show up.
3. Click *Submit*.
4. The next screen allows you to set up which products will be included in the bundle. Note that you should define all items at this point, as there is currently no functionality to add new items to a bundle once it has been created. Select the products from the drop down and click *Add Product* to add a product to the bundle. Once at least two products are defined (which can be the same product), a *Done* button will appear next to the *Add Product* button. Click this when all products have been added to the bundle.

To Add a Bundled Product Option

1. On the *View Bundled Product* page, click the *Add Product Option* button in the *Current Options* tab at the bottom.
2. Fill in the appropriate fields. Refer to **Product Option Field List** to see definitions for all fields. Note the bundled product options have far fewer fields than regular product options, so all of the fields listed in the Product Option Field List will not show up. At the bottom of the page, there will be a drop down containing all options for each product defined in the bundle. Select the desired option for each product. You may also optionally enter a bundle discount for each item in the bundle. This is the discount that will be applied to the product for purchasing the bundle. Note that options associated with payment plans cannot be added to bundles, so they will not show up in the list. If any of the products in the bundle do not have an eligible option, the submit button will be disabled and the bundled option cannot be created.
3. Click *Submit*.

Duplicating an existing Bundled Product Option

If you have an existing Bundled Product Option, you can duplicate the data for the option to a new Bundled Product Option. Simply select the option from the Product List or Product Details page. Then use the *Actions* dropdown and choose *Duplicate*. Then follow the instructions in [Duplicating Product Options](#).

To Edit a Bundled Product or Product Option

To edit a bundled product or bundled product option go to the menu *Configure / Products*. This will display a list of all products and product options. To edit the bundled product or bundled product option, simply click on the name of the product or product option and the corresponding product or product option page will appear. At the top of the page, use the *Actions* dropdown to choose *Edit*. Bundled product options can also be edited from the *Current Options* tab at the bottom of the bundled product page by clicking the option name.

Product Field List

Refer to the **Adding Products** topic for general information about Products, which includes information on using the *Add Product Wizard*.

The Product field list sections are listed below:

- **General Info**
- **Order & License Information**
- **Trial Information**
- **Other Information**
- **Additional Settings**

General Info

Product ID

A unique, numeric, system-generated identifier assigned to the Product by SOLO Server when the Product is created. This field cannot be modified.

Product Name

Any name you want to use for this Product. For software, this would be the name of the application.

Product Image

An image of the Product, in **.png**, **.jpg** or **.gif** format, which must be uploaded to SOLO Server. This is displayed to customers in the integrated shopping cart. Recommended size is 100x100px or smaller.

To upload an image, go to the View Product page, click the **Browse...** button and locate the image file to upload. Then click the **Save** button. Once an image is uploaded, a thumbnail view of that image will be displayed. To display the full size version of the image, click the "View Full Size Image" link. To delete the image, click the "Remove Image" link.

Short Description

This field is reserved for future catalog enhancements and is not currently used. An abbreviated description of the product.

Description

A brief description of the Product. Supports HTML. This is optional and displayed to customers on the "Product Catalog" page when using the integrated shopping cart. Refer to **Getting Ordering URLs** for the "List all products" URL.

Category

SOLO Server allows creating Product Categories and assigning categories to each Product ID. These categories can be used in the Shopping Cart's catalog page to allow filtering by category. Please refer to **Configuring Categories** for more information. Note that multiple categories can be selected.

Display Index

Display index when customers are viewing the integrated shopping cart Product Catalog. You must manually arrange your Products by assigning numeric values for each. The Products will be displayed from top-to-bottom in ascending sequence. Refer to **Getting Ordering URLs** for the "List all products" URL.

Page Title

The title to display on the Product Catalog detail page when using **Single Order Mode**.

Meta Description

The text for the Description meta tag on the Product Catalog detail page.

Meta Keywords

The text for the Keywords meta tag on the Product Catalog detail page.

Latest Version

The latest available version of the Product ID. This optional field is used for display purposes in the cart and **Customer License Portal**; it is also referenced for informational purposes during order processing and License ID generation activities. The Latest Version field, if specified, is also recorded in the Download Log when downloads of the purchased software are performed via the SOLO Server ESD facility. The format of the version number is NNNNN.NNNNN.NNNNN.NNNNN, where N represents a non-negative integer ranging from 0 to 99999, inclusive. No leading zeroes are required. Please note that all four version elements must be specified to avoid the generation of an error message. For version numbering schemes using less than four version elements, use trailing zeroes (e.g., for version 3.0, specify 3.0.0.0).

Latest Version Shipping

The latest version of the Product ID that is available to be shipped. This field is generally for informational purposes only, and is primarily used by SOLO Server Authors who offer CD (or other physical media) versions of their software. On many occasions, due to manufacturing lead times or other external factors, the version of the physical software in stock may lag behind the ESD version. The format of the version number is NNNNN.NNNNN.NNNNN.NNNNN, where N represents a non-negative integer ranging from 0 to 99999, inclusive. No leading zeroes are required. Please note that all four version elements must be specified to avoid the generation of an error message. For version numbering schemes using less than four version elements, use trailing zeroes (e.g., for version 3.0, specify 3.0.0.0).

Order & License Information

EULA

The End User License Agreement for the product. Click Edit to enter or modify the EULA. See **Product EULA**.

Storefront Template

The custom markup template to use for the shopping cart **Customized Storefront**. Note that this only applies if running the shopping cart in **Single Order Mode**.

Order Confirm HTML

This markup is displayed as part of the line item on invoices, as well as on the **Customer License Portal** License Details page (unless overridden by the Customer License Portal HTML outlined below). Refer to **Customizing Invoices and Order Confirmation Emails** for more information. Order Confirm HTML instructions can be specified at both the Product and the Product Option levels. Both values (if present) will be concatenated. If neither are present, it will use the following default text in the invoice:

```
To download your software, visit your personalized <a href-  
f="https://secure.softwarekey.com/solo/customers/License.aspx?LicenseID=[varLicenseID]" &tar-  
get="_blank">Software Download Page</a>.  
<br /><br />The application will ask for a License ID and Password to enable it. Use the val-  
ues above to activate your purchase.
```

The following variables can be used in this HTML:

- [varMerchantDispName] - The merchant account name that will appear on the customer's credit card statement. If no merchant account is associated with the order, the SOLO Server Author's company name will be used.
- [varLicenseID] - The License ID assigned to this purchase.

- [varPassword] - The customer Password. **Important Note:** We strongly recommended *not* using this. For customers who have chosen their own password, the value will be masked with * characters and not useful to the user.
- [varEmail] - The customer email address.
- [varEmailURLEncoded] - The customer email address, URL encoded.
- [varCompanyName] - The customer company name.
- [varCompanyNameURLEncoded] - The customer company name, URL encoded.
- [varActivationPassword] - The license Activation Password.
- [varOriginalQS] - The original query string which initiated the order through the cart.
- [varQOrdered] - The quantity ordered.
- [varLicenseCounter] - The License Counter value from the license record.
- [varCustomerID] - The Customer ID.
- [varLatestVersion] - The Latest Version field from the product.
- [varOriginalLicenseID] - The License ID of the original license that this license was used to renew or upgrade through the rules engine.
- [varProductID] - The Product ID.
- [varProductName] - The Product name.
- [varProdOptionID] - The Product Option ID.
- [varProdOptionName] - The Product Option name.
- [varDistributorID] - The Distributor ID, if present.
- [varEnteredDate] - The license entered date.
- [varExpirationDate] - The license Download Until date.
- [varSalePrice] - The sale price of the license.
- [varLFUDefChar1] - [varLFUDefChar10] - License user defined string fields (UDefChar) 1 through 10.
- [varLFUDefDate1] - [varLFUDefDate5] - License user defined date fields (UDefDate) 1 through 5.
- [varLFUDefNum1] - [varLFUDefNum5] - License user defined numeric fields (UDefNum) 1 through 5.
- [varLFUDefFloat1] - [varLFUDefFloat5] - License user defined float fields (UDefFloat) 1 through 5.

Use of the Order Confirm HTML field is optional. If you decide to implement its functionality, please note that any `<hr>` tags will be arbitrarily replaced with `<br>` tags.

Order Confirm Email

Selects which Mailing is to be sent **when using the cart in Single Order Mode**. Single order confirmation e-mails can be defined at the Author level and can be overridden at the Product level. Refer to **Customizing Invoices and Order Confirmation Emails** for more information.

Customer License Portal HTML

This markup is displayed on the License Details page in the **Customer License Portal**, and will override any markup specified in the Order Confirm HTML. Customer License Portal HTML instructions can be specified at both the Product ID and the Product Option levels. Both values (if present) will be concatenated. The following variables can be used in this HTML:

- [varMerchantDispName] - The merchant account name that will appear on the customer's credit card statement. If no merchant account is associated with the order, the SOLO Server Author's company name will be used.
- [varLicenseID] - The License ID assigned to this purchase.
- [varPassword] - The customer Password. **Important Note:** We strongly recommended *not* using this. For customers who have chosen their own password, the value will be masked with * characters and not useful to the user.
- [varActivationPassword] - The license Activation Password.
- [varEmail] - The customer email address.
- [varEmailURLEncoded] - The customer email address, URL encoded.
- [varCompanyName] - The customer company name.
- [varCompanyNameURLEncoded] - The customer company name, URL encoded.
- [varOriginalQS] - The original query string which initiated the order through the cart.
- [varQOrdered] - The quantity ordered.
- [varLicenseCounter] - The License Counter value from the license record.

- [varCustomerID] - The Customer ID.
- [varLatestVersion] - The Latest Version field from the product.
- [varOriginalLicenseID] - The License ID of the original license that this license was used to renew or upgrade through the rules engine.
- [varProductID] - The Product ID.
- [varProductName] - The Product name.
- [varProdOptionID] - The Product Option ID.
- [varProdOptionName] - The Product Option name.
- [varDistributorID] - The Distributor ID, if present.
- [varEnteredDate] - The license entered date.
- [varExpirationDate] - The license download until date.
- [varSalePrice] - The sale price of the license.
- [varLFUDefChar1] - [varLFUDefChar10] - License user defined string fields (UDefChar) 1 through 10.
- [varLFUDefDate1] - [varLFUDefDate5] - License user defined date fields (UDefDate) 1 through 5.
- [varLFUDefNum1] - [varLFUDefNum5] - License user defined numeric fields (UDefNum) 1 through 5.
- [varLFUDefFloat1] - [varLFUDefFloat5] - License user defined float fields (UDefFloat) 1 through 5.

Use of the Customer License Portal HTML field is optional.

Download URL

This field is no longer used.

Screen Shot

This field is no longer used.

Info URL

A URL to an information page for the Product Option. This is used by the upsell table on the cart to offer a pop-up link to obtain additional information about the product. The page entered here should be designed for a 400x400px pop-up window.

Image URL

This field is currently not used, and is reserved. A URL to an image for the option.

Auth S/N Type

This is an advanced option. For more information, [contact us](#).

Author S/N Text

This is an advanced option. For more information, [contact us](#).

Author S/N Next

This is an advanced option. For more information, [contact us](#).

Author S/N Inc.

This is an advanced option. For more information, [contact us](#).

License Labels

A custom label set for the user-defined fields displayed on the User-Defined Fields tab on the License Details page. When editing a product, you can click the Configure License Labels button to open the license labels configuration page. See [Customizing License Labels](#) for more information.

Trial Information

Trial URL

If you have a trial version of your software product, you can specify the complete URL to access the trial or the trial download request form. This is listed under the Product Description in the integrated shopping cart as a "Click Here for a Free Trial!" link. This supports a [varLatestVersion] search/replace parameter which will be replaced with the current value of the Latest Version field on the product.

Trial Text HTML

Used with **Trial Tracking Service**. Contains the HTML that will be displayed to the user when they successfully complete the trial request form. This HTML must contain the link to the file to download. This supports a [varLatestVersion] search/replace parameter which will be replaced with the current value of the Latest Version field on the product.

Trial Welcome Mailing

Used with **Trial Tracking Service**. The mailing to send to a prospective customer when they request a trial.

Trial Teaser Mailing

Used with **Trial Tracking Service**. The mailing to send to a prospective customer a specified number of days after requesting the trial.

Trial Teaser Days Back

Used with **Trial Tracking Service**. The number of days back after requesting the trial to send the trial teaser mailing.

Register URL

A URL to a page where the customer can register the trial version of the software product.

Register Mailing

Specifies the mailing to be sent to the customer once the trial version of the software product is registered.

Other Information

LF Password

This field is currently not used, but is reserved for future use. Shorthand for License File Password.

Custom License Options

This field is currently not used, but is reserved for future use.

Custom Data

Additional data to be included within the Product CustomData element in the XML License File when using Protection PLUS 5 SDK. This can be string or XML formatted data.

License Key Size

Used to determine the **Encryption Key size** for encrypting the license data when a user downloads a license (volume license or otherwise) from the customer portal. This field defaults to use 1024-bit keys. If using 4096-bit Encryption Keys and allowing customers to download licenses, you will need to set this value.

Use Test CC No.

Whether or not the use of the test credit card number is enabled for **Testing the Order Process**.

Enabled

If this option is not enabled, any order containing the Product will be declined, and the Product will be hidden from ordering pages and drop-down menus. Note that disabling this option will also automatically set it to Hidden.

You cannot delete a Product; you can only disable it by unchecking this option.

Hidden

Enable if this Product should be hidden from all online catalog listings.

Include in Ticket Log

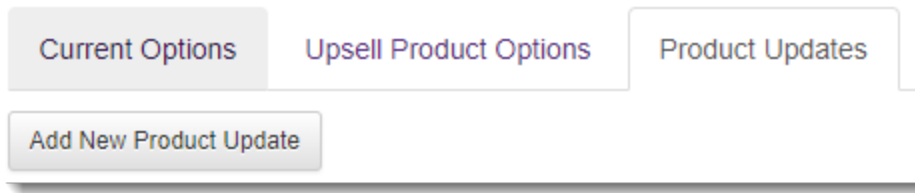
This field is no longer used. Check this box to have the Product show up in the ticket log product drop down.

Product Activation Mailing

Mailing sent to the customer when any license for this Product is activated for the first time. It will also be sent when using [postregdata.asp](#) if the customer email address was blank prior to that registration and if the license has only one activation logged. See [Activation \(Product\) Mailings](#) for more information on creating this mailing.

Additional Settings

These settings are accessible through tabs at the bottom of a View Product page:



Current Options

Allows you to [Add a Product Option](#) and view a list of existing Product Options.

Upsell Product Options

[Configuring Upsells](#) can increase revenue by attempting to persuade a customer to purchase either a more expensive item or related additional items.

Product Updates

[Product Updates](#) allow users of a product to be automatically notified of a new version when one becomes available.

Product EULA

SOLO Server can optionally display a EULA before a software application is purchased online through the SOLO Server shopping cart or downloaded through the **Customer License Portal**.

To add a EULA, select the Product from *Configure / Products* and on the View Product page, click the Edit button next to EULA. The text entered should be in HTML format, including <p> tags between paragraphs to add a blank line. Once you have entered a EULA, the **Get Ordering URLs** page will generate links for *Display Product EULA* which displays the EULA before adding the product to the shopping cart.

Importing and Exporting Product Serial Numbers

For products configured to use serial numbers assigned from a list, serial numbers can be quickly uploaded to the server as follows:

- From the Edit Product page, set *Auth S/N Type* to "Assigned from List" if not already set.
- From the product configuration page, click the *Import Serials* link next to the *Auth S/N Type*.
- Copy the list of serial numbers into the "Serial Numbers List" text area and click the *Save* button. Note that the list must be formatted with one serial number per line.
- The serials will be imported into the database and a confirmation message with a count of imported serials will be displayed. If a duplicate serial number is found, it will show an error and return you to the list.

In addition to importing, you also have the following options from the product configuration page:

- *Export all* and *Export unused* will generate a CSV file with either all serials or all serials which have not yet been associated with a license. The file includes the following fields:
 - *ProductName* - The product name.
 - *ProductID* - The Product ID.
 - *SerialNumber* - The serial number.
 - *License ID* - The License ID associated with the serial. This will be blank if the serial is unused and has yet to be associated with a license.
 - *BatchID* - A system generated unique identifier assigned to each batch of serials imported into the SOLO Server, which allows identifying which serials were uploaded together.
 - *EnteredDate* - The date and time the serial was imported.
- *Purge unused* deletes all unused serial numbers not associated with a License ID on the product. Clicking this will display a confirmation warning. Click OK to purge the unused serials, and you will see a confirmation message with the number of serials which were purged.

Important

The *Purge unused* function cannot be undone, therefore it is recommended that you export all unused serials prior to purging them.

Product Updates

Product Updates allow users of a product to be automatically notified of a new version when one becomes available. Using Protection PLUS, you can configure the your software to automatically query SOLO Server for updates every certain number of days and/or runs, or call the UpdateCheck method from **XML License Service** at any time.

To create or edit a product update, go to the product details page, then click on the Product Updates tab at the bottom right. Click the *Add New Product Update* button to add a new update, or the View link next to an existing update to access the details and Edit button. Each product update is defined by the following properties:

Minimum Eligible Version

The lowest version number of the product which is eligible for the update. This must be in the format N.N.N.N where N can be any number from 0 to 99999.

Maximum Eligible Version

The highest version number of the product which is eligible for the update. This must be in the format N.N.N.N where N can be any number from 0 to 99999.

Latest Version

The latest version of the product available through the update. This must be in the format N.N.N.N where N can be any number from 0 to 99999.

Product Update Name

The product update name. A unique name string for this product update - used to match against the value passed up by the client.

Release Date

The date the update was released.

More Info Link

A URL which the user can visit to obtain more information on the update.

Verify Password

Whether to verify the password during the update check. If this is set and the Password does not verify, the update will return SECURE for the action.

Action

The action to take.

- None (NONE)
- Display Message (MSG)
- Go to URL (GOURL)
- Automatic Download via FTP (DNFTP)
- Automatic Download via HTTP (DNHTTP)

Server Name

The server name for downloading the update. Only available for Go to URL and Automatic Download actions.

- If the action is Go to URL, this is the URL to direct the user to.
- If the action is Automatic Download by FTP/HTTP, this is the root URL to the server (ex. www.softwarekey.com, ftp.softwarekey.com, etc.).

Port

The port number to use. Only available for Automatic Download actions. This is generally 80 for http, 443 for https, and 21 for FTP.

Path/Filename

The path and filename of the file relative to the server root URL specified by Server Name. Only available for Automatic Download actions.

Authentication

The type of authentication to use when retrieving the update file. Available only for Go to URL and Automatic Download actions.

- Use No Authentication
- Use License ID/Password - Use the License ID and Password
- Use Custom User ID/Password - Use a custom username and password

Custom Username/Password

The custom Username and Password for Custom User ID/Password authentication type.

Message

The message that will appear when the program finds the product update. Note that there is support for multiple versions of the message in multiple languages. To edit the message, click Edit International Text when viewing the update details. When the update is created, an entry is created for language code en (US English). This can be edited by using the Edit link. To add a new entry for a different language, click Add New, and then enter the 2 character language code and the message.

Product Option Field List

Refer to the **Adding Product Options** topic for general information about Product Options, which includes information on using the *Add Product Wizard*.

The Product Option field list sections are listed below:

- **General Information**
- **Purchasing Details**
- **Product Activation & Licensing Details**
- **Other Details**
- **Shipping Options**
- **Inventory Options**
- **Additional Settings**

General Information

Option ID

A unique, numeric, system-generated identifier assigned to the Product Option by SOLO Server when the Product Option is created. This field cannot be modified.

Product Name

The name of the Product with which the Product Option is associated.

Option Name

The name of the Product Option. The full name of an Option will be displayed as *Product Name Option Name*.

Replaced By

A Product Option which replaces the current Product Option. If specified, when the current Product Option is added to a cart, it will be replaced by the Product Option chosen here. This is useful if you have old purchase links that customers may still be using and you want to automatically direct them to the Product Option that has replaced the old one.

Option Image

An image of the Product Option, in **.png**, **.jpg** or **.gif** format, which must be uploaded to SOLO Server. This is displayed to customers in the integrated shopping cart. Recommended size is 100x100px or smaller.

To upload an image, go to the View Product Option page, click the **Browse...** button and locate the image file to upload. Then click the **Save** button. Once an image is uploaded, a thumbnail view of that image will be displayed. To display the full size version of the image, click the "View Full Size Image" link. To delete the image, click the "Remove Image" link.

Option Description

A brief description of the Product Option. Supports HTML. This is optional and displayed to customers on the "Display Product Option" page when using the integrated shopping cart, or on the renewals and upgrades page in the **Customer License Portal**. Refer to **Getting Ordering URLs** for the "Display Product" URL.

Option Type

Choose one of the following values for the Product Option Type:

All Supported Licensing Clients

- *Activation Code* - Used to provide a single Protection PLUS Trigger Code. This is the most common Product Option Type used by SOLO Server Authors.

- *Activation Code with Quantity* - Provides a single Protection PLUS Trigger Code where the Event Data (additional number) is sent based upon the value of Quantity for the license. Note that this option type can only be used with *Quantity Mode* set to *Multiple Activations* (see below), and also that upon order processing, the *Activations Left* parameter on the license will be set to *Activations per U/M* regardless of quantity.
- *Activation Code with Fixed Value* - Provides a single Protection PLUS Trigger Code, along with additional numeric Event Data which is specified in the *TC Fixed Value* field (see below).
- *Activation Code with Days Left* - Provides a single Protection PLUS Trigger Code where the Event Data (additional number) is calculated automatically as the number of days between the current date and the *Download Until* date on the License Details screen. The default *Download Until* date is set when you specify a value in the *Days to D/L* field (see below). This option is great when you want the software to expire on a specific date, even if the user subsequently activates the software in the middle of their subscription period.

This setting will also result in an activation request being rejected if the *Download Until* date of that license is in the past, and it will return error code **5019**: License ID has expired.

- *Activation Code with License Counter* - Provides a single Protection PLUS Trigger Code, along with additional numeric Event Data with the value from the *License Counter* field on the license. Note that when using this option, the *License Counter* must be a 0 or a positive integer less than 16383.

Protection PLUS 5 SDK

- *Volume License* - Used to provide a **downloadable volume license** file not tied to a particular installation, which can be distributed to client machines to allow the software to run without activation.
- *Downloadable License with Trigger Code Validation* - This is the same as a Volume License, except a trigger code activation is required to allow the software to run.
- *Downloadable License with Encrypted Trigger Code Validation* - This is the same as a Volume License, except an encrypted trigger code activation is required to allow the software to run.

No activation or licensing

- *Downloadable Goods* - A downloadable product (ESD), but no license credentials are supplied.
- *Shipped Goods* - A "hard" product that is shipped only via regular mail or other courier. No download or unlock code provided.
- *Transaction/Service Fee* - A service fee, such as a subscription renewal, that is not a new license that can be activated with. A unique License ID will still be assigned to the item, but this is only used for internal purposes. The License ID is not provided to the customer by default, and it can't be activated with.

Option Order

Used to specify the order in which you want your Product Options to appear when listed online for customers. You must manually arrange your Product Options by assigning numeric values for each. The Product Options will be displayed from top-to-bottom in ascending sequence. Refer to **Getting Ordering URLs** for the "Display Product" URL.

Order Level Req

The minimum Order Level a SOLO Server user must have to be able to view Products or select the Product Option from the Product dropdown in **Store / Create a New Cart/Order**. Order Level can be effectively used to restrict SOLO Server users from having access to certain products. For example, if you set the Order Level Required field to a value of 10 and a SOLO Server user has a Order Level designation of 0 (as specified in the SOLO Server user's security profile) that SOLO Server user will not see the product as an available option.

Warehouse ID

The name of the warehouse for the product. Optional.

Purchasing Details

Unit of Measure

Specify, at your discretion, what you want the unit of measure for the Product Option to be called (e.g., each, license, network seat, etc.)

Price per U/M

Price of the Product Option per unit of measure (or quantity) purchased. Extended, or quantity-based, pricing can also be configured by clicking the "Create/Manage Extended Pricing" link next to the price when on the View Product Option page. See **Extended Pricing** for more details.

Important: Setting the Unit Price to zero allows someone to use the cart to process an order without entering a credit card, even if you are not using the eCommerce engine of SOLO Server. It is recommended that you set the Unit Price to a value greater than zero unless you specifically want to allow this or have **set up a cart rule to verify eligibility for a free upgrade**.

Payment Plan

The **payment plan**, if any, associated with the Product Option. Optional.

Quantity Mode

Determines how the shopping cart order processor handles a quantity greater than one when processing the option. This can be set to one of two modes, as follows:

- Multiple Licenses (default) - This will cause a separate license with a quantity of one to be created for each quantity ordered.
- Multiple Activations - This will cause a single license to be created, with the number of total activations available equal to the value specified in the Activations Per U/M field multiplied by the quantity ordered.

For example, if Activations per U/M is set to 3, and a quantity of 5 is entered in the shopping cart:

- Multiple Licenses would result in 5 License IDs, each with 3 Activations Left.
- Multiple Activations would result in 1 License ID with 15 Activations Left.

Minimum Quantity

Typically, the value of this field is set to 1. If the user is required to purchase a certain number of products in order to qualify for the price offered by the purchase of this Product Option, set the quantity in this field accordingly.

Maximum Quantity

Typically, the value of this field is set to either 0 or 1. To permit your customer to purchase unlimited quantities of this Product Option, specify 0. To bypass the prompt that will ask your customer to specify the quantity, set this field to 1 (i.e., your customer will automatically purchase a quantity of 1). Otherwise specify the maximum quantity that your customer should be allowed to order.

Order Confirm HTML

This markup is displayed as part of the line item on invoices, as well as on the **Customer License Portal** License Details page (unless overridden by the Customer License Portal HTML outlined below). Refer to **Customizing Invoices and Order Confirmation Emails** for more information. Order Confirm HTML instructions can be specified at both the Product and the Product Option levels. Both values (if present) will be concatenated. If neither are present, it will use the following default text in the invoice:

```
To download your software, visit your personalized <a href-  
f="https://secure.softwarekey.com/solo/customers/License.aspx?LicenseID=[varLicenseID]" &tar-  
get="_blank">Software Download Page</a>.  
<br /><br />The application will ask for a License ID and Password to enable it. Use the
```

values above to activate your purchase.

The following variables can be used in this HTML:

- [varMerchantDispName] - The merchant account name that will appear on the customer's credit card statement. If no merchant account is associated with the order, the SOLO Server Author's company name will be used.
- [varLicenseID] - The License ID assigned to this purchase.
- [varPassword] - The customer Password. **Important Note:** We strongly recommended *not* using this. For customers who have chosen their own password, the value will be masked with * characters and not useful to the user.
- [varActivationPassword] - The license Activation Password.
- [varEmail] - The customer email address.
- [varEmailURLEncoded] - The customer email address, URL encoded.
- [varCompanyName] - The customer company name.
- [varCompanyNameURLEncoded] - The customer company name, URL encoded.
- [varOriginalQS] - The original query string which initiated the order through the cart.
- [varQOrdered] - The quantity ordered.
- [varLicenseCounter] - The License Counter value from the license record.
- [varCustomerID] - The Customer ID.
- [varLatestVersion] - The Latest Version field from the product.
- [varOriginalLicenseID] - The License ID of the original license that this license was used to renew or upgrade through the rules engine.
- [varProductID] - The Product ID.
- [varProductName] - The Product name.
- [varProdOptionID] - The Product Option ID.
- [varProdOptionName] - The Product Option name.
- [varDistributorID] - The Distributor ID, if present.
- [varEnteredDate] - The license entered date.
- [varExpirationDate] - The license Download Until date.
- [varSalePrice] - The sale price of the license.
- [varLFUDefChar1] - [varLFUDefChar10] - License user defined string fields (UDefChar) 1 through 10.
- [varLFUDefDate1] - [varLFUDefDate5] - License user defined date fields (UDefDate) 1 through 5.
- [varLFUDefNum1] - [varLFUDefNum5] - License user defined numeric fields (UDefNum) 1 through 5.
- [varLFUDefFloat1] - [varLFUDefFloat5] - License user defined float fields (UDefFloat) 1 through 5.

Use of the Order Confirm HTML field is optional. If you decide to implement its functionality, please note that any `<hr>` tags will be arbitrarily replaced with `<br>` tags.

Customer License Portal HTML

This markup is displayed on the License Details page in the **Customer License Portal**, and will override any markup specified in the Order Confirm HTML. Customer License Portal HTML instructions can be specified at both the Product ID and the Product Option levels. Both values (if present) will be concatenated. The following variables can be used in this HTML:

- [varMerchantDispName] - The merchant account name that will appear on the customer's credit card statement. If no merchant account is associated with the order, the SOLO Server Author's company name will be used.
- [varLicenseID] - The License ID assigned to this purchase.
- [varPassword] - The customer Password. **Important Note:** We strongly recommended *not* using this. For customers who have chosen their own password, the value will be masked with * characters and not useful to the user.
- [varActivationPassword] - The license Activation Password.
- [varEmail] - The customer email address.
- [varEmailURLEncoded] - The customer email address, URL encoded.
- [varCompanyName] - The customer company name.
- [varCompanyNameURLEncoded] - The customer company name, URL encoded.
- [varOriginalQS] - The original query string which initiated the order through the cart.

- [varQOrdered] - The quantity ordered.
- [varLicenseCounter] - The License Counter value from the license record.
- [varCustomerID] - The Customer ID.
- [varLatestVersion] - The Latest Version field from the product.
- [varOriginalLicenseID] - The License ID of the original license that this license was used to renew or upgrade through the rules engine.
- [varProductID] - The Product ID.
- [varProductName] - The Product name.
- [varProdOptionID] - The Product Option ID.
- [varProdOptionName] - The Product Option name.
- [varDistributorID] - The Distributor ID, if present.
- [varEnteredDate] - The license entered date.
- [varExpirationDate] - The license download until date.
- [varSalePrice] - The sale price of the license.
- [varLFUDefChar1] - [varLFUDefChar10] - License user defined string fields (UDefChar) 1 through 10.
- [varLFUDefDate1] - [varLFUDefDate5] - License user defined date fields (UDefDate) 1 through 5.
- [varLFUDefNum1] - [varLFUDefNum5] - License user defined numeric fields (UDefNum) 1 through 5.
- [varLFUDefFloat1] - [varLFUDefFloat5] - License user defined float fields (UDefFloat) 1 through 5.

Use of the Customer License Portal HTML field is optional.

Custom Renewal HTML

For options used for license renewals. Markup entered here will replace the default content for the renewal on the **Customer License Portal** renewals and upgraded page. The following variables can be used in this HTML:

- [varCustomerID] - The Customer ID.
- [varFirstName] - The customer first name.
- [varLastName] - The customer last name.
- [varEmail] - The customer email.
- [varCountry] - The customer country.
- [varProductName] - The Product name.
- [varOptionName] - The Product Option name.
- [varProductDescription] - The Product description.
- [varOptionDescription] - The Product Option description.
- [varProdOptionID] - The Product Option ID of the renewal option.
- [varUMPrice] - The Product Option Price per U/M of the renewal option.
- [varFormattedUMPrice] - The Product Option Price per U/M of the renewal option, formatted as currency.
- [varLicenseID] - The License ID being renewed.
- [varExternalReference1] - The External Reference 1 value for the license being renewed.
- [varExternalReference2] - The External Reference 2 value for the license being renewed.
- [varQuantity] - The quantity for the renewal.

For New Customers

If checked, all new customers will be permitted to view the Product Option in the online catalog.

Tax Exempt

Specifies whether the Product Option is tax exempt.

No Invoice Discounts

If checked, author/invoice-level Priority Code discounts will NOT apply to the Product Option.

Product Activation & Licensing Details

Activations per U/M

Specifies the number of activations the license is allocated per unit of measure purchased (e.g., two activations per license, 25 activations per network seat, etc.). As the software author, you determine the amount of access to your application your customers are entitled to receive.

The Activations per U/M field can be modified at any time, but be aware that any changes which you make will apply to newly created licenses only. For the *Activation Code with Quantity* Option Type, this should always be set to 1, and for all other *Activation Code* Option Types, the value specified must be greater than zero (0).

Issue License

Check this box if a License ID needs to be issued for the Product Option upon purchase/creation.

If there is no *Order Confirm HTML* specified for the Product Option, this will cause the License ID to be displayed (by default) on the online invoice with the following message text: "The application will ask for a License ID and Password to enable it. Use the values above to activate your purchase." This flag must be set to True if the Product Option Type is any one of the *Activation Code* Product Option Types.

Issue Installation ID

Used to determine if an Installation ID is to be issued for activations processed through SOLO Server. In general, always enable this option.

Allow Deactivations

Used to determine if a deactivation is allowed through SOLO Server. This can only be enabled if *Issue Installation ID* is also enabled.

Deactivations per U/M

Specifies the number of deactivations allowed through SOLO Server. This value can only be set if both *Issue Installation ID* and *Allow Deactivations* are enabled. A value of -1 indicates unlimited deactivations are permitted.

Allow Reactivations on Same Computer/Allow Reactivations

During the activation process, the server will search the License ID's activation/installation history for matching Activation Data from a previous activation. If an exact match is found, this is considered to be a reactivation on the same computer. The new installation will be granted with an exception of "<TH" (less than threshold) and the activation count will NOT be decremented. In addition, the Installation ID from the original matching activation is moved to the new activation rather than creating a new Installation ID. The original activation is then deactivated and its Related InstallationID is set to the Installation ID that was moved.

This feature is only available when the *Issue Installation ID* option is also set to True.

Please be aware that this feature will only work as described when correctly formatted Activation Data is exchanged with the ActivateInstallation Web method. Otherwise, a match will never be found. For Protection PLUS 5 SDK Volume License option types, this is labeled "Allow Reactivations", and controls whether online activations are allowed after the initial license file has been generated.

Note that disabling this setting will not prevent a previously deactivated installation from being reactivated.

IP Activation Mode

Choose one of the following values for restricting activations by IP address (note that currently only IPv4 addresses are supported):

- No restrictions - No IP address restrictions will be enforced, regardless of whether Allowed Activation IPs is specified on the license.
- No restrictions (allow override) - No IP address restrictions will be enforced unless the Allowed Activation IPs field is populated on the license.
- First activation IP - If the Allowed Activation IPs field is not set on the license, activation will be allowed for any IP address and that IP address will be set on the license Allowed Activation IPs field along with the IP Mask.
- Specified activation IP - Only IP addresses specified on the Allowed Activation IPs field on the license can activate.

IP Mask

IP mask to set on the license Allowed Activation IPs field during the first activation when IP Activation Mode is set to *First Activation IP*.

Additional Activation Days

The number of days following the last successful activation that an additional activation will be granted once the activation count reaches zero (0). Activations allowed through this mechanism will be marked with the #DAYS exception in the activation history log. Set this value to zero (0) to disable this feature.

Minimum Activation Version

The minimum version number of your application that your customer must have installed to permit activation. Leave this blank to allow activation for any and all versions of your software. The format of the version number is NNNNN.NNNNN.NNNNN.NNNNN, where N represents a non-negative integer ranging from 0 to 99999, inclusive. No leading zeroes are required. Please note that all four version elements must be specified. For version numbering schemes using less than four version elements, use trailing zeroes (e.g., for version 3.0, specify 3.0.0.0).

Minimum Activation URL

Specifies a destination URL to which the customer will be re-directed if the attempted activation fails because the customer has a version of the software that is LESS THAN the version number specified in the Minimum Activation Version field.

Unlock Threshold

This field is only available if the Issue Installation ID flag is set to False. This value controls the decision as to whether or not to grant an activation without decrementing the activation count, provided a previous activation with a matching or nearly matching ComputerID is found in the activation history. The value of this numeric field represents the allowable difference between Computer ID values when determining if a previous activation is a match (or a near-match) to the current activation request.

- Setting this field to -1 (minus 1) will disable this feature.
- Setting this to 0 (zero) will require an EXACT match on Computer ID.
- Setting this greater than 0 (zero) will cause any existing activation with a Computer ID within +/- the specified value to be considered a matching activation. When using the **Protection PLUS Enhanced Computer ID Algorithms**, set this value to 65535 to allow re-activation on the same computer hardware.

When the value here is 0 (zero) or greater and a match is found, the new activation will be granted with an exception of "<TH" (threshold) and the count of remaining activations will not be decremented.

Trigger Code

Trigger Code Event ID to generate. Must be a numeric value between 1 and 50, inclusive. This field is required if the Product Option Type is any of the *Activation Code* options.

Trigger Code Seed

Protection PLUS Trigger Code seed value. Must be a valid integer value of 0 (zero) or greater. A random number is generated for you automatically when adding a new option. This field is required if the Product Option Type is any of the *Activation Code* options.

RegKey 2 Seed

Protection PLUS Registration Key 2 Seed / Trigger Code Event Data (additional number) seed. must be a valid integer value between 0 (zero) and 255, inclusive. A random number is generated for you automatically when adding a new option. This field is required if the Product Option Type is *Activation Code with Quantity* or *Activation Code with Fixed Value*.

TC Fixed Value

Trigger Code Fixed Value / Event Data value to send. The specified value must be a valid integer between 1 and 16383, inclusive. Entering a value of 0 (zero) will be submitted as NULL. This field is required if the Product Option Type is *Activation Code with Fixed Value*.

OffAct Key

Offline Activation Key. For any of the *Activation Code* Product Option Types, if you want to allow the option to activate an offline machine through another computer, enter a random sequence of letters and numbers here. A random value is generated for you automatically when adding a new option.

In Instant Protection PLUS 3, this is the **Users may activate my application from another computer** option.

Upgrade From

This feature has been deprecated and replaced by the **Product Option Rules**, and will only be displayed if already set.

Upgrade To

This feature has been deprecated and replaced by the **Product Option Rules**, and will only be displayed if already set.

Days to D/L

Although labeled *Days to Download*, it can also be used to set a license expiration date. This field specifies the number of days to set the *Download Until* expiration date following license creation or activation. This expiration date can be used to:

- Indicate software maintenance/support expiration. The license will still be valid after this date, but you can restrict the customer from downloading the product from the **Customer License Portal**. Set *Days to D/L* to 0 to indicate perpetual access.
- Indicate a periodic/subscription expiration date for a license, where the software will no longer be licensed after this date. This only applies if you have configured your software to use this date as a license expiration date.

The *Download Until* date is calculated upon creating a new license, but the *Reset Expiration at Activation* option (see below) can be enabled, which causes it to update the expiration date based on the *first* activation for that License ID.

This date is passed down in the EffectiveEndDate field in Protection PLUS 5 SDK license files.

File to D/L

File to Download. The path and name of the file available for download through the **Customer License Portal**. Use the "Select a File..." button on the Edit Product Option page to open a dialog to select a file already uploaded to your ESD directory, or the "Manage and Upload Files" button to open the file management page in a new tab. See **Setting Up ESD Product Option** for details.

This supports the [varLatestVersion] search/replace parameter, which will be replaced with the current value of the *Latest Version* field on the Product.

D/L Page

Download Page. A URL to a custom page to download the file. When the customer clicks the Download button in the **Customer License Portal**, SOLO Server will append the LicenseID to the querystring of this URL and redirect the user to this page.

This supports the [varLatestVersion] search/replace parameter, which will be replaced with the current value of the *Latest Version* field on the Product.

Trial Required

Reserved. Leave False (unchecked).

Reset Expiration at First Activation

If enabled, when a valid License ID is being activated for the first time, the *Download Until* expiration date of the License ID will be calculated and reset to the current date *plus* the number of days specified in the *Days to D/L* field (*unless the existing date is later than the calculated date*).

Upgrade Behavior

This setting determines whether the License ID should be allowed to execute and/or activate when the License ID Status is changed to "Upgrade" (UPG). This offers three (3) options:

- Deactivate - Existing activations will deactivate after the next contact with the server. New activations will not be allowed.
- Allow Execution - Existing activations will be allowed to continue to execute after the next contact with the server. New activations will NOT be allowed.
- Allow Activation - Existing activations will be allowed to continue to execute after the next contact with the server. New activations will be allowed.

License File Name

For Protection PLUS 5 SDK Volume License types, the file name of the downloadable license file. This field supports several search/replace parameters as follows:

- [varLicenseID] - The License ID.
- [varLFUDefChar1] - [varLFUDefChar10] - License user defined string fields (UDefChar) 1 through 10.
- [varExpirationDate] - The license expiration date, with slashes replaced with underscores.
- [varSerialNumber] - The serial number of the license, if applicable.

License Labels

Custom label set for the user-defined fields displayed on the "User-Defined Fields" tab on the License Details page. See **Customizing License Labels** for more information. When editing an Option, you can click the *Configure License Labels* button to open the license labels configuration page.

License Counter Source

This setting determines how the License Counter field is initialized on newly added licenses. The following options are available:

- None - The License Counter will be left uninitialized when adding a new license.
- Specified Value - The License Counter will be set to the quantity multiplied by the specified License Counter Value when adding a new license.
- Quantity - The License Counter will be set to the license quantity when adding a new license.

For more information, see our blog post on **Using a Counter Value in Licensed Applications**.

License Counter Value

The specified value to set the *License Counter* to when adding a new license when the *License Counter Source* is set to Specified Value. Note that for options with a *Quantity Mode* of Multiple Activations, this will be multiplied by the quantity.

For more information, see our blog post on [Using a Counter Value in Licensed Applications](#).

Custom Parameter Set

The Custom Parameter Set to use for licenses for the option. See [Custom License Parameters](#) for more details.

Network Floating Options

Advanced option. The set of [Network Floating Options](#) to use for Cloud-Controlled network floating licensing through the [XmlNetworkFloatingService web service](#). Also note that when using this option, the *License Counter Source* should be set to either Specified Value or Quantity in order to properly initialize the *License Counter* on newly added licenses, as network floating licensing uses the *License Counter* to store the number of allowed network seats.

License Validation Options

The set of [License Validation Options](#) used to control how periodic background checking with SOLO Server is performed by the application.

License Groups

The Product Option license group behavior. Can be one of the following:

- Disabled - Licenses for this Product Option cannot be placed in license group.
- Enabled - Licenses for this Product Option can optionally be placed in a license group.
- Required - Licenses for this Product Option must be placed in a license group. **Important:** When using this setting, you will *not* be allowed to use the [Add/AddS web service method](#) to add a license using this Product Option.

This is an advanced option. For more information, [contact us](#).

User Defined Fields Writable

Whether to allow applications to write new information to the license user-defined fields through the [XmlLicenseServer](#) web service's UpdateUserDefinedFields method. This is disabled by default.

Custom Data

Additional data to be included within the ProductOption/CustomData element in the XML License File when using Protection PLUS 5 SDK. This can be string or XML data.

Other Details

Hidden

Enable if this Product Option should be hidden from all online catalog listings.

Enabled

If this option is not enabled, any order containing the product will be declined, and the Option will be hidden from ordering pages and drop-down menus. Note that disabling this option will also automatically set it to Hidden.

You cannot delete a Product Option; you can only disable it by unchecking this option.

Activation Threshold Plugin

The Plugin to perform customized activation threshold checking to determine if the activating machine matches an existing installation when allowing reactivation on the same computer. This option is only available to Master Users, and is designed to allow custom logic to be implemented to augment the activation process. For example, plugins can be developed to match on certain system identifiers or require only a partial rather than exact match. If you have interest in having such a plugin developed and put in place, please [contact us](#) for additional information.

Pre-Activation Plugin

The Plugin to process before an activation is issued. A processing failure can prevent an activation from being processed. This option is only available to Master Users, and is designed to allow custom logic to be implemented to augment the activation process. For example, plugins can be developed to validate with a third-party service prior to allowing the activation to be issued. If you have interest in having such a plugin developed and put in place, please [contact us](#) for additional information.

Post-Activation Plugin

The Plugin to process after an activation has been issued. Since this takes place after issuing an activation, a processing failure cannot prevent an activation from being issued. This option is only available to Master Users, and is designed to allow custom logic to be implemented to augment the activation process. For example, plugins can be developed to communicate with a third-party service to notify it that an activation was issued. If you have interest in having such a plugin developed and put in place, please [contact us](#) for additional information.

QB Item

This is an advanced option. For more information, [contact us](#).

QB Account

This is an advanced option. For more information, [contact us](#).

QB Taxable

This is an advanced option. For more information, [contact us](#).

QB Class

This is an advanced option. For more information, [contact us](#).

Info URL

An URL to an information page for the Product Option. This is used by the upsell table on the cart to offer a pop-up link to obtain additional information about the product. The page entered here should be designed for a 400x400 pop-up window. If an Info URL is set here, it will override the Info URL set up at the Product ID level. Optional.

Image URL

Currently not used, but reserved for future use. URL to an image for the option. If an Image URL is set here, it will override the Image URL set up on the Product ID. Optional.

Error Message

An error message to display on the cart page if the Option fails [rules](#) validation. **NOTE:** This is the only [rule](#) error message supported by the shopping cart - the rule level messages are no longer supported.

Marx OLM Update

Update values for Marx Online License Management (OLM). For use with Marx CryptoBox hardware keys.

Shipping Options

Requires Shipping

Enable if the sale of the Product Option requires a physical shipment via regular mail or other courier service. Note that if you have any shipping options set up on the Product Option and this option is not enabled, there is a possibility of an error being displayed during checkout which will prevent the customer from completing the order.

Length

The length of the Product Option at shipping time.

Width

The width of the Product Option at shipping time.

Height

The height of the Product Option at shipping time.

Weight

The weight of the Product Option at shipping time.

Insurance Value

The insurance value of the Product Option at shipping time.

Inventory Options

Track Inventory

Enables inventory tracking of the Product Option.

Allow Backorder

Enable this to allow the inventory level of this Product Option to drop below zero. If this disabled, and the Track Inventory is enabled, SOLO Server will decline any online orders that would cause the Stock Quantity field to drop below zero.

Stock Quantity

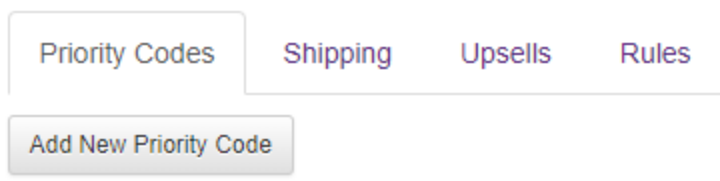
The quantity of the Product Option currently in stock.

Minimum Stock Quantity

The minimum stock quantity before a notification is sent. If, during the occurrence of an online purchase, the Stock Quantity drops below the value specified in this field, SOLO Server will trigger the dispatch of a notification to the administrator. See **Real Time Inventory Management** for more information.

Additional Settings

These settings are accessible through tabs at the bottom of a View Product Option page:



Priority Codes

Priority Discount Codes can be used to offer promotional discounts to customers and to apply miscellaneous discounts when processing orders manually.

Shipping

Multiple **shipping options** can be defined per product option, and several properties of each option can be configured to restrict how the shipping option can be used.

Upsells

Configuring Upsells can increase revenue by attempting to persuade a customer to purchase either a more expensive item or related additional items

Rules

Product Option Rules allow you to restrict the purchase of a product option based on certain criteria when using SOLO Server's integrated e-Commerce.

Duplicating Product Options

In order to quickly set up multiple product options for a product, SOLO Server users with the **Add Product permission** enabled can duplicate an existing product option. To duplicate a product option, navigate to the option details page of the product option to duplicate click the Actions button, and choose Duplicate. This will take you to a new page with the following options:

New Option Name

The name for the new option.

New Option Price

The price for the new option (for bundled products this will be disabled as SOLO Server will compute the price based on the included options). **Important note:** Setting the price to zero allows someone to use the cart to process an order without entering a credit card, even if you are not using the eCommerce engine of SOLO Server. It is recommended that you set the Unit Price to a value greater than zero unless you specifically want to allow this or have set up a cart rule to verify eligibility for a free upgrade.

Duplicate Priority Codes

Check this to duplicate all of the priority codes from the existing option to the new option.

Duplicate Shipping

Check this to duplicate all of the shipping options from the existing option to the new option.

Duplicate Upsells

Check this to duplicate all of the upsells from the existing option to the new option.

Duplicate Rules

Check this to duplicate and rules from the existing option to the new option (for bundled products this will be disabled because bundles cannot have rules).

Duplicate Extended Pricing

Check this to duplicate all extended pricing rules from the existing option to the new option.

Once you have filled in these fields, simply click the Submit button and the new option will be created and displayed. Note that the new option is created hidden and disabled so that it does not immediately show up in the online catalog before you review the settings and make any changes. You will need to unhide and enable it, which are the *Hidden* and *Enabled* product option settings.

Setting Up ESD for a Product Option

Electronic Software Delivery (ESD) is a distribution system that will help your customers download your software after they have purchased or been issued a license. Access to the download can be limited by the *Status* and *Download Until* date of the License ID, and the customer can access their downloads by logging into the **Customer License Portal**.

If you have configured your product to automatically start as a free trial without requiring activation, then you can choose to host the trial download on your own website or distribute it through some other means. If the trial version can be activated into a full version, then all the customer will need is their purchased License ID and Password to activate into the full version. If, however, the full retail version of your product is a different build/download than your trial version, or if your customer purchases your software without first downloading the trial version, you can provide a customer with prompt access to download the software through SOLO Server's ESD.

SOLO Server offers Authors two options for download link destinations:

1. SOLO Server Hosted Download, where you can upload a retail version of your product to our server and provide your customer with access to the download through the Customer License Portal.
2. Externally Hosted Download, where you specify within SOLO Server a URL containing the external location of the retail download of your software.

Each of these options is discussed in greater detail below.

SOLO Server Hosted Download

Using this option, you can upload the full retail version of your software to a private and thoroughly secure folder structure within SOLO Server. This will ensure that subsequent downloads of your product will only be available to those customers who have purchased an authorized License ID. All download requests associated with a given License ID are recorded in the *Download Log* tab at the bottom of the License Details page in SOLO Server. Alternatively, a **report of all ESD downloads** for a specified date range and (optionally) specified software products can be generated.

Be aware that there is a series of strictly enforced guidelines which must be followed by SOLO Server Authors when choosing to use this option. Refer to **Managing Files** for complete details, including upload instructions and important information regarding file size limits.

Once the file is uploaded, configure the following fields when **adding a Product Option**:

File to D/L

Set to the location of the file in the *ESD Files* folder, such as: `\filename.ext` or `\dir1\dir2\filename.ext`

D/L Page

Leave blank.

Days to D/L

Set to the number of days that the customer is permitted to download the software. When a License ID for this Product Option is generated, the *Days To D/L* field will be added to the *Entered Date* and stored in the *Download Until* field of the License ID record.

Reset Expiration at Activation

Optionally enable this field if you want the *Download Until* date of the License ID to be reset/recalculated to the first activation date plus the *Days To D/L* field.

Externally Hosted Download

If your installer is too large to host through SOLO Server, it is possible to host the download for your software on your brochure Web site, FTP site, or other download service, and tell SOLO Server the location of the file.

When **adding a Product Option**:

Order Confirm HTML

Could be set to an example like this:

HTML

```
<a href="http://www.yourdomain.com/downloads/yourfile.exe">Download your software now.</a>
```

File to D/L

Leave blank.

D/L Page

Set to: `http://www.yourdomain.com/downloads/yourfile.exe`

Days to D/L

Set to the number of days that the customer is permitted to download the software. When a License ID for this Product Option is generated, the *Days To D/L* field will be added to the *Entered Date* and stored in the *Download Until* field of the License ID record. For an externally hosted download, SOLO Server won't restrict access to the file if the customer already has the link.

Network Floating Options

Network Floating Options control the behavior of Cloud-Controlled Network Floating Licensing through the **XmlNet-workFloatingService web service**. If you are interested in implementing Cloud-Controlled Network Floating Licensing into your product, please **contact us**.

The fields on this page are as follows:

Display Name

Display name for the set of options.

Poll Frequency

The frequency the application will poll the server in seconds. Must be greater than 0.

Poll Retry Frequency

The frequency the application will retry polling the server if polling fails in seconds. Must be greater than 0.

Poll Retry Count

The number of times the application will retry polling the server if polling fails. Must be 0 or greater.

Allow Temporary Overages

If enabled, this will allow temporary overages to occur within the set maximum overage period. An example scenario of where this could be useful could include a user shutting the lid on a laptop before heading out to lunch, which causes the computer to suspend or hibernate. In this state, the computer is unable to perform any polls to keep the session active. When the user lifts the lid on the laptop and returns to its normal, running state, the session would no longer be active, and this could result in the user being locked out of the application if other users have since consumed all available seats. By allowing temporary overages, this will allow the user to resume a session which has since expired within the allowed overage period; however, this would result in the possibility of more seats being used than licensed temporarily. No new sessions may be open until enough active sessions have closed or expired to fall back under the seats allowed.

Maximum Overage Period

Please refer to the description of Allow Temporary Overages above. This is the time, in seconds, in which a session is allowed to be expired before polling again to resume its session, even if it means an overage will occur.

Checkout Duration Minimum

The minimum number of hours allowed when checking out a network seat.

Checkout Duration Maximum

The maximum number of hours allowed when checking out a network seat. Must be equal or greater than the Minimum Checkout Duration.

Allow Checkout Extension

Whether to allow extending the checkout period for a checked out session. **Important:** Enabling this feature means multiple checkout requests may be used to extend a checkout period. Checked-out sessions cannot be manually closed from within SOLO Server, so they may only be checked-in or closed from the application. If a computer should orphan/abandon a checked-out session, it's seat will not be recovered until that session's check-out period is over. In other words, the ability to self-heal and recover orphaned seats is eliminated when using checkouts, and the risk of this being problematic is higher with "Allow Checkout Extension" enabled.

Allow Expired Licenses

Whether to allow expired licenses (with a Download Until in the past) to open sessions.

License Validation Options

In addition to validating the local license file every run, a licensed application can also periodically validate with SOLO Server. This allows the application to:

- Verify the *License Status* of the License in SOLO Server.
- Verify that the current installation has not been deactivated.
- Refresh the license file to get any updated license data, such as a new expiration date or any custom license parameters.

The frequency of these validations can be specified through *License Validation Options* configured in SOLO Server, which are then included in the Protection PLUS 5 SDK license file.

To better understand the benefits of this approach, see our post on [Dynamic License Validation Options](#).

Important

These License Validation Options can only be accessed when using Protection PLUS 5 SDK. The values will be stored in the Protection PLUS 5 SDK license file, and you must configure your software to utilize this data.

See the Protection PLUS 5 SDK manual topics ([PLUSManaged](#) or [PLUSNative](#)) for more details on how to implement this functionality in your application.

How to Configure

A set of License Validation Options can be specified at the Product Option level, and optionally overridden on individual licenses.

Defining License Validation Options

To create or edit a set of License Validation Options:

1. Use the SOLO Server menu *Configure / Products*.
2. Use the drop-down *Actions / Configure License Validation Options*.
3. Press the *Add New* button or *Edit* link.
4. Refer to the Fields and Example Settings sections below for more details on what values to use.
5. Press *Save*.

Assigning to a Product Option

When editing the settings of a **Product Option**, there is *License Validation Options* field. The drop-down field lets you choose an existing set of License Validation Options, or you can press the *Configure License Validation Options* button to define a new set.

Overriding on a License

A license will default to inheriting the License Validation Options from the corresponding setting in the **Product Option Configuration**.

This can be overridden by [editing a license](#) and changing the *License Validation Options* field to a new set of defined License Validation Options.

Fields

Name

The friendly name of the set of options. This will be used to identify the set of options in drop downs in the user interface.

Enabled

Whether the set of options is enabled.

Disabling a set of options will only prevent it from being selected when setting the license validation options on any product options or licenses going forward, but will not disable the use of the options already set on existing product options or licenses.

Always require validation with SOLO Server

Choose this option if you want the application to require validation with SOLO Server on every execution.

Validation is required to run the application. It is recommended to only use this option if your application requires Internet access. **If the customer does not have Internet access for any reason, they will not be able to access your software since they can't complete the required validation.**

When this is set, all subsequent options are disabled as they are no longer applicable.

Attempt validation with SOLO Server after X days

Choose this option if you want the application to attempt validation with SOLO Server after a certain number of days.

Enter a value to specify how frequently you want the application to try to validate with SOLO Server. The day counter is always reset if validation is successful. This is not a required validation and will fail silently if the software is unable to connect to SOLO Server.

Require validation with SOLO Server after X days

Choose this option if you want the application to require validation with SOLO Server after a certain number of days.

Validation is required to run the application beyond this period, and the application will cease to operate if the software is unable to connect with SOLO Server. This option is only available if attempt validation is also selected. The value must be greater than or equal to the number of days for attempting validation. This allows for an offline grace period when an Internet connection is temporarily unavailable.

Warn the user X days before validation with SOLO Server is required

Choose this option if you want to warn the user prior to validation with SOLO Server being required.

Enter a value to specify when to begin warning the user that required license validation is near. This option is only available if require validation is also selected. The value must be must fall on or between the attempt and require days.

Example Settings

Since your software can always validate against the local Protection PLUS 5 SDK license file, it only needs to periodically validate with SOLO Server in most cases.

The following example settings are a good balance of flexibility and control. You can adjust these values to best suit your software and your customers:

- Attempt validation with SOLO Server after **14** days
- Require validation with SOLO Server after **30** days
- Warn the user **7** days before validation with SOLO Server is required

Here is a breakdown of the validation process with the above values:

- If your software can't connect to SOLO Server after 14 days for whatever reason, the validation *attempt* can be allowed to fail silently. Until it is successful, your software can keep attempting to validate with SOLO Server whenever your validation logic is run.
- After it has been 23 days (7 days before validation with SOLO Server is required), your software can prompt the user with a warning that the software needs to connect to the license server within X days, otherwise they will no longer be able to

access the software.

- Once it reaches 30 days since it last successfully validated with SOLO Server, it will prevent the use of the software.

See the Protection PLUS 5 SDK manual topics (**PLUSManaged** or **PLUSNative**) for more details on how to code this functionality in your application.

Extended Pricing

In addition to flat, per unit pricing, extended quantity based pricing can also be specified on a product option. To configure extended pricing, click the Create/Manage Extended Pricing link next to the Price Per U/M field on the product option page while in view mode (note that this is not available for bundled options).

On the extended pricing page, new pricing levels can be defined by entering the minimum and maximum quantities the pricing applies to as well as the unit price for the quantity range in the bottom row of the grid and then clicking the Add New Pricing button. Existing pricing levels can be editing by clicking the Edit button, adjusting the values, and clicking the Update button. Similarly, pricing levels can be removed by clicking the Delete button. Enter 0 as the maximum quantity to specify no maximum.

When pricing an item on the cart, SOLO Server will first look for an extended pricing level that applies to the item. If found, the extended pricing level will be used, otherwise, pricing will fall back to the default specified on the option. Note that the minimum/maximum quantity check performed when adding an item to the cart is still based on the minimum and maximum quantities specified on the option, so these should still be set accordingly even if extended pricing is specified.

Example:

To set up an option with a base price of \$100 with a 10% discount for additional quantity up to 5, extended pricing would be set as follows:

Minimum Quantity	Maximum Quantity	Unit Price
1	1	100.00
2	2	90.00
3	3	80.00
4	4	70.00
5	0	60.00

The option itself should be set with the base unit price (Price Per U/M) of 100.00, and specify a minimum quantity of 1 and maximum quantity of 0 in this case.

Product Option Rules

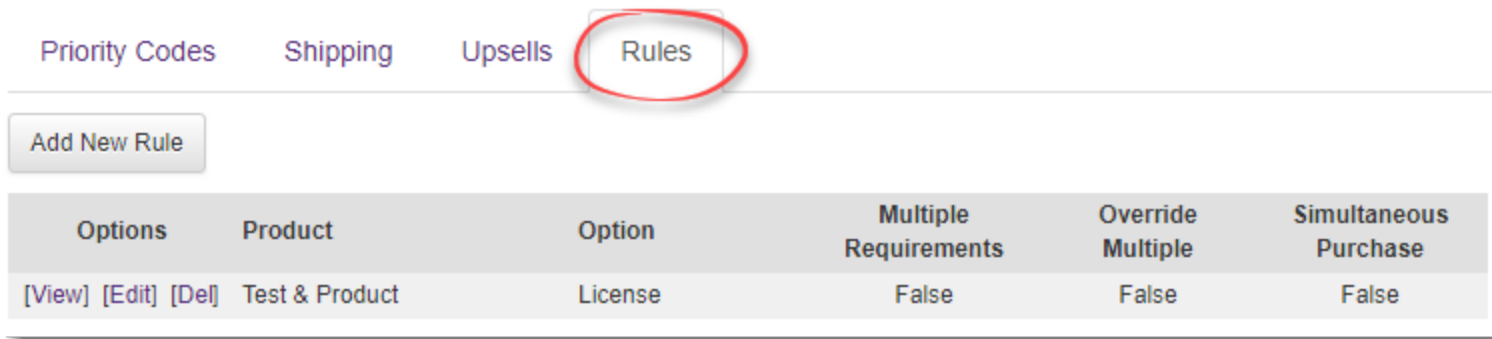
When using SOLO Server's **integrated shopping cart**, you can define "Rules" on a Product Option that set conditions for how/when that Option can be purchased. Some examples of rules include:

- Offer renewals for subscription licenses, support, or maintenance. This will automatically update the expiration (*Download Until*) date of the previous/existing License ID.
- Offer a free or paid upgrade license only if the customer has a valid license for a specific earlier version
- Allow customers to purchase additional activations for a license they purchased previously
- Allow customers to purchase an increment to the License Counter field for a license they purchased previously
- Restrict a certain Option from being bought unless the customer already owns (or is simultaneously purchasing) another specified Option

Once the Option is added into the cart and the customer is logged in, the cart processor can validate that the rules have not been violated by checking against the customer's license history and/or current cart contents. If any rules are violated, the customer can be shown an error message describing the problem, and the order will not be allowed to be completed.

Setting up Rules

To set up rules on a Product Option, scroll to the bottom of a View Product Option page and click on the Rules tab:



Options	Product	Option	Multiple Requirements	Override Multiple	Simultaneous Purchase
[View] [Edit] [Del]	Test & Product	License	False	False	False

Any existing rules will be listed. To view any configured rule, simply click the View link. If the user has the **Edit Products permission**, there will also be "Edit" and "Delete" links for each rule, as well as an *Add New Rule* button above the list.

Rule Parameters

The Product Option rules fields are defined as follows:

Product

The Product that is required to satisfy the rule.

Product Option

(Optional) The Option, under the Product selected above, that is required to satisfy the rule.

If specified, the engine will also check the *Upgrade To* field of the Option for each license. If the *Upgrade To* field matches the Option selected in this rule field, the license will be considered to be the selected Option.

Error Message

NOTE: This field is no longer supported by the shopping cart. Use the Error Message field on the **Product Option configuration**.

Multiple Requirements

If this is set, the rule will be evaluated using a logical AND comparison with any other rules on the Option with *Multiple Requirements* set. This cannot be used with *Override Multiple*. Rules without this set will be compared using a logical OR comparison.

Override Multiple

If this is set, the rule can override the results of the evaluation of other rules on the Option with *Multiple Requirements* set. Essentially, the rule will be compared using an OR comparison against the results of the Multiple Requirements rule evaluation. This cannot be used with *Multiple Requirements*.

Simultaneous Purchase

If this is set, the rule is first checked against the customer's license history. If the rule does not validate against the license history, it is then checked against the items currently in the customer's cart. Note that when doing the validation against the cart items, only the *One to One* match parameter is checked. This cannot be used with *Require License ID* nor any of the options which update existing licenses during order processing (Link Old To New, Update Old Status, Carry Download Expiration, Maintenance Renewal, Update License Counter, and Increment Activation Count).

Require License ID:

If this is set, when evaluating the rule against a cart item or processing the rule during order processing, the rule will only consider the specific RuleLicenseID passed in when adding the item to the cart. Note that when this is set the RuleLicenseID MUST be passed when adding the item to the cart (this is automatically handled for the add to cart links for upgrades/renewals in the **Customer License Portal**). This setting cannot be used along with *Simultaneous Purchase*.

Previous License OK

If this is set, the previous license(s) must have an OK status.

Quantity Mode

The type of quantity validation to enforce. This can be set to the following:

- None - The customer can purchase any quantity of the upgrade licenses.
- Limit to Quantity - The customer can purchase up to the quantity of upgrade license as previous licenses they own.
- One to One Match - The customer must purchase the exact quantity of upgrade licenses as previous licenses they own.

Link Old To New

If this is set, upon order processing, the ReplacedBy field on the previous license(s) will be updated with the new License ID(s). This setting cannot be used along with *Simultaneous Purchase*.

Update Old Status

If this is set, upon order processing, the status of the old license(s) will be set to Upgrade (UPG). This setting cannot be used along with *Simultaneous Purchase*.

Download Expiration Carryover (when possible)

Whether the expiration date on the existing license is carried over to the new license if the existing license is not expired. This can be set to the following:

- None - The existing expiration date is not carried over
- Carry Over - The existing expiration date will be carried over to the new license
- Increment - The existing expiration date will be carried over to the new license and incremented by the Product Option Days to D/L setting.

Note that this cannot be combined with the *Maintenance Renewal* option nor the *Simultaneous Purchase* option.

Maintenance Renewal

Check this to set up the option as license or maintenance/support subscription renewal. This allows the customer to purchase a subscription renewal option, and upon order processing, the download expiration date for the original license(s) (the "Download Until" field on the license details page) will be incremented by the *Days to Download* of the renewal subscription option. If the original license has not expired, it will increment based on the expiration date, which allows customers to renew early without any penalty. If the original license has expired, you can choose to increment based on the current date or the expiration date of the original license.

In addition, when *Maintenance Renewal* is checked and the parent option has a **payment plan** associated with it, the original license will also be associated with the payment plan. This allows setting up a retail renewal option that when purchased will increment the license expiration date and then convert the license expiration to be controlled by the payment plan system from that point onward. Note that this cannot be combined with the *Carry Download Expiration* option nor the *Simultaneous Purchase* option.

Expired Maintenance Start Date

When *Maintenance Renewal* is checked, this controls how the new expiration date is calculated **when the license/maintenance being renewed has expired**. *Current Date* will base the new expiration on the current date. *Expiration Date* will base the new expiration on the original license's expiration date, effectively forcing the customer to catch up on their maintenance.

If the license has not expired yet, the new expiration date is always based on the original license's expiration date so that the customer is not penalized for renewing early.

Increment Activation Count

Use this setting to allow customers to purchase additional activations for their existing licenses. When set, the *Activations Left* on the existing license will be incremented during order processing based on the *Activations Per U/M* setting of the Option. **Note:** This setting also requires that the *Require License ID* setting detailed above also be enabled.

Update License Counter

Use this setting to allow customers to increment the license counter for their existing licenses. When set, the *License Counter* on the existing license will be incremented during order processing based on the *License Counter Source/Value* settings of the Option. **Note:** This setting also requires that the *Require License ID* setting detailed above also be enabled. For more information, see our blog post on **Using a Counter Value in Licensed Applications**.

Verify Purchase Date

If this is set, the previous license(s) must have a purchase date after the *Previous Purchase Date*.

Previous Purchase Date

The date the previous license(s) must have been purchased after.

Download Expiration Availability

The availability of the upgrade/renewal based on the expiration (*Download Until*) date of the original license(s). The following options are available:

- Always Available - The upgrade/renewal is always available for purchase, regardless of the previous license(s) expiration date.
- Only Available Before Expiration - The upgrade/renewal is available for purchase only when the previous license(s) expiration date has not expired, taking into account the grace period below.
- Only Available When Expired - The upgrade/renewal is available for purchase only when the previous license(s) expiration date has expired, taking into account the grace period below.

Download Expiration Grace Period

The number of days past the expiration (*Download Until*) date that the previous license(s) are still considered valid.

Allow User Override

If this is set, the rule is can be overridden by users or members of groups which have the *Override Rules* permission.

Display Upgrade

If this is set, the option will be displayed with the upgrade options on the Renewals & Upgrades page of the **Customer License Portal** for the given product and/or option with a link to add the item to a cart. The link will include the LicenseID, which will be stored on the cart item for use with the *Require License ID* option detailed above.

Highlight Upgrade

Not yet implemented. In the future, this will cause the given product and/or option to be highlighted on the customer home page.

Rule Evaluation Flow

To view the flowcharts describing how rules are evaluated, see **Rule Evaluation Flow**.

Bundled Products

For bundled products, if a rule specifies *Link Old To New*, the License ID of the last item added to the invoice from the bundle will be used to update the existing license. Also note that if a bundle is set up as the previous product and/or option, you must have *Simultaneous Purchase* checked as the license history is not checked for bundles since they are broken into individual licenses upon order completion and will never be found in the customer's license history.

How to Configure Specific Rules

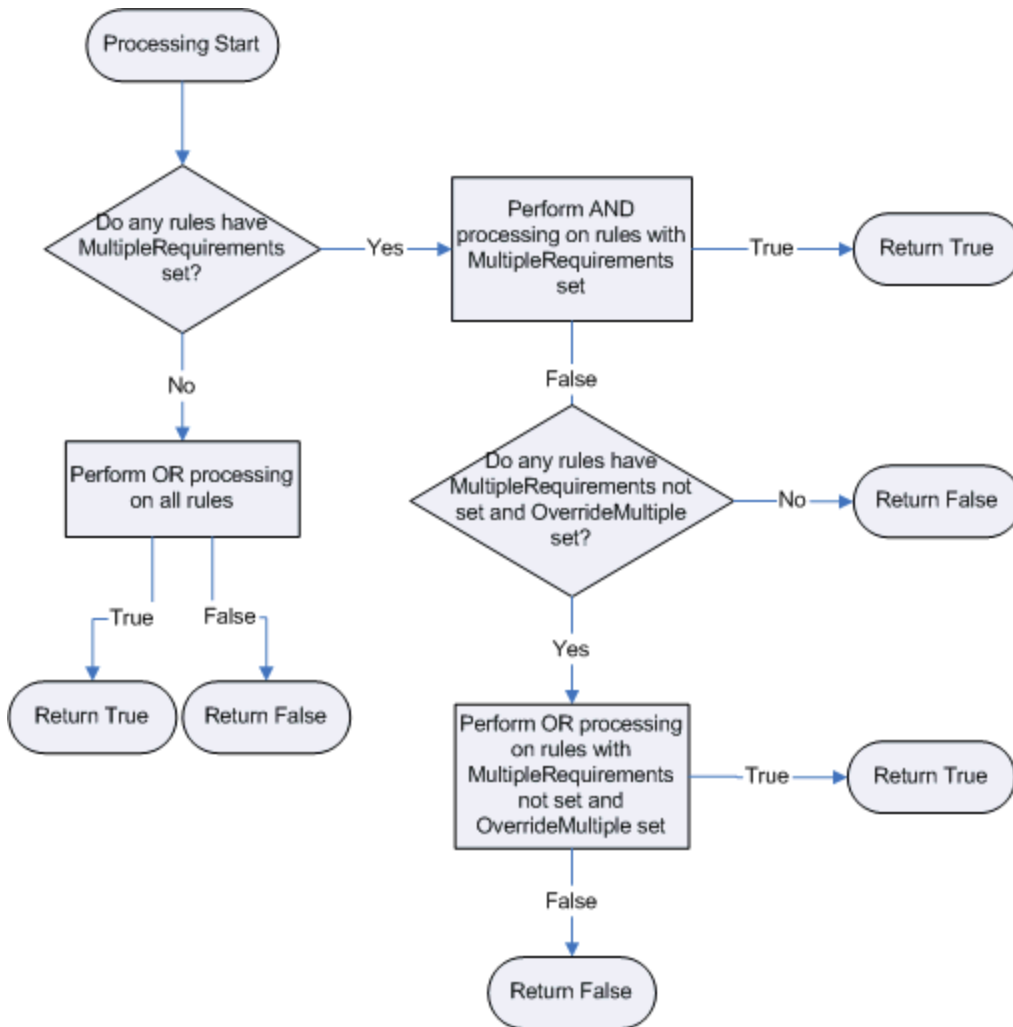
For examples of how to configure rules, refer to the following topics:

- **Configuring Renewal Options**
- **Configuring Upgrade Options**

Rule Evaluation Flow

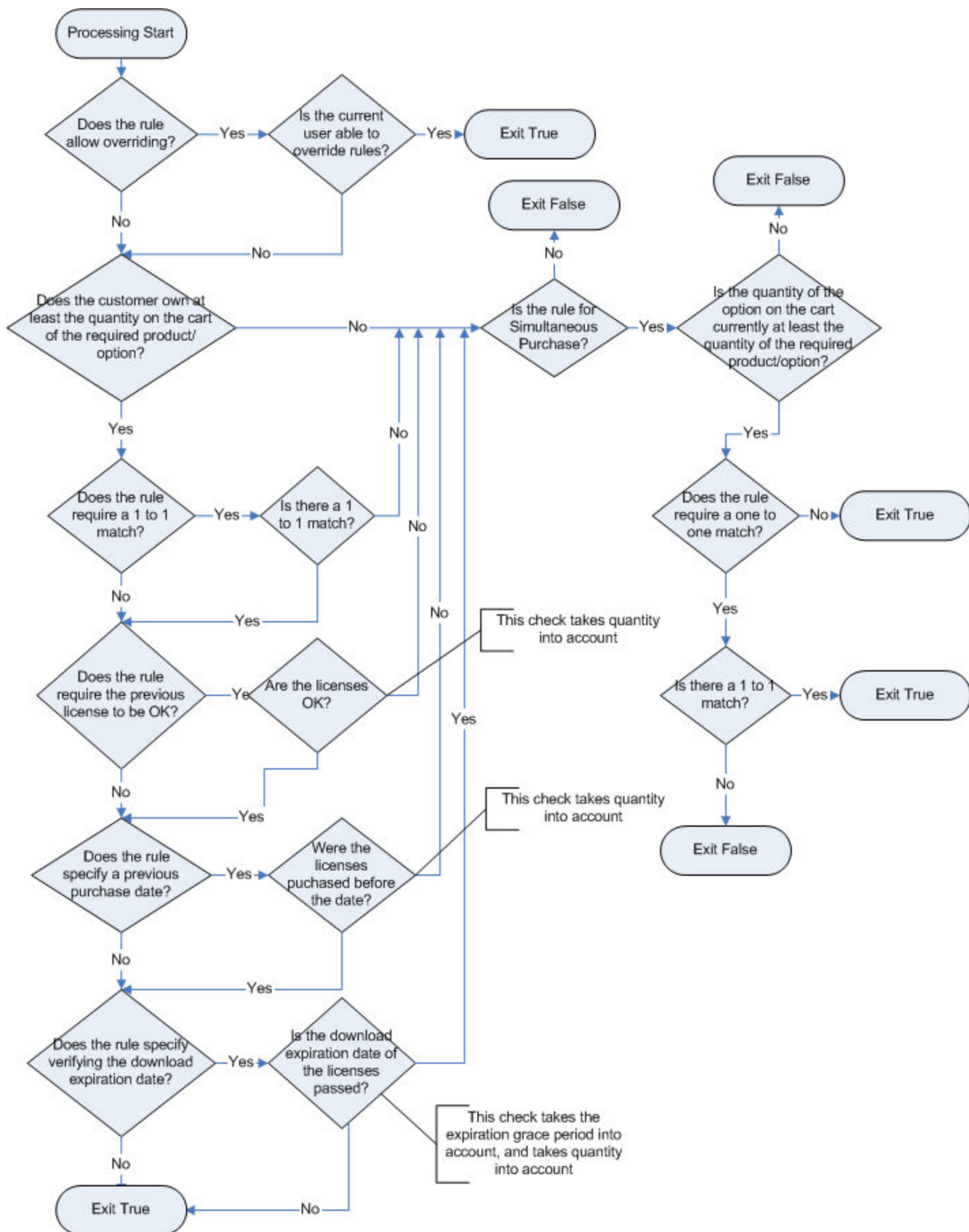
Overall Rule Flowchart

The following flowchart explains the processing for all rules defined on a Product Option:



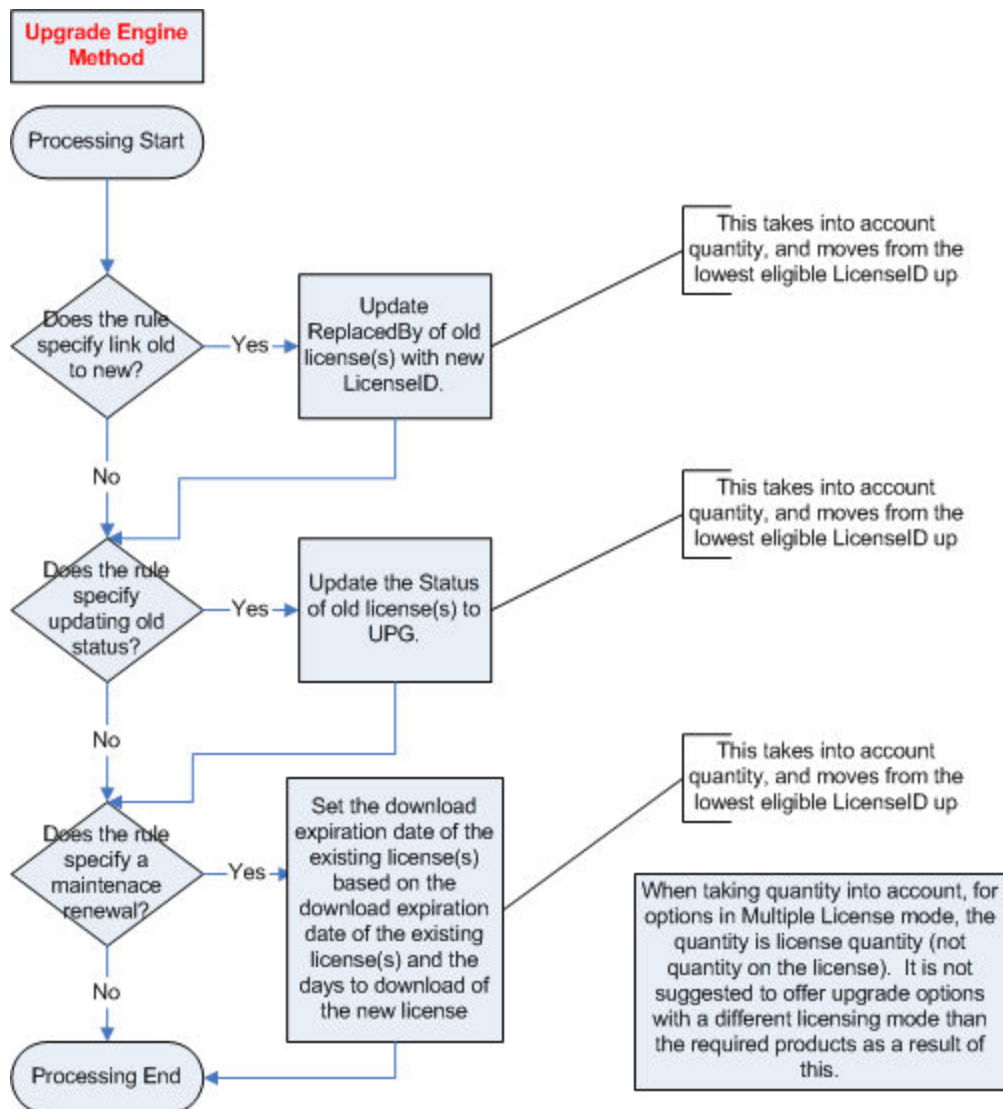
Individual Rule Flowchart

The following flowchart explains the processing for each individual rule:



Order Processing Flowchart

The following flowchart explains the rule processing that occurs for each rule during order processing:



Configuring Renewal Options

A renewal Product Option can be configured with a **rule** that only makes it available to customers who already own a license that has an expiration date. If a customer satisfies a renewal rule, the renewal Option will be available for purchase in the Renewals & Upgrades section of the **Customer License Portal**. Upon purchase, the renewal order will update the expiration (*Download Until*) date of the original/previous license, and the renewal will be listed in the customer's order history.

Non-Expiring License

For a non-expiring software license, you can use the *Download Until* date in the SOLO Server license record to keep track of software maintenance. The license itself will not expire since your application won't be enforcing the *Download Until* date.

The *Download Until* date can also be used to limit download access when using the **Electronic Software Delivery (ESD)** functionality.

Time-Limited License

For a time-limited license, after a renewal has been purchased and the License ID has been updated in SOLO Server, your application needs to pull the new expiration date from the *Download Until* field when it periodically checks-in with SOLO Server:

- Instant Protection PLUS 3: Enable the "**Check SOLO for new expiration during warning/grace period**" option.
- AutoCrypt SL: Automatically updates the expiration date when using **Automated License Validation**.
- Protection PLUS 5 SDK: A license refresh will update the *EffectiveEndDate* field in the license file, which can then be validated (**PLUSManaged** or **PLUSNative**).

After the expiration date has been updated in the local license file, the application will continue working and will not require the customer to activate again.

Rule Configuration for Renewal Option

Follow these steps for the recommended way to create a renewal Option:

1. **Create/edit an Option** under the correct Product ID. This renewal Option will simply be a line-item on the invoice and purchase history, and will automatically update the original license.
2. Change the following Option fields:
 - a. **Option Name:** (You could name it "1-year Renewal" or "30 day Renewal" etc.)
 - b. **Option Description:** (This will be displayed to the customer on the Renewals & Upgrades page for this specific renewal.)
 - c. **Option Type:** Transaction/Service Fee
 - d. **Order Confirm HTML:** (optional example) Thank you for renewing your software maintenance/subscription for [insert product name].
 - e. **For New Customers:** Disable
 - f. Since the customer won't be receiving a new License ID or be able to activate with the renewal purchase, the following options can be cleared out:
 - **Activations per U/M:** 0
 - **Issue License:** Disable
 - **Issue Installation ID:** Disable
 - g. **Days to D/L:** # of days the original license will be renewed by (for example, 365 for a one year renewal)
 - h. **Error Message:** You must have a valid [insert product name] license before you are allowed to purchase this renewal.
3. **Add a rule** to this new Option.
 - a. **Product:** Specify the Product a customer must have to be eligible for the renewal.
 - b. **Product Option:** (optional) Specify the Option a customer must have to be eligible for the renewal.
 - c. Set the following parameters:
 - **Require License ID:** Enable
 - **Previous License OK:** Enable

- **Maintenance Renewal:** Enable
 - **Display Upgrade:** Enable
- d. Optionally change the following parameters:
- **Expired Maintenance Start Date:** Expiration Date. Note that if a license/maintenance has been expired for over a year (for example), and the customer purchases a one year renewal, the license will still be expired since this configuration renews based on the existing expiration date. To prevent this, you can set the *Download Expiration Availability* and *Download Expiration Grace Period* to prevent the purchase of a renewal after a specified period.
 - **Download Expiration Availability:** Choose when the upgrade should be available based on the expiration (*Download Until*) date of the previous license.
 - **Download Expiration Grace Period:** The number of days past the expiration (*Download Until*) date that the previous license(s) are still considered valid.

If a customer satisfies a renewal rule, the renewal Option will be listed in the Renewals & Upgrades section of the **Cus-tomer License Portal**. It will list the specific License ID the renewal would be applied to upon purchase.

Configuring Upgrade Options

An upgrade Product Option can be configured with a **rule** that only makes it available to customers who already own a specific license. If a customer satisfies an upgrade rule, the upgrade Option will be available for purchase in the Renewals & Upgrades section of the **Customer License Portal**.

Typically, the upgrade Product Option will use the same settings as the non-upgrade Option available to new customers, but the upgrade Option can have a discounted price, or even be free. For example, a customer with a "MyApp 1.0 License" could be eligible to buy "MyApp 2.0 License Upgrade" for \$99, whereas a new customer would only be able to buy "MyApp 2.0 License" for \$199.

Quantity Mode

Upon order processing, any rules that specify upgrading an existing license will be evaluated differently depending on the **Quantity Mode** of the Product Option the rule is specified on.

- If the *Quantity Mode* is set to *Multiple Licenses*, the total quantity of existing licenses is taken into account when upgrading old licenses (not the quantity on each existing license).
- If the *Quantity Mode* is set to *Multiple Activations*, the quantity on each existing license is taken into account.

For this reason, it is suggested that the previous Option and the Option being upgraded to both have the same *Quantity Mode* (either *Multiple Licenses* or *Multiple Activations*).

Rule Configuration for a Paid or Free Upgrade Option

Follow these steps for the recommended way to create an upgrade Option:

1. **Create/edit an Option** under the correct Product ID. This is the Option being upgraded to. Configure the settings as needed so that the customer will be able to activate your software, and also use the following fields:
 - a. **Option Name:** (Include "Upgrade" in the name to differentiate it from a similar non-upgraded Product Option, if applicable.)
 - b. **Option Description:** (This will be displayed to the customer on the Renewals & Upgrades page for this specific upgrade.)
 - c. **Price per U/M** For a paid upgrade, set the appropriate amount. This could be discounted compared to what you would charge new customers, as this upgrade will only be available for purchase by existing customers. For a free upgrade, set to \$0.
 - d. **For New Customers:** Disable
 - e. **Error Message:** You must have a valid [insert product name] license before you are allowed to purchase this upgrade.
2. **Add a rule** to this new Option.
 - a. **Product:** Specify the Product a customer must have to be eligible for the upgrade.
 - b. **Product Option:** (optional) Specify the Option a customer must have to be eligible for the upgrade.
 - c. Set the following parameters:
 - **Require License ID:** Enable
 - **Previous License OK:** Enable
 - **Quantity Mode:** Limit to Quantity. This makes it so the customer can only redeem a number of Upgrades up to the number of licenses they currently have. This is important if you are offering a free or discounted upgrade.
 - **Update Old Status:** Enable. This sets the old license status to UPG (Upgrade), and will stop the customer from redeeming additional upgrades due to the "Previous License OK" setting also being enabled. You can change the **Upgrade Behavior** of the previous license in the Option settings.
 - **Display Upgrade:** Enable
 - d. Optionally change the following parameters:
 - **Link Old To New:** If this is set, upon order processing, the ReplacedBy field on the previous license(s) will be updated with the new License ID(s).
 - **Download Expiration Carryover:**
 - Carry Over - The existing expiration date will be carried over to the new license
 - Increment - The existing expiration date will be carried over to the new license and incremented by the Product Option Days to D/L setting.

- **Verify Purchase Date:** Enable if you want to limit the upgrade only to customers who purchased the previous license after the date you specify in **Previous Purchase Date**.
- **Download Expiration Availability:** Choose when the upgrade should be available based on the expiration (*Download Until*) date of the previous license.
- **Download Expiration Grace Period:** The number of days past the expiration (*Download Until*) date that the previous license(s) are still considered valid.

If a customer satisfies an upgrade rule, the upgrade Option will be listed in the Renewals & Upgrades section of the **Cus-tomer License Portal**. It will list the specific License ID the upgrade would be applied to upon purchase.

Managing Files

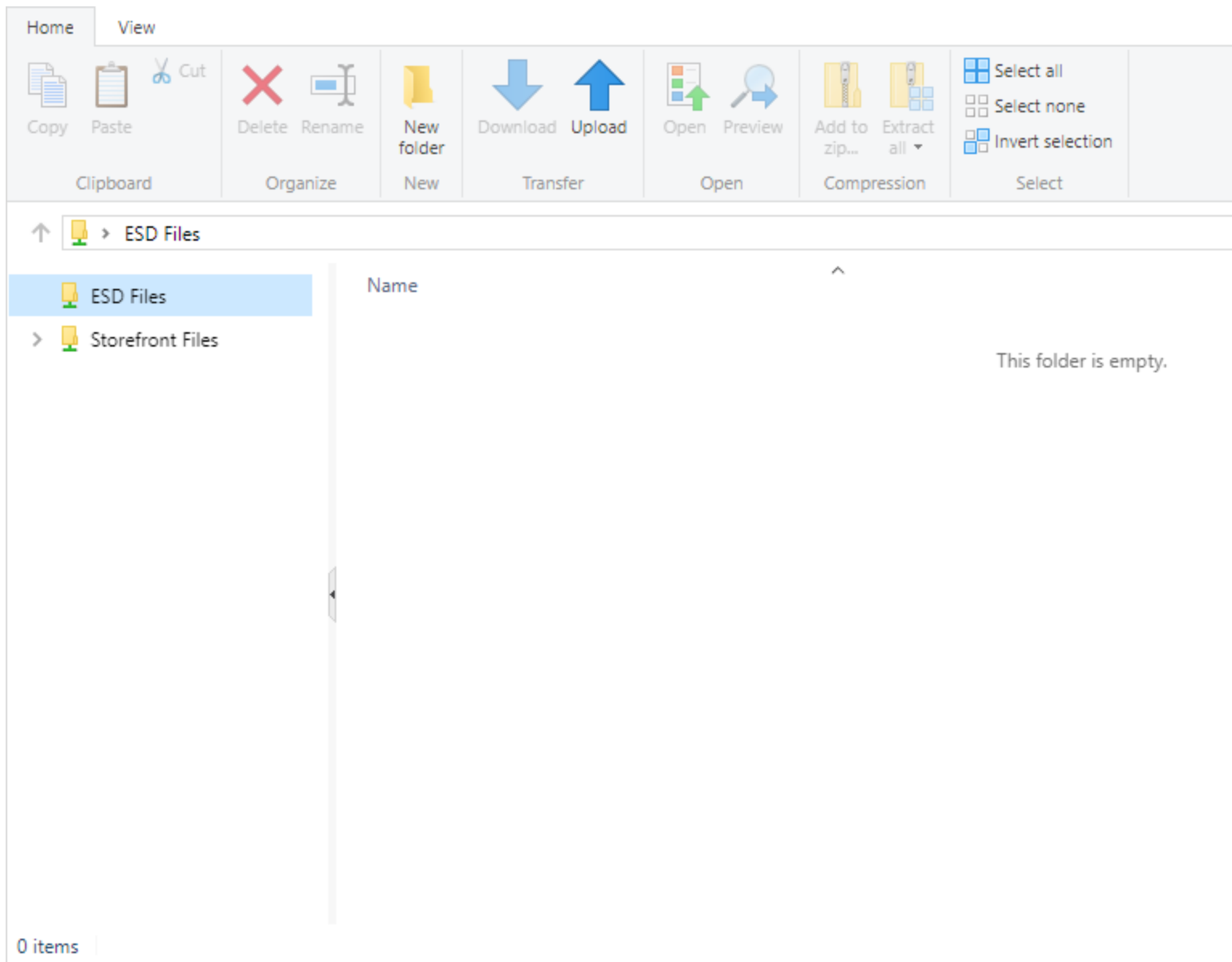
Uploading and managing Storefront and Electronic Software Delivery (ESD) files on the server is accomplished through an easy to use interface very similar to Windows Explorer. To access the file management feature, click *Configure / Manage and Upload Files*.

Once a file is uploaded to the ESD folder, it can be **linked to a specific Product Option**, and customers who have a license for that Product Option can download the file through the **Customer License Portal**. The benefits of using SOLO Server's integrated downloads feature are:

1. Limit download access to only licensed users, and log which software version is being downloaded (based on the Product **Latest Version** field).
2. In addition to tracking **End User License Agreement** acceptance before allowing file downloads, limit software download access to a software maintenance subscription so that only paying customers enjoy continued access to new software versions.
3. Expired maintenance customers can instantly **purchase renewals** to once again gain immediate access to the software update/download.

File Location Information

On the left "Folders" pane of the file management interface, you will see root level folder(s):



- **ESD Files** - Users with *Add or Edit Products* permissions will see this folder. This is the root Electronic Software Delivery folder. When **Setting Up an ESD Product Option** for a SOLO Server hosted download, this corresponds to the leading backslash in the Product Option *File to D/L* field.
- **Storefront Files** - User with *Manage Storefront/Files* permission will see this folder. This is the root storefront folder. When **Customizing the SOLO Server Storefront**, this corresponds to the following when building URLs to these files:
 - **SOLO Server Shared URL:** [https://secure.softwarekey.com/solo/products/custom/\[Author ID\]/](https://secure.softwarekey.com/solo/products/custom/[Author ID]/)
 - replace [Author ID] with your Author ID, which can be found in the footer at the bottom of every page in the SOLO Server administrative interface.
 - If using SOLO Server Shared / Custom URL, replace *secure* with your custom sub-domain.
 - **SOLO Server Dedicated URL:** [https://\[Domain Name\]/solo/products/custom/\[Author ID\]/](https://[Domain Name]/solo/products/custom/[Author ID]/)
 - [Domain Name] is replaced with your domain name.
 - [Author ID] is replaced with your Author ID (generally 2451871), which can be found in the footer at the bottom of every page in the SOLO Server administrative interface.
 - **SOLO Server Self-Hosted:** [https://\[Domain Name\]/\[SOLO Root\]/products/custom/\[Author ID\]/](https://[Domain Name]/[SOLO Root]/products/custom/[Author ID]/)
 - [Domain Name] is replaced with your domain name.
 - [SOLO Root] is replaced with your SOLO Server root directory or removed if you are running SOLO Server from the web site root.
 - [Author ID] is replaced with your Author ID (generally 2451871), which can be found in the footer at the bottom of every page in the SOLO Server administrative interface.

Managing Files and Folders

Common file and folder management tasks are handled using either the buttons along the top or the right click context menu, both of which very similar to latest version of Windows Explorer:

- To create a new folder, simply right click on either a folder in the left pane or in the right pane and choose New Folder, or use the New Folder button at the top to create a new folder in the current folder.
- Similarly, to rename or delete a folder, simply right click on the folder and choose Rename or Delete, or use the Rename or Delete button at the top to rename or delete the currently selected folder.
- You can also cut, copy, and paste folders through the right click menu or the Cut, Copy and Paste buttons at the top.
- Finally, you can download individual files (optionally as a zip) and zipped folders.

Uploading Files

Uploading files is also very straightforward:

- To upload files, simply right click in the location you want to upload the file to or click the upload button at the top to upload to the current directory. You will be prompted to choose a file or files to upload. Simply choose your files and click Upload.
- For the Storefront Files folder, you can also upload multiple files as well as directories in a zip package, and then unzip them on the server. This allows you to create your directory structure locally. This entails a few simple steps:
 - On your local machine, build the directory and file structure. When complete, zip up the contents of the root folder.
 - In the file manager interface, navigate to the folder you would like to unzip the package to. Then upload the zip file as described above.
 - Once the file is uploaded, simply right click and choose "Extract to Here".

Note the following restrictions:

- If you are using SOLO Server Shared or Dedicated URL, there is currently a 300 MB upload limit for all software installers. If your file does not upload, check the file size to make sure it is lower than the limit. You may also see a "The specified file does not exist" error message in this scenario. You can contact support@softwarekey.com for information on changing this value. SOLO Server Self-Hosted customers can see the information below on how to change the file size limit.
- Only the following file types can be uploaded to the Storefront Files directory:
 - .gif
 - .jpg
 - .css
 - .ico
 - .js
 - .swf
 - .htm
 - .html
 - .svg
 - .webp
 - .zip - In addition, any files within a zip that are not one of these file types will not be extracted on the server.
 - .eot
 - .ttf
 - .woff
 - .woff2
- Note that depending on the browser you are using, some of these file types may not appear in the default filter of the browser file picker dialog. If you do not see a file you are expecting, choose "All Files (*.*)" from the filter drop down in the file picker dialog of the browser.
- If you are using SOLO Server Shared or Dedicated URL, the file upload dialog may appear to show no progress being made while uploading files. This is due to the load balancing device which SOLO Server is running behind. The load balancer will buffer the entire file before passing it along to the web servers, making it appear to the web servers that no progress is being made. Simply wait for the file to upload and disregard the apparent lack of progress.

Self-Hosted Instance Configuration for Upload Size Limits

The maximum file size allowed to be uploaded is controlled by the MaximumFileUploadMegaBytes web.config entry, which by default is set to 300 MB.

In addition to the web.config entry, starting with IIS7, ASP.NET uses a configuration file entry to control the maximum request size. If IIS Request Filtering is in use on the web server, an additional configuration file entry is also used. In the case of SOLO Server, both entries are located in the web site web.config file within a location element pointing to the fileuploader.ashx file used by the file management control, since that is the only place in SOLO Server where uploads are allowed.

Newer installations of SOLO Server likely have the configuration already in place in the web.config file and set to the default maximum value of 300 MB. If not present, the following can be added to the root configuration element in the web.config file (be sure to comment out the `system.webServer` section if not using IIS Request Filtering):

XML

```
<location path="fileuploader.ashx">
  <system.web>
    <!--Value is in KB-->
    <httpRuntime maxRequestLength="307200" />
  </system.web>
  <system.webServer>
    <security>
      <requestFiltering>
        <!--Value is in bytes-->
        <requestLimits maxAllowedContentLength="314572800" />
      </requestFiltering>
    </security>
  </system.webServer>
</location>
```

Encryption Key Data

To access this page in SOLO Server, click the *Configure / Products* menu then use the Actions dropdown and click *View Encryption Key Data*.

Many of the SOLO Server XML **web services** require data to be encrypted and digitally signed. Additionally, Protection PLUS 5 SDK relies on data encrypted and signed by SOLO Server to secure its license files and its web service calls. If your application integrates with any of these web services, or uses Protection PLUS APIs that require encryption key data, this page provides the data your application needs.

Important

Regardless of the format used, you should make a reasonable attempt to hide any and all key/envelope data in your application. To do this, you may use techniques such as (but not limited to) storing the data as a byte array in code, and breaking it up into several pieces/chunks spread throughout different areas of your source code. Doing this will help prevent hackers from easily viewing your key just by opening your .EXE file, and is especially important when using writable/self-signed license files with Protection PLUS 5 SDK.

Additionally, if your application is written in .NET, the use of **an obfuscation utility is strongly recommended!** These utilities typically help hide and encrypt this sensitive data.

Envelope

If you are using Protection PLUS 5 SDK version 5.12.1.0 or later, then your application should use the Envelope format. This format provides an extra level of convenience by bundling the raw data needed into a single blob format, and provides extra security since it is digitally signed and encrypted by SOLO Server. (This helps protect your application against key-substitution attacks.) Each time you visit this page, a new envelope is generated using a new, random encryption key. You may revisit the page for new envelopes to use in new applications, or in new versions of the same application. Generating a new envelope will not break compatibility with older applications that use previously generated envelope data. Your application will need to know both the *Envelope* and its corresponding *Envelope Key* to use the data stored in the envelope correctly.

If you are using Protection PLUS 5 SDK version 5.21.4.0 or later, it is recommended to use the Envelope containing the 4096-bit encryption keys. Encryption and decryption using the larger key size has little increase in processing time due to a combination of symmetrical and asymmetrical encryption being utilized.

Important

When using Volume licenses or Downloadable licenses along with 4096-bit keys, you will need to set the key size on the **SOLO Server Product**, otherwise SOLO Server defaults to the 1024-bit keys to encrypt the license data. Setting the key size is not necessary when using any web service endpoints as SOLO Server will determine the encryption key size based on the incoming request data.

Raw Key Data

If you are using an API which does not support the Envelope format (such as versions of Protection PLUS older than 5.12.1.0, Instant Protection PLUS 3, the Automation Client or Client Services libraries, etc...), then your application will require the raw key data, which includes the *Encryption Key ID*, *Server Key*, and *Client Key*. If your application is written in .NET, you will need to use the CSP blob formatted Client Key and Server Key; otherwise, you should use the XML formatted data instead.

Security Requirements

The *Require Encryption* and *Require Signature* fields typically always show *True*, and cannot be changed in SOLO Server's web interface for security reasons. However, if you encounter a circumstance where any of these requirements need to be made optional (such as government, military, or export requirements or restrictions), please **submit a ticket** with your request.

Customizing User-Defined Field License Labels

Each license in SOLO Server has a set of user-defined fields and coupon fields. These can be found by clicking the *User-Defined Fields* tab on the bottom right of any License Details page. The user-defined fields can be configured with custom labels which will override the default labels such as "UDefChar1", "UDefNum1" with more user friendly values to help you and your staff.

The default labels are shown here:

[Download Log](#)
[Number Post Log](#)
[String Post Log](#)
[User-Defined Fields](#)

User-Defined Fields

Edit

UDefChar1:	UDefChar6:
UDefChar2:	UDefChar7:
UDefChar3:	UDefChar8:
UDefChar4:	UDefChar9:
UDefChar5:	UDefChar10:
UDefNum1:	UDefDate1:
UDefNum2:	UDefDate2:
UDefNum3:	UDefDate3:
UDefNum4:	UDefDate4:
UDefNum5:	UDefDate5:
UDefFloat1	CouponType: 0
UDefFloat2	CouponCode:
UDefFloat3	CouponClaimed:
UDefFloat4	CouponAmount:
UDefFloat5	CouponPaid:
	CouponDeclReason:

Important

Custom labels are only displayed in the SOLO Server author interface. They do not replace the field names/labels in the Protection PLUS 5 SDK license file, which will still use the "UserDefined" field names as shown in the [License File Schema](#).

Configuring Custom Labels

First, you must configure a set of custom labels.

- From the menu, choose *Configure / Products*, click the Actions drop down and choose *Customize License Labels*. You can also click the "Configure License Labels" link next to the License Labels field when editing a Product or Product Option.
- By default, a list of all currently configured labels sets is displayed. A new set can be added using the "Add New" button along the top, while existing sets can be viewed/edited/deleted using the View/Edit/Del links in the list.
- When editing or adding a label set, any field left with a blank value will simply inherit the default value.

Assigning Custom Labels

Once label sets are configured, they can be assigned at the Product or Product Option level:

- To assign a label set to a Product, edit the Product and choose the label set from the *License Labels* drop down in the *Order & License Information* section of the page.
- To assign a label set to a Product Option, edit the Product Option and choose the label set from the *License Labels* drop down in the "Product Activation & Licensing Details" section of the page. Any label set specified on a Product Option will override a label set on the Product.

Custom License Parameters

Custom License Parameters is a feature which allows you to define unlimited custom parameters on licenses, which are then included in the Protection PLUS 5 SDK license file. The parameters can be used for any number of uses such as:

- Limiting which features are available to the licensed application.
- Controlling time limited features in an application.
- Limiting a feature by a counter, for example, limiting the number of concurrent application instances that can be run.

Overview

In a nutshell, custom license parameters work as follows:

- A custom parameter set is defined, containing any number of custom parameters.
- The custom parameter set is then associated with any product options that are to use it.
- When adding or editing licenses for product options which are associated with a custom parameter set, form fields for setting the custom parameters will be displayed. When saving, the custom parameter data is then serialized to XML and stored on the License Custom Data field on the license (note that this is separate from the Custom Data fields on the product and product option). This field is included in the Protection PLUS 5 SDK license file, allowing it to be used in your application for any purpose.
- When viewing a license for an option with a custom parameter set defined, all of the custom parameters will be displayed.
- When a license for an option with a custom parameter set defined is viewed in the customer license portal, any custom parameters set to display in the portal will be listed.

Custom Parameter Sets

A custom parameter set defines a grouping of custom parameters. To configure custom parameter sets, from the menu, choose *Configure / Products*, and then choose *Configure Custom Parameter Sets* from the Actions menu. A listing of all currently defined custom parameter sets will be displayed, with the ability to sort and filter as needed. For each custom parameter set, the flyout menu on the left can be used to view, edit, clone, delete, or manage the custom parameters, and clicking the name will view the custom parameter set. To add a new custom parameter set, click the *New Custom Parameter Set* button. Each custom parameter set is defined by the following properties:

Custom Parameter Set ID

The system generated ID.

Last Modification

The date, time, and user account of the last modification.

Display Name

The friendly name. This is used in labeling in the administrative interface as well as the customer license portal.

Hidden

Whether the custom parameter set should be hidden from the drop down when configuring product options.

Delete Removed Parameters

When editing an existing license, controls whether or not any parameter that has been removed and is no longer defined in the custom parameter set will be deleted from the custom parameter xml blob.

Custom Implementation Base URL

Advanced Option. A custom URL to load the resources for editing the custom parameters when adding or editing licenses.

License Custom Data XML Preview

A preview/sample of the XML that will be included in the Protection PLUS 5 SDK license file.

Custom Parameters

One or more custom parameters. See below for more details.

Custom Parameters

Each custom parameter set consists of one or more custom parameters. To configure the custom parameters on a custom parameter set, view the custom parameter set. A listing of custom parameters will be displayed with the ability to filter as needed. For each custom parameter, the flyout menu on the left can be used to view, edit, delete the custom parameter, and clicking the name will view the custom parameter. To add a new custom parameter, click the New Custom Parameter button. Alternately, you can click the Manage Custom Parameters button to see the same interface in a modal dialog. Each custom parameter is defined by the following properties:

Custom Parameter ID

The system generated ID.

Last Modification

The date, time, and user account of the last modification.

Parameter Set

The custom parameter set the parameter belongs to.

Display Name

The friendly name. This is used in labeling in the administrative interface as well as the customer license portal.

Tag Name

The name for the XML tag when serializing the parameter to XML. This will also be the name referenced in code when extracting the value from the License Custom Data field. Note that this value must be unique.

Display Index

The display index used to order the custom parameters when adding, viewing, and editing licenses, as well as when displaying them on the license details page in the customer license portal.

License Custom Data XML Preview

A preview/sample of the XML that will be included in the Protection PLUS 5 SDK license file.

Data Type

The data type. This is used to enforce validation when adding or editing licenses, as well as to determine how to display the parameter values in the administrative interface and customer license portal. This can be one of the following types:

- Boolean
- Date
- Float
- Integer
- String

Note that this cannot be changed on an existing parameter.

Required

For non-boolean data types, whether to require the user to enter a value for the parameter.

Always Include

For the boolean data type, by default, a False value will be omitted from the custom data xml. Enabling this will cause the property to instead be included in the custom data xml when set to False.

Default Checked

For the boolean data type, whether the checkbox will be checked by default when adding new licenses.

Default Days

For the date data type, the number of days from the current date which will be pre-populated when adding new licenses.

Default Value

For numeric and string data types, the default value for the parameter which will be pre-populated when adding new licenses.

Description

Brief description of the usage of the custom parameter. For internal use only.

Display in Customer License Portal

Whether to display the custom parameter on the customer license portal license details page.

Configuring a Product Option to use Custom License Parameters

Once custom parameter sets have been defined, they must next be associated with the product option(s) that will use them. To do this, from the menu, choose *Configure / Products*, and then locate and edit each applicable option, setting the Custom Parameter Set property to the appropriate custom parameter set.

Managing Custom Parameters on Licenses

Once a product option is associated with a custom parameter set, a new dynamically generated form will appear when adding or editing licenses for the option, similar to the screenshot below (the form will vary based on the parameter set definition). Simply set the values as needed, and the XML will be updated on the fly and saved to the Custom License Data field on the license.

Parameter Set 1

☐ **Boolean Parameter**

Date Parameter:

03/01/2018

Float Parameter:

123.456

Integer Parameter:

123

String Parameter:

String 1

☒ **Preview License Custom Data XML (Advanced)**

Custom Data:

```
<CustomParameters>
  <DateParameter>2018-03-01</DateParameter>
  <FloatParameter>123.456</FloatParameter>
  <IntegerParameter>123</IntegerParameter>
  <StringParameter>String 1</StringParameter>
```

Custom Parameters and the Shopping Cart

For product options configured with custom parameters, when checking out through the shopping cart, new licenses will be automatically populated with any custom parameters that are marked as both Required and have a default value specified (for float, integer, and string types, Default Value is set; for boolean types, Always Include is set; for date types, Default Days is set).

Using Custom Parameters in Custom License Mailings

The custom license parameter values can be included in **Custom License Mailings**. Simply use the naming convention [varCLP-TagName], where TagName is replaced with the Tag Name of the custom parameter.

Displaying Custom Parameters in the Customer License Portal

Enabling the Display in Customer License Portal setting on a custom parameter will result in the parameter being displayed on the license details page in the customer license portal using the Display Name for the label.

Parameter Set 1

String Parameter

Float Parameter

Integer Parameter

Boolean Parameter

Date Parameter

Global Custom Parameter Sets

Users with Global Access permission can create global custom parameter sets, which are available to all authors on the given SOLO Server instance. To create global custom parameter sets, simply use the Configure Custom Parameter Sets (Global) option rather than the standard option in the Actions menu on the product listing page. Global custom parameter sets are particularly useful when running in **Multi-Tenant Catalog Mode**, and if a global parameter set is used on a parent option, it will be synchronized with the child options when synchronizing catalogs.

Multi-Tenant Catalog Mode

The Multi-Tenant Catalog Mode feature of SOLO Server allows a "master" catalog to be maintained on a "parent" author account, with the ability to replicate the master catalog to "child" author accounts. This is intended for scenarios involving subsidiaries or distributors, where the customers and licenses for each subsidiary/distributor should be segregated, but product catalog maintenance is done on a master catalog, and the software is built against the product data from the master catalog. In this mode, a master catalog is maintained on a parent author account. Each child author account then inherits a selective copy of the master catalog, which can be resynchronized after any changes to the parent catalog. For the remainder of this topic, the terms "parent" and "child" will be used to describe the two author types when running in this mode.

For more information on the benefits and process of using this feature, read our blog post: [Distributors & Subsidiaries can now self-manage licenses](#)

Overview

When using this mode, you must first choose the parent author account. This is generally the default author account created during installation (Author ID 2451871), though this is not a requirement. Once the parent author account is chosen, the ParentCatalogAuthorID entry in the **web.config** file must be set to this Author ID, and any other author will be considered a child author. Once this is configured:

- To view the synchronization interface, users must have Global Access and View Products permissions. To perform catalog synchronization, users must also have Edit Products permission, and not be marked as Read Only.
- When viewing the product listing for a child author, users with appropriate permissions will now see a Synchronize Catalog option in the Actions menu. Clicking this option will take the user to a page which will list out all products on the parent catalog, as well as whether each product has been replicated to the child catalog, and the last replication details for those products that have been replicated. For users with the appropriate permissions, each author in the listing will also include a checkbox to allow selectively replicating/synchronizing the parent catalog products to the child catalog. Simply check the products to replicate/synchronize and click the Synchronize button to update the catalog on the child author.
- When viewing the product details for a product on the parent author, users with appropriate permissions will see a Synchronize Catalog option in the Actions menu. Clicking this option will take the user to a page which will list out all child authors, as well as whether the given product has been replicated to the child author, and the last replication details for those authors the product has been replicated to. For users with the appropriate permissions, each product in the listing will also include a checkbox to allow selectively replicating/synchronizing the parent product to the child authors. Simply check the authors to replicate/synchronize to and click the Synchronize button to update the products on the child authors.
- Any web endpoints which verify the Product ID or Product Option ID will validate against the values of the parent product/product option, and the encryption key of the parent author will be used. This allows maintaining a single software build which will work across all child authors.
- Similarly, the download page in the Customer License Portal will use the parent author's ESD directory, allowing a single download to be maintained.

Adding a New Child Author

To add a new child author, follow these steps:

- From the menu, choose *Admin / Add a new Author Account*.
- Fill out the form with the details for the new child author and click the Save button to create the new author.
- Next, verify the permissions of the default user and groups which were created from the prior step. From the menu, choose *[User Name] / Users* on the upper right and revoke any unnecessary permissions from the default user, and choose *[User Name] / Groups* and do the same for the default groups. While doing this, you can also add any additional groups or user accounts.
- Finally, perform the first synchronization of the parent catalog to the new child author. From the menu, choose *Configure / Products*, and then from the Actions menu, choose Synchronize Catalog.
- On the synchronization page, check the checkbox for any products from the parent catalog that should be synced to the new author, and then click the Synchronize button.

Resynchronizing a Child Author Catalog

After initial catalog synchronization, it may be necessary to resynchronize the child author catalog to replicate changes from the parent catalog to the child catalog, or to replicate additional product(s) to the child author account. To resynchronize a child author catalog:

- Switch to the author account whose catalog is to be resynchronized.
- From the menu, choose *Configure / Products*, and then from the Actions menu, choose Synchronize Catalog.
- A listing of all products from the parent catalog will be displayed. Check the Resynchronize checkbox for any products that already been replicated that need to be resynchronized, and check the Replicate checkbox for any products not already replicated which need to be, and click Resynchronize.

Resynchronizing a Parent Catalog Product to Child Author Catalogs

When a change is made to a product in the parent catalog or a new product is added, it may be necessary to replicate the updates to one or more of the child author accounts. To resynchronize a given parent product:

- Switch to the parent author account, and then choose *Configure / Products* from the menu. On the product listing, locate the product to be synchronized and view it.
- In the Actions menu on the product details page, choose the Synchronize Product option.
- A listing of all child authors will be displayed. Check the Resynchronize checkbox for any authors that the product has already replicated to that need to be resynchronized, and check the Replicate checkbox for any authors the product is not already replicated which need to be, and click Resynchronize.

Restricting User and Group Permissions on Child Author Accounts

In most cases, user permissions for users and groups on child author accounts should be restricted. For example, to prevent the product catalog from getting out of sync, child author users should not be granted add or edit products permission. To allow child authors to manage their own users and groups without allowing them to grant certain permissions, SOLO Server only allows child author users to grant permissions to which they have been granted. Since the allowed permissions will differ on a case by case basis, a database customization hook is in place which allows implementing customized permissions on the default users and groups which are created when creating the child author account. For SOLO Server Dedicated URL customers using this feature, we will take care of setting this up when we enable this feature. For SOLO Server Self-Hosted customers, we will provide instructions on setting this up, and can optionally implement this through our professional services.

Custom Parameter Sets and Multi-Tenant Catalog Mode

By default, when synchronizing products, any fields related to another record on the parent author (such as Mailing IDs, License Labels, etc.) are not synchronized to the child products and options. If using Multi-Tenant Catalog Mode in conjunction with **Custom License Parameters**, it is recommended to use global custom parameters on the product options on the parent author account. To create global custom parameter sets, simply use the Configure Custom Parameter Sets (Global) option rather than the standard option in the Actions menu on the product listing page. If a global parameter set is used on a parent option, it will be synchronized with the child options when synchronizing catalogs, meaning you need to only manage one custom parameter set at the parent level.

Shipping Options

Shipping options are defined on the product option level. Multiple options can be defined per product option, and several properties of each option can be configured to restrict how the shipping option can be used. The shipping options properties are as follows:

Name

The shipping option name. This is what is displayed on the shipping options page on checkout.

Short Name

The short name for the option. This will be displayed on invoices and internally.

Price

The base shipping price for a quantity of 1.

Combo Price

The base shipping price for a quantity of 1 when using the Combo Price cart shipping calculation and multiple shippable items are present on the cart.

QMultiPrice

The additional price added per unit for every extra unit above a quantity

Display Order

The display order of the option when displayed to the user during checkout.

Physical Delivery

Check this if the option is actually a physical delivery. Note that this field is a legacy field and is not used to determine physical delivery for tax calculation purposes. For tax calculation purposes, physical delivery is determined by the Requires Shipping field on the Product Option.

Domestic

Check this box to allow the option to be displayed and used for domestic (US) customers.

International

Check this box to allow the option to be displayed and used for international (non US) customers.

Allow Military

Check this box to allow the option to be used for military addresses.

Allow PO Box

Check this box to allow the option to be used for post office box addresses.

Image URL

A url to an image to display with the option in the checkout process. This must come from a secure (https) link.

Image

If an image URL is specified, the image will be displayed here.

For information on the shipping calculations used on the cart, see [Configuring Cart Options](#) and [Configuring Shipping for the Cart](#).

Real Time Inventory Management

SOLO Server offers the option of setting up product options to use real time inventory tracking. To enable inventory tracking, check the Track Inventory field on the Edit Product Option page and configure the Allow Backorder, Stock Quantity, and Minimum Stock Quantity fields. For product options with inventory tracking set up, SOLO Server will automatically decrement the stock quantity on the product option every time a license is added for that product option, either online or through the authors interface.

When online orders are placed with tracked items, SOLO Server will check the inventory levels upon order processing. If the order will cause the inventory level to drop below either zero or the Minimum Stock Quantity, a notification will be sent to users with the **Manage Inventory permission**. In addition, if the product option is set up to not allow backorders, any order that will cause the quantity to drop below zero will be declined. If the stock quantity reaches zero for a product option that does not allow backordering, any existing customers with the item in their cart will see a SOLD OUT message appear on the line item, and no other customers will be able to add the item to their cart.

In addition, users with the Manage Inventory permission can use the Manage Inventory page to view and update current stock levels on tracked options. To do so, from the menu select *Store / Inventory*. A list of tracked product options will appear, with the current stock quantity in text fields on the right. To update inventory levels, simply set the current stock quantity in the text fields and click Submit Changes.

Configuring Warehouses

Warehouses can be defined and used in conjunction with the separate invoicing and shipping systems that integrate with SOLO Server. They can be defined on an author level, or, for Master Users, defined globally with respect to all authors. Globally defined warehouses will appear in the drop down on the product options page for all authors. To manage warehouses, go to the menu *Store / Warehouses* (or Global Warehouses if desired). A list of warehouses will be displayed. Click on the [View] link to view the warehouse details, the [Edit] link to edit the warehouse, or the [Delete] link to remove a warehouse. To add a new warehouse, click the *Add New* button, and to edit a warehouse, click the [Edit] on the view page.

The fields on warehouses are defined as follows:

Name

Internal name of the warehouse

Company Name

Company name of the warehouse

Address Line 1/2

Warehouse street address

City

Warehouse city

State/Province

State/Province of the warehouse

Postal Code

Postal Code of the warehouse

Country

Country of the warehouse

Phone

Phone number of the warehouse

Support Phone

Support phone number.

Support Email

Support email address.

Fed Ex Account

Fed Ex account number for the warehouse. Available only to Master Users.

Fed Ex Meter

Fed Ex meter number for the warehouse. Available only to Master Users.

Display Phone On Invoice

Flag to determine whether to display the phone and support phone numbers on the invoice generated by the external invoicing application.

Invoice Message

A message to be included on the bottom of the printed invoice/packing slip.

Order Processing Plugin

The plugin to call after order processing to perform additional shipping related processing. Available only to Master Users.

Plugin Username/ID

The Username or ID used by the Order Processing Plugin when calling an external processor. Available only to Master Users.

Plugin Password

The password used by the Order Processing Plugin when calling an external processor. Available only to Master Users.

Plugin Test Mode

Whether to run the Order Processing Plugin in test mode (for integration testing). Available only to Master Users.

Customers Overview

Customer records in SOLO Server contain contact/registration information about the customer, and each record is assigned a unique Customer ID that is generated by SOLO Server.

When you add a license in SOLO Server, it must be attached to a customer record. Depending on how the license is added, it may be necessary to create the customer record first and then add a license to it.

When using SOLO Server's **integrated eCommerce**, the customer record is automatically created when a customer first purchases, and then they can enter their login ID (email address or Customer ID) and Customer Password to purchase additional licenses in the future.

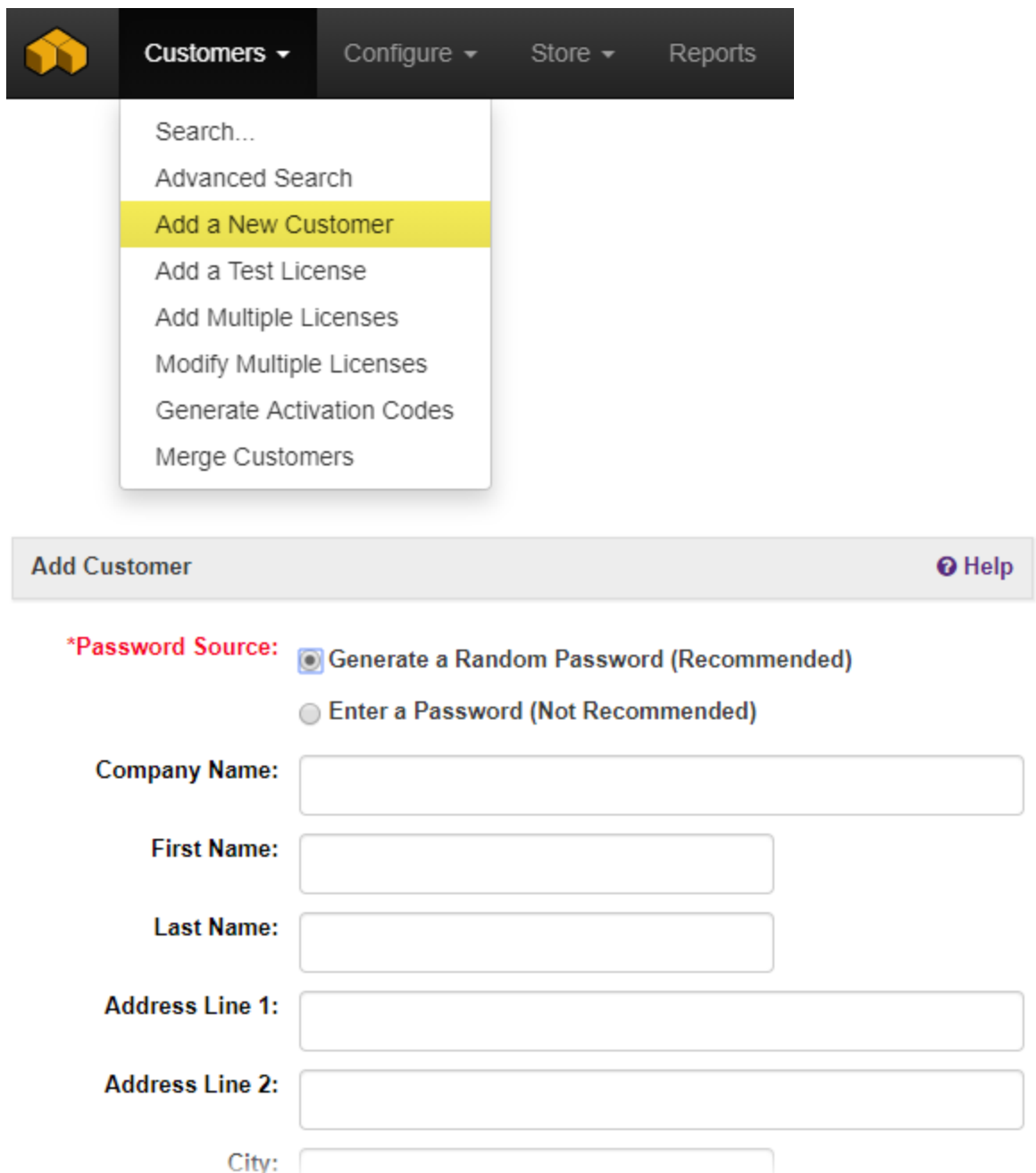
Adding Customers

A customer record can be added to SOLO Server in different ways.

Once added, you can then edit the customer through the [Customer Details](#) page.

Author Interface

To manually create a new customer record in SOLO Server, use the menu *Customers / Add a New Customer*.



The screenshot shows the SOLO Server Author Interface. At the top is a dark navigation bar with a logo and several menu items: 'Customers', 'Configure', 'Store', and 'Reports'. The 'Customers' menu is open, showing a list of options: 'Search...', 'Advanced Search', 'Add a New Customer' (highlighted in yellow), 'Add a Test License', 'Add Multiple Licenses', 'Modify Multiple Licenses', 'Generate Activation Codes', and 'Merge Customers'. Below the navigation bar is a light gray header for the 'Add Customer' form, which includes a 'Help' link. The form itself has a section for '*Password Source:' with two radio button options: 'Generate a Random Password (Recommended)' (selected) and 'Enter a Password (Not Recommended)'. Below this are input fields for 'Company Name:', 'First Name:', 'Last Name:', 'Address Line 1:', 'Address Line 2:', and 'City:'.

You will need to fill out the customer's contact information and choose a Customer Password. When you click the Save button, it will take you to that customer record. From there, you will have the option to [add a license](#) to the customer record.

Shopping Cart

Before a customer can make a purchase through the SOLO Server integrated shopping cart, they will need to register their contact information, which will create a customer record for them automatically. The customer is given the option to choose their own Customer Password in this case.

SAMPLE SOFTWARE STORE

Enter Your Customer Information

(* indicates a required field)

*Email Address:

Company Name:

*First Name:

*Last Name:

*Address Line 1:

Address Line 2:

*City:

State/Province:

Web Services

The CreateCustomer method from our **Customer Server** web service can also be used to add a new customer record. This should be used by internal applications only and should not be called by client applications distributed to customers. This can be used to import a list of customers, which can be especially useful if you are migrating from another licensing solution.

Deleting Customers

There is not a way to directly delete a customer record through the author interface. If a customer record only has test licenses, then it will be deleted at the beginning of the month along with the test licenses.

If you need to delete customer data due to a GDPR request, see **Privacy & GDPR Options**.

Customer Record Fields

Customer Password

The password is used by the customer to activate their product as well as to log into the **Shopping Cart** and **Customer License Portal**. By default, when adding a new customer, this will be pre-populated with a random **Customer Password**. Click "Generate New Password" to generate a new random password.

Company Name

First Name

Last Name

Address Line 1

Address Line 2

City

State/Province

Postal Code

Country

E-Mail

Phone

Fax

External Reference

A reference number for an external system.

EU VAT Number

VAT Number for European Union customers. This will be disabled in cases where the customer country is not in the EU.

Bypass VAT Database Validation

Whether to bypass validating the EU VAT Number against the EU database. This will be disabled in cases where the customer country is not in the EU.

Notes

Any notes regarding the customer. To clear any existing notes, enter the reserved string MAKENULL.

Notify Product

Whether the user has opted to receive automated product related mailings sent out through any of the **Daily Processes**. This is the value for the "Notify me of product updates related to my purchase" checkbox on the cart registration page and customer license portal customer edit page.

Notify Partners

Whether the user has opted to receive any email correspondence not directly related to products they own. This is the value for the "Notify me of new products and other special offers" checkbox on the cart registration page and customer license portal customer edit page.

Unregistered

Whether the customer is registered. This flags whether the customer has confirmed their contact details and preferences through the **Shopping Cart, Customer License Portal**, or by registering through the software. When set, the customer will be prompted to register the first time they log in to the **Customer License Portal**.

Invalid Address

Whether the customer's physical address is known to be invalid.

Exclude From All

Whether the customer should be excluded from all bulk e-mail communication such as newsletters or product update notices.

Taxable

Whether the customer is taxable or not.

Is Distributor

Whether the customer is a distributor.

Enabled

Whether the customer is enabled. When disabled, the customer will be unable to log in to the **Shopping Cart** or **Customer License Portal**, however they will still be able to activate their software.

Send Welcome Mailing

When adding a new customer, whether to send the customer the *Customer Welcome Mailing* specified on the **Cart Options** and **Customer License Portal Options**.

Customer Details

The Customer Details page gives a complete overview of everything within SOLO Server associated with a given customer.

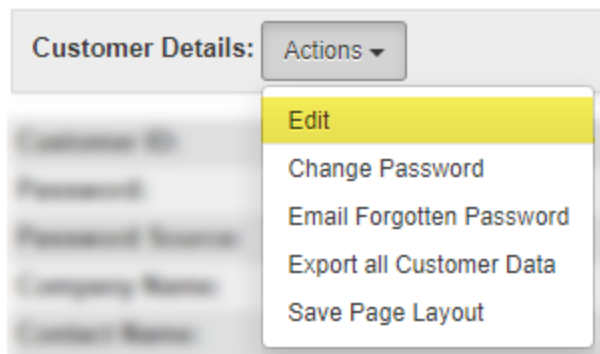
The top of the page contains all of the details on the customer record, and this is followed by separate sections listing out all other records related to the customer, such as licenses, orders, and payment plans. Each section can be expanded or contracted using the arrow icons on the left of the headings.

In addition, the default state of the each section can be saved as a preference using the Save Page Layout button as outlined in the Customer Details section below.

SOLO Server only supports Latin-1 (ISO 8859-1) character encoding. It does not support UNICODE characters.

Action Menu

In the heading at the top of the page, an actions menu with several options is displayed:



Edit

Click to edit the customer information.

Change Password

Click to change the customer password.

Email Forgotten Password

Click to send the customer the forgotten password notification email. Only available if the customer record is enabled and has a valid email address.

Send Welcome Mailing

Click to send the customer the Customer Welcome Mailing specified on the **Cart Options** and **Customer License Portal Options**. Only available if the customer record has a valid email address.

Export all Customer Data

Available to users with Master User permission. Generates a spreadsheet of all data records related to the customer.

Save Page Layout

Click to save the layout of the page with regards to which sections are expanded or contracted, as well as the filter applied to the Licenses & Other Items section. Subsequent visits to the page will by default display the sections in the same state.

Customer Fields

Following the heading, all of the details from the customer record are displayed:

Customer ID

The customer's unique ID number which is automatically generated during customer creation and can be used for logging in to the **Shopping Cart** and **Customer License Portal**.

Password

The password is used by the customer to log in to the **Shopping Cart** and **Customer License Portal**. The password will appear as "SECURED" if it was chosen by the customer and the user does not have View Password permission. View the topic on **Password Accessibility** for more information.

Password Source

Available only to users with Master User permission. The source where the password originated from. This can be one of the following:

- Author Unknown - The password was specified by an author user, but it is unknown whether it was randomly generated or not.
- Author User - The password was specified by an author user, and was not randomly generated.
- Author Random - The password was specified by an author user, and was randomly generated.
- Customer - The password was specified by the customer.

Company Name (up to 50 characters)

Contact Name (First and Last Name, 30 characters each)

Address 1 (50 characters)

Address 2 (50 characters)

City (30 characters)

State/Province (50 characters)

Postal Code (15 characters)

Country (50 characters)

E-Mail (50 characters)

Phone

Fax

External Reference

A reference to an external system. If this value starts with "http://" or "https://", this will be formatted as a link which will open in a new window/tab.

EU VAT Number

VAT Number for European Union customers.

Last Login

The date and time as well as the IP address when the customer last logged in to the **Shopping Cart** or **Customer License Portal**.

Entered By

The User ID who created the customer. If the customer created their own record through the **Shopping Cart** or **Customer License Portal**, "WebServer" will be listed as the user.

Entered Date

The date and time the customer record was created.

Modified By

The User ID who last modified the customer record. If the customer modified their own record through the **Shopping Cart** or **Customer License Portal**, "WebServer" will be listed as the user.

Modified Date

The date and time the customer record was last modified.

Unregistered

Whether the customer is registered. This flags whether the customer has confirmed their contact details and preferences through the **Shopping Cart**, **Customer License Portal**, or by registering through the software. When not set, the customer will be prompted to register the first time they log in to the **Customer License Portal**.

Enabled

Whether the customer is enabled. When disabled, the customer will be unable to log in to the **Shopping Cart** or **Customer License Portal**, however they will still be able to activate their software.

Invalid Address

Whether the customer's physical address is known to be invalid.

Taxable

Whether the customer is taxable or not.

Exclude From All

Whether the customer should be excluded from all bulk e-mail communication such as newsletters or product update notices.

Is Distributor

Whether the customer is a distributor.

Privacy/Terms Accepted:

Whether the user has accepted the Privacy and Terms HTML.

Notify Product

Whether the user has opted to receive automated product related mailings sent out through any of the **Daily Processes**. This is the value for the "Notify me of product updates related to my purchase" checkbox on the cart registration page and customer license portal customer edit page.

Notify Partners

Whether the user has opted to receive any email correspondence not directly related to products they own. This is the value for the "Notify me of new products and other special offers" checkbox on the cart registration page and customer license portal customer edit page.

Notes

Any notes regarding the customer. To clear any existing notes when editing, enter the reserved string MAKENULL.

Licenses & Other Items

Displays a listing of all licenses and other items associated with the customer (note that other items are still considered to be a "license" within SOLO Server, they just cannot be used for activation).

Options/Buttons

Reset Activations Left on all Licenses: Displayed for users with Reset Activations permission. Click this button to reset the activation count on all licenses owned by the customer which have OK status to the Activations per U/M specified on the each license's product option. This cannot be undone.

Export Licenses: Displayed to users with Report Access permission. Click this button to generate an export of all licenses on the customer. For users with global access permission, the export will be run against the currently selected author account.

Filter: Select a filter option display all items, only licenses, or only other items, as well as whether to only display items with an OK status.

Add License: Adds a new license or item to this customer record.

Item List

For each item, the following details are displayed:

- **Author** - The author owning the license. This is only displayed for users with Global Access permission on SOLO Server instances with multiple authors present.
- **ID** - The License ID. This is only displayed for option types which support activation. Clicking the ID will open the license details page.
- **Entered** - The date the license was entered. Mouse over the date to see the full date including the time.
- **Details** - The product and option name. Click to view the License Details page.
- **Qty** - The quantity on the license.
- **Expiration** - The Download Until date on the license, which will be displayed in red if in the past. Only displayed for options configured for expiration (Days to D/L greater than 0).
- **Status** - The status of the license. This consists of several pieces of information:
 - Test - If the license is a test license, [Test] will be displayed in red.
 - License status - Will be displayed in red when not OK. Mousing over the value will display the full status string. This can have the following values:
 - OK
 - DUP - Duplicate
 - FRD - Fraud
 - EXP - Expired
 - CHK - Check/Validate
 - UPG - Upgrade
 - VOI - Void
 - RET - Returned
 - DEL - Delete
 - Activations Left - Displayed as "A=XX" where XX is the number of activations left on the license. Only displayed for option types that allow activation.
 - Deactivations Left - Displayed as "D=XX" where XX is the number of deactivations left on the license. Only displayed for option types that allow activation and options allowing deactivation.
 - License Counter - Displayed as "LC=XX" where XX is the value of the License Counter on the license. Only displayed if the License Counter is populated on the license.
 - Mouse over the prior three fields to see a full description of the status.
- **Last Check** - The date the software last contacted the server for a status check. Mouse over the value to see the full date including the time.
- **Invoice** - If the license is included on an invoice, the Invoice Number. Click to navigate to the invoice in the Orders & Refunds section - the corresponding invoice will be briefly highlighted.

Orders & Refunds

Displays a listing of all orders and refunds associated with the customer. To add a new invoice, click the Add Invoice button. For each invoice, the following details are displayed:

- **Author** - The author owning the invoice. This is only displayed for users with Global Access permission on SOLO Server instances with multiple authors present.

- Details - invoice level details:
 - Invoice No - Click to open the invoice details page. Click the Print link to open a new window with a printable version of the invoice.
 - Created - The date and time the invoice was created.
 - Status - The invoice status. This can have the following values:
 - Web
 - Shipping
 - Shipped
 - Pending
 - Voided
 - Holding
 - Refund
 - Delete
 - Terms - The payment terms. This can have the following values:
 - Prepaid
 - Net10 - Net 10
 - Net30 - Net 30
 - Net45 - Net 45
 - Net60 - Net 60
 - VISA/MC - Visa/Mastercard
 - AMEX - American Express
 - DISC - Discover Card
 - DINERS - Diners Club
 - MAESTRO - Maestro
 - PayPal
 - WPay - WorldPay
 - COD
 - Cash
 - Check
 - Comp
 - Wire
 - Consign - Consignment
 - License ID - For line items which are option types which allow activation, the License ID. Click to view the license details page.
 - Product - The product and option name of the line item. Click to view the license details page. This column will also contain additional items such as discounts, shipping, and tax as applicable.
 - Qty - The quantity for each line item
 - Unit Price - The full unit price for each line item.
 - Ext Price - The extended price for each line item, taking into account quantity and discounts.

Store Credits

Displays a listing of all store credits associated with the customer. Click the Add Store Credit button to add a new store credit. See **Store Credits** for more information. This listing contains the following columns:

- Author - The author owning the store credit. This is only displayed for users with Global Access permission on SOLO Server instances with multiple authors present.
- Amount - The amount of credit. Click the view link to view the store credit record.
- Expiration date - The date the store credit expires. This will be displayed in red for expired credits.
- Entered By - The User ID who created the store credit.
- Reason - The reason the store credit was issued.

Redeemed Store Credits

Displays a listing of all redeemed store credits associated with the customer. See **Store Credits** for more information. This listing contains the following columns:

- Author - The author owning the store credit. This is only displayed for users with Global Access permission on SOLO Server instances with multiple authors present.
- Amount - The amount of credit. Click the view link to view the store credit record.
- Entered By - The User ID who created the store credit.
- Reason - The reason the store credit was issued.

- Invoice - The Invoice the store credit was redeemed on. Click to navigate to the invoice in the Orders & Refunds section - the corresponding invoice will be briefly highlighted.

Payment Plans

Displays a listing of all payment plan instances associated with the customer. See [Payment Plans Overview](#) for more information. This listing contains the following columns:

- Author - The author owning the payment plan instance. This is only displayed for users with Global Access permission on SOLO Server instances with multiple authors present.
- Name - The payment plan name. Click to open the payment plan instance details page.
- Plan Details - Details on the recurring billing cycle.
- # Payments - The total number of payments that are scheduled, or "Perpetual".
- Next Payment - The date of the next scheduled payment.
- Price - The amount billed for each scheduled payment.
- Surcharge - The surcharge billed for each scheduled payment.
- Status - The current status (Active/Inactive/Fulfilled). For active status, click the Disable link to disable the payment plan, while for inactive status, click the Enable link to re-enable the payment plan.

Stored Payments

Displays a listing of all stored payments associated with the customer. Click the Add Stored Payment button to add a new Stored Payment. This listing contains the following columns:

- Author - The author owning the stored payment. This is only displayed for users with Global Access permission on SOLO Server instances with multiple authors present.
- Card No./Reference Number - The credit card number or reference transaction ID. Click to open the stored payment details page.
- Expiration - The credit card expiration date, if available.
- Name on Card - The name on the credit card, if available.
- Terms - The credit card terms:
 - AMEX - American Express
 - DINERS - Diners Club
 - DISC - Discover
 - MAESTRO - Maestro
 - VISA/MC - Visa/Mastercard

Unfinished Orders

Displays a listing of all unfinished orders associated with the customer. For each order, the following details are displayed:

- Author - The author owning the order. This is only displayed for users with Global Access permission on SOLO Server instances with multiple authors present.
- Cart Details:
 - CartID - Click to open the cart page.
 - Created - The date and time the cart was created.
 - Accessed - The date and time the cart was last accessed.
- Product - The product and option name of the line item. This column will also contain additional items such as discounts, shipping, and tax as applicable.
- Qty - The quantity for each line item
- Unit Price - The full unit price for each line item.
- Ext Price - The extended price for each line item, taking into account quantity and discounts.

Declined Orders

Displays a listing of all declined orders associated with the customer. This listing contains the following columns:

- Author - The author owning the decline. This is only displayed for users with Global Access permission on SOLO Server instances with multiple authors present.
- Date - The date and time the decline occurred.
- Error Code - The decline error code.
- Error String - The extended description of the decline.

Trial Data

Displays a listing of all of all trial records associated with the customer when using the **Trial Tracking** feature of SOLO Server. This listing contains the following columns:

- Author - The author owning the trial product. This is only displayed for users with Global Access permission on SOLO Server instances with multiple authors present.
- Product - The product name of the trial product.
- Date - The date and time the trial was originally requested.
- Teaser - The date and time the last trial teaser email was sent, if applicable.
- Last Return - The date and time the customer last returned to request the trial, if applicable.
- Return Count - The number of times the trial was requested.

Audit Data

Display a listing of all customer audit records for the customer. This listing contains the following columns:

- Audit ID - The Audit ID. Click to view the audit record.
- Last Modified Date - The last modified date on the customer record at the time the audit was created. This is essentially the time stamp of when the customer record was put in the state recorded in the audit record.
- Enabled - Whether the customer was marked enabled.
- Registered - Whether the customer was marked as registered.
- Email - The email address.
- Password - The customer password.
- Password Source - Available only for users with Master User permission. The source where the password originated from. See the description for **Password Source** above for details on the possible values.

Author Links

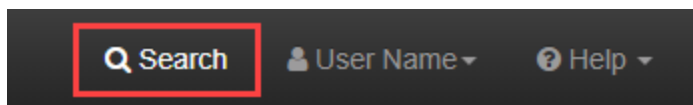
Displays a listing of all authors associated with the customer. This is only displayed for users with Global Access and Master User permissions on SOLO Server instances with multiple authors present. Click the View links to view the details of a given author, or the Switch link to switch to the given author. If the customer has no child records linked to the given author, click the Delete link to remove the link between the customer and author.

License Groups

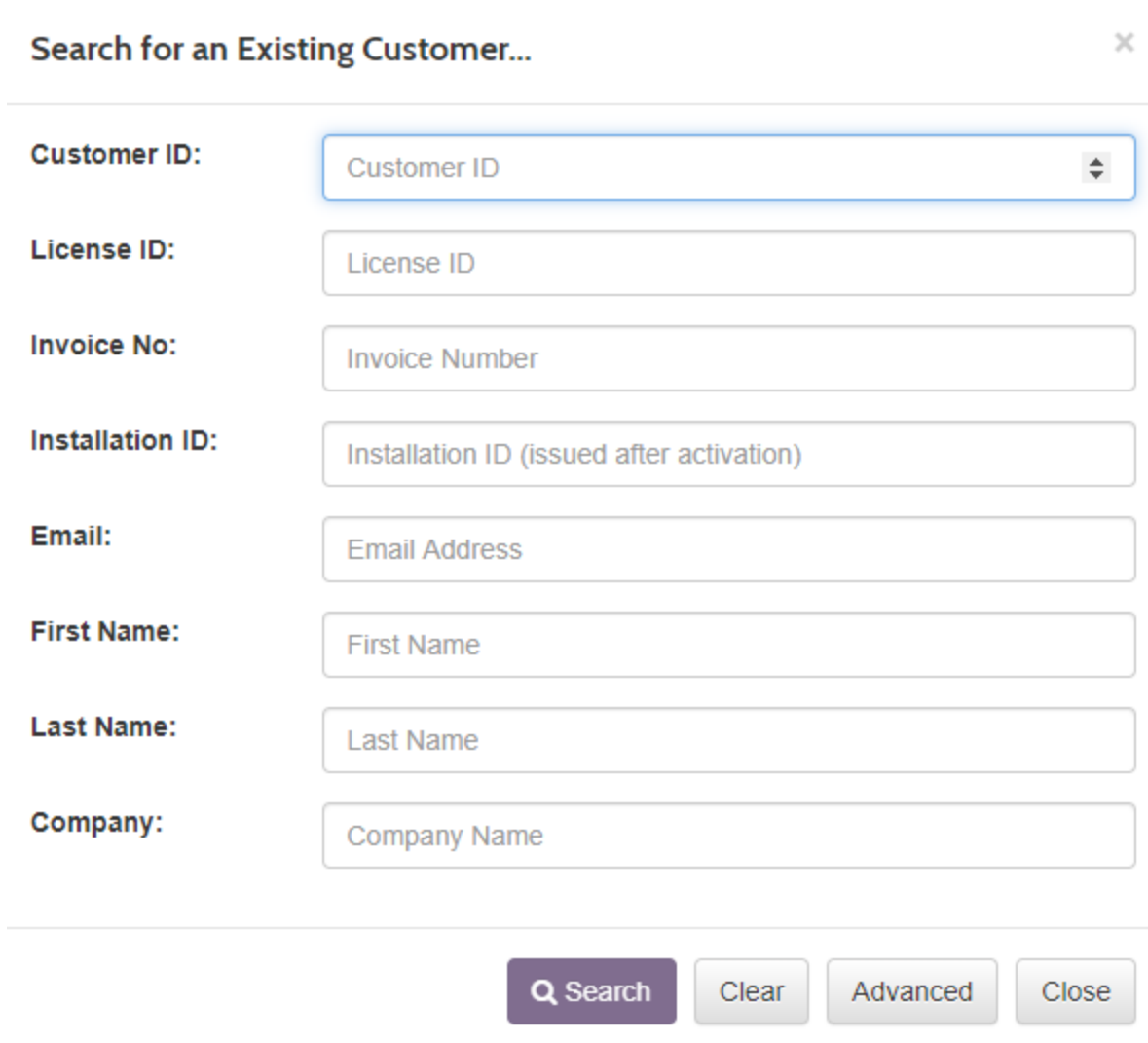
Displays a summary of all license groups associated with the customer. This is displayed if any of the licenses the customer has are assigned a license group. It includes the name of the License Group(s), how many licenses are assigned to each group, and the types of licenses (Product Options) in each group. Clicking on the license name will link to the License Details page for that license.

Searching for Customers and Licenses

To quickly search for a customer, license, invoice, or installation in SOLO Server, simply click the *Search* menu in the top right area. You can also access the search by using the menu *Customers / Search*, or by using the hotkey combination Ctrl+Alt+Q.



Enter a value in one of the fields and click Search.

A screenshot of a dialog box titled 'Search for an Existing Customer...'. The dialog has a close button (X) in the top right corner. It contains several input fields, each with a label to its left: 'Customer ID:' with a dropdown menu showing 'Customer ID'; 'License ID:' with a text input field showing 'License ID'; 'Invoice No:' with a text input field showing 'Invoice Number'; 'Installation ID:' with a text input field showing 'Installation ID (issued after activation)'; 'Email:' with a text input field showing 'Email Address'; 'First Name:' with a text input field showing 'First Name'; 'Last Name:' with a text input field showing 'Last Name'; and 'Company:' with a text input field showing 'Company Name'. At the bottom of the dialog, there are four buttons: 'Search' (with a magnifying glass icon), 'Clear', 'Advanced', and 'Close'.

The fields are checked in order. If you enter a Customer ID and a LicenseID, the LicenseID search will not be performed.

Advanced Search

For more advanced searches, click the *Advanced* button in the Search dialog or use the menu *Customers / Advanced Search*. More details of the Advanced Search types are listed below.

Viewing Search Results

If only one matching result is found, you will be taken directly to that record.

For multiple results, it will list up to 100 customer, license, or invoice records that match the criteria.

Exporting Search Results

On the Advanced Search page, you use the *Export* button in the Customer Details Search section (Report Access permission required) to generate a CSV file. When exporting, the limit of 100 records is not enforced. You can also generate other **reports** to export customer and license information.

Wildcard Searches

SOLO Server uses the % character as the wild card character.

All text fields in the search will automatically have their values wrapped with wildcard characters on either end of the value, allowing the query to search for similar records instead of just exact matches.

To disable wildcard matching and perform an exact match search, prepend the escape sequence "-%" to the beginning of the value. For example, for an exact match search of test@test.com, use: -%test@test.com

Advanced Search Details

Global and Master Users search Globally by default. Uncheck the Global Search checkbox at the top of the Customer Search page to only search the selected author's records.

Quick Search

The fields are checked in order. If you enter a Customer ID and a LicenseID, the LicenseID search will not be performed.

License Details Search

The license details search fields will find a specific license:

- Author Serial Text
- Author Serial Num
- Licensee Name
- Licensee Email
- Activation Password
- External Reference
- User Defined Fields
- User Defined Field Search Type: String, Integer, Float, or Date

Invoice Details Search

Enter either the credit card number, the Transaction ID, or the User PO Number to search by transaction details.

Depending on the merchant account and maintenance settings, the card number may be permanently masked to store only the first digit and last 4 digits. You can search on either a full card number or the last 4 digits. If a search on the full card number fails or your merchant account is configured to store only truncated card numbers, search only on the last 4 digits of the card number.

Customer Details Search

Enter any customer details to search on in the fields to search by customer contact details.

IP Address Search

If an IP address is entered here, the system will search customers, invoices, declined orders, activations, post counters, post strings, and customer audit logs for the given IP address. To search for a partial IP address you can use % as a wild-card character - an example would be 10.10.0.%

The result listing will be limited to the first 100 matching records, but if you use the *Export* button in the *Customer Details Search* section (Report Access permission required), it will include all customers. You can also generate other reports to get a CSV file of customer and license information.

Global and Master Users search Globally by default. Uncheck the Global Search checkbox at the top of the Customer Search page to only search the selected author's records.

Customer Password and Activation Password

There are two types of passwords in SOLO Server. In most cases, your customers will use the customer password to log in to the **Shopping Cart** or **Customer License Portal**, and they will use the activation password to activate a product.

Customer Password

Each Customer will have one *customer password*. A customer would use their Login ID (email address, Customer ID or License ID for example) and the customer password to log in to the **Shopping Cart** or the **Customer License Portal**. The customer password can also be used to **activate a software product**, but in most cases, we recommend having your customer use the activation password to activate (see below).

Creation and Visibility

The customer password can be set by the customer, the SOLO Server author, or randomly generated.

The customer password will not be visible or accessible in the SOLO Server author interface if it was set by the customer and the viewing user does not have View Password permission.

If using SOLO Server's integrated **Shopping Cart**, new customers will be able to register an account and choose their own customer password or set a random one (recommended). Customers can also potentially change their customer password after logging into the **Customer License Portal**.

Important

If the customer has set their own customer password, either through the initial registration or by updating it through the **Customer License Portal**, the password will not be visible or accessible in the SOLO Server author interface for users without View Password permission. View the topic on **Password Accessibility** for more information.

If a SOLO Server author chooses the customer password or if it is randomly generated, then it will still be visible in SOLO Server.

Changing a Customer Password

Users with *Edit Customers* permission can change a customer's account password. To do this follow these steps:

- **Search** for the customer.
- On the Customer Details page, use the drop-down *Actions / Change Password*.
- Select a Password Source. It is recommended to choose "Generate a Random Password".
- If you like to notify the customer email of the change, check the "Notify Customer by Email" checkbox.
- Click "Submit". The password will be updated, and you will be taken back to the customer details page (where you can view the password if randomly generated).

Resetting a forgotten Customer Password

If the customer forgot their password, they will need to reset it. You can easily send the customer an email with instructions to do this by simply **searching for the customer** and then clicking the **Email Forgotten Password** button.

Activation Password

The Activation Password is different for each License ID and must be randomly generated. The activation password can only be used to activate a software product.

Since the activation password is always randomly generated, it is always visible in SOLO Server and it is safe to send as plain-text through email.

Use the *Reset Password* link on the License Details page to reset the Activation Password.

Merging Customer Records

When a customer has two Customer records in SOLO Server, users with Manage Records permission can merge child records from one customer account to another following these steps:

- From the menu, select *Customers / Merge Customers*.
- Enter the Customer ID to move the records from in the *From Customer ID* field.
- Enter the Customer ID to move the records to in the *To Customer ID* field.
- Click the *Continue* button.
- Verify the details of the From and To Customers. If the details check out, click the *Continue* button.
- Finally, on the confirmation page, click the *Continue* button to perform the merge. After merging, you will be taken to the customer details page for the To Customer.

Customer Password Accessibility

The customer password will not be visible or accessible in the SOLO Server author interface if it was set by the customer and the viewing user does not have View Password permission.

We highly recommend that customers set a random and/or unique customer password, but it is possible that they set their customer password to the same password they use for entirely different accounts or services. Hiding the customer password is a security measure to protect customers who may potentially do this.

Resetting a forgotten Customer Password

If the customer forgot their password, they will need to reset it. You can easily send the customer an email with instructions to do this by simply **searching for the customer** and then clicking the **Email Forgotten Password** button.

Licenses Overview

The primary goal of adding licensing logic to your software is to ensure that customer using your software only have access to what they are entitled to.

To start, you will define a **Product Catalog**, which is where licenses are generated from. The Product and Option setting define some behavior and default values of a license, and other fields can be customized on a per license basis.

When a license is added, it must be attached to a **customer**.

Each license has a unique License ID and Activation Password. In most cases, the customer with need to input the License ID and Activation Password into your software to **activate** it. When selling or distributing a license, you will need to provide the customer with their unique License ID and Activation Password.

Adding a Single License

There are multiple ways for an administrator to add license in SOLO Server. A license must be attached to a customer record, so you can either **add a customer** first and then add a license for that customer, or create a new customer and license at the same time, such as when using the shopping cart.

There is a separate feature for **Adding Multiple Licenses**, which allow you to add a bulk number of licenses to an existing customer or unregistered customer records.

Author Interface

1. **Add a new customer** or **search** for an existing Customer record.
2. Verify their contact information, including e-mail address.
3. In the *Licenses & Other Items* section of the customer details page, click the *Add License* button.

Customer Details:
Actions ▼
Help

Customer ID:	21269169 [View Cust Page]	Entered By:	userID
Password:	3Z86mSCp	Entered Date:	3/26/2019 5:35:20 PM
Company Name:	SAMPLE COMPANY	Unregistered:	False
Contact Name:		Enabled:	True
		Invalid Address:	False
		Taxable:	True
		Exclude From All:	False
		Is Distributor:	False
		Privacy/Terms Accepted:	False
		Notify Product:	False
		Notify Partners:	False

▼ Licenses & Other Items (0)
Export Licenses
Add License

No licenses found for this customer.

4. Enter the Quantity and select the Product, and click one of the following buttons:
 - **Order Single** or **Begin New Cart**: If the customer is paying for the license and you wish to automatically add an invoice record, click the Order Single or Begin New Cart buttons to use the single item or cart ordering processes similar to the shopping cart steps above. You may also adjust the quantity and enter a distributor/affiliate ID, **priority code**, or PO Number if using any of these options. The customer will receive e-mail notification as if they purchased online. This is the same result as using the "Shopping Cart" instructions above.
 - **Add New License**: If you wish to simply add a license to the customer record without payment or without adding an invoice record, click this button. If you do want to add the license to an existing invoice, copy in the Invoice No. Fill in the appropriate values, which can be different than the default values set in the product option (see **License Field List** for information on each field), optionally select a mailing to send to the customer (the mailing supports the **Custom License Mailing** search/replace parameters), enter any **custom license parameter** values if necessary, and click Submit. Alternatively, you can use the **Add Multiple** option and set the # *Licenses to Add* to one. Note that the mailing will only be sent if a single license is added.
 - **Add New Test License**: This is similar to a Prepaid License, but test licenses will be deleted at the beginning of each month and should only be used for internal testing purposes.

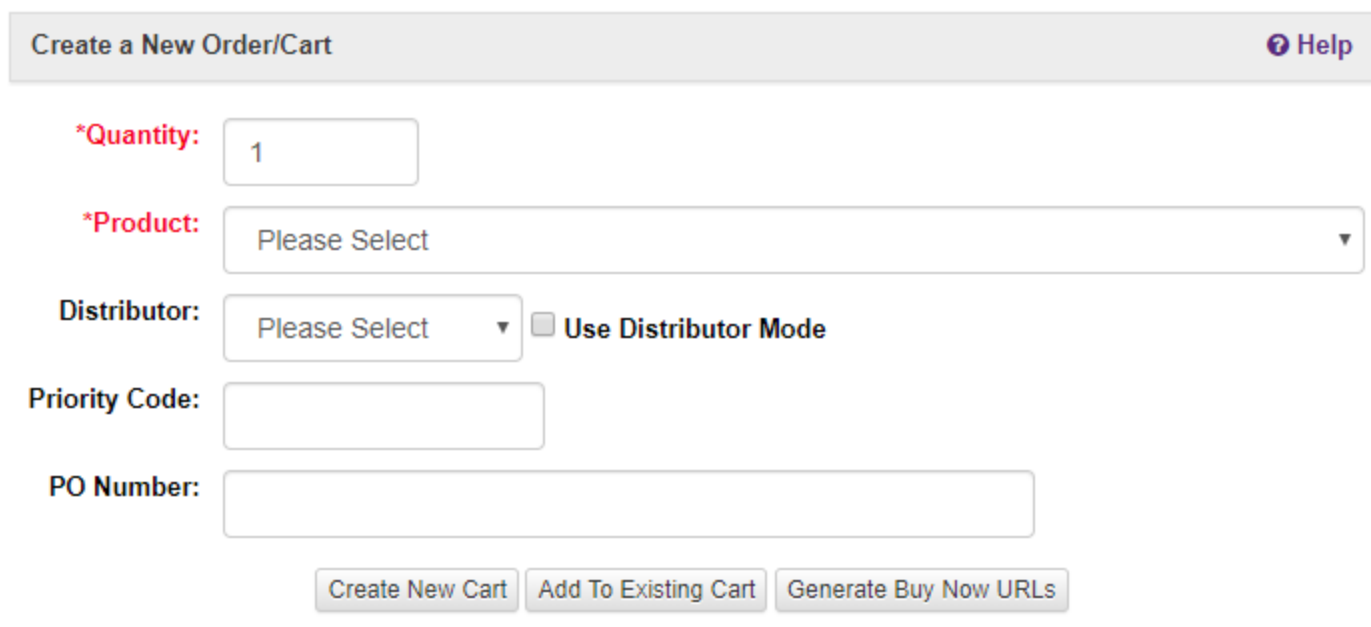
5. On the Add License page, it will list some commonly used license fields whose values can be changed for the license being added. The field values default to what is specified in the Product Option settings.

Press the *Create License* button once you have the values you want.

Shopping Cart

A customer can go to your storefront to purchase a license, or if a new customer calls to purchase a product with a credit card, or if you have received another form of payment for a new customer, you can use the online storefront and shopping cart to process the order for them.

1. **Log into the SOLO Server administration interface.** Doing this will mark any newly-added customer and license as being entered as by you, rather than an anonymous web user.
2. Select the menu *Store / Create a New Order/Cart*.
3. From the menu, choose *Store / Create a New Order/Cart*.



Create a New Order/Cart [Help](#)

***Quantity:**

***Product:**

Distributor: ☐ **Use Distributor Mode**

Priority Code:

PO Number:

- Enter the Quantity and select the Product to add to the order.
 - Optionally select a Distributor to associate with the order, and check the Use Distributor Mode checkbox to create the cart in **Distributor Mode**.
 - Optionally check the Use Single Mode checkbox to create the cart in **Single Order Mode**. Note that this advanced option is only available to users with Master User permission.
 - Optionally enter a Priority Code and/or a PO number.
 - Click *Create New Cart*.
4. Click the *Checkout* button.
 5. Enter the customer's email in the New Customers section and click continue. If a customer with the given email already exists, the customer will automatically be linked to the cart and you will be prompted to verify the customer information, otherwise, you will be prompted to enter the customer's details. Since you are logged in to SOLO Server, you do not need the Customer Password.
 6. Fill in or verify the customer information as if you were them.
 7. If the order contains shippable items, enter the shipping details.
 8. Choose a payment method. You can process a credit card payment or choose an option such as Cash, Check, Money Order, or Prepaid if you have already received the payment in one of those forms.
 9. If processing the order using a credit card, enter the credit card details.
 10. Complete the order. The customer will receive the **Order Complete Standard Cart** email as if they purchased online.

Upgrades/Renewals using Product Rules

If the customer is upgrading/renewing an existing license that you have configured **rules** for, you can go to the License Details page of the license that is being upgraded from, then click the *[View in License Portal]* link next to the License ID

and complete the upgrade through the Customer License Portal and shopping cart just like the customer would.

Web Services

The **SOLO Server web services** can be used to programmatically add licenses on demand. There are web service methods that can also create a customer and register a customer/license record. Here are the ways to add a license:

- **License Server** web service using the *AddLicenseAndUnregisteredCustomer* method optionally followed by the *RegisterLicense* method.
- **Customer Server** web service using the *CreateCustomer* method followed by **XML License Service** web service using the *Add/AddS* method. For an existing customer, you can simply pass in an existing Customer ID using the *Add/AddS* method.

If you want to add multiple licenses, simply loop the web service calls. This can give you a result similar to using the **Add Multiple** author interface option.

Importing Licenses

If you are migrating from another licensing system, you may need to import your current list of customers and licenses.

Since there are often specific business logic rules / transformation that must take place during import, there are no generic "import" capabilities in the SOLO Server author interface. To import a large amount of data, you have the option to:

- Use our web service interfaces, such as the **CreateCustomer** and **Add/AddS** methods
- Provide us a CSV file with your customer and license data and we can write an import script based upon your business requirements

Since we charge for each activation, we would need to understand the goal of importing any license records, and we could potentially charge a flat fee for the right to importing this data. This fee would be the same whether you use the web services or we help you. The second option would have additional professional service fees to write, test, and run the script. We could estimate these fees once we had a sampling of your data and understood your goals.

If you only wanted to import Customer records and License records for historical purposes or to allow exclusive upgrade options to existing customers, there would not be any activation fees.

Creating a Test License

When you are ready to test the product activation functionality of your software, there are two fast and easy methods to create a test license.

To create a test license on a new, unregistered customer record, follow these steps:

1. From the Author Home page menu, select *Customers / Add a Test License*.
2. Choose the applicable product and product option.
3. Click the *Add New Test License* button.
4. You will be displayed a page with several settings for the new license pre-set with values based on the product option configuration. Make any adjustments as needed, and click Submit.
5. You will be redirected to the Customer Details screen for the newly created test customer and you can view the License ID in the *Licenses & Other Items* section.

To create a test license on an existing customer record or on a new, registered customer record, follow these steps:

1. Click *Customers / Search...* and find an existing customer record; or, if you prefer, **add a new customer**.
2. Scroll down and click *Add License*.
3. Leave the Quantity set to 1.
4. Choose the product and product option for which you wish to generate a test license.
5. Click the *Add New Test License* button.
6. You will be displayed a page with several settings for the new license pre-set with values based on the product option configuration. Make any adjustments as needed, and click Submit.
7. You will be redirected to the Customer Details screen and you can view the License ID in the *Licenses & Other Items* section.

Important

Test licenses are available for **your** development and testing needs as you may deem necessary, but test licenses should not be distributed to customers. At the end of each calendar month, all test licenses are purged from SOLO Server. In addition, any customer records which contain only test licenses will also be deleted. You will not be charged for creating test licenses.

All other non-test (or "live") licenses created in SOLO Server (regardless of how the licenses are created) will **not** be purged, however, and **will result in account charges/fees** being assessed to your SOLO Server account. There are various ways of creating non-test licenses, including, but certainly not limited to the following examples: Manually adding a license, processing an order without using the test credit card number, or performing web service calls.

For information on how to test the full ordering process, please view the **Testing Order Process** topic.

Adding Multiple Licenses

Multiple licenses can be added to the same customer record, or each new license can be added to it's own unregistered customer record.

The second approach is typically used to pre-generate a list of licenses that can later be distributed in various ways, including:

- Providing them to a distributor
- Loading them into your own eCommerce or shopping cart solution
- Printing and including them with your software

See **Processing an Add Multiple Order with an Invoice** below for walk-through instructions on using the *Add Multiple Licenses* feature.

Add Multiple Licenses Field List

Required Settings

Product

Choose the Product being licensed.

License IDs to Add

Specify the number of licenses that should be created.

Unit Price

Fill in the unit price for each license added. If adding these licenses to an invoice, it is important to fill in a unit price so the printable invoice is correct.

Optional Settings

Customer ID

If you want to add new licenses to an existing Customer record, specify the Customer ID. Otherwise, leave this field blank and one new unregistered Customer record will be created for each License added.

Invoice Number

If the License record should be assigned to an existing invoice, enter the invoice number here. Otherwise, no invoice will be attached to the license(s).

NOTE:

When using the Add Multiple feature, it is strongly recommended to always specify an Invoice Number, as this makes it easy to find and re-export that "batch" of licenses. See **Processing an Add Multiple Order with an Invoice** for walk-through instructions.

Password Prefix

Optionally choose a password prefix. When the licenses are added, they will have a sequential License ID and a random password. If this is populated, the prefix will be added to the beginning of each random password.

Password Length

Optionally specify a password length. If not populated, the default length will be 6 characters if no prefix is specified, while if a prefix is specified, 6 random characters will be appended to the end of the prefix. Also note that if a prefix is specified, this value must be at least 3 greater than the prefix length.

Numeric Password

Check this to specify that the random portion of the password be only numeric. If not checked, the random portion of the password will be mixed case alphanumeric.

Use Password Rules for License Activation Password

Check this to use the Password Prefix, Password Length, and Numeric Password options when generating the license activation password. If unchecked, the license activation password will be generated using the default alphanumeric format with the length specified by the Activation Password Length **Security Setting**.

Distributor

If you wish to assign this license to a distributor, choose the distributor in this field.

License Notes

Any text entered in this field will be attached to the Notes field of each License record added. This could be used to add an order number, invoice number, or some other information to identify this block of licenses.

List Customer Details

If this is checked the results page will show the Customer ID and Customer Password for each record. Note that the customer password will not be included if adding the licenses to an existing customer if the current user does not have view password permission or the customer has created their own password.

Req Sequential

Checking this box will lock the license table and all licenses will be added in sequential order. This is only needed when tracking shipments of stock product where a From and To address range is used to move licenses from one SOLO Server Invoice to another. **IMPORTANT NOTE:** For large numbers of licenses, this process can take several minutes. Because the licenses table is locked when this setting is enabled, no other licenses can be added to the system while running the bulk insert operation (including through the shopping cart). As a result, care should be taken when using this option.

Custom Parameters

If the option being added is associated with a custom parameter set, a second page will be displayed for entering the custom parameter values. See **Custom License Parameters** for more details.

Processing an Add Multiple Order with an Invoice

When using the *Add Multiple Licenses* feature, it is strongly recommended to always specify an Invoice Number that all the licenses will be linked to. This way, if you need to re-export this list of licenses or make a change to them in the future, this can be addressed by going back to the Invoice. Follow the steps below to complete this process:

1. Choosing a Customer Record

First, you must choose which customer record you want to add the invoice to.

Your Company

When generating licenses for sale/distribution, **create** an internal customer record, or search for an existing customer record for your company. You can use the same customer record for all the licenses you are adding for direct distribution.

If you are adding licenses to sell or distribute directly to customers, you need to **create** or **search** for a customer record for your own company and proceed to step 2.

Specific Customer

If you are adding multiple licenses to a specific customer, **create** or **search** for that customer's record in SOLO Server.

If you want to charge a credit card for this order and are using SOLO Server's integrated eCommerce, use the **Mail/Phone Order Processing** instructions instead.

Distributor

If this is a new Distributor, **add a new Distributor record**. A distributor record is linked to every license so that you know who sold the license to the end user. If you are adding multiple licenses for a distributor, you will need to **create** or **search** for their customer record. A distributor is purchasing software from you, so they are a customer also.

If you want to charge a credit card for this order and are using SOLO Server's integrated eCommerce, use the **Mail/Phone Order Processing** instructions instead.

2. Adding an Invoice

In the *Order & Refunds* section of the *Customer Information* page, click the *Add Invoice* button:

Customer Details:
Actions
Help

Customer ID:	21269099 [View Cust Page]	Entered By:	userID
Password:	GNgbG2nK	Entered Date:	3/26/2019 12:58:32 PM
Company Name:	CONCEPT SOFTWARE TEST	Unregistered:	False
Contact Name:	TEST USER	Enabled:	True
Address 1:	PO BOX 770459	Invalid Address:	False
City:	WINTER GARDEN	Taxable:	True
State Province:	FL	Exclude From All:	False
Postal Code:	34787	Is Distributor:	False
Country:	UNITED STATES	Privacy/Terms Accepted:	False
E-Mail:	test-email@address.com	Notify Product:	False
Phone:	3212211497	Notify Partners:	False

Lenses & Other Items (0)
Export Licenses
Add License

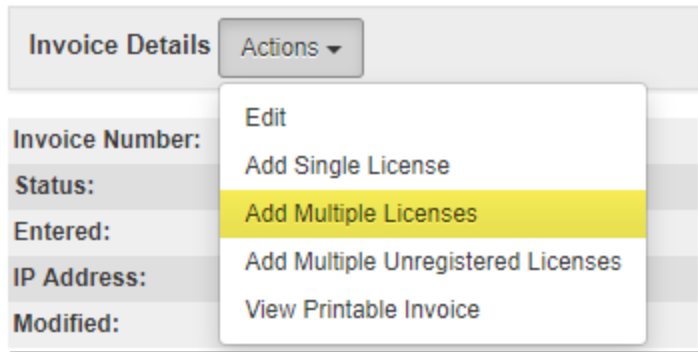
No licenses found for this customer.

Orders & Refunds (0)
Add Invoice

- *Status*: set to Web or one of the other statuses.
- Set the *Terms* to a selection such as Prepaid.
- For the *User PO No.*, optionally enter a batch number or some other identifier to help you find this invoice in the future. The *User PO No.* is a searchable field in the **Advanced Search**.
- The *Notes* field can contain any other information regarding this batch of licenses, but this field is not searchable.
- *Amount Charged*: Calculate and fill in this field with the (Unit Price * # of Licenses) + Amount Tax + Amount Shipping - Amount Discount. The Amount Charged can be updated later.
- Fill in any other relevant **Invoice fields**.
- Click *Submit*.

3. Adding Licenses

At the top of the Invoice Details page, use the Actions drop-down and choose *Add Multiple Licenses*. Refer to the Field List above for additional information on each option:



The screenshot shows the 'Invoice Details' section with a table of fields: Invoice Number, Status, Entered, IP Address, and Modified. To the right of this table is an 'Actions' drop-down menu. The menu is open, showing five options: 'Edit', 'Add Single License', 'Add Multiple Licenses' (which is highlighted in yellow), 'Add Multiple Unregistered Licenses', and 'View Printable Invoice'.

- *Product*: Choose the Product and Product Option.
- *# License IDs to Add*: Enter the number of licenses to add.
- *Unit Price*: Price per product/license.
- *Customer ID*: Leave this field blank to create new record for each license, or specify a Customer ID that all the licenses should be added to.
- *Invoice Number*: This should already be filled in as the invoice created above.
- *Distributor*: Optionally assign the licenses being created to a distributor (see step 1 for details)
- Optionally fill in the other settings.
- Click *Next*.

If the Product selected is a bundled item, you will next be prompted to enter unit prices for each option in the bundle, while if the Product selected is associated with a custom parameter set, you will be prompted to enter the **custom license parameter** values. Enter the values and click Submit.

You will be asked to confirm the settings you have selected. Review the data and if correct, click *Create Licenses*. If you need to change anything, click *Edit*.

To add additional Products, use the *Actions* drop-down and choose *Add Multiple Licenses* to repeat the process.

4. Finalizing and Exporting

After the licenses are created, you will be redirected to the *Invoice Details* page.

If the invoice does not balance, a pop up message will appear. Make sure the following sum is correct: $(Unit Price * \# of Licenses) + Amount Tax + Amount Shipping - Amount Discount = Amount Charged$. Use the *Actions* drop-down and choose *Edit* to update the invoice.

To export the list of License IDs and Passwords, scroll down to the Licenses section and click the CSV button.

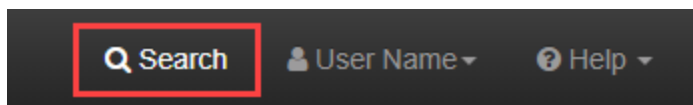
Licenses										Export: CSV Import Text	
License ID	Status	Product	Qty.	Unit Price	PrCode Discount	Upsell Discount	Bundle Discount	Sale Price	Refund		
63803940	OK	XML License Test License	1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	N/A		
63803939	OK	XML License Test License	1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	N/A		
63803938	OK	XML License Test License	1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	N/A		
63803937	OK	XML License Test License	1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	N/A		
63803936	OK	XML License Test License	1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	N/A		

The downloaded CSV file can be edited in a spreadsheet application to make any desired changes before importing it into another system or providing the data to a distributor. The fields included in the CSV file are:

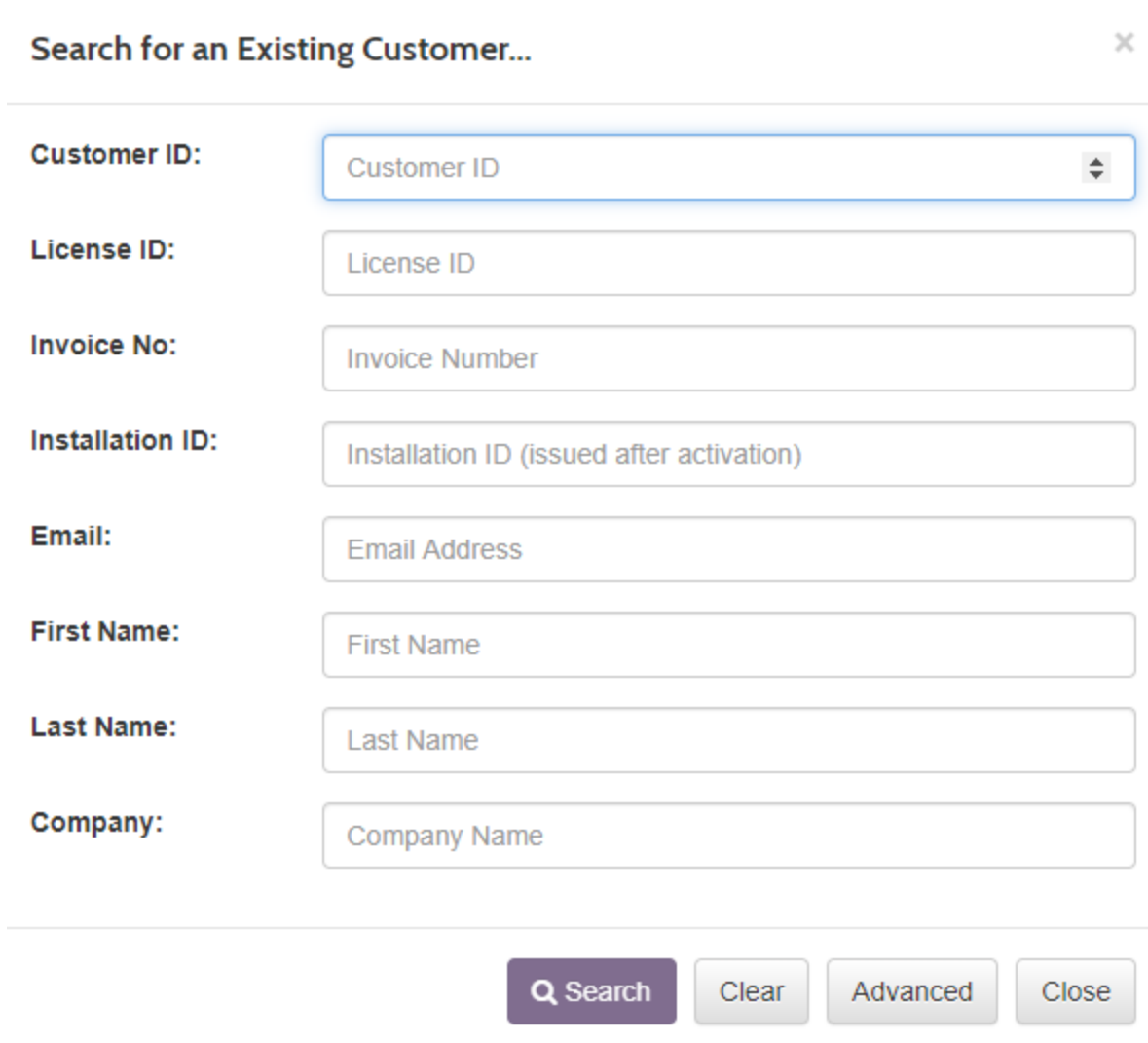
- LicenseID
- ActivationPassword
- CustomerID
- AuthorSerialNum
- AuthorSerialNumTxt
- SerialNumber
- ProductName
- OptionName

Searching for Customers and Licenses

To quickly search for a customer, license, invoice, or installation in SOLO Server, simply click the *Search* menu in the top right area. You can also access the search by using the menu *Customers / Search*, or by using the hotkey combination Ctrl+Alt+Q.



Enter a value in one of the fields and click Search.

A screenshot of a dialog box titled 'Search for an Existing Customer...'. The dialog has a close button (X) in the top right corner. It contains several input fields, each with a label on the left and a text box on the right. The labels are: 'Customer ID:', 'License ID:', 'Invoice No:', 'Installation ID:', 'Email:', 'First Name:', 'Last Name:', and 'Company:'. The corresponding text boxes contain placeholder text: 'Customer ID', 'License ID', 'Invoice Number', 'Installation ID (issued after activation)', 'Email Address', 'First Name', 'Last Name', and 'Company Name'. At the bottom of the dialog, there are four buttons: 'Search' (with a magnifying glass icon), 'Clear', 'Advanced', and 'Close'.

The fields are checked in order. If you enter a Customer ID and a LicenseID, the LicenseID search will not be performed.

Advanced Search

For more advanced searches, click the *Advanced* button in the Search dialog or use the menu *Customers / Advanced Search*. More details of the Advanced Search types are listed below.

Viewing Search Results

If only one matching result is found, you will be taken directly to that record.

For multiple results, it will list up to 100 customer, license, or invoice records that match the criteria.

Exporting Search Results

On the Advanced Search page, you use the *Export* button in the Customer Details Search section (Report Access permission required) to generate a CSV file. When exporting, the limit of 100 records is not enforced. You can also generate other **reports** to export customer and license information.

Wildcard Searches

SOLO Server uses the % character as the wild card character.

All text fields in the search will automatically have their values wrapped with wildcard characters on either end of the value, allowing the query to search for similar records instead of just exact matches.

To disable wildcard matching and perform an exact match search, prepend the escape sequence "-%" to the beginning of the value. For example, for an exact match search of test@test.com, use: -%test@test.com

Advanced Search Details

Global and Master Users search Globally by default. Uncheck the Global Search checkbox at the top of the Customer Search page to only search the selected author's records.

Quick Search

The fields are checked in order. If you enter a Customer ID and a LicenseID, the LicenseID search will not be performed.

License Details Search

The license details search fields will find a specific license:

- Author Serial Text
- Author Serial Num
- Licensee Name
- Licensee Email
- Activation Password
- External Reference
- User Defined Fields
- User Defined Field Search Type: String, Integer, Float, or Date

Invoice Details Search

Enter either the credit card number, the Transaction ID, or the User PO Number to search by transaction details.

Depending on the merchant account and maintenance settings, the card number may be permanently masked to store only the first digit and last 4 digits. You can search on either a full card number or the last 4 digits. If a search on the full card number fails or your merchant account is configured to store only truncated card numbers, search only on the last 4 digits of the card number.

Customer Details Search

Enter any customer details to search on in the fields to search by customer contact details.

IP Address Search

If an IP address is entered here, the system will search customers, invoices, declined orders, activations, post counters, post strings, and customer audit logs for the given IP address. To search for a partial IP address you can use % as a wildcard character - an example would be 10.10.0.%

The result listing will be limited to the first 100 matching records, but if you use the *Export* button in the *Customer Details Search* section (Report Access permission required), it will include all customers. You can also generate other reports to get a CSV file of customer and license information.

Global and Master Users search Globally by default. Uncheck the Global Search checkbox at the top of the Customer Search page to only search the selected author's records.

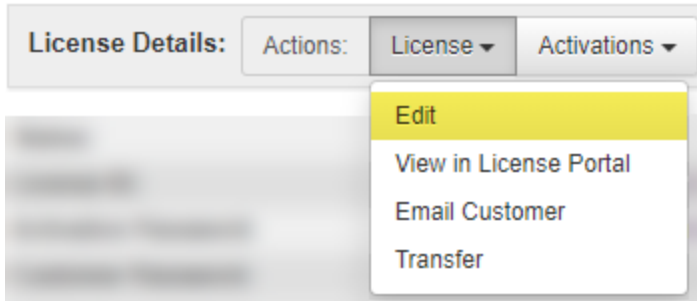
License Details

The License Details page will list a summary of the main fields of a License ID and includes access to other functionality and data.

Expand the section below for more details on editing a license.

License Field List

Use the drop-down *License / Edit* to update the fields listed below:



Status

This field shows the status of the license. If the license Status is set as anything but OK or Upgrade, then the local software using this license will deactivate once it validates/checks-in with SOLO Server, and no new activations will be allowed for this License ID. If the license is marked as anything but OK, the customer will not be able to download the file configured for this license.

- **OK** - License is valid.
- **Duplicate** - It was voided as a duplicate order.
- **Fraud** - It was marked as a fraudulent charge.
- **Expired** - User-defined, can be used to deactivate software when it validates with SOLO Server.
- **Check/Validate** - License should be checked/validated.
- **Upgrade** - License has been upgraded. Configure the **Product Option Upgrade Behavior setting** to determines whether the software using this License ID should be allowed to execute and/or activate when the Status is changed to Upgrade.
- **Void** - It was voided for any reason. This status can only be set directly by Master Users. Non Master Users must use the void invoice functionality to void all licenses on a given invoice. In addition, non Master Users cannot edit the status if it is currently set to this status.
- **Returned** - The product was returned for credit. This status can only be set directly by Master Users. Non Master Users must use the refund license/invoice functionality to set licenses to refund status. In addition, non Master Users cannot edit the status if it is currently set to this status.
- **Delete** - Flagged for deletion. Only Master Users can assign this status. Licenses will be deleted by the daily cleanup job. **NOTE:** Master User access is not available to authors using SOLO Server Shared URL.

License ID

Assigned by server. Not an editable field.

Activation Password

License Activation Password. This is a system generated random value. Users with Edit Licenses permission can click the *License / Reset Activation Password* option to reset the password to a new random value. Note that resetting the activation password will prevent the existing password from being used for further activations, and may cause previously activated installations to become deactivated.

Customer Password

Password of the customer who owns the license. The password will appear as "SECURED" if it was chosen by the customer and the user does not have View Password permission. View the topic on [Password Accessibility](#) for more information.

Replaced By

The License ID that this license has been replaced by. Click the License ID to view the License.

Returned Date

The date the license was marked returned.

Customer ID

Customer ID of the customer who owns the license. Clicking the Customer ID on the view page will open the customer details page, while clicking the edit link will open the customer edit page. This can also be edited on the edit page by users with Manage Records permission, allowing a license to be transferred to another customer.

Upgraded To

The ProdOptionID this license has been upgraded to. When set, the product/option information displayed to the user for the license in the [Customer License Portal](#) will be pulled from this ProdOptionID rather than that directly associated with the license.

Company Name

Company name of the customer who owns the license. Editable by editing the customer.

Contact Name

Contact name of the customer who owns the license. Editable by editing the customer.

Mail Address 1, 2 & 3

Mailing address of the customer who owns the license. Editable by editing the customer.

Country

Country of the customer who owns the license. Editable by editing the customer.

Voice

Voice number of the customer who owns the license. Editable by editing the customer.

Fax

Fax number of the customer who owns the license. Editable by editing the customer.

E-Mail

Email address of the customer who owns the license. Click the email to open your email editor and email the customer. Editable by editing the customer.

Licensee Name

The licensee name if the license is used by someone other than the license owner.

License Email

The licensee email address if the license is used by someone other than the license owner.

External Reference 1

A reference to an external system. This is intended for integration with third-party software and services, such as [FastSpring](#). If this value starts with "http://" or "https://", this will be formatted as a link which will open in a new window/tab when viewing the license.

External Reference 1 Source

A description of the source of the External Reference 1 value. Typically, this would only ever be managed by an integration; however, this is available for editing in case of a failure with such an integration.

External Reference 2

A reference for an external system. This is intended for integration with third-party software and services, such as **FastSpring**. If this value starts with "http://" or "https://", this will be formatted as a link which will open in a new window/tab when viewing the license.

External Reference 2 Source

A description of the source of the External Reference 2 value. Typically, this would only ever be managed by an integration; however, this is available for editing in case of a failure with such an integration.

Entered By

This field logs who entered the sale. Not an editable field.

Entered Date

This field logs the enter date of the sale. Not an editable field.

Modified By

This field logs who last modified the record. Not an editable field.

Modified Date

This field logs the last modified date of the record. Not an editable field.

Return Reason

For returned licenses, the reason the license was returned. See **Return Reasons**.

Product

The product name and option name the license is for.

Version

The version of the software, which is automatically set based on the **Latest Version** Product field when the license record is created. The version number must be in the format N.N.N.N where N can be any number from 0 to 99999.

Quantity Ordered

The quantity of this product the customer purchased in this order.

Unit Price

The unit price paid for each unit on the license.

Sale Price

The actual price paid for the license.

Priority Code

A priority code associated with the license. See **Priority Discount Codes**.

Download Until

The date in which the customer can download the software through the Customer License Portal (see **Setting Up ESD Product Option**). This field can also be used as the expiration date for subscription/periodic licenses.

Note that the Status field of the license will NOT be automatically changed after it has passed the Download Until date.

Serial Number Text

This is an advanced option. For more information, [contact us](#).

Serial Number

This is an advanced option. For more information, [contact us](#).

AFL Serial Number

Assigned From List Serial Number . This is an advanced option. For more information, [contact us](#).

Activated Installations

The number of currently active installations. Only displayed for product options with Issue License set.

Activations Left

The number of times the customer has left to activate the software in this license. Only displayed for product options with Issue License set. The arrow icons surrounding the value in view mode can be clicked to quickly increment or decrement the activation count on a given license.

Deactivations Left

The number of deactivations allowed through the DeactivateInstallation method of the [XmlActivationService](#) web service. The arrow icons surrounding the value in view mode can be clicked to quickly increment or decrement the deactivation count on a given license. This field will only be displayed when the license Product Option has Allow Deactivations set. A value of -1 specifies unlimited deactivations.

Allowed Activation IPs

This can be used to only allow activations from a certain IP address or range of IP addresses. It requires you to enter an IP address and subnet mask. It must be entered in the following format xxx.xxx.xxx.xxx:yyy.yyy.yyy.yyy|xxx.xxx.xxx.xxx:yyy.yyy.yyy.yyy. The | (pipe) separates the IP addresses. If you give a subnet of 255.0.0.0 and IP of 65.12.12.12, anyone with a 65. IP address will be allowed to activate. Note that this is not honored if the product option IP Activation Mode is set to No Restrictions. Also note that currently IP address activation restrictions only support IPv4 addresses.

License Counter/Allowed Network Seats

Counter field to store a user defined integer value. When new licenses are created, this field is initialized based on the License Counter Source and License Counter Value settings of the product option. When populated, this is included in the xml license file returned from the [XmlActivationService.ActivateInstallationLicenseFile](#) or the [XmlLicenseFileService.GetLicenseFile](#) web methods. For product options using SOLO Server for network floating licensing through the [XmlNetworkFloatingService web service](#), this value stores the number of allowed network seats, and is labeled accordingly, and will also display the number of network seats currently in use. Note that when using this along with an Activation Code with License Counter option type, the value must be a 0 or a positive integer less than 16383.

License Update

This is an advanced option. For more information, [contact us](#).

Invoice No.

The Invoice Number associated with this license. Click the view link to view the invoice details.

Original License ID

For licenses purchased as an upgrade or renewal through the rules engine, the License ID that was upgraded or renewed. Click the link to view the original license details.

CC Account

This field will show the last four digits of the credit card the customer used for a purchase. To edit, edit the invoice.

Amount Charged

The amount charged on the invoice the license is associated with. To edit, edit the invoice.

Auth Code

The authorization code given by the bank for the invoice this license is associated with. To edit, edit the invoice.

Source

The value that the customer chose as "how did you hear about us" when placing their order. This field can be saved for future marketing research. Not an editable field from this page. See [Marketing Sources](#).

IP Address

The TCP/IP address from which the order was received. If you need to research the order, this address links to a tracing web site to possibly show the location of the user. Not an editable field.

Last Lic Upd

The date/time of the last time the application phoned home to the server.

Lic Upd Data

The license update data sent to the application the last time it phoned home to the server.

Distributor

The distributor/affiliate associated with the license. Click the distributor/affiliate name to view the distributor information.

License Validation Options

The set of [License Validation Options](#) used to control how periodic background checking with SOLO Server is performed by the application. By default, this value is simply inherited from the corresponding setting on the [Product Option Configuration](#). This setting allows overriding the validation options on a license level basis.

License Group

The License Group the license is assigned to. If the [License Groups Product Option setting](#) isn't set to *Disabled*, then you can assign the license to a new or existing License Group.

Custom Cart Data

Custom data string passed to the cart and saved to the license during order processing. This is an advanced setting generally used with custom cart integrations. This field is read only for non-Master Users.

Custom Data

User defined custom data string in either text or xml format. When populated, this is included in the xml license file returned from the [XmlActivationService.ActivateInstallationLicenseFile](#) or the [XmlLicenseFileService.GetLicenseFile](#) web methods.

Notes

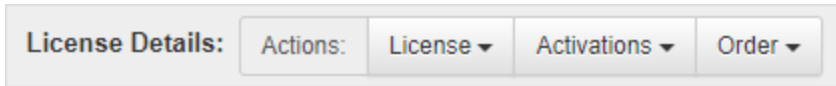
Record any notes about this purchase.

Reason For Last Change

The reason for the last change made to the license by a logged in author user. Note that this is currently read only and used with specific customizations.

Button Functionality

Depending on the status and other details of the license, as well as the current user's permissions, several functions may be available through the *Actions* drop-down buttons along the top:



License Button

Edit

Edit the license. See the License Field List section above for more details.

View in License Portal

Opens the license details page in the **Customer License Portal** in a new tab/window. This is the customer's version of the license details page.

Email Customer

Send a custom mailing to the customer. You will be taken to a new page where you can select a mailing to send from a drop down, as well as specify additional email addresses. For more information, see **License Email Notifications**.

Reset Activation Password

Users with Edit Licenses permission can click Reset Activation Password to reset the activation password to a new random value. Note that resetting the activation password will prevent the existing password from being used for further activations, and may cause previously activated installations to become deactivated.

Issue Serial Number

This option will appear when the license product has a serial number type of Assigned From List and the license is missing a serial number. Click to issue a serial number for the license.

View Audit History

View the audit history for the license. Only available when license auditing is enabled.

Export Audit History

Export the audit history for the license in xml format. Only available when license auditing is enabled.

Transfer

Transfer the license to a newly created, unregistered customer.

Activations Button

View Activation History

Displays all **activation history** for the license.

View Installation History

Displays all Installations associated with the license. This is similar to the **activation history**, but does not include rejected activations.

Generate Activation Codes

Generate activation codes for a manual activation. For more information, see **Manually Unlocking Customers**.

Reset Activations Left

Resets the activations for the license back to the default for the license product option. This option appears when Unlocks Left on the license is zero.

Reset Activation Security Check

Unlocks the license if it has been locked down by the activation velocity check due to too many failed activation attempts in the velocity check's duration

Order Button

View Invoice Details

View the invoice details.

View Order Confirmation

View the order confirmation page seen by the customer in a new tab/window.

Refund

Refund the license. See [Issuing a Refund](#). Only appears for invoices that have not been voided.

Void CC Transaction

Void the credit card transaction for this license. See [Voiding an Order Before Settlement](#). Only appears for invoices that have not been voided and for users with invoice void permission. Note that this is not available for invoices processed through a PayPal Payments Pro merchant account when the bank account is held by PayPal.

Chargeback

Issue a chargeback for the credit card transaction for this license. Only appears for invoices that have not been voided.

Email Invoice

Resend the order notification email to the customer.

Custom License Parameters

The Custom License Parameters section will be displayed if the license is associated with a Product Option that has a custom parameter set defined. See [Custom License Parameters](#) for more details. This is only available when using Protection PLUS 5 SDK.

Payment Plan Information

If the license is part of a payment plan, the payment plan information for the license will be displayed. Click on the payment plan name to view information on the payment plan. See [Payment Plans Overview](#).

Custom Options

This section may be present on certain licenses, depending on the server configuration. Contact your system administrator if there are custom actions you would like to add to your product.

Usage Information

At the bottom of the page, select one of the tabbed options for license usage information.

Download Log

For products delivered by **Electronic Software Delivery (ESD)**, this tab contains a report of the number of times that the user downloaded the software. It includes the date & time, status (if the download was completed or in progress), TCP/IP Address of the user downloading the software, version of the software downloaded, and the elapsed time of the download. The TCP/IP address is a clickable link that will perform a traceroute to the address. This is useful for auditing purposes. If a customer is located in the US and the downloads are coming from a user in Europe, the customer password could have been compromised.

Number and String Post Logs

Products using Electronic License Management (ELM) can send usage data periodically to SOLO Server. Using the functions `SK_PostStrings()` or `SK_PostCounters()`, up to five values can be sent at any time. Refer to the Protection PLUS online manual for the usage of these functions. This table contains the date & time, TCP/IP Address of the machine posting the data, the data itself, and the value of the License Update string at the time the software was activated. The TCP/IP address is a clickable link that will perform a traceroute to the address. This is useful for auditing purposes. If a customer is located in the US and the postings are coming from a user in Europe, the customer password could have been compromised. The License Update field lists the value of the License Update string that was programmed at the time the number or string values were posted.

User-Defined Fields

Displays the user defined fields on the license. Click the **Edit** button to edit the user defined fields.

Bulk Modify License

The *Customers / Modify Multiple Licenses* page will allow you to bulk modify licenses on the same invoice or prepaid licenses with no invoice. You can change the Distributor, Invoice Number, Status, Unit Price, and Download Until date.

Important

This page can cause irreparable damage to your license data if not used properly! Database changes cannot be undone!

1. Enter the Starting License ID and Ending License ID.
2. Choose what you want to change on the Licenses.
 - Status - Will change the status of the licenses to the specified status. Leave the value [do not change] to leave the status as is on the license records.
 - Distributor - Will change the distributor of the licenses to the one you specify. Leave the value [do not change] to leave the Distributor ID alone on the license record. Set it to [NONE] to remove the Distributor ID from the license record, or choose another Distributor from the list.
 - Invoice No - Will change the Invoice Number of the licenses to a new one that you specify. Leave this parameter blank to leave the invoice number alone.
 - Unit Price - Will change the Price per unit on the licenses. Leave this parameter blank to leave the unit price alone.
 - Download Until - Will change the Download Until date on the licenses. Leave this parameter blank to leave the date alone.
3. After you submit, a page will be displayed that tells you what you are about to do. Verify the changes to be made and click Yes to commit the changes, or No to cancel.

License Email Notifications

SOLO Server supports sending two types of license email notifications:

- Manually sent notifications initiated by a logged in user.
- Automated notifications sent on a daily basis through a scheduled job.

Manually Sent Notifications

Manually sent notifications can be sent as follows:

- **Search** for the license in SOLO Server.
- On the **License Details** page, click the **License** button and choose **Email Customer**.
- Choose a mailing template to send from the drop down, which should be configured based on the **Custom License Mailing**.
- The TO field will be automatically populated with the customer email address.
- Add any additional email addresses to notify to the TO, CC, and BCC fields. Multiple email addresses can be entered in each field, separated by either commas or semicolons.
- Optionally click the **Preview** button to preview the content that will be sent.
- Click the **Send** button.

Note that this functionality also supports several search and replace variables within the subject and body of the mailing template. For more information on these, see **Custom License Mailings**. Be careful not to send a mailing with unsupported search and replace fields present, as these will show up in the email to the customer.

Automated Notifications

There are several **Daily Processes** which send automated email notifications based on certain license conditions:

- **Customer Subscription Expiration Process** - sends an email notification a given number of days prior to a license reaching expiration (can include a table with all licenses that have expiration dates)
- **First Activation Follow Up Process** - sends an email notification a given number of days after first activation.
- **Non Activated License Notification Process** - sends an email notification a given number of days after a license is created if it has not yet activated.
- **Subscription Expiration Process** - sends an email notification a given number of days prior to a license reaching expiration.

For more information on configuring these automated notifications see the topic on **Daily Processes**.

Transferring Licenses

New Customer

To transfer a license to a new, unregistered customer:

1. **Find** the License you would like to transfer.
2. On the License Details page, click the *License* dropdown and choose *Transfer*.
3. A message box will pop up asking you for a password. This password will be assigned as the Customer Password of the new unregistered customer.
4. Once you enter the password, the license is transferred to a new, unregistered customer with the provided password.
5. The license notes are updated saying where the license was transferred from.

Note that the invoice is NOT transferred. The customer that purchased the license will keep the invoice, because they are the one who paid for it. If you go the old customer, you will see an invoice without a license attached. You can always go to the View Invoice Details screen to get to the license which was transferred.

Existing Customer

To transfer a license to an existing customer:

1. **Find** the customer you would like to transfer the license to. Write down their Customer ID.
2. **Find** the license you would like to transfer.
3. On the license details page, click on [Edit] at the top.
4. In the Customer ID field, replace the existing Customer ID with the Customer ID of the customer you want to transfer the license to.
5. Click Submit

Activation and Management

Once a license is obtained, customers can activate your software. Whether your customers' computers are directly connected to the Internet or in very remote or disconnected environments, you can allow customers to activate software licenses however you prefer:

- Direct online activation
- Indirect activation through a nearby computer with Internet access for disconnected devices
- Offline activation through an exchange of codes for very remote/disconnected computers.
- Volume license activation for mass distributing software without fingerprinting (Protection PLUS 5 SDK required)

Electronic License Activation

You can set the parameters around activation using the Electronic License Activation (ELA) options.

- Set rules for activation, re-activation, and license transfer
- Custom license parameters with near-limitless extensibility
- Extend an evaluation or subscription-based license for an additional period of time
- Permit access to selected modules of a modular application
- Facilitates conversion of upgrades (e.g. immediately move up to the Platinum Edition from the Gold Edition upon receipt of payment)

Electronic License Management

Electronic License Management (ELM) is also a core feature of SOLO Server, which allows you to maintain control of your software after it leaves your possession. After a license has been activated, your software can be configured to periodically validate with SOLO Server, which allows you to update or revoke a license, as well as secure enforce license transfers.

Activation

The heart of the software licensing and copy protection is product activation. View the [Activation overview video](#) for a quick summary of how this process works:

Every copy of your software must be activated when installed on a new computer or network. Each **license** is assigned a number of *Activations Left*, and each time the customer activates the software on a new computer, it decrements the *Activation Left* count. SOLO Server can log both online and offline activations, and allows you to view details of the **activation history** for each license.

Creating, maintaining, and distributing different builds of your application, where each build fulfills a unique set of licensing requirements, can result in a significant amount of unnecessary effort. Instead, activation allows a single build of your application to change the state of the license for a computer, network, and/or tailored licensing requirements.

Background Checking / Validation with SOLO Server

Background checking, or validation with SOLO Server, gives you more control over the use of your licensed software. Once a customer has activated with a License ID, your software can validate against that same License ID in SOLO Server.

Using one of our licensing clients, you will configure your software to periodically check in with SOLO Server. You can configure it to validate with SOLO Server after X days, which can fail silently, and also optionally configure a required check which must be completed after Y days. This gives you the control of forcing validations with the server, while also giving the customer some flexibility in case they don't always have an Internet connection.

Imagine you are using SOLO Server's e-commerce features, you sell a license for your application, the customer activates it, and a few weeks later you find the license was purchased with a stolen or lost credit card. Another scenario could be that a customer has called and activated your application, and is requesting a new activation claiming his or her original computer is broken and had to be replaced.

You can configure your software to automatically check with SOLO Server periodically to verify the status of the license. Should you encounter situations like the ones described above, you can disable an individual system previously activated or disable the entire license (and all systems activated with it), and rest easy that the system revoked will soon no longer be able to run (see the deactivation section below for more details).

Additionally, some applications may require time-limited licenses which are activated (known as periodic or lease licenses). SOLO Server's rich e-commerce features can help you automate accepting payments (even automatic, recurring payment) while making it possible for your software to automatically update its expiration date. So for example, let's say your customers may only use the licensed application or service for 30 days before payment is necessary again. Once the next payment is processed after 30 days, your application can automatically check for a new expiration date without requiring customers to go through the process of activating again. This level of automation gives you and your users the simplest and most convenient experience possible.

Deactivation & Transfer

License deactivation can apply to a specific activated installation or to all activated installations of a License ID. Requiring periodic background checks with SOLO Server allow you to securely enforce license deactivation.

When a single installation is deactivated, it automatically increments the *Activations Left* count for that particular License ID. This allows the customer to activate again on another computer, effectively transferring the activation.

You must enable the *Allow Deactivations* **Product Option setting**, and the License ID must have at least one *Deactivation Left* before an installation can be deactivated.

There are three ways to deactivate:

Deactivate through the Application

A deactivate option can be added to your software to allow the customer to conveniently transfer a license. Internet access is required, and upon success, the local license file is immediately updated to an unlicensed status, and the *Activations Left* count of the License ID is incremented.

It is important for your application to require periodic background checks with SOLO Server, as this will catch the case of the customer restoring a backup of the deactivated license file.

Deactivate through the Customer License Portal

You can enable an option that allows the customer to **remotely deactivation through the Customer License Portal**. This is useful in case the customer no longer has access to the device that needs to be deactivated.

Deactivate through the Author Interface

Whether you give your customer the option to deactivate or not, you still have the ability to deactivate installations or entire licenses through the author interface. **Change the Status of the License ID** to deactivate all installations, or go to the **Activation History** to deactivate a particular installation.

Deactivating an Installation through the Customer License Portal

Deactivating through the **Customer License Portal** is useful in case the customer no longer has access to the installation they need to deactivate. This may occur if a computer crashes or is formatted. If you allow the customer to enter an "Installation Name" during activation, you can choose to display it in the Installation History. This has the potential benefit of helping them identify their different installations.

The relevant **Customer License Portal Options** are listed below. "Customers may view installation data and deactivate installations" must be selected to allow the customer to deactivate their own installations:

Installations:

Whether users are allowed to view and manage installations on their licenses.

- Customers may not access installation data, and they will not be able to deactivate.
- Customers may only view installation data, but not deactivate.
- Customers may view installation data and **deactivate installations**

Installation Name:

Whether users are allowed to view the installation name.

- Customers may not access the installation name
- Customers may view the installation name

If you allow the customer to enter an installation name during activation and allow them to view it in the **Customer License Portal**, this will help them more easily identify which installation matches up to which computer.

The following screen shot has the options set to view installation data and deactivate installations, and also view the installation name:

LICENSE PORTAL

[License Portal Home](#) » [Licenses & Activations](#) » [License Details](#) » Installation History

Installation History

Installation ID	Status	▼ Activation Date/Time	N
AFZ35-CSHPF-KWYLC-U93XG-BK5YS-W	Active 	Sep 30 2014 4:14:17 PM	Jo
XSEYU-SUULK-BXWYZ-Z2CFT-7KJVH-S	Active 	Sep 30 2014 4:04:36 PM	Jo

Clicking on the red (X) will prompt the user with the message: "Are you sure you want to deactivate Installation ID "XXXX-XXXXX-XXXXX-XXXX-X"?" for that given Installation ID:

Are you sure you want to deactivate Installation ID "6G6YS-U3DXZ-UXYWZ-3FN9Q-MUP8M-A" ?

OK

Cancel

License Activation History

To view license activation history, on the License Details page, click the drop-down *Activations / View Activation History* or *View Installation History*.

The activation history page displays the complete history of all activation attempts for a given license, including failed attempts, whereas the installation history page only lists successful attempts in which an Installation ID was issued.

The attempts are listed in order from newest to oldest. Each log entry can be expanded/contracted to show/hide additional details by clicking the icon on the left or the "Show more/Show less" link. All log entries can be expanded/contracted using the icon in the left of the header or the "Expand All/Contract All" link. 20 results are shown at a time - use the arrows along the right at the top/bottom of the page to page through the history.

To export the entire activation history for the license, click the *Actions* button and choose *Export*, which will take you to the **Activation Data Export** page allowing you to export the data in comma separated value (CSV) or XML format.

Each log has the following basic information:

Date/Time Entered

The date and time the activation attempt occurred.

Actions

If the option allows deactivation, the installation is active, the license has remaining deactivations, and the user has manage installations permission, a red Deactivate/Ban icon will appear here. Click the icon to deactivate or ban the installation.

If the product option is configured to allow reactivation on the same computer, you will be prompted to either deactivate or ban the installation. Deactivating will allow the computer to reactivate, while banning will permanently prevent the computer from reactivating.

If, on the other hand, the activation has been deactivated or banned, the license has remaining activations, and the user has manage installations permission, a blue reactivate icon will appear here. Click the icon to reactivate the installation.

Last Check

The date of the last time the Installation last contacted the server to check it's status. This will only be populated for product options with Issue InstallationID set and using the new web methods on the XmlActivationService web service for activation and status checking.

Status

A green checkmark will be displayed for activations that succeeded and have not been deactivated. An orange exclamation point will be displayed for activations that were rejected. A red deactivated icon will be displayed for successful activations that have since been deactivated. A red banned icon will appear for activations that have been permanently banned from reactivating by an administrator. Review the legend for samples of the icons.

Type

Can be one of the following:

- Online - Activations performed by the application through any of the activation interfaces.
- Offline - Activations performed through the Protection PLUS 4 offline activation page.
- Manual - Activations performed through one of the manual activation pages.
- AutoCrypt SL - Online activations performed through AutoCrypt SL.
- AutoCrypt SL (Manual) - Manual activations performed through AutoCrypt SL.

InstallationID

The InstallationID assigned to this activation. This will only be populated for product options with Issue InstallationID set and using the new web methods on the XmlActivationService web service for activation. Click the InstallationID to view further details.

ComputerID

The ComputerID number used for the activation.

When expanded, the log record can contain the following additional information:

Name

The user defined Installation name passed during activation (only applicable when using ActivationInstallation web method for activation).

Entered By

The UserID who created the record. This will be either "WebServer" or a blank value for online activations, "OL_Act" for offline activations, "WebServer" for anonymous manual activations, or the SOLO Server UserID for manual activations performed by an author user.

Internet Address

The IP address the activation attempt originated from. Click the IP to perform a lookup of the IP Address in a new window.

Result Code

For rejections, the result code of the rejection.

Last Status Check

The date and time of the last status check through the CheckInstallationStatus web method.

Last Status Check Result Code

The Result Code returned by the last call to the CheckInstallationStatus web method.

Last Status Check Exception

The error message for the Last Status Check Result Code when on zero.

Initial Product Version

The version number passed up during the activation attempt.

Current Product Version

The version number passed up during the last call to the CheckInstallationStatus web method.

Related Installation

The InstallationID of another installation related to this. For example, when allowing reactivation on the same computer and allowing reuse of the InstallationID, this will be set to the currently active InstallationID for the given computer. Click the value to view more details.

Exception

For rejections, the error message of the rejection. For successful activations, this can be one of the following values:

- < TH - The activation code was sent successfully because the computer ID number was within the unlock threshold specified on the product option. The activation count was not decremented.

- #DAYS - The activation was allowed because the last successful activation attempt was farther in the past than the specified additional activation days specified on the product option. The activation count was not decremented.
- DECLI - The activation code request was declined due to no remaining activations. This has been deprecated and replaced with Result Code 5013/Exception "No Remaining Activations", and will only appear for older activations.
- RET - The activation has been deactivated through the license_return.asp script. This has been deprecated and replaced with the Deactivated Date, and will only appear for older activations.
- LICDL - For Protection PLUS 5 volume or downloadable licenses, the activation is from the first attempt to download the license file. In this scenario, an activation is performed in order to create the installation record for the license file, but the activation count is not decremented.

Exception Details

For certain rejection types, additional information on the reason for the rejection.

License Update

The value of the License Update string that was programmed at during the activation attempt.

Deactivated Date

The date the installation was deactivated.

Deactivated By

The UserID that deactivated the installation. For online deactivations, this will be "WebServer", while for manual deactivations, this will be the SOLO Server UserID which performed the deactivation.

Activation/Installation Details

The activation/installation detail page displays details for a given activation or installation. It can be reached by clicking the Installation ID or Related Installation ID links on the activation history page, or by searching on a specific Installation ID from the search menu or advanced search page.

When viewing the details of an Installation, you can also Deactivate, Ban, or Reactivate the given Installation by clicking the Deactivate, Ban, or Reactivate Installation buttons at the bottom of the page. These buttons will only be available to users with Manage Installations permission and for licenses which allow reactivation/deactivation and have activations/deactivations available. In addition, the option to ban an installation is only available when the license product option is configured to allow reactivation on the same computer.

The page will display the following information (note that not all fields here are applicable in all cases and will not be displayed if not):

Status

The current status (Active, Deactivated, or Banned). When viewing Installation details, you can toggle this status by clicking the Deactivate, Ban, and Reactivate Installation buttons at the bottom of the page.

Activation ID

The unique ID of the activation record.

Installation ID

The Installation ID assigned to this activation. This will only be populated for product options with Issue Installation ID set and using the new web methods on the XmlActivationService web service for activation.

Installation Name

The user defined Installation name passed during activation (only applicable when using ActivateInstallation web method for activation).

License ID

The License ID the activation was performed against. Click to view the license details.

Date Entered

The date and time the activation occurred.

Entered By

The User ID who created the record. This will be "WebServer" for online activations, "OL_Act" for offline activations, "WebServer" for anonymous manual activations, or the SOLO Server User ID for manual activations performed by an author user.

IP Address

The IP address the activation attempt originated from. Click the IP to perform a lookup of the IP Address in a new window.

Activation Source

The source of the activation. This can take the following values:

- ActivationServer - The activation came through the ActivationServer.Activate web method
- ManualActivation - The activation came through the trigger code manual activation page.
- OfflineActivation - The activation came through the Protection PLUS 4 offline activation page.
- OnlineActivation - The activation came through the standard online activation page.
- XmlActivationService - The activation came through the XmlActivationService ActivateInstallation or ActivateInstallationLicenseFile web method.
- ManualRequest - The activation came through the Protection PLUS 5 manual activation page.

- AutoCryptSL - The activation came through the XmlActivationServer ActivateInstallationLicenseFile web method using AutoCrypt SL.
- AutoCryptSLManual - The activation came through the Protection PLUS 5 manual activation page using AutoCrypt SL.

Session Code

The session code generated for the activation attempt.

Computer ID

The Computer ID number used for the activation. Applications licensed with Protection PLUS 5 SDK will always have a Computer ID of 1000.

Trigger Code

The activation trigger code.

Exception

The exception details for the activation. This can be one of the following values:

- < TH - The activation code was sent successfully because the Computer ID number was within the unlock threshold specified on the product option. The activation count was not decremented.
- #DAYS - The activation was allowed because the last successful activation attempt was farther in the past than the specified additional activation days specified on the product option. The activation count was not decremented.
- DECLI - The activation code request was declined due to no remaining activations. This has been deprecated and replaced with Result Code 5013/Exception "No Remaining Activations", and will only appear for older activations.
- RET - The activation has been deactivated through the license_return.asp script. This has been deprecated and replaced with the Deactivated Date, and will only appear for older activations.
- LICDL - For Protection PLUS 5 volume or downloadable licenses, the activation is from the first attempt to download the license file. In this scenario, an activation is performed in order to create the installation record for the license file, but the activation count is not decremented.

License Update

The value of the License Update string on the license record during the activation attempt.

Related Installation ID

The Installation ID of another installation related to this. For example, when allowing reactivation on the same computer and allowing reuse of the Installation ID, this will be set to the currently active Installation ID for the given computer. Click the value to view more details.

Deactivated Date

The date the installation was deactivated.

Deactivated By

The User ID that deactivated the installation. For online deactivations, this will be "WebServer", while for manual deactivations, this will be the SOLO Server User ID which performed the deactivation.

Deactivated Activation ID

The Activation ID of an activation which caused this activation to be deactivated. Click the value to view more details.

Reactivated Date

The date the installation was reactivated.

Reactivated By

The User ID that reactivated the installation.

Last Status Check

The date and time of the last status check through the XmlActivationService.CheckInstallationStatus or XmlLicenseFileService.GetLicenseFile web methods.

Last Status Check Result Code

The Result Code returned by the last call to the XmlActivationService.CheckInstallationStatus or XmlLicenseFileService.GetLicenseFile web method.

Last Status Check Exception

The exception from the last status check if the result code is not 0.

Initial Product Version

The version number passed up during the activation attempt.

Current Product Version

The version number passed up during the last call to the XmlActivationService.CheckInstallationStatus or XmlLicenseFileService.GetLicenseFile web method.

Activation Data

The xml activation data passed during the activation for activations through the XmlActivationService ActivateInstallation or ActivateInstallationLicenseFile web methods.

Manual (Trigger Code) Activation using SOLO Server

As an alternative to using LFEEdit, Instant Protection PLUS 3, or License Manager for generating activation codes for trigger code (phone/manual/offline) activations, activation codes can also be generated through SOLO Server, which can be done through the author interface or by the customer through the Customer License Portal.

The advantage of using this technique is that the activation will be recorded in the **Activation/Installation history** for that License ID (shown below), with the Type designated as a "Manual Activation". The *Activations Left* will also be decremented for that License ID.

Expand All	Actions	Date/Time Entered	Last Check	Status	Type	Installation ID
Show more...		10/28/2016 6:42:07 PM		✓		

Important

SOLO Server assumes that the customer will activate successfully with the Activation Code(s) they are given. If the customer tries to activate the wrong product or if they mistype the Activation Code(s), the activation will fail locally, but it will not reflect this in the SOLO Server activation/installation history.

SOLO Server Author Interface

If a customer provides you their user codes and License ID by phone or email, you can log into the SOLO Server author interface to generate their activation codes:

- Use the menu *Customers / Generate Activation Codes*. Enter the License ID to activate and click Continue. Alternately, search for the License ID, click the *Activations* dropdown and choose *Generate Activation Codes*.
- A page will be displayed with the license details, including customer and product information. Verify the details match the expected values, and if so, enter the two user codes.
- Optionally enter an Installation Name, which will result in an Installation ID being generated. This Installation ID cannot be used to deactivate the installation as it is only storing the Installation Name in this case.
- Click *Activate*.

The activation results will be displayed at the bottom of the page. If successful, Activation Code 1 and potentially Activation Code 2 will be displayed. If there is an error, the error code and description will be displayed instead. You will give the customer the Activation Code(s) for them to enter into the software.

Customer License Portal

It is possible to allow customers to generate the Activation Code(s) by using the **Customer License Portal**, which can be accessed by any computer with Internet access. This allows them to activate their offline computers without needing to call or email your support staff, which is especially useful in urgent cases or when there is a drastic timezone difference between your staff and your customer.

To enable this option, go to the menu **Configure / Customer License Portal Options**, click the *Edit* button, and check the *Allow customers to activate manually* option.

The activation instructions for your customers can be similar to the following:

- Log into the Customer License Portal.
- Click on the Licenses & Activations option.
- Click the License ID to be used for the activation.
- If there is at least one Activation Left, click the *Activate* button at the bottom of the screen.
- Enter User Code 1 and User Code 2 and click Activate.
- Activation Code 1 and potentially Activation Code 2 will be provided. Enter the code(s) into the corresponding software to activate it.

Activating Customers Through a Browser

This is an advanced topic. Only implement this if directed by tech support personnel.

A customer who has a valid License ID and Password can generate a manual unlock code for trigger code activation using their browser. This can be used for contingency purposes when the computer containing the software to be unlocked does not have access to the Internet. The customer can enter their License ID and Password at:

- <http://secure.softwarekey.com/solo/unlock/>

They will then be prompted to enter the User Code 1 and User Code 2 values originally generated from the activation dialog. SOLO Server will validate the User Code values and then return Registration Code 1 and (optionally) Registration Code 2 values which can be subsequently used in the original activation dialog to activate, or unlock, the application. Note that if the user transposes or drops any digits, the Registration Code generated will not work, yet SOLO Server will consume an activation.

Should you wish to automate this process even further, you could create a dialog box asking the user for their LicenseID and Password and call ShellExecute with the following URL:

`http://secure.softwarekey.com/solo/unlock/getcode.asp?LicenseID=[LicenseID]&CustomerPW=[Customer Password]&code1=[codeentrynumber/CENum/UserCode1/SessionID]&code2=[computerIDnumber/UserCode2]`

Sales and eCommerce Overview

Although the primary focus of SOLO Server is Electronic License Activation and Management, SOLO Server's integrated e-Commerce can be used to fully automates product/license sales and distribution.

Some of the supported features include:

- Automatically recurring subscriptions through **payment plan** system
- Purchase options based on licenses owned (such as renewals and upgrades) through the **Customer License Portal**
- **Customizable storefront design**
- **Discount codes**, either for all customers or as a one-time use
- Support for **affiliates and distributors**
- Customizable **order confirmation emails**

Requirements for SOLO Server's Integrated eCommerce

You only need to supply a **compatible merchant account and payment gateway** so you can accept credit cards as a method of payment.

You would also want a **brochure website** that links to your SOLO Server storefront.

When purchasing a product/license, a customer will register their contact information and then complete the checkout process for the license(s) they want. The customer will automatically receive their License ID(s) and Activation Password(s) by email once the purchase has been processed successfully.

Should I Use SOLO Server's Integrated eCommerce?

Companies that already have fully functioning e-Commerce solutions or, for whatever reasons, do not wish to sell their software products online, can still benefit from the multitude of license management features available with the use of SOLO Server. The author interface and/or web services can be used to create the licenses, and then you can choose to distribute them in a way that best suits your needs.

Be sure to check out our blog post **Choosing an eCommerce System for selling your Licensed Applications**.

Brochure Website

Most ISVs (Independent Software Vendors) already have a brochure website which is utilized to advertise their company's various products and services. The content on this type of website will ordinarily contain items such as:

- Product features, options, and screenshots
- Minimum system requirements for using the software
- Other pertinent marketing information
- Company contact details and product support availability

SOLO Server has pages and services that are readily available to be linked to from your brochure website:

1. **Generate Ordering Links** - When using SOLO Server's integrated eCommerce, you can add a "Buy Now" links for the products/licenses you've configured, which redirects the customer to the SOLO Server cart to promptly process their order.
2. **Customer License Portal** - You can add a link to the Customer License Portal login page, which then allows customers to view/ manage their licenses and download the software they have licenses for. When using our integrated eCommerce, they can also see their order history, reprint receipts, purchase renewals or upgrades.
3. **Trial Tracking Service** - This can be used to gather data from potential customers who are interested in downloading a trial version of your software. You simply create a form on your web site that posts to a SOLO Server script. The server will collect the data and accordingly send customized marketing e-mails to your prospective customers.

The shopping cart and Customer License Portal pages can have a **custom design to match the look and feel of your website**. So even through customers are linked to a different domain, it can still have the same look at your website.

Merchant Account and Payment Gateway

If you wish to accept transactions using SOLO Server's optional integrated e-Commerce, it is necessary for your company to acquire a merchant account and a SOLO Server-compatible payment gateway.

Merchant Account

A **merchant account** is a type of account that allows your business to accept credit cards as a method of payment. There is a wide variety of online merchant account providers from which to choose; in fact, your local bank will likely be able to provide you with a merchant account.

Each SOLO Server Author can be configured to use their own merchant account, but only one merchant account can be used at any given time.

The following merchant account providers are currently supported by SOLO Server:

- **Stripe**
- **PayPal Payments Standard** - Can be used simultaneously with other gateways or as a primary account.
- **PayPal Payments Pro** (PayFlow Edition) - Recommended choice when using **Payment Plans**. PayPal is no longer creating new PayPal Payments Pro accounts, but existing accounts are still supported.
- **Authorize.NET**
- **DIBS Debitech**
- **DIBS Debitech Web**
- **First Atlantic Commerce**
- **Network Merchants**
- **RBS WorldPay**

Note that PayPal Payments Standard, Dibs Debitech Web, RBS Worldpay, and Stripe are not compatible with **Payment Plans**.

In addition, if using Authorize.NET, you must store full credit card information in order to use the payment plan feature (which is not recommended).

For additional information, read our post **What are some options for obtaining a merchant account?**

Payment Gateway

A **payment gateway** is a service that interfaces between the SOLO Server cart and the merchant account. Credit card approval requests are relayed from the SOLO Server cart to the bank through the payment gateway much like a credit card swipe terminal is used in a retail environment. The SOLO Server cart supports many popular payment gateways as a vehicle for submitting transactions to your merchant account.

Quite often, the provider of a merchant account can offer its clients a "bundle," which may include a payment gateway, such as with PayPal.

If you already have a merchant account but need a compatible payment gateway, please **contact our support team** for further assistance.

Configuring Your Payment Gateway in SOLO Server

If you are using SOLO Server Shared URL, you must **open a support ticket** when you are ready to **configure PayPal** or any other merchant account associated with your Author ID.

If you are using SOLO Server Self-Hosted or SOLO Server Dedicated URL, **here are the steps for adding your PayPal Merchant Account to your cart**. For other cases, refer to the **Merchant Account Field List**.

Shopping Cart Overview

SOLO Server currently offers an integrated shopping cart that will allow you to easily sell your products and services. The storefront can be customized, and orders can be processed through the cart in different ways. It is also possible to support **automatically recurring payments**. To process payments, you will need a **merchant account and compatible payment gateway**.

At checkout, anonymous/new customers will register their contact information to make a purchase using the shopping cart. Existing customers can log in to make another purchase, and use the **Customer License Portal** to purchase renewals and upgrades based on the licenses/products they already have.

The default look of the cart is shown below:

Shopping Cart

Item Description	Price	Quantity	Total
XML License Test License	\$99.00	1	\$99.00
Have a priority/discount code? Enter it here and click Update.			
Subtotal: \$99.00			
Continue Shopping Update Checkout			

The look and feel of the shopping cart can be customized. See the **Customize SOLO Server Storefront** topic for additional information. It is also possible to change the behavior of many cart features through the **Cart Options** and **Advanced Cart Options**.

Features of the Shopping Cart

- Flexible interface - The cart offers flexibility when linking in from an external site. The interface allows multiple actions to be completed in a single call to the shopping cart page.
- Screen reader accessibility - The markup of the cart is fully accessible to screen readers.
- Input validation - The client and server side validation of the cart is user friendly.
- Category support - The author catalog page supports filtering by category.
- Dynamic menu support - Search and replace parameters are available in the storefront markup which support creating dynamically generated menus by product and category.
- Meta tag support - Search and replace parameters are available in the storefront markup to support inserting the meta tag settings from categories or products into the markup on the catalog and product details pages.
- Multi-language support - The cart can be displayed in English, French, German, Italian, or Spanish.
- Currency Prefix/Postfix support - Currency values can be prefixed/postfixed with user defined values.
- Distributor Mode - **Distributor Mode** is supported by the cart, allowing a distributor user to log in to the cart using their distributor UserID/Password.
- Support for many other additional **Cart Options** and **Advanced Cart Options**.

Viewing Your Online Storefront

To view your online store, **log in** to the SOLO Server administration interface and choose the menu *Store / Create a New Order/Car*t.

Important

The storefront will recognize that you are logged in as a SOLO Server author. When logged into SOLO Server, clicking the Continue Shopping button redirects to the Create a New Order/Car

t page, and it also presents you with additional payment options during checkout. If you want to test the storefront as a customer, you will first need to log out of SOLO Server.

From this page, you can select the following options to begin the checkout process either through a new or existing cart:

- Quantity
- Product and Product Option
- Distributor (and **Distributor Mode**)
- **Single Order Mode**
- **Priority Code**
- Purchase Order Number

You can also use the *Generate Buy Now URLs* button to help you create a specific purchase URL, or go to the menu *Store / Generate Ordering Links*. Refer to the **Shopping Cart Querystring Parameters** topic to further customize a URL.

Testing Order Process

You have the capability to fully experience the cart process by testing your **virtual storefront**. You can fully simulate exactly what the customer sees when they purchase your software online. To "test drive" the cart, simply follow these instructions:

1. Edit the Product ID record and check-mark the check-box labeled "Use Test CC No." (located in the *Other Information* section). This enables you to use a specially created SOLO Server-only test credit card number to "purchase" your product. By default, all new SOLO Server Authors are initially set up to use the SOLO Server test credit card number.
2. Make sure that you are logged into the SOLO Server Author interface at the time you perform your testing activities. This is a security measure designed to prevent anonymous or otherwise unauthorized users from maliciously using the SOLO Server test credit card number to illegally purchase software products.
3. Place an order using the normal **Ordering URL** that you intend to publish.
4. At checkout time, use the following SOLO Server test credit card number: **4442780423232**. Enter a CVV2 value of **000** and specify any future **MM/20YY** combination as the Expiration Date.

You will not be charged for any transactions using the test credit card number, as this results in the creation of test licenses which are subsequently deleted at the end of every month. Please DO NOT attempt to use this credit card number for legitimate transactions.

Important

Test licenses are available for **your** development and testing needs as you may deem necessary, but test licenses should not be distributed to customers. At the end of each calendar month, all test licenses are purged from SOLO Server. In addition, any customer records which contain only test licenses will also be deleted. You will not be charged for creating test licenses.

All other non-test (or "live") licenses created in SOLO Server (regardless of how the licenses are created) will **not** be purged, however, and **will result in account charges/fees** being assessed to your SOLO Server account. There are various ways of creating non-test licenses, including, but certainly not limited to the following examples: Manually adding a license, processing an order without using the test credit card number, or performing web service calls.

To easily create a test license without going through the cart process, please refer to the **Creating a Test License** topic.

Important

When testing the order process using a PayPal Payments Standard merchant account, please be aware that the SOLO Server test credit card (as described above) **cannot** be used for testing purposes, as the payment pages at the secure PayPal site are not equipped to recognize the SOLO Server test credit card number as a testing-only credit card number. Any PayPal Payments Standard transactions using the SOLO Server test credit card number will be unconditionally rejected. Instead, you will need to submit your test transaction using either a live PayPal account or a genuine credit card and then subsequently issue yourself a refund. If you are reluctant to put fairly large amounts on a live credit card, you might want to consider setting up a temporary Priority Code (established at the Product Option level) with an assigned value of \$1.00 USD less than the actual retail price of your software product so that you end up charging yourself no more than \$1.00 USD at checkout time.

Testing with Stripe

When testing the order process using a Stripe merchant account, you can use Stripe's test mode and test card numbers. Configure your Stripe merchant account in SOLO Server with your test API keys from the Stripe Dashboard (found under Developers > API keys with "Test mode" enabled), and use the following test card:

- **Card Number:** 4242 4242 4242 4242
- **Expiration:** Any future date
- **CVV:** Any 3 digits

For additional test cards (including cards that simulate declines and specific error conditions), see **Stripe's testing documentation**.

Using Other Forms of Payment With the Cart

When a customer orders by phone, fax, or e-mail, you can use SOLO Server's **integrated eCommerce** to process the order. Simply go to the online order form and fill in the information as if the customer was doing it. Their credit card is validated while they are on the phone and they receive the e-mail with the unlock / download instructions immediately sent by the server.

You can also process an order online where a credit card is not involved. Let's say someone sent you a check by mail. While **logged into the SOLO Server author interface**, you can place their order through the shopping cart and simply choose "Check" or "Money Order" on the payment page. You may also use "Cash" or "Prepaid". The sale will be logged in the server and the customer will receive their order confirmation e-mail with the activation / download instructions. Note that for the "Check" payment option, if the invoice requires shipping, the order will be set to Holding status for 20 days to allow time for the check to clear.

See **Mail/Phone Order Processing** for more details.

Mail/Phone Manual Order Processing

When a customer orders by phone, fax, or email, you can use SOLO Server's integrated shopping cart to process the order, with or without a credit card.

Using the Shopping Cart to Process an Order

1. Adding Products to the Cart

- From the menu, choose *Store / Create a New Order/Cart*.

Create a New Order/Cart

Help

*Quantity:

*Product:

Please Select

Distributor:

Please Select

☐ Use Distributor Mode

Priority Code:

PO Number:

Create New Cart

Add To Existing Cart

Generate Buy Now URLs

- Enter the Quantity and select the Product to add to the order.
- Optionally select a Distributor to associate with the order, and check the Use Distributor Mode checkbox to create the cart in **Distributor Mode**.
- Optionally check the Use Single Mode checkbox to create the cart in **Single Order Mode**. Note that this advanced option is only available to users with Master User permission.
- Optionally enter a Priority Code and/or a PO number.
- Click *Create New Cart*.
- If you need to add more items, click the *Continue Shopping* button to return to the *Create a New Order/Cart* page. Select the new items and click *Add To Existing Cart*. Repeat this until all of the items are in the cart, and then click *Checkout*.

2. Checkout Process

- On the cart login page, enter the customer's email address and click Continue. If the email exists in the system, you'll be prompted to verify the existing customer's details, otherwise you'll be prompted to create a new customer record.

SAMPLE SOFTWARE STORE

Enter Your Customer Information

(* indicates a required field)

*Email Address:

Company Name:

*First Name:

*Last Name:

*Address Line 1:

Address Line 2:

*City:

State/Province:

- Fill in or verify the customer information as if you were them.
- If the order contains shippable items, enter the shipping details.
- Choose a payment method.

Choose a Payment Method

*Payment Method: ☐ Credit/Debit Card



*The options below are only available to you as a SOLO Server Author. Your customers will **not** see the payment methods below.*

- ☒ Prepaid
- ☐ Cash
- ☐ Check
- ☐ Money Order
- ☐ Net 10
- ☐ Net 30
- ☐ Net 45
- ☐ Net 60
- ☐ Wire

PO Number:

Credit/Debit Card

Use this to process the order with a credit/debit card.

Prepaid

Use this if the customer is paying by some other method not listed here.

Cash

Use this if the order is for cash.

Check

Use this if the customer paid by check. Not that if this is used and the order requires shipping, the invoice will be set to Holding status with a Hold Until Date 20 days later in order to allow the check to clear.

Money Order

Use this if the customer paid by money order.

Net 10/30/45/60

Use one of these if the customer is paying using Net payment terms.

Wire

Use this if the customer paid by wire transfer.

- If processing the order using a credit card, enter the credit card details.
- When the order is complete, the customer will receive the **Order Complete Standard Cart** email. To avoid this, use your email address for the ordering process then manually edit the customer's record to reflect their email address.

Other Ways to Complete a Cart Order

In addition, it is also possible to complete a cart order created by the customer by directly going to the cart and completing the order. There are two ways to do this.

1. If you have phone/mail options defined on your merchant account, a search and replace variable of [varCartID] is supported in the phone/mail ordering html fields. If this is placed in the html, it will be replaced by the CartID. Use this CartID from the mail in order generated from the mail order page, or ask the customer for the CartID when they have called and are viewing the phone order page. Next, from the author home page, enter the CartID in the *Return to Cart* form and click *Go* to start the checkout process from the cart page. Make sure to verify the contents of the cart are correct, as the customer may have modified the cart.
2. If the customer has been registered in SOLO Server, it is also possible to complete a customer's cart from the customer details page. **Search** for the customer in SOLO Server and scroll down to the Unfinished Orders section of the page. Any unfinished carts associated with the customer will be listed here. If a cart is present, click on the CartID to go to the cart and complete the order. Again, make sure to verify the contents of the cart, as the customer may have modified them.

Cart Options

The Cart Options page is used to configure the basic behavior of the cart, and can be found from the menu *Store / Cart Options*. The options are outlined below.

Cart Options

Storefront Template

The custom markup template to use for the shopping cart **Customized Storefront**.

Continue Shopping URL

The generic URL for the continue shopping button to link to. This value can be overridden as explained below.

- If this value is omitted, no continue shopping button will be displayed on the cart page, but upsell functionality will still work.
- If this field is populated, it is probably a good idea to place a button on the page this refers to in order to provide a path back to the cart without adding another item. The link should simply go to `Cart.aspx`, and should include the **querystring parameters** that are noted in **"Returning to an Existing Cart"**.
 - In this case, it is also required to pass the `AuthorID` parameter in the querystring so if the customer does not have a cart, the newly created cart will be associated with the proper author and the correct custom HTML will appear.

Maximum Number of Upsells to Display

The maximum number of upsells to display on the cart page.

Shipping Calculation Method

There are 3 shipping calculation methods that can be used on the cart as follows:

- Combo Price: The prices for each ship option are computed by summing up for each item on the cart as follows:
 - If there is only 1 cart item, the Price field from the Shipping Option is used, otherwise the ComboPrice is used. (ComboPrice is a new field for Shipping Options. Current Shipping Options have been defaulted to use the Price as the ComboPrice)
 - For each shipped item in the cart, the price is then:

$$SP_i = P + (Q - 1) \times QMP$$

Where:

- SP_i = Shipping Price for the given item
- P = Price (1 item on cart) or Combo Price (multiple items on cart) from the shipping option
- Q = Quantity
- QMP = QMultiPrice from the shipping option
- The total for each option is then the sum of the price computed in the previous bullet point for each cart item, or:

$$SUM(SP_i)$$

- Max Plus Half: The price for each option is computed by finding the maximum shipping price for amongst all items on the cart, and summing this with half of the shipping cost for each remaining item on the cart.
 - The ship price for each item is calculated as follows:

$$SP_i = P + (Q - 1) \times QMP$$

Where:

- SP_i = Shipping Price for the given item
- P = Price
- Q = Quantity
- QMP = QMultiPrice from the shipping option

- The total price for each option is then summed as follows:

$$SP_{\max} + SUM(\frac{1}{2} SP_i(\text{excluding } SP_{\max}))$$

- Max Plus QMult: The price for each option is computed by finding the maximum shipping price amongst all items on the cart, and summing this with the QMultPrice for each remaining item on the cart.

- The ship price for each item is calculated as follows:

$$SP_i = P + (Q - 1) \times QMP$$

Where:

- SP_i = Shipping Price for the given item
- P = Price
- Q = Quantity
- QMP = QMultPrice from the shipping option
- The total price for each option is then summed as follows:

$$SP_{\max} + SUM(QMP_i \times Q_i(\text{excluding } SP_{\max}))$$

Tax Calculation Method

The method used to calculate tax during checkout. This can be set to the following values:

- Tax Rules - Uses tax rules defined by country, US State, or Canadian Province. This is the method used by all non European Union authors.
- European Union VAT - Uses European Union VAT rules. **NOTE: Available only for authors within the European Union.**
- Avalara - Uses Avalara AvaTax to calculate tax dynamically. Requires **configuring an AvaTax account**.

You will also need to set the tax rules through the menu **Store / Sales Tax Rules**.

Sales Tax Label

Text to override the default label displayed for sales tax in the cart and on invoices.

Country Match Method

Determines whether the shipping and billing country fields are editable during checkout. This can be set to the following values:

- All - Shipping and billing country must match customer country and the fields are non-editable.
- Shipping - Shipping country must match customer country and is non-editable. Billing country is editable.
- Billing - Billing country must match customer country and is non-editable. Shipping country is editable.
- None - No restrictions - both shipping and billing country are editable.

Require Phone

Whether the phone number is require on the customer registration page.

Disable Priority Codes

Checking this will cause the priority code entry field on the payment page to not be displayed. Checking this will have the same effect as using the NoPrCode=true querystring value outlined above.

Display Images

If this is checked, if the product or product option has an image associated with it, it will be displayed on the cart option detail and view cart pages.

Display Distributor Login

If this is checked, a Distributor/Reseller login option will be displayed on the cart login page to allow Distributors/Resellers to log into the cart using their distributor login information.

Require Source

If this is checked, the free text source (Heard From) field will be a required field during checkout if no marketing sources are defined.

Allow Customer PO

Whether non author/distributor users are allowed to enter a PO number on the payment page during checkout.

Invoice and Mailing Options

Order Confirm HTML

This text is displayed near the top of the order confirmation page and email. The following search and replace variables are supported:

- [varMerchantDispName] - The merchant account name that will appear on the customer's credit card statement. If no merchant account is associated with the order, the SOLO Server Author's company name will be used.
- [varPassword] - The customer password. **Important Note:** We strongly recommended *not* using this. For customers who have chosen their own password, the value will be masked with * characters and not useful to the user.
- [varOriginalQS] - Original query string that started order
- [varChargeAmount] - The total amount charged to the customer's credit card formatted as currency.
- [varChargeAmountNF] - The total amount charged to the customer's credit card not formatted as currency (to be used with tracking pixels).
- [varAmountSubtotal] - The subtotal of the order (total minus shipping and taxes) formatted as currency.
- [varAmountSubtotalNF] - The subtotal of the order (total minus shipping and taxes) not formatted as currency (to be used with tracking pixels).
- [varInvoiceNo] - The Invoice Number for the order.
- [varSource] - The order source (entered in the text field on the registration page).
- [varCustomerID] - The Customer ID.
- [varEmail] - The Customer Email.
- [varEmailURLEncoded] - The Customer Email URL Encoded.
- [varDateEntered] - The date of the order.
- [varDateEnteredURLEncoded] - The date of the order URL Encoded.
- [varLicenseID] - The License ID, or a comma-separated list of License IDs (if there are multiple licenses).

Customer Welcome Mailing

The custom mailing to be sent when a new customer registers during checkout. See [Customer Welcome Mailings](#) for more details.

Single Order Complete Mailing

The custom mailing to be sent when a single mode cart order is completed and Use Engine Invoice on Single is unchecked. See [Customizing Invoices and Order Confirmation Emails](#) and [Order Complete Single Order Mode Mailings](#) for more details.

Cart Order Complete Mailing

The custom mailing to be sent when a regular mode cart order is completed. See [Customizing Invoices and Order Confirmation Emails](#) and [Order Complete Standard Cart Mailings](#) for more details.

Credit Processing Options

These options control how SOLO Server performs credit card fraud verification upon order processing. Note that these fields are only used for Authorize.NET, First Atlantic Commerce, Network Merchants, and PayPal Payments Pro, merchant accounts.

AVS Security Level

Sets up the basic fraud detection feature for Address Verification Service from the credit card bank. Most domestic and some international cards can verify the billing address of the cardholder in real time. International cards which cannot be verified will come back unavailable, which can be accepted or denied. You can choose any of the following options, although options 1 or 2 are most recommended.

- No AVS checking
- Zip OR Address Match (Unavailable Allowed) - AVS zip OR address must match, AVS unavailable allowed
- Zip AND Address Match (Unavailable Allowed) - AVS zip AND address must match, AVS unavailable allowed
- Zip OR Address Match (Unavailable Disallowed) - AVS zip OR address must match, AVS unavailable rejected
- Zip AND Address Match (Unavailable Disallowed) - AVS zip AND address must match, AVS unavailable rejected

CVV2 Security Level

Sets up the basic fraud detection feature for CVV2 verification from the credit card bank (Visa/Mastercard only). Most domestic and some international cards can verify the CVV2 number in real time. International cards which cannot be verified will come back unavailable, which can be accepted or denied. You can choose any of the following options, although option 1 is most recommended.

- No CVV2 checking
- CVV2 Match (Unavailable Allowed) - CVV2 must match, CVV2 unavailable allowed
- CVV2 Match (Unavailable Disallowed) - CVV2 must match, CVV2 unavailable rejected

AVS Override

The AVS Security level can be overridden if the CVV2 number matches. The CVV2 number only appears on the back of the card, so the likelihood that this number is guessed is low. You can choose to allow a valid CVV2 number to override the AVS checking or not.

Use Extended Fraud Screening

Whether to use extended fraud screening when processing auth/capture transactions. When enabled, additional fraud checks are performed when processing auth/capture transactions in the shopping cart, with the results included in the author notification email. This is currently in beta and is only available to Master Users.

Advanced Cart Options

The Advanced Cart Options page is used to configure the advanced behavior of the shopping cart, and can be found in the menu *Store / Advanced Cart Options*. The options are outlined below.

Advanced Cart Options

Auto Redirect Anonymous Customers

Checking this will cause anonymous customers to pass over the login screen straight to the register screen if there is no customer cookie found. If omitted, false is assumed. Checking this will have the same effect as using the `aredir=true` querystring value when initially creating the cart.

Currency Prefix

A prefix to be added when displaying currency values in the cart (for example, \$). **NOTE: This feature should only be used when advised.**

Use the following HTML escape sequences for common international currencies:

Pound Sterling (£): `£`

Euro (€): `€`

Yen (¥): `¥`

Currency Postfix

A postfix to be added when displaying currency values in the cart (for example, USD). **NOTE: This feature should only be used when advised.**

Invoice and Mailing Options

Use Engine Invoice On Single

If checked, the single order process will use the cart invoice.

Email Campaign Options

These options are used to configure **Email Marketing Campaigns** for abandoned carts:

Email Campaign Enabled

Checking this will enable the email campaign service.

Campaign 1 Look Back Days

The number of days from the last accessed date of a cart that the first campaign mailing should be sent.

Campaign 1 Mailing

The mailing to be sent for the first campaign. See **Email Campaign Mailings**.

Campaign 2 Look Back Days

The number of days after the first campaign mailing is sent that the second campaign mailing should be sent.

Campaign 2 Mailing

The mailing to be sent for the second campaign. See **Email Campaign Mailings**.

Advanced Options

These are advanced options available only to Master Users.

Confirm Invoice Style

The xslt stylesheet filename to use for invoices displayed on the checkout thank you page. Leave this blank to use the default template.

Confirm Email Invoice Style

The xslt stylesheet filename to use for invoices inserted into the order confirmation emails. Leave this blank to use the default template.

View Invoice Style

The xslt stylesheet filename to use for invoices displayed on the **Customer License Portal** view/print invoice page. Leave this blank to use the default template.

Custom Registration Page

Custom page to redirect to in place of the default customer registration page.

Register Redirect

Custom page to redirect to during checkout after submitting the registration page.

Completion Redirect

Custom page to redirect to during checkout after order processing.

Order Processing Plugin

The order processing plugin to call after standard order processing to perform additional custom order processing actions.

Generate Ordering Links

To retrieve system-generated URLs that will allow you to link into SOLO Server from your external website, click the menu *Store / Generate Ordering Links*. This will display a page containing SOLO Server-generated URLs which you can easily copy-and-paste directly into your web pages or emails.

SOLO Server provides two (2) order processing modes: (1) Single Order; and (2) Shopping Cart. The **Single Order Mode** provides a simplified ordering experience for customers purchasing a single product license. The cart mode is the main order processing style, and provides upsell functionality as well as multi-product purchasing support. By default, only the links for cart mode are displayed. To view the Single Order mode links, check the "Show Advanced Links" check-box and click the **Generate Links** button. To view links for other products in your mix, select a new product from the drop down menu located directly above the links and click the **Generate Links** button.

Each link contains two icons to the right. Clicking the first icon will open the link in a new tab/window, while clicking the second icon will copy the link to the clipboard.

There are many additional parameters which may be passed to the cart to control its operation. Refer to **Cart QueryString Parameters** for a comprehensive list of these parameters.

The displayed links are as follows:

Main Store Links

The links displayed under the Main Store section heading are non-ordering links, and will not cause an item to be added to the cart. These are as follows:

List All Products

This link will display the Product Catalog page for your store.

List All Products (Single Mode)

The link will display the Product Catalog page for your store, but use the Single Order mode of the cart. This is only displayed when the "Show Advanced Links" check-box contains a check-mark character.

View Shopping Cart

This link will display the cart page, but will not add an item to the cart. Use this link for a **View Cart** button on your Web site.

Shopping Cart Checkout

This link will initiate the checkout process on the cart.

Customer License Portal

This link will display the **Customer License Portal** log in page.

Product Links

The links displayed under the section heading(s) containing the name(s) of your product(s) are also non-ordering links, and will not cause an item to be added to the cart.

Display Product

This link will display the product detail page for the product. The page will display all available options for the product and permit the customer to select which option(s) they wish to order.

Display Product (Single Mode)

This link will display the product detail page for the product, but use the Single Order mode of the cart. The page will display all available options for the product and permit the customer to select which option(s) they wish to order. This is only displayed when the "Show Advanced Links" check-box contains a check-mark character.

Product Option Links

The remaining sets of links apply to each of the product options associated with the product.

Display Product Option

This will display the product option detail page for the given product option.

Display Product Option (Single Mode)

The will display the product option detail page for the given product option, but use the Single Order mode of the cart. This is only displayed when the "Show Advanced Links" check-box contains a check-mark character.

Display Product EULA

This will appear if a EULA (End-User Licensing Agreement) is defined for the product. The link will display the EULA page for the product with a purchase link for the product option.

Display Product EULA (Single Mode)

This will appear if a EULA is defined for the product, and the link will display the EULA page for the product with a purchase link for the product option, using the Single Order mode of the cart. This is only displayed when the "Show Advanced Links" check-box contains a check-mark character.

Add Item to Shopping Cart

This link will directly add the product option to the cart and display the cart page.

Add Item to Shopping Cart (Single Mode)

This link will directly add the option to the cart and display the cart page, using the Single Order mode of the cart.

Shopping Cart Querystring Parameters

Overview:

External web sites can link into several ordering pages in the cart ordering process, either to view product catalog information, view the cart, or to add items to the cart. Much of the behavior of the cart will be determined by the querystring parameters passed in on the first visit to the ordering process, so it is important that all necessary parameters are passed in on every external link into the SOLO Server ordering process.

Once you have **Generated an Ordering Link** from the *Store / Generate Ordering Links* or *Store / Create a New Order-/Cart* pages, you can append the querystring parameters to the URL.

Author Catalog Page (Author.aspx)

The author catalog page lists out all products available to new customers for a given author with links to the product details page for each. In addition, the page can optionally filter the product list by category. The page supports the following querystring parameters:

- AuthorID - The AuthorID to display products for.
- CategoryID - The CategoryID to filter by.

Only one of these is required, but it is best practice to always pass the AuthorID regardless so no errors occur should a category be deleted.

Product Details Page (Product.aspx)

The product details page displays details on a specific product, with links to the product option details page for each. If only a single option is available on the product, the page will automatically redirect to the product option details page for that option. The page requires the following querystring parameter:

- ProductID - The ProductID of the product to display.

Product Option Details Page (ProdOption.aspx)

The product option details page displays details on a specific product option, as well as offering a form allowing the user to specify a quantity and add the item to the cart. If a EULA is defined on the product, the user will first be taken to the license agreement page before the item can be added to the cart, otherwise, the item will be added directly to the cart. The page requires the following querystring parameter:

- ProdOptionID - The Product Option ID to display.

License Agreement Page (LicenseAgreement.aspx)

For products with a EULA specified, this page displays the license agreement and prompts the customer to accept the agreement before adding the item to the cart. If no EULA is specified, the page will automatically redirect to the cart page and add the item to the cart. The page requires the following querystring parameter:

- ProdOptionID - The Product Option ID to display the EULA for.

Shopping Cart Page (Cart.aspx)

The shopping page can be linked in numerous ways to perform different actions such as:

- Displaying the cart
- Initiating checkout
- Adding an item to the cart simple)
- Adding an item to the cart advanced)
- Applying a priority code to the cart
- Clearing the cart

- Performing multiple actions
- Returning to an existing cart

The next few sections will outline linking to the cart page in each of these instances. Though this is not required in all instances, it is highly recommended that regardless of how the cart page is being called, you should include the following querystring parameter AT ALL TIMES:

- AuthorID - The AuthorID to create the cart for if no cart is found. If this is not available and an existing cart is not found for the customer, the system has no way of determining where to route the customer to create a fresh cart. In these cases, they will be offered a link back to a page listing all authors where they can select an author and start a fresh cart.

Displaying the Shopping Cart

To simply display the cart and perform no other actions, simply call the page with the following required querystring parameter:

- AuthorID - The AuthorID to create the cart for if no cart is found.

Initiating Checkout

To initiate checkout, call the cart as if displaying it, but add the following additional querystring parameter:

- checkout=true

Adding an Item to the Cart (Simple)

To add an item to the cart, use the following querystring parameters:

- action=add - Instructs the cart you are trying to add an item
- actiondata0 - ProdOptionID to add to the cart

So, to add ProdOptionID 1234 to the cart, use the following querystring:

- action=add&actiondata0=1234

Adding an Item to the Cart (Advanced)

The actiondata0 parameter described above can also accept a comma separated list of additional data regarding the item to be added. The additional fields are as follows:

- Quantity - Quantity to add to the cart
- UpsellProdOptionID - ProdOptionID to tie the item to for an upsell discount. This is generally not used when linking externally to the cart - it is used internally by the cart when adding upsells. Simply pass a 0 to not specify an UpsellProdOptionID.
- UpgradingFromLicenseID - LicenseID to tie the new license to by setting the UpgradeFrom field to during order processing. Pass a 0 to not specify an UpgradingFromLicenseID.
- CustomData - Custom data string to store on the license. This advanced option and is generally not used.
- RuleLicenseID - If the item being added is subject to upgrade/renewal rules, the LicenseID to verify the rules against. Pass a 0 to not specify a RuleLicenseID.
- Advanced Fields - Additional fields are available for advanced implementations. Documentation for these fields is available upon request. Please **contact us** with additional information on any advanced needs for further information.

The fields must be passed in this order, but you can omit fields from the end that are not needed. For example, to specify a quantity of 4 when adding an ProdOptionID 1234 to the cart, use the following querystring:

- action=add&actiondata0=1234,4

To also specify a CustomData field of "ExampleCustomData", the querystring would be:

- action=add&actiondata0=1234,4,0,0,ExampleCustomData

Applying a Priority Code to the Cart

Applying a **priority code** to the cart is similar to adding an item to the cart. To apply a priority code, use the following querystring parameters:

- action=applyprcode - Instructs the cart you are trying to apply a priority code
- actiondata0 - Priority code to apply

So, to apply priority code EXAMPLE to the cart, use the following querystring:

- action=applyprcode&actiondata0=EXAMPLE

Clearing the Cart

To clear all items from the cart, pass the following querystring parameters:

- action=clear - Instructs the cart you want to clear all items
- actiondata0 - Simply pass this as a blank value - this is required for compatibility with multiple actions described in the next section.

Performing Multiple Actions

Multiple actions can be performed in a single call to the cart page - for example, two items can be added and a priority code can be applied with one link to the cart. This is accomplished by specifying multiple actions in order in the querystring. The "0" in the actiondata0 parameter described above is actually a zero-based index which can be changed to support multiple sets of "actiondata" for multiple actions. To string several actions together, simply specify each action followed by its actiondata, incrementing the index on "actiondata" for each action. For example, the add both ProdOptionID 1234 and 5678 as well as apply priority code EXAMPLE in a single call, the querystring would be as follows:

- action=add&actiondata0=1234&action=add&actiondata1=5678&action=applyprcode&actiondata2=EXAMPLE

Returning to an Existing Cart

To return to an existing cart, pass the following querystring parameters:

- cart=exist - This flag indicates a return to an existing cart.
- CartID - The CartID to return to
- Password - The customer password. This is optional in cases where there is no customer associated with the cart, but required when a customer is already associated with the cart for security reasons.

Initialization Querystring Parameters

In addition to the querystring parameters specific to each page outlined above, numerous additional optional querystring parameters can be passed to any of the cart pages when initializing a new cart. Note that these parameters will only be considered when creating a new cart - they are ignored if a cart already exists, so if you opt to use these they should be included in ALL links into the cart. These optional parameters are as follows:

- MallID - Reserved for future use.
- DistributorID - The Distributor ID to be associated with the order.
- Source - The order source. This can be any string up to 50 characters in length. If passed in, this will be stored on the cart and saved on the invoice upon checkout. In addition, the "How did you hear about us?" drop down and text box will not be displayed on the registration page. Be sure to URLEncode this value before adding to a querystring.
- Promo - The promo code. This can be any string up to 50 characters in length, and is used to supplement the source for additional tracking functionality. If passed in, this will be stored on the cart and tied to the invoice upon check out. Be sure to URLEncode this value before adding to a querystring.
- ReturnPage - A URL to return to from the continue shopping button which will override the continue shopping URL defined on the cart options. Be sure to URLEncode this value before adding to a querystring.
- Single - A true/false value determining whether to run the cart in single order mode (assumed false if omitted).
- UserPONumber - A PO Number to pass on to the invoice during order processing.

- NoPayPal - A true/false value which when included will cause the paypal payment option to be hidden (assumed false if omitted).
- NoMailInst - A true/false value which when included will cause the by mail payment option to be hidden (assumed false if omitted).
- NoPhoneInst - A true/false value which when included will cause the by phone payment option to be hidden (assumed false if omitted).
- ARedir - A true/false value which determines whether the login screen is bypassed for customers with no customer cookie (assumed false if omitted).
- NoPrCode - A true/false value used to determine whether to display the priority code entry field on the cart page (assumed false if omitted).
- RegisterRedirect - A custom page to redirect to during the checkout process after the customer has registered. This is an advanced option. The path to the page is relative to the root of the author custom directory, and does not support querystring parameters. Be sure to URLEncode this value before adding to a querystring.
- CompletionRedirect - A custom page to redirect to after the order has successfully processed instead of the standard thank you page. This is an advanced option. The path to the page is relative to the root of the author custom directory, and does not support querystring parameters. Be sure to URLEncode this value before adding to a querystring.

Auto Login Querystring Parameters

Similar to the initialization querystring parameters, the cart also supports auto login querystring parameters which can be used to automatically log in a customer or distributor to the cart. Like the initialization parameters, these parameters will only be considered when creating a new cart - they are ignored if a cart already exists. These parameters are as follows:

- CustomerID/Password - Pass these values to automatically log in the customer by CustomerID/Password.
- Email/Password - Pass these values to automatically log in the customer by Email/Password.
- DUserID/DPassword - Pass these value to automatically log in a distributor by UserID/Password and set the cart to Distributor Mode.

Forcing Creation of a new Cart

To force creation of a new cart, simply pass cart=new in the querystring.

Running the Cart in Single Order Mode

The cart can also be run in single order mode, which replicates the behavior of the older single item ordering pages in SOLO Server. This mode is enabled by passing in Single=true in the **querystring of the ordering link**.

The distinctions between single order mode and the standard cart mode are as follows:

- Only 1 item can be added to the cart. If another item is added, the original item will be removed.
- Support for Product level custom HTML.
- No continue shopping button or upsells are displayed on the cart page.
- Author and product level custom mailings are supported (standard cart only supports the cart order complete mailing). Refer to **Customizing Invoices and Order Confirmation Emails** for more information.

Distributor Mode

Overview:

The distributor mode of the cart allows a distributor to log in using the UserID and Password from their distributor account rather than a customer account. It provides a reliable method for resellers to purchase licenses and ensure they are properly linked to their distributor account. In this mode:

- Distributor records must be specifically linked to a customer record to be able to log in
- When the distributor logs in using their distributor credentials, the cart is associated with the linked customer as well as the distributor.

Enabling Distributor Mode

There are two ways distributor mode can be enabled:

- Set the **cart option** "Display Distributor Login". This will cause the login page during checkout to always display and additional distributor/reseller login option along with the existing new/existing customer options. Using this option allows distributors to purchase without having to use specific links that include their DistributorID.
- Set up distributor(s) to "Require Cart Login". **Setting this on a distributor record** will force the distributor to login using their distributor credentials on any carts associated with the distributor. In this case, you must provide the distributor with a specific link that includes their DistributorID so the Distributor gets associated at cart creation and this rule is enforced.

Cart Pricing/Discounting Overview

This provides a short overview of how the cart calculates pricing and applies discounts. The cart supports several discount types, each of which has several discount methods. Multiple discounts can apply, and the pricing engine is configured to always choose the best price for the entire cart with the given discounts. The supported discounts are as follows:

- **Combo or Upsell Discounts** - Discounts associated with the purchase of an upsell on the cart page. These discounts are dependent on both the upsell base and the upsell item being purchased as a pair. See [Configuring Upsells](#) for more details.
- **Author Level Priority Code Discounts** - Code based discounts that apply on the cart level, offering either a flat or percentage discount on the entire order. The priority code can be entered on the cart page. See [Priority Discount Codes](#) for more details.
- **Product Option Level Priority Code Discounts** - Code based discounts that apply on a cart item level, offering either a flat or percentage discount on the cart item. The priority code can be entered on the cart page. See [Priority Discount Codes](#) for more details.
- **Bundle discounts** - Discounts associated with purchasing products as a bundle. To use these it is necessary to set up [Bundled Products and Product Options](#).
- **Distributor Discounts** - Percentage discount given to an order associated with a distributor with a percentage discount defined. Distributor discounts apply to the entire order.

The cart is priced and discounted in the following order:

1. Bundle Discounts
2. Combo Discounts
3. Product Option Level Priority Code Discounts
4. Author Level Priority Code Discounts
5. Distributor Discounts

The priority code processing is configured to always choose the best applicable code out of all codes entered into the cart, both on the item level and the cart level.

Configuring Shipping for the Cart

To begin selling shippable items through the cart, follow these steps:

- Determine what shipping options you would like to offer (USPS, Fedex, UPS, etc.).
- For each shipping option you would like to offer, determine a Short Name. When there are multiple shippable items on a cart, SOLO Server will match on the Short Name across cart items for matches, so it is important to determine your Short Name values early and use them consistently going forward, since if no matches are found, customers will not be able to complete checkout and will instead see an error message noting that shipping is misconfigured.
- Next, determine and set the shipping calculation method, which is detailed in **Configuring Cart Options**.
- Finally, for each shippable product option:
 - Edit the option and check the Requires Shipping checkbox.
 - Add all applicable **Shipping Options**. When viewing the option, scroll to the bottom of the page and click the Shipping tab. Click the Add New Shipping Option button to add new shipping options. Be sure to use the Short Names determined previously. Ideally, you should ensure that in addition to the Short Name, all other shipping settings match, however this is not a requirement - in the case where there are mismatches, SOLO Server will either choose the top value alphabetically for text values, or the more restrictive value for the Allow Military/Allow PO Box settings.
- Once all shippable items are configured with shipping options, the final step is to test to ensure there are no misconfigurations. The easiest way to do this is to add the first shippable item to a shopping cart and proceeding through checkout to the shipping page. On the shipping page, ensure all expected shipping options appear. Then, use the View Cart link to open a new window, and then work through and add each additional shippable item to the cart one at a time, refreshing the shipping page after each item is added and ensuring all shipping options continue to appear.

Adding an Invoice

An invoice will be added automatically when an order is processed through the shopping cart, or you can add an invoice manually through the SOLO Server author interface. This can help you better manage orders, especially when **Adding Multiple Licenses**. A new invoice can be created in the following ways:

- An order processed through the shopping cart will also add an invoice, including **test orders**.
- On a customer record, there is an *Add Invoice* button in the *Orders and Refunds* section. This will take you to the **Edit Invoice Details** page.

Viewing Invoice Details

The *Actions / Edit* menu at the top allows you to update the invoice, and the *Actions / Add Single License* or *Actions / Add Multiple Licenses* menus will create new licenses and attach them to the invoice.

Field List

Invoice Number

The invoice number assigned by the server. Click the *Printable* link to view the invoice that can be sent to the customer.

Status

The invoice status. Can be any of the following values:

- Pending - User defined status.
- Shipping - Default status of a shippable order. When an invoice has a status of shipping, it will show up in the unshipped orders report.
- Shipped - Post shipping status of a shippable order. When the order is marked as shipped through the **Unshipped Orders Report**, SOLO Server will set this as the invoice status as well as set the Ship Date.
- Holding - Intermediate shipping status. Used in conjunction with the Hold Until field. SOLO Server runs a daily job which will convert licenses with a Hold Until date of the current date and a status of Holding to status Shipping. In addition, orders paid by check through the cart ordering path will automatically be set to Holding with a hold until date of 20 days in the future in order to give time for the check to clear.
- Web - Default status of a non shippable order.
- Rebate - Invoice has had a rebate processed against it.
- Voided - Invoice has been voided. When an invoice is voided, SOLO Server sets the invoice to this status.
- Refund - Invoice has been refunded. When refunding an order SOLO Server sets the refund invoice to this status.
- Delete - Master Users can also set the invoice status to Delete. A daily job runs which purges all invoices with a status of delete from SOLO Server entirely. Note that when set to this status, all licenses on the invoice must also be set to delete status. If any licenses are found on the invoice which are not set to delete status, a popup message will appear alerting the user to this situation.

Important

Master User access is only available to authors using SOLO Server Self-Hosted or SOLO Server Dedicated URL. For SOLO Server Shared URL, only SoftwareKey support and admins have Master User access.

Entered

The date and time the invoice was entered, and the user that entered the invoice. Online orders are entered by the "WebServer" user.

IP Address

The TCP/IP address from which the order was entered from. If you need to research the order, this address links to a tracing web site to possibly show the location of the user.

Modified

The date and time the invoice was last modified, and user that last modified the invoice.

Amount Charged

The total amount charged. For new invoices, enter the amount to be charged here.

Amount Discount

The total discount amount on the invoice due to invoice level priority codes.

Amount Tax

The total amount of sales tax paid on the order.

Sales Tax Data

When sales tax is calculated through Avalara AvaTax, the raw sales tax data returned by Avalara.

Sales Tax History

When sales tax is calculated through Avalara AvaTax, the raw sales tax history data from any void or refund activity of the Avalara transaction.

Amount Shipping

The total amount of shipping charge paid on the order.

Amount Store Credit

The total amount of store credit used on the invoice.

Customer Information

The customer contact information, including company name and contact details. Click on the CustomerID to view the customer details page for the customer. Click on the email address to email the customer.

Shipping Information

The shipping details, if applicable.

Transaction Details

Terms

The terms of the payment. Can be one of the following values:

- Visa/Mastercard
- American Express
- Discover Card
- PayPal
- WorldPay
- COD
- Cash
- Check
- Comp
- Wire
- Consignment
- Credit (used for refund orders)
- Prepaid
- Net 10
- Net 30
- Net 45
- Net 60

Additional Terms

Any additional terms specified by an administrative user.

Merchant Account

Master User Administrators only - The merchant account that processed the order.

Authorization Code

The credit card authorization code given by the bank.

Transaction ID

The transaction ID given by the bank.

Batch No

The batch number which the credit card transaction settled with.

Other Details

EU VAT Number

The customer's European Union VAT number, if applicable.

User PO No.

The PO number referenced with the order.

Priority Code

A priority code associated with the order.

Promo Code

A promo code associated with the order.

Distributor

The distributor associated with the order

Source

Where the customer heard about your company. For online orders, this is collected on the registration page.

Marketing Source

The marketing source selected by the customer for online orders on the registration page.

Original Querystring

For online orders, the original querystring from the first web page hit which created the cart. Available to Master Users only.

User Comments

Any comments associated with the invoice.

Notes

Any notes associated with the invoice.

Shipping Details

Ship Method

The invoice shipping method.

Ship Date

The date the invoice was shipped.

Ship Tracking

The shipment tracking number.

Credit Card Details

Card Number

Credit card number.

Expiration Date

Credit card expiration date.

First Name

First name of the cardholder.

Last Name

Last name of the cardholder.

Phone Number

Phone number of the cardholder

Bill Address 1

Street address on the cardholder's account.

Bill Address 2

Line 2 of the street address of cardholder's account.

City

City of the cardholder's account.

State/Province

State/Province of the cardholder's account.

Postal Code

Postal code of the cardholder's account.

Country

Country of the cardholder's account.

Invoice Options

Depending on the status and other details of the invoice, as well as the current user's permissions, several functions may be available through the *Actions* button at the top of the page as follows:

Edit

Edit the invoice.

Add Single License

Add a single license to the invoice

Add Multiple Licenses

Add a multiple licenses to the invoice for the invoice customer.

Add Multiple Unregistered Licenses

Add multiple licenses to the invoice, associating each with a new unregistered customer.

View Printable Invoice

Opens up a printable version of the invoice in a new tab/window.

View Order Confirmation

View the order confirmation page seen by the customer in a new tab/window.

Resend Invoice

Resend the order notification email to the customer.

Refund

Refund the invoice. See **Issuing a Refund**. Only appears for invoices that have not been voided.

Void CC Transaction

Void the credit card transaction for this invoice. See **Voiding an Order Before Settlement**. Only appears for invoices that have not been voided and for users with invoice void permission. Note that this is not available for invoices processed through a PayPal Payments Pro merchant account when the bank account is held by PayPal.

Chargeback

Issue a chargeback for the credit card transaction for this invoice. Only appears for invoices that have not been voided.

Void/Refund Avalara Transaction

For invoices where the sales tax was calculated using Avalara AvaTax, click this button to void or refund the AvaTax transaction. Note that this will only appear if the AvaTax transaction history indicates the transaction is currently in a state which will allow issuing a void or refund.

Licenses

This is a listing of all licenses on the invoice. Clicking on the License ID will open the license details page for that license. If the license is refundable, clicking the Refund link will open the refund page with the specific license set up for refunding. You can also export details on the licenses in several formats using the Export buttons along the right:

CSV

Comma separated value format. Export includes the following fields:

- LicenseID
- ActivationPassword
- CustomerID
- CustomerPassword - Note that this will be output as "SECURED" for customers who have chosen their own password for users without View Password permission. View the topic on **Password Accessibility** for more information.
- AuthorSerialNum
- AuthorSerialNumTxt
- SerialNumber
- ProductName
- OptionName

Import

Text format suitable for import as product serial numbers for resale. For each license, there is a single line of text in the following format:

- LicenseID: NNNNNN Activation Password: XXXXXX

Text

Contains the same fields as the CSV format (with blank values omitted) in text format similar to the Import format.

Refund History

Any refunds associated with the invoice will be listed below the licenses. Click the invoice number to view the details of the refund invoice.

Payment Plans

Any payment plans associated with licenses on the invoice will be listed here. Click the payment plan name to view more details on the payment plan.

Edit Invoice Field List

General Information

Invoice No.

Assigned by server. Not an editable field.

Status

The invoice status. Can be any of the following values:

- Pending - User defined status.
- Shipping - Default status of a shippable order. When an invoice has a status of shipping, it will show up in the unshipped orders report.
- Shipped - Post shipping status of a shippable order. When the order is marked as shipped through the **Unshipped Orders Report**, SOLO Server will set this as the invoice status as well as set the Ship Date.
- Holding - Intermediate shipping status. Used in conjunction with the Hold Until field. SOLO Server runs a daily job which will convert licenses with a Hold Until date of the current date and a status of Holding to status Shipping. In addition, orders paid by check through the cart ordering path will automatically be set to Holding with a hold until date of 20 days in the future in order to give time for the check to clear.
- Web - Default status of a non shippable order.
- Rebate - Invoice has had a rebate processed against it.
- Voided - Invoice has been voided. When an invoice is voided, SOLO Server sets the invoice to this status.
- Refund - Invoice has been refunded. When refunding an order SOLO Server sets the refund invoice to this status.
- Delete - Master Users can also set the invoice status to Delete. A daily job runs which purges all invoices with a status of delete from SOLO Server entirely. Note that when set to this status, all licenses on the invoice must also be set to delete status. If any licenses are found on the invoice which are not set to delete status, a popup message will appear alerting the user to this situation. **NOTE:** Master User access is not available to authors using SOLO Server Shared URL.

Hold Until

The hold until date. Used in conjunction with the Holding status. SOLO Server runs a daily job which will convert licenses with a Hold Until date of the current date and a status of Holding to status Shipping. In addition, orders paid by check through the cart ordering path will automatically be set to Holding with a hold until date of 20 days in the future in order to give time for the check to clear.

Customer ID

Customer ID of the customer who owns the invoice. Clicking the Customer ID on the view page will open the customer details page. This can also be edited on the edit page by users with Manage Records permission, allowing an invoice to be transferred to another customer.

Billing Information

Important

Note that the following fields are not editable for cart orders or orders with a completed credit card transaction.

Credit Card No.

Credit card number.

Terms

The terms of the payment. Can be one of the following values:

- Prepaid
- Net 10
- Net 30
- NET 45
- Net 60
- Visa/Mastercard
- American Express
- Discover Card
- Diners Club
- Maestro
- PayPal Payments Standard
- WorldPay
- COD
- Cash
- Check
- Comp
- Wire
- Consignment

Additional Terms

Any additional terms specified by an administrative user.

Credit Card CVV2

Credit card CVV2 number.

Credit Card Expire

Credit card expiration date.

Credit Card First and Last Name

Name of the card holder.

Credit Card Phone Number

Phone number of the cardholder's account.

Credit Card Bill Address 1

Street address on the cardholder's account.

Credit Card Bill Address 2

Line 2 of the street address of cardholder's account.

Credit Card City

City of the cardholder's account.

Credit Card State/Province

State/Province of the cardholder's account.

Credit Card Postal Code

Postal code of the cardholder's account.

Credit Card Country

Country of the cardholder's account.

Amount Charged

The total amount charged. For new invoices, enter the amount to be charged here. Note that this value includes any discounts, tax, and shipping, so even though they are entered separately below, they should be factored into this number.

Amount Discount

The total discount amount on the invoice due to priority codes and upsell discounts. For new invoices, enter any discount given.

Tax Calculation Type

The method used to calculate tax if the order was processed through the shopping cart. The following options are available:

- Tax Rules - Tax was calculated through SOLO Server's built in tax rules implementation.
- European Union VAT - Tax was calculated through SOLO Server's built in European Union VAT implementation.
- Avalara - Tax was calculated through the Avalara Avatax integration with SOLO Server.

Amount Tax/VAT

The sales tax paid on the order. For new invoices, enter any tax here.

Amount Shipping

The shipping charge paid on the order. For new orders, enter any shipping costs here.

Priority Code

A priority code associated with the order. Enter any priority code here when entering a new invoice. See **Priority Discount Codes**.

Authorization Code

The credit card authorization code given by the bank. For new invoices, do not add anything here unless you get a code from the bank. Once the credit card is processed, this field will be filled in automatically.

Transaction ID

The credit card authorization reference ID that some merchant accounts require.

Batch No

The batch number which the invoice credit card transaction settled with.

Merchant Account ID

Master User Administrators only - Choose the merchant account that should process this order when manually adding an invoice.

Shipping Information

Ship Method

The invoice shipping method (if applicable). This is for purposes of display on the printed invoice.

Ship Date

The date the invoice was shipped. This will be filled in automatically if the order is marked as shipped through SOLO Server. For new invoices, enter the date the product will be shipped (if applicable).

Ship Tracking

The shipment tracking number (if applicable). For new invoices, enter any tracking number here.

Ship Company

Enter the company where the product is being shipped.

Ship First Name

The first name of the shipping address. For new invoices, enter the shipping first name here.

Ship Last Name

The last name of the shipping address. For new invoices, enter the shipping last name here.

Ship Address 1

Street address where the invoice is being shipped. For new invoices, enter the shipping street address here.

Ship Address 2

Line 2 of the street address where the invoice is being shipped. For new invoices, enter line 2 of the shipping street address here.

Ship City

City where the invoice is being shipped. For new invoices, enter the shipping city here.

Ship State/Province

State/Province where the invoice is being shipped. For new invoices, enter the shipping State/Province address here

Ship Postal Code

Postal code where the invoice is being shipped. For new invoices, enter the shipping postal code here.

Ship Country

Country where the invoice is being shipped. For new invoices, enter the shipping country here.

Other Information

European Union VAT Number

The customer's European Union VAT number, if applicable.

User PO No.

Use this field if there is a PO number referenced with the order.

User Comments

Not currently used.

Source

Where the customer heard about your company. For online orders, this is collected on the registration page. For new invoices, enter a source here if desired. See [Marketing Sources](#).

PromoCode

A promo code associated with the order. This can be used with the Promo Code report for marketing purposes. For new invoices, enter any promo code here. See [Promo Codes](#).

Notes

Add any notes on about the sale. These notes will NOT show up on the invoice.

Customizing Invoices and Order Confirmation Emails

When customers order from the integrated shopping cart, by default a generic email message is sent to them confirming their purchase. This is the same invoice that is shown to the customer after the order has been successfully processed. This invoice includes all of the customer billing and shipping information, as well as a summary of all items purchased. The customized email that can be sent is dependent on whether the order was processed through standard cart mode or **single order mode**.

Standard Cart Mode

To customize this email, view the **Order Complete Standard Cart Mailing** topic.

Single Order Mode

The **single order mode** only allows one item in the shopping cart at a time and can allow for more customization of the order confirmation email since it can be tailored to a single product/license. To customize this email, view the **Order Complete Single Order Mode Mailing** topic.

Mail/Phone Manual Order Processing

When a customer orders by phone, fax, or email, you can use SOLO Server's integrated shopping cart to process the order, with or without a credit card.

Using the Shopping Cart to Process an Order

1. Adding Products to the Cart

- From the menu, choose *Store / Create a New Order/Cart*.

Create a New Order/Cart

Help

*Quantity:

*Product:

Please Select

Distributor:

Please Select

☐ Use Distributor Mode

Priority Code:

PO Number:

Create New Cart

Add To Existing Cart

Generate Buy Now URLs

- Enter the Quantity and select the Product to add to the order.
- Optionally select a Distributor to associate with the order, and check the Use Distributor Mode checkbox to create the cart in **Distributor Mode**.
- Optionally check the Use Single Mode checkbox to create the cart in **Single Order Mode**. Note that this advanced option is only available to users with Master User permission.
- Optionally enter a Priority Code and/or a PO number.
- Click *Create New Cart*.
- If you need to add more items, click the *Continue Shopping* button to return to the *Create a New Order/Cart* page. Select the new items and click *Add To Existing Cart*. Repeat this until all of the items are in the cart, and then click *Checkout*.

2. Checkout Process

- On the cart login page, enter the customer's email address and click Continue. If the email exists in the system, you'll be prompted to verify the existing customer's details, otherwise you'll be prompted to create a new customer record.

SAMPLE SOFTWARE STORE

Enter Your Customer Information

(* indicates a required field)

*Email Address:

Company Name:

*First Name:

*Last Name:

*Address Line 1:

Address Line 2:

*City:

State/Province:

- Fill in or verify the customer information as if you were them.
- If the order contains shippable items, enter the shipping details.
- Choose a payment method.

Choose a Payment Method

*Payment Method: ☐ Credit/Debit Card



*The options below are only available to you as a SOLO Server Author. Your customers will **not** see the payment methods below.*

- ☒ Prepaid
- ☐ Cash
- ☐ Check
- ☐ Money Order
- ☐ Net 10
- ☐ Net 30
- ☐ Net 45
- ☐ Net 60
- ☐ Wire

PO Number:

Credit/Debit Card

Use this to process the order with a credit/debit card.

Prepaid

Use this if the customer is paying by some other method not listed here.

Cash

Use this if the order is for cash.

Check

Use this if the customer paid by check. Not that if this is used and the order requires shipping, the invoice will be set to Holding status with a Hold Until Date 20 days later in order to allow the check to clear.

Money Order

Use this if the customer paid by money order.

Net 10/30/45/60

Use one of these if the customer is paying using Net payment terms.

Wire

Use this if the customer paid by wire transfer.

- If processing the order using a credit card, enter the credit card details.
- When the order is complete, the customer will receive the **Order Complete Standard Cart** email. To avoid this, use your email address for the ordering process then manually edit the customer's record to reflect their email address.

Other Ways to Complete a Cart Order

In addition, it is also possible to complete a cart order created by the customer by directly going to the cart and completing the order. There are two ways to do this.

1. If you have phone/mail options defined on your merchant account, a search and replace variable of [varCartID] is supported in the phone/mail ordering html fields. If this is placed in the html, it will be replaced by the CartID. Use this CartID from the mail in order generated from the mail order page, or ask the customer for the CartID when they have called and are viewing the phone order page. Next, from the author home page, enter the CartID in the *Return to Cart* form and click *Go* to start the checkout process from the cart page. Make sure to verify the contents of the cart are correct, as the customer may have modified the cart.
2. If the customer has been registered in SOLO Server, it is also possible to complete a customer's cart from the customer details page. **Search** for the customer in SOLO Server and scroll down to the Unfinished Orders section of the page. Any unfinished carts associated with the customer will be listed here. If a cart is present, click on the CartID to go to the cart and complete the order. Again, make sure to verify the contents of the cart, as the customer may have modified them.

Sending Invoice Email Notifications

If an order was completed through the SOLO Server shopping cart, the invoice would have been sent automatically at that time. If you need to send or resend an invoice, there are two ways to do this:

1. On the license details page, click the Order dropdown and then *Email Invoice*
2. On the invoice details page, click the Actions dropdown and then *Resend Invoice*.

You will be taken to a page which will prompt for a list of To, CC, and BCC email addresses to send the notifications to, with the To email defaulted to the customer email address. Specify the recipient(s) and click the Continue button to send the notification email.

Issuing a Refund

It may be necessary at times to refund an unhappy customer's credit card for a purchase they have made online.

1. **Find** the invoice or license in the database. You can either search for the invoice, or search for the customer to find the invoice or license on the customer details page.
2. If the search was on the customer, find the license or invoice that is to be refunded from the customer details page and click to view the invoice/license.
3. If on the invoice details page, click the Actions button and choose Refund, or if on the license details page, click the Order button and choose Refund. On the invoice details page, you can also click the refund link on an individual license in the License Details section to only refund a single license.
4. This will open the refund page. A listing of all licenses on the invoice is displayed. If the page was reached from a license, the license clicked to reach the page will automatically be set with the entire quantity on the license to be set to returned status. If the page was reached from an invoice, all items will have their entire quantity set to returned status. Adjust the quantity and status drop downs as necessary. Note that you can also set the license status to FRAUD if necessary, or leave the status at OK.
5. For partial refunds, it is also possible to add a miscellaneous adjustment. If necessary, enter a miscellaneous adjustment in the text field.
6. If the order had shipping charges and they are to be refunded as well, check the "Refund this invoices shipping charges" checkbox.
7. If desired, a refund can be converted to store credit instead of crediting the customer's credit card. If desired, check the "Convert refund amount into store credit" checkbox to convert the refund to a store credit, and then enter the expiration date of the store credit.
8. If any mailings are defined with "Refund" in the name, they will show up in the "Send Mailing to Customer" drop down. If desired, select a mailing to send to the customer when the refund is processed.
9. Select a reason for the refund from the "Reason" drop down (note that this only applies if **Return Reasons** are configured). To configure return reasons, click the Manage Return Reasons link.
10. Add any additional information you would like to be stored with the refund invoice in the "Additional Information" field.
11. **Master Users Only:** If this is a fraudulent order and you wish to automatically tell the server to reject any *future* orders from this customer's credit card account or e-mail address, check the box "Block this user's credit card account and e-mail address." Note this setting affects only future orders. Any previously-processed or in-process orders are not affected.
12. Click Submit button. A verification screen will appear. Verify the information, and if everything is correct, click the "Submit" button.
13. All licenses whose status was changed will be marked with the new status, a new refund invoice will also be created showing the credit, and if an email was selected earlier, it will be sent to the customer. The credit should show up on the customer's credit card within 2 days.
14. If any payment plans are associated with any licenses being refunded, details on these will be listed on the confirmation page, with links to view/disable them.

Important

For certain merchant account types and configurations, it is also necessary to perform a second refund directly through the merchant account interface. When this is the case, SOLO Server will display a message stating this along with a link to the merchant account login page. Do not skip this step, as in these cases only the record in SOLO Server has been marked as refunded and the actual credit transaction has not been refunded.

Important

For SOLO Server customers using SoftwareKey processed payments, the PayPal Payments Standard refund must be manually processed through the PayPal site by the SoftwareKey accounting department. SOLO Server will notify us of the refund by email, and we will process the refund within one business day.

Voiding an Order Before Settlement

Voiding an Order Before Settlement

When an order is processed and we receive an authorization code on a customer's credit card, this is merely a hold against the available charging capabilities of their card. The money transfer is not actually initiated until we settle the batch at the end of the day. The credit card gateway and bank network define the settlement time.

Customers using the Concept Software merchant account will have transactions settled around midnight each night. Customers supplying their own merchant account should contact their bank gateway to determine the actual settlement time.

As you can see, there is an opportunity to void an order before the settlement occurs. Because no money is transferred, the bank does not charge their fee, nor would there be any SOLO Server commission due. If an order is processed and settled, the bank will collect their discount rate and the SOLO Server commission would apply.

Although we try to catch most orders that should be voided, such as duplicates, it is ultimately **your responsibility**. The worst thing that happens if you don't catch an order that should have been voided is you will lose a little money when issuing a refund. Note that this feature is not available for transactions processed through a PayPal Payments Pro merchant account when the bank account is held by PayPal.

1. **Find** the license or invoice in the database.
2. If on the invoice details page, click the Actions button and choose Void CC Transaction, or if on the license details page, click the Order button and choose Void CC Transaction.
3. Select the reason of the void from the dropdown list. The actual status is for your reference only.
4. **Master Users Only:** If this is a fraudulent order and you wish to automatically tell the server to reject any *future* orders from this customer's credit card account or e-mail address, check the box "Block this user's credit card account and e-mail address." Note this setting affects only future orders. Any previously-processed or in-process orders are not affected.
5. Click Yes button. The License selected will be marked as Voided. If the error message "ERROR - TRANSACTION NOT FOUND" appears, this transaction must have been settled and you must **Issue a Refund** instead.
6. A license with a status other than OK will not be usable by the customer.
7. Note that the void affects the entire invoice, so if the license was on a multiple license invoice, all licenses on that invoice will also be marked to the same status.
8. If any payment plans are associated with any licenses on an invoice that has been voided, details on these will be listed on the confirmation page, with links to view/disable them.

Collecting Sales Tax

Please contact your tax advisor or local taxation agency regarding the taxation rules for your online store. You should enter the sales tax rules for your state/country into your SOLO Server account. You are responsible for reporting this tax to the appropriate agency.

Currently, SOLO Server offers three tax calculation methods which can be used during the checkout process. The tax calculation method is selected through the **Store / Cart Options** page.

Tax Rules

Individual tax rules configured either globally, or by country, by US state, or by Canadian province. This is the only option for non European Union authors. When calculating taxes in this mode:

- For international (non US/CA) orders, the system will first look for a country tax rule and apply it if found. If not found, it will next look for a global tax rule and apply it if found.
- For US/CA orders, the system will first look for a state/province specific tax rule and apply it if found. If not found, the system will next look for a US/CA country tax rule, and if found this will be applied. If neither is found, the system will finally look for a global tax rule and apply that tax if found.
- **Note:** If only a global tax rule is specified, tax will be applied prior to the customer either logging in or registering. Otherwise, tax will not be applied until the customer either logs in or registers since the customer country must be known in order to determine the applicable tax rule to use.

European Union VAT

European Union VAT rules. This option is only available to European Union based authors. When this method is selected:

- During checkout the customer will be prompted to supply a VAT number if they are from a European Union country.
- If the VAT number is supplied and validated against the EU VAT database, no VAT is charged if the customer country is different from the author country.
- If the VAT number is not supplied or cannot be validated VAT is charged.
- Customers from the country of the author are always charged VAT.
- Non EU customers are charged no VAT.

Avalara

Tax is calculated in real time through **Avalara AvaTax**. This is currently supported only for US based addresses, and requires acquiring a separate account with Avalara, which SOLO Server will integrate with. For non-US addresses, or in the event of a failure to calculate tax through AvaTax, SOLO Server will fall back to using tax rules, so when using this option, you should also configure tax rules to be used in the event of a fall back for US customers as well as for any other countries where tax collection is required. For further information, see **Avalara AvaTax Configuration**.

NOTE: In the near future the tax calculation method option is going to be removed and both European Union VAT rules and standard Tax Rules will be able to be used simultaneously. Prior to making this change to the cart logic, we have rewritten the sales tax configuration page with this future change taken into account. As a result, you can now set up both Standard rules and EU VAT rules regardless of the selected tax calculation method, however if you are using the EU VAT tax calculation method, ONLY the EU VAT rules will be considered by the cart.

Regardless of which option is selected, individual tax rule(s) need to be defined for the tax rates. To configure these rules, from the Authors menu choose *Store / Sales Tax Rules*. This will display a list of current tax rules, broken into the following categories:

- United States Tax Rules
- Canadian Tax Rules
- European Union VAT Tax Rules
- Country Tax Rules
- Global Tax Rules.

To view, edit or delete existing sales tax rules, click the View, Edit or Del links. To add a new rule, click the Add New button at the top of the listing. Each rules is defined by the following properties:

Tax Rule Type

The tax rule type, which can be one of the following values:

- Standard - Standard tax rule set up for a specified country, US state, or Canadian province.
- European Union VAT - EU VAT tax rule. Note that these are currently only considered when the tax calculation method is set to EU VAT.
- Global - Standard tax rule set up globally.

Country

The country the tax applies for. Available only when the Tax Rule Type is Standard.

State/Province

The US state or Canadian province the tax applies for. Available only when the Tax Rule Type is Standard and the country is US or Canada.

Tax Type

Whether the tax should be applied to physical delivery only, electronic delivery only, or both. Physical delivery products are those products with the "Requires Shipping" checkbox checked on the option details page.

Tax Rate

The tax rate as a decimal (0.07 instead of 7%).

Include Shipping

Whether the tax should also apply to shipping costs. This is only available for "Physical Delivery" or "Both Physical and Electronic Delivery" Tax Types.

Avalara AvaTax Configuration

For US based companies that require real-time tax calculations for US based customers, SOLO Server offers an integration with **Avalara AvaTax**. Several steps are needed to configure SOLO Server to integrate with AvaTax.

Perform Initial Configuration in AvaTax

The first task to integrate SOLO Server with AvaTax is to perform some basic configuration of your AvaTax account and gather some information which will be entered in to SOLO Server.

- If you have not already done so, **obtain an AvaTax account**.
- Once you have an account, log in to the AvaTax administrative interface.
- Obtain your Account ID by clicking *Account* in the upper right and viewing the *Account ID*. Make note of this ID as it will need to be entered into SOLO Server.
- Next, verify or create a company, which is the entity which collected sales tax will be attributed to. From the *Settings* menu, select *Manage Companies*. If using an existing company, verify the details, otherwise create a new company. In either case, make note of the *Company Code*, as this will need to be entered into SOLO Server.
- Next verify or create a location, which is the origin address that sales tax will be calculated against. From the *Settings* menu, choose *Company locations and marketplaces*. If using an existing location, verify the details, otherwise create a new location. In either case, make note of the *Location Code*, as this will need to be entered into SOLO Server.
- Generate a *License Key* if you do not have an existing key. From the *Settings* menu, choose *License and API Keys*, and then generate a key. Make note of this key as it cannot be re-obtained, only reset, and will need to be entered into SOLO Server.

Perform Initial Configuration in SOLO Server

Once basic configuration in AvaTax is completed, the next task is to perform some basic configuration of your SOLO Server account to allow SOLO Server to communicate with AvaTax.

- Log in to your SOLO Server account.
- From the menu, choose *Store / Cart Options*, and then click the *Edit* button.
- Change the *Tax Calculation Method* to *Avalara*.
- Next, from the menu, choose *Store / Avalara Settings (Sales Tax)*, and then click the *Edit* button.
- Enter the *Account ID*, *License Key*, *Company Code*, and *Location Code* that were noted when configuring AvaTax, as well as an address to fall back to as the tax origin address should AvaTax tax calculation for some reason fail. Save the changes.
- Test connectivity with AvaTax by clicking the *Test Connection* button and verifying that you receive the message "Connectivity check with AvaTax was successful".
- Set up fallback tax rules. When tax calculation through AvaTax fails, SOLO Server will fall back to using the standard tax rule implementation. For more information on configuring tax rules, see the **Collecting Sales Tax** topic.

Map SOLO Server Product Options to AvaTax

Once basic configuration of both the AvaTax and SOLO Server accounts is complete, the next task is to set up mappings within AvaTax for your product options. SOLO Server sends up the *Product Option ID* to AvaTax, where it is mapped to an *Item Code* stored in AvaTax which also identifies details on how the item should be taxed.

- In SOLO Server, open the product listing from the menu through *Configure / Products*.
- In AvaTax, from the *Settings* menu, choose *What you sell*.
- For each product option in SOLO Server which will be sold through the shopping cart, add a corresponding item in AvaTax, setting the *Item Code* to the SOLO Server *Product Option ID*, the *Description* to the product and option name, and choosing an appropriate *Avalara Tax Code*. If you are unsure what to enter for the tax code, you can simply type a letter into the field and scroll to the bottom of the search results to and click the *Browse the directory* link to view a directory of tax codes.

Avalara Configuration Options

The Avalara configuration options page allows you to edit the settings related to using for tax calculation on the shopping cart.

Account ID

The Account ID of the Avalara AvaTax account used to access the AvaTax API. This can be found in the AvaTax administrative interface by clicking *Account* in the upper right and viewing the *Account ID*.

License Key

The license key used for accessing the AvaTax API. To generate a license key in the AvaTax administrative interface, choose the *Settings / License and API Keys* menu option.

Company Code

The company code used when accessing the AvaTax API. To view and configure company in the AvaTax administrative interface, choose the *Settings / Manage Companies* menu option. Tax will be attributed to the company whose code is entered here.

Location Code

The location code used when accessing the AvaTax API. To view and configure location in the AvaTax administrative interface, choose the *Settings / Company locations and marketplaces* menu option. Tax will be calculated using the address of the location code entered here as the origin address.

Address

The street address to use for origin address when tax calculation falls back to using tax rules when AvaTax calculation fails.

City

The city to use for origin address when tax calculation falls back to using tax rules when AvaTax calculation fails.

State

The state to use for the origin address when tax calculation falls back to using tax rules when AvaTax calculation fails.

Postal code

The postal code to use for the origin address when tax calculation falls back to using tax rules when AvaTax calculation fails.

Voiding or Refunding an Avalara Transaction

Due to differences in the rules for issuing voids or refunds for credit card transactions versus Avalara AvaTax transactions, the Avalara AvaTax void/refund functionality has been implemented separately from that for credit cards. To issue a void or refund for an invoice where tax was calculated through AvaTax, on the invoice details page, choose *Void/Refund Avalara Transaction* from the *Actions* menu. You will be presented with some basic details on the transaction, as well as several options as follows:

Invoice No

The invoice number to void/refund is being issued against.

Amount Charged

The total amount charged on the invoice, including sales tax.

Amount Tax

The total amount of sales tax on the invoice.

Refund Type

The refund type to issue. This list will vary based on the sales tax history and user permissions. Note that once a refund of any type has been issued, no further refunds are allowed, though the transaction can still be voided. The options here are as follows:

- Void - The transaction will be voided, which will mark it as *Cancelled* in AvaTax.
- Full Refund - A full refund for the transaction will be issued.
- Percentage Refund - A partial, percentage refund for the transaction will be issued.
- Tax Only Refund - A partial refund of only the tax amount will be issued. Useful for cases where the customer is able to provide an exemption certificate after purchase.
- Itemized Refund - A partial refund of only selected line items from the original order. When selected, a table detailing the original order will be shown with the option to check which items to refund in the rightmost column.

Refund Percentage

If the selected refund type is a percentage refund, the percentage of the transaction to refund.

Once the refund type and percentage (if applicable) and items (if applicable) are specified, simply click the *Process* button to process the void/refund. If any errors occur, the error details returned from AvaTax will be displayed, otherwise a confirmation message will be displayed and the sales tax history on the invoice will be updated. Note that Avalara does not permit multiple refunds per invoice, so if any additional refund is required in the future, it will be necessary to manually enter this on the Avalara web site.

Basic Fraud Detection

SOLO Server provides several features to help detect fraudulent customers and orders. This topic was written to help educate you and show you how to use the tools provided. Identifying a suspicious transaction from an order confirmation email often becomes intuitive after considering the following points:

- Refer to **Interpreting Approval Codes**. Was there an Address Verification (AVS) code returned? Almost all cards issued in the United States support AVS matching. Did the user supply a valid CVV2 number? If the bank reported that either of these pieces of information did not match (as opposed to the service not being available), immediately look into the order further.
- Does the name and address look valid? Sometimes hackers use obviously false information which raises an immediate red flag. Sometimes hackers put their email address in the address field instead of a street address.
- Did the user supply a phone number? Does the phone number ring valid? Does that person answer the phone? Most customers do not mind a simple phone verification, especially for large dollar amounts.
- Does the email address match the customer name? Is it a corporate email address?
- Is the email address through a public service provider such as hotmail.com or yahoo.com? Sometimes hackers will create a mailboxes on one of the public service providers that might trick you into thinking it is legitimate. For example, if a hacker obtains a credit card account from Jane Smith, they may register janesmith@hotmail.com.
- Similar to how Domain Name Servers (DNS) convert host names such as www.softwarekey.com to numbers (IP address), often times DNS servers can look up the IP address and return the registered host name.
- Does the Country of IP Address match the name and address given by the user? Is it a foreign IP address using a customer address in the United States or vice versa?
- Was a reverse DNS host name listed on the order confirmation email? Does it match the email address domain? Does the hostname match the city and/or state of the customer?
- If a reverse DNS hostname is not available or you want to probe the Country of IP Address further, attempt to see who the IP address block is registered to. To do this, click on the order details using the link at the bottom of the order confirmation email. Click on the IP address hyperlink. In the middle table, click Network Lookup then Submit. Is the IP address coordinator in the same country as the customer? Is the country code listed or does the country code of their phone number match the customer? Is it a foreign IP address using a customer address in the United States or vice versa?
- Were there one or more attempts that were declined, possibly using different credit cards? Is this hacker "fishing" for a valid number? Were there one or more attempts where the customer uses the same credit card but alters the address? If any declines are present for the customer within the previous 24 hours, the count will be displayed in red near the bottom of the notification email.

Other important notes:

- The IP Address of the requesting party can be "spoofed," which means that the value received by the server can be incorrect. If multiple orders occur from the same person, is the IP address in the same range? Are they from the same country?
- Interesting article about IP address blocks and physical location: <http://www.aspfaqs.com/aspfaqs/ShowFAQ.asp?FAQID=179>

Examples of Valid Orders:

Sample 1

Approval Code: 947061A
Company:
Contact Name: Jiamiene Hsu
Address Line 1: 2008 Midwest Club Parkway
Address Line 2: Oak Brook, IL 60523
Address Line 3:
Country: USA
Voice: (630)789-8281
FAX:
E-Mail address: jhsu@allways.net
IP Address = 208.148.108.2
DNS HostName = 208-148-108-2.dpliv.com
Country Of IP Address: United States

The AVS matched the street address but not the zip code. The DNS HostName does not tell us much, so we look up the IP Address coordinator to see:

- Allways, Inc. (NETBLK-CW-208-148-104) CW-208-148-104
- 208.148.104.0 - 208.148.111.255

which matches the email domain. Not 100% sure this is valid, but we have no reason to think it is not valid either.

Sample 2

Approval Code: 091404YM
Company:
Contact Name: Dale Mori
Address Line 1: 16275 Willow Stream Lane
Address Line 2: N. Ft. Myers, FL 33917
Address Line 3:
Country: USA
Voice: 941-567-2931
FAX:
E-Mail address: DaleMori@msn.com
IP Address = 63.233.149.217
DNS HostName = 0-1pool149-217.nas1.fort-myers1.fl.us.da.qwest.net
Country Of IP Address: United States

The credit card AVS matched (Y) and the CVV2 matched (M). The DNS HostName contains the city of the customer. This looks very legitimate.

Sample 3

Approval Code: 005385GU
Company:
Contact Name: Chris May
Address Line 1: 101 Wilton Road
Address Line 2: Wellington, 6005
Address Line 3:
Country: NEW ZEALAND
Voice: +64 4 4703843
FAX:
E-Mail address: cmay@deloitte.co.nz
IP Address = 202.36.181.10

DNS HostName = firewall.deloitte.co.nz
Country Of IP Address: New Zealand

The credit card AVS and CVV2 responses are not available (typical for international cards). This is an international order and the DNS Host Name and email address both match. This looks legitimate.

Sample 4

Approval Code: 784259S
Company: CAF
Contact Name: JOSE LUIS DE SIMONE
Address Line 1: AV. LUIS ROCHE TORRE CAF
Address Line 2: ALTAMIRA
Address Line 3: CARACAS, 1060
Country: VENEZUELA
Voice: 58212 2092170
FAX: 58212 2092170
E-Mail address: jdesimone@yahoo.com
IP Address = 200.14.9.189
DNS HostName =
Country Of IP Address: Venezuela

The credit card AVS and CVV2 responses are not available (typical for international cards). This is an international order. The DNS Host Name is blank and the user is using a public email service (yahoo.com). We look up the IP Address coordinator to see:

- Corporacion Andina de Fomento (NETBLK-CAFC SVC)
- BOX-69.011
- Caracas
- VE

At least the coordinator is in the same country. This looks legitimate.

Sample 5

Approval Code: 014706AM
Company: Electric Power Research Institute
Contact Name: Lance Agee
Address Line 1: 3412 Hillview Avenue
Address Line 2: PO Box 10412
Address Line 3: Palo Alto, CA 94303
Country: USA
Voice: 650-855-2106
FAX: 650-855-1026
E-Mail address: lagee@epri.com
IP Address = 144.58.57.133
DNS HostName =
Country Of IP Address: United States

The AVS matched the street address but not the zip code (A) and the CVV2 number matched (M). The email address looks like an abbreviation of the company name. We look up the IP Address coordinator to see:

- Electric Power Research Institute (NET-EPRI)
- Information Technology Division
- 3412 Hillview Avenue
- P.O. Box 10412
- Palo Alto, CA 94303
- US

This looks perfectly legitimate.

Sample 6

ContactName: Patty Sinkler
MailAddr1: 5918 Rosebay Forest Place
MailAddr2: Midlothian, WA 23112
MailAddr3:
Country: USA
EMail: asad_shahid@yahoo.com
Voice: 3452324234
IP Address = 24.64.73.134
DNS HostName =
Country Of IP Address: Canada

There were several attempts with different account numbers using the same information above. The email address does not match the user's name at all. We look up the IP Address coordinator to see:

- Shaw Fiberlink Ltd. (NETBLK-FIBERLINK-CABLE)
- Suite 800, 630 3rd Avenue SW
- Calgary, Alberta T2P 4L4
- CA

But this customer is supposedly in Washington State. This was not a legitimate order. Blocking this user's email address turns up several other orders with other customer information and account numbers!

Notice with this new Country Of IP Address, that instantly your attention is directed to the fact that the Country Of IP Address: Canada is not consistent with the address of the customer.

Interpreting Approval Codes

When a credit card transaction is authorized, the approval code often contains additional information about the transaction that helps determine its validity. Also refer to **Basic Fraud Detection** and **AVS / CVV2 Security Level** settings of **Cart Options**.

Address Verification System (AVS), a tool used to combat fraudulent credit card activity, checks the numeric portions of the billing address supplied by the cardholder to determine if they match the billing address that the issuing bank has on file. Because AVS only verifies the numeric portions of the address, certain anomalies (for example, transposed digits within apartment numbers) can cause false declines; such instances, however, are reported quite infrequently.

Card Verification Value 2 (CVV2) is yet another weapon in the war against credit card fraud. CVV2 is a 3- or 4-digit security code located on the credit card to ensure that the customer is in possession of the physical credit card. It is typically located above the last 5 digits of the embossed credit card number on the front of an American Express card; for VISA, MasterCard, and Discover cards, it is usually a separate group of 3 digits located just to the right of the signature strip ([see example](#)).

There are a myriad of payment gateway providers (e.g., PayPal, Authorize.Net, etc.) that Internet-based merchants to accept online payments via credit card and eCheck. As you might expect, each provider maintains its own unique authorization code format. The following authorization code format, shown for illustrative purposes only, represents the format employed by the PayPal Payments Pro gateway.

Sample authorization code format: **nnnnnnABC**, where:

1. **nnnnnn** is the numeric portion of the authorization code as assigned by PayPal Payments Pro;
2. **A** is the AVS result obtained when an attempt is made to match the numeric portion of the street address as provided by the customer to the billing address which the issuing bank has on file for the cardholder;
3. **B** is the AVS result obtained when an attempt is made to match the ZIP Code provided by the customer to the ZIP Code which the issuing bank has on file for the cardholder; and,
4. **C** is the CVV2 result obtained when an attempt is made to match the 3- or 4-digit security code as provided by the customer to the CVV2 which the issuing bank has on file for the specified credit card.

AVS Result Codes

Code	Description
Y	Numeric portions of street address or ZIP Code match the cardholder's billing address on file with the issuing bank.
N	Numeric portions of street address or ZIP Code do not match the cardholder's billing address on file with the issuing bank.
X	Card issuer does not support AVS validation (typically, this is only seen with the use of international cards).

CVV2 Result Codes

Code	Description
Y	The CVV2 supplied by the customer matches the CVV2 on file with the cardholder's issuing bank.
N	The CVV2 supplied by the customer does not match the CVV2 on file with the cardholder's issuing bank.

X Card issuer does not support CVV2 validation (typically, this is only seen with the use of international cards).

As a participating merchant, you have the right (within a prescribed amount of time) to summarily reject, or void, an order if the AVS and/or CVV2 results indicate the absence of a match. In fact, this helps to fight fraud. Please refer to **Voiding an Order Before Settlement** for additional information.

See also: **Basic Fraud Detection** and AVS / CVV2 Security Level settings of **Cart Options**.

Adding FORCE Transaction to Settlement Batch

What does REFERRAL mean when processing an order?

Instead of returning an approval code, the bank occasionally returns REFERRAL. In this case, you need to get a voice approval code. Once you receive a voice authorization, you will need to enter it into the server as a Force transaction, following these steps.

1. Add Invoice to Customer record, perhaps **Using PREPAID as Credit Card Account**.
2. Edit this record.
3. Change Terms to VISA/MC, AMEX, or DISC depending on the type of credit card used.
4. Change Merchant Account ID to the appropriate merchant account processing this charge.
5. Enter the Credit Card account and expiration date as well as any other information applicable to this invoice.
6. For Authorization Code, enter FORCE=123456 where 123456 is the approval code given by the bank.
7. Click Submit.

The invoice will be updated with this approval code and the transaction will be submitted to the payment gateway for settlement.

Implementing Custom Branding

By default, a generic "Software Store" or "License Portal" heading will be displayed in the **Shopping Cart** and **Customer License Portal**. There are two methods to customize these pages to look like your web site, which can be accessed by going to the menu *Configure / Custom Markup & Logo*. Customizations can be applied to the **Shopping Cart** at the author, distributor, and product levels, while the **Customer License Portal** can be customized at the author level.

Method 1: Logo Image

The first customization method displays a single header image in place of the default "Software Store" or "License Portal" heading. To implement this method, simply upload a company logo or banner graphic by clicking the *Select New Image* button, choosing your image, and then clicking the *Upload Image* button. The image will appear centered in the header on the shopping cart and customer license portal pages. You can also remove the image by clicking the *Remove Image* link on this same page. A few things to note:

- The recommend logo image width is 738 pixels.
- At least 740 pixels of width must be reserved for the SOLO Server content.
- This method is not supported in the **Shopping Cart** at the distributor and product levels.
- Method 2 will override this method if used at the author level in the **Shopping Cart** or in the **Customer License Portal**.

Method 2: Custom Markup Templates

The second customization method allows you to make the **Shopping Cart** and/or **Customer License Portal** look like your existing web site using Custom Markup Templates. With this method, a web developer can specify custom top and bottom HTML markup to replace the default markup output at the top and bottom of the **Shopping Cart** or **Customer License Portal**. A few things to note:

- If a Custom Markup Template is configured for an area of SOLO Server, it will take precedent over the Logo Image from Method 1.
- Customization at the product level using this method is only supported when running the cart in **Single Order Mode**.

Customizing your Storefront is comprised of three steps:

1. **Uploading Graphics, Stylesheets, and Other Supporting Files**
2. **Creating a Custom Markup Template**
3. **Setting the Storefront Markup Option**

Uploading Graphics, Stylesheets, and Other Supporting Files

SOLO Server uses HTTPS encryption to protect customer data. When customizing the customer facing areas of SOLO Server, referencing files on an external server which is not using an HTTPS connection will cause a message similar to "The page you are about to view contains both secure and unsecured items. Do you wish to view the unsecured items?" to be displayed to the end user, which will inevitably confuse them. Therefore, it is necessary to upload all graphics, stylesheets and other supporting files to your *Storefront Files* directory on SOLO Server so that all page items can be transferred through the HTTPS encryption channel. Note that the maximum upload size is set at 300MB.

Uploading and managing files on the server is accomplished through an easy to use interface very similar to Windows Explorer. Use the menu *Configure / Manage and Upload Files*. See **Managing Files** for more details on using the file management interface.

Creating a Custom Markup Template

Important

Customization does not work with sites using frames. You can still link your frames pages to pages within SOLO Server, however, you can't put our forms in your frames. SOLO Server's pages are not secure within frames.

1. In the **Custom Markup Templates** section Click **Add New**.
2. Pick a name for the template, such as **Shopping Cart** or **Customer License Portal**.

3. If necessary, have your graphic designer create a blank page with your navigation included and place <SOLO Server content goes here> where you would like the SOLO Server page content to appear. For the **Shopping Cart**, you can also begin with the **Sample Custom HTML** and modify this to suit your needs. Note that at least 740 pixels of width must be reserved for the SOLO Server content.
4. Paste the site's HTML coding into the form. Everything before <SOLO Server content goes here> goes in Markup Top. Everything after <SOLO Server content goes here> goes in Markup Bottom.
5. Now you need to edit your HTML slightly:
 1. If you would like SOLO Server to dynamically insert the current page name (e.g. "Shopping Cart", "License Portal - Home", etc.) into the existing title, locate the `<title>` HTML element in the Markup Top. Add a [varTitle] search/replace string to the existing value where you would like the page name to be inserted.
 2. It is also necessary to add a `Content-Type` meta tag to the `<head>` HTML element as shown below. This will ensure that the customer's browser uses the proper character set which works with SOLO Server's client side validation routines.
 3. The above two steps should look similar to this:

HTML

```
<head>
  <title>Software Store - [varTitle]</title>
  <meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1" />
</head>
```

6. Next, you need to add the links to the default CSS stylesheets somewhere between the `<head>` tag and `</head>` tag. The markup for these links is shown below:

Shopping Cart Default CSS - HTML

```
<link href="[varSOLODirRoot]/products/cart_styles_core.css" rel="stylesheet" type="text/css" />
<link href="[varSOLODirRoot]/products/cart_styles_print.css" rel="stylesheet" type="text/css" media="print" />
<link href="[varSOLODirRoot]/products/cart_styles_screen.css" rel="stylesheet" type="text/css" media="screen,projection" />
<link href="[varSOLODirRoot]/products/cart_styles_speech.css" rel="stylesheet" type="text/css" media="speech" />
```

Customer License Portal Default CSS - HTML

```
<link href="[varSOLODirRoot]/customers/reset.css" rel="stylesheet" type="text/css" media="screen" />
<link href="[varSOLODirRoot]/customers/customersNET.css" rel="stylesheet" type="text/css" media="screen" />
<link href="[varSOLODirRoot]/customers/customersNET_print.css" rel="stylesheet" type="text/css" media="print" />
<!--[if IE 6]><link rel="stylesheet" type="text/css" href="[varSOLODirRoot]/customers/customersNET_ie6.css" media="screen" /><![endif]-->
<!--[if IE 7]><link rel="stylesheet" type="text/css" href="[varSOLODirRoot]/customers/customersNET_ie7.css" media="screen" /><![endif]-->
<link href="[varSOLODirRoot]/customers/customersNET_default.css" rel="stylesheet" type="text/css" media="screen" />
```

7. Now change any links that refer back to your web site to have the full address (e.g. `http://www.yourdomain.com/directory/file.htm`), or the links will point to a nonexistent page within SOLO Server.
8. You also need to change the graphic and other supporting file paths. They all need to go to "[varSOLODirRoot]/products/custom/[Author ID]/[File Path]", replacing the following:
 1. [Author ID] is replaced with your Author ID, which can be found in the footer at the bottom of every page in the SOLO Server administrative interface.

2. [File Path] is replaced with the path to the file relative to the Storefront Files root folder in the **Manage Files** interface.
9. Note that any links in your custom markup that link into a SOLO Server subdirectory, such as a link to view the **Shopping Cart** or to login to the **Customer License Portal**, must access the subdirectories with the subdirectory name in all lower case (for example <http://secure.softwarekey.com/solo/customers> and not <http://secure.softwarekey.com/solo/Customers>). If mixed case subdirectory names are used, you will experience problems with cookies being set in the browser.
10. Click **Save**.
11. Test and verify the template:
 1. If configuring the template for use in the **Customer License Portal**, you can click the **Customer License Portal** link under **Previews** to see what this template looks like in the portal.
 2. A future build of SOLO Server will introduce preview functionality for the **Shopping Cart**. Until this is available:
 1. If you have yet to "go live":
 1. Update the **Cart Options** and set the Storefront Template setting to the newly created template.
 2. Use the Store / **Create a New Order/Cart** page to create a cart and view and verify the markup.
 2. If you are already "live" and need to test and verify the changes without immediately pushing them live, follow these steps:
 1. Create a dummy **Distributor** record for testing, setting the Storefront Template setting on the distributor to the newly created template.
 2. Use the Store / **Create a new Order/Cart** page to create a cart, selecting the distributor from the prior step, and then test and verify the markup in the cart.

Setting the Storefront Markup Option

- To configure the markup at the author level in the **Shopping Cart**, edit the **Cart Options** and set the Storefront Markup setting to the appropriate template.
- To configure the markup at the distributor level in the **Shopping Cart**, edit the **Distributor Configuration** for the distributor and set the Storefront Markup setting to the appropriate template.
- To configure the markup at the product level in the **Shopping Cart**, edit the **Product Configuration** for the product and set the Storefront Markup setting to the appropriate template.
- To configure the markup for the **Customer License Portal**, edit the **Customer License Portal Options** and set the Storefront Markup setting to the appropriate template.

Viewing Audit Data

Once a custom markup template is created, SOLO Server automatically records an audit trail of all changes made to the template. To view the audit data for a template, simply view the template, and then click the *View Audit History* button. This will display a listing of the audit history of the template. Click the *View* link for a given audit to see a listing of the changes for that particular audit.

Advanced - Creating Custom Stylesheets

The default CSS stylesheets detailed above will cause the dynamically generated SOLO Server page content to render with SOLO Server's default look and feel. These stylesheets can be overridden to further change the look and feel of the generated content to more closely match your web site.

The recommended method of creating custom stylesheet versions is as follows:

- Download the default stylesheets and save the files locally.
- Modify the local copies of the default stylesheets as needed.
- **Upload** the custom versions of the stylesheets to your storefront directory.
- Update the custom markup template to reference the custom versions of the stylesheets.

The default stylesheets offer a great number of CSS classes - too many to document here without becoming overwhelming. The naming conventions used in the stylesheets should be sufficient to allow locating the proper elements to customize after reviewing the files.

Optional Advanced Implementation For the Customer License Portal

If you would like to have text on the Custom Markup change between Log In and Log Out (depending on the log in state), optionally use the following two HTML comments (replace 2451871 with your Author ID):

Customer License Portal Advanced Markup - HTML

```
<!--[varAnonymousMenu]<a href="[varSOLODirRoot]/customers/Default.aspx?AuthorID=2451871" title-  
e="Use this link to log into our License Portal">Log In</a>[/varAnonymousMenu]-->  
<!--[varAuthenticatedMenu]<a href="[varSOLODirRoot]/customers/Default.aspx?Logout=True" title-  
e="Use this link to log out of the License Portal">Log Out</a>[/varAuthenticatedMenu]-->
```

Sample Custom HTML

The default custom html, which is displayed when no custom html is defined, is listed below. You can use this as a starting point when creating your own custom html. Note that the main body of the page is displayed in a single cell of a table.

Top Custom Markup

HTML

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html>
<head>
<title>Software Store - [varTitle]</title>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1" />
<link href="[varSOLODirRoot]/products/cart_styles_core.css" rel="stylesheet" type="text/css" />
<link href="[varSOLODirRoot]/products/cart_styles_print.css" rel="stylesheet" type="text/css"
media="print" />
<link href="[varSOLODirRoot]/products/cart_styles_screen.css" rel="stylesheet" type="text/css"
media="screen,projection" />
<link href="[varSOLODirRoot]/products/cart_styles_speech.css" rel="stylesheet" type="text/css"
media="speech" />
</head>
<body>
<div style="margin: auto; width: 740px;">
```

Bottom Custom Markup

HTML

```
</div>
</body>
</html>
```

Customizing SOLO Server Pages

In addition to the configurable Virtual Storefront for every Author and Distributor, the default headers/footers in the six areas of SOLO Server (Affiliates, Authors, Customers, Postings, Products, and Unlock) can also be customized for SOLO Server Self-Hosted. For SOLO Server Shared and Dedicated URL, please **contact us** for more information.

Several files for each directory are installed into **\SWKey\SOLO\DLLs\CustomHTML**. The "top" HTM file are output to the browser, then the page-specific information is rendered then finally the "bottom" HTM file is output to the browser. Through tables, you can fully customize the look and feel of the page - top, left, bottom, and right. You'll note that there are additional "NET" and "NETComponent" files for the authors directory as well as additional "NET" files for products. These files are specific to certain .NET web pages in each of those subdirectories.

The DLLs use App.Path to determine the directory where the top and bottom HTM files are located. These files are NOT in the normal directory structure of the web site. HOWEVER, the graphic files that are referenced by these top and bottom HTM files must be in the directory structure of the web site. If you use relative paths for the image files, the path will be relative to the current area of SOLO Server that the customer is in. For example, if you modify CustomersCustTop.htm to include an image as `` and the **Customer License Portal** page is at `www.-company.com/customers/`, the browser will look for the image directory below the customers directory. If you were to specify ``, the browser will look for the graphic in the `www.company.com/images/` directory.

Upgrading SOLO Server

Be sure that when any new version of SOLO Server is installed that you back up any of the customized HTM files and restore after the new version is installed. The installer should not update these files, but in the event it does, you will have a backup.

Configuring Categories

SOLO Server allows creating product categories and assigning categories to each product. These categories can be used in the cart's catalog page to allow filtering by category.

To manage categories, from the menu, select *Store / Store Catalog Categories*. A list of existing categories will be shown. To create a new category, click the Add New button along the top, and to view or edit existing categories, click the View or Edit link to left of the category in the list.

Each category has the following fields:

Category Index

The order the category should appear with the list of categories.

Category Name

The category name.

Category Description

A brief description of the category.

Page Title

The title to be used for the catalog page when viewing by the category. This functionality is currently not implemented.

Meta Description

The string to be placed in the description meta tag on the catalog page when viewing by the category. This functionality is currently not implemented.

Met Keywords

The string to be placed in the meta keywords tag on the catalog page when viewing by the category. This functionality is currently not implemented.

To assign categories to a product, navigate to the product configuration page and click Edit. The categories will appear in a list box on the page. Highlight the categories you would like to assign to the product (note that you can assign multiple categories by holding down the shift key while selecting) and then click the Submit button.

Payment Plans Overview

Payment plans allow customers to be billed on a recurring basis, either indefinitely, or for a specified number of payments/installments. Some examples of the types of situations this is designed to support includes, but is not limited to, the following:

- A customer purchases a software license, which is only licensed to operate for one month. An automatic, recurring payment may extend the license to operate for another month after successfully billing the customer.
- A customer purchases a software license which does not expire, but has an annual maintenance or support plan associated with it. The customer may be automatically billed after one year to extend his or her's eligibility for upgrades and/or technical support.
- A customer may be allowed to purchase a \$90 product for 3 monthly installments of \$30. In this case, an initial payment of \$30 is made, and two automatic, recurring payments of \$30 will be processed 30 and 60 days after initial purchase.

Payment plans are supported through SOLO Server's integrated eCommerce. We recommend using PayPal's PayFlow Pro payment gateway:

Important

Payment Plans are not compatible with the PayPal Payments Standard, Stripe, and WorldPay payment gateways. In addition, if using Authorize.NET, you must store full credit card information in order to use the payment plan feature. PayPal's PayFlow Pro supports payment plans, and supports resubmitting a prior Transaction ID for recurring payments, and thus doesn't require storing the full credit card information.

Payment Plan Process

Regardless of the scenario, an initial purchase of a **Product Option** must be made, and that Product Option must be configured with a Payment Plan. A new Payment Plan instance is created for each new order for that Product Option. The following list outlines the payment plan process:

- Customer purchases a **Product Option** associated with a payment plan
- During order processing:
 - A new **Stored Payment** is created for the customer with the payment details.
 - A new payment plan instance is created for the customer with the payment plan details and linked to the new stored payment.
 - A new license is created for the customer and linked to the payment plan instance.
- The customer is then regularly billed automatically based on the payment plan instance settings. Optional billing reminder emails can also be sent prior to the actual billing taking place. Customers can log into the **Customer License Portal** to update their payment information or cancel their subscription.
- The default behavior of the payment plan is defined, but you are allowed **to administer each payment plan instance** for each unique order processed. You can manually update the fields of a payment plan instance, but there is not a built-in feature to automatically update a payment plan instance based on changes to an existing license. **Contact us** if you have any questions about updating a payment plan instance.

Now that you have a high-level understanding of how payment plans work, the next step is learning **how to setup a payment plan**.

If you are using Instant Protection PLUS 3, we also have a **tutorial on setting up a recurring subscription**.

Payment Plan Setup

Payment plans are an easy way to accept and process recurring payments and installments. This section describes how you can configure your SOLO Server account to process recurring payments.

Permissions

Before you start setting-up payment plans, it is necessary to grant relevant permissions to any users or groups who will need them through the Manage Users/Manage Groups pages. The relevant permissions are as follows, and can be set by going to the menu (*Your Name*) / *Users*:

Create Payment Plan

Allows creating of payment plans

Edit Payment Plan

Allows editing of existing payment plans

Edit Payment Plan Instance

Allows editing payment plan instances

Create Stored Payments

Allows creating stored payments for customers

Edit Stored Payments

Allows editing existing customer's stored payments

For more information on managing users, visit the [Managing Users and E-Mail Notifications](#) page.

Configuring Product Options

The first step in setting up a payment plan is to configure the required **Product Options**. You will generally need to configure at least two Product Options: one used for the initial purchase, and another used for installments (or any recurring payments that are processed). The Product Option for the initial purchase will be configured as appropriate for your licensing needs, and will need to be revisited after the payment plan has been created. It should also be named so that it sufficiently describes the payment plan with which it will be associated. For this example, we would name this option something like *License with Monthly Subscription*. We also have a step by step [tutorial on setting up a recurring subscription](#) using SOLO Server and Instant Protection PLUS 3.

Creating the Product Options

The Product Option used for installments (also referred to as the Installment Option) is best configured before creating your payment plan. The installment option should use a name that indicates what was processed (i.e. a "maintenance renewal", "subscription renewal", etc...). This is displayed on the invoices generated for any recurring payments processed, and helps you and your customers understand exactly why a payment was processed. Additionally, using the separate option also helps make your reports much more clear. For example, it will allow you to distinguish between new orders and recurring payments. Below are some steps that show how the product options may be configured:

- First, **create your product**. For this example, we will call it *Product A*.
- Next, **create a product option** for the initial purchase. For this example, we will name this *Purchase with Monthly Subscription*. This is the option the customer will activate and should be configured accordingly.
- Now **create a product option** for the installment. For this example, we will call this *Monthly Subscription Renewal*. You can also name your Product Option something like *Annual Subscription Renewal*, *Installment*, or anything that you feel is most appropriate for describing the nature of the installments or recurring payments that will be processed.
 - Set the Option Type to Transaction Fee.
 - Although the price set on the Product Option will not be relevant for processing recurring payments, we recommend setting this to a value noticeably greater than the installment price (i.e. something like \$99 or \$999).

- Uncheck "For New Customers" to prevent customers from seeing this Product Option in the SOLO Server product catalog.
- Uncheck "Issue License" to indicate that any licenses generated with this Product Option are only intended for invoicing purposes (and may not be activated).
- The defaults for any other fields are sufficient, so no further configuration is required for the Installment Option.

With the installment Product Option in place, you may now proceed to configure your payment plan.

Configuring a Payment Plan

To configure a payment plan, use SOLO Server's global menu and click on the *Store / Payment Plans (Recurring Billing)*. To add a new Payment Plan, click the *Add New* button; otherwise click the *Edit* link next to the payment plan you wish to configure. Then refer to the descriptions of each of the **Payment Plan Fields** to configure your Payment Plan. The example product option configuration shown in the section above is designed to charge a recurring monthly subscription fee for a software license. In this scenario, the Payment Plan could be configured as follows:

- For this example, we would pick a name like *Product A Monthly*.
- To bill every 30 days, the Recurrence Type would be set to *Scheduled*, with the Frequency set to 30 and the Frequency Interval set to *Days*.
- Since the customer needs to make an initial purchase to obtain a payment plan instance (which is what processes the recurring payments), the payment plan needs to assume that the initial payment covers the first month. To do this and avoid double-billing the customer, set the Days Until Start to 30 for this example (or whatever value is appropriate for you, when creating your payment plan).
- Since our example is a subscription which could be used indefinitely, the number of payments needs to be set to -1 as indicated on the page. If, for example, this was set to 2, then no further payments would be processed after the 2 installments were processed in the frequency specified earlier.
- Set the installment price to the amount that should be charged for each recurring payment or installment. If needed or appropriate, you may add a surcharge to the installment as well.
- Since we created a Product Option named *Monthly Subscription Renewal* under *Product A* in our example, we would select *Product A Monthly Subscription Renewal* in the Installment Product Option field.
- If an installment payment attempt is declined, it can retry the charge once per day up to the *Number of Retries* configured. This can function as a grace period before the customer's license is potentially deactivated. You can also notify them of the need to update their credit card information beforehand through an automated mailing (see Sending Billing Reminders below).

Displaying Information in the Shopping Cart and Invoices

Customers need to be informed about how the payment plan will charge them on a recurring basis before and after they place their order. There are several fields that can show information throughout the ordering process to help ensure customers are not surprised about charges after the initial purchase (which helps prevent refunds and charge-backs/disputes).

- The information you enter in the Purchase Text field is displayed on the line item level of the cart as well as on both the initial purchase and installment invoices.
- The information entered in the Purchase License Text field is displayed on the line item level above the Purchase Text on the cart and initial purchase invoice. So with the *Monthly Subscription Renewal* example, we can add information such as:
 - "You will automatically be billed \$10 every month. If your subscription expires and is not renewed, or your subscription is canceled, then you will no longer be able to access Product A."
- The information in the Installment Text field is displayed on the line item level above the Purchase Text on installment invoices.. This field allows you to further describe what the payment was for, and can also be used to provide instruction and/or links to assist with canceling or disabling any further payment processing for the payment plan instance.
- By default a message is also displayed at the line item level providing the customer with a link to view or cancel the payment plan through the **Customer License Portal**:
 - "To view details, edit billing and credit card information, or cancel the payment plan subscription associated with this item, click [HERE](#)."

Associating a Payment Plan with a Product Option

Once a payment plan is created, the final step is to associate it with one or more product options which are used for initial purchases (including bundled product options). On the product option add/edit screen, there is a Payment Plan field where all payment plans will show up in a drop down list. To tie a payment plan to a product option, just select a payment plan from the list and save the change. In our example given above, we would edit the Product Option for the initial purchase of *Product A (License with Monthly Subscription)* and configure it to use the *Product A Monthly* payment plan.

Using Payment Plans With Bundles

Bundles can be used with payment plans, with the payment plan instance covering all of the bundled licenses as a whole. There are a few limitations that can cause confusion when configuring a bundle with a payment plan:

- Currently, you cannot add an included option to a bundle option if the option is associated with a payment plan. This means that if you would like to bundle options that can be purchased individually with a payment plan, those options will need to be duplicated and the payment plan removed from the duplicate for use in the bundle.
- You cannot use a bundle for the renewal option. This means that you must set up a separate product for the renewal option rather than creating a new option on the bundle product.

Sending Billing Reminders

In order to reduce time-consuming administrative issues that tend to be commonly associated with the nature of subscription-based software sales (such as billing inquiries, chargebacks, and billing failures due to expired card data), SOLO Server can optionally send reminder emails to customers with an upcoming payment and/or whose credit card is nearing expiration. To configure billing reminders, **create a mailing** for the notification email content and then set up a Pending Payment Plan Notification **Daily Process**. See **Pending Payment Plan Notification Mailings** for more details.

Payment Plan Field List

Below is a list of fields that are used to configure your **payment plans**. If you are unsure as to how to best configure any of these fields, you may find more information on **how to setup a payment plan**, or you may open a ticket for assistance. Once your payment plan is configured, you may then configure one or more of your **Product Options** to use the payment plan. Additionally, once a customer orders a product option configured with the payment plan, a unique **payment plan instance** is created (using the payment plan settings specified in the fields described below) to control recurring payments for that specific order.

Fields

Name

The name of the payment plan.

Description

A text description of the payment plan.

Recurrence Type

There are currently 2 options here as follows:

- **Scheduled** - The payment plan bills the customer on a set schedule determined by the Frequency, Frequency Interval, and Days Until Start fields below it.
- **Day Of Month** - The payment plan bills the customer on the specified day of each month defined by the Day Of Month field below it.

Frequency

Only available for Scheduled Recurrence Type. The number of Days, Weeks, Months, or Years (specified by Frequency Interval) between billing attempts. **NOTE:** If you are using the PayPal Payments Pro gateway for credit processing and are not storing full credit card details, PayPal will invalidate the reference transaction after one year. In this scenario, it is suggested to configure a yearly plan to use an interval a few days short of one year to allow for any retry attempts.

Frequency Interval

Only available for Scheduled Recurrence Type. The interval (Days, Weeks, Months, or Years) to use with the Frequency.

Days Until Start

Only available for Scheduled Recurrence Type. The number of days after the initial purchase to set as the first billing date. **IMPORTANT:** If this value is set to zero, then the first recurring payment is processed the next time the payment processor runs. Since the first payment is accepted through the cart, the value for this field should be consistent with the payment frequency.

Day Of Month

Only available for Day of Month Recurrence Type. This is the day of the month the customer will be billed on. During initial purchase, the first billing date will be set to the next occurrence of this day of month.

Number of Payments

The number of times the customer will be billed. If this is set to -1, the customer will be continually billed at the given schedule, with no stopping point until they or an administrator disables the payment plan.

Installment Price

The price the customer will be charged at each billing.

Installment Surcharge

An optional surcharge to be added to each installment, on top of the Installment Price.

Installment Product Option

The product option to be placed on the installment invoice. A new product and product option will likely need to be created for this. Note that the price defined for the installment product option will be ignored when processing, and the payment plan Installment Price will be used instead.

Email Customer On Installment

If checked, the customer will be emailed an invoice after each installment is charged to them.

Number of Retries

If an installment payment attempt is declined, it can retry the charge once per day up to the number of retries configured. It will trigger the *Declined Action* if the final attempt is declined, or it will continue the payment plan if any retry is successful.

Declined Action

The action to take if the *Number of Retries* is exceeded for a customer when processing installments. Currently, there are two options:

- Notify Admin - An email notification will be sent to an administrator.
- Disable License - Any licenses associated with the payment plan will be disabled and an email notification will be sent to an administrator. The following changes are made to the License ID:
 - *Status* is set to Check (CHK), which will deactivate the software when it next validates with SOLO Server.
 - *Notes* is updated to "This license has been disabled due to a failed final payment plan payment attempt."
 - *Modified Date* is updated.
 - *Modified By* is updated to Nightly Run.

Persist Discount Information

If checked, and priority code discount information used for the initial order will be persisted to the payment plan instance. As long as the priority code remains valid, the discount will be reapplied for each recurring billing cycle. Note that this only applies to product option level priority codes - author level priority codes are not persisted.

Increment License Expiration:

If checked, upon each successful payment, the expiration date of the original license will be incremented by the value of License Expiration Increment Days.

License Expiration Increment Days

Available only if Increment License Expiration is set. The number of days the expiration date of the original license will be incremented after a successful payment plan payment. An example for this text is as follows:

Purchase Text

This will be displayed on the line item level of the cart as well as on both the initial purchase and installment invoices. It accepts HTML, and an example for this text is as follows:

- For any billing inquiries, please contact billing@yourcompany.com.

Purchase License Text

This will be displayed on the line item level above the Purchase Text on the cart and initial purchase invoice. It accepts HTML, and an example for this text is as follows:

- This purchase will initiate automatic annual subscription billing for the use of this product. You will be automatically billed US\$XXXX per License ID every 365 days for your use of the product. Your purchase receipts will include instructions about how to cancel your subscription when you wish to do so. For any billing inquiries, please contact billing@yourcompany.com.

Require Customer to Accept Terms Above

When checked, below the Purchase License Text on the shopping cart, the user will be shown a checkbox labeled "I understand and accept the recurring billing terms outlined above" which must be checked in order to check out. Used for compliance with the Federal Trade Commission "Click-to-Cancel" Rule.

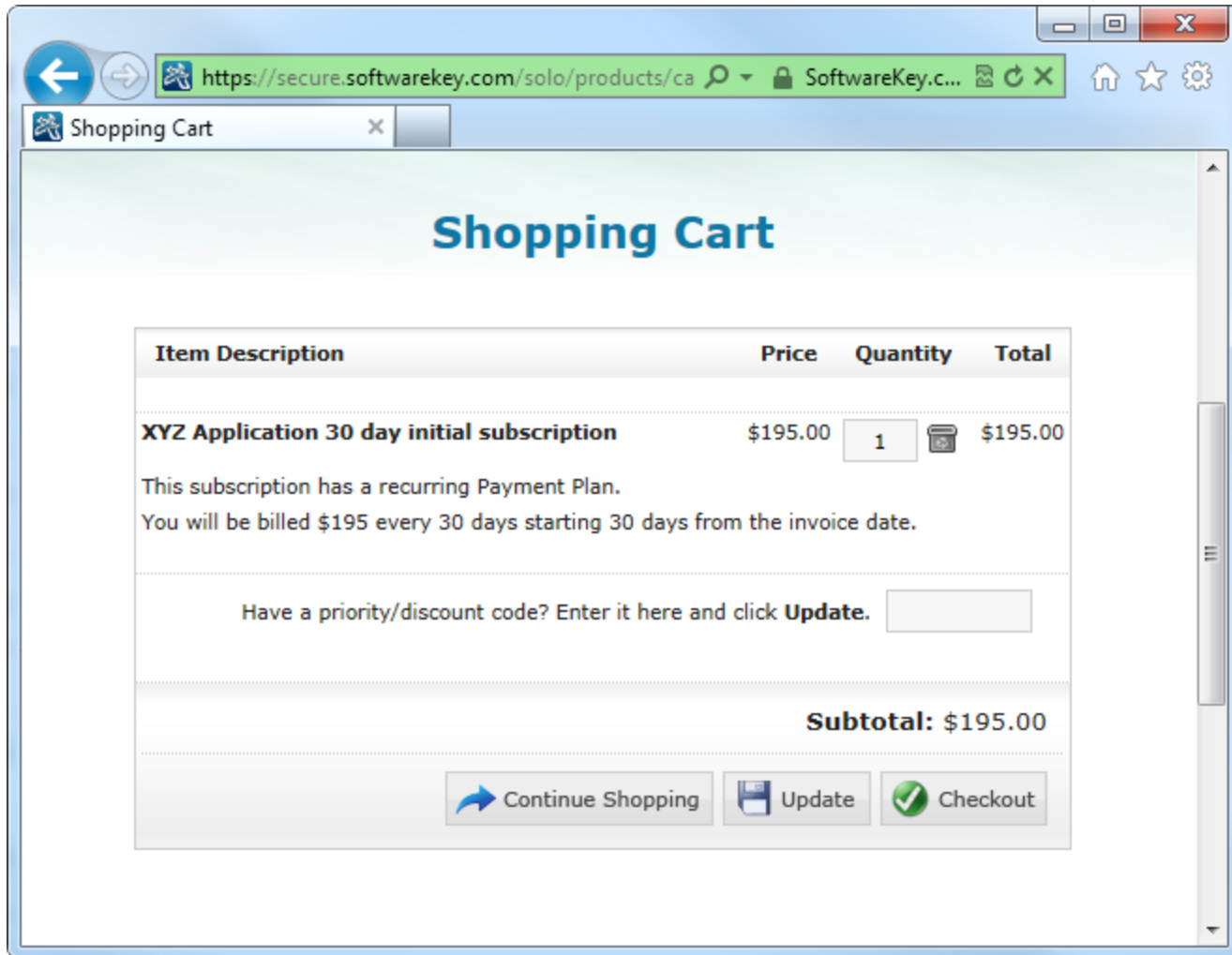
Installment Text

This will be displayed on the line item level above the Purchase Text on installment invoices. It accepts HTML, and an example for this text is as follows:

- Your product subscription has been extended by 365 days.

Payment Plan Ordering Details

Once a payment plan is defined and tied to a product option, no other work is need to sell the payment plan through the cart other than setting up the link if it does not exist. In the cart, the information about any payment plans found on the cart will be displayed to the customer. The Purchase Text defined for the payment plan will be displayed on a line at the bottom of the cart, and the Purchase License Text will be displayed on a line below the payment plan item on the cart. An example follows:



Item Description	Price	Quantity	Total
XYZ Application 30 day initial subscription	\$195.00	1	\$195.00
This subscription has a recurring Payment Plan. You will be billed \$195 every 30 days starting 30 days from the invoice date.			
Have a priority/discount code? Enter it here and click Update .			
			Subtotal: \$195.00
Continue Shopping Update Checkout			

The same text will be added to the completed invoice, as well as a message with a link allowing the customer to view the details and cancel a payment plan subscription in the **Customer License Portal**.

When the order is completed, a payment plan instance is created for the customer. This payment plan will be tied to the customer, the invoice, and to each license associated with the payment plan (there can be multiple licenses tied to the payment plan for bundled items). A Stored Payment will also be created for the customer using the entered credit card information. This will be used when billing the customer for installments. All of the information except the name and the custom text fields will be carried from the original payment plan to the payment plan instance so that changes to the original payment plan do not affect existing customer's payment plan instances.

Disabling Payment Plan Instance

Use the following steps to disable or cancel a payment plan instance for a customer (note that Edit Payment Plan Instance permission is required to disable a payment plan instance):

- Search for the customer, invoice, or license associated with the payment plan instance.
- Scroll down to the Payment Plans section of the page.
- Click the Disable link on the right (this will only appear for active payment plan instances)
- Optionally append anything to the notes on the payment plan instance regarding the cancellation.
- Click the Yes button to confirm.
- Disabling the instance will set the status to Inactive, send any users with Notify Final Payment Plan Declines permission an email notification of the cancellation, and set the Disabled By and Disabled Date fields on the instance.

Enabling Payment Plan Instance

Use the following steps to enable a payment plan instance for a customer (note that Edit Payment Plan Instance permission is required to disable a payment plan instance):

- Search for the customer, invoice, or license associated with the payment plan instance.
- Scroll down to the Payment Plans section of the page.
- Click the Enable link on the right (this will only appear for inactive payment plan instances)
- Set the Next Payment Date and Stored Payment.
- Optionally enter any notes regarding enabling the instance.
- If any licenses associated with the payment plan instance are currently at a non-OK status, check the Re-enable Disabled Licenses checkbox to automatically reset the affected licenses back to OK status. This option is only available to users with edit licenses permission. Users without this permission will instead see a warning message regarding the license status.
- Click the Yes button to confirm.

Administering Payment Plan Instances

A payment plan instance can be updated at any time. This can be useful when a customer wants to add additional users, activations, or make some other change to an existing license on a payment plan that would result in a change to the installment price or other payment plan fields. If the change occurs in the middle of the billing period, you may need to perform a separate one-time charge for the additions being made to the license since the updated installment price will only apply to the upcoming periods. **Contact us** if you have any questions about updating a payment plan instance.

To administer a payment plan instance, either search for the customer associated with the instance or for a license or invoice associated with the instance. Scroll down to the Payment Plans section of the page and click the payment plan name to view details on the instance. Along the top, there will be several options:

Edit

This is only available if for users with edit payment plan instance permission. Click this to edit the details of the instance.

Disable

This is only available for users with edit payment plan instance permission and when the current status is Active. Click this to disable the instance. You will be prompted to confirm the action as well as given the option of entering notes regarding the reasons for disabling the instance. Disabling the instance will set the status to Inactive, send any users with Notify Final Payment Plan Declines permission an email notification of the cancellation, and set the Disabled By and Disabled Date fields on the instance.

Enable

This is only available if for users with edit payment plan instance permission and when the current status is Inactive. Click this to enable the instance. You will be prompted to confirm the action as well as given the option of setting the next payment date and stored payment, as well as entering notes regarding the reasons for enabling the instance. Additionally, users with edit licenses permission will also be prompted whether to re-enable any licenses associated with the payment plan instance which are currently at a non-OK status.

History

Click to view the entire payment history for the payment plan instance. A listing of all billing attempts (both successful and declined) will be displayed, with links back to the invoice for each successful payment. If more than 15 billing attempts have been made, this list will be displayed in pages of 15 records - use the arrows at the top and bottom to move through the history.

When viewing/editing the instance, the following fields are available:

Name

The name of the payment plan. This is not editable.

Recurrence Type

There are currently 2 options here as follows:

- Scheduled - The payment plan bills the customer on a set schedule determined by the Frequency, Frequency Interval, and Days Until Start fields below it.
- Day Of Month - The payment plan bills the customer on the specified day of each month defined by the Day Of Month field below it.

Frequency

Only available for Scheduled Recurrence Type. The number of Days, Weeks, Months, or Years (specified by Frequency Interval) between billing attempts.

Frequency Interval

Only available for Scheduled Recurrence Type. The interval (Days, Weeks, Months, or Years) to use with the Frequency.

Days Until Start

Only available for Scheduled Recurrence Type. The number of days after the initial purchase to set as the first billing date.

Day Of Month

Only available for Day of Month Recurrence Type. This is the day of the month the customer will be billed on. During initial purchase, the first billing date will be set to the next occurrence of this day of month.

Number of Payments

The number of times the customer will be billed. If this is set to -1, the customer will be continually billed at the given schedule, with no stopping point until they or an administrator disables the payment plan.

Installment Price

The price the customer will be charged at each billing.

Installment Surcharge

An optional surcharge to be added to each installment, on top of the Installment Price.

Installment Product Option

The product option to be placed on the installment invoice. Note that the price defined for the installment product option will be ignored when processing, and the payment plan Installment Price will be used instead.

Email Customer On Installment

If checked, the customer will be emailed an invoice after each installment is charged to them, or, in the case the credit card is declined, a decline notification.

Number of Retries

The number of times to retry charging the customer if they are declined when processing installment payments.

Declined Action

The action to take if the Number of Retries is exceeded for a customer when processing installments. Currently, there are 2 options:

- Notify Admin - An email notification will be sent to an administrator.
- Disable License - Any licenses associated with the payment plan will be disabled, and an email notification will be sent to an administrator.

Status

The payment plan instance status:

- Active - The instance is active and billing is enabled.
- Inactive - The instance is inactive and no billing is enabled.
- Fulfilled - The instance is fulfilled and no billing is enabled. This status is set automatically when the number of payments is not -1 (indefinite) and the specified number of payments are successfully processed.

Re-enable Disabled Licenses

If one or more licenses associated with the payment plan instance have a non-OK status and the user account has edit licenses permission, this option will be displayed when editing or enabling the instance. Check this box to reset any licenses associated with the payment plan which have a non-OK status back to an OK status. This is

only available to users with edit licenses permission - users without this permission will see a warning message regarding the license status.

Start Date

The date of the first scheduled billing attempt. This is only editable for instances which have not yet had a billing attempt.

Next Payment Date

The date of the next billing attempt. This is required when the status is Active.

Stored Payment

The stored payment used for billing. This will either be a Credit Card or a Reference transaction, depending on the merchant account configuration. For more details, see [Stored Payments](#).

Distributor

The distributor associated with the instance.

Discount Type

The discount type of any persistent discount applied to each billing attempt - either a percentage or a flat amount off of the total. This is set to the priority code discount type if a priority code was applied to the initial purchase and the payment plan has Persist Discount Information set true.

Discount Name

The discount name of the discount. This is set to the priority code name if a priority code was applied to the initial purchase and the payment plan has Persist Discount Information set true. Available only when a discount type is selected.

Discount Value

The discount value. This is set to the priority code discount value if a priority code was applied to the initial purchase and the payment plan has Persist Discount Information set true. Available only when a discount type is selected.

Discount Expiration Date

The discount expiration date. This is set to the priority code discount expiration date if a priority code was applied to the initial purchase and the payment plan has Persist Discount Information set true. Available only when a discount type is selected.

Increment License Expiration

If checked, upon each successful payment, the expiration date of the original license will be incremented by the value of License Expiration Increment Days.

License Expiration Increment Days

Available only if Increment License Expiration is checked. The number of days the expiration date of the original license will be incremented after a successful payment plan payment.

Notes

Any notes associated with the instance.

Permissions Setup

Before starting to set up payment plans, it is necessary to grant these permissions to any users or groups who will need them on the manage users/manage groups pages. The permissions are as follows:

- Create Payment Plan – Allows creating of payment plans
- Edit Payment Plan – Allows editing of existing payment plans
- Edit Payment Plan Instance – Allows editing payment plan instances
- Create Stored Payments – Allows creating stored payments for customers
- Edit Stored Payments – Allows editing existing customer's stored payments

For more information on managing users, visit the [Managing Users and E-Mail Notifications](#) page.

Stored Payments

SOLO Server uses stored payments to hold information for processing recurring payments and installments, which pertains to **payment plans**, and **payment plan instances** which are associated with stored payments.

Payment Information

The information saved in stored payments varies depending on the type of merchant account being used. Some types of merchant accounts require saving credit card data, while others reference information of a prior payment to process another payment (the latter of which is ideal). This is described in detail below.

- DIBS Debittech and PayPal Payments Pro gateways - A reference payment will be used for both of these gateways unless the merchant account is set to store all credit card data, in which case credit card payments will be used.
- All other gateways - Credit card payments are always used. Full credit card storage must be set on the merchant account in order to use stored payments.

Fields

When adding or editing a stored payment, the fields listed below will be displayed regardless of whether the using reference or credit card payments.

- For credit card stored payments which have the full credit card data available:
 - Users with permission to view credit card numbers will see all fields pre-populated with the existing payment data.
 - For users without permission to view credit card numbers, the card number will be displayed in masked format. If the credit card number has not changed, the form may be resubmitted with the masked value to use the existing card number.
- For reference stored payments:
 - When storing partial credit card details, the credit card fields will be cleared, but the billing address information will be pre-populated with the existing billing address data.
 - When storing no credit card details, the credit card fields will be cleared and the billing address information will be pre-populated with values from the customer record.

Card Number

The card number.

CVV2 Number

The card CCV2 number (a 3 digit number on the back of Visa/Mastercard or a 4 digit number on the front of Amex cards).

Expire Month

The card expiration month.

Expire Year

The card expiration year.

First Name

First name on the credit card account.

Last name

Last name on the credit card account.

Address Line 1

The account billing address.

Address Line 2

Line 2 of the account billing address (if applicable)

City

The account city.

State/Province

The account state/province.

Postal Code

The account postal code.

Country

The account country.

Phone

The account phone number.

After submitting changes when adding/editing a stored payment, a test authorization for \$1 will be performed to verify the card data. Depending on the card issuer, this may result in a **temporary** hold being placed on the card for these funds which may last for several days. This will NOT show up on the credit card statement as a charge. If this transaction fails, an error message with the reason for the failure will be displayed. If the test succeeds:

- For reference transactions against a merchant account set to store no credit card data, only the reference transaction information will be stored.
- For other cases, either partial or full credit card data will be stored based on the merchant account configuration.

Configuring Upsells

The concept of upselling is to increase revenue by attempting to persuade a customer to purchase either a more expensive item or related additional items. For example:

- If you are selling multiple editions of a product, such as Basic and Premium, you would attempt to upsell a customer from the Basic to the Premium version.
- If you are selling multiple related products, you would attempt to upsell a customer additional related products, perhaps offering a discount on the related products.

SOLO Server's cart includes the ability to display a list of upsell items below the cart based on the current cart content. For each upsell, this listing displays:

- The product/option image of the upsell product or option (if specified).
- The upsell product and option name, formatted as a link to the Info URL on the upsell product or option if this is specified.
- An optional user defined message.
- A message regarding any discounts if a discount is specified.
- An Add to Cart button to allow the customer to quickly add the item to the cart.

Upsells are defined in SOLO Server on either the product or the product option level. Upsells defined on the product level apply for any options on the product, while those defined on the product option level apply only to the specific option. To configure upsells for either a product or a product option, simply navigate to the product or product option configuration page for the given product or option, scroll to the bottom, and click the Upsells tab. This tab will bring up a list of upsells defined for the Product/Product Option. To add a new upsell, click the Add New Upsell button at the top of the table. To edit or delete current options, use the edit and delete links on the left side of the table.

Upsells are defined by the following properties:

Upsell Product Option

The product option to offer as the upsell.

Display Index

The display index used for ordering within the upsell list on the cart page.

Message Text

Optional message to display with the upsell on the cart page.

Remove Cart Item

Whether to remove the existing cart item when adding the upsell item to the cart. Note that this will only work for products that do not have a EULA specified.

Combo Discount Type

The discount type to be applied to the upsell item when both it and the product or option the upsell is defined on are in the cart. Upsell discounts are only applied when the base item and the upsell are purchased in combination - hence the term "Combo Discount". Only applicable when Remove Cart Item is not set. This can take the following values:

- None - no discount
- Dollar Off Single: Dollar amount off discounted once, regardless of quantity.
- Dollar Off Multiple: Dollar amount off multiplied by the quantity of the upsell.
- Percent Off Single: Percent off discount on a quantity of 1 of the upsell. Additional quantity is full price.
- Percent Off Multiple: Percent off discount on total upsell price regardless of quantity.

Combo Discount Value

The combo discount value - available only when Combo Discount Type is not None, and Remove Cart Item is not set.

Hidden

Whether the upsell is hidden. Check this to hide the upsell so it is not displayed on the cart page.

Priority Discount Codes

Priority Discount Codes can be used to offer promotional discounts to customers and to apply miscellaneous discounts when processing orders manually. Priority Discount Codes can be applied to a particular Product Option or globally for all of an Author's products.

Adding Author Global Discount Codes

Author Global Discount Codes will be applied to ALL products purchased.

1. Go to the menu option *Store / Priority Codes (Discounts)*. A list of existing priority codes will be displayed.
2. To add a new code, click *Add New*. To edit an existing code, click the edit link for that code, and to delete an existing code, click the delete link for that code.
3. Enter the Priority Code Name which can be up to 10 characters (Excluding the Characters & and ?).
4. Optionally enter a description.
5. Select the **Type**.
6. Depending on the type chosen, enter either the percentage (15% = 15) or the flat dollar amount.
7. If this code is only available for a specific time period, enter an expiration date.
8. If this code is for use only with **Email Marketing Campaigns**, check the Email Campaign Only checkbox.
9. Click Submit.

In addition to any user created codes, the cart also supports a special code named "FREESHIP". This code will discount the shipping charges for an order to \$0, and can only be used by a SOLO Server user (it will not work for online customers). To enable the use of this code, simply create a priority code of "FREESHIP". You can specify any type and value as these fields are ignored. The discount will take the value of the shipping cost when entered in the checkout process. Note that if this code is entered, but another code is entered that will give a discount value greater than the FREESHIP code will, the FREESHIP code will not be applied.

Adding Product Option Discount Codes

Product Option Discount Codes will be applied to ONLY a particular product option. If you wish to promote more than one product option, you will need to add a Discount Code for each Product Option.

1. Go to the menu option *Configure / Products*.
2. Expand or click the Show Options link next to the product you wish to manage.
3. Click the link of the product option name to which you wish to apply the discount code .
4. At the bottom of the screen, make sure the Priority Codes tab is active, then click [Add].
5. Enter the Priority Code Name which can be up to 10 characters (Excluding the Characters & and ?).
6. Optionally enter a description.
7. Select the **Type**.
8. Depending on the type chosen, enter either the percentage (15% = 15) or the flat dollar amount.
9. If this code is only available for a specific time period, enter an expiration date.
10. Click Submit.

Description of Priority Discount Code Fields

Priority Discount Codes Field List

Priority Discount Codes can be used to offer promotional discounts to customers and to apply miscellaneous discounts when processing orders manually.

Priority Discount Codes can be applied to a particular Product Option or globally for all of an Author's products. There is no limit to the number of Priority Codes that can be added. Some can be published to track marketing efforts while others can be used only internally to offer miscellaneous discounts.

Name

Enter the Priority Code Name, which can be up to 10 characters (letters and numbers excluding the characters & and ?). If one time use priority codes are enabled, if this value starts with a # character, the priority code is considered one time use and will be removed after the first use. One time use priority codes are enabled as follows:

- For SOLO Server Shared URL, one time use priority codes are enabled.
- For SOLO Server Dedicated URL, one time use priority codes can be enabled by contacting support@softwarekey.com.
- For SOLO Server Self-Hosted, refer to the instructions below for enabling one time use priority codes.

Description

Enter a description of up to 100 characters.

Type

Can be one of the five values below:

FLAT

subtracts a fixed amount from order

FLATPU

subtracts a fixed amount times the quantity ordered

PCT

subtracts a fixed percentage from order

FLATVAR

subtracts a variable flat amount from order

PCTVAR

subtracts a variable percentage amount from order

Value

For PCT type, the percentage to discount the order (15% = 15). For FLAT type, the fixed amount to discount the order (\$15 = 15). For variable discounts, this field is ignored.

Expires

For all types, when this Priority Code should expire. Any attempts to use this Priority Code after this date will not discount the product and will not generate any error message. The discount request will be ignored.

Email Campaign Only

If checked, the code can only be used on a cart that is part of an **Email Marketing Campaign**. This field only applies to global author level priority codes.

Notes on FLATVAR and PCTVAR Types

The FLATVAR and PCTVAR discount types can only be applied by logged in author users - they will not be applied for anonymous web users.

If a Priority Code of ABCD was set up as FLATVAR and an administrator entered an order and chooses the Priority Code of **ABCD=25.10**, then \$25.10 will be discounted off of the invoice total.

If a Priority Code of EFGH was set up as PCTVAR and an administrator entered an order and chooses the Priority Code of **EFGH=10**, then a 10% discount will be applied to the invoice total.

How to add Priority Codes at Author and Product Option Level

One Time Use Priority Codes

One time use priority codes are removed from the system automatically after first use. By default, any priority code starting with the "#" character is considered one time use, however this can be customized as needed. One time use priority codes are enabled on SOLO Server Shared URL.

SOLO Server Self-Hosted and SOLO Server Dedicated URL can optionally enable one time use priority codes:

- SOLO Server Dedicated URL users should contact support@softwarekey.com.
- SOLO Server Self-Hosted users must manually install two database triggers. The scripts to install these are located in the Database\Triggers\OneTimeUsePriorityCodes subfolder of the install location. Simply run the two scripts against the SOLO database in SQL Server Management Studio.

Bundled Products And Options

Bundled products and options can be used to offer discounts to customers who purchase multiple products at a single time. Discounts can be specified on one or more options in a bundle. In the cart, bundled options act the same as regular options, and are displayed as a single line item with each option in the bundle listed along with the bundle discount. For more information on creating bundled products and options, see [Adding a Bundled Product and Product Option](#).

In addition to allowing you to bundle several products with a discount, the same product and/or option can also be placed in a bundle multiple times. This allows setting up discounts such as "Buy 1 Get 1 Free" or "Buy 1 Get the 2nd at 50% Off".

Store Credits

Store credits are credits which can be issued to a customer which are deducted from the cart total when the customer checks out. These can be used as follows:

- For promotional or customer service purposes, grant a dollar off discount to an individual customer without need to use a priority code.
- To grant credit to a customer when refunding rather than refunding the customer's money.

To grant a store credit to a customer for promotional or customer service purposes, simply search on the customer and click the Add Stored Credit link on the Store Credits section of the page (note that you must have Issue Store Credit permission to do this). To offer a customer store credit in place of a refund when refunding an invoice, simply check the "Convert refund amount into store credit" checkbox while performing the refund.

When adding/editing a store credit, the following options are available:

- Amount: The amount of the store credit.
- Reason: The reason for issuing the store credit.
- Expiration Date: The date on which the store credit expires. Note that the value allowed in this field may be restricted to a maximum number of days in the future if the Maximum Store Credit Expiration Days field is set in the **Author Advanced Options**.

During checkout, store credits work as follows:

- Once the user logs in, the cart will look for any store credits granted to the customer. If any are found, the cart total will be discounted by the store credit total.
- If the store credit total exceeds the cart total, the cart will be discounted to \$0.
- During order processing, any stored credits used will be linked to the newly created invoice, making them unusable in the future. If the store credit amount exceeds the total amount, the store credit record which causing things to exceed the cart amount will be split. The existing store credit amount will be updated to match the amount used to reach \$0 on the order and associated with the invoice, and a new store credit will be issued in the amount of the difference.

Promo Codes

In order to allow tracking of marketing campaigns and other promotional efforts, user defined promo codes can be passed in the querystring to the ordering pages, and will be tracked on the order when it is completed. The **Promo Code Report** can then be used to generate statistics on these promo codes, giving information on the number of invoices and the revenue generated for each promo code.

Use of promo codes is simply a matter of adding `PROMO=XXXX` (where XXXX is the code, up to 50 characters) to the querystring of your buy now links. There are no restrictions on what your promo codes can be named. Beware of using special characters, however. If these are necessary, be sure to URLEncode the promo code value in the buy now link.

Marketing Sources

The ordering process implements features on the registration page for collecting marketing data from the customer. By default, there is a text field on the page next to the question "Where did you hear from us?". The field allows the user to enter any value they please, and the value is stored in the source field on the invoice. If marketing sources are defined, an extra drop down list will also be displayed allowing the user to choose from author defined marketing sources. The results from both of these inputs can be viewed in the **Sources Report**.

To define marketing sources for the drop down list, from the menu, select *Store / Marketing Sources*. This opens the marketing sources configuration page. To add a new source, click the *Add New* button at the top, or click the View, Edit, and Del links to view, edit, or delete existing sources. Each marketing source is defined by three options as follows:

Name

The name is the value that will be displayed in the drop down.

Display Index

The order the source will be listed in the drop down.

Active

Whether the source is currently active. Unchecking this will cause the source to not show up in the drop down.

Return Reasons

Another marketing feature offered by SOLO Server is tracking of return reasons. Authors can configure a list of return reasons which will show up in a drop down list on the refund page. By using these and running the **Reasons for Returns Report**, you can get an idea of why people are returning each product.

To configure return reasons, from the menu select *Store / Return Reasons*. A list of any existing reasons will be displayed. To view, edit, or delete an existing reason, click the View, Edit, or Del links. To add a new reason, click the Add New button at the top. Return reasons are defined by the following options:

Reason

The reason name - this will appear in the drop down.

Description

An extended description of the reason.

Outbound Marketing

SOLO Server incorporates an outbound marketing capability when using the cart for order processing. The cart reports allow users to assign abandoned carts themselves, as well as add notes to abandoned carts. To use this feature, follow these instructions:

- Click the *Reports* menu, scroll down to the Uncompleted Store Orders section, and click **All Shopping Carts**. This will load the **All Shopping Carts Report**.
- To assign 5 random abandoned carts to your user, click Assign Carts. Click OK at the confirmation prompt.
- The **Assigned Shopping Carts Report** will then load.
- Each cart displayed has the customer contact information listed at the top. Use this information to contact the customer.
- Enter any notes by clicking the Update button, then entering the note in the text field and clicking the Update button again.
- If the customer would like to complete the cart, click the customer name to go to the customer details page. Find the cart in the unfinished orders section of the page and click on the Cart ID. You can then complete the order through the regular ordering process.

Email Marketing Campaigns

Email marketing campaigns allow you to send automated marketing emails to customers who have abandoned their carts without making a purchase. The automated emails can offer priority codes to customers offering them a discount if they complete their purchase, and can also contain links directly back to the customer's existing cart. To set up an email marketing campaign, follows these steps:

- If applicable, create any priority codes that will be used with the campaign. See [Priority Discount Codes](#) for more information. A discount price may incentivize the customer to complete their abandoned cart order. If you want to limit the priority code so that it can only be used with a campaign, be sure to check the "Email Campaign Only" checkbox when setting up the priority code.
- Create the mailing(s) for the campaign. A campaign can have up to two mailings sent. See [Email Campaign Mailings](#) for more information on creating these mailings.

Once the mailing is configured, you need to set

- From the SOLO Server menu, select *Store / Advanced Cart Options* then click the Edit button.
- In the Email Campaign Options section:
 - Check the "Email Campaign Enabled" checkbox to enable the campaign. When this is checked, an automated process will begin automatically sending out campaign emails daily.
 - Set up the first mailing by setting the "Campaign 1 Look Back Days" field to the number of days since a cart is abandoned that the first email should be sent, and then choosing the mailing from the "Campaign 1 Mailing" drop down.
 - If using a second mailing, set it up by setting the "Campaign 2 Look Back Days" field to the number of days after the first mailing is sent that the second email is sent, and then choosing the mailing from the "Campaign 2 Mailing" drop down. If you are not using a second mailing, leave the "Campaign 2 Mailing" drop down set to "None".

The final step to enable this process is to submit a request to SoftwareKey support. See the bottom of [Email Campaign Mailings](#) for details.

Exit Marketing

The SOLO Server cart can easily be set up to perform exit marketing when a customer abandons the shopping/checkout process before completing an order. This is done through a combination of scripts added to the virtual storefront html along with the Exit Handler Script property of the cart options.

Important

This feature is currently not supported by the .NET cart.

Technical Overview

The exit handling is handled entirely by client side script by the web browser, and is achieved by catching the beforeunload browser event in client script. This event will fire for any navigation event, both off site as well as within the normal shopping/checkout process, so the event handler must determine if the navigation event is a proper click through within the site or navigation offsite. This is accomplished by using a boolean flag variable named properClickThrough which is set to false by default and set to true by any valid onsite navigation event. The event handler then checks if the value is false when handling the before unload event and only executes the exit marketing code if this is the case.

Basic Implementation

While SOLO Server is very flexible in the way things can be set up, in a majority of cases implementation can simply be plugged in as follows:

- Add code to set up the properClickThrough flag variable in the virtual storefront top html. The following code can simply be copy/pasted into the <head> section:

HTML

```
<script type="text/javascript">
//Flag variable for proper click through
//When false, exit handling code will run as the user is navigating offsite
//Default to false - valid navigation events will set it true
var properClickThrough = false;

//If the current page is the thank you page, set properClickThrough to true since the sale has completed
if (document.location.pathname.indexOf("b1_singleform1thankyou.asp") != -1)
{
    properClickThrough = true;
}
</script>
```

- Update all links in the virtual storefront html to set the properClickThrough flag to true when clicked by adding the following attribute: `onclick="properClickThrough=true;"`
- Update the cart options and set the Exit Handler Script field to the following: `properClickThrough = true;`

Integrating the Marketing Specific Code

The marketing specific code will be unique to each implementation, but should follow these rules:

- Code should be placed in a function which is then associated with the window.onbeforeunload event.
- The function should first check if `properClickThrough == true`, and if so, exit immediately.

Once this code is ready it can be added to a script block in the virtual storefront html. Before doing this, be sure to read the next section on testing.

Testing

In order to test things in production without exposing them to customers, follow these steps:

- Update the default for properClickThrough to **true** in the virtual storefront html to prevent the code from running by default.
- Add in the marketing specific code to the virtual storefront html.
- Open a new browser window and add an item to the cart. Verify no client side errors occur with the marketing code and fix if necessary.
- Once the marketing code is verified to not cause errors, enter the following in the address bar and hit enter to manually force the marketing code to execute: `javascript:properClickThrough=false;document.location=' '`;
- Verify and perform and debugging/fixes required to the marketing code.

Once everything is verified to be working properly, go back and set the default for properClickThrough to **false** to enable the functionality for all customers.

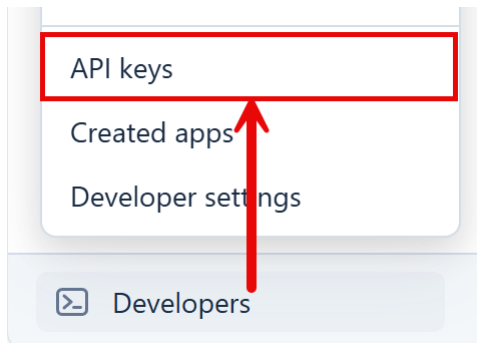
Configuring Stripe

SOLO Server's integrated eCommerce can use Stripe to securely process your payments. Stripe is a leading global payment processor trusted by millions of businesses worldwide, offering bank-level security and support for all major credit and debit cards.

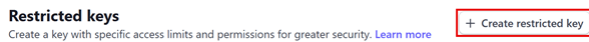
Stripe API Keys

To submit transactions to your Stripe account, you will need to send SoftwareKey two API keys from Stripe, which will be added to your SOLO Server account. Here are the steps for that process:

1. Log into **Stripe**.
2. On the left dashboard panel at the bottom, navigate to **Developers / API keys**.



3. On the Developers page, select the **+ Create restricted key** button in the Restricted Keys section.



4. Choose the option for **Building your own integration**.



5. For the **Key name**, enter: SOLO Server Merchant Account
6. Under the Permissions and Connect Permissions columns, update the following from None to Write:

Resource Type	Permissions	Connect Permissions
Charges and Refund	Write	
Payment Intents	Write	
Checkout	Write	
Checkout Sessions		Write

Webhook

Write

RESOURCE TYPE	PERMISSIONS ⓘ	CONNECT PERMISSIONS ⓘ
Core	None Read Write	None Read Write
Charges and Refunds ⓘ	None Read Write	None Read Write
Payment Intents ⓘ	None Read Write	None Read Write
Checkout View documentation	None Read Write	None Read Write
Checkout Sessions ⓘ	None Read Write	None Read Write
Webhook View documentation	None Read Write	
Webhook Endpoints ⓘ	None Read Write	

All other permissions should be kept as None.

7. Select **Create Key** at the bottom of the page.

Stripe may prompt you to verify your identity before the API key is created.

8. You will then be prompted with your API restricted key (prefixed with `rk_live`). As instructed, save and store this new key to a secure place, such as a password manager or secret store.

Your new API key



Keep your key safe

Save and store this new key to a secure place, such as a password manager or secret store. You won't be able to see it again.

[Learn more about keeping your keys safe](#)

`rk_live` [redacted]

8. Your new restricted key will be displayed on the API keys page, but note that it doesn't display the full key, which is why you must securely store it separately.

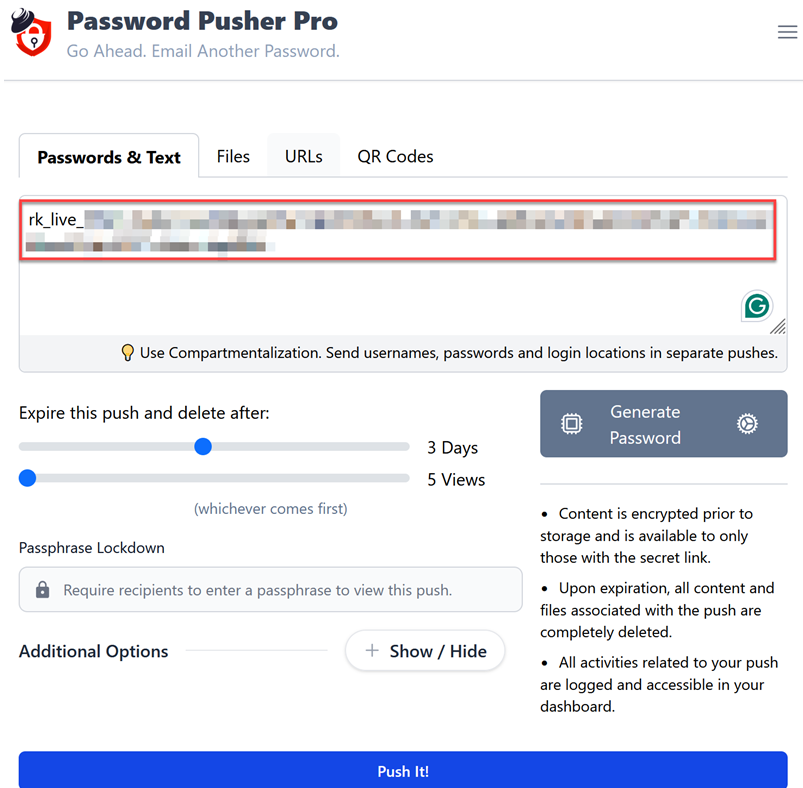
The Publishable key (prefixed with `pk_live`) will be displayed.

Restricted keys					
Create a key with specific access limits and permissions for greater security. Learn more					
+ Create restricted key					
Name	Token	IP restrictions	Last used	Created	
SOLO Server Merchant Account Connect ⓘ	<code>rk_live...</code>	None ⓘ	—	Mar 5	...
Standard keys					
Create a key that unlocks full API access, enabling extensive interaction with your account. Learn more					
+ Create secret key					
Name	Token	IP restrictions	Last used	Created	
Publishable key	<code>pk_live...</code>	—	Feb 18 ⓘ	Jan 12, 2023	...

9. You can use **Password Pusher** to securely send your Restricted Key. The **EU region is used for GDPR compliance**.

10. Go to <https://eu.pwpush.com/>

11. In the Passwords & Text section, paste in your Restricted Key. The **Allow immediate deletion** option is on by default, which allows us to delete the push once we have received it.



12. Press the **Push It!** button to generate your unique link.

Your push has been created.

Now use this secret link or QR code to share it:



13. Email that push link, your Publishable Key, and you SOLO Server account company name or Author ID to **support@softwarekey.com**.

Stripe Test Mode

You can toggle Stipe into Test mode if you want to generate API keys for test transactions.




Developers

[API keys](#) Created apps

- The Restricted key will start with rk_test and will not be hidden
- The Publishable key will start with pk_test

You can email both keys to support@softwarekey.com and we will configure your account to submit test transactions. Your SOLO Server account can be configured to support test transactions or live transactions, but not both at the same time.

PayPal Payments Overview

When using the SOLO Server integrated shopping cart, you can have payments processed into a PayPal Payments Standard or PayPal Payments Pro (PayFlow Edition) account, which both accept credit cards.

With PayPal Payments Standard, the customer will be transferred to the PayPal website to complete payment. With PayPal Payments Pro (PayFlow Edition), the customer can complete checkout through the SOLO Server shopping cart. For more details on the differences between these choices, [view our knowledgebase article](#).

Your SOLO Server account will need to be configured to connect to your PayPal account. Refer to the following topics for details:

- [Configuring PayPal for SOLO Server Shared URL](#)
- [Configuring PayPal for SOLO Server Self-Hosted or Dedicated URL](#)

Configuring PayPal for Shared URL

If you have a SOLO Server Shared URL account, you will need to provide SoftwareKey support with information to connect your SOLO Server account to your PayPal account.

PayPal Payments Standard

For a PayPal Payments Standard account, simply **contact SoftwareKey support** and **let us know the email address of your PayPal account** and the company name for your SOLO Server account.

PayPal Payments Pro (PayFlow Edition)

For a PayPal Payments Pro (PayFlow Edition) account, you will need to **provide new user credentials so we may submit transactions to your PayPal Pro account**. To create the new user for use with the shopping cart, please follow the steps below:

1. Log into PayPal Manager at <https://manager.paypal.com/> using the primary administrator account (if you created additional user accounts in PayPal Manager, make sure the optional User field is blank).

PayPal | Manager

Manager Login

Using Payflow credentials

Login with your Payflow credentials, leaving the Users field blank if you are logging in for the first time, or have not setup additional users.

Log In

[Forgot your password?](#)

[I would like to create a new account](#)

Use PayPal credentials

Use your PayPal username (email address) and password to login.

Login with PayPal

If this is the first time you are logging in with your PayPal credentials, you will be asked to Link your PayPal Account to your Payflow Account. Once linked, you'll be able to log into PayPal Manager using either Payflow or PayPal credentials.

2. Verify under Service Summary, your account has PayFlow Pro status of Live. If not, contact PayPal to have this feature enabled on your account.

Service Summary		
Service	Status ?	Mode ?
PayFlow Pro	Live	--
ACH Services	--	--

3. Click Account Administration.
4. Under Manage Users click Add User.

Account Administration

Help

Use this page to view or modify your company, contact, processor and merchant bank information, manage your security settings and manage users on your account.

Contact Information

- [Company Information](#)
- [Primary Contact Information](#)
- [Secondary Contact Information](#)
- [Billing Information](#)

Processor & Merchant Bank Information

- [Accepted Card Types](#)
- [Processor Information](#)
- [Merchant Bank Information](#)

Manage Security

- [Transaction Settings](#)
- [Allowed IP Addresses](#)
- [Change Password](#)
- [Security Questions](#)
- [Support PIN](#)

Manage Users

- [Manage Users](#)
- [Add User](#)

Account Preferences

- [Time Zone](#)
- [Notification Preferences](#)

5. Under Add User, enter the following information:
 - a. **Admin User Password:** enter your current login password
 - b. **Contact Name:** SOLO Server
 - c. **Email:** support@softwarekey.com
 - d. **User Login Name:** ShoppingCartAPI
 - e. **User Password:** [new and unique password] Do not use special characters. Use a strong combination of letters and numbers.
 - f. **Confirm User Password:** [same as User Password]
 - g. **Select a Predefined Role:** API_FULL_TRANSACTIONS
 - h. **User Status:** Active

Add User

Administrators can add new users to the account here. Specify new user's information in the required fields, including a login name, privilege level and status. PayPal Manager supports up to 1000 users. For increased security, you must validate your identity by entering your current password below.

* Required Field

Admin Confirmation

Admin User:

* Admin User Password:

User Information

* Contact Name:

Phone:

* Email:

User Login Information

Partner:

Merchant Login:

* User Login Name:

* User Password:

* Confirm User Password:

Assign privilege to User

* Select a Predefined Role:

* User Status:

* Enter the security code as shown:



6. Enter the security code and click Update.
7. **Call us at +1-321-221-1497 and provide the following information:**
 - a. SOLO Server Author ID (or company name)
 - b. **Partner**
 - c. **Merchant Login**

- d. **User Login Name** (ShoppingCartAPI)
- e. **User Password**
- 8. Also, please answer the following questions:
 - a. What credit card types do you accept (Visa / MC / Amex / Discover)?
 - b. Do you also want to give customers the option to be redirected to the PayPal website to complete payment? If so, please tell us the email address that should receive your payments through PayPal.

We will configure your SOLO Server account to submit transactions to your PayPal account and send you an email when it is ready to be tested. You can test the ordering process by using a live credit card and then issuing yourself a **refund**. If you are reluctant to put a large amount on a live credit card, you could always set up a **Priority Code** for one of your products with a value of \$1.00 USD less than your product price, resulting in a \$1.00 charge.

Configuring PayPal for SOLO Server Self-Hosted or Dedicated URL

If you have SOLO Server Self-Hosted with the optional e-Commerce license or are using SOLO Server Dedicated URL, you can complete the PayPal configuration from within SOLO Server.

PayPal Payments Standard Configuration

Follow these steps to configure your PayPal Standard account:

1. Go to the menu *Admin / Merchant Accounts*.
2. Click the *Add New* button.
3. Set the Type to PayPal Payments Standard, and configure the **merchant account settings**, including setting the Enabled checkbox to true, and then and click Save.
4. Go to the menu *Admin / Account Options* and click the Edit button.
5. Set the Credit cards Enabled checkbox to true.
6. Change the Merchant ID drop-down to the PayPal merchant account you configured from above.
7. Click the Save button.

PayPal Payments Pro (PayFlow Edition) Configuration

Follow these steps to configure your PayPal Pro account:

1. **Create a new User as described under PayPal Payments Pro (PayFlow Edition).**
2. Go to the SOLO Server menu *Admin / Merchant Accounts*.
3. Click the Add New button.
4. Set the Type to PayPal Payments Pro, and configure the **merchant account settings**, including setting the Enabled checkbox to true, and then and click Save.
5. Go to the menu *Admin / Account Options* and click the Edit button.
6. Set the Credit Cards Enabled checkbox to true.
7. Change the Merchant ID drop-down to the PayPal Pro merchant account you configured from above (it will list the Display Name).
8. Click the Save button.

FastSpring Overview

In addition to SOLO Server's integrated e-commerce system, SOLO Server also offers and integration to allow selling your software through **FastSpring**. FastSpring's incredible e-commerce platform is equal parts power and flexibility. Perfect for businesses of any size, the robust feature choices provide e-commerce resources that include product fulfillment options, subscriptions and recurring billing, one-time purchases and more. The platform features are fully customizable, and can be tailored to your exact needs. Whether you're selling to customers locally or on the other side of the globe. Top FastSpring Features Include:

- Shopping cart and bundled merchant account with customer support
- Multiple languages and currency options
- Many online and offline payment methods
- Subscription models and recurring billing
- Purchase fulfillment and notification options

More information can be found on our blog post **FastSpring and SoftwareKey – bringing together the best in eCommerce and software licensing**.

How SoftwareKey licensing works with FastSpring

With an integration of the SoftwareKey System and FastSpring, you can spend more time focusing on improving your software while the licensing and eCommerce combination ensures you can capture more sales. Here are the components of the combined system:

- FastSpring sells the software license and informs SoftwareKey SOLO Server to create the license
- SOLO Server automates the delivery of the license to the customer's computer
- Protection PLUS validates, caches, and manages the license

Configuring FastSpring

FastSpring offers two different store types, the older classic store, and the newer contextual store. The following topics outline configuring the integration between FastSpring and SOLO Server, as well as the options in SOLO Server related to FastSpring integration:

- **Configuring FastSpring Classic Store Integration**
- **Configuring FastSpring Contextual Store Integration**
- **FastSpring Options**

Configuring FastSpring Classic Store Integration

This topic is a guide on how to configure the integration between a FastSpring classic store and SOLO Server. This can be used as an alternative to SOLO Server's integrated shopping cart. Read our blog post on [choosing an eCommerce system](#) for more information.

This topic makes several assumptions:

1. You already have a SOLO Server license or an activated SOLO Server account (you can [sign-up for free](#)).
2. You already have a basic working knowledge of SOLO Server's administrative interface.
3. You already have the relevant **Product(s) and Product Option(s) configured in SOLO Server**.
4. You already have a FastSpring account.
5. You already have a basic working knowledge of FastSpring and its SpringBoard interface.
6. You already have the relevant Product(s) configured in FastSpring.

One important concept to understand is SOLO Server's FastSpring Integration Script. This is a script included with SOLO Server that is designed to receive automated notifications from FastSpring and respond accordingly.

Important

When adding the FastSpring notification parameters as directed in the steps in the sections below, take care to ensure that there are no spaces after copying and pasting from this topic. For example, this can be problematic if our server receives `swk_action =NewLicense` instead of `swk_action=NewLicense`.

Gather SOLO Server Information

Before you can begin, there is a little bit of information you need to gather from SOLO Server's authors administration interface. Sign-in to SOLO Server, and find the following information:

1. On the bottom of the screen, you will find your Author ID to the right of your company name. Take note of this.
2. Click the *Configure / Products* menu, and click "Show options..." next to the product you wish to configure in FastSpring. Take note of the Option ID that corresponds with the product you are configuring in FastSpring.
3. You will need the URL of the FastSpring Integration script for each notification you configure in FastSpring. To obtain this URL, click the *Store / FastSpring Options* menu, where this URL is listed as the Fulfillment URL.

Configuring Order Fulfillment

The first, and perhaps most important step to getting started is to configure FastSpring to ask SOLO Server to create license as part of an order's fulfillment. Here are the steps to do this:

1. Before you can begin, you must have the product configured in FastSpring, and you must have at least 1 product and product option configured in SOLO Server. Take note of the Product Option ID from SOLO Server (which you can find by clicking *Configure / Products*, clicking "Show Options..." for the product, and taking note of the Option ID).
2. In SpringBoard, manage the product, and click "Add" under the Fulfillment Actions section. Select "Generate a license", pick the "Remote Server Request" option, and click Next.
3. Enter the URL of the FastSpring Integration Script (to obtain this URL, click the *Store / FastSpring Options* menu, where this URL is listed as the Fulfillment URL) and change the encoding to ISO-8859-1. You can configure the output format with one of the following options and click Create when done. See the *Customizing FastSpring Email / Web Order Notification Text* section at the bottom of this topic for examples.
 1. Select Single-Line License (Quantity Based), which is the default. This requires the "FastSpring Multi-line License Response" setting under *Store / FastSpring Options* to be unchecked, which is the default.
 2. Select Multiple-Line License (Quantity Based), which will give you more control over how the list of License ID(s) and Password(s) is displayed when an order is completed. This also requires the "FastSpring Multi-line License Response" setting under *Store / FastSpring Options* to be checked.
4. Click on the Security tab.
 1. If this is the first notification you are configuring, take note of or copy the private key. Then go to SOLO Server, click the *Store / FastSpring Options* menu, click the Edit button, and enter or paste the private key from FastSpring's Security tab into the "API Private Key" field, and click Submit to save it.
 2. If this is not the first notification you are configuring, go to SOLO Server, click *Store / FastSpring Options*, copy the "FastSpring API Private Key" value, and paste it into FastSpring's "private key" field.

5. Click the Parameters tab, and add the following fields:
 1. Add a parameter named `swk_action`, with a value of `NewLicense`.
 2. Add a parameter named `swk_authorid`, with the Author ID you see at the bottom of SOLO Server's authors administration interface.
 3. Add a parameter named `swk_prodoptionid`, with the Option ID from step 1.
6. Also in the Parameters tab, set the name as appropriate. Under most circumstances, you should set this to "Not Name Based". Setting this to "Person Name" will result in the customer name being passed in the notification, which SOLO Server will detect, and when present will populate both the first/last name and company name fields when adding a new customer record. This will allow partially registering the customer information and optionally not configuring the the Order Completed Notification as outlined below.
7. Click Save on the right. You should now see the license generator in the list in the Fulfillment Actions section. You can click Edit on that item to make changes or run tests. Note that when you run tests, the number of licenses displayed in the results may not match the quantity entered if licenses were previously created for that email address and reference number.

The license generator notifications sent from FastSpring only contain very limited information about the customer, which includes the email address. If a customer with that email address already exists in SOLO Server, it will add the new license to that record. If there isn't an existing customer record, SOLO Server creates a new customer from one of these requests, marks it as unregistered, and only saves the customer's email address for future reference. If you wish to have FastSpring also provide SOLO Server with basic contact details about the customer after an order is completed, follow the steps in the next section.

Configuring Order Completed Notifications

As noted above, FastSpring only sends very limited information about the customer when generating licenses. If you are using the "Person Name" option for the name parameter for order fulfillment and do not want to collect extended customer information, this is optional. If you want FastSpring to provide SOLO Server with additional information about the customer, it is necessary to do so using an Order Completed Notification. Here is how you can configure this in FastSpring:



1. In SpringBoard, click the notification  icon at the very top, right.
2. Under the Custom Notifications section, click Add.
3. Choose "Order Completed (one per product)" for the event type.
4. Choose HTTP URL for the Destination. Paste in the URL to the FastSpring Integration Script (to obtain this URL, click the *Store / FastSpring Options* menu, where this URL is listed as the Fulfillment URL), leave the content type as Name/Value Parameters, and click Next.
5. In the General tab, you may optionally give the notification a name.
6. Under the Conditions tab, you may optionally configure the notification to only apply to select Products.
7. In the Advanced tab, select ISO-8859-1 for the Character Encoding.
8. In the Security tab, paste the private key you established for all notifications sent to SOLO Server. To retrieve this value from SOLO Server, sign-in to SOLO Server, click *Store / FastSpring Options*, copy the "API Private Key" value, and paste it into FastSpring's "private key" field.
9. In HTTP parameters, you can leave the defaults in place, and add the following parameters (by clicking the Add Parameter button and filling out the new fields for each):
 1. Add a parameter named `swk_action`, with a value of `OrderCompleted`.
 2. Add a parameter named `swk_authorid`, with the Author ID you see at the bottom of SOLO Server's authors administration interface.
10. Click Save when done.
11. Now place a test order using an email address that has a corresponding customer record in SOLO Server, and make sure SOLO Server updates the registration data when an order for an applicable FastSpring product is completed.

With this configuration in place and verified, it may now be time to consider what happens when a customer's order is returned/refunded.

Configuring Return Completed Notifications

Return Completed Notifications tell SOLO Server when a FastSpring order has been returned, and provides some information about the return. This allows SOLO Server to send a notification to author users configured with "Notify Orders"

enabled. The notification SOLO Server sends includes licenses associated with the original order, which *may* need to be deactivated (depending on the nature and details of the return).

Important

Return Completed Notifications do not automatically disable licenses. These notifications can only bring relevant licenses to your attention for further review after a return is processed in FastSpring. Additionally, **do not configure Return Completed Notifications on subscription products** configured in FastSpring, as those should rely on Subscription Deactivated Notifications (described in the next section) to automatically disable SOLO Server licenses associated with a deactivated FastSpring subscription.

The steps for configuring Return Completed Notifications are outlined below.



1. In SpringBoard, click the notification  icon at the very top, right.
2. Under the Custom Notifications section, click Add.
3. Choose "Return Completed" for the event type.
4. Choose HTTP URL for the Destination. Paste in the URL to the FastSpring Integration Script (to obtain this URL, click the *Store / FastSpring Options* menu, where this URL is listed as the Fulfillment URL), leave the content type as Name/Value Parameters, and click Next.
5. In the General tab, you may optionally give the notification a name.
6. Under the Conditions tab, you may optionally configure the notification to only apply to select Products.
7. In the Advanced tab, select ISO-8859-1 for the Character Encoding.
8. In the Security tab, paste the private key you established for all notifications sent to SOLO Server. To retrieve this value from SOLO Server, sign-in to SOLO Server, click *Store / FastSpring Options*, copy the "API Private Key" value, and paste it into FastSpring's "private key" field.
9. In HTTP parameters, you can leave the defaults in place, and add the following parameters (by clicking the Add Parameter button and filling out the new fields for each):
 1. Add a parameter named `swk_action`, with a value of `ReturnCompleted`.
 2. Add a parameter named `swk_authorid`, with the Author ID you see at the bottom of SOLO Server's authors administration interface.
 3. Add a parameter named `OriginalOrderID`, with a value of `{return.original.id}`.
 4. Add a parameter named `OriginalTotal`, with a value of `{return.original.total}`.
 5. Add a parameter named `ReturnEmail`, with a value of `{return.customer.email}`.
 6. Add a parameter named `ReturnID`, with a value of `{return.id}`.
 7. Add a parameter named `ReturnReason`, with a value of `{return.reasonText}`.
 8. Add a parameter named `ReturnTotal`, with a value of `{return.total}`.
 9. Add a parameter named `ReturnType`, with a value of `{return.type}`.
10. Click Save when done.
11. Now place a test order for an applicable product, issue a return/refund in SpringBoard, and make sure SOLO Server sends you a notification outlining the licenses associated with that order.

The nature of returns is not always easily deduced from the data in Return Completed Notifications, which is why the notification SOLO Server sent only informs you of licenses that may require your review and possibly further action from you. You can choose to change the **Status** of the license in SOLO Server, which will deactivate the software using that license when it validates with SOLO Server.

In the case of subscriptions, SOLO Server is only aware of the original order reference number from FastSpring, which is why Return Completed Notifications should not be configured for these types of FastSpring products. This means that, when returning a subscription payment (other than the initial purchase), SOLO Server will not be able to find the original licenses involved with the subscription (this is in part due to a limitation of what's available in FastSpring's notifications). Additionally, deactivating a subscription is a scenario where it does make sense to automatically disable a license in SOLO Server, and this is explained further in the next section.

Configuring Subscription Deactivated Notifications

When issuing licenses in SOLO Server for subscriptions managed by FastSpring, it may be necessary to void a license when the FastSpring subscription payment is not received. This allows you to leverage the two systems to offer your software as a service that requires payment on a recurring basis.

Important

For subscriptions being managed by FastSpring, you need to issue a license that does **not** enforce an expiration date in the local license file. To enforce an expiration, the Protection PLUS licensing implementation needs to be configured to require periodic validation with SOLO Server to check the license status. If the license status has been set to a status other than "OK" due to a missed payment, the software will be deactivated. Your licensed software should validate with SOLO Server every X days (to coincide with the subscription billing frequency). It is important to make this validation with SOLO Server mandatory so that the customer cannot simply block connection to SOLO Server.

Follow the steps below to configure this feature:



1. In SpringBoard, click the notification  icon at the very top, right.
2. Under the Custom Notifications section, click Add.
3. Choose "Subscription Deactivated" for the event type.
4. Choose HTTP URL for the Destination. Paste in the URL to the FastSpring Integration Script (to obtain this URL, click the *Store / FastSpring Options* menu, where this URL is listed as the Fulfillment URL), leave the content type as Name/Value Parameters, and click Next.
5. In the General tab, you may optionally give the notification a name.
6. Under the Conditions tab, you may optionally configure the notification to only apply to select Products.
7. In the Advanced tab, select ISO-8859-1 for the Character Encoding.
8. In the Security tab, paste the private key you established for all notifications sent to SOLO Server. To retrieve this value from SOLO Server, sign-in to SOLO Server, click *Store / FastSpring Options*, copy the "API Private Key" value, and paste it into FastSpring's "private key" field.
9. In HTTP parameters, you can leave the defaults in place, and add the following parameters (by clicking the Add Parameter button and filling out the new fields for each):
 1. Add a parameter named `swk_action`, with a value of `SubscriptionDeactivated`.
 2. Add a parameter named `swk_authorid`, with the Author ID you see at the bottom of SOLO Server's authors administration interface.
10. Click Save when done.
11. Now place a test order for a subscription product. When done, pull up one of the License IDs in SOLO Server and observe its "OK" status. In SpringBoard, search for the Order Reference or Subscription Reference number, view the subscription (this is an extra click if you used an order reference), click Cancel on the right, select the option to Cancel Now, and click Confirm. Refresh the license in SOLO Server and make sure its status is now set to "Expired."

Customizing FastSpring Order Email / Web Notification Text

When an order is completed, FastSpring will send the customer an order confirmation email, and SOLO Server can optionally send new customers a welcome email. You can also automatically email the customer their purchased license information, and/or display their license information on the on the order complete web page. This information should include the License ID(s) and Password(s), which the customer will use to activate the software. To configure the notifications:

1. In SpringBoard, go to the home page and click Products and Pages under the Products and Settings section.
2. Click on the Product/Subscription you want to configure.
3. Under Fulfillment Actions, click Add.
4. Choose Send Email / Show Web Notification and click Next. **View FastSpring's support page for more information on email / web notifications.**
5. Once you click Create, additional tabs will be available.
6. To configure SOLO Server to send a customer welcome email to new customers, create a **Customer Welcome Mailing**, and then update the **Cart Options** and set the Customer Welcome Mailing option to the mailing.

Notification Examples

Important

SOLO Server can only accept Single-Line License (Quantity Based) **or** Multi-Line License (Quantity Based) notifications, which is determined by the "FastSpring Multi-line License Response" SOLO Server setting under *Store / FastSpring Options*. You will need to choose one Order Fulfillment output format for all of your products in SpringBoard, either Single-Line License (Quantity Based) or Multi-Line License (Quantity Based).

Choosing Multi-Line License (Quantity Based) gives you more control over how the license information is displayed, which can be especially useful if multiple licenses will be sold in the same order.

Single-Line License (Quantity Based)

When using the Single-Line License (Quantity Based) Order Fulfillment output format, the "FastSpring Multi-line License Response" SOLO Server setting under *Store / FastSpring Options* needs to be unchecked. The License ID and Activation Password will be listed on separate lines when using `#{orderItem.fulfillment.license.licenses.list}`. Refer the following examples as a reference, and process a test order and use the Preview option in SpringBoard to check your content is displayed as expected.

Text

```
Hello #{order.customer.fullName}:
Thank you for your recent order (#{order.id}). You may activate your license(s) with the following information:
#{orderItem.fulfillment.license.licenses.list}
```

HTML

```
<div>
<p>Hello #{order.customer.fullName}</p>
<p>Thank you for your recent order (#{order.id}). You may activate your license(s) with the following information:</p>

<pre>#{orderItem.fulfillment.license.licenses.list}</pre>
</div>
```

Multi-Line License (Quantity Based)

When using the Multi-Line License (Quantity Based) Order Fulfillment output format, the "FastSpring Multi-line License Response" SOLO Server setting under *Store / FastSpring Options* needs to be checked. Refer the following examples as a reference, and process a test order and use the Preview option in SpringBoard to check your content is displayed as expected.

Text

```
Hello #{order.customer.fullName}:
Thank you for your recent order (#{order.id}). You may activate your license(s) with the following information:
#{orderItem.fulfillment.license.licenses.list}
```

HTML

```
<div>
<p>Hello #{order.customer.fullName}</p>
<p>Thank you for your recent order (#{order.id}). You may activate your license(s) with the following information:</p>

<table>
<tr><th>License ID</th><th>Activation Password</th></tr>
<repeat value="#{orderItem.fulfillment.license.licenseData}" var="licenseItem">
<tr><td>#{licenseItem.contentMap.LicenseID}</td><td>#{licenseItem.contentMap.Password}</td></tr>
</repeat>
</table>
</div>
```


Configuring FastSpring Contextual Store Integration

This topic is a guide on how to configure the integration between a FastSpring contextual store and SOLO Server. This can be used as an alternative to SOLO Server's integrated shopping cart. Read our blog post on [choosing an eCommerce system](#) for more information.

This topic makes several assumptions:

1. You already have a SOLO Server license or an activated SOLO Server account (you can [sign-up for free](#)).
2. You already have a basic working knowledge of SOLO Server's administrative interface.
3. You already have the relevant **Product(s) and Option(s) configured in SOLO Server**.
4. You already have a FastSpring account.
5. You already have a basic working knowledge of the FastSpring Dashboard interface.
6. You already have the relevant Product(s) configured in FastSpring.

One important concept to understand is SOLO Server's FastSpring Integration Script. This is a script included with SOLO Server that is designed to receive automated notifications from FastSpring and respond accordingly.

Important

When adding the FastSpring notification parameters as directed in the steps in the sections below, take care to ensure that there are no spaces after copying and pasting from this topic. For example, this can be problematic if our server receives `swk_action =NewLicense` instead of `swk_action=NewLicense`.

Product Option Configurations for Recurring Subscriptions

Recurring subscriptions can be enforced based on two different fields:

- License Status Field
- License **Download Until** date in SOLO Server

In FastSpring, a subscription is considered valid until the customer stops paying, and then a web hook event will set the License Status field to **Expired** in SOLO Server. The next time your software validates with SOLO Server, it will see this updated status, and disable use of your software. In this case, the license does not need to have a set expiration date.

Additionally, you can optionally set an initial expiration date for the license based on the Product Option **Days to D/L** field. For example, an annual license would have a value of 365. Each time the subscription is renewed in FastSpring, the **Download Until** date of the license will be incremented by the **Days to D/L** amount. Your software will still need to periodically Refresh with SOLO Server to get this updated date. When using this approach, the subscription charge date in FastSpring may get out of sync with the Download Until date. If you allow the customer to make an overdue payment, these settings can be configured in FastSpring under Subscription Plans: Notifications and Retentions settings:

- Payment Reminders
- Overdue Notifications
- Deactivation Settings

Gather SOLO Server Information

Before you can begin, there is a little bit of information you need to gather from SOLO Server's authors administration interface. Sign-in to SOLO Server, and find the following information:

1. On the bottom of the screen, you will find your Author ID to the right of your company name. Take note of this.
2. Click the *Configure / Products* menu, and click "Show options..." next to the product you wish to configure in FastSpring. Take note of the Option ID that corresponds with the product you are configuring in FastSpring.
3. You will need the URL of the FastSpring Integration fulfillment script for each new license notification you configure in FastSpring. To obtain this URL, click the *Store / FastSpring Options* menu, where this URL is listed as the Fulfillment URL.
4. You will need the URL of the FastSpring Integration Web Hook script for each WebHook notification you configure in FastSpring. To obtain this URL, click the *Store / FastSpring Options* menu, where this URL is listed as the Web Hook URL.

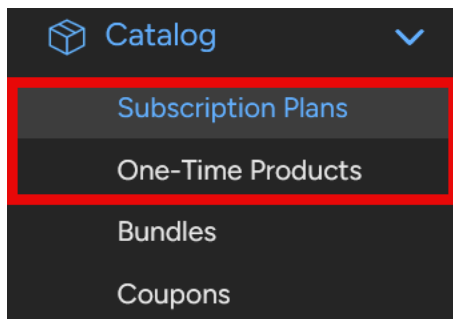
Configuring Order Fulfillment

The first step is to configure FastSpring to ask SOLO Server to create a license as part of an order's fulfillment.

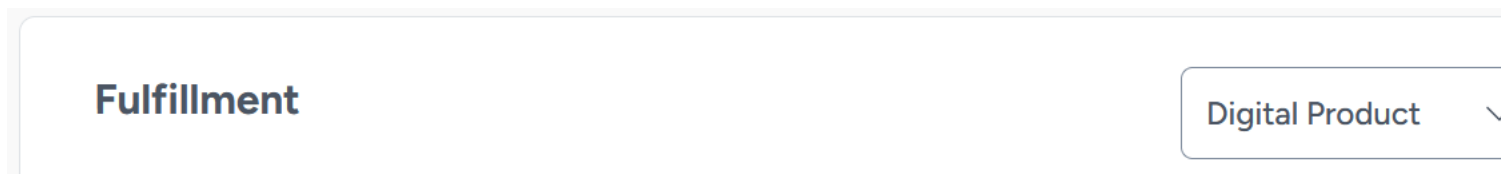
Before you can begin, you must have the product configured in FastSpring, and you must have at least one product and product option configured in SOLO Server. Take note of the Product Option ID from SOLO Server (which you can find by clicking *Configure / Products*, clicking "Show Options..." for the product, and taking note of the Option ID).

Here are the steps to create the license fulfillment in FastSpring:

1. In the FastSpring menu, use the Catalog menu on the left and select a **Subscription Plan** or **One-Time Product**.



2. Use the **+ Create Subscription** or **+ Create Product** buttons to create a new item, or you can select an existing item you already created.
3. In the Fulfillment section, press the "Add Fulfillment" button.



4. Select **Generate a License**, then pick **Remote Server Request** from the "Choose a Generator..." dropdown. Select Next.
5. Update the following fields:
 - URL: Enter the **Fulfillment URL** from SOLO Server under the *Store / FastSpring Options* menu.
 - Method: **HTTP POST** (it is already set to this by default)
 - POST Encoding: **ISO-8859-1**
 - Output Format: Either of the following two options:
 1. **Single-Line License (Quantity Based)** - Displays the ordered license on a single line when an order is completed. This requires the "FastSpring Multi-line License Response" setting under *Store / FastSpring Options* to be **unchecked**, which is the default.
 2. **Multiple-Line License (Quantity Based)** - This will give you more control over how the list of License ID(s) and Password(s) is displayed when an order is completed. This also requires the "FastSpring Multi-line License Response" setting under *Store / FastSpring Options* to be **checked**.

See the *Customizing FastSpring Email / Web Order Notification Text* section at the bottom of this topic for examples.

6. Click the **Create** button. This will create the Fulfillment and provide access to the other Fulfillment configuration settings.
7. Click on the Security tab.
 1. If this is the first notification you are configuring, take note of or copy the private key.

General
Security
Parameters
Advanced

Private Key Security

Private Key

Then go to SOLO Server, click the *Store / FastSpring Options* menu, click the Edit button, and enter or paste the private key from FastSpring's Security tab into the **API Private Key** field, and click Submit to save it.

Edit FastSpring Options [? Help](#)

API Private Key:

HMAC SHA256 Secret:

Generate

2. If this is not the first notification you are configuring, go to SOLO Server, click *Store / FastSpring Options*, copy the **API Private Key** value, and paste it into FastSpring's **Private Key** field.
8. Click the Parameters tab, and add the following fields to the "Custom" fields at the bottom:
 1. Add a parameter named `swk_action`, with a value of `NewLicense`.
 2. Add a parameter named `swk_authorid`, with the Author ID you see at the bottom of SOLO Server's authors administration interface.

3. Add a parameter named `swk_prodoptionid`, with the Product Option ID from the previous section on this page.

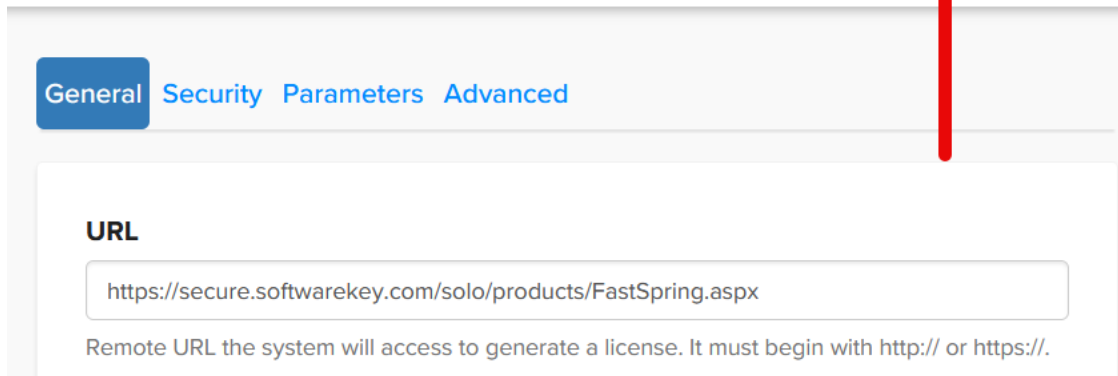
General
Security
Parameters
Advanced

Name	Value
name	Not Name Based
quantity	Quantity
periods	the expected number of total subscription periods
swk_action	NewLicense
swk_authorid	
swk_prodoptionid	
Custom Name 4	Custom Value 4

9. Also in the Parameters tab, set the name as appropriate. Under most circumstances, you should set this to **Not Name Based**. Setting this to **Person Name** will result in the customer name being passed in the notification, which SOLO Server will detect, and when present will populate both the first/last name and company name fields when adding a new customer record. This will allow partially registering the customer information and optionally not configuring the the order.created Web Hook as outlined below.
10. Click **Save** on the top-right.
11. Back in the Catalog, you should see the license generator in the list in the Fulfillment section. You can click Edit on that item to make changes, and there is a **Test** button on the top right.

← Remote License Configuration

Test Save



General Security Parameters Advanced

URL

Remote URL the system will access to generate a license. It must begin with http:// or https://.

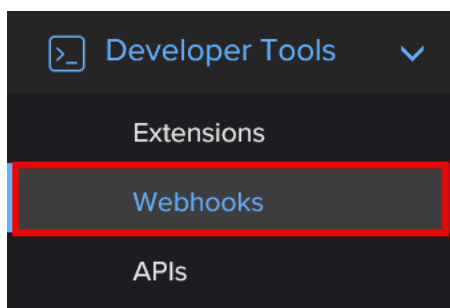
Note that when you run tests, the number of licenses displayed in the results may not match the quantity entered if licenses were previously created for that email address and reference number.

The license generator notifications sent from FastSpring only contain very limited information about the customer, which includes the email address. If a customer with that email address already exists in SOLO Server, it will add the new license to that record. If there isn't an existing customer record, SOLO Server creates a new customer from one of these requests, marks it as unregistered, and only saves the customer's email address for future reference. If you wish to have FastSpring also provide SOLO Server with basic contact details about the customer after an order is completed, follow the steps in the next section.

Configuring Web Hook Integration

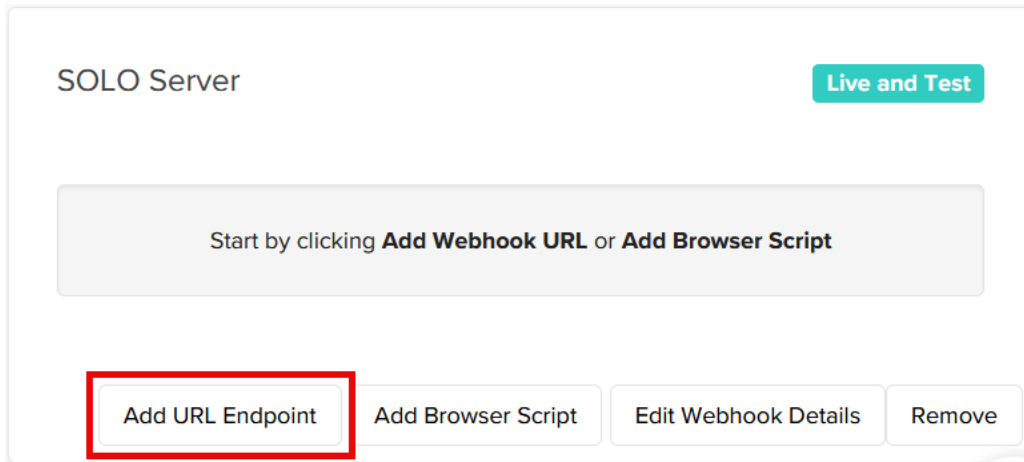
After configuring the license generator (as instructed above) for order fulfillment, the next critical piece to configure is the Web Hook integration. Note that Web Hook integration only applies to FastSpring Contextual Stores. If you are using a FastSpring Classic Store, **refer to the topic** on how to configure integration with that.

1. Sign-in to the FastSpring Dashboard interface, click the Developer Tools menu on the left, and then click the Webhooks sub-menu.



2. Click the Configuration tab (next to Log).
3. Click the Add Webhook button on the top right.
4. Enter a title such as "SOLO Server", select "Live and Test Orders", and click Add. Do not check the "Enable webhook expansion" checkbox.

- Return to the Configuration tab and click the **Add URL Endpoint** button under the webhook you just created.



- In another browser tab/window, sign-in to SOLO Server and click the *Store / FastSpring Options* menu. Then select the URL value listed for **Web Hook URL** and copy it.
- Paste this URL that you copied from step #6 into the URL field.
- Return to the SOLO Server browser tab/window. If you see a **Generate** button for the **HMAC SHA256 Secret** field, click it. Then copy the value in the **HMAC SHA256 Secret** and paste it into the **HMAC SHA256 Secret** field in the FastSpring browser tab/window.

Now that everything is configured, test ordering with each of your products and subscriptions to ensure everything is working correctly. In the Subscription or Product Catalog, you can use the test credit card data and the web checkout option for testing.

Checkout Links

Simulate your customer's checkout experience without affecting your store's order and transaction reporting.

Test Card Number

✓ Success

XXXX XXXX XXXX XXXX

✗ Decline

XXXX XXXX XXXX XXXX

Expiration date

Any future date

CVV

XXXX

Copy

Web Checkout

☒ Test Mode
 ☐ Live Mode ⓘ

web default ▼

Open

Customizing FastSpring Order Email / Web Notification Text

When an order is completed, FastSpring will send the customer an order confirmation email, and SOLO Server can optionally send new customers a welcome email. You can also automatically email the customer their purchased license information, and/or display their license information on the on the order complete web page. This information should include the License ID(s) and Password(s), which the customer will use to activate the software. To configure and customize the notifications:

1. In the FastSpring Dashboard interface, go to Products in the menu and select the Product/Subscription you want to configure.
2. Under the Fulfillment section, press **Add Fulfillment**.
3. Choose Send Email and press Next. **View FastSpring's support page for more information on email / web notifications.**
4. Once you press Create, additional tabs will be available.
5. To configure SOLO Server to send a customer welcome email to new customers, create a **Customer Welcome Mailing**, and then update the **Cart Options** and set the Customer Welcome Mailing option to the mailing.

Notification Examples

Important

SOLO Server can only accept Single-Line License (Quantity Based) **or** Multi-Line License (Quantity Based) notifications, which is determined by the "FastSpring Multi-line License Response" SOLO Server setting under *Store / FastSpring Options*. You will need to choose one Order Fulfillment output format for all of your products in SpringBoard, either Single-Line License (Quantity Based) or Multi-Line License (Quantity Based).

Choosing Multi-Line License (Quantity Based) gives you more control over how the license information is displayed, which can be especially useful if multiple licenses will be sold in the same order.

Single-Line License (Quantity Based)

When using the Single-Line License (Quantity Based) Order Fulfillment output format, the "FastSpring Multi-line License Response" SOLO Server setting under *Store / FastSpring Options* needs to be unchecked. The License ID and Activation Password will be listed on separate lines when using `#{orderItem.fulfillment.license.licenses.list}`. Refer the following examples as a reference, and process a test order and use the Preview option in SpringBoard to check your content is displayed as expected.

Text

```
Hello #{order.customer.fullName}:
Thank you for your recent order (#{order.id}). You may activate your license(s) with the following information:
#{orderItem.fulfillment.license.licenses.list}
```

HTML

```
<div>
<p>Hello #{order.customer.fullName}</p>
<p>Thank you for your recent order (#{order.id}). You may activate your license(s) with the following information:</p>

<pre>#{orderItem.fulfillment.license.licenses.list}</pre>
</div>
```

Multi-Line License (Quantity Based)

When using the Multi-Line License (Quantity Based) Order Fulfillment output format, the "FastSpring Multi-line License Response" SOLO Server setting under *Store / FastSpring Options* needs to be checked. Refer the following examples as a reference, and process a test order and use the Preview option in SpringBoard to check your content is displayed as expected.

Text

```
Hello #{order.customer.fullName}:
Thank you for your recent order (#{order.id}). You may activate your license(s) with the following information:
#{orderItem.fulfillment.license.licenses.list}
```

HTML

```
<div>
<p>Hello #{order.customer.fullName}</p>
<p>Thank you for your recent order (#{order.id}). You may activate your license(s) with the following
information:</p>
```

```
<table>
<tr><th>License ID</th><th>Activation Password</th></tr>
<repeat value="#{orderItem.fulfillment.license.licenseData}" var="licenseItem">
<tr><td>#{licenseItem.contentMap.LicenseID}</td><td>#{licenseItem.contentMap.Password}</td></tr>
</repeat>
</table>
</div>
```


FastSpring Options

The FastSpring Options page allows you to view and edit the options for integration with FastSpring e-Commerce. More information on FastSpring integration can be found in the [FastSpring Overview](#). The fields on this page are as follows:

API Private Key

The Private Key for verifying FastSpring API notifications.

HMAC SHA256 Secret

The secret used for validating the integrity of FastSpring Web Hook requests. If not populated, click the Generate button to generate a new value.

Multi-line License Response

When set to true, the response sent to FastSpring when it requests new licenses to be generated uses a multi-line format. The multi-line format can be confusing to users when presenting it in the raw, but the benefit is that it is easier to separate the License ID and Password for customized presentation in FastSpring using its content map.

Omit Missing Customer Notifications

Available to users with Master User permission only. Whether to omit error notifications for order.completed Web Hook notifications when the customer cannot be found.

Fulfillment URL

The URL to use for FastSpring license fulfillment, as well as additional notifications when using a classic FastSpring store.

Web Hook URL

The URL to use when configuring the FastSpring Web Hook integration when using a conceptual FastSpring store.

Configuring Authorize.Net

If you are using the Authorize.Net payment gateway to process payments, then you are required to perform some steps in your Authorize.Net account before integrating with SOLO Server:

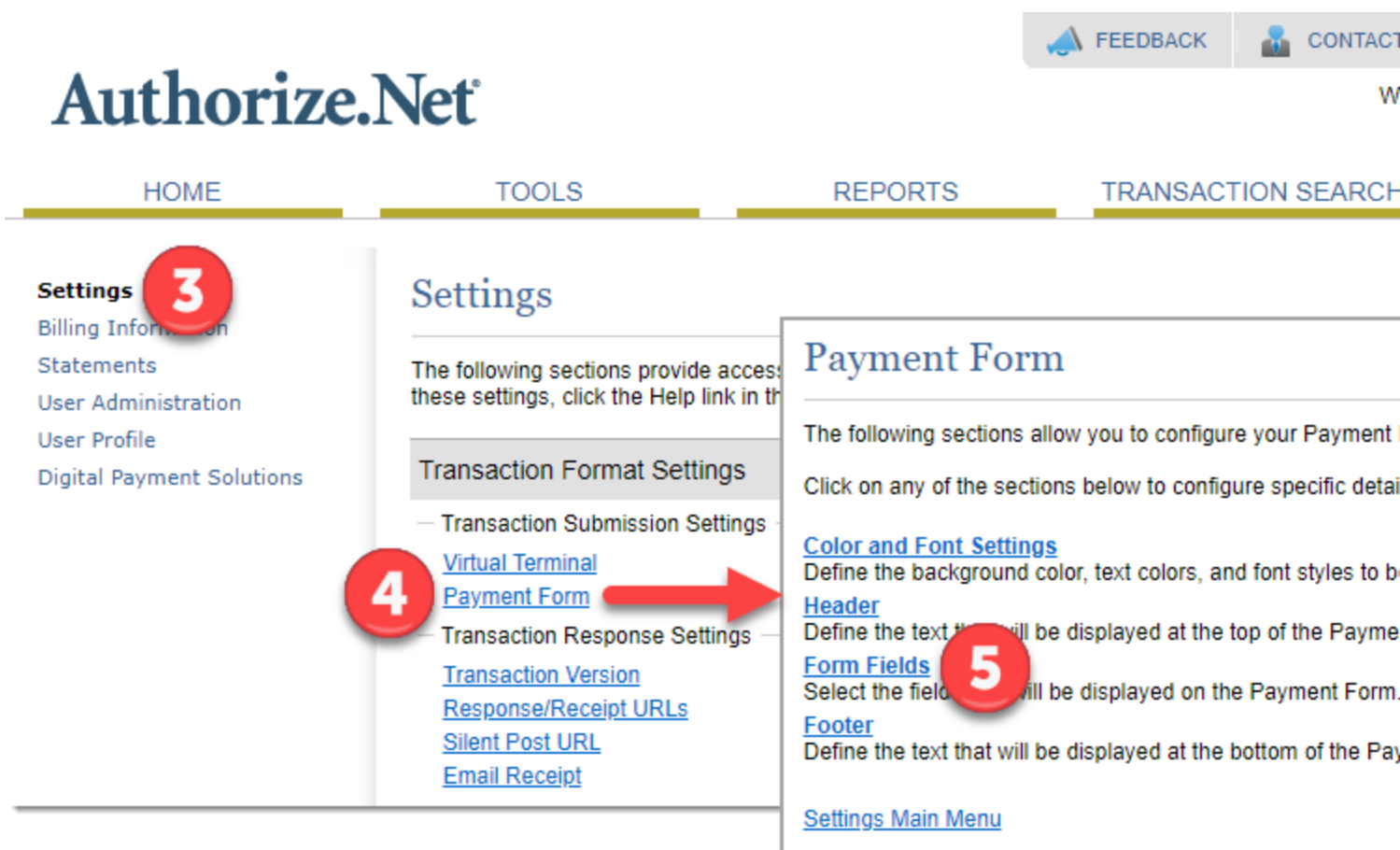
- Create an API Login ID and Transaction Key
- **Convert your account from Test Mode to Live**

Creating API Login ID and Transaction Key

An API Login ID and Transaction Key allows SOLO Server to submit requests that can be authenticated by your Authorize.Net account.

You can follow the instructions below, or **follow the instructions on the Authorize.Net support site**.

1. **Log into your Authorize.net account.**
2. Click on the *Account* heading.



3. Click on *Settings* in the left menu.
4. In the Transaction Format Settings section, click on *Payment Form*
5. Click *Form Fields*.
6. Uncheck any checkboxes in the *Required* column that are checked.
7. Click *Submit* to save any changes.
8. Back on the *Settings* page, in the *Security Settings / General Security Settings* section, click *API Credentials & Keys*.
9. Select *New Transaction Key*.
10. Click *Submit* to continue.
11. Request and enter PIN for verification.
12. Your new Transaction Key is displayed.

Return to the *API Credentials & Keys* page if you need to see your API Login ID.

Configuring the Merchant Account in SOLO Server

SOLO Server Shared URL

If SoftwareKey is hosting your SOLO Server account, call us at +1-321-221-1497 and provide your:

- API Login ID
- Transaction Key
- Credit card types you accept (Visa/Mastercard, American Express, Discover, Maestro, Diners Club)

Make sure you have also **converted your Authorize.Net account to Live mode**.

SOLO Server Dedicated URL or SOLO Server Self-Hosted

If using SOLO Server Dedicated URL or SOLO Server Self-Hosted, follow these steps:

1. Go to the menu *Admin / Merchant Accounts*.
2. Click the Add New button.
3. Set the Type to Authorize.NET, and configure the **merchant account settings**, including:
 - Set Save Credit Card Info to *Save partial/truncated card numbers*. If you want to use the recurring billing engine and payment plans, this must be set to *Save entire card numbers*.
 - Set *Enabled* checkbox to true
4. Click *Save*.
5. Go to the menu *Admin / Account Options* and click the *Edit* button.
6. Set the *Credit Cards Enabled* checkbox to true.
7. Change the *Merchant ID* drop-down to the Authorize.NET merchant account you configured from above.
8. Click the *Save* button.

You can now process eCommerce transactions through the integrated shopping cart.

Configuring WorldPay

If you are using the WorldPay payment gateway to process payments, then you are required to apply some changes to your WorldPay account.

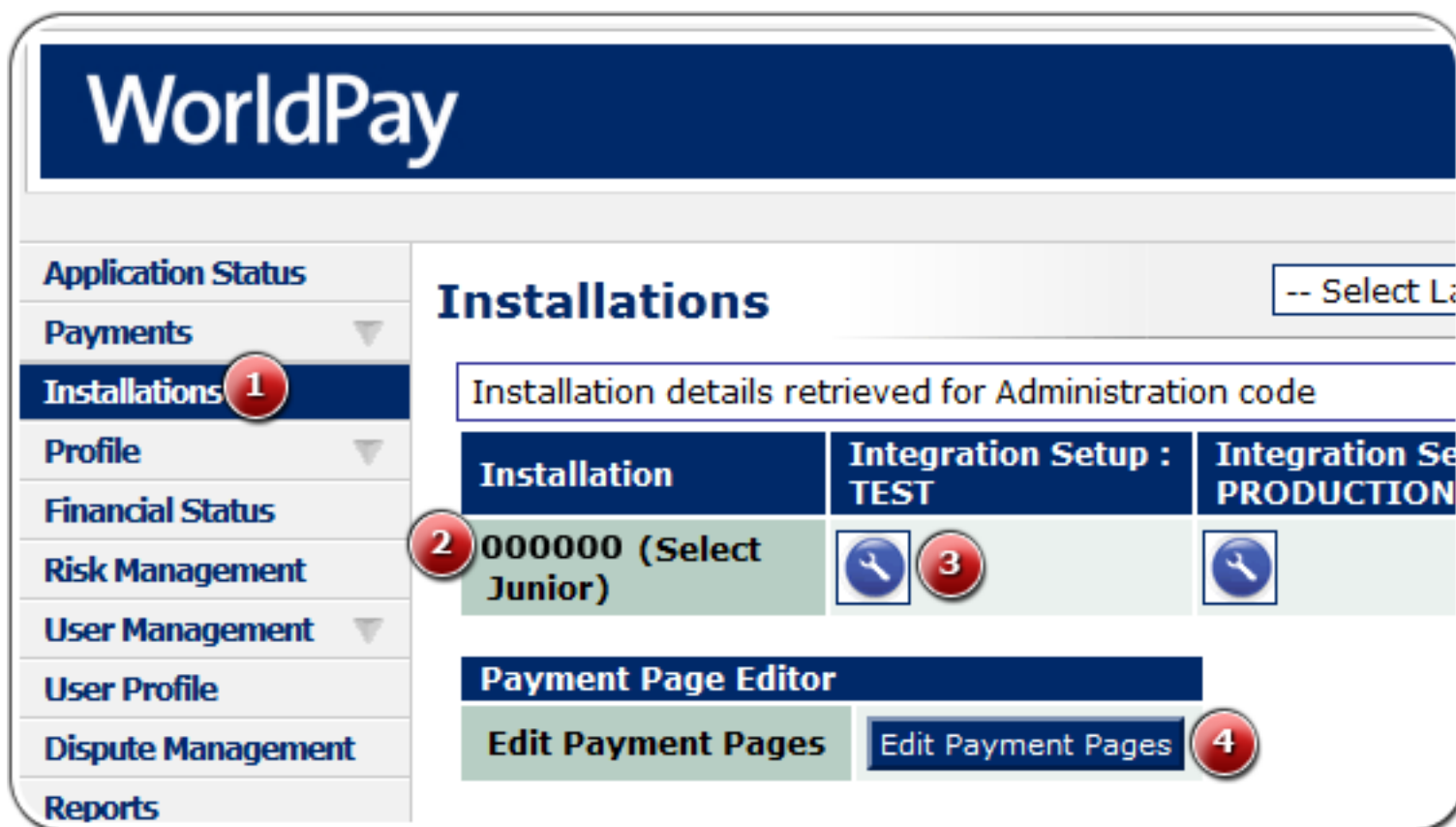
Initial Installation Configuration

Before you may begin using WorldPay with SOLO Server, you will need to have an "Installation" created. WorldPay's merchant support should be able to assist you with this if needed. If you have already been using a WorldPay account prior to creating a SOLO Server account, then you should have a separate "Installation" created just for SOLO Server's transactions. This will help segregate settings specific to SOLO Server, and prevent any potential conflict with settings used other online orders you might accept either directly or through another third-party system.

Important

WorldPay's interface allows you to configure installation settings for a test environment and a production environment separately. We strongly advise you test everything in the test environment first. Once your testing has been completed, you may edit the installation's test environment settings, and then click the "Copy to Production" button near the bottom of that page.

Begin by editing your installation. To do this, follow the instructions and the corresponding items labeled in red in the screen shot below.



WorldPay

Application Status

Payments

Installations 1

Profile

Financial Status

Risk Management

User Management

User Profile

Dispute Management

Reports

Installations -- Select L

Installation details retrieved for Administration code

Installation	Integration Setup : TEST	Integration Se PRODUCTION
2 000000 (Select Junior)	3	

Payment Page Editor

Edit Payment Pages **Edit Payment Pages** 4

1. Click the Installations menu option on the left.
2. Take note of your Installation ID in the list (you will need this later).
3. Click the edit icon under the test environment column for your installation.
4. Take note of the Edit Payment Pages button in this screen shot, which is referenced later.

Now that you are editing the installation's test environment settings, you will need to configure it as follows:

- The *Payment Response URL*, also referred to as the *Callback URL*, **must** be set so that WorldPay knows to notify SOLO Server when payment has been received. If you are using SOLO Server Shared URL, enter https://secure.softwarekey.com/solo/products/b1_processworldpay.asp into this field.

When using SOLO Server Shared / Custom URL, replace *secure* with your custom subdomain. When using SOLO Server Dedicated URL, replace *secure.softwarekey.com* with your domain. When using SOLO Server Self-Hosted, replace *secure.softwarekey.com/solo* in the URL with the path to your SOLO Server instance. Please **contact us** if you need assistance determining the correct URL.

Note that navigating to this page directly in your web browser will display a blank page, as it is only intended to work with WorldPay.

- Next, check the *Payment Response enabled?* option.
- You may optionally check the *Enable the Shopper Response* option. Checking this option will cause WorldPay to display SOLO Server's invoice automatically after payment has been received.
- Next, enter a randomized, alpha-numeric value for the *Payment Response password*, and re-enter the same value in the corresponding *Confirm* field. Take note of the password entered along with the Installation ID shown at the top of the page (if you did not already take note of this earlier - #2 in the screen shot above).
- Click the *Save Changes* button when done.

Next, your SOLO Server account needs to be configured to use the Installation ID and the Payment Response password. If using SOLO Server Self-Hosted, you may **manage your merchant account settings** directly. Otherwise, **contact us** to have this configured for you, and make sure you request to have your account configured to work in test mode initially (which allows you to test with WorldPay without actually charging credit cards, and is especially convenient when your account is not yet used in production).

Aesthetic Customizations (Optional)

SOLO Server allows you to customize the storefront so it resembles your brochure web site. You may also wish to customize WorldPay so its payment processing pages also resemble your web site. For more information on this, visit WorldPay's web site, click on the *Support Centre* option, and select the *Guides* menu option on the left (under the *Self Service*) section. Select the *Business Gateway* option, click *Go*, and then click on the *Customising Guide (Advanced)*. This will provide you with guidance on editing the payment pages, which you can do by logging into the WorldPay interface, clicking *Installations* in the menu on the left, and clicking the *Edit Payment Pages* button (shown in #4 in the screen shot above).

Using SOLO Server's Payment Status Page

As an alternative to WorldPay's *Shopper Response* option (which shows SOLO Server's invoice directly), you may customize WorldPay's *resultY.html* page to link to SOLO Server's Payment Status page instead. To do this, you can add the hyper-link to this page's HTML using code like the following sample for SOLO Server Shared URL.

HTML

```
<a href="https://secure.softwarekey.com/solo/products/PaymentStatus.aspx?CartID=<WPDISPLAY item-  
m=cartId>&Email=<WPDISPLAY item=email>">View your invoice</a>
```

- When using SOLO Server Shared / Custom URL, replace *secure* with your custom subdomain.
- When using SOLO Server Dedicated URL, replace *secure.softwarekey.com* with your domain.
- When using SOLO Server Self-Hosted, replace *secure.softwarekey.com/solo* in the URL with the path to your SOLO Server instance.

Please **contact us** if you need assistance determining the correct URL.

Important

When using a link to SOLO Server's Payment Status page, you need to consider that the link will **not work** when the customer enters a different email address on the WorldPay interface.

Additionally, it is very important that the HTML you add **does not redirect** to SOLO Server's Payment Status page automatically, as this is forbidden by WorldPay.

Going Live

Once you have completed your testing, and you wish to process live/production payments, follow these steps.

1. Log into the WorldPay merchant interface, click "Installations" in the menu on the left, click the edit icon for your installation's test environment settings, and click the "Copy to Production" button near the bottom of the page.
2. If you are using SOLO Server Shared or Dedicated URL, **contact us** to have your merchant account taken out of test mode. Otherwise, if using SOLO Server Self-Hosted, un-check the Test Mode setting on your **merchant account settings**.
3. Test the production environment using one of your own, real credit cards. You can configure and use a priority code to give yourself a discount, which would allow you to run the test charge for a low amount (such as \$1.00). Additionally, once your production testing is complete, you may use the WorldPay merchant interface to issue a refund to your credit card for each order processed. Make sure you mark any refunded invoices as refunded in SOLO Server!

What are Affiliates and Distributors?

Quite often, prospective customers will hear about your products through word-of-mouth and may opt to purchase software through authorized re-sellers.

- **Distributor / Re-seller** - A company authorized to re-sell your application. Typically, distributors keep your product in stock, although that is not a requirement.
- **Affiliate** - An individual or company who recommends your product through a link on their Web site. In exchange for promoting your software products on their Web sites, you reward the affiliate with a commission if someone purchases your software through clicking a link on the affiliate's Web site.

SOLO Server supports the management of both distributors and affiliates. Both terms are used interchangeably throughout the SOLO Server documentation.

More Information

- [Adding Distributors](#)
- [Preparing for Affiliates](#)
- [Advanced External Affiliate Tracking](#)

Initial SOLO Server Setup for Affiliates

The most important part of setting up the Affiliate Management System of SOLO Server is configuring the clickable license agreement.

Depending on the configuration of SOLO Server, there may be two (2) license agreements: one for the author selling the software, and another for the master organization which is hosting SOLO Server. All SOLO Server Shared and Dedicated URL authors must provide their own license agreement dictating the terms, payment schedule, commissions, etc. Concept Software (the company hosting SOLO Server) also has an affiliate network agreement protecting them from the affiliate in case, for example, the author does not pay, etc., etc.

There are three (3) application variables which affect the license agreement message that the potential affiliate sees. The default text is presented below:

You must agree to the terms and conditions of <AuthorName> and <MasterName> in order to become an Affiliate. By clicking Accept you agree to the terms and conditions of these agreement(s).

The application variable **SOLOListAuthorName** determines if the <AuthorName> is listed. The application variable **AffiliateMasterAgreementName** determines the link text for <MasterName>. Finally, the application variable **AffiliateMasterAgreementURL** indicates the URL that should be displayed in a pop-up window then the user clicks on <MasterName>.

Once you decide if you need one or two agreements, proceed to:

Preparing for and Signing Up Affiliates

SOLO Server also offers the option of "Global" distributors/affiliates. This is useful for SOLO Server installations with multiple authors who want to share distributors across all authors. When this is enabled, adding, editing, or deleting either a distributor/affiliate or a distributor type on any author will replicate the changes across all authors. To enable this on a new installation of SOLO Server, refer to the **installation topic**. To enable this on an existing SOLO Server installation, contact support@softwarekey.com for further instructions.

Preparing for and Signing Up Affiliates

The first step (and perhaps the most important part) of launching an Affiliate Marketing program is to design a clear, concise, and unambiguous agreement which lays the foundation of your relationship with your affiliates. This includes the terms of payment and acceptable use.

An example agreement for the Protection PLUS Affiliate program can be found at <http://secure.softwarekey.com/solo/affiliate/ala.asp?a=2451871>.

1. Convert your Affiliate User License Agreement to HTML format.
2. Log into SOLO Server.
3. Click the menu *Configure / Distributors* then use the Actions dropdown and select *Customize Agreement*.
4. Enter the HTML formatted License Agreement.
5. If you wish to have a customized look and feel for the affiliate sign-up pages, create a custom markup template as outlined in the **Customize SOLO Server Storefront** topic. Note that the logo image (Method 1) is not supported in this case.
6. Your next step is to create an affiliate welcome mailing. See **Affiliate Welcome Mailings** for additional details. See Sample Affiliate E-Mail Welcome below. The value of **<URL>** and **<LOGININFO>** placeholders will be filled in by the server with the correct information for this affiliate.
7. Next, use the Actions dropdown and select *Options* and then click the Edit button.
8. If a custom markup template was configured in step 5, select the template as the Affiliate Storefront Template.
9. Set the Affiliate URL to the address of the Web site that the user should be directed to when they click on an affiliate link.
10. Set the default Pct Cost field for new affiliates that sign-up online. This field is **NOT** the commission that you are awarding your affiliates for each sale. Instead, this is the percentage that your distributor pays for your products. For example, if you normally sell a product for \$100 and offer an Affiliate Pct Cost of 65%, they pay \$65 for your product. They can then turn around and sell the product for \$100 (their commission would be \$35) or use Pct Discount to offer the product for somewhere between \$65 and \$100.
11. Choose the mailing just created in step 6 as the Affiliate Welcome Mailing.
12. Click the **Submit** button.
13. To sign up affiliates, put a page on your Web site announcing your affiliate program and link them to the signup page as follows:
 - **SOLO Server Shared URL:** [https://secure.softwarekey.com/solo/affiliate/signup.asp?a=\[Author ID\]](https://secure.softwarekey.com/solo/affiliate/signup.asp?a=[Author ID])
 - replace [Author ID] with your Author ID, which can be found in the footer at the bottom of every page in the SOLO Server administrative interface.
 - If using SOLO Server Shared / Custom URL, replace *secure* with your custom sub-domain.
 - **SOLO Server Dedicated URL:** [https://\[Domain Name\]/solo/affiliate/signup.asp?a=\[Author ID\]](https://[Domain Name]/solo/affiliate/signup.asp?a=[Author ID])
 - [Domain Name] is replaced with your domain name.
 - [Author ID] is replaced with your Author ID (generally 2451871), which can be found in the footer at the bottom of every page in the SOLO Server administrative interface.
 - **SOLO Server Self-Hosted:** [https://\[Domain Name\]/\[SOLO Root\]/affiliate/signup.asp?a=\[Author ID\]](https://[Domain Name]/[SOLO Root]/affiliate/signup.asp?a=[Author ID])
 - [Domain Name] is replaced with your domain name.
 - [SOLO Root] is replaced with your SOLO Server root directory or removed if you are running SOLO Server from the web site root.
 - [Author ID] is replaced with your Author ID (generally 2451871), which can be found in the footer at the bottom of every page in the SOLO Server administrative interface.

Sample Affiliate E-mail Welcome - Must Be Edited

Thank you for your interest in our Affiliate Program! Throughout our 10-year history, many new customers find us through referrals. We are now saying "thank you" to all new customer referrals by launching our Affiliate Program.

Your account has been set up.

Choose one of the graphic buttons displayed on the following page:

<http://www.yourdomain.com/affiliatebuttons.htm>

Then place a link on your web site that points to the following URL:

- **<URL>**

This URL contains your affiliate account information. The user will be redirected to our home page after a cookie is placed on their browser. Any users who download our evaluation copy or purchase our products will automatically be linked to your account and you will receive a commission. You can log in at any time and see how many hits you have gotten and how many people have purchased. Use the following login URL and information:

- *<LOGININFO>*

Again, thank you for signing up with our Affiliate program!

Sales Department

Adding & Managing Distributors

To Add a New Distributor

- From the SOLO Server menu, select *Configure / Distributors* and use the *Actions* dropdown to choose *Add New*.
- Populate applicable fields accordingly. See **Distributors Field List**.
- Click the *Save* button.

To View/Modify Existing Distributors

- From the SOLO Server menu, select *Configure / Distributors*.
- To view an existing Distributor, click on a *[View]* link.
- To edit an existing Distributor, click on an *[Edit]* link. See **Distributors Field List** for an explanation of Distributor fields.
- To delete an existing distributor, click on a *[Del]* link. **Note:** If any licenses are associated with the Distributor at the time of deletion, the Distributor will only be "marked" as deleted (i.e., a *logical* delete, as opposed to a *physical* delete), and will still remain in the database. To include *logically* deleted Distributors in the list, check the *Display Deleted* check box at the top of the page. (Please be aware that only SOLO Server Master Users are permitted to view logically deleted Distributors.)

Exporting Distributors

To export a list of Distributors in a comma separated values (.csv) format, use the *Actions* dropdown and choose *Export List* or *Export Global List*:

- **Export List** will generate a list of Distributors for the currently selected Author.
- **Export Global List** will generate a list of Distributors for *all* SOLO Server Authors. (This option is available only to SOLO Server users with Global Access specified as True within their user profiles.)

Distributors / Affiliates

Distributors and Affiliates are interchangeable concepts in SOLO Server. Each Distributor/Affiliate shares the following properties:

Distributor Contact & Account Details

Company Name

Self-explanatory.

Contact Name

Self-explanatory.

Mail Address 1

Street address.

Mail Address 2

City, State, ZIP or Postal Code.

Mail Address 3

Additional address info, as applicable.

Country

Self-explanatory.

Phone

Distributor/Affiliate phone number.

Email

Distributor/Affiliate e-mail address.

CustomerID

The Customer ID if the Distributor/Affiliate has a corresponding Customer Details record in SOLO Server. When viewing the Distributor record, click this to open the Customer Details page for the Customer in a new window/tab. Note that it is required to link the distributor to a CustomerID if the Require Cart Login checkbox is checked.

Distributor Type

The user defined **Distributor Type**.

Web Site URL

The Distributor's URL or the URL to the Affiliate's home page that hosts your Affiliate graphic.

Enabled

Whether the Distributor is enabled.

User ID

The user ID of the Distributor. This user ID is used to log in to the Affiliate interface or cart.

Password

The password associated with the user ID used to log in to the Affiliate interface or cart. By default, when adding a new distributor, this will be pre-populated with a random password. Click "Generate New Password" to generate a new random password.

Accounting Options

Billing Name

The name that should appear on all checks made payable to this Distributor/Affiliate.

Pct Discount

The discount percentage to apply in the cart when the cart is associated with the Distributor.

Pct Cost

The percentage of the full retail price paid by the Distributor for your products. For example, if you sell a product for \$100.00 and offer Pct Cost of 65%, they pay \$65.00 for your product. This is used by the **Licenses by Distributor Report** to determine commissions owed from/to the distributor.

Tax ID

The Tax ID of the Distributor/Affiliate. This may be necessary for tax purposes because you are paying an entity a commission for sales. Consult your tax advisor to see if your commissions are taxable. Individuals (US residents) should provide their Social Security number.

Tax Classification

Identify the type of entity that this Distributor is classified as.

QB Class

The QuickBooks class associated with this Distributor. Normally left blank.

Advanced Options

The following options are available only to SOLO Server Master Users.

Merchant ID

The merchant account used by the Distributor/Affiliate. This can be set to use the same merchant account as the author or another merchant account defined for the Distributor/Affiliate.

Register Redirect

Custom page to redirect to during checkout after submitting the registration page.

Completion Redirect

Custom page to redirect to during checkout after order processing.

Order Processing Plugin

The order processing plug-in to call after standard order processing to perform additional custom order processing actions.

Cart Options

Notify Orders

Enable if the Distributor should be notified by e-mail of orders processed on their behalf. Note that the Distributor can log in and change this flag.

Require Cart Login

Check this to force the distributor to log into the cart using their UserID/Password. This flag is generally set to True for Distributors who are re-sellers and purchase multiple licenses for redistribution. Note that you must link the distributor to a Customer record by specifying a CustomerID in order to enable this setting.

Storefront Template

The custom markup template to use for the shopping cart **Customized Storefront**.

Order Confirm HTML

Custom HTML that is output for the Distributor/Affiliate on the order confirmation page. The following search and replace variables are supported:

- [varInvoiceNo] - The Invoice Number.
- [varLicenseID] - The License ID, or a comma-separated list of License IDs (if there are multiple licenses).
- [varOriginalQS] - Original query string which began the order.
- [varCustomerID] - The Customer ID.
- [varPassword] - The customer password. **Important Note:** We strongly recommended *not* using this. For customers who have chosen their own password, the value will be masked with * characters and not useful to the user.
- [VarCustomerEmail] - The customer e-mail address.
- [varChargeAmount] - The total amount charged for the invoice (formatted as currency).
- [varChargeAmountNF] - The total amount charged for the invoice (not formatted as currency and to be used with tracking pixels).
- [varAmountSubtotal] - The invoice subtotal (formatted as currency).
- [varAmountSubtotalNF] - The invoice subtotal (not formatted as currency and to be used with tracking pixels).

Distributor/Affiliate Types

For reporting purposes, Distributors/Affiliates can be assigned user-defined types (for example Affiliate, Distributor, OEM, Retail, etc.). This allows the **Unit Compare Report** to group sales by Distributor Type. To configure Distributor Types, go to the menu *Configure / Distributors*, click the Actions drop down and choose Types. This will display a directory of all currently defined Distributor/Affiliate Types. To display, modify, or purge previously existing Distributor Types, click the **[View]**, **[Edit]** or **[Del]** (abbreviation for Delete) links. To define and add a new Distributor/Affiliate Type, click the **[Add New]** link at the top of the page.

Distributor/Affiliate Types are defined by the following fields:

Display Index

Controls the display order of the Distributor/Affiliate Type.

Description

The user-defined name assigned to the Distributor/Affiliate Type.

Include In Unit Compare Report

If this flag is set to True, this Distributor/Affiliate Type will be included in the **Unit Compare Report**.

Distributor Options

There are several Distributor Options related to online affiliate programs that can be configured as follows:

Affiliate Storefront Template

The custom markup template to use for the affiliate **Customized Storefront** for the affiliate signup page.

Affiliate URL

By default, the SOLO Server **Distributor/Affiliate Hit Tracking** page will redirect the user back to Web Site specified in your **Contact Details** after tracking the hit. This setting allows this behavior to be overridden to redirect to a different location on your web site. The following search/replace variables can be used in this field to echo the querystring passed to the hit tracking page back to your site:

- [varQueryString] - Contain the entire query string sent to the */products/info.asp* script
- [varQueryStringLC] - Same as [varQueryString], but converts the entire query string to lower-case.
- [varQueryStringUC] - Same as [varQueryString], but converts the entire query string to upper-case.

Affiliate Pct Cost

This is the default value for new Distributors/Affiliates that sign-up online. This field is *NOT* the commission that you are awarding your affiliates for each sale. Instead, this is the percentage that your distributor pays for your products. For example, if you normally sell a product for \$100 and offer an Affiliate Pct Cost of 65%, they pay \$65 for your product. They can then turn around and sell the product for \$100 (their commission would be \$35) or use Pct Discount to offer the product for somewhere between \$65 and \$100.

Affiliate Welcome Email

The e-mail sent to welcome Distributors/Affiliates who are new to your program. Refer to **Affiliate Welcome Mailings** for more information on creating custom e-mails.

Tracking Affiliate Hit Counts

It is often useful to monitor Distributor/Affiliate-generated traffic as a means to track the overall effectiveness of their campaigns. A Web analytics tool such as WebTrends could provide this for you, as well as other data about prospective customers visiting your Web site. SOLO Server has a basic hit-count tracking mechanism to provide basic data to Distributors/Affiliates without giving them access to all of your Web site analytics.

Collecting Data

To track Distributor/Affiliate hits to your site using SOLO Server and set Affiliate/Distributor cookies in the customer's browser, you can use the *info.asp* page in the products directory. There are actually two (2) ways in which this page can be used. The first method is to embed a 0x0 pixel image file on the home page of your Web site and set the **src** property to point to the *info.asp* page. The second method is to actually redirect to the *info.asp* page and have the page redirect back to your site after recording the hit. In either case, the URL will be as follows:

- `http://secure.softwarekey.com/solo/products/info.asp?a=[Distributor ID/Affiliate ID]&AuthorID=[Your Author ID]&nr=true&page=home"`

The query string parameters are as follows:

- **a=** : The Distributor ID/Affiliate ID sending the traffic to the Web site
- **AuthorID=** : Your SOLO Server Author ID
- **nr=** : For use with an embedded pixel image. If this is set to True, the redirect will be suppressed. If this is set to False, a redirect to the page will occur. In this case, the page will redirect to the SOLO Server Author Distributor/Affiliate URL; or, if this is not defined, the SOLO Server Author Web site.
- **page=** : Use this if you have several places from where you link and you want to differentiate hits from each location. In most instances, this parameter is omitted.

Viewing Traffic

Currently, a raw-hit counter is incremented on the Distributor record when *info.asp* is called. This counter can be viewed by an administrator or by the affiliate after logging in. A more advanced hit-counting mechanism is currently under development. Please contact support@softwarekey.com to find out when this advanced reporting functionality will be completed and available to the SOLO Server Author community.

Important Information for SOLO Server Self-Hosted Authors: Compact Privacy Policy

Because */products/info.asp* places a cookie on the viewer's browser, it is important that the SOLO Server Self-Hosted instance have a compact privacy policy loaded. Otherwise, when the referring page is loaded, a privacy report will show up in the browser status bar, indicating that the third-party cookie was blocked. SOLO Server Shared and Dedicated URL already have a compact privacy policy on the servers.

Advanced External Affiliate Tracking

In some cases, it may be desirable to perform more advanced Distributor/Affiliate tracking at your Web site, as well as optionally track Promo codes (which can be used to differentiate, for example, between different banners clicked on the Distributor/Affiliate site). This allows you to append the Distributor/Affiliate ID and/or Promo code to the "Buy Now" links at your site in order to pass them directly to the Shopping Cart. This can be used in place of, or in addition to, the standard method of **Tracking Affiliate Hit Counts**.

To perform advanced tracking, you must include a common file in each page on your Web site. A sample of this common file written in ASP can be found at

<http://secure.softwarekey.com/solo/templates/AffiliateTrackingSample.htm>.

Important

Once you click on the preceding link, you will be re-directed to what initially appears to be a blank window. Position your mouse anywhere within the white space, right-click, and select "View Source" to view the contents of the sample. Save it to disk, changing the file extension to .TXT and view it using Notepad to see the correct formatting of this file.)

Also, a sample of this common file written in PHP can be found at http://secure.softwarekey.com/solo/templates/AffiliateTrackingSample_PHP.htm. Right click this link and save to disk. Rename the file to .TXT and view it in Notepad to see the correct formatting of this file.

Important

Once you click on the preceding link, you will be re-directed to what initially appears to be a blank window. Position your mouse anywhere within the white space, right-click, and select "View Source" to view the contents of the sample. Save it to disk, changing the file extension to .TXT and view it using Notepad to see the correct formatting of this file.)

To integrate advanced Distributor/Affiliate tracking into your Web site, follow these steps:

- Take the source of the sample page noted above and place in a common include file for your site. Rename the include file to something like *AffiliateInclude.asp* or *AffiliateInclude.php*.
- If necessary, convert the ASP or PHP code to the language used by your Web site.
- Include the file (server side) in every page on your Web site. The file should be included near the top of each page so that processing occurs before any links on the page are written. Here are some examples of what you would add at the top of the file:

Classic ASP

```
<!--#include file="AffiliateInclude.asp"-->
```

PHP

```
<?php include_once("AffiliateInclude.php"); ?>
```

- On all "Buy Now" links or trial sign-up links/forms on the site, wrap the URL in the WrapLink function. This will automatically append the proper parameters to the query string. Here are some examples:

Classic ASP

```
<a href="<%=WrapLink("http://secure.softwarekey.com/solo/products/Cart.aspx?action=add&actiondata0=1234")%">">Buy Now</a>
```

PHP

```
<a href="<?php echo(WrapLink("http://secure.softwarekey.com/solo/products/Cart.aspx?action=add&actiondata0=1234")); ?>">Buy Now</a>
```

Once this is implemented into your site, you can test by visiting a page on your site with **?a=XXXX&Promo=YYYY** in the query string. This should save the a/Promo values to cookies in the browser. Next, navigate to a page with a "Buy Now" link and verify that the query string on the "Buy Now" link has **d=XXXX&PROMO=YYYY** appended to the query string.

Cart Distributor Mode

Overview:

The cart supports a **Distributor Mode** in which a Distributor can log in using the UserID and Password from their Distributor account rather than using a Customer account. This is generally used to allow re-sellers to log in and purchase licenses for redistribution as it ensures that the resulting licenses are properly associated with the Distributor account.

Setting up a Distributor for Cart Distributor Mode

Several steps need to be taken to set up a Distributor to be able to log in to the cart:

1. If the Distributor already has a Customer record in SOLO Server, get the Customer ID; otherwise, create a new Customer record for the distributor and take note of the Customer ID.
2. Edit the Distributor record and set the Customer ID to the value from the Step 1. This is the Customer record with which all orders for the distributor will be associated.
3. Optionally, set the "Require Cart Login" flag. When this flag is set to True, the checkout process will force a Distributor login for any carts associated with the Distributor. Note that you must set this flag to True if you do not enable the cart option "Display Distributor Login", or the distributor will be unable to reach the login page.

Customer License Portal Overview

While administrators log into the SOLO Server author interface to manage their account, products, customers and orders, your customers (end-users) can log into a dedicated portal that provides them with the capability to view and manage their software licenses.

Customers can log into this portal to see their order history, reprint receipts, download software updates, purchase upgrades, renew support contracts, register software, retrieve license keys, and much more. What you allow the customer can do depends on your SOLO Server account configuration.

The default design of the Customer License Portal is a generic, clean interface, but this can be **customized to match the look and feel of your website:**

LICENSE PORTAL

License Portal Home



License Portal Home

Welcome



Payment History

Review past payments and re-print receipts and invoices.



Downloads

Download purchased software.



Licenses & Activations

Activate and manage your software installations.



Renewals & Upgrades

Renew software & support subscriptions and purchase upgrades.



Contact Information

Customer ID: 20518451

Company Name: TEST COMPANY

Contact Name: JOHN DOE

Address: 123 TEST ST.
TESTVILLE, TX 12345
UNITED STATES

Phone Number: 123-456-7890

Email Address: test_customer@softwarekey.com



Edit Contact Information



Change Password

Support Information

Email: [support@softwarekey.com](#)

Phone: 1-314-567-8901

Fax: 1-314-567-8902

Web: [http://www.softwarekey.com/support](#)

Linking to the Customer License Portal from Your Website

Placing a link to the SOLO Server Customer License Portal on your brochure or support website is a simple process.

To get the URL, use the menu **Store / Generate Ordering Links** and copy the Customer License Portal URL.

Alternatively, generate the URL as follows:

- **SOLO Server Shared URL:** `https://secure.softwarekey.com/solo/customers/Default.aspx?AuthorID=[Author ID]`
 - replace [Author ID] with your Author ID, which can be found in the footer at the bottom of every page in the SOLO Server administrative interface.
 - If using SOLO Server Shared / Custom URL, replace *secure* with your custom sub-domain.
- **SOLO Server Dedicated URL:** `https://[Domain Name]/solo/customers/Default.aspx?AuthorID=[Author ID]`
 - [Domain Name] is replaced with your domain name.
 - [Author ID] is replaced with your Author ID (generally 2451871), which can be found in the footer at the bottom of every page in the SOLO Server administrative interface.
- **SOLO Server Self-Hosted:** `https://[Domain Name]/[SOLO Root]/customers/Default.aspx?AuthorID=[Author ID]`
 - [Domain Name] is replaced with your domain name.
 - [SOLO Root] is replaced with your SOLO Server root directory or removed if you are running SOLO Server from the web site root.
 - [Author ID] is replaced with your Author ID (generally 2451871), which can be found in the footer at the bottom of every page in the SOLO Server administrative interface.

Customer License Portal Customization

It is also possible to **customize the look of the portal to match your website**. The Customer License Portal uses temporary (session) cookies to control the look and feel of the portal, and if you are not seeing your customizations being displayed, try the following:

- Ensure that your Author ID is in the Customer License Portal login URL (see above for details).
- Close all your browser windows (or use a different browser) to remove all session cookies and try again.

Browser Requirements and Recommendations

It is always strongly recommended that users employ the most recently released (and generally regarded as stable) versions of standards-compliant Web browsers. The minimum requirements for the Customer License Portal are presently as follows:

- A minimum screen resolution of 1024x768 pixels or higher (larger screen resolutions are required for larger font DPI settings).
- Color quality of 16-bit or higher (24-bit or higher recommended)
- A current, standards-compliant Web browser. Although you may see some minor visual differences in older browsers, minimum supported Web browser versions are as follows:
 - Internet Explorer 6.0 or higher (8.0 or higher recommended)
 - Mozilla Firefox 3.0 or higher (3.5 or higher recommended)
 - Apple Safari 3.1 or higher (4.0 or higher recommended)
 - Google Chrome 1.0 or higher

Recommended screen resolution and color quality requirements and recommendations are based on the default template available. This is subject to change with any **custom styling**.

Customer License Portal Options

The SOLO Server **Customer License Portal** has several options to control the content and functionality presented to the user.

To view the options, use the menu *Configure / Customer License Portal Options*. Click *Edit* to change the options.

Description of the configurable options

Storefront Template

The custom markup template to use for the customer license portal **Customized Storefront**.

Custom Renewal URL

This overrides the Renewals and Upgrades page in the **Customer License Portal** Dashboard. This parameter is intended to be used under the guidance of the product support department.

Require Phone

Whether the phone number is required on the customer registration page.

Features

Various features which can be enabled/disabled:

- Allow customers to activate manually using trigger codes - when this is set customers will be offered an *Activate* button on the license details page to a separate page which will allow the user to manually generate activation codes that use trigger code activation.
- Filter history on Issue License - when this is set, the license history displays only licenses for product options with the Issue License option enabled.
- Allow new customer sign up - when set, the log in page will include a form to allow new customers to sign up for an account.
- Require email validation on new customer sign up - available when Allow new customer signup is set. When set, after creating a new account, new customers will be sent an email notification to verify their account and must visit a one time link for account verification before being allowed to access the license portal.
- Require Registration - when set, if the customer record is marked as unregistered, the customer will be required to enter registration information after logging in before they can continue.
- Network Session History Enabled - when set, the cloud controlled network floating session history page is available in the customer license portal. This feature is in preview - **contact us** for more information if you are interested in implementing advanced network floating licensing into your product.

Dashboard Buttons

The dashboard buttons which will be enabled and displayed on the **Customer License Portal** home page.

- Payment History Button - Allows customers to view their prior invoices.
- Downloads Button - Allows customers to view a consolidated listing of available downloads.
- Recurring Payments Button - Allows customers to view, edit, and cancel recurring payments.
- Licenses & Activations Button - Allows customers access to their license and activation history.
- Renewals & Upgrades Button - Allows customers access to a consolidated listing of all renewals and upgraded.
- Product Registration Button - Allows customers access to register licenses to their account.

Licensee Fields

Whether users are allowed to view/edit the licensee fields on their licenses.

Installations

Whether users are allowed to view and manage installations on their licenses. This allows the customer to **Deactivate an Installation Through the Customer License Portal**.

Installation/Computer Name

Whether users are allowed to view and/or edit the installation name on their installations or the view the computer name on network floating sessions for licenses configured for use with cloud controlled network floating licensing.

Network Sessions

Whether customers may view and optionally close active network floating sessions on licenses configured for use with cloud controlled network floating licensing.

Customer Welcome Mailing

The custom mailing to be sent when a new customer signs up. See [Customer Welcome Mailings](#) for more details.

Additional parameters will be added in the future.

With everything enabled, the customer will see the following License Details page:

LICENSE PORTAL

[License Portal Home](#) » [Licenses & Activations](#) » License Details



License Details for Protection PLUS 5 Sample 30 Day Lic

License Information

Status: OK

License ID: 61014377

Activations Left: 1

Deactivations Left: 1

Expires: Sep 30 2015 (365 Days)

Order Info

Invoice:

Date Ordered:

Quantity:

Licensee Information

Licensee Name: Test Customer

Licensee Email: test_customer@softwarekey.com



Edit Licensee Information

Additional Information



Download



Activate



Manage Installations

Implementing Custom Branding

By default, a generic "Software Store" or "License Portal" heading will be displayed in the **Shopping Cart** and **Customer License Portal**. There are two methods to customize these pages to look like your web site, which can be accessed by going to the menu *Configure / Custom Markup & Logo*. Customizations can be applied to the **Shopping Cart** at the author, distributor, and product levels, while the **Customer License Portal** can be customized at the author level.

Method 1: Logo Image

The first customization method displays a single header image in place of the default "Software Store" or "License Portal" heading. To implement this method, simply upload a company logo or banner graphic by clicking the *Select New Image* button, choosing your image, and then clicking the *Upload Image* button. The image will appear centered in the header on the shopping cart and customer license portal pages. You can also remove the image by clicking the *Remove Image* link on this same page. A few things to note:

- The recommend logo image width is 738 pixels.
- At least 740 pixels of width must be reserved for the SOLO Server content.
- This method is not supported in the **Shopping Cart** at the distributor and product levels.
- Method 2 will override this method if used at the author level in the **Shopping Cart** or in the **Customer License Portal**.

Method 2: Custom Markup Templates

The second customization method allows you to make the **Shopping Cart** and/or **Customer License Portal** look like your existing web site using Custom Markup Templates. With this method, a web developer can specify custom top and bottom HTML markup to replace the default markup output at the top and bottom of the **Shopping Cart** or **Customer License Portal**. A few things to note:

- If a Custom Markup Template is configured for an area of SOLO Server, it will take precedent over the Logo Image from Method 1.
- Customization at the product level using this method is only supported when running the cart in **Single Order Mode**.

Customizing your Storefront is comprised of three steps:

1. **Uploading Graphics, Stylesheets, and Other Supporting Files**
2. **Creating a Custom Markup Template**
3. **Setting the Storefront Markup Option**

Uploading Graphics, Stylesheets, and Other Supporting Files

SOLO Server uses HTTPS encryption to protect customer data. When customizing the customer facing areas of SOLO Server, referencing files on an external server which is not using an HTTPS connection will cause a message similar to "The page you are about to view contains both secure and unsecured items. Do you wish to view the unsecured items?" to be displayed to the end user, which will inevitably confuse them. Therefore, it is necessary to upload all graphics, stylesheets and other supporting files to your *Storefront Files* directory on SOLO Server so that all page items can be transferred through the HTTPS encryption channel. Note that the maximum upload size is set at 300MB.

Uploading and managing files on the server is accomplished through an easy to use interface very similar to Windows Explorer. Use the menu *Configure / Manage and Upload Files*. See **Managing Files** for more details on using the file management interface.

Creating a Custom Markup Template

Important

Customization does not work with sites using frames. You can still link your frames pages to pages within SOLO Server, however, you can't put our forms in your frames. SOLO Server's pages are not secure within frames.

1. In the **Custom Markup Templates** section Click **Add New**.
2. Pick a name for the template, such as **Shopping Cart** or **Customer License Portal**.

3. If necessary, have your graphic designer create a blank page with your navigation included and place <SOLO Server content goes here> where you would like the SOLO Server page content to appear. For the **Shopping Cart**, you can also begin with the **Sample Custom HTML** and modify this to suit your needs. Note that at least 740 pixels of width must be reserved for the SOLO Server content.
4. Paste the site's HTML coding into the form. Everything before <SOLO Server content goes here> goes in Markup Top. Everything after <SOLO Server content goes here> goes in Markup Bottom.
5. Now you need to edit your HTML slightly:
 1. If you would like SOLO Server to dynamically insert the current page name (e.g. "Shopping Cart", "License Portal - Home", etc.) into the existing title, locate the `<title>` HTML element in the Markup Top. Add a [varTitle] search/replace string to the existing value where you would like the page name to be inserted.
 2. It is also necessary to add a `Content-Type` meta tag to the `<head>` HTML element as shown below. This will ensure that the customer's browser uses the proper character set which works with SOLO Server's client side validation routines.
 3. The above two steps should look similar to this:

HTML

```
<head>
  <title>Software Store - [varTitle]</title>
  <meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1" />
</head>
```

6. Next, you need to add the links to the default CSS stylesheets somewhere between the `<head>` tag and `</head>` tag. The markup for these links is shown below:

Shopping Cart Default CSS - HTML

```
<link href="[varSOLODirRoot]/products/cart_styles_core.css" rel="stylesheet" type="text/css" />
<link href="[varSOLODirRoot]/products/cart_styles_print.css" rel="stylesheet" type="text/css" media="print" />
<link href="[varSOLODirRoot]/products/cart_styles_screen.css" rel="stylesheet" type="text/css" media="screen,projection" />
<link href="[varSOLODirRoot]/products/cart_styles_speech.css" rel="stylesheet" type="text/css" media="speech" />
```

Customer License Portal Default CSS - HTML

```
<link href="[varSOLODirRoot]/customers/reset.css" rel="stylesheet" type="text/css" media="screen" />
<link href="[varSOLODirRoot]/customers/customersNET.css" rel="stylesheet" type="text/css" media="screen" />
<link href="[varSOLODirRoot]/customers/customersNET_print.css" rel="stylesheet" type="text/css" media="print" />
<!--[if IE 6]><link rel="stylesheet" type="text/css" href="[varSOLODirRoot]/customers/customersNET_ie6.css" media="screen" /><![endif]-->
<!--[if IE 7]><link rel="stylesheet" type="text/css" href="[varSOLODirRoot]/customers/customersNET_ie7.css" media="screen" /><![endif]-->
<link href="[varSOLODirRoot]/customers/customersNET_default.css" rel="stylesheet" type="text/css" media="screen" />
```

7. Now change any links that refer back to your web site to have the full address (e.g. `http://www.yourdomain.com/directory/file.htm`), or the links will point to a nonexistent page within SOLO Server.
8. You also need to change the graphic and other supporting file paths. They all need to go to "[varSOLODirRoot]/products/custom/[Author ID]/[File Path]", replacing the following:
 1. [Author ID] is replaced with your Author ID, which can be found in the footer at the bottom of every page in the SOLO Server administrative interface.

2. [File Path] is replaced with the path to the file relative to the Storefront Files root folder in the **Manage Files** interface.
9. Note that any links in your custom markup that link into a SOLO Server subdirectory, such as a link to view the **Shopping Cart** or to login to the **Customer License Portal**, must access the subdirectories with the subdirectory name in all lower case (for example <http://secure.softwarekey.com/solo/customers> and not <http://secure.softwarekey.com/solo/Customers>). If mixed case subdirectory names are used, you will experience problems with cookies being set in the browser.
10. Click **Save**.
11. Test and verify the template:
 1. If configuring the template for use in the **Customer License Portal**, you can click the **Customer License Portal** link under **Previews** to see what this template looks like in the portal.
 2. A future build of SOLO Server will introduce preview functionality for the **Shopping Cart**. Until this is available:
 1. If you have yet to "go live":
 1. Update the **Cart Options** and set the Storefront Template setting to the newly created template.
 2. Use the Store / **Create a New Order/Cart** page to create a cart and view and verify the markup.
 2. If you are already "live" and need to test and verify the changes without immediately pushing them live, follow these steps:
 1. Create a dummy **Distributor** record for testing, setting the Storefront Template setting on the distributor to the newly created template.
 2. Use the Store / **Create a new Order/Cart** page to create a cart, selecting the distributor from the prior step, and then test and verify the markup in the cart.

Setting the Storefront Markup Option

- To configure the markup at the author level in the **Shopping Cart**, edit the **Cart Options** and set the Storefront Markup setting to the appropriate template.
- To configure the markup at the distributor level in the **Shopping Cart**, edit the **Distributor Configuration** for the distributor and set the Storefront Markup setting to the appropriate template.
- To configure the markup at the product level in the **Shopping Cart**, edit the **Product Configuration** for the product and set the Storefront Markup setting to the appropriate template.
- To configure the markup for the **Customer License Portal**, edit the **Customer License Portal Options** and set the Storefront Markup setting to the appropriate template.

Viewing Audit Data

Once a custom markup template is created, SOLO Server automatically records an audit trail of all changes made to the template. To view the audit data for a template, simply view the template, and then click the *View Audit History* button. This will display a listing of the audit history of the template. Click the *View* link for a given audit to see a listing of the changes for that particular audit.

Advanced - Creating Custom Stylesheets

The default CSS stylesheets detailed above will cause the dynamically generated SOLO Server page content to render with SOLO Server's default look and feel. These stylesheets can be overridden to further change the look and feel of the generated content to more closely match your web site.

The recommended method of creating custom stylesheet versions is as follows:

- Download the default stylesheets and save the files locally.
- Modify the local copies of the default stylesheets as needed.
- **Upload** the custom versions of the stylesheets to your storefront directory.
- Update the custom markup template to reference the custom versions of the stylesheets.

The default stylesheets offer a great number of CSS classes - too many to document here without becoming overwhelming. The naming conventions used in the stylesheets should be sufficient to allow locating the proper elements to customize after reviewing the files.

Optional Advanced Implementation For the Customer License Portal

If you would like to have text on the Custom Markup change between Log In and Log Out (depending on the log in state), optionally use the following two HTML comments (replace 2451871 with your Author ID):

Customer License Portal Advanced Markup - HTML

```
<!--[varAnonymousMenu]<a href="[varSOLODirRoot]/customers/Default.aspx?AuthorID=2451871" title-  
e="Use this link to log into our License Portal">Log In</a>[/varAnonymousMenu]-->  
<!--[varAuthenticatedMenu]<a href="[varSOLODirRoot]/customers/Default.aspx?Logout=True" title-  
e="Use this link to log out of the License Portal">Log Out</a>[/varAuthenticatedMenu]-->
```

Deactivating an Installation through the Customer License Portal

Deactivating through the **Customer License Portal** is useful in case the customer no longer has access to the installation they need to deactivate. This may occur if a computer crashes or is formatted. If you allow the customer to enter an "Installation Name" during activation, you can choose to display it in the Installation History. This has the potential benefit of helping them identify their different installations.

The relevant **Customer License Portal Options** are listed below. "Customers may view installation data and deactivate installations" must be selected to allow the customer to deactivate their own installations:

Installations:

Whether users are allowed to view and manage installations on their licenses.

- Customers may not access installation data, and they will not be able to deactivate.
- Customers may only view installation data, but not deactivate.
- Customers may view installation data and **deactivate installations**

Installation Name:

Whether users are allowed to view the installation name.

- Customers may not access the installation name
- Customers may view the installation name

If you allow the customer to enter an installation name during activation and allow them to view it in the **Customer License Portal**, this will help them more easily identify which installation matches up to which computer.

The following screen shot has the options set to view installation data and deactivate installations, and also view the installation name:

LICENSE PORTAL

[License Portal Home](#) » [Licenses & Activations](#) » [License Details](#) » Installation History

Installation History

Installation ID	Status	▼ Activation Date/Time	N
AFZ35-CSHPF-KWYLC-U93XG-BK5YS-W	Active 	Sep 30 2014 4:14:17 PM	Jo
XSEYU-SUULK-BXWYZ-Z2CFT-7KJVH-S	Active 	Sep 30 2014 4:04:36 PM	Jo

Clicking on the red (X) will prompt the user with the message: "Are you sure you want to deactivate Installation ID "XXXX-XXXXX-XXXXX-XXXX-X"?" for that given Installation ID:

Are you sure you want to deactivate Installation ID "6G6YS-U3DXZ-UXYWZ-3FN9Q-MUP8M-A" ?

OK

Cancel

Web Services Overview

SOLO Server offers several web services which allow you to build custom interfaces which interact directly with SOLO Server via HTTP.

Supported Web Services

Web Service	Description
Activation Server	Provides a method which may be used for generating activation codes for the manual/trigger code activation process . Whenever possible, however, we strongly encourage the use of the XML Activation Service instead, as it contains support for newer and more robust activation features.
Cart Server	Includes methods for creating and manipulating carts. This is particularly useful for a highly customized integration with a brochure website that would be otherwise difficult to achieve through the use of cart query string parameters alone.
Customer Server	Supplies methods for creating customers and manipulating customer registration data. Because it contains features and capabilities not previously available with its predecessor, the newer XML Customer Service should be used instead, whenever possible.
License Server	Includes methods for creating licenses and manipulating customer registration data. The superior XML License Service should be used instead, if at all possible.
XML Activation Service	Supplies methods for activating, deactivating, and validating Protection PLUS 4 SDK, Instant Protection PLUS 3 and Protection PLUS 5 SDK license installations.
XML Customer Service	Provides methods for finding and authenticating customers.
XML License Service	Includes methods for creating, manipulating, and validating licenses.
XML License File Service	Includes methods for retrieving and refreshing Protection PLUS 5 SDK license files.

When using the XML web services, the & (ampersand) character is an escape character in XML, and would need to be replaced with *&* when using it as input.

Contact support@softwarekey.com if you determine a need for one or more customized web services for your application.

Web Service Security

Important

For security reasons, certain SOLO Server web services require the following to be passed to the web method:

- Author ID
- API User ID
- API User Password

If you are using any of the web methods that require these values as inputs, you need to create an *Integration User* on your SOLO Server account, which will be used **exclusively** for the web services. An Integration User **cannot** log into the SOLO Server author interface.

If you are currently using the regular UserID and UserPassword credentials, you will need to update your application(s) to use an API UserID and API UserPassword instead, as support for the regular User ID and Password will be removed in the future.

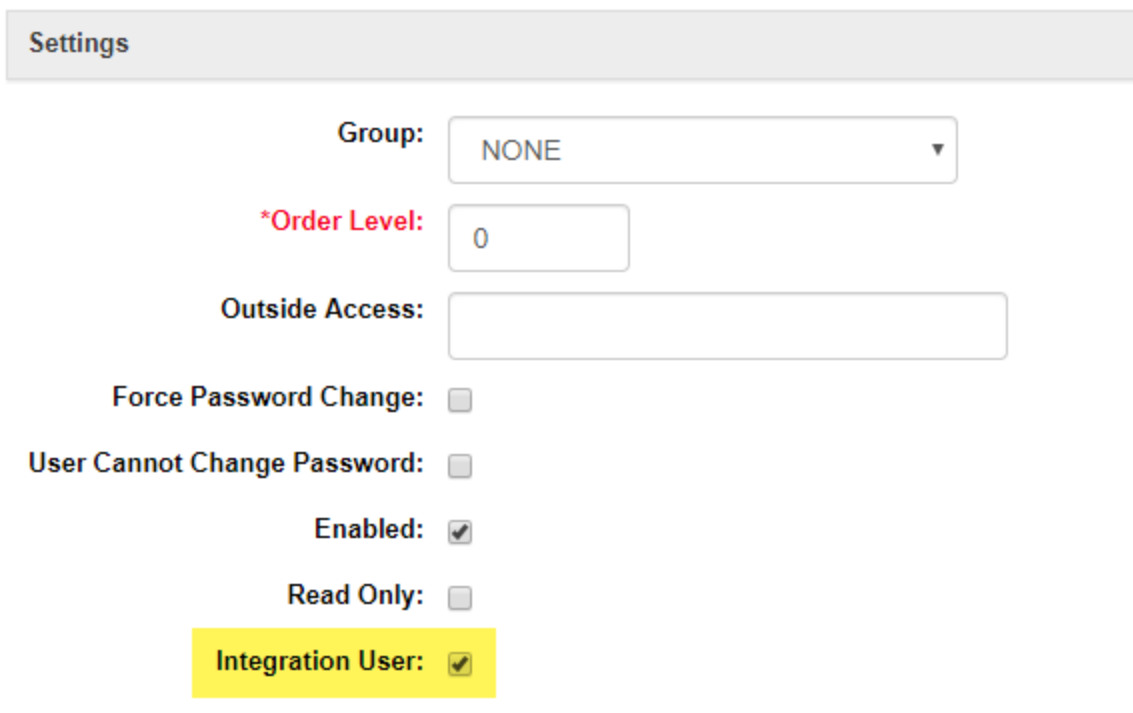
The web methods that require providing an AuthorID, API UserID, and API User Password as inputs ([see below](#)) should only be used by your internal systems and applications. It is *not* safe to deploy your protected applications with API credentials, as this exposes a security risk to your account. If you absolutely need to allow your protected application(s) to use these web methods, we recommend creating and hosting a proxy web service that can properly authenticate the request from your software and then make the web service call to SOLO Server.

Creating an Integration User

To create an Integration User, first **add a new user**.

You can also edit an existing user to update them to an Integration User.

Enable the *Integration User* option in the Settings section:



Settings

Group:

*Order Level:

Outside Access:

Force Password Change: ☐

User Cannot Change Password: ☐

Enabled: ☒

Read Only: ☐

Integration User: ☒

This user's Group can be set to NONE, and they should be granted the appropriate user permissions to perform the required action of the web service method(s) you are using ([see below](#)).

To ensure even greater security, you can also use the Outside Access field on the user record to restrict which IP addresses can call the web methods.

After clicking Save button, viewing the user will list the system generated API User ID and API User Password:

Integration User: True

API Credentials:

API User ID:

API User Password:

Important

An *Integration User* is used **exclusively** for the web services. An Integration User **cannot** log into the SOLO Server author interface.

Affected Web Service Methods and Required Permissions

The following web methods require the AuthorID/API UserID/API UserPassword and these User **permissions**:

Web Service Method	Required User Permission(s)
CustomerServer. CreateCustomer	Add Single Customer
LicenseServer. AddLicenseAndUnregisteredCustomer	Add Single Customer, Add Licenses
XmlCustomerService. GetCustomerDataByAuthor	none
XmlCustomerService. CustomerSearch	none
XmlCustomerService. CustomerLogin	none
XmlLicenseService. Add	Add Licenses
XmlLicenseService. UpdateActivationFields	Edit Licenses
XmlLicenseService. UpdateUserDefinedFields	Edit Licenses (when <i>User Defined Fields Writable</i> setting is disabled)
XmlLicenseService. GetLicenseCustomData	none
XmlLicenseService. UpdateLicenseCustomData	Edit Licenses
Any reports accessed programatically	dependent on the report

Accessing Web Services from your Application

Application Programming Interface (API) Libraries

The SoftwareKey System offers an assortment of libraries which provide APIs that simplify the invocation of these web services from your application. This collection of API libraries includes:

- The Protection PLUS 5 SDK libraries, including the PLUSManaged library (for .NET applications), and the PLUSNative library (for native applications).
- The Automation Client library, which is included with Protection PLUS 4 SDK for native/unmanaged applications.
- The SwkClientServices2005 library, which is included with Protection PLUS 4 SDK for .NET/managed applications.

Please refer to the applicable product manuals and sample projects for more information on each library/API.

Automation Client Scripts

SOLO Server also includes a variety of **Automation Client scripts**, each of which is specifically designed to work with Automation Client functions. Although these web services provide the same (and more!) functionality than the Automation Client scripts, the scripts may still be a more convenient means of gearing your application to communicate with SOLO Server.

Custom Web Form Integration

In some cases, these web services may be used with your own, custom web forms. (An example of a custom web form is **Self Hosted Trial Tracking** forms.) If you are creating custom web forms which integrate with these web services, you should review the **Client Validation Script**, which simplifies adding client-side validation to your forms, which will help ensure that SOLO Server accepts the data entered by the end-user.

Activation Server

The Activation Server web service provides a license activation method, validating license input parameters and generating unlocking codes if the input is verified.

For SOLO Server Shared URL, this can be reached at <https://secure.softwarekey.com/solo/webservices/activationserver.asmx>

- When using SOLO Server Shared / Custom URL, replace *secure* with your custom subdomain.
- When using SOLO Server Dedicated URL, replace *secure.softwarekey.com* with your domain.
- When using SOLO Server Self-Hosted, replace *secure.softwarekey.com/solo* in the URL with the path to your SOLO Server instance.

Please **contact us** if you need assistance determining the correct URL.

The *activationserver.asmx* page offers the following Web methods:

ActivateLicense

Provides activation codes for a license after validating the license information passed in.

Input

Parameter	Data Type	Required/Optional	Description
licenseID	int	Required	The License ID. Not required with a serialNumber. Pass in 0 (zero) to omit.
password	string	Required	The customer password or license activation password. Not required with a serialNumber. Pass in "" to omit.
productID	int	Required	The Product ID.
code1	int	Required	Generally, the entry code.
code2	int	Required	Generally, the computer code.
serialNumber	string	Required	Any serial number associated with the License ID. Required with no License ID. Pass in 0 (zero) for no serial.
requireRegistration	bool	Required	True/False as to whether or not to require the customer to register before activation will be permitted.

Output

The result dataset contains the following parameters:

Parameter	Data Type	Description
Failure		

ErrorCode	int	The resulting Return Code from execution of ActivateLicense method. A Return Code of 0 (zero) indicates success. Return Code values are as follows: • 40 - Security Check Failure • 50 - Invalid Parameters • 75 - Invalid Computer ID • 100 - Invalid License ID / Password/ SerialNumber • 150 - Unregistered Customers (when requiresRegistration is passed in as True) • 200 - Invalid Product ID • 300 - No More Keys Available • 400 - Invalid Option Type • 450 - License Expired • 500 - Unknown Error
ErrorMessage	string	Message from the error code. See descriptions in ErrorCode.
Success		
Product	string	The full Product name (i.e., Product name + Product Option name).
LicenseID	int	The License ID. This is only set if the license is validated.
Quantity	int	The quantity on the license.
RegCode1	int	Registration (Activation) Code 1.
RegCode2	int	Registration (Activation) Code 2.
LicenseUpdate	string	The contents of the License Update field for the license.
UnlocksLeft	int	The number of unlocks remaining (after the current unlock action takes effect).

ActivateLicenseETC

Provides activation codes for a license after validating the license information passed in for product options using the Downloadable License with Encrypted Trigger Code Validation option type.

Input

Parameter	Data Type	Required/Optional	Description
licenseID	int	Required	The License ID. Not required with a

			serialNumber. Pass in 0 (zero) to omit.
password	string	Required	The customer password or license activation password. Not required with a serialNumber. Pass in "" to omit.
productID	int	Required	The Product ID.
code1	int	Required	The License ID.
code2	int	Required	Generally, the computer code.
serialNumber	string	Required	Any serial number associated with the License ID. Required with no License ID. Pass in 0 (zero) for no serial.
requireRegistration	bool	Required	True/False as to whether or not to require the customer to register before activation will be permitted.

Output

The result dataset contains the following parameters:

Parameter	Data Type	Description
Failure		
ErrorCode	int	The resulting Return Code from execution of ActivateLicense method. A Return Code of 0 (zero) indicates success. Return Code values are as follows: • 40 - Security Check Failure • 50 - Invalid Parameters • 75 - Invalid Computer ID • 100 - Invalid License ID / Password/ SerialNumber • 150 - Unregistered Customers (when requiresRegistration is passed in as True) • 200 - Invalid Product ID • 300 - No More Keys Available • 400 - Invalid Option Type • 450 - License Expired • 500 - Unknown Error
ErrorMessage	string	Message from the error code. See descriptions in ErrorCode.
Success		

Product	string	The full Product name (i.e., Product name + Product Option name).
LicenseID	int	The License ID. This is only set if the license is validated.
Quantity	int	The quantity on the license.
RegCode1	int	Registration (Activation) Code 1.
RegCode2	int	Registration (Activation) Code 2.
LicenseUpdate	string	The contents of the License Update field for the license.
UnlocksLeft	int	The number of unlocks remaining (after the current unlock action takes effect).
EncryptedRegistrationKey	int	The encrypted trigger code.

Cart Server

The Cart Server web service provides several Web methods for interacting with shopping carts.

For SOLO Server Shared URL, this can be reached at <https://secure.softwarekey.com/solo/webservices/cartserver.asmx>

- When using SOLO Server Shared / Custom URL, replace *secure* with your custom subdomain.
- When using SOLO Server Dedicated URL, replace *secure.softwarekey.com* with your domain.
- When using SOLO Server Self-Hosted, replace *secure.softwarekey.com/solo* in the URL with the path to your SOLO Server instance.

Please **contact us** if you need assistance determining the correct URL.

The *cartserver.asmx* page offers the following Web methods:

AddCartItem

Adds an item to a cart.

Input

Parameter	Data Type	Required/Optional	Description
cartID	int	Required	The cart ID to which the item is to be added.
prodOptionID	int	Required	The Product Option ID to add to the cart.
quantity	int	Required	The quantity of the item to add .
upgradingFrom	int	Optional	If upgrading from an existing License ID, the License ID being upgraded from. Pass in 0 (zero) if not upgrading.
returnPage	string	Optional	The URL of the page to return the customer to when the Continue Shopping button on the cart is clicked. Pass in an empty string for no return page. If an empty string is passed, the URL will revert to the Continue Shopping URL specified in the Cart Options.

Output

The result dataset contains the following parameters:

Parameter	Data Type	Description
result	int	• If the result is greater than 0 (zero), the result represents the new CartItemID. • If the result equals 0 (zero), this indicates a general failure to update the database as expected. • If the result is less than 0 (zero), the res-

ult represents a generated error code. The error codes and their associated meanings are as follows:

- **-1:** The prodOptionID passed in is invalid.
- **-2:** The Product or Product Option is disabled.
- **-3:** There is no merchant account associated with the cart.
- **-4:** The Product Option is a Payment Plan item and the merchant account disallows storing credit card information; therefore, the item cannot be added to the cart.
- **-5:** Unhandled quantity check failure. If you encounter this error, please **open a support ticket** and a member of our Technical Support staff will respond to your query as promptly as possible with further details.
- **-6:** The specified quantity is greater than the maximum allowable quantity for the option.
- **-7:** The specified quantity is less than the minimum allowable quantity for the option.
- **-8:** The Product Option is out of stock and does not allow back ordering (for options with **Real Time Inventory Tracking** enabled).

CreateCart

Creates a new cart.

Input

Parameter	Data Type	Required/Optional	Description
authorID	int	Required	The Author ID for which the cart is to be created.
mallID	int	Optional	The Mall ID under which the cart is to be created (for advanced SOLO Server installations only). Pass in 0 (zero) if there is no Mall ID.
distributorID	int	Optional	The Distributor ID associated with the cart. Pass in 0 (zero) if there is no Distributor ID.
source	string	Optional	The source to be associated with the cart. Pass in an empty string if there is no

source.

promoCode	string	Optional	The Promo Code to be associated with the cart. Pass an empty string if there is no Promo Code.
originalQS	string	Optional	The initial query string to be associated with the cart. Pass in an empty string if there is no original query string.
isSingle	bool	Required	Pass in True to create a cart in single order mode ; otherwise, pass in False.
returnPage	string	Optional	The URL of the page to which the customer will be returned upon clicking the Continue Shopping button on the cart. Pass in an empty string if there is no return page. In this case, the URL will revert to the Continue Shopping URL specified in the Cart Options.
ipAddress	string	Required	The IP address of the customer for whom the cart is being created.

Output

The result dataset contains the following parameters:

Parameter	Data Type	Description
cartID	int	The new Cart ID. If a general failure occurred during creation of the cart, this value will be set to 0 (zero).

LockCart

Locks a cart, preventing the user from making any modifications.

Input

Parameter	Data Type	Required/Optional	Description
cartID	int	Required	The CartID to lock.

UpdateCartCustomerID

Updates the CustomerID on a cart.

Input

Parameter	Data Type	Required/Optional	Description
cartID	int	Required	The CartID to update.
customerID	int	Required	The CustomerID to associate with the cart.

UpdateCartShipping

Updates the shipping details associated with the cart.

Input

Parameter	Data Type	Required/Optional	Description
cartID	int	Required	The CartID to update.
shortName	string	Required	The Short Name of the shipping option to associate with the cart. This is case-sensitive.
company	string	Required	The shipping company. Pass in an empty string if there is no company name to specify.
firstName	string	Required	The shipping first name.
lastName	string	Required	The shipping last name.
address1	string	Required	The shipping address line 1.
address2	string	Optional	The shipping address line 2. Pass in an empty string for no address line 2.
city	string	Required	The shipping city.
stateProvince	string	Required	The shipping state/province. For US and Canadian addresses, this should be validated to be a valid state/province code. See State Codes and Country Strings as well as Client Validation Script for details on validation.
postalCode	string	Required	The shipping postal code. For US and Canadian addresses, this should be validated to be a valid postal code. See State Codes and Country Strings as well as Client Validation Script for

details on validation.

country

string

Required

The shipping country. This should be a valid SOLO Server country string. See **State Codes and Country Strings** as well as **Client Validation Script** for details on validation.

To clear the shipping details from a cart, pass in empty string to all of the string inputs.

Customer Server

The Customer Server web service provides several Web methods for interacting with customers.

For SOLO Server Shared URL, this can be reached at <https://secure.softwarekey.com/solo/webservices/customerserver.asmx>

- When using SOLO Server Shared / Custom URL, replace *secure* with your custom subdomain.
- When using SOLO Server Dedicated URL, replace *secure.softwarekey.com* with your domain.
- When using SOLO Server Self-Hosted, replace *secure.softwarekey.com/solo* in the URL with the path to your SOLO Server instance.

Please **contact us** if you need assistance determining the correct URL.

The customerserver.asmx web service offers the following methods:

CreateCustomer

Creates a new customer or modifies an existing customer with the same email/password combination.

This method requires passing in a SOLO Server AuthorID/API UserID/API UserPassword, and the user must have the *Add Single Customer* permission.

Important

Since this web method requires providing an AuthorID, API UserID, and API User Password as inputs, it should be used for internal applications only and should not be called by client applications distributed to customers. See **web service security** for details.

If you are currently using regular UserID and UserPassword credentials, you will need to update your application(s) to **use an API UserID and API UserPassword instead**, as support for the regular User ID and Password will be removed in the future.

Important

The optional fields listed below are considered optional in the SOLO Server database. Specifying a blank value will result in the respective field being updated with an empty value in the database.

Input

Parameter	Data Type	Required/Optional	Description
authorID	int	Required	SOLO Server Author ID.
userID	string	Required	The API User ID of the user from the given author using the service (previously the regular User ID). The API User ID and Password need to be used , as support for the regular User ID and Password will be removed in the future.
userPassword	string	Required	The API User Password for API User ID (previously the regular User Password for the User ID). The API User ID and Password need to be used , as support for the regular User ID and Password will be removed in the future.

companyName	string	Optional	The name of the customer's company. Pass in an empty string if a company name has not been specified or is otherwise unavailable.
firstName	string	Optional	The customer's first name.
lastName	string	Optional	The customer's last name.
address1	string	Optional	The customer's address, line #1.
address2	string	Optional	The customer's address, line #2. Pass in an empty string if a second address line has not been specified or is otherwise unavailable.
city	string	Optional	The customer's city.
stateProvince	string	Optional	The customer state/province. For US and Canadian addresses, this should be validated to be a valid state/province code. See State Codes and Country Strings as well as Client Validation Script for details on validation.
postalCode	string	Optional	The customer postal code. For US and Canadian addresses, this should be validated to be a valid postal code. See State Codes and Country Strings as well as Client Validation Script for details on validation.
country	string	Optional	The customer's country. This should be a valid SOLO Server country string. See State Codes and Country Strings as well as Client Validation Script for details on validation.
email	string	Optional	The customer's e-mail address.
password	string	Optional	The new customer password. Pass in an empty string to generate a random password.
phone	string	Optional	The customer's phone number. Pass in an empty string if a phone number has not been specified or is otherwise unavailable.
fax	string	Optional	The customer's fax number. Pass in an empty string if a fax number has not been specified or is otherwise unavailable.

nickname	string	Optional	The customer's external reference. The external reference field on the customer was previously the nickname field, and the parameter name in this method has been left unchanged to preserve backwards compatibility with existing integrations.
offerProduct	string	Required	Pass in True to sign-up the customer for receipt of product e-mails; otherwise, pass in False.
offerPartners	string	Required	Pass in True to sign-up the customer for receipt of partner e-mails; otherwise, pass in False.

Output

The result DataSet contains the following parameters:

Parameter	Data Type	Description
Failure		
ResultCode	int	The result code could be: -1 - The Author ID, User ID, and user password combination is invalid, or the user account does not have proper permissions to add customer records.
Sucess		
CustomerID	int	The Customer ID is returned when all the input values are valid and a customer is created.

Invoice Server

The InvoiceServer web service provides several web methods for interacting with invoices.

For SOLO Server Shared URL, this can be reached at <https://secure.softwarekey.com/solo/webservices/invoiceserver.asmx>

- When using SOLO Server Shared / Custom URL, replace *secure* with your custom subdomain.
- When using SOLO Server Dedicated URL, replace *secure.softwarekey.com* with your domain.
- When using SOLO Server Self-Hosted, replace *secure.softwarekey.com/solo* in the URL with the path to your SOLO Server instance.

Please **contact us** if you need assistance determining the correct URL.

The *invoiceserver.asmx* page offers the following webmethods:

GetInvoiceXML

Retrieves XML data representing a given invoice.

Input

Parameter	Data Type	Required/Optional	Description
invoiceNo	int	Required	The invoice number.
password	string	Required	The password of the customer associated with the invoice.

Output

- XML Data on the invoice and associated licenses. Documentation on the XML format is currently in process. Contact **support@softwarekey.com** for more details.

License Server

The License Server web service provides several Web methods for interacting with licenses.

For SOLO Server Shared URL, this can be reached at <https://secure.softwarekey.com/solo/webservices/licenseserver.asmx>

- When using SOLO Server Shared / Custom URL, replace *secure* with your custom subdomain.
- When using SOLO Server Dedicated URL, replace *secure.softwarekey.com* with your domain.
- When using SOLO Server Self-Hosted, replace *secure.softwarekey.com/solo* in the URL with the path to your SOLO Server instance.

Please **contact us** if you need assistance determining the correct URL.

The *licenseserver.asmx* page offers the following Web methods:

AddLicenseAndUnregisteredCustomer

Allows adding a new license and an unregistered customer associated with the license.

This method requires passing in a SOLO Server AuthorID/API UserID/API UserPassword, and the user must have *Add Single Customer* and *Add Licenses* permissions.

Important

Since this web method requires providing an AuthorID, API UserID, and API User Password as inputs, it should be used for internal applications only and should not be called by client applications distributed to customers. See **web service security** for details.

If you are currently using regular UserID and UserPassword credentials, you will need to update your application(s) to **use an API UserID and API UserPassword instead**, as support for the regular User ID and Password will be removed in the future.

Important

Licenses added through this web method on SOLO Server Shared and Dedicated URL accounts which have not been activated will automatically be marked as test licenses, and will automatically be purged at the first of every month.

Input

Parameter	Data Type	Required/Optional	Description
authorID	int	Required	SOLO Server Author ID.
userID	string	Required	The API User ID of the user from the given author using the service (previously the regular User ID). The API User ID and Password need to be used , as support for the regular User ID and Password will be removed in the future.
userPassword	string	Required	The API User Password for API User ID (previously the regular User Password for the User ID). The API User ID and Password need to be used , as support for the regular User ID and Password will be removed in the future.

prodOptionID	int	Required	The Product Option ID for which the license is to be created.
distributorID	int	Optional	The Distributor ID to which the license is to be associated. Pass in 0 (zero) if a distributor has not been specified or is otherwise unavailable.
unitPrice	double	Required	The unit price of the specified Product Option ID.
licenseNotes	string	Optional	Any notes to be associated with the new license. Pass in an empty string if notes have not been specified or are otherwise unavailable.

Output

The result dataset contains the following parameters:

Parameter	Data Type	Description
CustomerID	int	The new Customer ID.
LicenseID	int	The new License ID.
Password	string	The randomly generated password for the new Customer.
AuthorSerialNumNext	int	If applicable, the AuthorSerialNumNext value of the product.
AuthorSerialNumType	string	If applicable, the type of serial number.
SerialNumber	string	If applicable, the serial number of the license.
ActivationPassword	string	The randomly generated activation password for the new license.

RegisterLicense

Allows registering an unregistered license with customer data.

Important

The optional fields listed below are considered optional in the SOLO Server database. Specifying a blank value will result in the respective field being updated with an empty value in the database.

Input

Parameter	Data Type	Required/Optional	Description
licenseID	int	Required	The License ID.
password	string	Required	The customer password or license activation password.
company	string	Optional	The customer's company name.
firstName	string	Optional	The customer's first name.
lastName	string	Optional	The customer's last name.
address1	string	Optional	The customer's street address (or line 1 of the customer's address).
address2	string	Optional	The customer's second address line (i.e. apartment or suite number). Pass in an empty string if a second address line has not been specified or is otherwise unavailable.
city	string	Optional	The city of the customer's address.
stateProvince	string	Optional	The state/province of the customer's address. For US or Canadian addresses, this should be validated to be a valid state/province code. See State Codes and Country Strings as well as Client Validation Script for details on validation.
postalcode	string	Optional	The customer's zip/postal code. For US or Canadian addresses, this should be validated to be a valid postal code. See State Codes and Country Strings as well as Client Validation Script for details on validation.
country	string	Optional	The country of the customer's address. This should be a valid SOLO Server country string. See State Codes and Country Strings as well as Client Validation Script for details on validation.
phone	string	Optional	The customer's phone number. Pass in an empty string if a phone number has not been specified or is otherwise unavailable.

fax	string	Optional	The customer's fax number. Pass in an empty string if a fax number has not been specified or is otherwise unavailable.
email	string	Optional	The customer's email address.
notes	string	Optional	Any notes to be added to the customer record upon registration. Pass in an empty string if no notes have been specified.
newPassword	string	Optional	A new password for the customer. Note that this will only be updated if the customer password is used for authentication.

Output

The result dataset contains the following parameters:

Parameter	Data Type	Description
Failure		
Error	int	Code for the error. Codes are as follows: 1 - Invalid LicenseID/Password 3 - Registered Customer - the customer has already registered. Use the UpdateLicenseRegistration method instead.
Message	string	Description of the error. See Error above.
Success		
CustomerID	int	The CustomerID. Note that this can change from the original CustomerID associated with the license if the entered customer data causes a merge to occur.

UpdateLicenseRegistration

Allows updating the registration information on a license.

Important

The optional fields listed below are considered optional in the SOLO Server database. Specifying a blank value will result in the respective field being updated with an empty value in the database.

Input

Parameter	Data Type	Required/Optional	Description
licenseID	int	Required	The License ID.
password	string	Required	The customer password or license activation password.
company	string	Optional	The customer's company name.
firstName	string	Optional	The customer's first name.
lastName	string	Optional	The customer's last name.
address1	string	Optional	The customer's street address (or line 1 of the customer's address).
address2	string	Optional	The customer's second address line (i.e. apartment or suite number). Pass in an empty string if a second address line has not been specified or is otherwise unavailable.
city	string	Optional	The city of the customer's address.
stateProvince	string	Optional	The state/province of the customer's address. For US and Canadian addresses, this should be validated to be a valid state/province code. See State Codes and Country Strings as well as Client Validation Script for details on validation.
postalCode	string	Optional	The customer's zip/postal code. For US and Canadian addresses, this should be validated to be a valid postal code. See State Codes and Country Strings as well as Client Validation Script for details on validation.
country	string	Optional	The country of the customer's address. This should be a valid SOLO Server country string. See State Codes and Country Strings as well as Client Validation Script for details on validation.
phone	string	Optional	The customer's phone number. Pass in an empty string if a phone number has not been specified or is otherwise unavailable.

fax	string	Optional	The customer's fax number. Pass in an empty string if a fax number has not been specified or is otherwise unavailable.
email	string	Optional	The customer's e-mail address.
notes	string	Optional	Any notes to be added to the customer record upon registration. Pass in an empty string if no notes have been specified.
newPassword	string	Optional	A new password for the customer. Note that this will only be updated if the customer password is used for authentication.

Output

The result dataset contains the following parameters:

Parameter	Data Type	Description
Failure		
Error	int	Code for the error. Codes are as follows: 1 - Invalid LicenseID/Password
Message	string	Description of the error. See Error above.
Success		
CustomerID	int	The CustomerID. Note that this can change from the original CustomerID associated with the license if the entered customer data causes a merge to occur.

ValidateLicenseRegistration

Validates whether a given license has been registered.

Input

Parameter	Data Type	Required/Optional	Description
licenseID	int	Required	The License ID.
password	string	Required	The customer password or license activation password.

Output

The result dataset contains the following parameters:

Parameter	Data Type	Description
Failure		
Error	int	Code for the error. Codes are as follows: 1 - Invalid LicenseID/Password 3 - Unregistered Customer
Message	string	Description of the error. See Error above.
Success		
The license registration data	XML	- CustomerID (int) - CompanyName (string) - FirstName (string) - LastName (string) - MailAddr1 (string) - MailAddr2 (string) - City (string) - StateProvince (string) - PostalCode (string) - Country (string) - Voice (string) - Fax (string) - Email (string) - Notes (string) - EuropeanUnionVATNumber (string) - ProductID (int) - ProdOptionID (int)

XML Activation Service

The XML Activation Service Web service provides several activation-related web methods.

Refer to the **SOLO Server New Activation Features white paper** for more information on these new web services.

For SOLO Server Shared URL, this can be reached at <https://secure.softwarekey.com/solo/webservices/XmlActivationService.asmx>

- When using SOLO Server Shared / Custom URL, replace *secure* with your custom subdomain.
- When using SOLO Server Dedicated URL, replace *secure.softwarekey.com* with your domain.
- When using SOLO Server Self-Hosted, replace *secure.softwarekey.com/solo* in the URL with the path to your SOLO Server instance.

Please **contact us** if you need assistance determining the correct URL.

All web methods in this service use XML for both input and output (though the input parameter is defined as a string to allow POST access to the web service, the string must be in XML format). This allows new input and output values to be added without breaking backwards compatibility with existing implementations using the service.

Important

If your integration with the web service validates the XML returned by the web methods, be sure to account for the possibility of new elements being returned in the result. This can easily be done by applying an XSLT transform to the result XML to filter out any new fields and then validating the transformed XML.

Each web method in this web service is documented by a series of documentation files named after the web method as follows:

- MethodNameInput.xml - Uncommented xml file with input xml structure.
- MethodNameInputDetails.xml - Commented xml file with input xml structure and comments on each input element.
- MethodNameInput.xsd - XSD schema file defining the input xml structure.
- MethodNameOutput.xml - Uncommented xml file with output xml structure.
- MethodNameOutputDetails.xml - Commented xml file with output xml structure and comments on each output element.
- MethodNameOutput.xsd - XSD schema file defining the input xml structure.

Important

The SoftwareKey System offers an assortment of libraries which provide APIs that simplify the invocation of these web services from your application. This collection of API libraries includes:

- The Protection PLUS 5 SDK libraries, including the PLUSManaged library (for .NET applications), and the PLUSNative library (for native applications).
- The Automation Client library, which is included with Protection PLUS 4 SDK for native/unmanaged applications.
- The SwkClientServices2005 library, which is included with Protection PLUS 4 SDK for .NET/managed applications.

Please refer to the applicable product manuals and sample projects for more information on each library/API.

Important

Please note that all date values returned by the above Web methods are in UTC time, using the ISO 8601 format as follows:

- YYYY-MM-DDTHH:MM.SSZ

ActivateInstallation

This web method is used to perform an activation for an installation on a given license. It returns activation codes and other license information related to activation.

Input

The values of these elements are as follows:

Parameter	Data Type	Required/Optional	Description
EncryptionKeyID	string	Required	The Encryption Key ID used for encrypting, decrypting, digitally signing, and verifying requests and responses. This is included in the Encryption Envelope, which may be retrieved by clicking the <i>Configure/Products</i> menu and clicking <i>Actions/View Encryption Key Data</i> .
LicenseID	int	Required for LicenseID/Password authentication, otherwise optional.	The License ID of the license which is being activated.
Password	string	Required for LicenseID/Password authentication, otherwise optional.	For LicenseID/Password authentication, the customer password or license activation password. If provided for SerialNumber/ProductID validation, the customer password, license activation password, or for Assigned from List serials, the serial number password.
SerialNumber	string	Required for SerialNumber/ProductID authentication, otherwise optional.	The Serial Number associated with the license which is being activated.
ProductID	int	Required with SerialNumber/ProductID authentication, otherwise optional.	The Product ID with which the license was created. When present, the license's Product ID will be validated against the value in this element. Multiple ProductID elements can be included, in which case the license's Product ID will be validated to ensure it matches at least one of the values listed in the elements provided.
ProdOptionID	int	Optional	The Product Option ID with which the license was created. When present, the license's Product Option ID will be validated to ensure it matches the value provided in this element.
UserCode1	int	Required	The randomized session code value used with Protection PLUS 4 SDK compatible activations.
UserCode2	int	Required	The Computer ID number value used with Protection PLUS 4 SDK compatible activations.

RequireRegistration	bool	Optional	When true, the customer will be required to have registered before allowing activation. If omitted, false is assumed.
ProductVersion	string	Optional	Product Version Number. This should be formatted like NNNNN.NNNNN.NNNNN.NNNNN, where each N represents a digit (leading zeroes are not required).
InstallationName	string	Optional	Descriptive name for the installation.
InstallationID	string	Optional	Existing InstallationID. When provided, this will be stored as the RelatedInstallationID on the activation record.
ActivationData	string	Optional	An string containing an XML document that has activation data. This XML document typically contains data which is used to uniquely identify the system which is being activated. If used, a valid XML document must be provided, which must have a single, root node.

The input XML is in the following format:

XML

```

<ActivateInstallation xmlns="">
  <EncryptionKeyID></EncryptionKeyID>
  <PrivateData>
    <LicenseID></LicenseID>
    <Password></Password>
    <SerialNumber></SerialNumber>
    <ProdOptionID></ProdOptionID>
    <UserCode1></UserCode1>
    <UserCode2></UserCode2>
    <RequireRegistration></RequireRegistration>
    <ProductVersion></ProductVersion>
    <LicenseID></LicenseID>
    <InstallationName></InstallationName>
    <InstallationID></InstallationID>
    <ActivationData>
      <XmlDocument/>
    </ActivationData>
  </PrivateData>
</ActivateInstallation>

```

Output

The result is returned as XML in the following format:

XML

```
<ActivateInstallation>
  <PrivateData>
    <ResultCode></ResultCode>
    <ErrorMessage></ErrorMessage>
    <ExtendedResultCode></ExtendedResultCode>
    <ExtendedErrorMessage></ExtendedErrorMessage>
    <Product></Product>
    <LicenseID></LicenseID>
    <Quantity></Quantity>
    <RegistrationKey1></RegistrationKey1>
    <RegistrationKey2></RegistrationKey2>
    <LicenseUpdate></LicenseUpdate>
    <ActivationsLeft></ActivationsLeft>
    <ExpirationDate></ExpirationDate>
    <InstallationID></InstallationID>
    <ActivationPassword></ActivationPassword>
    <IsTestLicense></IsTestLicense>
    <LicenseStatus></LicenseStatus>
    <MinimumActivationVersionString></MinimumActivationVersionString>
    <MinimumActivationVersionLong></MinimumActivationVersionLong>
    <MinimumActivationVersionUrl></MinimumActivationVersionUrl>
    <ServerDateTime></ServerDateTime>
    <SessionCode></SessionCode>
  </PrivateData>
</ActivateInstallation>
```

The values of these elements are as follows:

Parameter	Data Type	Description
ResultCode	int	May contain one of the following values, each of which indicates a possible result: 0 - Success 5000 - Invalid Encryption Key ID 5001 - Encryption Required 5002 - Signature Required 5003 - Decryption Failure 5004 - Verification Failure 5005 - Invalid Parameters 5006 - Security Check Failure 5007 - Invalid Computer ID 5008 - Invalid Activation Data 5009 - Unregistered Customer 5010 - Invalid Product ID 5011 - Invalid Product Option ID 5012 - Invalid Product Version 5013 - No Remaining Activations 5014 - Invalid Option Type 5016 - Deactivated Installation 5017 - Invalid License Status 5019 - License Expired 5021 - Invalid IP Address 5022 - Invalid System Time 5024 - Invalid XML Document

- 5025 - Plugin Failed
- 5026 - Plugin Processing Failed
- 5029 - Invalid Trigger Code Data
- 5033 - Account Closed

ErrorMessage	string	Detailed error message for the result code. Only returned in error conditions (a non-zero ResultCode)
ExtendedResultCode	int	Extended result code returned by an activation plugin which failed. Only returned when an activation plugin is configured and returns a failure result.
ExtendedErrorMessage	string	Detailed error message for the ExtendedResultCode. Only returned when an activation plugin is configured and returns a failure result and an extended error message.
Product	string	Full Product Name (product and option name). Only returned if activation is successful or declined when no activations are left (ResultCode 0 and 5013).
LicenseID	int	The License ID of the license being activated. Only returned if activation is successful or declined when no activations are left (ResultCode 0 and 5013).
Quantity	int	License Quantity. Only returned if activation is successful or declined when no activations are left (ResultCode 0 and 5013).
ActivationsLeft	int	License Activations Left (after current activation). Only returned if activation is successful or declined due to no more keys (ResultCode 0 and 5013)
RegistrationKey1	int	Registration Key 1/Activation Code 1. Only returned if activation is successful (ResultCode 0).
RegistrationKey2	string	Registration Key 2/Activation Code 2. Only returned if activation is successful (ResultCode 0) and the Product Option Type is an "Activation Code" type that includes a secondary value (such as the Fixed Value, Quantity, or Days Left).
LicenseUpdate	string	License update string. Only returned if

		activation is successful (ResultCode 0) and a value is populated on the license.
ExpirationDate	date	License and/or download expiration date. Only returned if activation is successful (ResultCode 0) and the Product Option is configured to use an expiration date (Days To D/L > 0).
InstallationID	string	The Installation ID which uniquely identifies the successful activation. Only returned if activation is successful (ResultCode 0) and Issue Installation ID setting is enabled in the Product Option configuration.
ActivationPassword	string	License activation password. Only returned if activation is successful (ResultCode 0).
IsTestLicense	bool	Whether to mark the license as a test license. On SOLO Server Shared and Dedicated URL, test licenses are automatically purged on the first of every month so they are not billed.
LicenseStatus	string	License status. Only returned if license status is not OK (ResultCode 5017).
MinimumActivationVersionString	string	Minimum product version required for activation (string representation). Only returned if activation version check fails (result code 5012).
MinimumActivationVersionLong	long	Minimum product version required for activation (long integer representation). Only returned if activation version check fails (ResultCode 5012).
MinimumActivationVersionUrl	string	Url for more information or to download the update. Only returned if activation version check fails (ResultCode 5012) and a Minimum Activation URL has been specified in the Product Option configuration.
ServerDateTime	dateTime	Server timestamp.
SessionCode	string	A session code generated by the client to prevent replay attacks.

The documentation files for this Web method are as follows:

- [ActivateInstallationInput.xml](#)
- [ActivateInstallationInputDetails.xml](#)
- [ActivateInstallationInput.xsd](#)
- [ActivateInstallationOutput.xml](#)
- [ActivateInstallationOutputDetails.xml](#)
- [ActivateInstallationOutput.xsd](#)

ActivateInstallationLicenseFile

This web method is used to perform an activation for an installation on a given license using the Protection PLUS 5 SDK libraries. It returns activation codes, other license information related to activation, and an encrypted and digitally signed XML License File.

Any new or existing Protection PLUS customers who are creating a new application may want to consider evaluating this new system. [Contact us](#) for more information.

The values of these elements are as follows:

Parameter	Data Type	Required/Optional	Description
EncryptionKeyID	string	Required	The Encryption Key ID used for encrypting, decrypting, digitally signing, and verifying requests and responses. This is included in the Encryption Envelope, which may be retrieved by clicking the <i>Configure/Products</i> menu and clicking <i>Actions/View Encryption Key Data</i> .
LicenseID	int	Required for LicenseID/Password authentication, otherwise optional.	The LicenseID to activate.
Password	string	Required for LicenseID/Password authentication, otherwise optional.	For LicenseID/Password authentication, the customer password or license activation password. If provided for SerialNumber/ProductID validation, the customer password, license activation password, or for Assigned from List serials, the serial number password.
SerialNumber	string	Required for SerialNumber/ProductID authentication, otherwise optional.	The Serial Number to activate.
ProductID	int	Required with SerialNumber/ProductID authentication, otherwise optional.	The License ProductID. When present, the License ProductID will be validated against this ProductID. Multiple ProductID elements can be included, in which case the License ProductID will be validated against a list.

ProdOptionID	int	Optional	The License Product Option ID. When present, the License Product Option ID will be validated against this Product Option ID.
UserCode1	int	Required	The randomized session code value used with Protection PLUS 4 SDK compatible activations.
UserCode2	int	Required	The Computer ID number value used with Protection PLUS 4 SDK compatible activations.
RequireRegistration	bool	Optional	When true, the customer will be required to have registered before allowing activation. If omitted, false is assumed.
ProductVersion	string	Optional	Product Version Number. This should be formatted like NNNNN.NNNNN.NNNNN.NNNNN, where each N represents a digit (leading zeroes are not required).
InstallationName	string	Optional	Descriptive name for the installation.
InstallationID	string	Optional	Existing InstallationID. When provided, this will be stored as the RelatedInstallationID on the activation record.
ActivationData	XmlDocument	Optional	An string containing an XML document that has activation data. This XML document typically contains data which is used to uniquely identify the system which is being activated. If used, a valid XML document must be provided, which must have a single, root node.

The input xml is in the following format:

XML

```
<ActivateInstallationLicenseFile xmlns="">
  <EncryptionKeyID></EncryptionKeyID>
  <PrivateData>
    <LicenseID></LicenseID>
    <Password></Password>
    <SerialNumber></SerialNumber>
    <ProductID></ProductID>
    <ProdOptionID></ProdOptionID>
    <UserCode1></UserCode1>
```

```

<UserCode2></UserCode2>
<RequireRegistration></RequireRegistration>
<ProductVersion></ProductVersion>
<InstallationName></InstallationName>
<InstallationID></InstallationID>
<ActivationData>
  <XmlDocument/>
</ActivationData>
</PrivateData>
</ActivateInstallationLicenseFile>

```

Output

The result is returned as XML in the following format:

XML

```

<ActivateInstallationLicenseFile>
  <EncryptionKeyID></EncryptionKeyID>
  <PrivateData>
    <ResultCode></ResultCode>
    <ErrorMessage></ErrorMessage>
    <ExtendedResultCode></ExtendedResultCode>
    <ExtendedErrorMessage></ExtendedErrorMessage>
    <Product></Product>
    <LicenseID></LicenseID>
    <Quantity></Quantity>
    <RegistrationKey1></RegistrationKey1>
    <RegistrationKey2></RegistrationKey2>
    <LicenseUpdate></LicenseUpdate>
    <ActivationsLeft></ActivationsLeft>
    <ExpirationDate></ExpirationDate>
    <InstallationID></InstallationID>
    <ActivationPassword></ActivationPassword>
    <IsTestLicense></IsTestLicense>
    <LicenseStatus></LicenseStatus>
    <MinimumActivationVersionString></MinimumActivationVersionString>
    <MinimumActivationVersionLong></MinimumActivationVersionLong>
    <MinimumActivationVersionUrl></MinimumActivationVersionUrl>
    <License></License>
    <ServerDateTime></ServerDateTime>
    <SessionCode></SessionCode>
  </PrivateData>
</ActivateInstallationLicenseFile>

```

The values of these elements are as follows:

Parameter	Data Type	Description
ResultCode	int	Can take the following values 0 - Success 5000 - Invalid EncryptionKeyID 5001 - Encryption Required 5002 - Signature Required 5003 - Decryption Failure

- 5004 - Verification Failure
- 5005 - Invalid Parameters
- 5006 - Security Check Failure
- 5007 - Invalid ComputerID
- 5008 - Invalid Activation Data
- 5009 - Unregistered Customer
- 5010 - Invalid ProductID
- 5011 - Invalid ProdOptionID
- 5012 - Invalid Product Version
- 5013 - No Remaining Activations
- 5014 - Invalid Option Type
- 5016 - Deactivated Installation
- 5017 - Invalid License Status
- 5019 - License Expired
- 5021 - Invalid IP Address
- 5022 - Invalid System Time
- 5023 - Protection PLUS 5 SDK Access Not Enabled
- 5024 - Invalid Xml Document
- 5025 - Plugin Failed
- 5026 - Plugin Processing Failed
- 5029 - Invalid Trigger Code Data
- 5030 - Protection PLUS 5 SDK evaluation has expired
- 5031 - SOLO Server evaluation has expired
- 5033 - Account Closed

ErrorMessage	string	Detailed error message for the ResultCode. Only returned in error conditions (ResultCode non zero)
ExtendedResultCode	int	Extended result code returned by an activation plugin which failed. Only returned when an activation plugin is configured and returns a failure result.
ExtendedErrorMessage	string	Detailed error message for the ExtendedResultCode. Only returned when an activation plugin is configured and returns a failure result and an extended error message.
Product	int	Full Product Name (product and option name). Only returned if activation is successful or declined due to no more keys (ResultCodes 0, 5013).
LicenseID	int	LicenseID; Only returned if activation is successful or declined due to no more keys (ResultCode 0 and 5013).
Quantity	int	License Quantity. Only returned if activation is successful or declined due to no more keys (ResultCode 0 and 5013).

ActivationsLeft	int	License Activations Left (after current activation). Only returned if activation is successful or declined due to no more keys (ResultCode 0 and 5013)
RegistrationKey1	int	Registration Key 1. Only returned if activation is successful (ResultCode 0).
RegistrationKey2	string	Registration Key 2/Activation Code 2. Only returned if activation is successful (ResultCode 0) and the Product Option Type is an "Activation Code" type that includes a secondary value (such as the Fixed Value, Quantity, or Days Left).
LicenseUpdate	string	License Update string. Only returned if activation is successful (ResultCode 0) and value is populated on the license.
ExpirationDate	date	License expiration Date. Only returned if activation is successful (ResultCode 0) and the ProdOption is set for expiration (Days To D/L > 0).
InstallationID	string	The Installation ID which uniquely identifies the successful activation. Only returned if activation is successful (ResultCode 0) and Issue Installation ID setting is enabled in the Product Option configuration.
ActivationPassword	string	License activation password. Only returned if activation is successful (ResultCode 0).
IsTestLicense	bool	Whether to mark the license as a test license. On SOLO Server Shared and Dedicated URL, test licenses are automatically purged on the first of every month so they are not billed.
LicenseStatus	string	License status. Only returned if license status is not OK (ResultCode 5017).
MinimumActivationVersionString	string	Minimum product version required for activation (string representation). Only returned if activation version check fails (ResultCode 5012).
MinimumActivationVersionLong	long	Minimum product version required for activation (long integer representation). Only returned if activation version check

fails (ResultCode 5012).

<code>MinimumActivationVersionUrl</code>	string	Url for more information or to download the update. Only returned if activation version check fails (ResultCode 5012) and a Minimum Activation URL has been specified in the Product Option configuration.
<code>License</code>	string	The contents of the XML License File. When encryption is being used for this file, it will be in its encrypted form here.
<code>ServerDateTime</code>	dateTime	Server timestamp.
<code>SessionCode</code>	string	A session code generated by the client to prevent replay attacks.

The documentation files for this Web method are as follows:

- [ActivateInstallationLicenseFileInput.xml](#)
- [ActivateInstallationLicenseFileInputDetails.xml](#)
- [ActivateInstallationLicenseFileInput.xsd](#)
- [ActivateInstallationLicenseFileOutput.xml](#)
- [ActivateInstallationLicenseFileOutputDetails.xml](#)
- [ActivateInstallationLicenseFileOutput.xsd](#)

DeactivateInstallation

This web method is used to deactivate an installation activated through the ActivateInstallation or ActivateInstallationLicenseFile web methods.

Input

The values of these elements are as follows:

Parameter	Data Type	Required/Optional	Description
<code>EncryptionKeyID</code>	string	Required	The Encryption Key ID used for encrypting, decrypting, digitally signing, and verifying requests and responses. This is included in the Encryption Envelope, which may be retrieved by clicking the <i>Configure/Products</i> menu and clicking <i>Actions/View Encryption Key Data</i> .
<code>InstallationID</code>	string	Required	The InstallationID to deactivate.

The input xml is in the following format:

XML

```
<DeactivateInstallation xmlns="">
  <EncryptionKeyID></EncryptionKeyID>
  <PrivateData>
```

```
<InstallationID></InstallationID>
</PrivateData>
</DeactivateInstallation>
```

Output

The result is returned as XML in the following format:

XML

```
<DeactivateInstallation>
  <PrivateData>
    <ResultCode></ResultCode>
    <ErrorMessage></ErrorMessage>
    <DeactivatedDate></DeactivatedDate>
    <ServerDateTime></ServerDateTime>
    <SessionCode></SessionCode>
  </PrivateData>
</DeactivateInstallation>
```

The values of these elements are as follows:

Parameter	Data Type	Description
ResultCode	int	Can take the following values • 0 - Success • 5000 - Invalid EncryptionKeyID • 5001 - Encryption Required • 5002 - Signature Required • 5003 - Decryption Failure • 5004 - Verification Failure • 5005 - Invalid Parameters • 5015 - Invalid InstallationID • 5016 - Deactivated Installation • 5018 - No Remaining Deactivations • 5022 - Invalid System Time • 5024 - Invalid Xml Document
ErrorMessage	string	Detailed error message for the ResultCode. Only returned in error conditions (ResultCode non zero)
DeactivatedDate	date	Date the Installation was Deactivated. Only returned when the installation is already deactivated (ResultCode 5016).
ServerDateTime	dateTime	Server timestamp.
SessionCode	string	A session code generated by the client to prevent replay attacks.

The documentation files for this Web method are as follows:

- [DeactivateInstallationInput.xml](#)
- [DeactivateInstallationInputDetails.xml](#)

- [DeactivateInstallationInput.xsd](#)
- [DeactivateInstallationOutput.xml](#)
- [DeactivateInstallationOutputDetails.xml](#)
- [DeactivateInstallationOutput.xsd](#)

CheckInstallationStatus

This web method is used to retrieve installation status information for installations activated through the ActivateInstallation Web method, as well as to optionally post usage data to be logged on the server.

Input

The values of these elements are as follows:

Parameter	Data Type	Required/Optional	Description
EncryptionKeyID	string	Required	The Encryption Key ID used for encrypting, decrypting, digitally signing, and verifying requests and responses. This is included in the Encryption Envelope, which may be retrieved by clicking the <i>Configure/Products</i> menu and clicking <i>Actions/View Encryption Key Data</i> .
InstallationID	string	Required	The InstallationID to check status for.
ProductVersion	string	Optional	Product Version Number. This should be formatted like NNNNN.NNNNN.NNNNN.NNNNN, where each N represents a digit (leading zeroes are not required).

To optionally log usage data, include an additional UsageData element. Within this element, include any number of LogEntry elements, which have the following parameters:.

Parameter	Data Type	Required/Optional	Description
EnteredDate	dateTime	Required	Date/time the event was logged.
LogSessionID	GUID	Required	GUID session identifier for the application instance.
Event	string	Required	Event descriptor.
EventData	string	Optional	Additional data regarding the event.
NetBIOSName	string	Optional	NetBIOS machine name of the computer.
DNSName	string	Optional	DNS machine name of the computer.
UserName	string	Optional	User name of logged in user.

ApplicationName	string	Optional	Application which logged the event.

The input xml is in the following format:

XML

```
<CheckInstallationStatus xmlns="">
  <EncryptionKeyID></EncryptionKeyID>
  <PrivateData>
    <InstallationID></InstallationID>
    <ProductVersion></ProductVersion>
  </PrivateData>
  <UsageLog>
    <UsageLog>
      <LogEntry>
        <EnteredDate></EnteredDate>
        <LogSessionID></LogSessionID>
        <Event></Event>
        <EventData></EventData>
        <NetBIOSName></NetBIOSName>
        <DNSName></DNSName>
        <UserName></UserName>
        <ApplicationName></ApplicationName>
      </LogEntry>
    </UsageLog>
  </UsageLog>
</CheckInstallationStatus>
```

Output

The result is returned as XML in the following format:

XML

```
<CheckInstallationStatus>
  <PrivateData>
    <ResultCode></ResultCode>
    <ErrorMessage></ErrorMessage>
    <DeactivatedDate></DeactivatedDate>
    <LicenseStatus></LicenseStatus>
    <LicenseUpdate></LicenseUpdate>
    <ExpirationDate></ExpirationDate>
    <RemainingActivations></RemainingActivations>
    <ServerDateTime></ServerDateTime>
    <SessionCode></SessionCode>
  </PrivateData>
</CheckInstallationStatus>
```

The values of these elements are as follows:

Parameter	Data Type	Description
ResultCode	int	Can take the following values 0 - Success 5000 - Invalid EncryptionKeyID

- 5001 - Encryption Required
- 5002 - Signature Required
- 5003 - Decryption Failure
- 5004 - Verification Failure
- 5005 - Invalid Parameters
- 5015 - Invalid InstallationID
- 5016 - Deactivated Installation
- 5017 - Invalid License Status
- 5022 - Invalid System Time
- 5024 - Invalid Xml Document

ErrorMessage	string	Detailed error message for the ResultCode. Only returned in error conditions (ResultCode non zero).
DeactivatedDate	date	Date the Installation was Deactivated. Only returned if the installation is deactivated (ResultCode 5016).
LicenseStatus	string	Current license status. Only returned if license status is not valid (ResultCode 5017).
LicenseUpdate	string	License Update string. Only returned if the value on the license is populated.
ExpirationDate	date	License expiration Date. Only returned if Product Option is set for expiration (Days To D/L > 0).
RemainingActivations	int	The number of activations remaining on the license.
ServerDateTime	dateTime	Server timestamp.
SessionCode	string	A session code generated by the client to prevent replay attacks.

The documentation files for this Web method are as follows:

- **CheckInstallationStatusInput.xml**
- **CheckInstallationStatusInputDetails.xml**
- **CheckInstallationStatusInput.xsd**
- **CheckInstallationStatusOutput.xml**
- **CheckInstallationStatusOutputDetails.xml**
- **CheckInstallationStatusOutput.xsd**

DecrementLicenseCounter

This web method is used to decrement the license counter on the license for a given installation.

Input

The values of these elements are as follows:

Parameter	Data Type	Required/Optional	Description
EncryptionKeyID	string	Required	The Encryption Key ID used for encrypting, decrypting, digitally signing, and verifying requests and responses. This is included in the Encryption Envelope, which may be retrieved by clicking the <i>Configure/Products</i> menu and clicking <i>Actions/View Encryption Key Data</i> .
InstallationID	string	Required	The InstallationID to decrement the license counter for.
DecrementAmount	int	Required	The amount to decrement the license counter by.

The input xml is in the following format:

XML

```
<DecrementLicenseCounter xmlns="">
  <EncryptionKeyID></EncryptionKeyID>
  <PrivateData>
    <InstallationID></InstallationID>
    <DecrementAmount></DecrementAmount>
  </PrivateData>
</DecrementLicenseCounter>
```

Output

The result is returned as XML in the following format:

XML

```
<DecrementLicenseCounter>
  <PrivateData>
    <ResultCode></ResultCode>
    <ErrorMessage></ErrorMessage>
    <LicenseCounter></LicenseCounter>
    <DeactivatedDate></DeactivatedDate>
    <LicenseStatus></LicenseStatus>
    <ServerDateTime></ServerDateTime>
    <SessionCode></SessionCode>
  </PrivateData>
</DecrementLicenseCounter>
```

The values of these elements are as follows:

Parameter	Data Type	Description
ResultCode	int	Can take the following values 0 - Success 5000 - Invalid EncryptionKeyID 5001 - Encryption Required

- 5002 - Signature Required
- 5003 - Decryption Failure
- 5004 - Verification Failure
- 5005 - Invalid Parameters
- 5015 - Invalid InstallationID
- 5016 - Deactivated Installation
- 5017 - Invalid License Status
- 5022 - Invalid System Time
- 5024 - Invalid Xml Document
- 5035 - Invalid License Counter
- 5036 - Invalid Counter Type
- 5037 - License Counter Overage

ErrorMessage	string	Detailed error message for the ResultCode. Only returned in error conditions (ResultCode non zero).
LicenseCounter	int	On success (ResultCode 0), the new value of the license counter after decrementing. On failure (ResultCode non-zero), the existing value of the license counter, if available.
DeactivatedDate	date	Date the Installation was Deactivated. Only returned if the installation is deactivated (ResultCode 5016).
LicenseStatus	string	Current license status. Only returned if license status is not valid (ResultCode 5017).
ServerDateTime	dateTime	Server timestamp.
SessionCode	string	A session code generated by the client to prevent replay attacks.

The documentation files for this Web method are as follows:

- **DecrementLicenseCounterInput.xml**
- **DecrementLicenseCounterInputDetails.xml**
- **DecrementLicenseCounterInput.xsd**
- **DecrementLicenseCounterOutput.xml**
- **DecrementLicenseCounterOutputDetails.xml**
- **DecrementLicenseCounterOutput.xsd**

XML Customer Service

The XML Customer Service web service provides several web methods for interacting with customers.

For SOLO Server Shared URL, this can be reached at <https://secure.softwarekey.com/solo/webservices/XmlCustomerService.asmx>

- When using SOLO Server Shared / Custom URL, replace *secure* with your custom subdomain.
- When using SOLO Server Dedicated URL, replace *secure.softwarekey.com* with your domain.
- When using SOLO Server Self-Hosted, replace *secure.softwarekey.com/solo* in the URL with the path to your SOLO Server instance.

Please **contact us** if you need assistance determining the correct URL.

All web methods in this service use xml for both input and output. This allows new input and output values to be added without breaking backwards compatibility with existing implementations using the service.

Important

If your integration with the web service validates the xml returned by the web methods, be sure to account for the possibility of new elements being returned in the result. This can easily be done by applying an xslt transform to the result xml to filter out any new fields and then validating the transformed xml.

The XmlCustomerService.asmx web service offers the following web methods:

GetCustomerDataByAuthor/GetCustomerDataByAuthorS

Used to retrieve author specific customer contact details as well as license information for a customer.

This method requires passing in a SOLO Server AuthorID/API UserID/API UserPassword, but the user does not need any specific permissions.

GetCustomerDataByAuthor accepts an XmlDocument input parameter, while GetCustomerDataByAuthorS accepts a string input parameter for the xml so that it is accessible via http post.

Important

Since this web method requires providing an AuthorID, API UserID, and API User Password as inputs, it should be used for internal applications only and should not be called by client applications distributed to customers. See **web service security** for details.

If you are currently using regular UserID and UserPassword credentials, you will need to update your application(s) to **use an API UserID and API UserPassword instead**, as support for the regular User ID and Password will be removed in the future.

Input

The values of these elements are as follows:

Parameter	Data Type	Required/Optional	Description
AuthorID	int	Required	SOLO Server Author ID.
UserID	string	Required	The API User ID of the user from the given author using the service (previously the regular User ID). The API User ID and Password need to be used , as support for the regular User ID and Password will be removed in the future.

UserPassword	string	Required	The API User Password for API User ID (previously the regular User Password for the User ID). The API User ID and Password need to be used , as support for the regular User ID and Password will be removed in the future.
CustomerID	int	Optional - Either CustomerID or LicenseID must be provided	The Customer ID to retrieve data for.
LicenseID	int	Optional - Either CustomerID or LicenseID must be provided	The LicenseID to retrieve customer data for.

The input xml is in the following format:

XML

```
<GetCustomerDataByAuthor xmlns="">
  <AuthorID></AuthorID>
  <UserID></UserID>
  <UserPassword></UserPassword>
  <CustomerID></CustomerID>
  <LicenseID></LicenseID>
</GetCustomerDataByAuthor>
```

Output

The result is returned as XML in the following format:

XML

```
<?xml version="1.0" encoding="utf-8"?>
<CustomerData>
  <Customer>
    <CustomerID></CustomerID>
    <CompanyName></CompanyName>
    <FirstName></FirstName>
    <LastName></LastName>
    <Address1></Address1>
    <Address2></Address2>
    <City></City>
    <StateProvince></StateProvince>
    <PostalCode></PostalCode>
    <Country></Country>
    <Phone></Phone>
    <Fax></Fax>
    <ExternalReference></ExternalReference>
    <Email></Email>
    <Unregistered></Unregistered>
    <Enabled></Enabled>
    <InvalidAddress></InvalidAddress>
    <Taxable></Taxable>
    <ExcludeFromAll></ExcludeFromAll>
    <IsDistributor></IsDistributor>
```

```

    <OfferProduct></OfferProduct>
    <OfferPartners></OfferPartners>
    <Notes></Notes>
    <Password></Password>
  </Customer>
  <License>
    <LicenseID></LicenseID>
    <ActivationPassword></ActivationPassword>
    <EnteredDate></EnteredDate>
    <Status></Status>
    <ExpirationDate></ExpirationDate>
    <Quantity></Quantity>
    <RemainingActivations></RemainingActivations>
    <RemainingDeactivations></RemainingDeactivations>
    <LicenseUpdate></LicenseUpdate>
    <LicenseCounter></LicenseCounter>
    <PaymentPlanInstanceID></PaymentPlanInstanceID>
    <ProductID></ProductID>
    <ProductName></ProductName>
    <ProdOptionID></ProdOptionID>
    <OptionName></OptionName>
  </License>
</CustomerData>

```

If an error occurs, only the ResultCode and ErrorMessage elements will be returned, otherwise the Customer and License elements will be returned.

In the case of an error, the ResultCode will contain one of the following error values:

Parameter	Data Type	Description
ResultCode	int	May contain one of the following values, each of which indicates a possible result: -1 - Invalid Login -2 - Invalid XML Document 100 - Invalid Customer ID 101 - Invalid LicenseID 102 - Missing CustomerID/LicenseID
ErrorMessage	string	Detailed error message for the result code. Only returned in error conditions (a non-zero result code)
Customer	Xml	Customer details. See the sample XML above for details on the child elements. Note that the Password will be returned as SECURED if it was chosen by the customer and the user account used for authentication does not have View Password permission.
License	Xml	License details. See the sample XML above for details on the child elements.

CustomerSearch/CustomerSearchS

Used to search for customer details.

This method requires passing in a SOLO Server AuthorID/API UserID/API UserPassword, but the user does not need any specific permissions.

CustomerSearch accepts an XmlDocument input parameter, while CustomerSearchS accepts a string input parameter for the xml so that it is accessible via http post.

Important

Since this web method requires providing an AuthorID, API UserID, and API User Password as inputs, it should be used for internal applications only and should not be called by client applications distributed to customers. See [web service security](#) for details.

If you are currently using regular UserID and UserPassword credentials, you will need to update your application(s) to **use an API UserID and API UserPassword instead**, as support for the regular User ID and Password will be removed in the future.

Input

The values of these elements are as follows:

Parameter	Data Type	Required/Optional	Description
AuthorID	int	Required	SOLO Server Author ID.
UserID	string	Required	The API User ID of the user from the given author using the service (previously the regular User ID). The API User ID and Password need to be used , as support for the regular User ID and Password will be removed in the future.
UserPassword	string	Required	The API User Password for API User ID (previously the regular User Password for the User ID). The API User ID and Password need to be used , as support for the regular User ID and Password will be removed in the future.
Global	bool	Optional	Whether to perform a global search or just a search against the specified author. Only applicable if the user account has global access permission.
SearchField	string	Required	The search field(s). You can pass one or more search fields in the input to search on a combination of fields. The following search fields are available: CustPass - Customer password. Note that searching on this field will only return results for customer accounts

where the password was not set by the customer if the user does not have View Password permission.

- CompanyName
- FirstName
- LastName
- Address
- City
- StateProvince
- PostalCode
- Country
- Email
- Phone
- Fax
- ExternalReference

As an example, to search for John Doe, pass the following in the XML

```
<
  FirstName
>
John
</FirstName><LastName>Doe</LastName>.
```

By default, these searches uses wildcard matching on both the beginning and end of the search string, meaning that similar results will be returned along with exact matches. You can override this default behavior in 3 ways:

- Disable this by prepending the escape sequence "-%" (without the quotes) to the beginning of the search string. For example, to perform an exact match search on the email address test@test.com, pass in a value of "-%test@test.com" (without quotes).
- Override this by specifying only leading or trailing wildcard matches. To override this, include a "%" character on the end of the string you want wildcard matching to take place for. For example, to search on customers with @test.com email addresses, pass in a value of %@test.com.

The input xml is in the following format:

XML

```
<CustomerSearch xmlns="">
  <AuthorID></AuthorID>
  <UserID></UserID>
  <UserPassword></UserPassword>
  <Global></Global>
  <SearchField></SearchField>
  <SearchField></SearchField>
  <!-- ...additional SearchField elements -->
</CustomerSearch>
```

Output

The result is returned as XML in the following format:

XML

```
<?xml version="1.0" encoding="utf-8"?>
<Customers>
  <ResultCode></ResultCode>
  <ErrorMessage></ErrorMessage>
  <Customer>
    <CustomerID></CustomerID>
    <Password></Password>
    <CompanyName></CompanyName>
    <ContactName></ContactName>
    <FirstName></FirstName>
    <LastName></LastName>
    <MailAddr1></MailAddr1>
    <MailAddr2></MailAddr2>
    <City></City>
    <StateProvince></StateProvince>
    <PostalCode></PostalCode>
    <Country></Country>
    <EMail></EMail>
    <Voice></Voice>
    <Fax></Fax>
    <OfferProduct></OfferProduct>
    <OfferPartners></OfferPartners>
  </Customer>
  <!-- ...additional Customer elements when multiple matches found -->
</Customers>
```

If an error occurs, only the ResultCode and ErrorMessage elements will be returned, otherwise the Customer elements will be returned if any matches are found. In the case of an error, the ResultCode will contain one of the following error values:

Parameter	Data Type	Description
ResultCode	int	May contain one of the following values, each of which indicates a possible result: 0 - Success -1 - Invalid User Login -2 - Invalid XML Document 100 - Invalid Input
ErrorMessage	string	Detailed error message for the result code. Only returned in error conditions (a non-zero result code)
Customer	Xml	The following XML tags will be returned: <pre><CustomerID></CustomerID> <Password></Password> <CompanyName></CompanyName> <ContactName></ContactName> <FirstName></FirstName></pre>

```
<LastName></LastName>
<MailAddr1></MailAddr1>
<MailAddr2></MailAddr2>
<City></City>
<StateProvince></StateProvince>
<PostalCode></PostalCode>
<Country></Country>
<EMail></EMail>
<Voice></Voice>
<Fax></Fax>
<OfferProduct></OfferProduct>
<OfferPartners></OfferPartners>
```

Note that the Password element will be returned as SECURE for for customer accounts where the password was set by the customer if the user does not have View Password permission.

CustomerLogin/CustomerLoginS

Used to verify customer login details.

This method requires passing in a SOLO Server AuthorID/API UserID/API UserPassword, but the user does not need any specific permissions.

CustomerLogin accepts an XmlDocument input parameter, while CustomerSearchS accepts a string input parameter for the xml so that it is accessible via http post.

Important

Since this web method requires providing an AuthorID, API UserID, and API User Password as inputs, it should be used for internal applications only and should not be called by client applications distributed to customers. See [web service security](#) for details.

If you are currently using regular UserID and UserPassword credentials, you will need to update your application(s) to **use an API UserID and API UserPassword instead**, as support for the regular User ID and Password will be removed in the future.

Input

The values of these elements are as follows:

Parameter	Data Type	Required/Optional	Description
AuthorID	int	Required	SOLO Server Author ID.
UserID	string	Required	The API User ID of the user from the given author using the service (previously the regular User ID). The API User ID and Password need to be used , as support for the regular User ID and Password will be removed in the future.

UserPassword	string	Required	The API User Password for API User ID (previously the regular User Password for the User ID). The API User ID and Password need to be used , as support for the regular User ID and Password will be removed in the future.
Email	string	Optional	Customer email address
CustomerID	int	Optional	The Customer ID, which uniquely identifies the customer to which this License ID belongs.
LicenseID	int	Optional	The License ID.
InvoiceNo	int	Optional	Invoice Number
Password	string	Required unless performing a login by LicenseID/ActivationPassword	The customer password.
ActivationPassword	string	Required if performing a login by LicenseID/ActivationPassword	The license Activation Password. Only supported for use in conjunction with a LicenseID.

The input xml is in the following format:

XML
<pre><CustomerSearch xmlns=""> <AuthorID></AuthorID> <UserID></UserID> <UserPassword></UserPassword> <Email></Email> <CustomerID></CustomerID> <LicenseID></LicenseID> <InvoiceNo></InvoiceNo> <Password></Password> <ActivationPassword></ActivationPassword> </CustomerSearch></pre>

Note that only one of the Email, CustomerID, LicenseID, InvoiceNo, or Nickname elements is required when attempting a login using the customer Password, and ActivationPassword is only supported when attempting a login using LicenseID.

Output

The result is returned as XML in the following format:

XML
<pre><?xml version="1.0" encoding="utf-8"?> <LoginResult></pre>

```
<ResultCode></ResultCode>
<CustomerID></CustomerID>
<ErrorMessage></ErrorMessage>
</LoginResult>
```

The ResultCode can take the following values:

Parameter	Data Type	Description
ResultCode	int	May contain one of the following values, each of which indicates a possible result: • 0 - Success • -1 - Invalid User Login • -2 - Invalid XML Document • 100 - Invalid Input • 200 - Invalid Customer Login
CustomerID	int	The Customer ID. Only returned if login is successful (ResultCode 0).
ErrorMessage	string	Detailed error message for the result code. Only returned in error conditions (a non-zero result code)

XML License Service

The XML License Service Web service provides several Web methods for interacting with licenses.

For SOLO Server Shared URL, this can be reached at <https://secure.softwarekey.com/solo/webservices/XmlLicenseService.asmx>

- When using SOLO Server Shared / Custom URL, replace *secure* with your custom subdomain.
- When using SOLO Server Dedicated URL, replace *secure.softwarekey.com* with your domain.
- When using SOLO Server Self-Hosted, replace *secure.softwarekey.com/solo* in the URL with the path to your SOLO Server instance.

Please **contact us** if you need assistance determining the correct URL.

All Web methods in this service use XML for both input and output. This allows new input and output values to be added without breaking backwards compatibility with existing implementations using the service.

Important

If your integration with the Web service validates the XML returned by the Web methods, be sure to account for the possibility of new elements being returned in the result. This can easily be done by applying an XSLT transform to the result XML to filter out any new fields and then validating the transformed XML.

The XmlLicenseService.asmx Web service offers the following Web methods:

Add/AddS

Used to add a license to a customer record. Replicates the **Add New License functionality available through the Author Interface**, allowing programmatic access to remotely add licenses.

This method requires passing in a SOLO Server AuthorID/API UserID/API UserPassword, and the user must have *Add Licenses* permission.

Add accepts an XmlDocument input parameter, while AddS accepts a string input parameter for the XML so that it is accessible via http post.

Important

Since this web method requires providing an AuthorID, API UserID, and API User Password as inputs, it should be used for internal applications only and should not be called by client applications distributed to customers. See **web service security** for details.

If you are currently using regular UserID and UserPassword credentials, you will need to update your application(s) to **use an API UserID and API UserPassword instead**, as support for the regular User ID and Password will be removed in the future.

Important

Licenses added through this web method on evaluation SOLO Server accounts will automatically be marked as test licenses, and will automatically be purged at the first of every month.

Important

This web method *cannot* be used to add licenses from Product Options that are configured to use the **License Groups: Required** setting.

Input

The values of these elements are as follows:

Parameter	Data Type	Required/Optional	Description
AuthorID	int	Required	SOLO Server Author ID.
UserID	string	Required	The API User ID of the user from the given author using the service (previously the regular User ID). The API User ID and Password need to be used , as support for the regular User ID and Password will be removed in the future.
UserPassword	string	Required	The API User Password for API User ID (previously the regular User Password for the User ID). The API User ID and Password need to be used , as support for the regular User ID and Password will be removed in the future.
ProdOptionID	int	Required	The Product Option ID for the license being issued/created.
Quantity	int	Required	The quantity for the license. Note that this DOES NOT take into account the quantity mode setting in the Product Option configuration.
UnitPrice	decimal	Required	The unit price for the license.
Expiration	date	Optional	The expiration date for the license, formatted as MM/dd/yyyy. If not specified, the expiration will be calculated based on the product option Days To D/L setting.
ActivationCount	int	Required	The number of activations for the license.
DeactivationCount	int	Required	The number of deactivations for the license.
LicenseCounter	int	Optional	The License Counter value for the license. Omit this field or use a blank value to leave the value unset.
Version	string	Optional	The version number to be associated with the license. This should be formatted like NNNNN.NNNNN.NNNNN.NNNNN, where each N represents a digit (leading zeroes are not required).
LicenseUpdate	string	Optional	The value to be placed in the License Update field of the license.

Notes	string	Optional	Any notes to be associated with the license.
CustomerID	int	Required	The Customer ID to add the license to.
DistributorID	int	Optional	The Distributor ID to associate the license with (if applicable).
LicenseeEmail	string	Optional	The licensee email address.
LicenseeName	string	Optional	The licensee name.
IsTestLicense	bool	Optional	Whether to mark the license as a test license. On SOLO Server Shared and Dedicated URL, test licenses are automatically purged on the first of every month so they are not billed.

The input XML is in the following format:

XML

```
<LicenseAdd xmlns="">
  <AuthorID></AuthorID>
  <UserID></UserID>
  <UserPassword></UserPassword>
  <ProdOptionID></ProdOptionID>
  <Quantity></Quantity>
  <UnitPrice></UnitPrice>
  <Expiration></Expiration>
  <ActivationCount></ActivationCount>
  <DeactivationCount></DeactivationCount>
  <LicenseCounter></LicenseCounter>
  <Version></Version>
  <LicenseUpdate></LicenseUpdate>
  <Notes></Notes>
  <CustomerID></CustomerID>
  <DistributorID></DistributorID>
  <LicenseeEmail></LicenseeEmail>
  <LicenseeName></LicenseeName>
  <IsTestLicense></IsTestLicense>
</LicenseAdd>
```

Output

The result is returned as XML in the following format:

XML

```
<?xml version="1.0" encoding="utf-8"?>
<AddPrepaidLicense xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <ResultCode></ResultCode>
  <LicenseID></LicenseID>
```

```
<Password></Password>
<SerialNumber></SerialNumber>
<ActivationPassword></ActivationPassword>
</AddPrepaidLicense>
```

The values of these elements are as follows:

Parameter	Data Type	Description
ResultCode	int	The result code: -2 - Invalid XML Document -1 - Invalid SOLO Server Logon 0 - Success 1 - Invalid ProdOptionID 2 - ProdOption is a bundled option which cannot be added through the Web service 3 - ProdOption is a payment plan option which cannot be added through the Web service 4 - Invalid CustomerID 5 - Invalid DistributorID 6 - No serials available (for products configured with Assigned From List serial numbers) 7 - The ProdOptionID is for an option which requires a license group, and cannot be created through this mechanism. 8 - The provided expiration date is invalid.
LicenseID	int	The new License ID.
Password	string	The customer password. Note this is only returned if the user calling the web method has View Password permission or the password was not chosen by the customer. View the topic on Password Accessibility for more information.
SerialNumber	string	The serial number of the new license (if applicable).
ActivationPassword	string	The randomly generated activation password for the new license.

InfoCheck/InfoChecks

Returns data about the license's activation details and optionally customer registration details.

InfoCheck accepts an XmlDocument input parameter, while InfoChecks accepts a string input parameter for the XML so that it is accessible via http post.

Input

The values of these elements are as follows:

Parameter	Data Type	Required/Optional	Description
LicenseID	int	Required for LicenseID/Password authentication, otherwise optional.	The License ID.
Password	string	Required if access to licensee, customer registration, or user defined field data is needed, otherwise optional.	The customer password or license activation password. For Assigned from List serial numbers, the serial number password may also be used. If provided, the server will validate the password, and the licensee, customer registration, and user defined field information will be populated in the output. If omitted, these fields will not be populated in the output.
SerialNumber	string	Required for SerialNumber/ProductID authentication, otherwise optional.	The Serial Number associated with the license which is being checked.
ProductID	int	Required for SerialNumber/ProductID authentication, otherwise optional.	The Product ID. If passed in, the server will validate the Product ID against the Product ID associated with the license.

The input is XML in the following format:

XML

```
<LicenseInfoCheck xmlns="">
  <LicenseID></LicenseID>
  <Password></Password>
  <SerialNumber></SerialNumber>
  <ProductID></ProductID>
</LicenseInfoCheck>
```

Output

The result is returned as XML in the following format:

XML

```
<?xml version="1.0" encoding="utf-8"?>
<LicenseInfoCheck xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <ResultCode></ResultCode>
  <ProductID></ProductID>
  <ProductName></ProductName>
  <LatestVersion></LatestVersion>
  <ProdOptionID></ProdOptionID>
```

```
<OptionName></OptionName>
<TCFixedValue></TCFixedValue>
<EnteredDate></EnteredDate>
<Status></Status>
<Quantity></Quantity>
<ReplacedBy></ReplacedBy>
<RemainingActivations></RemainingActivations>
<RemainingDeactivations></RemainingDeactivations>
<DownloadExpiration></DownloadExpiration>
<LicenseUpdate></LicenseUpdate>
<CurrentVersion></CurrentVersion>
<InvoiceNo></InvoiceNo>
<LicenseeEmail></LicenseeEmail>
<LicenseeName></LicenseeName>
<IsTestLicense></IsTestLicense>
<LicenseCounter></LicenseCounter>
<CustomerID></CustomerID>
<Company></Company>
<FirstName></FirstName>
<LastName></LastName>
<Address1></Address1>
<Address2></Address2>
<City></City>
<StateProvince></StateProvince>
<PostalCode></PostalCode>
<Country></Country>
<Email></Email>
<Phone></Phone>
<Fax></Fax>
<UDefChar1></UDefChar1>
<UDefChar2></UDefChar2>
<UDefChar3></UDefChar3>
<UDefChar4></UDefChar4>
<UDefChar5></UDefChar5>
<UDefChar6></UDefChar6>
<UDefChar7></UDefChar7>
<UDefChar8></UDefChar8>
<UDefChar9></UDefChar9>
<UDefChar10></UDefChar10>
<UDefNum1></UDefNum1>
<UDefNum2></UDefNum2>
<UDefNum3></UDefNum3>
<UDefNum4></UDefNum4>
<UDefNum5></UDefNum5>
<UDefFloat1></UDefFloat1>
<UDefFloat2></UDefFloat2>
<UDefFloat3></UDefFloat3>
<UDefFloat4></UDefFloat4>
<UDefFloat5></UDefFloat5>
<UDefDate1></UDefDate1>
<UDefDate2></UDefDate2>
<UDefDate3></UDefDate3>
<UDefDate4></UDefDate4>
<UDefDate5></UDefDate5>
</LicenseInfoCheck>
```


The values of these elements are as follows:

Parameter	Data Type	Description
ResultCode	int	The result code: -2 - Invalid XML Document 0 - OK 100 - Invalid License ID or Invalid License ID/Password combination 200 - Invalid ProductID
ProductID	int	The Product ID of the license.
ProductName	string	The Product Name.
LatestVersion	string	The Latest Version from the product.
ProdOptionID	int	The Product Option ID of the license.
OptionName	string	The Product Option Name.
TCFixedValue	int	The TC Fixed Value parameter from the option.
EnteredDate	datetime	The date and time the license was originally entered into the server.
Status	string	The license status.
Quantity	int	The quantity on the license.
ReplacedBy	string	The License ID of a license that has replaced the license.
RemainingActivations	int	The number of activations remaining on the license.
RemainingDeactivations	int	The number of deactivations remaining on the license.
DownloadExpiration	date	The download expiration date for the license.
LicenseUpdate	string	The License Update data for the license.
CurrentVersion	string	The Current version of the license.
InvoiceNo	int	The Invoice Number for the license. Note that this will only be returned if the CustomerID on the License matches the CustomerID on the invoice.

LicenseeEmail	string	The licensee email address. Only populated if a password is provided.
LicenseeName	string	The licensee name. Only populated if a password is provided.
IsTestLicense	bool	Whether to mark the license as a test license. On SOLO Server Shared and Dedicated URL, test licenses are automatically purged on the first of every month so they are not billed.
LicenseCounter	int	The license counter.
The remaining elements	string/int/date	The remaining elements are the CustomerID and customer contact details, and the license User-Defined fields. If the password is not provided, these fields will not be populated. Additionally, individual User-Defined field elements will not be present when they lack a value.

UpdateCheck/UpdateChecks

Checks for an update for a license or product and returns update information if applicable.

UpdateCheck accepts an XmlDocument input parameter, while UpdateCheckS accepts a string input parameter for the XML so that it is accessible via http post.

Input

The values of these elements are as follows:

Parameter	Data Type	Required/Optional	Description
LicenseID	int	Optional	The License ID.
Password	string	Optional	The customer password or license activation password. If provided, this will be validated if the product update specifies verifying the password.
ProductID	int	Optional	The Product ID. If both LicenseID and ProductID are provided, the provided ProductID will be validated to match the license ProductID.
ProductName	string	Optional	The product name for the update to look for.
LanguageCode	string	Optional	The two character language code for the update short message. Default is "en".

Pass in blank to use default.

VerifyDaysToDL	bool	Optional	Specifies whether to verify the download expiration date of the license has not expired (if the LicenseID is provided). Note that for product options configured for perpetual download (Days to Download of 0), this is ignored and no verification will take place.
Version	string	Optional	The current version number. This should be formatted like NNNNN.NNNNN.NNNNN.NNNNN, where each N represents a digit (leading zeroes are not required).

The input is XML in the following format:

XML

```
<LicenseUpdateCheck xmlns="">
  <LicenseID></LicenseID>
  <Password></Password>
  <ProductID></ProductID>
  <ProductName></ProductName>
  <LanguageCode></LanguageCode>
  <VerifyDaysToDL></VerifyDaysToDL>
  <Version></Version>
</LicenseUpdateCheck>
```

Output

The result is returned as XML in the following format:

XML

```
<?xml version="1.0" encoding="utf-8"?>
  <LicenseUpdateCheck xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
    <ResultCode></ResultCode>
    <Status></Status>
    <ReplacedBy></ReplacedBy>
    <LicenseUpdate></LicenseUpdate>
    <VersionString></VersionString>
    <VersionLong></VersionLong>
    <ActionToTake></ActionToTake>
    <URLInfo></URLInfo>
    <URLFile></URLFile>
    <URLFileServerName></URLFileServerName>
    <URLFilePort></URLFilePort>
    <URLFilePathOrFileName></URLFilePathOrFileName>
    <URLFileUserName></URLFileUserName>
    <URLFilePassword></URLFilePassword>
    <LatestFreeVersion></LatestFreeVersion>
    <ReleaseDate></ReleaseDate>
    <ShortMessage></ShortMessage>
```

```
<NoMoreDL></NoMoreDL>
<LicenseAgreementUrl></LicenseAgreementUrl>
</LicenseUpdateCheck>
```

The values of these elements are as follows:

Parameter	Data Type	Description
ResultCode	int	The result code: -2 - Invalid XML Document 0 - OK 100 - Invalid License ID or License ID/Password combination 200 - Invalid Product ID 300 - Expired - the download expiration is passed 400 - The Version passed is in the incorrect format. The Version should be in the format N.N.N.N, where N is a positive integer up to 1-5 digits, for example 1.10.2.1500.
Status	string	The license status.
ReplacedBy	string	The License ID of a license that has replaced the license.
LicenseUpdate	string	The License Update data for the license.
VersionString	string	The string representation of the current version number.
VersionLong	long	The long representation of the current version number.
ActionToTake	string	The action to take for the update. - NONE - Take no action - DNFTP - Download through FTP - DNHTP - Download through http - SECURE - The update is marked as requiring password verification and the passed in password did not match - GOURL - Got to a specified URL on the Web - MSG - Display a message
URLInfo	string	The URL to go to for more information.
URLFile	string	Information about building the URL for the update file. This depends on the authentication method:

- License ID/Password
 - Server Name|Port|Path/Filename|[varUserName]|[varPassword]
- Custom FTP
 - Server Name|Port|Path/Filename|FTP UserName|FTP Password
- No Authentication
 - Server Name|Port|Path/Filename|"

Note that these values are now automatically parsed and output in the following five URLFile entries below.

URLFileServerName	string	The server name for downloading the update.
URLFilePort	string	The port number to use for downloading the update.
URLFilePathOrFileName	string	The path and filename of the file to download relative to the root URL specified in the URLFileServerName.
URLFileUserName	string	The username to use for downloading the update.
URLFilePassword	string	The password to use for downloading the update.
LatestFreeVersion	string	The latest free version of the update.
ReleaseDate	date	The release date of the update.
ShortMessage	string	The short message defined on the update for the language code passed in or the default "en" message if no code was passed in.
NoMoreDL	date	The license download expiration date.
LicenseAgreementUrl	string	The URL to view the license agreement.

ValidateRegistration/ValidateLicenseRegistrationS

Validates whether a license is registered, returning the registration if the Password is passed in and validated.

ValidateLicenseRegistration accepts an XmlDocument input parameter, while ValidateLicenseRegistrationS accepts a string input parameter for the XML so that it is accessible via http post.

Input

The values of these elements are as follows:

Parameter	Data Type	Required/Optional	Description
LicenseID	int	Required for LicenseID/Password authentication, otherwise optional.	The License ID.
Password	string	Required	The customer password or license activation password. For Assigned from List serial numbers, the serial number password may also be used
SerialNumber	string	Required for SerialNumber/ProductID authentication, otherwise optional.	The serial number.
ProductID	int	Required for SerialNumber/ProductID authentication, otherwise optional.	The Product ID.

The input is XML in the following format:

XML

```
<?xml version="1.0" encoding="utf-8"?>
<ValidateRegistration xmlns="">
  <LicenseID></LicenseID>
  <Password></Password>
  <SerialNumber></SerialNumber>
  <ProductID></ProductID>
</ValidateRegistration>
```

Output

The result is returned as XML in the following format:

XML

```
<?xml version="1.0" encoding="utf-8"?>
<LicenseRegistration xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <ResultCode></ResultCode>
  <CustomerID></CustomerID>
  <Company></Company>
  <FirstName></FirstName>
  <LastName></LastName>
  <Address1></Address1>
  <Address2></Address2>
  <City></City>
  <StateProvince></StateProvince>
  <PostalCode></PostalCode>
  <Country></Country>
  <Phone></Phone>
  <Fax></Fax>
  <Email></Email>
  <Notes></Notes>
  <EuropeanUnionVATNumber></EuropeanUnionVATNumber>
```

```
<ProductID></ProductID>
<ProdOptionID></ProdOptionID>
<LicenseEmail></LicenseEmail>
<LicenseName></LicenseName>
</LicenseRegistration>
```

The values of these elements are as follows:

Parameter	Data Type	Description
ResultCode	int	The result code. Values are as follows: -2 - Invalid XML Document 0 - Success 100 - Invalid LicenseID/Password or SerialNumber/ProductID 300 - License not registered
CustomerID	int	The Customer ID, which uniquely identifies the customer to which this License ID belongs.
Company	string	The customer's company name.
FirstName	string	The customer's first name.
LastName	string	The customer's last name.
Address1	string	The customer's street address (or line 1 of the customer's address).
Address2	string	The customer's second address line (i.e. apartment or suite number).
City	string	The city of the customer's address.
StateProvince	string	The state/province of the customer's address.
PostalCode	int	The customer's zip/postal code.
Country	string	The customer's company name.
Phone	string	The customer's phone number.
Fax	string	The customer's fax number.
Email	string	The customers' email address.
Notes	string	Any notes associated with the customer.

EuropeanUnionVATNumber	string	The customer's EU VAT Number.
ProductID	int	The Product ID to which the License ID belongs.
ProdOptionID	int	The Product Option ID to which the License ID belongs.
LicenseeEmail	string	The licensee email address.
LicenseeName	string	The licensee name.

Register/RegisterS & UpdateRegistration/UpdateRegistrations

Registers customer information for an unregistered license or updates the registration on a registered license. These two Web methods are essentially identical except that Register will return an error if the customer is already registered.

Register/UpdateRegistration accept an XmlDocument input parameter, while RegisterS/UpdateRegistrationS accept a string input parameter for the XML so that it is accessible via http post.

Input

The values of these elements are as follows:

Parameter	Data Type	Required/Optional	Description
LicenseID	int	Required for LicenseID/Password authentication, otherwise optional.	The License ID.
Password	string	Required	The customer password or license activation password. For Assigned from List serial numbers, the serial number password may also be used.
SerialNumber	string	Required for SerialNumber/ProductID authentication, otherwise optional.	The serial number.
ProductID	int	Required for SerialNumber/ProductID authentication, otherwise optional.	The Product ID to which the License ID belongs (optional, recommended).
Company	string	Optional	The customer's company name.
FirstName	string	Optional	The customer's first name.
LastName	string	Optional	The customer's last name.
Address1	string	Optional	The customer's street address (or

			line 1 of the customer's address).
Address2	string	Optional	The customer's second address line (i.e. apartment or suite number).
City	string	Optional	The city of the customer's address.
StateProvince	string	Optional	The state/province of the customer's address. For US or Canadian addresses, this should be validated to be a valid state/-province code. See State Codes and Country Strings as well as Client Validation Script for details on validation.
PostalCode	string	Optional	The customer's zip/postal code. This should be a valid SOLO Server postal code string. See State Codes and Country Strings as well as Client Validation Script for details on validation.
Country	string	Optional	The country of the customer's address. For US and Canadian addresses, this should be validated to be a valid postal code. See State Codes and Country Strings as well as Client Validation Script for details on validation.
Phone	string	Optional	The customer's phone number.
Fax	string	Optional	The customer's fax number.
Email	string	Optional	The customers' email address.
Notes	string	Optional	Any notes associated with the customer.
EuropeanUnionVATNumber	string	Optional	The customer's EU VAT Number.
NewPassword	string	Optional	A new password to assign to the customer. Leave blank to keep the password unchanged. Note that this will only be updated if the customer password is used for authentication.

LicenseeOnly	boolean	Optional	Whether to only update the licensee fields (LicenseeEmail and LicenseeName). When omitted, this defaults to false.
LicenseeEmail	string	Optional	The licensee email address.
LicenseeName	string	Optional	The licensee name.
Enabled	boolean	Optional	Whether the customer is enabled..

The input is XML in the following format:

XML

```
<?xml version="1.0" encoding="utf-8"?>
<Register xmlns="">
  <LicenseID></LicenseID>
  <Password></Password>
  <SerialNumber></SerialNumber>
  <ProductID></ProductID>
  <Company></Company>
  <FirstName></FirstName>
  <LastName></LastName>
  <Address1></Address1>
  <Address2></Address2>
  <City></City>
  <StateProvince></StateProvince>
  <PostalCode></PostalCode>
  <Country></Country>
  <Phone></Phone>
  <Fax></Fax>
  <Email></Email>
  <Notes></Notes>
  <EuropeanUnionVATNumber></EuropeanUnionVATNumber>
  <NewPassword></NewPassword>
  <LicenseeOnly></LicenseeOnly>
  <LicenseeEmail></LicenseeEmail>
  <LicenseeName></LicenseeName>
  <Enabled></Enabled>
</Register>
```

Output

The result is returned as XML in the following format:

XML

```
<?xml version="1.0" encoding="utf-8"?>
<LicenseRegistrationResult xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <ResultCode></ResultCode>
  <CustomerID></CustomerID>
</LicenseRegistrationResult>
```

The values of these elements are as follows:

Parameter	Data Type	Description
ResultCode	int	The result code. Values are as follows: -2 - Invalid XML Document 0 - Success 100 - Invalid LicenseID/Password/SerialNumber 300 - Customer already registered. This will only be returned from the Register method.
CustomerID	int	The CustomerID associated with the license. Note that this can change from the original CustomerID associated with the license if the entered customer data causes a merge to occur.

UpdateActivationFields

Updates the activation related fields on a license.

This method requires passing in a SOLO Server AuthorID/API UserID/API UserPassword, and the user must have *Edit Licenses* permission.

Important

Since this web method requires providing an AuthorID, API UserID, and API User Password as inputs, it should be used for internal applications only and should not be called by client applications distributed to customers. See [web service security](#) for details.

If you are currently using regular UserID and UserPassword credentials, you will need to update your application(s) to **use an API UserID and API UserPassword instead**, as support for the regular User ID and Password will be removed in the future.

Input

All elements aside from AuthorID, UserID, UserPassword, and LicenseID are optional - if not passed in the existing value on the license record will be maintained. The values of these elements are as follows:

Parameter	Data Type	Required/Optional	Description
AuthorID	int	Required	SOLO Server Author ID.
UserID	string	Required	The API User ID of the user from the given author using the service (previously the regular User ID). The API User ID and Password need to be used , as support for the regular User ID and Password will be removed in the future.

UserPassword	string	Required	The API User Password for API User ID (previously the regular User Password for the User ID). The API User ID and Password need to be used , as support for the regular User ID and Password will be removed in the future.
LicenseID	int	Required	The License ID to update.
Status	string	Optional	The status to set the License to. Must be one of the following values (pass only the initial code such as OK - do not include the description): • OK • DUP - Duplicate • VOI - Void • FRD - Fraud • RET - Returned • EXP - Expired • CHK - Check/Validate • UPG - Upgrade
ActivationsLeft	int	Optional	Absolute value to set the Activations Left to.
ActivationsIncrement	int	Optional	Used in place of ActivationsLeft. Increments the existing Activations Left by the given value.
DeactivationsLeft	int	Optional	Absolute value to set the Deactivations Left to.
DeactivationsIncrement	int	Optional	Used in place of DeactivationsLeft. Increments the existing Deactivations Left by the given value.
LicenseCounter	int	Optional	Absolute value to set the License Counter to.
LicenseCounterIncrement	int	Optional	Used in place of LicenseCounter. Increments the existing License Counter by the given value.
ExpirationDate	date	Optional	Absolute value to set the Expiration Date to, formatted as MM/dd/yyyy.
ExpirationDateIncrement	int	Optional	Used in place of ExpirationDate. Increments the existing Expiration Date by the given number of days.

LicenseUpdate	string	Optional	Absolute value to set the License Update field on the license to.
SerialNumberText	string	Optional	Absolute value to set the Serial Number Text field on the license to.

The input XML is in the following format. The value is passed as a string to the Web method, and all white space between the XML elements should be removed before passing the value to the server.

XML

```
<UpdateActivationFields xmlns="">
  <AuthorID></AuthorID>
  <UserID></UserID>
  <UserPassword></UserPassword>
  <LicenseID></LicenseID>
  <Status></Status>
  <ActivationsLeft></ActivationsLeft>
  <ActivationsIncrement></ActivationsIncrement>
  <DeactivationsLeft></DeactivationsLeft>
  <DeactivationsIncrement></DeactivationsIncrement>
  <LicenseCounter></LicenseCounter>
  <LicenseCounterIncrement></LicenseCounterIncrement>
  <ExpirationDate></ExpirationDate>
  <ExpirationDateIncrement></ExpirationDateIncrement>
  <LicenseUpdate></LicenseUpdate>
  <SerialNumberText></SerialNumberText>
</UpdateActivationFields >
```

Output

The result is returned as XML in the following format:

XML

```
<UpdateLicenseActivationFields>
  <ResultCode></ResultCode>
</UpdateLicenseActivationFields >
```

The values of these elements are as follows:

Parameter	Data Type	Description
ResultCode	int	The result code: -2 - Invalid XML Document -1 - Invalid SOLO Server Logon, Invalid user permissions, or Invalid LicenseID 0 - Success 50 - Invalid parameters. Either no update fields are present, or there is an invalid value in one of the input parameters.

UpdateUserDefinedFields/UpdateUserDefinedFieldsS

Updates the user defined fields on a license. This method can be called in two ways:

- For **Product Options** which have the *User Defined Fields Writable* setting enabled, this method can be called by providing the LicenseID and Customer or Activation Password of the license to be updated.
- For **Product Options** which do not have the *User Defined Fields Writable* setting enabled, this method must be called by providing an AuthorID/API UserID/API UserPassword along with the LicenseID of the license to be updated, and the user must have *Edit Licenses* permission.

Important

Since this web method requires providing an AuthorID, API UserID, and API User Password as inputs, it should be used for internal applications only and should not be called by client applications distributed to customers. See **web service security** for details.

If you are currently using regular UserID and UserPassword credentials, you will need to update your application(s) to **use an API UserID and API UserPassword instead**, as support for the regular User ID and Password will be removed in the future.

Input

The values of these elements are as follows:

Parameter	Data Type	Required/Optional	Description
AuthorID	int	Optional when used with a Product Option with User Defined Fields Writable enabled, otherwise required.	SOLO Server Author ID
UserID	string	Optional when used with a Product Option with User Defined Fields Writable enabled, otherwise required.	The API User ID of the user from the given author using the service (previously the regular User ID). The API User ID and Password need to be used , as support for the regular User ID and Password will be removed in the future.
UserPassword	string	Optional when used with a Product Option with User Defined Fields Writable enabled, otherwise required.	The API User Password for API User ID (previously the regular User Password for the User ID). The API User ID and Password need to be used , as support for the regular User ID and Password will be removed in the future.
LicenseID	int	Required	The License ID.
Password	string	Optional when used with a Product Option with User Defined Fields Writable disabled, otherwise required.	The customer password or license activation password.

UDefCharN	string	Optional	The user defined character (string) fields - up to 50 characters are allowed for each.
UDefNumN	int	Optional	The user defined number (integer) fields.
UDefFloatN	double	Optional	The user defined floating point (double) fields.
UDefDateN	datetime	Optional	The user defined date fields.

Note that the UDefCharN, UDefNumN, UDefFloatN, and UDefDate fields are optional, however for any that are omitted the field on the license will be updated with a NULL value.

The input is XML in the following format:

XML

```
<?xml version="1.0" encoding="utf-8"?>
<UpdateUserDefinedFields xmlns="">
  <LicenseID></LicenseID>
  <Password></Password>
  <UDefChar1></UDefChar1>
  <UDefChar2></UDefChar2>
  <UDefChar3></UDefChar3>
  <UDefChar4></UDefChar4>
  <UDefChar5></UDefChar5>
  <UDefChar6></UDefChar6>
  <UDefChar7></UDefChar7>
  <UDefChar8></UDefChar8>
  <UDefChar9></UDefChar9>
  <UDefChar10></UDefChar10>
  <UDefNum1></UDefNum1>
  <UDefNum2></UDefNum2>
  <UDefNum3></UDefNum3>
  <UDefNum4></UDefNum4>
  <UDefNum5></UDefNum5>
  <UDefFloat1></UDefFloat1>
  <UDefFloat2></UDefFloat2>
  <UDefFloat3></UDefFloat3>
  <UDefFloat4></UDefFloat4>
  <UDefFloat5></UDefFloat5>
  <UDefDate1></UDefDate1>
  <UDefDate2></UDefDate2>
  <UDefDate3></UDefDate3>
  <UDefDate4></UDefDate4>
  <UDefDate5></UDefDate5>
</UpdateUserDefinedFields>
```

Output

The result is returned as XML in the following format:

XML

```
<?xml version="1.0" encoding="utf-8"?>
<UpdateUserDefinedFields xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <ResultCode></ResultCode>
</UpdateUserDefinedFields>
```

The values of these elements are as follows:

Parameter	Data Type	Description
ResultCode	int	The result code. Values are as follows: -2 - Invalid XML Document 0 - Success 100 - Invalid LicenseID/Password, or the license product option does not have the user defined fields marked as writeable.

GetLicenseCustomData/GetLicenseCustomDataS

Retrieves the content of the Custom Data field for a given license.

This method requires passing in a SOLO Server AuthorID/API UserID/API UserPassword.

GetLicenseCustomData accepts an XmlDocument input parameter, while GetLicenseCustomDataS accepts a string input parameter for the XML so that it is accessible via http post.

Important

Since this web method requires providing an AuthorID, API UserID, and API User Password as inputs, it should be used for internal applications only and should not be called by client applications distributed to customers. See [web service security](#) for details.

If you are currently using regular UserID and UserPassword credentials, you will need to update your application(s) to **use an API UserID and API UserPassword instead**, as support for the regular User ID and Password will be removed in the future.

Input

The values of these elements are as follows:

Parameter	Data Type	Required/Optional	Description
AuthorID	int	Required	SOLO Server Author ID.
UserID	string	Required	The API User ID of the user from the given author using the service (previously the regular User ID). The API User ID and Password need to be used, as support for the regular User ID and Password will be removed in the future.

UserPassword	string	Required	The API User Password for API User ID (previously the regular User Password for the User ID). The API User ID and Password need to be used , as support for the regular User ID and Password will be removed in the future.
LicenseID	int	Required	The License ID to get the Custom Data for.

The input is XML in the following format:

XML

```
<GetLicenseCustomData xmlns="">
  <AuthorID></AuthorID>
  <UserID></UserID>
  <UserPassword></UserPassword>
  <LicenseID></LicenseID>
</GetLicenseCustomData>
```

Output

The result is returned as XML in the following format:

XML

```
<GetLicenseCustomData xmlns="">
  <ResultCode></ResultCode>
  <LicenseCustomData></LicenseCustomData>
</GetLicenseCustomData>
```

The values of these elements are as follows:

Parameter	Data Type	Description
ResultCode	int	The result code: -2 - Invalid XML Document -1 - Invalid SOLO Server Logon or Invalid License ID 0 - OK
LicenseCustomData	string or XML	The Custom Data value for the license. If the value is a valid XML document, the XML document will be embedded as a child of the LicenseCustomData element, otherwise, the value will simply be a string.

UpdateLicenseCustomData/UpdateLicenseCustomDataS

Updates the content of the Custom Data field for a given license.

This method requires passing in a SOLO Server AuthorID/API UserID/API UserPassword, and the user must have the *Edit Licenses* permission.

UpdateLicenseCustomData accepts an XmlDocument input parameter, while UpdateLicenseCustomDataS accepts a string input parameter for the XML so that it is accessible via http post.

Important

Since this web method requires providing an AuthorID, API UserID, and API User Password as inputs, it should be used for internal applications only and should not be called by client applications distributed to customers. See [web service security](#) for details.

If you are currently using regular UserID and UserPassword credentials, you will need to update your application(s) to **use an API UserID and API UserPassword instead**, as support for the regular User ID and Password will be removed in the future.

Input

The values of these elements are as follows:

Parameter	Data Type	Required/Optional	Description
AuthorID	int	Required	SOLO Server Author ID.
UserID	string	Required	The API User ID of the user from the given author using the service (previously the regular User ID). The API User ID and Password need to be used , as support for the regular User ID and Password will be removed in the future.
UserPassword	string	Required	The API User Password for API User ID (previously the regular User Password for the User ID). The API User ID and Password need to be used , as support for the regular User ID and Password will be removed in the future.
LicenseID	int	Required	The License ID to update the Custom Data for.
LicenseCustomData	string or XML	Optional	The value to update the Custom Data field to. If the value is an XML document, the document should be embedded as a child of this element and the Format field outlined below should be set to XML. To clear the value on the license, pass in a blank value or omit this element.
Format	string	Optional	If the License Custom Data is an XML document, set this value must be set to XML in order for the web method to properly parse the content as an embedded XML document. In addition, when set to XML, additional validation will be per-

formed to ensure the value is a valid XML document.

The input is XML in the following format:

XML

```
<UpdateLicenseCustomData xmlns="">
  <AuthorID></AuthorID>
  <UserID></UserID>
  <UserPassword></UserPassword>
  <LicenseID></LicenseID>
  <LicenseCustomData></LicenseCustomData>
  <Format></Format>
</UpdateLicenseCustomData>
```

Output

The result is returned as XML in the following format:

XML

```
<GetLicenseCustomData xmlns="">
  <ResultCode></ResultCode>
</GetLicenseCustomData>
```

The values of these elements are as follows:

Parameter	Data Type	Description
ResultCode	int	The result code: -2 - Invalid XML Document -1 - Invalid SOLO Server Logon or Invalid License ID 0 - OK 1 - Invalid Format. The format was specified as XML but the LicenseCustomData field does not contain a valid embedded xml document.

XML License File Service

The XML License File Service provides methods for obtaining XML-formatted license files.

More specifically, this is the web service used by the *Protection PLUS 5 SDK* libraries to obtain encrypted and digitally signed xml license files.

For SOLO Server Shared URL, this can be reached at <https://secure.softwarekey.com/solo/webservices/XmlLicenseFileService.asmx>

- When using SOLO Server Shared / Custom URL, replace *secure* with your custom subdomain.
- When using SOLO Server Dedicated URL, replace *secure.softwarekey.com* with your domain.
- When using SOLO Server Self-Hosted, replace *secure.softwarekey.com/solo* in the URL with the path to your SOLO Server instance.

Please **contact us** if you need assistance determining the correct URL.

Each web method in this web service is documented by a series of documentation files named after the web method as follows:

- *MethodNameInput.xml* - Uncommented xml file with input xml structure.
- *MethodNameInputDetails.xml* - Commented xml file with input xml structure and comments on each input element.
- *MethodNameInput.xsd* - XSD schema file defining the input xml structure.
- *MethodNameOutput.xml* - Uncommented xml file with output xml structure.
- *MethodNameOutputDetails.xml* - Commented xml file with output xml structure and comments on each output element.
- *MethodNameOutput.xsd* - XSD schema file defining the input xml structure.

Important

The SoftwareKey System offers an assortment of libraries which provide APIs that simplify the invocation of these web services from your application. This collection of API libraries includes:

- The Protection PLUS 5 SDK libraries, including the PLUSManaged library (for .NET applications), and the PLUSNative library (for native applications).
- The Automation Client library, which is included with Protection PLUS 4 SDK for native/unmanaged applications.
- The SwkClientServices2005 library, which is included with Protection PLUS 4 SDK for .NET/managed applications.

Please refer to the applicable product manuals and sample projects for more information on each library/API.

GetLicenseFile

This web method is used to get a license file for a given Installation (issued at the time of activation).

Input

Parameter	Data Type	Required/Optional	Description
<i>EncryptionKeyID</i>	string	Required	The Encryption Key ID used for encrypting, decrypting, digitally signing, and verifying requests and responses. This is included in the Encryption Envelope, which may be retrieved by clicking the <i>Configure/Products</i> menu and clicking <i>Action-View Encryption Key Data</i> .
<i>InstallationID</i>	string	Required	Installation ID for which the License File is needed.
<i>ProductVersion</i>	string	Optional	Product Version Number. This should be

formatted like
NNNNN.NNNNN.NNNNN.NNNNN, where
each N represents a digit (leading zeroes
are not required).

Output

Parameter	Data Type	Description
ResultCode	int	Can take the following values • 0 - Success • 5000 - Invalid EncryptionKeyID • 5001 - Encryption Required • 5002 - Signature Required • 5003 - Decryption Failure • 5004 - Verification Failure • 5005 - Invalid Parameters • 5015 - Invalid InstallationID • 5016 - Deactivated Installation • 5017 - Invalid License Status • 5018 - No Remaining Deactivations • 5019 - License Expired • 5022 - Invalid System Time • 5023 - Protection PLUS 5 SDK Access Not Enabled • 5030 - Protection PLUS 5 SDK evaluation has expired • 5031 - SOLO Server evaluation has expired
ErrorMessage	string	Detailed error message for the ResultCode. Only returned in error conditions (ResultCode non zero).
License	string	The contents of the XML License File. When encryption is being used for this file, it will be in its encrypted form here.

The documentation files for this web method are as follows:

- **GetLicenseFileInput.xml**
- **GetLicenseFileInputDetails.xml**
- **GetLicenseFileInput.xsd**
- **GetLicenseFileOutput.xml**
- **GetLicenseFileOutputDetails.xml**
- **GetLicenseFileOutput.xsd**

XML Network Floating Service

The XML Network Floating Service web service provides several Web methods related to Cloud-Controlled network floating licensing.

For SOLO Server Shared URL, this can be reached at <https://secure.softwarekey.com/solo/webservices/XmlNetworkFloatingService.asmx>

- When using SOLO Server Shared / Custom URL, replace *secure* with your custom subdomain.
- When using SOLO Server Dedicated URL, replace *secure.softwarekey.com* with your domain.
- When using SOLO Server Self-Hosted, replace *secure.softwarekey.com/solo* in the URL with the path to your SOLO Server instance.

Please **contact us** if you need assistance determining the correct URL.

All web methods in this service use XML for both input and output (though the input parameter is defined as a string to allow POST access to the Web service, the string must be in XML format). This allows new input and output values to be added without breaking backwards compatibility with existing implementations using the service.

Important

If your integration with the Web service validates the XML returned by the Web methods, be sure to account for the possibility of new elements being returned in the result. This can easily be done by applying an XSLT transform to the result XML to filter out any new fields and then validating the transformed XML.

Each web method in this web service is documented by a series of documentation files named after the web method as follows:

- MethodNameInput.xml - Uncommented xml file with input xml structure.
- MethodNameInputDetails.xml - Commented xml file with input xml structure and comments on each input element.
- MethodNameInput.xsd - XSD schema file defining the input xml structure.
- MethodNameOutput.xml - Uncommented xml file with output xml structure.
- MethodNameOutputDetails.xml - Commented xml file with output xml structure and comments on each output element.
- MethodNameOutput.xsd - XSD schema file defining the input xml structure.

Important

Please note that all date values returned by the above Web methods are in UTC time, using the ISO 8601 format as follows:

- YYYY-MM-DDTHH:MM.SSZ

OpenSession

This web method is used to open a new network session, and returns information regarding the status of the network session.

Input

The values of these elements are as follows:

Parameter	Data Type	Required/Optional	Description
EncryptionKeyID	string	Required	The Encryption Key ID used for encrypting, decrypting, digitally signing, and verifying requests and responses. This is included in the Encryption Envelope, which may be retrieved by clicking the <i>Configure/Products</i> menu and clicking

Actions/View Encryption Key Data.

RequestMethod	string	Required for offline use through the ManualRequst.aspx page in the Customer License Portal , otherwise Optional.	The request method name "OpenSession".
LicenseID	int	Required	The License ID of the license.
Password	string	Required	The customer password or license activation password.
ActivationData	string	Optional	An string containing an XML document that has activation data. This XML document typically contains data which is used to uniquely identify the system which is being activated. If used, a valid XML document must be provided, which must have a single, root node.
SessionCode	string	Optional	A unique session code generated by the client which is returned in the output and used to prevent replay attacks.

XML

```
<GetNetworkSession xmlns="">
  <EncryptionKeyID></EncryptionKeyID>
  <RequestMethod>OpenSession</RequestMethod>
  <PrivateData>
    <LicenseID></LicenseID>
    <Password></Password>
    <ActivationData>
      <XmlDocument/>
    </ActivationData>
  </PrivateData>
  <SessionCode></SessionCode>
</GetNetworkSession>
```

Output

Refer to the **section below** for output details.

The documentation files for this Web method are as follows:

- **OpenSessionInput.xml**
- **OpenSessionInputDetails.xml**
- **OpenSessionInput.xsd**
- **Output.xml**
- **OutputDetails.xml**
- **Output.xsd**

PollSession

This web method is used to poll the server with an existing network session, and returns information regarding the status of the network session.

Input

The values of these elements are as follows:

Parameter	Data Type	Required/Optional	Description
EncryptionKeyID	string	Required	The Encryption Key ID used for encrypting, decrypting, digitally signing, and verifying requests and responses. This is included in the Encryption Envelope, which may be retrieved by clicking the <i>Configure/Products</i> menu and clicking <i>Actions/View Encryption Key Data</i> .
RequestMethod	string	Required for offline use through the ManualRequest.aspx page in the Cus-tomer License Portal , otherwise Optional.	The request method name "PollSession".
SessionID	string	Required	The Session ID.
CertificatePath	string	Required when polling a session that is checked out.	File system path to store the network certificate on the client.
ActivationData	string	Optional	An string containing an XML document that has activation data. This XML document typically contains data which is used to uniquely identify the system which is being activated. If used, a valid XML document must be provided, which must have a single, root node.
SessionCode	string	Optional	A unique session code generated by the client which is returned in the output and used to prevent replay attacks.

XML

```
<GetNetworkSession xmlns="">
  <EncryptionKeyID></EncryptionKeyID>
  <RequestMethod>PollSession</RequestMethod>
  <PrivateData>
    <SessionID></SessionID>
    <CertificatePath></CertificatePath>
    <ActivationData>
      <XmlDocument/>
    </ActivationData>
  </PrivateData>
```



```
<SessionCode></SessionCode>
</GetNetworkSession>
```

Output

Refer to the [section below](#) for output details.

The documentation files for this Web method are as follows:

- [PollSessionInput.xml](#)
- [PollSessionInputDetails.xml](#)
- [PollSessionInput.xsd](#)
- [Output.xml](#)
- [OutputDetails.xml](#)
- [Output.xsd](#)

CheckoutSession

This web method is used to check out a network session from the server for offline use, and returns information regarding the status of the network session.

Input

The values of these elements are as follows:

Parameter	Data Type	Required/Optional	Description
EncryptionKeyID	string	Required	The Encryption Key ID used for encrypting, decrypting, digitally signing, and verifying requests and responses. This is included in the Encryption Envelope, which may be retrieved by clicking the <i>Configure/Products</i> menu and clicking <i>Actions/View Encryption Key Data</i> .
RequestMethod	string	Required for offline use through the ManualRequest.aspx page in the Customer License Portal , otherwise Optional.	The request method name "CheckoutSession".
SessionID	string	Required	The Session ID.
RequestedCheckoutDuration	decimal	Required	The duration in hours to check the session out for.
CertificatePath	string	Required	File system path to store the network certificate on the client.
ActivationData	string	Optional	An string containing an XML document that has activation data. This XML document typically con-

tains data which is used to uniquely identify the system which is being activated. If used, a valid XML document must be provided, which must have a single, root node.

SessionCode	string	Optional	A unique session code generated by the client which is returned in the output and used to prevent replay attacks.

XML

```
<GetNetworkSession xmlns="">
  <EncryptionKeyID></EncryptionKeyID>
  <RequestMethod>CheckoutSession</RequestMethod>
  <PrivateData>
    <SessionID></SessionID>
    <RequestedCheckoutDuration></RequestedCheckoutDuration>
    <CertificatePath></CertificatePath>
    <ActivationData>
      <XmlDocument/>
    </ActivationData>
  </PrivateData>
  <SessionCode></SessionCode>
</GetNetworkSession>
```

Output

Refer to the [section below](#) for output details.

The documentation files for this Web method are as follows:

- [CheckoutSessionInput.xml](#)
- [CheckoutSessionInputDetails.xml](#)
- [CheckoutSessionInput.xsd](#)
- [Output.xml](#)
- [OutputDetails.xml](#)
- [Output.xsd](#)

CheckinSession

This web method is used to check in a network session to the server, and returns information regarding the status of the network session.

Input

The values of these elements are as follows:

Parameter	Data Type	Required/Optional	Description
EncryptionKeyID	string	Required	The Encryption Key ID used for encrypting, decrypting, digitally signing, and verifying requests and responses. This is included in the Encryption Envelope,

which may be retrieved by clicking the *Configure/Products* menu and clicking *Actions/View Encryption Key Data*.

RequestMethod	string	Required for offline use through the ManualRequst.aspx page in the Cus-tomer License Portal , otherwise Optional.	The request method name "CheckinSession".
SessionID	string	Required	The Session ID.
CertificatePath	string	Required when polling a session that is checked out.	File system path to store the network certificate on the client.
ActivationData	string	Optional	An string containing an XML document that has activation data. This XML document typically contains data which is used to uniquely identify the system which is being activated. If used, a valid XML document must be provided, which must have a single, root node.
SessionCode	string	Optional	A unique session code generated by the client which is returned in the output and used to prevent replay attacks.

XML

```
<GetNetworkSession xmlns="">
  <EncryptionKeyID></EncryptionKeyID>
  <RequestMethod>CheckinSession</RequestMethod>
  <PrivateData>
    <SessionID></SessionID>
    <CertificatePath></CertificatePath>
    <ActivationData>
      <XmlDocument/>
    </ActivationData>
  </PrivateData>
  <SessionCode></SessionCode>
</GetNetworkSession>
```

Output

Refer to the **section below** for output details.

The documentation files for this Web method are as follows:

- **CheckinSessionInput.xml**
- **CheckinSessionInputDetails.xml**
- **CheckinSessionInput.xsd**
- **Output.xml**
- **OutputDetails.xml**
- **Output.xsd**

OpenSession, PollSession, CheckoutSession, CheckinSession Output Details

Output

The result of the OpenSession, PollSession, CheckoutSession, and CheckinSession web methods is returned as XML in the following format:

XML

```
<GetNetworkSession>
  <PrivateData>
    <ResultCode></ResultCode>
    <ErrorMessage></ErrorMessage>
    <NetworkSession>
      <SessionID></SessionID>
      <LicenseStatus></LicenseStatus>
      <CustomerID></CustomerID>
      <LicenseID></LicenseID>
      <Password></Password>
      <ProductID></ProductID>
      <ProdOptionID></ProdOptionID>
      <PollFrequency></PollFrequency>
      <PollRetryFrequency></PollRetryFrequency>
      <PollRetryCount></PollRetryCount>
      <CheckedOut></CheckedOut>
      <TotalSeats></TotalSeats>
      <SeatsAvailable></SeatsAvailable>
      <IPAddress></IPAddress>
      <CheckoutDurationMinimum></CheckoutDurationMinimum>
      <CheckoutDurationMaximum></CheckoutDurationMaximum>
      <CertificatePath></CertificatePath>
      <AllocatedDate></AllocatedDate>
      <AllocatedUntilDate></AllocatedUntilDate>
      <ExpirationDate></ExpirationDate>
      <LastPollDate></LastPollDate>
      <ActivationData></ActivationData>
      <Status></Status>
    </NetworkSession>
    <ServerDateTime></ServerDateTime>
    <SessionCode></SessionCode>
  </PrivateData>
</GetNetworkSession>
```

The values of these elements are as follows:

Parameter	Data Type	Description
ResultCode	int	May contain one of the following values, each of which indicates a possible result: 0 - Success 5000 - Invalid Encryption Key ID 5001 - Encryption Required 5002 - Signature Required 5003 - Decryption Failure 5004 - Verification Failure

- 5005 - Invalid Parameters
- 5008 - Invalid Activation Data
- 5017 - Invalid License Status
- 5019 - License Expired
- 5022 - Invalid System Time
- 5024 - Invalid XML Document
- 5027 - Invalid Network Session
- 5028 - No Network Seats Remaining
- 5032 - Network Floating Access Not Enabled
- 5033 - Account Closed
- 5034 - Network Floating Access Invalid Domain

ErrorMessage	string	Detailed error message for the result code. Only returned in error conditions (a non-zero ResultCode)
SessionID	string	A unique, system generated ID value used to identify the session.
LicenseStatus	string	The license status.
CustomerID	int	The license Customer ID.
ProductID	int	The license Product ID.
ProdOptionID	int	The License Product Option ID.
ComputerName	string	The Computer Name of the machine which opened the session.
PollFrequency	int	The frequency the application should poll the server, in seconds.
PollRetryFrequency	int	The frequency the application should retry polling the server if polling fails, in seconds.
PollRetryCount	int	The number of times the application should retry polling the server if polling fails.
CheckedOut	bool	Whether the session is checked out or not.
TotalSeats	int	The total number of network seats available on the license.
SeatsAvailable	int	The total number of network seats still currently available on the license.
IPAddress	string	The IP address the session was opened under.

CheckoutDurationMinimum	int	The minimum amount of time the session may be checked out for, in hours.
CheckoutDurationMaximum	int	The maximum amount of time the session may be check out for, in hours.
CertificatePath	string	The path to store the session certificate file when checking out a session. This is reflected back from the value passed up by the application, and is only applicable to the CheckoutSession and CheckinSession web methods.
AllocatedDate	dateTime	The date and time (in UTC) in which the network session was opened.
AllocatedUntilDate	dateTime	The date and time (in UTC) in which a network session is no longer valid. This date is extended when the licensed application performs a poll. The date is calculated by SOLO Server as follows: Allocated Until Date = (Current Date and Time) + ((Poll Frequency) + (Poll Retry Count * Poll Retry Frequency)). When a session is checked out for a given duration, the Allocated Until Date is then set to the (Current Date and Time) + (the specified duration).
ExpirationDate	dateTime	The license download expiration date.
LastPollDate	dateTime	The date and time (in UTC) in which the network session last polled the server.
ActivationData	XmlDocument	An XML document that has activation data. This XML document typically contains data which is used to uniquely identify the system the application is running on.
Status	string	The session status, which can be one of the following values: • OK • NotFound - The network session could not be found on the server. • Invalid - The license status is not valid. • Closed - The session is closed. • Expired - The license has expired. • NoMoreSeats - No more network seats are available.
ServerDateTime	dateTime	Server timestamp.
SessionCode	string	A session code generated by the client to pre-

vent replay attacks.

CloseSession

This web method is used to close a network session, and returns information regarding the status of closing the session.

Input

The values of these elements are as follows:

Parameter	Data Type	Required/Optional	Description
EncryptionKeyID	string	Required	The Encryption Key ID used for encrypting, decrypting, digitally signing, and verifying requests and responses. This is included in the Encryption Envelope, which may be retrieved by clicking the <i>Configure/Products</i> menu and clicking <i>Actions/View Encryption Key Data</i> .
RequestMethod	string	Required for offline use through the ManualRequest.aspx page in the Cus- tomer License Portal , otherwise Optional.	The request method name "CloseSession".
SessionID	string	Required	The Session ID.
ActivationData	string	Optional	An string containing an XML document that has activation data. This XML document typically contains data which is used to uniquely identify the system which is being activated. If used, a valid XML document must be provided, which must have a single, root node.
SessionCode	string	Optional	A unique session code generated by the client which is returned in the output and used to prevent replay attacks.

XML

```
<GetNetworkSession xmlns="">
  <EncryptionKeyID></EncryptionKeyID>
  <RequestMethod>CloseSession</RequestMethod>
  <PrivateData>
    <SessionID></SessionID>
    <ActivationData>
      <XmlDocument/>
    </ActivationData>
  </PrivateData>
  <SessionCode></SessionCode>
</GetNetworkSession>
```

Output

The result is returned as XML in the following format:

XML

```
<GetNetworkSession>
  <PrivateData>
    <ResultCode></ResultCode>
    <ErrorMessage></ErrorMessage>
    <ServerDateTime></ServerDateTime>
    <SessionCode></SessionCode>
  </PrivateData>
</GetNetworkSession>
```

The values of these elements are as follows:

Parameter	Data Type	Description
ResultCode	int	May contain one of the following values, each of which indicates a possible result: 0 - Success 5000 - Invalid Encryption Key ID 5001 - Encryption Required 5002 - Signature Required 5003 - Decryption Failure 5004 - Verification Failure 5005 - Invalid Parameters 5024 - Invalid XML Document
ErrorMessage	string	Detailed error message for the result code. Only returned in error conditions (a non-zero ResultCode)
ServerDateTime	dateTime	Server timestamp.
SessionCode	string	A session code generated by the client to prevent replay attacks.

The documentation files for this Web method are as follows:

- [CloseSessionInput.xml](#)
- [CloseSessionInputDetails.xml](#)
- [CloseSessionInput.xsd](#)
- [CloseSessionOutput.xml](#)
- [CloseSessionOutputDetails.xml](#)
- [CloseSessionOutput.xsd](#)

Web Service Examples

PHP Sample Scripts

For sample PHP scripts of some of the most commonly used web service methods, please [contact us](#).

Bypassing the SOLO Server Cart Pages

Using the CartServer and optionally the CustomerServer web services, it is possible to create a cart for a customer without using the SOLO Server cart pages. Depending on how this is implemented, this allows you to link the customer into the SOLO Server ordering process on any page up to and including the "Select Payment Method" page. To bypass the SOLO Server cart pages, implement the following into your web site:

- Call CartServer.CreateCart to create the cart, saving the CartID in a local variable and storing it in a cookie or within the web session.
- Add any items into the cart by calling CartServer.AddCartItem for each item, using the stored CartID.
- At this point, you can bypass the cart page and simply link the user to the SOLO Server login (b1_custlogin.asp) page.
- If you want to collect the customer information on your site, simply collect it and call CustomerServer.CreateCustomer with the collected information, storing the CustomerID in a local variable. Next, call CartServer.UpdateCartCustomerID with the stored CartID and CustomerID to associate the customer with the cart.
- At this point, you can bypass the cart, login, registration, and shipping pages by linking into the following SOLO Server pages:
 - The registration page (b1_register.asp). This will display a confirmation screen to the customer to verify their information.
 - This shipping address page (b1_getshippingaddress.asp). If the items in the cart don't require shipping, the user will automatically be redirected to the payment page.
 - The payment page. If the items in the cart require shipping, the user will be automatically be redirected to the shipping pages.
- If you want to collect the shipping information on your site, collect it and call CartServer.UpdateCartShipping with the collected information and the stored CartID.
- At this point you can bypass the cart, login, registration, and shipping pages and link directly to the payment page (b1_payment.asp).

Client Validation Script

SOLO Server offers a client validation script which can be used to perform client side validation of form input fields. This can be used with **Self Hosted Trial Tracking** forms, as an example.

To use this script on a page external to SOLO Server, you must include it in you page using a client side include using the following html code:

```
<script language="javascript" src="http://secure.softwarekey.com/solo/client_validations.js"></script>
```

This script contains several functions for validating different data types as follows:

- **ValidateDateField** - Verifies the input is a valid date.
- **ValidateStringField** - Verifies the input is a valid string. This basically verifies that no foreign characters are present in the field, as these are not accepted by the SOLO Server database.
- **ValidateMoneyField** - Verifies the input is a valid monetary value.
- **ValidateEmailField** - Verifies the input is a validly formatted email address (this does not validate whether the address exists, just whether it is formatted correctly).
- **ValidateUSStateField** - Verifies the input is a valid 2 character US state code.
- **ValidateCAProvinceField** - Verifies the input is a valid 2 character Canadian province code.
- **ValidateUSPostalCodeField** - Verifies the input is a valid US postal code, either a 5 digit zip or zip +4.
- **ValidateCAPostalCodeField** - Verifies the input is a valid Canadian postal code.
- **ValidatePhoneField** - Verifies the input is a valid phone number.
- **ValidateIntField** - Verifies the input is a valid integer value.
- **ValidateFloatField** - Verifies the input is a valid float value.

Each method has the same input parameters, (oElement, sFieldName, bRequired):

- **oElement** - The form element to validate.
- **sFieldName** - The text of the label for the field. This will be displayed on the alert message that pops up if the field does not validate.
- **bRequired** - A boolean value as to whether the field is required. If set to true and the field is blank, a message will appear asking the user to enter a value in the field. If set to false and the field is blank, validation will succeed.

If a validation for a form element fails, an alert will be popped up to the user with a descriptive error message. Once the user OK's the alert, focus will then be given to field where validation failed.

The validation routines also test the length of the input against the maxlength of the form field if it is defined. This is due to the fact that some automated form fillers are able to populate a form field past it's maxlength. If maxlength is not defined, this checking is bypassed.

State Codes and Country Strings

When submitting address information through the SOLO Server web services, it is necessary to validate certain information to ensure it is a valid value to input into SOLO Server. If invalid values are submitted, SOLO Server will accept them, but they may cause issues later on within the administration interface, since the values in the database will not match the values in SOLO Server's drop down lists. If your web service application is a web site, you can use the functions in the SOLO Server **Client Validation Script** to validate the values on the client side. You should also incorporate similar validation on the server side. You can also convert the javascript from this file into the language of your application if it is a non web application.

State Codes:

If an address is a US address, the state/province passed into the web service should be a valid US state code. [Click here for a list of valid state codes.](#)

SOLO Server Country Strings:

The country drop downs in SOLO Server use specific strings to insert country information into the database and display it in the drop downs. When entering a country passed into the web service should match these strings, or when viewing the address in edit mode in SOLO Server the system will not find a matching country to preselect in the drop down. If you don't catch this, it is easily possible to delete the address country. To see the latest set of SOLO Server country strings, simply navigate to a page in SOLO Server with a country drop down (the customer edit page works) and view the source of the page, looking for the html code for the country drop down. In each of the <option> tags, the "value" parameter is the country string for the country. The country string in SOLO Server conform to the **ISO-3166 standard**, and the codes are available on the **Online Browsing Platform**. Note that full country name is used in SOLO Server, and not the two character country code.

Reports Overview

Various reports can be generated to export data from SOLO Server. Depending on the report, the output formats can include:

- HTML
- Adobe Acrobat (pdf)
- Microsoft Excel (xls)
- Comma Separated Value (csv)
- XML

Access to Reports

The following list outlines required User **permissions** to view each report:

Report Type	Report and Required User Permission
Licenses	Report Access
Auditing Exports	Authors: Master User ID Licenses: (see Auditing Exports) Products, Product Options: View Products Users: Manager Users
Trial Tracking	Report Access
Uncompleted Store Orders	Unshipped Orders: Shipping Reports Access Declined Orders, All Shopping Carts, Assigned Shopping Carts: Pending and Declined Reports
Accounting	Accounting Reports (Master User ID Only)
Account Statements and Usage	Financial Access
Customers	Report Access
Store Sales	Sales Reports Access or Financial Access

Activations Report

The Activations Report displays a list of Products and their Options with the number of activations that have been performed for each Product Option.

To view this report, click the *Reports* menu, scroll down to the Licenses section, and click **Activations**.

Report Options

Report Type

The report type. Options are as follows:

- Adobe Acrobat: The report will be generated as an Adobe Acrobat file (pdf).
- Microsoft Excel: The report will be generated as a Microsoft Excel spreadsheet (xls).
- Comma Separated Value: The report will be generated as a comma separated value file (csv).
- XML by Elements: The report will be generated as xml with separate elements for each field.
- XML by Parameters: The report will be generated as xml with a single element containing an attribute for each field.

Start/End Date

The date range to run the report for. Note that depending on the server configuration, there may be a restriction of the number of days the report can be run for.

Save to Disk

Check this box to save the report to disk. If unchecked, the report will be displayed in an inline frame within the web page, otherwise you will be prompted to save the file to disk.

Sort By

The sort method for the report:

- Product
- Distributor

Report Output

This report contains the following fields:

PDF and XLS

- Product and Option Name
- First Time Activations - The total number of first time activations for the Product Option during the time period
- Total Activations - The total number of activations for the Product Option during the time period
- Total Licenses Added - The total number of licenses added for the Product Option during the time period
- Total Added Licenses Activated - The total number of licenses added during the time period which have been activated

In the pdf and xls format, it also lists the totals at the bottom. Clicking on the Option name will prompt a csv export containing the customer details of each distinct customer that activated the Option during the date range that has registered. This can be saved to disk for further analysis.

Clicking on the values under the columns: First Time Activations, Total Activations, Total Licenses Added, Total Added Licenses Activated will load a csv export containing the Product or Product Option's First Time Activations, Total Activations, Total Licenses Added, Total Added Licenses Activated respectively.

CSV and XML

- ProductID
- ProductName

- ProdOptionID
- OptionName
- FirstTimeActivations
- TotalActivations
- TotalAdded
- TotalAddedActivated

Export Activation Data Report

The Export Activation Data Report allows exporting raw activation data from the database to a csv or xml file. It can be reached from two locations:

- Click the *Reports* menu, scroll down to the Licenses section, and click **Export Activation Data**. When reached through this path, the report can be run against a specific Product over a given date range.
- From the **License Activation History** page by using the *Actions* dropdown and choosing *Export*. When reached through this path, the report will export activation data for the given license.

Report Options

Report Type

The report type. Options are as follows:

- Comma Separated Value - The report will be generated as a comma separated value file (csv).
- XML by Elements - The report will be generated as xml with separate elements for each field.
- XML by Parameters - The report will be generated as xml with a single element containing an attribute for each field.

Filter By Date

Whether to filter by date.

Start/End Date

The date range to run the report for. Note that depending on the server configuration, there may be a restriction of the number of days the report can be run for.

Save to Disk

Check this box to save the report to disk. If unchecked, the report will be displayed in an inline frame within the web page, otherwise you will be prompted to save the file to disk.

Product

Choose a Product to filter the report data to only include records for the given Product. Select the default of ALL to include all Products. This option is not available when reached from the license activation history page.

Report Output

This report contains the following fields:

- ActivationDate
- LicenseID
- CustomerID
- CompanyName
- FirstName
- LastName
- Email
- ProductID
- ProductName
- ProdOptionID
- OptionName
- LicenseEnteredDate
- LicenseModifiedDate
- ExtraInfo
- Status
- ActivationType
- InstallationID

- ComputerID
- InstallationName
- EnteredBy
- IPAddress
- ResultCode
- LastStatusCheck
- LastStatusCheckResultCode
- InitialProductVersion
- CurrentProductVersion
- Exception
- LicenseUpdate
- DeactivatedDate
- DeactivatedBy

Export Licenses

The Export Licenses Report contains data from all licenses and their corresponding customer records based on the search and filtering options. It can be reached from two locations:

- Click the *Reports* menu, scroll down to the Licenses section, and click **Export Licenses**.
- From the customer details page by clicking the *Export Licenses* button in the Licenses & Other Items section of the customer details page. When reached through this path, the report will export license data for the given customer.

Report Options

Report Type

The report type. Options are as follows:

- Comma Separated Value: The report will be generated as a comma separated value file (csv).
- XML by Elements: The report will be generated as xml with separate elements for each field.
- XML by Parameters: The report will be generated as xml with a single element containing an attribute for each field.

Filter by Date

Check this box to filter by date range.

Start/End Date

Available when *Filter by Date* is checked. The date range to run the report for.

Search By

Available when *Filter by Date* is checked. Choose whether to search by the Entered Date or Modified Date of the License or Customer records. When run against a specific customer, only the license date field options will appear.

More Information: ¹

Products/Options

Choose all Products, a specific Product, or a specific Product Option to filter the report data on.

Filter Issue License

Check the checkbox to include only licenses for Product Options that have Issue License feature set on the Option configuration.

More Information: ²

Filter Unregistered

Check the checkbox to include only licenses for customers who have registered. Note that this option is not applicable when running against a specific customer, and will not appear.

More Information: ³

¹The customer record (contact information) and license record (entitlement information) are separate records, each with an "entered" timestamp and a "modified" timestamp. You can choose to search the dates on either of these four options in the Search By filter. If you are trying to synchronize data with another system such as a CRM or an e-mail broadcast service, you can use the modified timestamp to export only that data which has changed since the last time you exported data.

²The Product catalog in SOLO Server often contains licensable software (i.e., where the Issue License check-box is checked on the Product Option record) or other items such as transaction fees or upgrade purchases that do not display a License ID to the end user. You can use the Filter Issue License to only include license records for those Products which are considered to be licensable software products.

³Some SOLO Server users who bulk-enter licenses (via the *Customers / Add Multiple Licenses* menu option) end up with licenses that are linked to unregistered customer records. You can use the Filter Unregistered check-box to include only licenses for customers who have registered.

Filter OK Status

Check the checkbox to include only licenses with OK status.
More Information: ¹

Report Output

This report contains the following fields:

- CustomerID
- CompanyName
- ContactName
- Password
- FirstName
- LastName
- MailAddr1
- MailAddr2
- MailAddr3
- City
- StateProvince
- PostalCode
- Country
- EMail
- Voice
- Fax
- CustomerEnteredBy
- CustomerEnteredDate
- CustomerModifiedBy
- CustomerModifiedDate
- UnRegistered
- InvalidAddress
- ExcludeFromAll
- Taxable
- IsDistributor
- LastLogin
- LastLoginIP
- Notes
- TempEMailFlag
- Enabled
- AuthorIDOwner
- OfferProduct
- OfferPartners
- CustomerExternalReference
- EuropeanUnionVATNumber
- LicenseID
- ActivationPassword
- Status ReplacedBy
- UpgradedTo
- ReturnedDate
- ProductID
- ProductName
- ProdOptionID
- OptionName
- InvoiceNo
- UnlocksLeft (Activations Left)
- OutsideThresLeft

¹If you only want to include those licenses which are considered "active" (i.e., those licenses marked with a status of OK), check the Filter OK Status check-box.

- QOrdered
- LicenseCounter
- UnitPrice
- AuthorSerialNum
- AuthorSerialNumTxt
- CurrentVersion
- LicenseUpdate
- ExpirationDate
- DistributorID
- LicenseEnteredBy
- LicenseEnteredDate
- LicenseModifiedBy
- LicenseModifiedDate
- LicenseNotes
- LFExpireType
- LFUdefChar1 - LFUdefChar10
- LFExpireDateSoft
- LFExpireDateHard
- LFLastUsedDate
- LFLastUsedTime
- LFUdefDate1 - LFUdefDate5
- LFExpireCount
- LFExpireAllowed
- LFLANCount
- LFLANAllowed
- LFInstallCount
- LFInstallAllowed
- LFUdefNum1 - LFUdefNum5
- LastUpdateDate
- LastUpdateStatus
- CouponType
- CouponCode
- CouponClaimed
- CouponAmount
- CouponPaid
- CouponDeclinedReason
- LFUdefFloat1 - LFUdefFloat5
- PriorityCode
- SalePrice
- BundledProdOptionID
- PriorityCodeDiscountAmount
- UpsellProdOptionID
- ComboDiscountAmount
- PaymentPlanInstanceID
- PaymentPlanStatus
- ReturnReasonID
- BundleDiscountAmount
- CustomData
- DeactivationsLeft
- AllowedActivationIPs
- LicenseCustomData
- OriginalLicenseID
- ReasonForChange
- LicenseLicenseeName
- LicenseLicenseeEmail
- LicenseGroup
- ActiveActivations (included only when run against a specific License ID)
- ExternalReference1
- ExternalReference1Source
- ExternalReference2

- ExternalReference2Source

Electronic Software Delivery (ESD) Downloads Report

The Electronic Software Delivery (ESD) Downloads Report gives you a summary listing of all ESD downloads.

To view this report, click the *Reports* menu, scroll down to the Licenses section, and click **Electronic Software Delivery (ESD) Downloads**.

Report Options

Report Type

The report type. Options are as follows:

- Adobe Acrobat: The report will be generated as an Adobe Acrobat file (pdf).
- Microsoft Excel: The report will be generated as a Microsoft Excel spreadsheet (xls).
- Comma Separated Value: The report will be generated as a comma separated value file (csv).
- XML by Elements: The report will be generated as xml with separate elements for each field.
- XML by Parameters: The report will be generated as xml with a single element containing an attribute for each field.

Start/End Date

The date range to run the report for. Note that depending on the server configuration, there may be a restriction of the number of days the report can be run for.

Save to Disk

Check this box to save the report to disk. If unchecked, the report will be displayed in an inline frame within the web page, otherwise you will be prompted to save the file to disk.

Product

Choose a Product to filter the report data to only include records for the given Product. Select the default of ALL to include all Products.

Report Output

This report contains the following fields:

PDF and XLS

- Date
- Status
- Product and Option
- Customer (Company Name)

The Customer text will link to the License Details page for that download (which contains the Version, License ID and Customer ID).

CSV and XML

- DateAccessed
- Status
- ProductName
- OptionName
- Version
- LicenseID
- CustomerID
- Customer (Company Name)

Licenses By Customer Report

The Licenses By Customer Report displays a list of licenses for a given Product over specified date range, grouped by customer.

To view this report, click the *Reports* menu, scroll down to the Licenses section, and click **Licenses by Customer**.

Report Options

Report Type

The report type. Options are as follows:

- Adobe Acrobat: The report will be generated as an Adobe Acrobat file (pdf).
- Microsoft Excel: The report will be generated as a Microsoft Excel spreadsheet (xls).
- Comma Separated Value: The report will be generated as a comma separated value file (csv).
- XML by Elements: The report will be generated as xml with separate elements for each field.
- XML by Parameters: The report will be generated as xml with a single element containing an attribute for each field.

Start/End Date

The date range to run the report for. Note that depending on the server configuration, there may be a restriction of the number of days the report can be run for.

Save to Disk

Check this box to save the report to disk. If unchecked, the report will be displayed in an inline frame within the web page, otherwise you will be prompted to save the file to disk.

Product

Choose a Product to filter the report data to only include records for the given Product. Select the default of ALL to include all Products.

Filter Issue License

Check the checkbox to include only licenses for Product Options that have *Issue License* feature set on the Option configuration.
More Information: ¹

Filter Unregistered

Check the checkbox to include only licenses for customers who have registered.
More Information: ²

Filter OK Status

Check the checkbox to include only licenses with OK status.
More Information: ³

¹The Product catalog in SOLO Server often contains licensable software (i.e., where the Issue License check-box is checked on the Product Option record) or other items such as transaction fees or upgrade purchases that do not display a License ID to the end user. You can use the Filter Issue License to only include license records for those Products which are considered to be licensable software products.

²Some SOLO Server users who bulk-enter licenses (via the *Customers / Add Multiple Licenses* menu option) end up with licenses that are linked to unregistered customer records. You can use the Filter Unregistered check-box to include only licenses for customers who have registered.

³If you only want to include those licenses which are considered "active" (i.e., those licenses marked with a status of OK), check the Filter OK Status check-box.

Status Check Days Back

The number of days back from the current date to search each license for a count of active installations which have phoned home to perform a status check.

Sort By

The grouping method of the report. Options are as follows:

- License ID
- Product

Report Output

This report contains the following fields:

PDF and XLS

- Customer
- License ID
- Product and Option
- Entered Date
- Qty
- Successful Activations
- Declined Activations
- Threshold Activations
- Active Installations

Links are included to the corresponding Customer Details pages and License Details pages.

CSV and XML

- CustomerID
- LicenseeName
- ContactName
- FirstName
- LastName
- MailAddr1
- MailAddr2
- MailAddr3
- City
- StateProvince
- PostalCode
- Country
- EMail
- Voice Fax
- Enabled
- OfferProduct
- OfferPartners
- ExternalReference
- LastLogin
- Status
- LicenseEnteredDate
- EnteredBy
- ProdOptionID
- QOrdered
- LicenseID
- ActivationPassword
- UnlocksLeft
- ExpirationDate
- LicenseCounter

- ProductID
- ProductName
- OptionName
- ProductAndOptionName
- DistributorID
- InvoiceNo
- InvoiceCustomerID
- Terms
- AmountCharged
- AmountStoreCredit
- AmountDiscount
- AmountShipping
- AmountTax
- Source
- MarketingSource
- PromoCode
- InvoicePriorityCode
- ShipMethod
- QBAccount
- QBClass
- QBItem
- QBTaxable
- UnitPrice
- SalePrice
- ComboDiscountAmount
- UpsellProdOptionID
- BundleDiscountAmount
- BundledProdOptionID
- LicenseNotes
- CustomData
- LicensePriorityCode
- PriorityCodeDiscountAmount
- DistribCompany Name
- DistribContactName
- PaymentPlanInstanceID
- LastUpdateDate
- LastUpdateStatus
- SuccessfulActivations
- DeclinedActivations
- ThresholdActivations
- ActiveInstallations
- ActiveInstallationsPhonedHome
- LicenseLicenseeName
- LicenseLicenseeEmail
- OriginalLicenseID
- LFUdefChar1 - LFUdefChar10
- LFUdefNum1 - LFUdefNum5
- LFUdefFloat1- LFUdefFloat5
- LFUdefDate1 - LFUdefDate5
- ExternalReference1
- ExternalReference1Source
- ExternalReference2
- ExternalReference2Source

Licenses By Product Report

The Licenses By Product Report displays a list of licenses for a given Product over specified date range, grouped by Product.

To view this report, click the *Reports* menu, scroll down to the Licenses section, and click **Licenses by Product**.

Report Options

Report Type

The report type. Options are as follows:

- Adobe Acrobat: The report will be generated as an Adobe Acrobat file (pdf).
- Microsoft Excel: The report will be generated as a Microsoft Excel spreadsheet (xls).
- Comma Separated Value: The report will be generated as a comma separated value file (csv).
- XML by Elements: The report will be generated as xml with separate elements for each field.
- XML by Parameters: The report will be generated as xml with a single element containing an attribute for each field.

Start/End Date

The date range to run the report for. This will include licenses based on their creation date. The activation data for those licenses will not be limited by the specified date range, and will include data that occurred after the End Date (if applicable).

Note that depending on the server configuration, there may be a restriction of the number of days the report can be run for.

Save to Disk

Check this box to save the report to disk. If unchecked, the report will be displayed in an inline frame within the web page, otherwise you will be prompted to save the file to disk.

Product

Choose a Product to filter the report data to only include records for the given Product. Select the default of ALL to include all Products.

Filter Issue License

Check the checkbox to include only licenses for Product Options that have *Issue License* feature set on the Option configuration.
More Information: ¹

Filter Unregistered

Check the checkbox to include only licenses for customers who have registered.
More Information: ²

Filter OK Status

¹The Product catalog in SOLO Server often contains licensable software (i.e., where the Issue License check-box is checked on the Product Option record) or other items such as transaction fees or upgrade purchases that do not display a License ID to the end user. You can use the Filter Issue License to only include license records for those Products which are considered to be licensable software products.

²Some SOLO Server users who bulk-enter licenses (via the *Customers / Add Multiple Licenses* menu option) end up with licenses that are linked to unregistered customer records. You can use the Filter Unregistered check-box to include only licenses for customers who have registered.

Check the checkbox to include only licenses with OK status.
More Information: ¹

Status Check Days Back

The number of days back from the current date to search each license for a count of active installations which have phoned home to perform a status check.

Sort By

The grouping method of the report. Options are as follows:

- Entered Date
- Licensee Name
- Product Option Name

Report Output

This report contains the following fields:

PDF and XLS

- Product
- Licensee (Company Name)
- License ID
- Qty
- Entered Date
- Option Name
- Successful Activations: The total number of successful activation requests.
- Declined Activations: The total number of declined activation requests.
- Threshold Activations: A successful activation request that was reactivation, which is allowed if the **Allow Reactivations on Same Computer** setting is enabled, and there is a previous activated installation for the exact same computer.
- Active Installations: Successful activation requests that have an Installation ID.

Total amounts are listed for each Product.

CSV and XML

- CustomerID
- LicenseeName
- ContactName
- FirstName
- LastName
- MailAddr1
- MailAddr2
- MailAddr3
- City
- StateProvince
- PostalCode
- Country
- EMail Voice
- Fax Enabled
- OfferProduct
- OfferPartners
- ExternalReference
- LastLogin
- Status

¹If you only want to include those licenses which are considered "active" (i.e., those licenses marked with a status of OK), check the Filter OK Status check-box.

- LicenseEnteredDate
- EnteredBy
- ProdOptionID
- QOrdered LicenseID
- ActivationPassword
- UnlocksLeft
- ExpirationDate
- LicenseCounter
- ProductID
- ProductName
- OptionName
- DistributorID
- InvoiceNo
- InvoiceCustomerID
- Terms
- AmountCharged
- AmountStoreCredit
- AmountDiscount
- AmountShipping
- AmountTax
- Source MarketingSource
- PromoCode
- InvoicePriorityCode
- ShipMethod
- QBAccount
- QBClass
- QBItem
- QBTaxable
- UnitPrice
- SalePrice
- ComboDiscountAmount
- UpsellProdOptionID
- BundleDiscountAmount
- BundledProdOptionID
- LicenseNotes
- CustomData
- LicensePriorityCode
- PriorityCodeDiscountAmount
- DistribCompany Name
- DistribContactName
- PaymentPlanInstanceID
- LastUpdateDate
- LastUpdateStatus
- SuccessfulActivations
- DeclinedActivations
- ThresholdActivations
- ActiveInstallations
- ActiveInstallationsPhonedHome
- LicenseLicenseeName
- LicenseLicenseeEmail
- OriginalLicenseID
- LFUdefChar1 - LFUdefChar10
- LFUdefNum1 - LFUdefNum5
- LFUdefFloat1 - LFUdefFloat5
- LFUdefDate1 - LFUdefDate5
- ExternalReference1
- ExternalReference1Source
- ExternalReference2
- ExternalReference2Source
- LicenseCustomData

- OptionCustomData
- ProductCustomData
- AuthorCustomData

Licenses By Distributor Report

The Licenses By Distributor Report shows a list of all licenses associated with a given distributor over a date range. To view this report, click the *Reports* menu, scroll down to the Licenses section, and click **Licenses by Distributor**.

Report Options

To run the report, enter the *Date Range* and select the *Distributor* from the drop down, then click Generate.

Report Output

The output is displayed in the browser.

- At the top of the report, information on the distributor will be displayed.
- The main section of the report displays a summary of all licenses associated with the distributor. For each customer, the date the date, customer name, licenses, and total amount charged are shown. Clicking the customer name will open the customer details page for the given customer, while clicking on the product name of a license will open the license details page for that license.
- At the bottom of the report is a summary, giving the total license count for the distributor, as well as the total charge amount and the check amount.

Expired Licenses Report

The Expired Licenses Report lists details on licenses that expire during a given date range. This includes a future date range.

To view this report, click the *Reports* menu, scroll down to the Licenses section, and click **Expired Licenses**.

Report Options

Report Type

The report type. Options are as follows:

- Adobe Acrobat: The report will be generated as an Adobe Acrobat file (pdf).
- Microsoft Excel: The report will be generated as a Microsoft Excel spreadsheet (xls).
- Comma Separated Value: The report will be generated as a comma separated value file (csv).
- XML by Elements: The report will be generated as xml with separate elements for each field.
- XML by Parameters: The report will be generated as xml with a single element containing an attribute for each field.

Start/End Date

The date range to run the report for. Note that depending on the server configuration, there may be a restriction of the number of days the report can be run for.

Save to Disk

Check this box to save the report to disk. If unchecked, the report will be displayed in an inline frame within the web page, otherwise you will be prompted to save the file to disk.

Product

Choose a Product to filter the report data to only include records for the given Product. Select the default of ALL to include all Products.

Group By

The grouping method of the report. Options are as follows:

- Product
- Expiration Date

Filter Issue License

Check the checkbox to include only licenses for Product Options that have *Issue License* feature set on the Option configuration.

More Information: ¹

Report Output

This report contains the following fields:

¹The Product catalog in SOLO Server often contains licensable software (i.e., where the Issue License check-box is checked on the Product Option record) or other items such as transaction fees or upgrade purchases that do not display a License ID to the end user. You can use the Filter Issue License to only include license records for those Products which are considered to be licensable software products.

PDF and XLS

- Product
- Company
- License ID
- Expiration Date
- Option Name

Links are included to the corresponding Customer Details pages and License Details pages.

CSV and XML

- CustomerID
- CompanyName
- ContactName
- LicenseID
- ExpirationDate
- ProductID
- ProductName
- OptionName
- EMail
- MailAddr1
- MailAddr2
- MailAddr3
- City
- StateProvince
- PostalCode
- Country
- Voice
- Fax
- Enabled
- LastLogin
- LicenseEnteredDate

Export Network Floating History

The Export Network Floating History Report allows exporting raw network floating history data from the database to a csv or xml file.

It can be reached from the license details page by using the *Actions / License* dropdown and choosing *Export Network Floating History*.

Report Options

Report Type

The report type. Options are as follows:

- Comma Separated Value - The report will be generated as a comma separated value file (csv).
- XML by Elements - The report will be generated as xml with separate elements for each field.
- XML by Parameters - The report will be generated as xml with a single element containing an attribute for each field.

Start/End Date

The date range to run the report for. Note that depending on the server configuration, there may be a restriction of the number of days the report can be run for.

Report Output

This report contains the following fields:

- NetworkFloatingHistoryID
- SessionID
- LicenseID
- ComputerName
- LastPollDate
- AllocatedDate
- AllocatedUntilDate
- TotalSessionDurationMinutes
- TotalSessionDurationHours
- IPAddress
- PollCount
- TotalCheckoutDurationMinutes
- TotalCheckoutDurationHours

Auditing Exports

Raw **auditing** data can be exported in xml format through the corresponding audit export report.

To view these reports, click the *Reports* menu item, scroll down to the *Audit Exports* section, and click the applicable export option (*Authors*, *Licenses*, *Products*, *Product Options*, or *Users*).

Report Options

Report Type

The report type. Options are as follows:

- XML by Elements: The report will be generated as xml with separate elements for each field.
- XML by Parameters: The report will be generated as xml with a single element containing an attribute for each field.

Start/End Date

The date range to run the report for. Note that depending on the server configuration, there may be a restriction of the number of days the report can be run for.

Save to Disk

Check this box to save the report to disk. If unchecked, the report will be displayed in an inline frame within the web page, otherwise you will be prompted to save the file to disk.

Additional options for each report type are as follows:

Authors

Global/Author: Check the Global checkbox to run the report across all authors, or choose an author from the Author drop down to run the report against a specific author.

Products

Product: Choose the product to run the report against.

Product Option

Product Option: Choose the product option to run the report against.

Users

User ID: Choose the User ID to run the report against.

Trial Download Log Report

The Trial Download Log Report provides you with a listing of all records SOLO Server gathered from people who downloaded a trial product for a specific date range when using the **Trial Tracking** feature.

To view this report, click the *Reports* menu, scroll down to the Trial Tracking section, and click **Trial Download Log**.

Report Options

Report Type

The report type. Options are as follows:

- Adobe Acrobat: The report will be generated as an Adobe Acrobat file (pdf).
- Microsoft Excel: The report will be generated as a Microsoft Excel spreadsheet (xls).
- Comma Separated Value: The report will be generated as a comma separated value file (csv).
- XML by Elements: The report will be generated as xml with separate elements for each field.
- XML by Parameters: The report will be generated as xml with a single element containing an attribute for each field.

Start/End Date

The date range to run the report for. Note that depending on the server configuration, there may be a restriction of the number of days the report can be run for.

Save to Disk

Check this box to save the report to disk. If unchecked, the report will be displayed in an inline frame within the web page, otherwise you will be prompted to save the file to disk.

Product

Choose a Product to filter the report data to only include records for the given Product. Select the default of ALL to include all Products.

Affiliate

Choose an affiliate (aka distributor) to filter the report data to only include records for a given affiliate. Select the default of ALL to include all affiliates.

Include Repeat Requests

By default the report will only return records which were first downloaded during the date range - repeat downloads are not included. Check this box to also include records which downloaded again during the date range.

Report Output

This report contains the following fields:

PDF and XLS

- Date
- Product
- Customer
- Source
- Affiliate

CSV and XML

- DLDemoLogID
- DateAccessed
- ProductName

- CompanyName
- ContactName
- ContactFirstName
- ContactLastName
- MailAddr1
- MailAddr2
- MailAddr3
- MailAddrCity
- MailAddrState
- MailAddrZip
- MailAddrCountry
- Voice EMail
- Source
- LastReturnVisit
- ReturnCount
- InstallStart
- InstallComplete
- CustomerID
- DistributorID
- SameProductLicenses
- OtherProductLicenses
- Misc1 - Misc7
- DistribCompanyName

Trial Download Summary Report

The Trial Summary Report provides you with a total summary of the records SOLO Server gathered from people who downloaded a trial product for a specific date range when using the **Trial Tracking** feature.

To view this report, click the *Reports* menu, scroll down to the Trial Tracking section, and click **Trial Download Summary**.

Report Options

Report Type

The report type. Options are as follows:

- Adobe Acrobat: The report will be generated as an Adobe Acrobat file (pdf).
- Microsoft Excel: The report will be generated as a Microsoft Excel spreadsheet (xls).
- Comma Separated Value: The report will be generated as a comma separated value file (csv).
- XML by Elements: The report will be generated as xml with separate elements for each field.
- XML by Parameters: The report will be generated as xml with a single element containing an attribute for each field.

Start/End Date

The date range to run the report for. Note that depending on the server configuration, there may be a restriction of the number of days the report can be run for.

Save to Disk

Check this box to save the report to disk. If unchecked, the report will be displayed in an inline frame within the web page, otherwise you will be prompted to save the file to disk.

Group By

You can change the sorting of the data by choosing either Affiliate or Product from the Sort By Option drop down. Sorting by Product will display the downloads grouped by Product, and then sorted within each Product by affiliate. Sorting by affiliate will display the downloads grouped by affiliate, and then sorted within each affiliate by Product.

Report Output

This report contains the following fields:

PDF and XLS

- Product
- Total

CSV and XML

- DistribName
- DistributorID
- ProductName
- ProductID
- Total

Trial Conversions Report

The Trial Conversion Report provides you with the number of people who downloaded a trial version of a Product along with how many of those downloaders actually purchased, whether it be the same Product or a different Product when using the **Trial Tracking** feature.

To view this report, click the *Reports* menu, scroll down to the Trial Tracking section, and click **Trial Conversions**.

Report Options

Report Type

The report type. Options are as follows:

- Adobe Acrobat: The report will be generated as an Adobe Acrobat file (pdf).
- Microsoft Excel: The report will be generated as a Microsoft Excel spreadsheet (xls).
- Comma Separated Value: The report will be generated as a comma separated value file (csv).
- XML by Elements: The report will be generated as xml with separate elements for each field.
- XML by Parameters: The report will be generated as xml with a single element containing an attribute for each field.

Start/End Date

The date range to run the report for. Note that depending on the server configuration, there may be a restriction of the number of days the report can be run for.

Save to Disk

Check this box to save the report to disk. If unchecked, the report will be displayed in an inline frame within the web page, otherwise you will be prompted to save the file to disk.

Global/Author

Available to users with global access permission. Check the Global checkbox to run the report across all authors, or choose an author from the Author drop down to run the report against a specific author.

Report Output

This report contains the following fields:

PDF and XLS

- Trial Product
- Total Download Count
- Same Product Sales
- Results Sales %
- Other Product Sales
- Resulting Sales %

CSV and XML

- ProductName
- ProductID
- TotalCount
- SameProductCount
- OtherProductCount
- SameProductPercent
- OtherProductPercent

Declined Orders Report

The Declined Orders Report provides the user with information about orders which were declined.

To view this report, click the Reports menu, scroll down to the Uncompleted Store Orders section, and click **Declined Orders**.

Report Options

Start/End Date

The date range to run the report for. Note that depending on the server configuration, there may be a restriction of the number of days the report can be run for.

Global/Author

Available to users with global access permission. Check the Global checkbox to run the report across all authors, or choose an author from the Author drop down to run the report against a specific author.

Display Completed Orders

By default, the report will filter out orders associated with customers who were successfully able to order. Check this box to disable this filter and include declined orders from customers who did eventually complete a sale. When this is checked, orders that did not eventually result in a sale will be colored in red.

Sort By

The sort method for the report:

- Entered Date: Declined transactions are displayed in reverse order based upon the time the order was attempted.
- Customer ID: Declined orders are grouped by Customer ID, which allows easily identifying where multiple attempts are being made by the same person.
- IP Address: Declined orders are grouped by the IP Address that originated the transaction. This is useful to help identify potential fraud from multiple attempts from a single IP address.

Report Output

The report displays 5 declined orders at a time - use the arrows along the right at the top/bottom of the page to page through the orders. For each order, the following is displayed:

Customer ID

Click this to view the customer details page for the given customer in a new window.

Cart ID

Click this to go to the cart page with the cart the declined order occurred on. This field will only be displayed for orders created through the cart. Note that if the customer was able to successfully order through the cart, this may not appear even for a cart order since the successful order deleted the original cart.

Customer contact, address, and phone information.

The contact details entered during the ordering process.

IP Address

Click the IP Address to perform a lookup on the IP address.

- If SOLO Server has the IP2Location database available and this database reports the country of the IP Address is different than the country the user specified, the Country of IP Address will be shown on the report in a highlighted color. This will help identify potential fraud.

Customer Email.

Click the email to open your default email editor and email the customer.

Credit card information

This may not be available for older orders where this information has been purged.

Error Code

The error code from the decline.

Error String

The error message from the decline.

Entered Date

The date and time the decline occurred.

Ship Method

The ship method on the order (if shippable).

Product(s)

The products on the order, if available.

Master Users can delete declined orders by clicking the *Delete This Declined Order* button below the order. This will allow a customer who is being blocked for multiple declines to try again.

Unshipped Orders Report

The Unshipped Orders Report lists any invoices marked with a status of Shipping. When a new order is processed and a shipping option is specified, the status on the new invoice is automatically set Shipping. This report can be used by a fulfillment department to identify all orders which need to be shipped as well as to assign a ship date and tracking number to these orders.

To view this report, click the Reports menu, scroll down to the "Uncompleted Store Orders" section near the bottom, and click **Unshipped Orders**.

Report Output

The report will display the unshipped orders in chronological order based on the date they were entered, so the oldest orders appear first. 10 orders are shown at a time - use the arrows along the right at the top/bottom of the page to page through the orders. For each order, the following details are listed:

Entered

The date and time the order was initially processed.

Company

The Customer ID is listed first on this line, and can be clicked to open the customer details page for that customer. If the customer has a company name defined, this will also be listed.

Contact

The contact name for the order.

Invoice

The invoice number. Click on [V/E] to view or edit the Invoice details, or click on [P] to display a printable invoice to ship with the product or send to customer.

Ship Method

The short name of the shipping option for the order.

Ship Date

The date the order was shipped. This will default to the current date.

Tracking No

Enter the shipping tracking number if applicable

Mark Order as Shipped

Click this button to mark the order as shipped. This will update the invoice and set the status to Shipped, as well as set the Ship Date and Tracking number to the entered values, and remove the order from the report.

Also note that this report can be set to run globally across all authors in a multiple author SOLO Server instance by setting the SOLOUnshippedGlobal web.config entry to true.

All Shopping Carts Report

The All Shopping Carts Report provides you with the details about each cart in SOLO Server that has not been completed. To view this report, click the Reports menu, scroll down to the "Uncompleted Store Orders" section (near the bottom), and click **All Shopping Carts**.

Report Options

Accessed Date Range:

On first viewing, the report will be generated for the current day, including international customers, sorted by last accessed date.

To change the date range, enter new values in the date fields and click Generate. To move both dates back 1 day, click the arrow on the left of the start date field, and to move both dates forward 1 day, click the arrow to the right of the end date field.

Sort By Option

To change the sort order of the carts, select a value from the Sort By Option drop down. The following options are available:

- Accessed - Sorts the carts by last accessed date and time descending.
- Agent - Sorts the carts by the outbound agent User ID. This is for carts that have been assigned to an agent.
- Location - Sorts the carts by the customer location in the following order - Country, State/Province, City.

Include International Customers

To filter out international customers, uncheck the Include International Customers checkbox. This is useful when assigning carts to outbound agents.

Global Search

If the user has Global Access permission, a Global Search checkbox will be displayed. Check this box to perform a global search across all authors.

Report Output

In order for a cart to appear in this report, a customer record must be associated with it, meaning the customer had to click the checkout button and either log in or register. Note that this report will not show carts accessed within the last 5 minutes since customers are likely still in the process of finalizing their order.

A range of details is provided for each cart as follows:

- Cart ID, Last Accessed Date, Outbound Agent.
- Customer name (click to view the customer details page), customer location, customer phone number.
- The contents of the cart.
- Cart notes. To update the notes on a cart, click the Update button, update the note, and then click Update again.

A user may also assign carts to themselves by clicking *Assign Carts* button. This will assign 5 random unassigned carts to the logged in user. See **Outbound Marketing** for more details.

Assigned Shopping Carts Report

The Assigned Shopping Carts Report is identical to the all shopping carts report, except that only carts assigned to the current logged in user are displayed. For more information, see [All Shopping Carts Report](#).

Author Fees Report

The Author Fees Report lists all author fees for the current author for a given date range, and is used internally by SoftwareKey for billing.

To view this report, click the *Reports* menu, scroll down to the Accounting section, and click **Author Fees**.

Report Options

On first viewing, the report will be automatically generated for the previous month. To change the date range, simply update the Start/End Date fields and click the submit button.

Managing Author Fees

To view, edit or delete existing fees, click the View, Edit or Del links. To add a new fee, click the *Add New* button at the top of the listing.

When viewing, adding, or editing fees, the following options are available:

Date

The date the fee applies to. This will default to the current date when adding a new fee.

Type

The fee type. Can be one of the following fee types:

- Web Hosting
- Refund Fee
- Refund
- Charge Back
- Bank Fee
- Consulting Invoice
- Credit
- Admin Fees

Amount

Fee amount. Note that for credits, this will be a negative value.

License ID

Optional. The License ID the fee applies to. When viewing, click the License ID to view the license details in a new tab/window.

Invoice No

Optional. The Invoice No the fee applies to. When viewing, click the Invoice No to view the license details in a new tab/window.

Notes

Optional. Any notes regarding the fee.

Monthly Summary Report

This Monthly Summary Report is similar to the **Monthly Statements and Account Usage Report**, except it shows all monthly totals for all authors. It is used internally by SoftwareKey for billing.

To view this report, click the *Reports* menu, scroll down to the Accounting section, and click **Monthly Summary**.

Report Options

Start/End Month

The month range to run the report for. Note that depending on the server configuration, there may be a restriction of the number of days the report can be run for, and that when run across multiple months, the calculated fees are not accurate as the pricing logic is based on a single month interval.

Type Filter Options:

All By Payment Mode

Shows all authors that have some kind of a balance. Lists the authors alphabetically by Payment Mode.

All By Payment Method

Shows all authors that have some kind of a balance. Lists the authors alphabetically by Payment Method.

All Mall Processed Payments

Only shows authors that have a balance and their Author Payment Mode is set to Mall Processed Payments.

Mall Processed Payments / ACH

Shows authors that have a balance, their Author Payment Mode is Mall Processed Payments, and they are to be paid by ACH.

Mall Processed Payments / Check

Shows authors that have a balance, their Author Payment Mode is Mall Processed Payments, and they are to be paid by Check.

Mall Processed Payments / Wire Transfer

Shows authors that have a balance, their Author Payment Mode is Mall Processed Payments, and they are to be paid by Wire Transfer.

Mall Processed Payments / PayPal Payments Standard

Shows authors that have a balance, their Author Payment Mode is Mall Processed Payments, and they are to be paid by PayPal Payments Standard.

All External Processed Payments

Only shows authors that have a balance and their Author Payment Mode is set to Externally Processed Payments.

External Processed Payments / ACH

Shows authors that have a balance, their Author Payment Mode is Externally Processed Payments, and they are to be charged by ACH.

External Processed Payments / CC

Shows authors that have a balance, their Author Payment Mode is Externally Processed Payments, and they are to be charged by CC.

External Processed Payments / NET 30 Terms

Shows authors that have a balance, their Author Payment Mode is Externally Processed Payments, and they are to be charged on NET 30 Terms.

All Activation Only Customers

Only shows authors that have a balance and their Author Payment Mode is set to Activation Only.

Activation Only / ACH

Shows authors that have a balance, their Author Payment Mode is Activation Only, and they are to be charged by ACH.

Activation Only / CC

Shows authors that have a balance, their Author Payment Mode is Activation Only, and they are to be charged by CC.

Activation Only / NET 30 Terms

Shows authors that have a balance, their Author Payment Mode is Activation Only, and they are to be charged on NET 30 Terms.

All Metering Only Customers

Only shows authors that have a balance and their Author Payment Mode is set to Metering.

Metering Only / ACH

Shows authors that have a balance, their Author Payment Mode is Metering, and they are to be charged by ACH.

Metering Only / CC

Shows authors that have a balance, their Author Payment Mode is Metering, and they are to be charged by CC.

Metering Only / NET 30 Terms

Shows authors that have a balance, their Author Payment Mode is Metering, and they are to be charged on NET 30 Terms.

Report Output

After you select a date range and a filter option, click Generate. A report will display that shows all the authors with a balance. It will list:

- Total Credit Card Sales
- Bank Credit Card Processing Fees
- Bank Auth Fee
- Commission Fee
- API Transaction Fees
- Refunds
- Activation Fees
- Commission

PayPal Payments Pro Batch Report

The PayPal Payments Pro Batch Report will compare the transaction data within SOLO Server with that from the PayPal Payments Pro batch report.

To view this report, click the *Reports* menu, scroll down to the Accounting section, and click **PayPal Payments Pro Batch**.

Follow these instructions to use this report:

- Log in to your PayPal Payments Pro account.
- In PayPal , go to the reports page and select the Batch ID Report. Enter a date range for the settlement, and choose to display the report as HTML. Submit the page and the report should load.
- From the left column of the report, note the Batch ID, and then click ASCII Report of Transactions. This will load a detailed transaction report. Copy the contents of the report.
- Paste the contents of the report into the text area at the top of the SOLO Server report page. Click Process.
- SOLO Server will parse the data from the PayPal Payments Pro batch report and compare it with the data found in SOLO Server. When the report is finished processing, it will display details of any discrepancies between the data in SOLO Server and that from PayPal . It will also give a count of matching transactions, as well as the date range of the transactions.
- If matching transactions were found, the option to assign the matching transactions to a batch will be displayed. If desired, enter the Batch ID and click the Process button and all matching transactions will be assigned the Batch ID.

Settlements Report

The Settlements Report is used to balance transactions in SOLO Server against those from the merchant accounts. To view this report, click the Reports menu, scroll to the Accounting section, and click **Settlements**.

Report Options

Merchant ID

Select the appropriate Merchant Account in the provided drop down box.

Date Range

Enter the from and to dates in the Date Range text fields.

Transaction ID Range

Enter the from and to Transaction IDs in the Transaction IDs text fields.

Sort By

Enter the BatchID in the Batch ID text field.

Report Output

When the report is generated, all transactions in SOLO Server matching the input parameters will be returned. Totals are also returned.

If the report is run using a Transaction ID range or a Batch ID, the correct date range will be calculated and populated in the Date Range fields when the report is generated.

The top portion of the report contains a listing of every sale transaction. The details of each transaction will look similar to the following:

Date: 6/7/2004 Status: Web Invoice #: 32467659
Author: Concept Software
Customer: TEST CUSTOMER
Account: 4442780423232 AuthCode: 007554YYY Terms: VISA/MC
Invoice: \$99.99 Shipping: \$0.00 Tax: \$0.00 Discount: \$0.00
1 Test Product \$99.99 OK

- Line 1: Transaction Date, Invoice Status, Invoice Number. Clicking the invoice number will generate a printable version of the invoice.
- Line 2: Author name.
- Line 3: Customer name. Click the customer name to go to the customer details page for that customer.
- Line 4: Credit card number, authorization code, terms.
- Line 5: Invoice total, shipping charge, tax applied, discount amount.
- Line 6+: License quantity, license product, license sale price, license status. Click the product name to view the license details page.
- If any store credits are applied, an addition line will show store credit applied to the transaction.
- If any licenses on the transaction are part of a payment plan, the balance still due on the payment plan will be displayed.

Following the details of sale transactions are the details of every refund transaction. The details of each refund transaction will look similar to the following:

Date: 6/7/2004 Status: Refund Invoice #: 32467526
Author: Concept Software
Customer: TEST CUSTOMER
CC Account: 4254358975552016 AuthCode:
Amount Refunded: (\$58.94) Terms: VISA/MC
Entered By: testuser

- Line 1: Transaction date, invoice status, invoice number. Clicking the invoice number will generate a printable version of the refund invoice.
- Line 2: Author name.
- Line 3: Customer name. Click the customer name to go to the customer details page for that customer.
- Line 4: Credit card number, authorization code.
- Line 5: Refund amount, terms.
- Line 6: SOLO Server user who entered the refund.

Below the transaction details, a summary of charges and refunds is displayed. If there is any variance, it will be displayed here as well. If there is no variance, two links will be displayed as follows:

- Download QB Cash Sale Listing - Will download a quickbooks file with the cash sales listing.
- Download QB Deposits - Will download a quickbooks file with the deposits.

Following the transaction details section of the report are several sections summarizing sales as follows:

- Non taxable sales
- Taxable sales
- Shipping charges
- Tax Collected
- Discounts
- Store Credit Used
- Non Taxable Returns
- Taxable Returns
- Returned Shipping
- Tax Returned

Monthly Statements and Account Usage

The Monthly Statements and Account Usage (formerly the Monthly Summary/Statement) Report shows a summary of sales, fees and usage for a chosen range of months. It can be used to view your usage data, such as the number of activations or API Transactions, or reconcile the payment you receive and what fees were incurred for a single month.

To view this report, click the *Reports* menu, scroll down to the Monthly Statements and Account Usage section and choose Monthly Statements and Account Usage.

Report Options

Report Type

The report type. Options are as follows:

- HTML Summary: The report will be displayed in the browser, and there is not an option to save to disk.
- HTML Details: The report will be displayed in the browser, and there is not an option to save to disk.
- Adobe Acrobat: The report will be generated as an Adobe Acrobat file (pdf).
- Microsoft Excel: The report will be generated as a Microsoft Excel spreadsheet (xls).
- Comma Separated Value: The report will be generated as a comma separated value file (csv).
- XML by Elements: The report will be generated as xml with separate elements for each field.
- XML by Parameters: The report will be generated as xml with a single element containing an attribute for each field.

Save to Disk

Check this box to save the report to disk. If unchecked, the report will be displayed in an inline frame within the web page.

Author

Available to users with global access permission. Choose an author from the Author drop down to run the report against a specific author. This will default to the currently selected author.

Month

The month to start the report. The report defaults to the previous month.

End Month

The month to end the report. This should be the same as the above Month when generating a statement to reconcile fees or commissions.

Important

Running this report over a multiple month period is not intended to be used as a statement. Some fee totals will be inaccurate or omitted.

Report Output

HTML Summary

- Sales & Fees Summary
 - Total Credit Card Sales
 - Bank Credit Card Processing Fees
 - Bank Auth Fees
 - Commission Fees
 - Prepaid License Fees and Count
 - Manual License Fees and Count

- Activation Fees and Count
- Fees Due (or Commission)
- API Transaction Usage Summary
 - Billable Transactions and Non-Billable Transactions for each API Endpoint used, including Count data
 - Total API Transactions

HTML Details

Same as HTML Summary, but also includes list of individual sales:

- Date
- Customer
- License
- Invoice
- Payment method
- Amount
- Commission

PDF and XLS

Credit Card Orders

Summary of credit card transaction data.

Credit Processing Fees

Bank fees for credit processing.

Commission Fees

Commission fees for credit card orders.

Prepaid License Fees

Fees for prepaid licenses.

Manual License Fees

Fees for manual licenses.

API Transaction Fees

Fees for API transactions over the monthly limit.

Activation Fees

Fee for activations.

Other Fees

Any other fees, including monthly fees, return fees, etc.

Totals

Totals for funds collected, fees collected, as well as the balance between the two.

CSV and XML

- AuthorID
- CustomerID
- CompanyName
- TotalCharges
- TotalChargeAmount
- ProcessingFeeRate

- TotalProcessingFees
- BankAuthFeeAmount
- TotalBankAuthFees
- CommissionFeeRate
- MinimumCommissionAmount
- TotalCommissionFees
- ServiceTransactionsIncluded
- ServiceTransactionsPerDollarOverrage
- TotalServiceTransactionFees
- TotalBillableMonthlyServiceTransactionsOverage
- TotalMonthlyServiceTransactions
- TotalBillableMonthlyServiceTransactions
- TotalNonBillableMonthlyServiceTransactions
- TotalMonthlyCheckInstallationStatusCount
- TotalMonthlyDeactivateInstallationCount
- TotalMonthlyGetLicenseFileCount
- TotalMonthlyGetLicenseStatusCount
- TotalMonthlyLicenseReturnCount
- TotalMonthlyNetworkFloatingCheckinCount
- TotalMonthlyNetworkFloatingCheckoutCount
- TotalMonthlyNetworkFloatingCloseCount
- TotalMonthlyNetworkFloatingOpenCount
- TotalMonthlyNetworkFloatingPollCount
- TotalMonthlyNetworkFloatingRejectionCount
- TotalAuthenticatedWebServiceCount
- TotalMonthlyInfoCheckCount
- TotalMonthlyUpdateCheckCount
- TotalMonthlyPostingCount
- TotalMonthlyTestActivationCount
- TotalMonthlyRejectedActivationCount
- TotalMonthlyDuplicateLoginCount
- TotalPrepaidLicenses
- PrepaidLicenseFeeAmount
- TotalPrepaidLicenseFees
- TotalManualLicenses
- ManualLicenseFeeAmount
- TotalManualLicenseFees
- TotalActivations
- ActivationFeeAmount
- FeeActivationsIncludedPerMonth
- TotalActivationFees
- MonthlyFeeAmount
- TotalWebHostingFees
- TotalFeeReturnFees
- TotalRefundFees
- TotalChargebackFees
- TotalBankFees
- TotalConsultingFees
- TotalCreditFees
- TotalAdminFees
- TotalOtherFees
- TotalSOLOFees
- TotalBankProcessingFees
- TotalReturns
- TotalReturnFees
- TotalMiscFees
- MonthlyProcessingFeeAmount
- TotalMonthlyProcessingFees
- TotalFees
- TotalCollected

- Balance
- AuthorPaymentMode
- ContactName
- EMail
- CheckPayableTo
- MailAddr1
- MailAddr2
- MailAddr3
- Country
- Notes
- MinimumMonthlyFeeAmount
- PayMethodComm
- PayMethodFee
- SignupComplete
- ContractReceived
- CreditCardDeclined
- TotalAmountDiscount
- TotalAmountTax
- TotalAmountShipping
- ImportantNotes
- LastBillDate
- IsLastBilledThisMonth
- LastBillAmount
- ProcessingFeeExceedsBalance
- FeeCreditLeft
- LastCreditDecrementDate
- LastCreditDecrementAmount
- IsLastCreditDecrementThisMonth
- TotalLicensesAdded
- TotalLicenseCount
- TotalRecentActiveUserCount
- TotalActiveUserCount
- EnteredDate
- BillStartDate

Export Customers Report

The Export Customers Report outputs a csv or xml file containing data from all customers based on the search and filtering options.

To view this report, click the *Reports* menu, scroll down to the Customers section, and click **Export Customers**.

Report Options

Report Type

The report type. Options are as follows:

- Comma Separated Value: The report will be generated as a comma separated value file (csv).
- XML by Elements: The report will be generated as xml with separate elements for each field.
- XML by Parameters: The report will be generated as xml with a single element containing an attribute for each field.

Filter by Date

Check this box to filter by date range.

Start/End Date

Available when Filter by Date is checked. The date range to run the report for.

Search By

Available when Filter by Date is checked. Choose whether to search by the Entered Date or Modified Date of the Customer records.
More Information¹

Filter Unregistered

Check the checkbox to include only customers who have registered.
More Information²

Filter Disabled

Check the checkbox to include only enabled customer records.

Report Output

- CustomerID
- Password
- CompanyName
- ContactName
- FirstName
- LastName
- MailAddr1
- MailAddr2
- MailAddr3
- City
- StateProvince

¹Each customer record has an "entered" timestamp and a "modified" timestamp. You can choose to search the dates of the timestamps in the Search By filter. If you are trying to synchronize data with another system such as a CRM or an e-mail broadcast service, you can use the modified timestamp to export only that data which has changed since the last time you exported data.

²When bulk-entering licenses via the *Customers / Add Multiple Licenses* menu option, the customers are created as unregistered. You can use the Filter Unregistered check-box to include only customers who have subsequently registered.

- PostalCode
- Country
- EMail
- Voice
- Fax
- EnteredBy
- EnteredDate
- ModifiedBy
- ModifiedDate
- LastLogin
- LastLoginIP
- Unregistered
- TempEMailFlag
- Enabled
- InvalidAddress
- Taxable
- ExcludeFromAll
- OfferProduct
- OfferPartners
- ExternalReference
- IsDistributor
- EuropeanUnionVATNumber
- PasswordSource

New and Repeat Customers Report

The New and Repeat Customers Report provides the you with an idea on how many new customers have placed orders in SOLO Server vs. the number of customers who returned to place orders.

To view this report, click the *Reports* menu, scroll down to the Customers section, and click **New and Repeat Customers**.

Report Options

Report Type

The report type. Options are as follows:

- Adobe Acrobat: The report will be generated as an Adobe Acrobat file (pdf).
- Microsoft Excel: The report will be generated as a Microsoft Excel spreadsheet (xls).
- Comma Separated Value: The report will be generated as a comma separated value file (csv).
- XML by Elements: The report will be generated as xml with separate elements for each field.
- XML by Parameters: The report will be generated as xml with a single element containing an attribute for each field.

Start/End Date

The date range to run the report for. Note that depending on the server configuration, there may be a restriction of the number of days the report can be run for.

Save to Disk

Check this box to save the report to disk. If unchecked, the report will be displayed in an inline frame within the web page, otherwise you will be prompted to save the file to disk.

Global/Author

Available to users with global access permission. Check the Global checkbox to run the report across all authors, or choose an author from the Author drop down to run the report against a specific author.

Report Output

This report contains the following fields:

PDF and XLS

- Return Customers who Purchased. These customers are existing customers who have returned to buy products in SOLO Server within the date range.
- New Customers who Purchased. These customers are newly registered customers who have bought products in SOLO Server for the first time within the date range.
- New Customers who did not Purchase. These customers registered in SOLO Server within the date range, but did not purchase products.
- The "Total Customers" columns is the total customer count, the "Percentage of Total Customers" is the percentage of the total number of customers, and the "Percentage of Customers w/Sales" is the percentage of the total number of customers who purchased. The pie chart represents the "Percentage of Total Customers" column.

CSV and XML

- TotalCustomers
- NewSaleCustomers
- NewSaleCustomerPercentage
- NewSaleCustomerPercentageSales
- RepeatSaleCustomers
- RepeatSaleCustomerPercentage

- RepeatSaleCustomerPercentageSales
- NoSaleCustomers
- NoSaleCustomerPercentage

Reasons for Returns Report

The Reasons for Returns Report displays a summary of all return reasons and return amounts, sorted by product. For information on configuring return reasons, see [Return Reasons](#).

To view this report, click the *Reports* menu, scroll down to the Customers section, and click **Reasons for Returns**.

Report Options

Report Type

The report type. Options are as follows:

- Adobe Acrobat: The report will be generated as an Adobe Acrobat file (pdf).
- Microsoft Excel: The report will be generated as a Microsoft Excel spreadsheet (xls).
- Comma Separated Value: The report will be generated as a comma separated value file (csv).
- XML by Elements: The report will be generated as xml with separate elements for each field.
- XML by Parameters: The report will be generated as xml with a single element containing an attribute for each field.

Start/End Date

The date range to run the report for. Note that depending on the server configuration, there may be a restriction of the number of days the report can be run for.

Save to Disk

Check this box to save the report to disk. If unchecked, the report will be displayed in an inline frame within the web page, otherwise you will be prompted to save the file to disk.

Global/Author

Available to users with global access permission. Check the Global checkbox to run the report across all authors, or choose an author from the Author drop down to run the report against a specific author.

Report Output

This report contains the following fields:

PDF and XLS

- Product
- Reason
- Returns (Quantity)
- Amount Refunded

CSV and XML

- ProductID
- ProductName
- ReturnReasonID
- Reason
- Quantity
- RefundAmount

Sales with Invoice Details Report

The Sales by Invoice Report provides you with details about invoices including items sold, the customer's name, and the terms.

To view this report, click the *Reports* menu, scroll down to the Store Sales section, and click **Sales with Invoice Details**.

Report Options

Start/End Date

The date range to run the report for. Note that depending on the server configuration, there may be a restriction of the number of days the report can be run for.

Global

If the user has Global Access permission, a Global Search checkbox will be displayed. Check this box to perform a global search across all authors.

Report Output

The report displays the details of every invoice in the date range.

You can click on any of the invoice numbers to go to the Invoice Details page to view further information.

You can click on any of the licenses purchased to go to the Licenses Details page to view further information.

Important

The link to export license and invoice data has been moved to the **Export Licenses** report.

Sales Tax Report

The Sales Tax Report shows a summary of sales taxes collected for given date range.

To view this report, click the *Reports* menu, scroll down to the Store Sales section, and click **Sales Tax**.

Report Options

Report Type

The report type. Options are as follows:

- Adobe Acrobat: The report will be generated as an Adobe Acrobat file (pdf).
- Microsoft Excel: The report will be generated as a Microsoft Excel spreadsheet (xls).
- Comma Separated Value: The report will be generated as a comma separated value file (csv).
- XML by Elements: The report will be generated as xml with separate elements for each field.
- XML by Parameters: The report will be generated as xml with a single element containing an attribute for each field.

Start/End Date

The date range to run the report for. Note that depending on the server configuration, there may be a restriction of the number of days the report can be run for.

Save to Disk

Check this box to save the report to disk. If unchecked, the report will be displayed in an inline frame within the web page, otherwise you will be prompted to save the file to disk.

Global/Author

Available to users with global access permission. Check the Global checkbox to run the report across all authors, or choose an author from the Author drop down to run the report against a specific author.

Merchant Account

Available to users with global access permission. Select a specific merchant account to filter the report by, or select the default of ALL to include all merchant accounts.

Group By

The field to group the report by. Options are as follows:

- State / Province: The tax is summed by state or province.
- US Postal Code: The tax is summed US postal code (first 5 digits).

Report Output

This report contains the following fields:

PDF and XLS

- Country
- State/Province
- Tax Collected
- Total

CSV and XML

- Country
- StateProvince
- TaxCollected

European Union VAT Report

The European Union VAT Report generates a listing of order tax data for orders processed using the European Union VAT Tax Calculation Method grouped by country.

To view this report, click the *Reports* menu, scroll down to the Store Sales section, and click **European Union (EU) Value-Added Tax (VAT)**.

Report Options

Report Type

The report type. Options are as follows:

- Adobe Acrobat: The report will be generated as an Adobe Acrobat file (pdf).
- Microsoft Excel: The report will be generated as a Microsoft Excel spreadsheet (xls).
- Comma Separated Value: The report will be generated as a comma separated value file (csv).
- XML by Elements: The report will be generated as xml with separate elements for each field.
- XML by Parameters: The report will be generated as xml with a single element containing an attribute for each field.

Start/End Date

The date range to run the report for. Note that depending on the server configuration, there may be a restriction of the number of days the report can be run for.

Save to Disk

Check this box to save the report to disk. If unchecked, the report will be displayed in an inline frame within the web page, otherwise you will be prompted to save the file to disk.

Global/Author

Available to users with global access permission. Check the Global checkbox to run the report across all authors, or choose an author from the Author drop down to run the report against a specific author.

Report Output

This report contains the following fields:

PDF and XLS

- Country
- Date
- Invoice
- VAT Number
- Amount VAT
- Amount Excl VAT
- Totals

CSV and XML

- InvoiceNo
- EnteredDate
- CompanyName
- EuropeanUnionVATNumber
- Address1
- Address2
- City
- StateProvince
- PostalCode

- Country
- InEuropeanUnion
- VATCharged
- AmountVAT
- AmountExclVAT

Priority Code, Bundle, and Upsell Discounts Report

The Priority Code, Bundle, and Upsell Discounts Report displays a summary of all promotional discounts used within a given date range.

To view this report, click the *Reports* menu, scroll down to the Store Sales section, and click **Priority Code, Bundle, and Upsell Discounts**.

Note: If you are looking for a report on **Promo Codes**, use the **Promo Codes Report**.

Report Options

Report Type

The report type. Options are as follows:

- Adobe Acrobat: The report will be generated as an Adobe Acrobat file (pdf).
- Microsoft Excel: The report will be generated as a Microsoft Excel spreadsheet (xls).
- Comma Separated Value: The report will be generated as a comma separated value file (csv).
- XML by Elements: The report will be generated as xml with separate elements for each field.
- XML by Parameters: The report will be generated as xml with a single element containing an attribute for each field.

Start/End Date

The date range to run the report for. Note that depending on the server configuration, there may be a restriction of the number of days the report can be run for.

Save to Disk

Check this box to save the report to disk. If unchecked, the report will be displayed in an inline frame within the web page, otherwise you will be prompted to save the file to disk.

Global/Author

Available to users with global access permission. Check the Global checkbox to run the report across all authors, or choose an author from the Author drop down to run the report against a specific author.

Report Output

PDF and XLS

Promotions are displayed broken down into four categories:

- Combo Discount Priority Codes: All discounts due to combo discounts. A combo discount is a discount resulting from buying an upsell product on the cart that has an upsell discount defined. Any products with upsell discounts defined will have each upsell discount listed as well as the total number of times the discount was used. See **Configuring Upsells** for more details.
- Bundled Offers: All discounts due to the purchase of discounted bundles. The total count for each bundled offer will be displayed, and expanding the bundle will show details of the products within the bundle. See **Adding a Bundled Product and Product Option** for more details.
- Author Level Priority Codes: All discounts due to author level priority codes. The priority code as well as a description of the code will be displayed along with the count of how many times the code was used.
- Product Level Priority Codes: All discounts due to product level priority codes. Each code will be listed, and can be expanded to give details by product.

CSV and XML

- TopDescrip
- SubCount

- SubDescrip
- BottomCount
- BottomDescrip

Promo Codes Report

The Promo Codes Report gives a summary count of all **Promo Codes** used within a given date range.

To view this report, click the *Reports* menu, scroll down to the Store Sales section, and click **Promo Codes**.

Note: If you are looking for a report on **Priority Codes** (discount codes), use the **Priority Code, Bundle, and Upsell Discounts Report**.

Report Options

Report Type

The report type. Options are as follows:

- Adobe Acrobat: The report will be generated as an Adobe Acrobat file (pdf).
- Microsoft Excel: The report will be generated as a Microsoft Excel spreadsheet (xls).
- Comma Separated Value: The report will be generated as a comma separated value file (csv).
- XML by Elements: The report will be generated as xml with separate elements for each field.
- XML by Parameters: The report will be generated as xml with a single element containing an attribute for each field.

Start/End Date

The date range to run the report for. Note that depending on the server configuration, there may be a restriction of the number of days the report can be run for.

Save to Disk

Check this box to save the report to disk. If unchecked, the report will be displayed in an inline frame within the web page, otherwise you will be prompted to save the file to disk.

Global/Author

Available to users with global access permission. Check the Global checkbox to run the report across all authors, or choose an author from the Author drop down to run the report against a specific author.

Report Output

PDF and XLS

- Promo Code
- Invoice Count
- Revenue Collected

CSV and XML

- PromoCode
- CodeCount
- Revenue

Marketing Sources Report

The Marketing Sources Report gives a summary count of all **Marketing Sources** entered within a given date range. To view this report, click the Reports menu, scroll down to the Store Sales section, and click **Marketing Sources**.

Report Options

Report Type

The report type. Options are as follows:

- Adobe Acrobat: The report will be generated as an Adobe Acrobat file (pdf).
- Microsoft Excel: The report will be generated as a Microsoft Excel spreadsheet (xls).
- Comma Separated Value: The report will be generated as a comma separated value file (csv).
- XML by Elements: The report will be generated as xml with separate elements for each field.
- XML by Parameters: The report will be generated as xml with a single element containing an attribute for each field.

Start/End Date

The date range to run the report for. Note that depending on the server configuration, there may be a restriction of the number of days the report can be run for.

Save to Disk

Check this box to save the report to disk. If unchecked, the report will be displayed in an inline frame within the web page, otherwise you will be prompted to save the file to disk.

Report Output

PDF and XLS

- Marketing Source
- Source Count

CSV and XML

- Source
- SourceID
- SourceCount

Summary of All Sales Report

The Summary of All Sales Report provides:

- Total number of Prepaid Units Sold along with the associated Sales
- Total Units Sold on Terms along with the associated Sales
- Total Returned Units along with associated Amount Returned

Prepaid sales are licenses attached to an invoice with terms of 'Cash', 'VISA', 'MC', 'VISA/MC', 'AMEX', 'DISC', 'DINERS', 'MAESTRO', 'PayPal', 'WPay', 'Check', 'Wire', or 'COD'. The License Status must not be VOI, DEL, DUP. Net Terms sales are licenses attached to an invoice with terms of 'Net 10', 'Net 60', 'Net 30', 'Consign', or 'Net 45'. The License Status must not be VOI, DEL, DUP. In both cases, Licenses not attached to invoices are excluded.

To view this report, click the *Reports* menu, scroll down to the Store Sales section, and click **Summary of All Sales**.

Report Options

Report Type

The report type. Options are as follows:

- Adobe Acrobat: The report will be generated as an Adobe Acrobat file (pdf).
- Microsoft Excel: The report will be generated as a Microsoft Excel spreadsheet (xls).
- Comma Separated Value: The report will be generated as a comma separated value file (csv).
- XML by Elements: The report will be generated as xml with separate elements for each field.
- XML by Parameters: The report will be generated as xml with a single element containing an attribute for each field.

Start/End Date

The date range to run the report for. Note that depending on the server configuration, there may be a restriction of the number of days the report can be run for.

Save to Disk

Check this box to save the report to disk. If unchecked, the report will be displayed in an inline frame within the web page, otherwise you will be prompted to save the file to disk.

Global/Author

Available to users with global access permission. Check the Global checkbox to run the report across all authors, or choose an author from the Author drop down to run the report against a specific author.

Sort By Option

The report can be sorted in four different ways:

- Product By Affiliate Type - The total sales and units sold are displayed for the given date range. Below the totals are the sales broken down by the different Affiliate Types. Below the sales for Each Affiliate Type are the sales for each product followed by the sales for each product option. Finally the sales for each Affiliate are displayed.
- Affiliate By Affiliate Type - The total sales and units sold are displayed for the given date range. Below the totals are the sales broken down by the different Affiliate Types. Below the sales for Each AffiliateType are the sales for each Affiliate. Finally the sales for each product broken down by product option are provided.
- Product By Country - The total sales and units sold are displayed for the given date range. Below the totals are the sales broken down by each Country. Below the sales for Country are the sales for each product followed by the sales for each product option. Finally the sales for each Affiliate are displayed.
- Affiliate By Country - The total sales and units sold are displayed for the given date range. Below the totals are the sales broken down by each Country. Below the sales for Country are the sales for each Affiliate. Finally the sales for each product broken down by product option are provided.

Include Returns

Check this box include licenses with status RET.

Report Output

PDF and XLS

For sales with no affiliate, the author name will appear in the report.

- Type of Sale
- Product and Option(s)
- Units
- Total Sales

CSV and XML

- Type
- Distributor
- TypeName
- ProductName
- OptionName
- DistribName
- Units
- Sales
- DistribTypeID
- AuthorID
- ProductID
- ProdOptionID
- DistributorID

Summary of Online Sales Report

The Summary of Online Sales Report provides the total number of Units Sold and the Total Returned Units. The totals can be broken down depending upon the selected sort option.

To view this report, click the *Reports* menu, scroll down to the Store Sales section, and click **Summary of Online Sales**.

Report Options

Report Type

The report type. Options are as follows:

- Adobe Acrobat: The report will be generated as an Adobe Acrobat file (pdf).
- Microsoft Excel: The report will be generated as a Microsoft Excel spreadsheet (xls).
- Comma Separated Value: The report will be generated as a comma separated value file (csv).
- XML by Elements: The report will be generated as xml with separate elements for each field.
- XML by Parameters: The report will be generated as xml with a single element containing an attribute for each field.

Start/End Date

The date range to run the report for. Note that depending on the server configuration, there may be a restriction of the number of days the report can be run for.

Save to Disk

Check this box to save the report to disk. If unchecked, the report will be displayed in an inline frame within the web page, otherwise you will be prompted to save the file to disk.

Global/Author

Available to users with global access permission. Check the Global checkbox to run the report across all authors, or choose an author from the Author drop down to run the report against a specific author.

Sort By Option

There are two sort options:

- Product - The total units sold are displayed for the given date range. Below the total units sold are the sold units by the different Affiliate Types. Below the units sold for Each Affiliate Type are the sold units for each product followed by the sold units for each product option. Finally the units sold for each Affiliate are displayed
- Affiliate - The total units sold are displayed for the given date range. Below the total units sold are the sold units by the different Affiliate Types. Below the units sold for Each Affiliate Type are the sold units for each Affiliate. Finally the units sold for each Product followed by product option are displayed.

Report Output

PDF and XLS

For sales with no affiliate, the author name will appear in the report.

- Type
- Product and Option(s)
- Units

CSV and XML

- AuthorID
- ProdOptionID

- DistribTypeID
- DistributorID
- Units
- Type
- ProductID
- ProductName
- OptionName
- DistributorTypeName
- DistribName

Sales By Terms Report

The Sales By Terms Report provides you with a summary of sales grouped by the different terms.

To view this report, click the *Reports* menu, scroll down to the Store Sales section, and click **Sales by Terms**.

Report Options

Report Type

The report type. Options are as follows:

- Adobe Acrobat: The report will be generated as an Adobe Acrobat file (pdf).
- Microsoft Excel: The report will be generated as a Microsoft Excel spreadsheet (xls).
- Comma Separated Value: The report will be generated as a comma separated value file (csv).
- XML by Elements: The report will be generated as xml with separate elements for each field.
- XML by Parameters: The report will be generated as xml with a single element containing an attribute for each field.

Start/End Date

The date range to run the report for. Note that depending on the server configuration, there may be a restriction of the number of days the report can be run for.

Save to Disk

Check this box to save the report to disk. If unchecked, the report will be displayed in an inline frame within the web page, otherwise you will be prompted to save the file to disk.

Global/Author

Available to users with global access permission. Check the Global checkbox to run the report across all authors, or choose an author from the Author drop down to run the report against a specific author.

Report Output

PDF and XLS

The report consists of total sales for the given date range grouped either by Prepaid or by Net (a.k.a On Terms). Below Prepaid sales are all the different type of Terms that are defined as Prepaid and their sales such as the different credit cards terms, PayPal, or wire. Below the Net sales are all the different type of Terms that are defined as Net and their sales such as Consign or Net 60.

- Terms
- Invoice Count
- Total Sales

CSV and XML

- InvoiceCount
- Terms
- Amount
- TermsType

Sales By Hour Report

The Sales By Hour Report provides a summary of the number of licenses and invoices sold for the given day by hour. To view this report, click the *Reports* menu, scroll down to the Store Sales section, and click **Sales by Hour**.

Report Options

Report Type

The report type. Options are as follows:

- Adobe Acrobat: The report will be generated as an Adobe Acrobat file (pdf).
- Microsoft Excel: The report will be generated as a Microsoft Excel spreadsheet (xls).
- Comma Separated Value: The report will be generated as a comma separated value file (csv).
- XML by Elements: The report will be generated as xml with separate elements for each field.
- XML by Parameters: The report will be generated as xml with a single element containing an attribute for each field.

Start Date

The date to run the report for.

Save to Disk

Check this box to save the report to disk. If unchecked, the report will be displayed in an inline frame within the web page, otherwise you will be prompted to save the file to disk.

Global/Author

Available to users with global access permission. Check the Global checkbox to run the report across all authors, or choose an author from the Author drop down to run the report against a specific author.

Report Output

PDF and XLS

When the report is run:

- A bar chart of the license count for each hour of the day as well as a listing of hourly and invoice license counts is output.
- When the report is generated for the current day, the data listing will also display an "On Pace For" entry bottom, which is an estimate for the total number of invoices for the end of the day total.
- You have the option to click on the provided "Hour of the Day" and then be redirected to the "Online Invoices" report for that hour.

CSV and XML

- HourOfDay
- InvoiceCount
- LicenseCount

Sales By User Report

The Sales By User Report gives a summary listing of sales and units per user for a given date range.

To view this report, click the *Reports* menu, scroll down to the Store Sales section, and click **Sales by User**.

Report Output

Report Type

The report type. Options are as follows:

- Adobe Acrobat: The report will be generated as an Adobe Acrobat file (pdf).
- Microsoft Excel: The report will be generated as a Microsoft Excel spreadsheet (xls).
- Comma Separated Value: The report will be generated as a comma separated value file (csv).
- XML by Elements: The report will be generated as xml with separate elements for each field.
- XML by Parameters: The report will be generated as xml with a single element containing an attribute for each field.

Start/End Date

The date range to run the report for. Note that depending on the server configuration, there may be a restriction of the number of days the report can be run for.

Save to Disk

Check this box to save the report to disk. If unchecked, the report will be displayed in an inline frame within the web page, otherwise you will be prompted to save the file to disk.

Product

Choose a product to filter the report data to only include records for the given product. Select the default of ALL to include all products.

Report Output

PDF and XLS

The report lists the following data for each user with sales:

- User ID, User Name
- Total Sales - Total revenue from invoices entered by this user.
- Total unit - Total number of license units sold by this user.
- Upsell Sales - Total upsell sales sold by this user. These are sales associated with adding an upsell item to the cart on the cart page.
- Upsell Units - Total number upsell license units sold by this user.
- Unpaid Licenses - Total licenses added by this user that are not paid for (\$0 licenses)

CSV and XML

- UserID
- UserName
- TotalSales
- TotalUnits
- UpsellSales
- UpsellUnits
- UnpaidUnits

Unit Compare By Distributor Type Report

The Unit Compare by Distributor Type Report provides the total number of Prepaid Units Sold broken down either by day, week, or month for each product with subtotals broken down by each **distributor type**.

To view this report, click the Reports menu, scroll down to the Store Sales section, and click **Unit Compare by Distributor Type** (near the bottom).

Report Options

Start Date

The date to run the report for. By default, the start date is a week prior to the current date.

To change the date, enter a new value in the date field and click Generate. To move the date back 1 day, click the arrow on the left of the date field, and to move the date forward 1 day, click the arrow to the right of the date field.

Expand All

The report can be generated with all sections expanded by checking the Expand All checkbox.

Global Search

If the user has Global Access permission, a Global Search checkbox will be displayed. Check this box to perform a global search across all authors.

Sort By Option

There are three sort options available:

- Day - The total units sold are displayed for the given begin date plus three additional days. The highest sold products are displayed at the top. Below each product, the totals are displayed for the product sold by each affiliate type.
- Week - The total units sold are displayed for each week instead of each day. The begin date you enter in the provided data field is assumed to be the first day of the week. The report will then calculate 7 days based on the entered start date for each week for four weeks out.
- Month - The total units sold are displayed for each month instead of each day or week. The month of the date you enter in the begin date field will be the month the report uses for the beginning month. The report will then calculate sales for the beginning month and the next three months.

Include All Affiliate Types

By default, the report will only show online (no distributor) and affiliate sales (sales attached to distributors with type Affiliate). To show sales from all **distributor types**, check the Include All Affiliate Types checkbox.

Report Output

Clicking the + and - icons on the left of the report will expand or contract the different levels of the report.

Unit Compare By Product Option

The Unit Compare By Product Option Report provides the total number of units that are associated with an invoice broken down either by day, week, or month for each product option.

To view this report, click the Reports menu, scroll down to the Store Sales section, and click **Unit Compare By Product Option** (near the bottom).

Report Options

Report Type

The report type. Options are as follows:

- Adobe Acrobat: The report will be generated as an Adobe Acrobat file (pdf).
- Microsoft Excel: The report will be generated as a Microsoft Excel spreadsheet (xls).
- Comma Separated Value: The report will be generated as a comma separated value file (csv).
- XML by Elements: The report will be generated as xml with separate elements for each field.
- XML by Parameters: The report will be generated as xml with a single element containing an attribute for each field.

End Date

The end date to run the report for.

Save to Disk

Check this box to save the report to disk. If unchecked, the report will be displayed in an inline frame within the web page, otherwise you will be prompted to save the file to disk.

Global/Author

Available to users with global access permission. Check the Global checkbox to run the report across all authors, or choose an author from the Author drop down to run the report against a specific author.

Interval

The following options are available:

- Daily - The total units sold are displayed for 6 days with the end date as the final date.
- Weekly - The total units sold are displayed for 6 weeks with the end date as the final date.
- Monthly - The total units sold are displayed for 6 months with the end date as the final date.

Report Output

PDF and XLS

- Product/Option
- Interval
- Count

CSV and XML

- ProductID
- ProductName
- ProdOptionID
- OptionName
- SalesCount1
- SalesCount2
- SalesCount3
- SalesCount4

- SalesCount5
- SalesCount6

Accessing Reports Programmatically

Many of the reports within SOLO Server can be accessed programmatically through standard HTTP GET or POST requests in order to allow integration with custom reporting tools.

The following list outlines which reports are accessible through this mechanism and the required User **permissions**:

Report Type	Supported Reports	Required User Permission
Licenses	All Reports except Licenses by Distributor	Report Access
Auditing Exports	All Reports	Authors: Master User ID Licenses: (see Auditing Exports) Products, Product Options: View Products Users: Manager Users
Trial Tracking	All Reports	Report Access
Uncompleted Store Orders	No Reports currently supported	
Accounting	No Reports currently supported	
Account Statements	All Reports	Accounting Reports
Customers	All Reports	Report Access
Store Sales	All Reports except Sales with Invoice Details and Unit Compare By Distributor Type	Sales Reports Access or Financial Access

Report Integration

To integrate your internal reporting application with SOLO Server, you simply need to call the appropriate SOLO Server reporting URL using either an HTTP GET or POST request containing authentication parameters along with report input parameters such as the report type and start and end date. SOLO Server will reply with a response which the calling application can then process accordingly.

Important

Since this approach requires providing an AuthorID, API UserID, and API User Password as inputs, it should be used for internal applications only and should not be called by client applications distributed to customers. Using this web method in a client application exposes a security risk as this would require including these credentials in the distributed product.

If you are currently using regular UserID and UserPassword credentials, you will need to update your application(s) to **use an API UserID and API UserPassword instead**, as support for the regular User ID and Password will be removed in the future.

Common Input Parameters

Parameter	Data Type	Required/Optional	Description
WebServiceLogin	boolean	Required	Must be set to "True". This parameter flags the request as a "web service" request, and instructs the request to be authenticated through the following three parameters rather than through session cookies.
AuthorID	int	Required	SOLO Server Author ID.
UserID	string	Required	The API User ID of the user from the given author using the service (previously the regular User ID). The API User ID and Password need to be used , as support for the regular User ID and Password will be removed in the future.
UserPassword	string	Required	The API User Password for API User ID (previously the regular User Password for the User ID). The API User ID and Password need to be used , as support for the regular User ID and Password will be removed in the future.
ReportType	string	Required	The format to generate the report in. This can be one of the following values: • Pdf - Adobe Acrobat • Xls - Microsoft Excel • Csv - Comma Separated Value • XmlElements - XML document with separate elements for each field in each record • XmlParameters - XML document with a single element containing an attribute for each field for each record Note that some reports do not support all report types. You can reference the topic on each specific report to see the supported report types for each.
StartDate	date	Required	Start date of the report date range. This should be in MM/dd/yyyy format.
EndDate	date	Required	End date of the report date range. This should be in MM/dd/yyyy format.

Report Specific Parameters

In addition to the common input parameters, each report has it's own set of additional reporting parameters specific to the given report. You can determine the additional parameters for each report by examining the HTML source of the report form as follows:

- Log in to SOLO Server and navigate to the report in question.
- An HTML form is displayed containing all of the available parameters, with the common Report Type, Start Date, and End Date parameters noted above at the top.
- The remaining form fields are specific to the given report, and the form field names match the parameter names which must be passed when calling the report programmatically.
- Examine the HTML source of the page to extract the name property of each of the form fields. Alternately, if using Firefox or Chrome, install the **Web Developer Toolbar**. With this installed, from the Web Developer menu, simply choose Forms, View Form Information, which will open a new tab listing out the form details, including form field names.
- Note the following when accessing the reports programmatically:
 - The Save To Disk field does not apply.
 - Checkbox fields use values of "True" or "False".
 - For any drop down fields, the passed in value must match one of the values in the list. You must view the source and extract the "value" property of for the given list item rather than the text displayed in the list on the web page.
 - Fields not marked as required can be omitted.
 - In most cases, the field names will match the labels on the report page with spaces removed, but this is not always the case. In the case of certain drop down options, such as for choosing a product, the name will often include "ID" appended to the end.

Example - Licenses By Product Report

As a example, consider retrieving the output of the **Licenses By Product Report** in Excel format for the month of January 2012 for licenses with OK status, using a Status Check Days Back setting of 30 days and sorting by entered date. The URL and querystring or form data is put together as follows:

- Report URL - `https://secure.yourdomain.com/[PathToSOLO]/authors/RptLicensesByProduct.aspx`
 - `secure.yourdomain.com` is replaced with the SOLO Server domain
 - `[PathToSOLO]` replaced with the path to the SOLO Server root.
 - In the case of SOLO Server Shared URL, this would be: `https://secure.softwarekey.com/solo/authors/RptLicensesByProduct.aspx`
- ReportType - Xls
- StartDate - 1/1/2012
- EndDate - 1/31/2012
- ProductID - This can be omitted since we are not filtering on a specific product. Note that the form field name is "ProductID" rather than "Product" as noted in the prior section.
- FilterIssueLicense - This can be omitted as since we are not filtering on this field.
- FilterUnregistered - This can be omitted as well since we are not filtering on this field.
- FilterOKStatus - True
- StatusCheckDaysBack - 30
- SortBy - 1. Note that this value matches the corresponding "value" attribute from the HTML form and not the displayed text as noted in the prior section.

So, given this information, and assuming we are using AuthorID 123456 along a UserID of "Reporting" with a password of "testing", the querystring or form data to post would come together to the following (prior to HTML encoding):

Querystring/Post Data

```
WebServiceLogin=True&AuthorID=123456&UserID=Reporting&UserPassword=testing&ReportType=Xls &StartDate=1/1/2012&EndDate=1/31/2012&FilterOKStatus=True&StatusCheckDaysBack=30&SortBy=1
```

Report Output

If all input parameters to the report are valid, SOLO Server will return the report file as an attachment to the caller in the selected file format. If, however, there are any invalid or missing input parameters, SOLO Server will instead return an xml response to the caller with details on why the request failed. The xml response document is in the following format.

XML

```
<RequestError>
  <ErrorType></ErrorType>
  <InvalidParameters>
```

```
<InvalidParameter>
  <Name></Name>
  <Value></Value>
  <Reason></Reason>
</InvalidParameter>
</InvalidParameters>
</RequestError>
```

The value of these elements is as follows:

Parameter	Data Type	Description
ErrorType	string	The type of error which occurred. Can be one of the following values: - AuthenticationFailure - Authentication of the AuthorID/UserID/UserPassword combination failed. - AccessDenied - The UserID does not have the appropriate permission to access the report. - InvalidParameters - One of more of the input parameters is missing or invalid. For this error type, the InvalidParameters element described below is also included in the document, and will contain an InvalidParameter element for each missing/invalid parameter describing why the parameter is invalid.
InvalidParameters	XML child element	This is a container element holding one or more InvalidParameter child elements, each containing details on why the given parameter is invalid.
Name	string	The name of the invalid/missing parameter.
Value	string	The value passed for the invalid parameter.
Reason	string	A string description of why the parameter is invalid.

Sample Code

For sample code demonstrating this functionality, [contact us](#).

Custom Mailing & Daily Processes

SOLO Server supports multiple custom mailings which are used to send notification emails to customers, and are triggered by events that occur within SOLO Server.

Examples of these include an order confirmation email, which is sent after an order is processed through the integrated shopping cart, and a subscription expiration warning email, which is sent through a **Daily Process** a specified number of days before the license will expire.

Many of the mailings support "search and replace" parameters, allowing them to be dynamically customized before being sent to the user. To use the "search and replace" parameters, simply place the string in the location within the e-mail where you would like the value of the parameter to be placed. Before the e-mail is sent, SOLO Server will dynamically replace all occurrences of the parameters with the proper value generated from SOLO Server.

View the **Configuring Custom Mailings** topics to see the list of available parameters and how each mailing can be sent.

Customizing Invoices and Order Confirmation Emails

When customers order from the integrated shopping cart, by default a generic email message is sent to them confirming their purchase. This is the same invoice that is shown to the customer after the order has been successfully processed. This invoice includes all of the customer billing and shipping information, as well as a summary of all items purchased. The customized email that can be sent is dependent on whether the order was processed through standard cart mode or **single order mode**.

Standard Cart Mode

To customize this email, view the **Order Complete Standard Cart Mailing** topic.

Single Order Mode

The **single order mode** only allows one item in the shopping cart at a time and can allow for more customization of the order confirmation email since it can be tailored to a single product/license. To customize this email, view the **Order Complete Single Order Mode Mailing** topic.

Configuring Custom Mailings

To configure custom mailings, click *Configure / Mailings (Email Templates)*. A list of any existing mailings will be displayed. To view, edit, or delete an existing mailing, click the View, Edit, or Del links. To add a new mailing, click the *Add New* button at the top.

For security and email deliverability purposes, each email domain that is used by SOLO Server Automation to send emails must have specific DNS records configured to advertise that our email sending provider is an authorized sender. To verify DNS for each domain, click the *Verify Email Domains* button to access a page which will verifying the DNS configuration with our email provider and provide details on configuring DNS. Note that this applies only for SOLO Server Shared and Dedicated URL customers.

You do not define a mailing as a particular type, but simply configure the mailing with appropriate content and "search and replace" parameters depending on the type of mailing you are using it for.

Mailings are defined by the following options:

Mailing Name

The mailing name - this will appear drop downs within SOLO Server so you can identify which mailing to select.

Mailing ID

System generated unique ID for the mailing.

Enabled

Whether the mailing is enabled. If not checked, any requests to send this mailing will be skipped.

From Name

The name the email should be from. On some mail clients, this name is shown in place or in addition to the email address.

From EMail

The from email address.

Subject

The subject of the message.

Body (Text)

The body of the email message in text format.

Body (HTML)

The body of the email message in HTML format.

HTML Preview

When editing a mailing and HTML content is specified, an HTML Preview field will be exposed allowing previewing the rendered content in real time.

Test Mailing

The "Send Test Mailing" button will send an email to the email address of the current SOLO Server **User who is logged in**. This test mailing will not replace any parameters with values, and they will still be listed as parameters such as [varLicenseID]. To see the email with the parameters replaced, you must trigger the event that sends the email.

Important

Note that some built in mailings support only text or only HTML format. In cases where both HTML and text emails are supported, SOLO Server will first look to see if HTML is defined. If so, the HTML is used, otherwise it will look for the text version.

List of Custom Mailings

Here is the list of mailings, and each topic includes the available "search and replace" parameters and details on how to send the mailing. Where appropriate, the topic will also include information about configuring the corresponding **Daily Process**.

- **Activation (Product)**
- **Affiliate Welcome**
- **Credit Card Billing Reminders**
- **Cross Product Marketing**
- **Custom License**
- **Customer Followup**
- **Customer Subscription Expiration**
- **Customer Welcome**
- **Email Campaign**
- **First Activation Followup**
- **Non Activated License Notification**
- **Order Complete Standard Cart**
- **Order Complete Single Order Mode**
- **Pending Payment Plan**
- **Refund**
- **Shipment Notification**
- **Subscription Expiration**
- **Trial Welcome (Product)**
- **Trial Teaser (Product)**
- **User Welcome**

Activation (Product) Mailings

This mailing sent to the customer when any license for this Product is activated for the first time.

It will also be sent when using **postregdata.asp** if the customer email address was blank prior to that registration and if the license has only one activation logged.

Mailing Parameters

This mailing supports the following search and replace parameters:

- [varFirstName] - The customer's first name.
- [varProductName] - The product name.
- [varProductID] - The Product ID.

Mailing Sample Content

Body (HTML)

```
<p>You have successfully activated [varProductName]!</p>
<p>Please visit our <a href="URL">support site</a> if you have any questions.</p>
```

How to Send

After configuring the mailing, to enable it for a specific Product:

- Use the menu *Configure / Products*.
- Click on a Product.
- Use the drop-down *Actions / Edit* to get to the Edit Product page.
- Set the *Product Activation Mailing* field to the correct mailing.

Affiliate Welcome Mailings

This mailing is sent when an affiliate signs up through the affiliate sign-up page in SOLO Server.

Mailing Parameters

This mailing supports the following search and replace parameters:

- [varWebSiteURL] - The Web Site URL entered by the affiliate.
- [varAffiliateID] - The Affiliate ID assigned to the new affiliate by SOLO Server.
- [varUserID] - The User ID entered by the new affiliate.
- [varPassword] - The password entered by the new affiliate.
- <URL> - The full URL to the affiliate routing page.
- <LOGININFO> - The full URL and userid/password to log in and check sales.

Mailing Sample Content

If no Affiliate Welcome mailing is defined, a generic e-mail will be sent to the newly signed up affiliate.

Body (Text)

Welcome and thank you for joining our Affiliate Program!

Place a link on your web site that points to the following URL:

<URL>

This URL contains your affiliate account information. Anyone who uses this link to purchase our products will automatically be linked to your account and you will receive a commission. You can log in at any time and see how many hits you have gotten and how many people have purchased.

Login using the following URL and information:

<LOGININFO>

Thank you again for signing up for our Affiliate Program, and welcome to the team!

How to Send

After configuring the mailing, to enable it:

- Go to the menu *Configure / Distributors*.
- Use the dropdown *Actions / Options*.
- Click the *Edit* button.
- Set the *Affiliate Welcome EMail* to the correct mailing.

Credit Card Billing Reminder Mailings and Process

Use this mailing to send a notification e-mail to everyone who purchased by credit card a specified number of days after the purchase. This is used to send reminders to customers that have purchased your product in an effort to reduce support inquiries and chargeback attempts.

Mailing Parameters

The following search and replace fields are supported for this mailing:

- [varCustomerID] - The Customer ID.
- [varEmail] - The customer's e-mail address.
- [varFirstName] - The customer's first name.
- [varContactName] - The customer's contact name.
- [varCompanyName] - The customer company name, or the customer's first and last name if no company name is specified.
- [varFirstProduct] - The first product purchased on the invoice.
- [varAuthorName] - The Author's name.
- [varInvoiceDate] - The Invoice's date.
- [varInvoiceNumber] - The Invoice Number.
- [varSalesEMail] - The sales e-mail for the Author.
- [varInvoiceTotal] - The total of the Invoice.
- [varMerchAcctDisplayName] - The Merchant Account's Display Name.
- [varCreditCardType] - The type of Credit Card used.
- [varOrderDetails] - A placeholder where the HTML invoice will be inserted. The surrounding HTML should take this into account. This is only supported for HTML e-mails.

Mailing Sample Content

Body (HTML)

```
<p>This e-mail is not a new bill - it is meant to help you to identify the charge that you previously made that will soon appear on your credit card statement.</p>

<p>On [varInvoiceDate] you made a purchase from [varAuthorName] and paid by credit card.</p>

<p>The order is stored in our system under the Invoice Number [varInvoiceNumber] and was paid with your [varCreditCardType]. The total amount of the order is USD [varInvoiceTotal].</p>

<p>Please note that "[varMerchAcctDisplayName]" will appear on your credit card statement, and may not be the name of the publisher ([varAuthorName]).</p>

<p>A copy of your invoice is included below for your reference.</p>

[varOrderDetails]
```

How to Send

This mailing is sent through the Credit Card Billing Reminder **Daily Process**.

SOLO Server Shared and Dedicated URL authors will need to contact support@softwarekey.com to set up and enable this process.

Daily Process Input Xml Elements

The *Input Xml* for this process includes the following elements:

MailingID

The Mailing ID of the mailing to be sent out. See **Creating Custom Mailings** for details on configuring custom mailings, and see above for the supported search and replace fields.

AdminEmail

Optional email address to send a summary notification email to. Note that multiple AdminEmail elements can be specified to send to multiple email addresses.

NotifyOnNoProcessingData

Optional True/False value which determines whether an administrative email notification is sent when no data was found to process. If omitted, the default is false.

BCCAdminEmails

Optional True/False value which determines whether the customer email notification is BCC'd to the AdminEmail emails.

DaysBack

The number of days in the past to look for invoices to send reminders for. For example, specifying a value of 7 will send notifications to invoices which were entered one week back.

MerchantAcctID

The Merchant Account ID to send out billing reminders for. This is optional if omitted the process will include all merchant accounts.

Cross Product Marketing Mailings and Process

This is used to send marketing e-mails to customers who have purchased a specific product a specified number of days after purchase. You can conditionally choose to only send the mailing on their first purchase of the specified Product ID, and you can also choose not to send the email if they've already purchased the other product being marketed.

Mailing Parameters

This mailing supports the following search and replace parameters:

- [varCustomerID] - The Customer ID.
- [varEmail] - The customer's e-mail address.
- [varFirstName] - The customer's first name.
- [varContactName] - The customer's contact name.
- [varCompanyName] - The customer company name, or the customer's first and last name if no company name is specified.

Mailing Sample Content

Body (Text)

Thank you for purchasing (specific product here)!

You may also be interested in our new software product: (other product here)

You can purchase a license and use the following discount code for 10% off!

Discount Code: XXXXXX

(add purchase URL here)

The **discount code** would be optional and configured separately.

How to Send

This mailing is sent through the Cross Product Marketing **Daily Process**.

SOLO Server Shared and Dedicated URL authors will need to contact support@softwarekey.com to set up and enable this process.

Daily Process Input Xml Elements

The *Input Xml* for this process includes the following elements:

MailingID

The Mailing ID of the mailing to be sent out. See **Creating Custom Mailings** for details on configuring custom mailings, and see above for the supported search and replace fields.

AdminEmail

Optional email address to send a summary notification email to. Note that multiple AdminEmail elements can be specified to send to multiple email addresses.

NotifyOnNoProcessingData

Optional True/False value which determines whether an administrative email notification is sent when no data was found to process. If omitted, the default is false.

BCCAdminEmails

Optional True/False value which determines whether the customer email notification is BCC'd to the AdminEmail emails.

OverrideOfferProduct

Optional True/False value which determines whether to override the Notify Product setting on the customer record. If omitted or set to false, emails will only be sent to eligible customers with the Notify Product setting enabled, while if set to true, all eligible customers will receive an email regardless of the Notify Product setting.

DaysBack

The number of days in the past to look for invoices to send the emails for. For example, specifying a value of 7 will send notifications to invoices which were entered one week back.

PurchasedProductID

The Product ID of the product the customer must have purchased.

OfferProductID

The Product ID the marketing offer pertains to. If a customer already owns this product, they will be excluded.

FirstPurchaseOnly

True/False as to whether to only send the emails to customers on their first purchase of the PurchaseProductID.

FilterOfferPartners

Optional True/False value as to whether to only send emails to customers with Notify Partners enabled rather than the Notify Products.

Custom License Mailings

These mailings can be manually sent based on an existing license, as well as when adding a prepaid license.

Mailing Parameters

The following search and replace fields are supported for these mailings:

- [varLicenseID] - The License ID of the license from which "Email Customer" was clicked. This is supported in the email subject as well as the body.
- [varSerialNumber] - The license serial number. If using Assigned From List serials and a serial number is assigned, the assigned serial will be used. Otherwise the Serial Number Text along with the numeric Serial Number will be used (the numeric portion will not be included if the value is 0).
- [varCustomerID] - The Customer ID.
- [varPassword] - The customer Password. **Important Note:** We strongly recommended *not* using this. For customers who have chosen their own password, the value will be masked with * characters and not useful to the user.
- [varActivationPassword] - The license Activation Password.
- [varExpirationDate] - The license download expiration date.
- [varRemainingActivations] - The remaining activations on the license.
- [varQOrdered] - The quantity on the license.
- [varContactName] - The customer first and last name.
- [varFirstName] - The customer first name.
- [varLastName] - The customer last name.
- [varCompanyName] - The customer company name. This is supported in the email subject as well as the body.
- [varEMail] - The customer's EMail address.
- [varLicenseeName] - The licensee name on the license.
- [varLicenseeEmail] - The licensee email on the license.
- [varProductName] - The license product name.
- [varOptionName] or [varProdOptionName] - The license option name.
- [varOptionDescription] - The license option description.
- [varAuthorName] - The author company name.
- [varSalesEMail] - The author sales email.
- [varSupportEMail] - The author support email.
- [varWebSite] - The author web site.
- [varSupportSite] - The author support web site.
- [varMerchantDispName] - The merchant account name that the customer will see on their credit card. If no merchant account is associated with the license, the author company name will be used.
- [varLicenseEnteredDate] - The Entered Date associated with the License record.
- [varServerName] - The server name (advanced).
- [varLicenseCounter] - The license counter value.
- [varAuthorSerialNumTxt] - The license Author S/N Text value.
- [varLatestVersion] - The product latest version.
- [varInvoiceNo] - The invoice number associated with the license.
- [varUserPONumber] - The invoice User PO Number. Note that the search/replace will also add a "PO#: " prefix at the beginning of the replace. This is supported in the email subject as well as the body.
- [varDownloadPage] - The D/L Page from the product option.
- [varPaymentPlanInstanceID] - For licenses is associated with a payment plan, the Payment Plan Instance ID.
- [varOriginalLicenseID] - For upgrade or renewal licenses originating from the **Customer License Portal**, the License ID of the license that was upgraded or renewed.
- [varExternalReference1] - License External Reference 1.
- [varExternalReference1Source] - License External Reference 1 Source.
- [varExternalReference2] - License External Reference 2.
- [varExternalReference2Source] - License External Reference 2 Source.
- [varLFUDefChar1] - [varLFUDefChar10] - License user defined string fields (UDefChar) 1 through 10.
- [varLFUDefDate1] - [varLFUDefDate5] - License user defined date fields (UDefDate) 1 through 5.
- [varLFUDefNum1] - [varLFUDefNum5] - License user defined numeric fields (UDefNum) 1 through 5.
- [varLFUDefFloat1] - [varLFUDefFloat5] - License user defined float fields (UDefFloat) 1 through 5.
- [varCLP-TagName] - **Custom License Parameters**. For each custom parameter in the custom parameter set, replace CustomParameterTagName with the Tag Name of the custom parameter. For example, if the custom parameter Tag Name is Feature1, the search/replace parameter would be [varCLP-Feature1].

Mailing Sample Content

Body (HTML)

```
<p>Dear [varContactName]:</p>

<p>THANK YOU for purchasing a license of [varProductName] [varOptionName]!</p>

<p><a href="https://secure.softwarekey.com/solo/customers/License.aspx?LicenseID=[varLicenseID]&ActivationPassword=[varActivationPassword]">
Download the software here.</a></p>

<p>After downloading and installing the software, use the following credentials to activate:</p>

<p>License ID: [varLicenseID]

<br>Activation Password: [varActivationPassword]</p>

<p>To manage your license(s) online, you can <a href="https://secure.softwarekey.com/solo/customers/Default.aspx?AuthorID=(insert your Author ID)">login to the Customer License Portal</a>. This uses a different password than the above Activation Password. Use the Forgot Password link on the login page with the Registered Email address to reset your Customer Password:</p>

<p>Registered Email address: [varEMail]</p>

<p>For your future reference, please be sure to note that your license expires on [varExpirationDate].</p>
```

Important

The sample content above uses SOLO Server Shared URLs for the links:

- When using SOLO Server Shared / Custom URL, replace *secure* with your custom subdomain.
- When using SOLO Server Dedicated URL, replace *secure.softwarekey.com* with your domain.
- When using SOLO Server Self-Hosted, replace *secure.softwarekey.com/solo* in the URL with the path to your SOLO Server instance.

Please **contact us** if you need assistance determining the correct URL.

The download link requires that you've **configured a download in SOLO Server** for this Product Option.

For the **Customer License Portal** login link, you need to replace (insert your Author ID) with your Author ID.

How to Send

Existing License

To manually send a mailing for an existing license:

- **Search** for the license in SOLO Server.
- On the **License Details** page, click the **License** button and choose **Email Customer**.
- Choose a mailing template to send from the drop down.
- The TO field will be automatically populated with the customer's email address.
- Add any additional email addresses to notify to the TO, CC, and BCC fields. Multiple email addresses can be entered in each field, separated by either commas or semicolons.
- Click the **Send** button.

Adding a Prepaid License

When **adding a single license** through the Author Interface, after clicking the *Add New Prepaid License* button, there is an *Email Customer* field where you can select a mailing template. When the license is added, it will send the mailing to the

email address registered for this customer record.

Customer Followup Mailings and Process

This sends follow-up e-mails to new customers a specified number of days after signing up, as well as sending purchase follow-up e-mails a specified number of days after purchase. This can be a general follow-up mailing, whereas the **Cross Product Marketing Mailings** give you some additional conditions for targeting a specific Product ID for marketing.

Mailing Parameters

This mailing supports the following search and replace parameters:

- [varCustomerID] - The Customer ID.
- [varEmail] - The customer's e-mail address.
- [varFirstName] - The customer's first name.
- [varContactName] - The customer's contact name.
- [varCompanyName] - The customer company name, or the customer's first and last name if no company name is specified.

Mailing Sample Content

Body (Text)

Thank you for your recent purchase from (your company name here)!

You can utilize our support page to help you with any questions.

How to Send

This mailing is sent through the Customer Followup **Daily Process**.

SOLO Server Shared and Dedicated URL authors will need to contact support@softwarekey.com to set up and enable this process.

Daily Process Input Xml Elements

The *Input Xml* for this process includes the following elements:

MailingID

The Mailing ID of the mailing to be sent out. See **Creating Custom Mailings** for details on configuring custom mailings, and see above for the supported search and replace fields.

AdminEmail

Optional email address to send a summary notification email to. Note that multiple AdminEmail elements can be specified to send to multiple email addresses.

NotifyOnNoProcessingData

Optional True/False value which determines whether an administrative email notification is sent when no data was found to process. If omitted, the default is false.

BCCAdminEmails

Optional True/False value which determines whether the customer email notification is BCC'd to the AdminEmail emails.

OverrideOfferProduct

Optional True/False value which determines whether to override the Notify Product setting on the customer record. If omitted or set to false, emails will only be sent to eligible customers with the Notify Product setting enabled, while if set to true, all eligible customers will receive an email regardless of the Notify Product setting.

AuthorID

The Author ID to search for customers/invoices. This is required for the NewAccount follow up type, as well as for the NewPurchase and Purchase types if ProductIDs is omitted.

ProductIDs

For the NewPurchase and Purchase follow up types, a comma separated value list of Product IDs to filter purchases on. Only customers who purchase one of the given Product IDs will be sent an email. If this is omitted, all products on the Author ID will be considered.

FollowupType

The follow up type. This can be one of three values:

- NewAccount - Sends follow ups to newly created customers (regardless of whether they purchase).
- NewPurchase - Sends follow ups to customers after their first purchase.
- Purchase - Sends follow ups to customers after any purchase.

DaysBack

The number of days in the past to look for customers/invoices to send the emails for. For example, specifying a value of 7 will send notifications to invoices which were entered one week back or customers created one week back.

Customer Subscription Expiration Mailings and Process

This mailing sends summary notification emails regarding license expiration to customers who have licenses nearing expiration or expired.

The process first finds all customers with an applicable license expiring a given number of days from the current date. For each of these customers, an email is then sent containing a summary of license expiration data for all applicable licenses, regardless of expiration date.

The summary lists the licenses by expiration date, starting with the earliest expiration date. Expired licenses will be highlighted in bold and red, while licenses nearing expiration are highlighted in bold, as shown in the following image:

License ID	Product	Licensee	Expiration Date
	Protection PLUS 4 Professional Edition CD		July 02, 2007
	Protection PLUS 4 Professional Edition		January 29, 2010
	SOLO Server Metering Single Domain License		January 29, 2010
	Protection PLUS 4 Professional Edition		February 29, 2012
	SOLO Server Unlimited Domains License		December 15, 2012
	Protection PLUS 4 Internet Edition CD		January 20, 2013
	Protection PLUS 5 SDK .NET Edition 1 Developer License		February 19, 2013
	SOLO Server Single Domain License		January 01, 2014
	SOLO Server Components SOLO Lite		January 20, 2015
	Protection PLUS 5 SDK .NET Edition Site License		January 29, 2015
	Protection PLUS 4 Enterprise Edition		February 02, 2015

Mailing Parameters

This mailing supports the following search and replace parameters:

- [varCustomerID] - The Customer ID.
- [varEmail] - The customer's e-mail address.
- [varFirstName] - The customer's first name.
- [varContactName] - The customer's contact name.
- [varCompanyName] - The customer company name, or the customer's first and last name if no company name is specified.
- [varAuthorName] - The Company Name of the author.
- [varPassword] - The customer password. **Important Note:** We strongly recommended *not* using this. For customers who have chosen their own password, the value will be masked with * characters and not useful to the user.
- [varDaysToExpiration] - The number of days to expiration.
- [varLicenses] - An HTML table containing a summary of all customer licenses and their expiration dates.

Mailing Sample Content

Body (HTML)

<p>This email is to let you know that your subscription on one or more software products will expire in [varDaysToExpiration] days, as shown below. The following table will also list any other licenses you have and their expiration dates:</p>

[varLicenses]

<p>We hope that you have enjoyed our product. To ensure that your access is not interrupted, please renew your subscription before time runs out.</p>

<p>Contact us for more information about renewing your subscription!</p>

How to Send

This mailing is sent through the Customer Subscription Expiration Notification **Daily Process**.

SOLO Server Shared and Dedicated URL authors will need to contact support@softwarekey.com to set up and enable this process.

Daily Process Input Xml Elements

The *Input Xml* for this process includes the following elements:

MailingID

The Mailing ID of the mailing to be sent. See **Creating Custom Mailings** for details on configuring custom mailings, and see above for the supported search and replace fields.

AdminEmail

Optional email address to send a summary notification email to. Note that multiple AdminEmail elements can be specified to send to multiple email addresses.

NotifyOnNoProcessingData

Optional True/False value which determines whether an administrative email notification is sent when no data was found to process. If omitted, the default is false.

BCCAdminEmails

Optional True/False value which determines whether the customer email notification is BCC'd to the AdminEmail emails.

OverrideOfferProduct

Optional True/False value which determines whether to override the Notify Product setting on the customer record. If omitted or set to false, emails will only be sent to eligible customers with the Notify Product setting enabled, while if set to true, all eligible customers will receive an email regardless of the Notify Product setting.

DaysToExpiration

The number of days prior to license expiration to send the email. This number of days is added to the current date, and any customer with applicable licenses expiring on this date are notified. Note that a negative value can be specified to send notifications after expiration.

ProductIDsCsv

A comma separated value list of Product IDs to search for expiring licenses on.

IncludedProdOptionsCsv

A comma separated value list of Product Option IDs to search for expiring licenses on.

ExcludedProdOptionsCsv

A comma separated value list of Product Option IDs to exclude from the search for expiring licenses. Used to filter out specific options when using the ProductIDsCsv input parameter.

CCLicenseeEmails

True/False. Whether to CC the notification to the licensee email addresses when present on the license(s).

ExcludeUpgradeLicenses

Whether to exclude licenses with a status of Upgrade for options configured with an Upgrade Behavior of Deactivate.

ExcludeActivePaymentPlanLicenses

Optional True/False value which determines whether to exclude licenses which are associated with an active payment plan instance.

Customer Welcome Mailings

This mailing is sent when a new customer registers during checkout in the cart, or when a customer signs up through the **Customer License Portal**. This would be for the *New Customers* section on the right of the Customer License Portal login page.

Mailing Parameters

This mailing supports the following search and replace parameters:

- [varCustomerID] - The Customer ID.
- [varPassword] - The customer password. **Important Note:** We strongly recommended *not* using this. For customers who have chosen their own password, the value will be masked with * characters and not useful to the user.
- [varEmail] - The customer e-mail address.
- [varFirstName] - The customer first name.
- [varLastName] - The customer last name.
- [varEmailVerificationUrl] - Supported for the customer license portal mailing only. When the "Require email validation on new customer sign up" **Customer License Portal Option** is enabled, the URL for the customer to follow to verify their account.

Mailing Sample Content

Body (Text)

Thank you for signing up and welcome! We're excited to have you join a long list of happy customers.

For your records:

- The contact name for this account is [varFirstName] [varLastName].
- Your Customer ID is [varCustomerID].
- The e-mail address on file is [varEmail].

We hope you enjoy our product!

How to Send

Shopping Cart Checkout

- Use the menu *Store / Cart Options*.
- Click the *Edit* button.
- Set the *Customer Welcome Mailing* to the correct mailing.

Customer License Portal Sign Up

- Use the menu *Configure / Customer License Portal Options*.
- Click the *Edit* button.
- Set the *Customer Welcome Mailing* to the correct mailing.

Email Campaign Mailings and Abandoned Cart Followup Process

These mailings are sent to customers who have abandoned their carts without purchasing. The automated emails can offer priority codes to customers offering them a discount if they complete their purchase, and can also contain a link directly back to the customer's existing cart. See **Email Marketing Campaigns** for more details.

Mailing Parameters

This mailing supports the following search and replace parameters:

- [varAuthorName] - The Company Name of the author.
- [varCartModifiedDate] - The last date the cart was accessed on.
- [varFirstName] - The customer first name.
- [varContactName] - The customer first and last name.
- [varProductList] - A comma separated list of products in the cart.
- [varProductListWithOptionName] - A comma separated list of products in the cart with product option names.
- [varFirstProduct] - The first product listed in the cart.
- [varFirstProductWithOptionName] - The first product listed in the cart with the product option name.
- [varCartLink] - The URL back to the cart.

Mailing Sample Content

Body (Text)

Did you forget? You visited [varAuthorName] on [varCartModifiedDate], and it looks like you were looking for [varProductList].

Complete your order within the next 24 hours, and we'll give you 10% off with coupon code XXXXXX!

We understand that you are busy, so we made sure that everything is still in your cart. You can use this link to go straight to your cart and finalize your order:

[varCartLink]

The **discount code** would be optional and configured separately.

How to Send

This mailing is sent through the Abandoned Cart Followup **Daily Process**. You will need to choose your Mailing and the Look Back Days per the **Email Marketing Campaigns** instructions.

SOLO Server Shared and Dedicated URL authors will need to contact support@softwarekey.com to set up and enable this process.

Daily Process Input Xml Elements

The *Input Xml* for this process includes the following elements:

OverrideOfferProduct

Optional True/False value which determines whether to override the Notify Product setting on the customer record. If omitted or set to false, emails will only be sent to eligible customers with the Notify Product setting enabled, while if set to true, all eligible customers will receive an email regardless of the Notify Product setting.

First Activation Followup Mailings and Process

Use this mailing to send follow up e-mails to all customers who have activated a specified product for the first time. The email will be sent a specified number of days after the first activation.

Mailing Parameters

This mailing supports the following search and replace parameters:

- [varCustomerID] - The Customer ID.
- [varEmail] - The customer's e-mail address.
- [varFirstName] - The customer's first name.
- [varContactName] - The customer's contact name.
- [varCompanyName] - The customer company name, or the customer's first and last name if no company name is specified.
- [varLicenseID] - The License ID.
- [varPassword] - The customer Password. **Important Note:** We strongly recommended *not* using this. For customers who have chosen their own password, the value will be masked with * characters and not useful to the user.
- [varActivationPassword] - The license Activation Password.
- [varProductName] - The product name.
- [varOptionName] - The product option name.
- [varProductID] - The Product ID.

Mailing Sample Content

Body (Text)

It's been a few days since you activated your [varProductName]. We hope you are enjoying [varProductName] as you explore its full capabilities.

We want to ensure that you benefit from everything [varProductName] has to offer. Please feel free to contact our support department with any questions. Keep this email handy, as it has information that will help us help you.

Customer ID: [varCustomerID]

Registered e-mail: [varEmail]

Contact Name: [varContactName]

License ID: [varLicenseID]

Our support department can be contacted via email at support@my_company.com.

How to Send

This mailing is sent by the First Activation Followup **Daily Process**.

SOLO Server Shared and Dedicated URL authors will need to contact support@softwarekey.com to set up and enable this process.

Daily Process Input Xml Elements

The *Input Xml* for this process includes the following elements:

MailingID

The Mailing ID of the mailing to be sent. See **Creating Custom Mailings** for details on configuring custom mailings, and see above for the supported search and replace fields.

AdminEmail

Optional email address to send a summary notification email to. Note that multiple AdminEmail elements can be specified to send to multiple email addresses.

NotifyOnNoProcessingData

Optional True/False value which determines whether an administrative email notification is sent when no data was found to process. If omitted, the default is false.

BCCAdminEmails

Optional True/False value which determines whether the customer email notification is BCC'd to the AdminEmail emails.

OverrideOfferProduct

Optional True/False value which determines whether to override the Notify Product setting on the customer record. If omitted or set to false, emails will only be sent to eligible customers with the Notify Product setting enabled, while if set to true, all eligible customers will receive an email regardless of the Notify Product setting.

ProductsCsv

A comma separated value list of Product IDs to send emails for. Optional when ProdOptionsCSV is specified, otherwise required.

ProdOptionsCvx

A comma separated value list of Product Option IDs to send emails for. Optional when ProductsCSV is specified, otherwise required.

DaysBack

The number of days after activation to send the emails.

Non Activated License Notification Mailings and Process

Use this mailing to send notification e-mails to customers who have not activated a new license a specified number of days since license creation.

Mailing Parameters

The following search and replace fields are supported for this mailing:

- [varCustomerID] - The Customer ID.
- [varEmail] - The customer's e-mail address.
- [varFirstName] - The customer's first name.
- [varContactName] - The customer's contact name.
- [varCompanyName] - The customer company name, or the customer's first and last name if no company name is specified.
- [varLicenseDetails] - Details of all applicable licenses.

Mailing Sample Content

Body (Text)

We were reviewing our records and noticed that you completed your purchase a few days ago but have not activated your license yet.

We want to ensure that you are able to successfully activate and utilize your software.

Customer ID: [varCustomerID]

Registered e-mail: [varEmail]

Contact Name: [varContactName]

[varLicenseDetails]

Please feel free to contact our support department with any questions. Our support department can be contacted via email at support@my_company.com.

Keep this email handy, as it has information that will help us help you.

How to Send

This mailing is sent through the Non Activated License Notification **Daily Process**.

SOLO Server Shared and Dedicated URL authors will need to contact support@softwarekey.com to set up and enable this process.

Daily Process Input Xml Elements

The *Input Xml* for this process includes the following elements:

MailingID

The Mailing ID of the mailing to be sent out. See **Creating Custom Mailings** for details on configuring custom mailings, and see above for the supported search and replace fields.

AdminEmail

Optional email address to send a summary notification email to. Note that multiple AdminEmail elements can be specified to send to multiple email addresses.

NotifyOnNoProcessingData

Optional True/False value which determines whether an administrative email notification is sent when no data was found to process. If omitted, the default is false.

BCCAdminEmails

Optional True/False value which determines whether the customer email notification is BCC'd to the AdminEmail emails.

OverrideOfferProduct

Optional True/False value which determines whether to override the Notify Product setting on the customer record. If omitted or set to false, emails will only be sent to eligible customers with the Notify Product setting enabled, while if set to true, all eligible customers will receive an email regardless of the Notify Product setting.

AuthorID

The Author ID to search for licenses on. This is optional if ProductIDs is used.

ProductIDs

A comma separated value list of Product IDs to filter purchases on. Only customers who own one of the given Product IDs will be sent an email. If this is omitted, all products on the Author ID will be considered.

DaysBackInterval

The number of days from purchase to send the first notification as well as the number of days between subsequent notifications. For example, setting this to 7 will send a notification one week after purchase and then once every week thereafter until the NotificationCount has been reached.

NotificationCount

The total number of notifications to send.

Order Complete Standard Cart Mailings

This mailing is sent to the customer when they complete an order through the standard cart ordering process. If no mailing is defined on the Cart Options, the customer will be sent a generic invoice e-mail (see below for details). This mailing only supports HTML.

Mailing Parameters

The following search and replace fields are supported for this mailing:

- [varCompanyName] - The customer company name.\
- [varFirstName] - The customer first name.
- [varContactName] - The first and last name of the customer.
- [varCustomerID] - The customer's Customer ID.
- [varPassword] - The customer password. **Important Note:** We strongly recommended *not* using this. For customers who have chosen their own password, the value will be masked with * characters and not useful to the user.
- [varShortShipName] - The short ship name of the shipping option selected for the order.
- [varMerchantDispName] - The merchant account name that the customer will see on their credit card. If no merchant account is associated with the order, the author company name will be used.
- [varUserPONumber] - The User PO Number. Note that the search/replace will also add a "PO#: " prefix at the beginning of the replace.
- [varInvoiceNo] - The Invoice No.
- [varInvoice] - This is a place holder for the entire system generated invoice table. This will be a large HTML table exactly like the generic cart invoice that is sent when this mailing is not defined. Be sure the HTML takes this into account. This is not supported in the subject.

Mailing Sample Content

Body (HTML)

```
<p>Hello [varContactName],<p>  
<p>Thank you for your purchase!</p>  
[varInvoice]
```

In the default email, [varInvoice] is all that is included.

The default email also uses:

- Subject: Thank you for your order!
- From: (Company name) (Contact E Mail)

The [varInvoice] table is automatically generated as shown below, and can be customized in a few ways:

<u>Sample Company</u> Invoice #40558559		Date: Oct 26 2015 2:25:23 PM Central Daylight Time (UTC-5)	
Customer Information:			
COMPANY NAME FIRST NAME LAST NAME ADDRESS LINE 1 ADDRESS LINE 2 CITY, NY 12345 UNITED STATES		Customer ID: 20914074 Email: name@email.com Phone: 123-456-7890	
Billing Information:			
FIRST NAME LAST NAME ADDRESS LINE 1 ADDRESS LINE 2 CITY, NY 12345 UNITED STATES		Terms: Prepaid	
Order Information:			
Description	Quantity	Unit Price	Extended Price
Sample Application Silver Edition License	1	\$399.00	\$399.00
License ID: 61706212 License Activation Password: Expiration: Oct 25 2016 To download your software, visit your personalized Software Download Page . The application will ask for a license ID and Password to enable it. Use the values above to activate your purchase.			
			Total: \$399.00
Product support is provided by:			
<u>Company Name</u> Address 1 Address 2 Country Support Site: Website URL Phone: Voice # Fax: Fax #		Support HTML	

The *Order Confirm HTML* fields are specified at the Store, Product and Option level.

Store Order Confirm HTML

The Store Order Confirm HTML is displayed above the entire [varInvoice] table on the order confirmation page and in the default order confirmation email.

- Use the menu *Store / Cart Options*.
- Click the *Edit* button.
- Enter custom text into *Order Confirm HTML* field.

Product and Option Order Confirm HTML

For each item within the invoice, the *Product Order Confirm HTML* is displayed first, and then the *Option Order Confirm HTML* is displayed next. Default text is used if these fields are left blank. To access these fields:

- Use the menu *Configure / Products*.
- Click a Product or Option.
- Use the dropdown *Actions / Edit*.
- Enter custom text into *Order Confirm HTML* field.

Example Product or Option Order Confirm HTML

To download your software, visit your personalized `<a href=f="https://secure.softwarekey.com/solo/customers/License.aspx?LicenseID=[varLicenseID]" target="_blank">Software Download Page</a>`.

`<br /><br />`The application will ask for a License ID and Password to enable it. Use the values above to activate your purchase.

Important

The example content above uses a SOLO Server Shared URL for the download page link:

- When using SOLO Server Shared / Custom URL, replace *secure* with your custom subdomain.
- When using SOLO Server Dedicated URL, replace *secure.softwarekey.com* with your domain.
- When using SOLO Server Self-Hosted, replace *secure.softwarekey.com/solo* in the URL with the path to your SOLO Server instance.

Please **contact us** if you need assistance determining the correct URL.

Support HTML

The Support HTML field can be updated by using the User menu (top right next to Help), and choosing *Contact Details*. Default text is used if this field is left blank, which uses the data from the fields on the *Contact Details* page. The following text is similar to the default text, but can be customized as needed:

Example Support HTML

```
<strong>Product support is provided by:
<br /><br /><a href="URL">Test Author</a></strong>
<br />PO Box #####<br />City, ST #####<br />United States
<br /><a href="URL">URL</a>
<br />Support Email: <a href="mailto:email@email.com">email@email.com</a>
<br />Sales Email: <a href="mailto:email@email.com">email@email.com</a>
<br />Phone: #-###-###-###<br />
```

How to Send

After a standard cart order is complete, SOLO Server will send out the default mailing unless you set the *Cart Order Complete Mailing*:

- Use the menu *Store / Cart Options*.
- Click the *Edit* button.
- Set the *Cart Order Complete Mailing* to the correct mailing.

Order Complete Single Order Mode Mailings

These mailings are sent to the customer when they complete an order through the cart in **Single Order Mode** with the *Use Engine Invoice On Single* **Advanced Cart Option** unchecked.

SOLO Server will first look for an order complete mailing defined on the Product level and send it if found. If none is found, SOLO Server will then look for order complete mailing defined on the store level and send it if found. If neither a product level or store level order complete e-mail is defined, the customer will be sent a generic order complete e-mail (see below for a text format example of the system generated e-mail).

Mailing Parameters

The following search and replace fields are supported for this mailing:

- [varProductName] - The name of the product purchased. This is a parameter in the subject and the body of the e-mail.
- [varProdOptionName] - The name of the product option purchased. This is a parameter in the subject and the body of the e-mail.
- [varLicenseID] - License ID(s) assigned to this order (in a comma separated list if there are multiple licenses).

The following parameters are only in the body of the e-mail.

- [varAddressLine1] - Address line 1 of customer.
- [varAddressLine2] - Address line 2 of customer.
- [varAddressLine3] - The city, state, and zip code of the customer.
- [varAuthorName] - Name of Author associated with product sold.
- [varAuthorURL] - URL of Author associated with product sold.
- [varAuthorOrdCompleteHTML] - Order complete text defined at the author level (advanced).
- [varSerialNumber] - The license serial number. If using Assigned From List serials and a serial number is assigned, the assigned serial will be used. Otherwise the Serial Number Text along with the numeric Serial Number will be used (the numeric portion will not be included if the value is 0).
- [varAuthorSerialNumNext] - Numeric portion of serial number assigned (only if Author Serial Number feature is used).
- [varAuthorSerialNumTxt] - Text portion of serial number assigned (only if Author Serial Number feature is used).
- [varBillAddr1] - Billing address line 1 of invoice.
- [varBillAddr2] - Billing address line 2 of invoice.
- [varBillAddr3] - Billing address line 3 of invoice.
- [varCCApprovalCode] - Approval code of order.
- [varChargeAmount] - Amount charged to the customer's credit card.
- [varCompanyName] - Customer's company name.
- [varFirstName] - Customer's first name.
- [varContactName] - Customer's contact name.
- [varCountry] - Customer's country.
- [varCustomerEmail] - Customer's e-mail address.
- [varCustomerFax] - Customer's fax number.
- [varCustomerID] - Customers' Customer ID.
- [varCustomerVoice] - Customer's phone number.
- [varEmailOrderError] - EMail address customer should contact if this is a duplicate charge or other billing questions should be sent. This will automatically be populated with the value configured with the **global application options** for EMailOrderError.
- [varInvoiceID] - Invoice Number assigned to this order.
- [varLicenseID] - License ID(s) assigned to this order.
- [varMerchantDispName] - The merchant account name that the customer will see on their credit card. If no merchant account is associated with the order, the author company name will be used.
- [varPassword] - The customer Password. **Important Note:** We strongly recommended *not* using this. For customers who have chosen their own password, the value will be masked with * characters and not useful to the user.
- [varActivationPassword] - The license Activation Password.
- [varProdOptOrdCompleteHTML] - Order complete text defined at the product option level (advanced).
- [varProdOrdCompleteHTML] - Order complete text defined at the product level (advanced).
- [varQOrdered] - The quantity ordered.
- [varServerName] - The server name (advanced).
- [varSOLORootDir] - The SOLO Server root directory as defined in the Global Application Options (advanced).

- [varShipShortName] - The short name of the shipping option selected for the order.
- [varOriginalQS] - Original query string that started order.

Mailing Sample Content

This sample text is the same as the default mailing:

Body (Text)

Thank you for your purchase of [varProductName] / [varProdOptionName]. Your Invoice No for this purchase is [varInvoiceID].

**** PLEASE PRINT THIS OUT AND RETAIN FOR FUTURE REFERENCE ****

Your order has been securely processed by [varMerchantDispName]. This is the name that will appear on your credit card statement.

WHAT TO DO NEXT:

The application will ask for a License ID and Activation Password to enable it. Use the following information:

- LicenseID = [varLicenseID]
- Password = [varActivationPassword]

To download the software, reprint a receipt, or for other customer-service issues, go to [http://\[varServer-Name\]\[varSOLORootDir\]customers/](http://[varServer-Name][varSOLORootDir]customers/) and log in with your Login ID and password.

If you have any questions concerning this product, please contact [varAuthorName] directly at support@my_company.com.

If you believe that you may have inadvertently ordered twice, send an e-mail to [varEMailOrderError]. Include the LicenseID or Invoice No in your correspondence.

Once again, thank you for your purchase.

[varAuthorName]

How to Send

After a single mode cart order is complete, SOLO Server will send out the default mailing unless you set the custom mailing on either the product or author level:

Product Level

- Use the menu *Configuration / Products*.
- Select a Product and then use the drop-down *Actions / Edit*.
- Set the *Order Confirm Email* to the correct mailing.

Store Level

- Use the menu *Store / Cart Options*.
- Click the *Edit* button.
- Set the *Single Order Complete Mailing* to the correct mailing.

Pending Payment Plan Notification Mailings and Process

This mailing will send a notification e-mail to customers who have a payment plan instance due for payment specified number of days in the future. This is used to send reminders to customers that they will be charged in the near future in an effort to reduce support inquiries and chargeback attempts.

Mailing Parameters

The following search and replace fields are supported for this mailing:

- [varCustomerID] - The Customer ID.
- [varEmail] - The customer's e-mail address.
- [varFirstName] - The customer's first name.
- [varContactName] - The customer's contact name.
- [varCompanyName] - The customer company name, or the customer's first and last name if no company name is specified.
- [varRenewals] - An HTML table containing a summary of all payment plan instances which will be billed.

Mailing Sample Content

Body (HTML)

```
<p>This e-mail is not a bill - This is a friendly reminder that your credit card on file will soon be charged for your monthly fees.</p>

<p>Customer ID: [varCustomerID]</p>

[varRenewals]

<p>Once the credit card on file has been successfully billed, a copy of your invoice will be emailed to you for your records.</p>
```

How to Send

This mailing is sent through the Pending Payment Plan Notification **Daily Process**. To enable this mailing, follow the instructions on **Sending Billing Reminders**.

SOLO Server Shared and Dedicated URL authors will need to contact support@softwarekey.com to set up and enable this process.

Daily Process Input Xml Elements

The *Input Xml* for this process includes the following elements:

MailingID

The Mailing ID of the mailing to be sent out. See **Creating Custom Mailings** for details on configuring custom mailings, and see above for the supported search and replace fields.

AdminEmail

Optional email address to send a summary notification email to. Note that multiple AdminEmail elements can be specified to send to multiple email addresses.

NotifyOnNoProcessingData

Optional True/False value which determines whether an administrative email notification is sent when no data was found to process. If omitted, the default is false.

BCCAdminEmails

Optional True/False value which determines whether the customer email notification is BCC'd to the AdminEmail emails.

OverrideOfferProduct

Optional True/False value which determines whether to override the Notify Product setting on the customer record. If omitted or set to false, emails will only be sent to eligible customers with the Notify Product setting enabled, while if set to true, all eligible customers will receive an email regardless of the Notify Product setting.

DaysAhead

The number of days in the future when the payment plan instances to send notification for will be processed.

AuthorIDCsv

A comma separated value list of Author IDs to include during processing. If blank or omitted, all authors will be included.

SuppressRenewals

True/False as to whether to only send notifications for payment plan instances with expiring credit cards.

Refund Mailings

Sends an email to a customer when **issuing a refund**.

Mailing Parameters

The following search and replace fields are supported for this mailing:

- [varInvoiceNo] - The invoice number of the refund invoice.
- [varCompanyName] - The customer's company name.
- [varFirstName] - The customer's first name.
- [varContactName] - The customer's contact name.
- [varRefundAmount] - The refund amount.
- [varAuthorCompany] - The company name of the author the refund applies to.
- [varRefundDetails] - This is a place holder for the entire refund details table, which is what is shown on the refund confirmation page. This will be a large HTML table, so be sure the surrounding HTML takes this into account. For text e-mails, this search and replace tag is not supported.
- [varStoreCreditAmount] - If the refund was converted to store credit, the store credit amount.
- [varStoreCreditExpiration] - If the refund was converted to store credit, the store credit expiration date.

Mailing Sample Content

Body (HTML)

```
<p>Thank you for contacting us regarding Invoice [varInvoiceNo] for [varContactName].</p>

<p>As discussed, we have refunded the credit card on file for $[varRefundAmount]. Please allow 5-7 business days for the refund to show on your credit card billing statement.</p>

[varRefundDetails]

<p>Please let us know if you need any further assistance.</p>
```

How to Send

Any mailing with the string "Refund" in the name will show up as a mailing option in the *Send Mailing to Customer* drop down on the refund page.

Shipment Notification Mailings and Process

Use this mailing to send shipping notification emails to customers whose orders have been marked shipped and/or a summary email to specific email addresses.

Mailing Parameters

The following search and replace fields are supported for this mailing:

- [varCustomerID] - The Customer ID.
- [varEmail] - The customer's e-mail address.
- [varFirstName] - The customer's first name.
- [varContactName] - The customer's contact name.
- [varCompanyName] - The customer company name, or the customer's first and last name if no company name is specified.
- [varAuthorName] - The author name.
- [varShipDate] - The shipping date.
- [varShipMethod] - The shipping method (short name).
- [varTrackingNo] - The shipping tracking number.
- [varInvoiceNo] - The invoice number.
- [varOrderDetails] - A placeholder where the HTML invoice will be inserted. The surrounding HTML should take this into account. This is only supported for HTML e-mails.

Mailing Sample Content

Body (HTML)

```
<p>This email is to notify you that your order is ready to ship on [varShipDate] via [varShipMethod]! Your tracking number is [varTrackingNo].</p>
```

```
[varOrderDetails]
```

How to Send

This mailing is sent through the Shipping Notification **Daily Process**.

SOLO Server Shared and Dedicated URL authors will need to contact support@softwarekey.com to set up and enable this process.

Daily Process Input Xml Elements

The *Input Xml* for this process includes the following elements:

MailingID

The Mailing ID of the mailing to be sent. See **Creating Custom Mailings** for details on configuring custom mailings, and see above for the supported search and replace fields.

AdminEmail

Optional email address to send a summary notification email to. Note that multiple AdminEmail elements can be specified to send to multiple email addresses.

NotifyOnNoProcessingData

Optional True/False value which determines whether an administrative email notification is sent when no data was found to process. If omitted, the default is false.

BCCAdminEmails

Optional True/False value which determines whether the customer email notification is BCC'd to the AdminEmail emails.

AuthorID

Optional. When specified, the process only targets invoices for the given Author ID.

DaysBack

The number of days back from the current date to search on the invoice shipping date. In most cases, this should be set to one to pick up invoices shipped the previous day.

Subscription Expiration Notification Mailings and Process

Use this mailing to send notifications to all customers whose licenses will expire a specified number of days in the future. A separate email will be sent for each license even if multiple licenses expire on the same day.

Mailing Parameters

The following search and replace fields are supported for this mailing:

- [varCustomerID] - The Customer ID.
- [varEmail] - The customer's e-mail address.
- [varFirstName] - The customer's first name.
- [varContactName] - The customer's contact name.
- [varCompanyName] - The customer company name, or the customer's first and last name if no company name is specified.
- [varAuthorName] - The author name.
- [varProductName] - The product name.
- [varOptionName] - The product option name.
- [varExpirationDate] - The license expiration date.
- [varLicenseID] - The License ID.
- [varPassword] - The customer Password. **Important Note:** We strongly recommended *not* using this. For customers who have chosen their own password, the value will be masked with * characters and not useful to the user.
- [varActivationPassword] - The license Activation Password.

Mailing Sample Content

Body (Text)

This email is to let you know that your subscription for [varProductName] [varOptionName], License ID [varLicenseID], will expire on [varExpirationDate].

We hope that you have enjoyed our product. To ensure that your access is not interrupted, please renew your subscription before time runs out.

Contact us for more information about renewing your subscription today!

How to Send

This mailing is sent through the Subscription Expiration Notification **Daily Process**.

SOLO Server Shared and Dedicated URL authors will need to contact support@softwarekey.com to set up and enable this process.

Daily Process Input Xml Elements

The *Input Xml* for this process includes the following elements:

MailingID

The Mailing ID of the mailing to be sent. See **Creating Custom Mailings** for details on configuring custom mailings, and see above for the supported search and replace fields.

AdminEmail

Optional email address to send a summary notification email to. Note that multiple AdminEmail elements can be specified to send to multiple email addresses.

NotifyOnNoProcessingData

Optional True/False value which determines whether an administrative email notification is sent when no data was found to process. If omitted, the default is false.

BCCAdminEmails

Optional True/False value which determines whether the customer email notification is BCC'd to the AdminEmail emails.

OverrideOfferProduct

Optional True/False value which determines whether to override the Notify Product setting on the customer record. If omitted or set to false, emails will only be sent to eligible customers with the Notify Product setting enabled, while if set to true, all eligible customers will receive an email regardless of the Notify Product setting.

DaysToExpiration

The number of days prior to license expiration to send the email. Note that a negative value can be specified to send notifications after expiration.

ProdOptionCsv

A comma separated value list of Product Option IDs to send the email for.

CCLicenseeEmails

True/False. Whether to CC the notification to the licensee email address when present on the license.

Trial Welcome (Product) Mailings

This mailing is sent to the customer when they request a trial for a Product through **Trial Tracking**.

SOLO Server Shared URL customers who would like to use this mailing need to contact support@softwarekey.com and sign up for **Trial Tracking and Marketing Services**.

Mailing Parameters

The following search and replace fields are supported for this mailing:

- [varRegID] - Trial Registration ID.
- [varProductName] - The product name.
- [varProductID] - The Product ID.
- [varDistributorID] - The Distributor ID, if present.
- [varTrialDownloadURL] - Trial URL of the product.
- [varLatestVersion] - The Latest Version field from the product.
- [varCompanyName] - The trial customer's company name.
- [varFirstName] - The trial customer's first name.
- [varLastName] - The trial customer's last name.
- [varEmail] - The trial customer's company email address.
- [varAddress1] - The trial customer's address line 1.
- [varAddress2] - The trial customer's address line 2.
- [varCity] - The trial customer's city.
- [varStateProvince] - The trial customer's state/province.
- [varPostalCode] - The trial customer's postal code.
- [varCountry] - The trial customer's country.
- [varPhone] - The trial customer's phone number.
- [varSource] - The trial source.
- [varMisc1] to [varMisc7] - Miscellaneous user defined data fields 1 through 7.

Mailing Sample Content

Body (Text)

Your [varProductName] test account is now ready to download at [varTrialDownloadURL]!

To log in, you'll need your registration ID [varRegID] and your password, which you created when you registered.

Not sure where to start? We're here to help!

Our support team is ready to answer your questions and help you navigate your evaluation of our software.

If you have any questions, please contact us for assistance. We look forward to helping you become another happy customer!

How to Send

To set up the mailing for a specific Product:

- Use the menu *Configure / Products*.
- Click on a Product.
- Use the drop-down *Actions / Edit* to get to the Edit Product page.
- Set the *Trial Mailing Welcome* field to the correct mailing.

Trial Teaser (Product) Mailings and Processes

This mailing can be used to follow-up or provide a "teaser" to prospects who have requested a trial through **Trial Tracking**.

The mailing is sent a specified number of days after the trial tracking request and **Trial Welcome Mailing** is sent. For example, if your software has a 30 days trial period, you could send the teaser email in 26 days to contact the user towards the end of their trial period.

SOLO Server Shared URL customers who would like to use this mailing need to contact support@softwarekey.com and sign up for **Trial Tracking and Marketing Services**.

Mailing Parameters

The following search and replace fields are supported for this mailing:

- [varFirstName] = The first name of the evaluator.
- [varLastName] = The last name of the evaluator.
- [varRegID] - The trial Registration ID.
- [varProductName] - The product name.
- [varProductID] - The Product ID.

Mailing Sample Content

Body (Text)

Your free trial will expire soon. We hope that you have enjoyed your free trial of [varProductName].

We know your time is precious, and you have put a lot of time and effort into getting everything set up while learning more about [varProductName].

Don't lose all of your hard work - purchase your full access software license now!

How to Send

This mailing is sent through either of two **Daily Processes** - the Single and Global Trial Teaser Processes.

Global Trial Teaser Process

To configure a product for the global trial teaser process.

- Use the menu *Configure / Products*.
- Click on a Product.
- Use the drop-down *Actions / Edit* to get to the Edit Product page.
- Set the *Trial Teaser Mailing* field to the correct mailing.
- Set the *Trial Teaser Days Back* field to the number of days to send the teaser after the **Trial Welcome Mailing** is sent.

Next, the Trial Teaser Notification (Global) **Daily Process** must be set up. The *Input Xml* for this process is not required as there are no input parameters. This is already configured for SOLO Server Shared and Dedicated URL.

Single Trial Teaser Process

The single trial teaser process requires no product setup. It is intended for special scenarios where the default global process is not sufficient, and allows sending multiple teaser emails.

SOLO Server Shared and Dedicated URL authors will need to contact support@softwarekey.com to set up and enable this process.

Daily Process Input Xml Elements

The *Input Xml* for this process includes the following elements:

MailingID

The Mailing ID of the mailing to be sent out. See [Creating Custom Mailings](#) for details on configuring custom mailings, and see above for the supported search and replace fields.

AdminEmail

Optional email address to send a summary notification email to. Note that multiple AdminEmail elements can be specified to send to multiple email addresses.

NotifyOnNoProcessingData

Optional True/False value which determines whether an administrative email notification is sent when no data was found to process. If omitted, the default is false.

BCCAdminEmails

Optional True/False value which determines whether the customer email notification is BCC'd to the AdminEmail emails.

ProductID

The Product ID to send teasers for.

DaysBack

The number of days since the trial was downloaded that the email should be sent.

MultipleTeaserMode

True/False as to whether to run in Multiple Teaser Mode. When run in this Multiple Teaser Mode, the query to gather trial records will not filter out records already marked with a TeaserSent date. This allows sending multiple teaser emails for a given product. When not in Multiple Teaser Mode, the query to gather trial records will filter out records already sent a teaser email.

User Welcome Mailings

This mailing is sent if a *Welcome Mailing* is selected when **creating a new SOLO Server user account**.

Mailing Parameters

The following search and replace fields are supported for this mailing:

- [varName] - The account User Name.
- [varUserID] - The account User ID.
- [varPassword] - The account password.
- [varLoginURL] - The URL to the log in page.
- [varResetURL] - The URL to the reset password page. If this variable is detected, the new user account will have the password reset fields set, and this URL will take the user to a page where they can enter their own password without needing to know the current account password.

Mailing Sample Content

Body (HTML)

```
<p>Dear [varName],</p>
<p>A new SOLO Server account has been created for you.</p>
<p>Your UserID is: [varUserID].</p>
<p>Please use the following link to create a password: [varResetURL]</p>
<p>After setting your password, use this link to login: [varLoginURL]</p>
```

How to Send

When **adding a new user**, optionally set the *Welcome Mailing* field to a mailing to send to the new user once the user account is created.

Configuring Daily Processes

Daily processes are processes which run on a daily basis automatically through the SOLO Server Daily Processor database job. These processes fall into three general categories:

- Database maintenance
- Sending marketing/account notification emails to customers
- Shipping/billing notifications

Most Daily Processes will send a **Custom Mailing**, which must be configured first.

Configuring Processes

SOLO Server Shared and Dedicated URL authors who want to use any of these processes will need to **contact us** to set up and enable the processes.

For these processes to run on SOLO Server Self-Hosted, you must configure the SOLO Server Daily Processing **database job**. By default, the installer only installs the Daily Maintenance process on fresh installs. Any additional processes must be configured by an administrator. To configure daily processes, click *Admin / Daily Processes (Scheduled Jobs)*.

Each process is defined by the following fields:

Process Name

The name of the process. This is displayed in the list view, as well as included in any summary email notifications/logs sent to administrators to identify the process.

Process Description

Short description of the process.

Process Type

The process type. Each process type will be outlined below.

Plugin

The **plugin** for the process. Only available when the selected process type is Custom Plugin.

Input Xml

Xml document containing the process input parameters. Click the Load Default Template link below the text area to load a default xml document for the chosen process type (note that nothing will occur here for processes which require no input or for custom plugin processes).

Execution Index

Index used to control the order in which the daily processes are run. Note that the Daily Maintenance process should always use a value of 0 here, and all other process types should use a value of 1 or greater. Currently, the Daily Maintenance process is the only exception in that it should run prior to all other processes, no other process types have interdependencies.

Active

Whether the process is active. When this is not checked, the daily processor will skip the process.

List of Daily Processes

Here is the list of daily processes. Where appropriate, the topic will also include information about configuring the corresponding **Custom Mailing**.

- **Abandoned Cart Followup**
- **Author File Archiving**
- **Credit Card Billing Reminder**

- **Cross Product Marketing**
- **Custom Plugin**
- **Customer Followup**
- **Customer Subscription Expiration**
- **Daily Maintenance**
- **First Activation Followup**
- **Non Activated License Notification**
- **Pending Payment Plan**
- **Product Serial Number Check**
- **Shipment Notification**
- **Subscription Expiration Notification**
- **Trial Teaser Notification**

Email Campaign Mailings and Abandoned Cart Followup Process

These mailings are sent to customers who have abandoned their carts without purchasing. The automated emails can offer priority codes to customers offering them a discount if they complete their purchase, and can also contain a link directly back to the customer's existing cart. See **Email Marketing Campaigns** for more details.

Mailing Parameters

This mailing supports the following search and replace parameters:

- [varAuthorName] - The Company Name of the author.
- [varCartModifiedDate] - The last date the cart was accessed on.
- [varFirstName] - The customer first name.
- [varContactName] - The customer first and last name.
- [varProductList] - A comma separated list of products in the cart.
- [varProductListWithOptionName] - A comma separated list of products in the cart with product option names.
- [varFirstProduct] - The first product listed in the cart.
- [varFirstProductWithOptionName] - The first product listed in the cart with the product option name.
- [varCartLink] - The URL back to the cart.

Mailing Sample Content

Body (Text)

Did you forget? You visited [varAuthorName] on [varCartModifiedDate], and it looks like you were looking for [varProductList].

Complete your order within the next 24 hours, and we'll give you 10% off with coupon code XXXXXX!

We understand that you are busy, so we made sure that everything is still in your cart. You can use this link to go straight to your cart and finalize your order:

[varCartLink]

The **discount code** would be optional and configured separately.

How to Send

This mailing is sent through the Abandoned Cart Followup **Daily Process**. You will need to choose your Mailing and the Look Back Days per the **Email Marketing Campaigns** instructions.

SOLO Server Shared and Dedicated URL authors will need to contact support@softwarekey.com to set up and enable this process.

Daily Process Input Xml Elements

The *Input Xml* for this process includes the following elements:

OverrideOfferProduct

Optional True/False value which determines whether to override the Notify Product setting on the customer record. If omitted or set to false, emails will only be sent to eligible customers with the Notify Product setting enabled, while if set to true, all eligible customers will receive an email regardless of the Notify Product setting.

Author File Archiving Process

This process archives files uploaded to the Storefront and ESD folders for author accounts marked inactive for a specified number of days, and is only applicable in instances where SOLO Server is licensed and configured to be run as a service with multiple author accounts. After files are archived for a given author, an author note is created noting the archiving has been processed, and the author will be bypassed during subsequent runs of the archive process.

Daily Process Input Xml Elements

AuthorsToIgnore

A comma separated value list of Author IDs to omit during processing.

DaysUntilArchive

The number of days after the last modification (Modified Date on the author home page) of an inactive account to archive the files. An author is considered inactive when the account is marked closed and disabled.

Credit Card Billing Reminder Mailings and Process

Use this mailing to send a notification e-mail to everyone who purchased by credit card a specified number of days after the purchase. This is used to send reminders to customers that have purchased your product in an effort to reduce support inquiries and chargeback attempts.

Mailing Parameters

The following search and replace fields are supported for this mailing:

- [varCustomerID] - The Customer ID.
- [varEmail] - The customer's e-mail address.
- [varFirstName] - The customer's first name.
- [varContactName] - The customer's contact name.
- [varCompanyName] - The customer company name, or the customer's first and last name if no company name is specified.
- [varFirstProduct] - The first product purchased on the invoice.
- [varAuthorName] - The Author's name.
- [varInvoiceDate] - The Invoice's date.
- [varInvoiceNumber] - The Invoice Number.
- [varSalesEMail] - The sales e-mail for the Author.
- [varInvoiceTotal] - The total of the Invoice.
- [varMerchAcctDisplayName] - The Merchant Account's Display Name.
- [varCreditCardType] - The type of Credit Card used.
- [varOrderDetails] - A placeholder where the HTML invoice will be inserted. The surrounding HTML should take this into account. This is only supported for HTML e-mails.

Mailing Sample Content

Body (HTML)

```
<p>This e-mail is not a new bill - it is meant to help you to identify the charge that you previously made that will soon appear on your credit card statement.</p>

<p>On [varInvoiceDate] you made a purchase from [varAuthorName] and paid by credit card.</p>

<p>The order is stored in our system under the Invoice Number [varInvoiceNumber] and was paid with your [varCreditCardType]. The total amount of the order is USD [varInvoiceTotal].</p>

<p>Please note that "[varMerchAcctDisplayName]" will appear on your credit card statement, and may not be the name of the publisher ([varAuthorName]).</p>

<p>A copy of your invoice is included below for your reference.</p>

[varOrderDetails]
```

How to Send

This mailing is sent through the Credit Card Billing Reminder **Daily Process**.

SOLO Server Shared and Dedicated URL authors will need to contact support@softwarekey.com to set up and enable this process.

Daily Process Input Xml Elements

The *Input Xml* for this process includes the following elements:

MailingID

The Mailing ID of the mailing to be sent out. See **Creating Custom Mailings** for details on configuring custom mailings, and see above for the supported search and replace fields.

AdminEmail

Optional email address to send a summary notification email to. Note that multiple AdminEmail elements can be specified to send to multiple email addresses.

NotifyOnNoProcessingData

Optional True/False value which determines whether an administrative email notification is sent when no data was found to process. If omitted, the default is false.

BCCAdminEmails

Optional True/False value which determines whether the customer email notification is BCC'd to the AdminEmail emails.

DaysBack

The number of days in the past to look for invoices to send reminders for. For example, specifying a value of 7 will send notifications to invoices which were entered one week back.

MerchantAcctID

The Merchant Account ID to send out billing reminders for. This is optional if omitted the process will include all merchant accounts.

Cross Product Marketing Mailings and Process

This is used to send marketing e-mails to customers who have purchased a specific product a specified number of days after purchase. You can conditionally choose to only send the mailing on their first purchase of the specified Product ID, and you can also choose not to send the email if they've already purchased the other product being marketed.

Mailing Parameters

This mailing supports the following search and replace parameters:

- [varCustomerID] - The Customer ID.
- [varEmail] - The customer's e-mail address.
- [varFirstName] - The customer's first name.
- [varContactName] - The customer's contact name.
- [varCompanyName] - The customer company name, or the customer's first and last name if no company name is specified.

Mailing Sample Content

Body (Text)

Thank you for purchasing (specific product here)!

You may also be interested in our new software product: (other product here)

You can purchase a license and use the following discount code for 10% off!

Discount Code: XXXXXX

(add purchase URL here)

The **discount code** would be optional and configured separately.

How to Send

This mailing is sent through the Cross Product Marketing **Daily Process**.

SOLO Server Shared and Dedicated URL authors will need to contact support@softwarekey.com to set up and enable this process.

Daily Process Input Xml Elements

The *Input Xml* for this process includes the following elements:

MailingID

The Mailing ID of the mailing to be sent out. See **Creating Custom Mailings** for details on configuring custom mailings, and see above for the supported search and replace fields.

AdminEmail

Optional email address to send a summary notification email to. Note that multiple AdminEmail elements can be specified to send to multiple email addresses.

NotifyOnNoProcessingData

Optional True/False value which determines whether an administrative email notification is sent when no data was found to process. If omitted, the default is false.

BCCAdminEmails

Optional True/False value which determines whether the customer email notification is BCC'd to the AdminEmail emails.

OverrideOfferProduct

Optional True/False value which determines whether to override the Notify Product setting on the customer record. If omitted or set to false, emails will only be sent to eligible customers with the Notify Product setting enabled, while if set to true, all eligible customers will receive an email regardless of the Notify Product setting.

DaysBack

The number of days in the past to look for invoices to send the emails for. For example, specifying a value of 7 will send notifications to invoices which were entered one week back.

PurchasedProductID

The Product ID of the product the customer must have purchased.

OfferProductID

The Product ID the marketing offer pertains to. If a customer already owns this product, they will be excluded.

FirstPurchaseOnly

True/False as to whether to only send the emails to customers on their first purchase of the PurchaseProductID.

FilterOfferPartners

Optional True/False value as to whether to only send emails to customers with Notify Partners enabled rather than the Notify Products.

Custom Plugin Process

This process type is used for custom daily processes implemented using SOLO Server's plugin mechanism. When this process type is selected, a Plugin drop down field will appear allowing you to select one of the plugins configured in SOLO. See the topic on [plugin processors](#) for more information.

Customer Followup Mailings and Process

This sends follow-up e-mails to new customers a specified number of days after signing up, as well as sending purchase follow-up e-mails a specified number of days after purchase. This can be a general follow-up mailing, whereas the **Cross Product Marketing Mailings** give you some additional conditions for targeting a specific Product ID for marketing.

Mailing Parameters

This mailing supports the following search and replace parameters:

- [varCustomerID] - The Customer ID.
- [varEmail] - The customer's e-mail address.
- [varFirstName] - The customer's first name.
- [varContactName] - The customer's contact name.
- [varCompanyName] - The customer company name, or the customer's first and last name if no company name is specified.

Mailing Sample Content

Body (Text)

Thank you for your recent purchase from (your company name here)!

You can utilize our support page to help you with any questions.

How to Send

This mailing is sent through the Customer Followup **Daily Process**.

SOLO Server Shared and Dedicated URL authors will need to contact support@softwarekey.com to set up and enable this process.

Daily Process Input Xml Elements

The *Input Xml* for this process includes the following elements:

MailingID

The Mailing ID of the mailing to be sent out. See **Creating Custom Mailings** for details on configuring custom mailings, and see above for the supported search and replace fields.

AdminEmail

Optional email address to send a summary notification email to. Note that multiple AdminEmail elements can be specified to send to multiple email addresses.

NotifyOnNoProcessingData

Optional True/False value which determines whether an administrative email notification is sent when no data was found to process. If omitted, the default is false.

BCCAdminEmails

Optional True/False value which determines whether the customer email notification is BCC'd to the AdminEmail emails.

OverrideOfferProduct

Optional True/False value which determines whether to override the Notify Product setting on the customer record. If omitted or set to false, emails will only be sent to eligible customers with the Notify Product setting enabled, while if set to true, all eligible customers will receive an email regardless of the Notify Product setting.

AuthorID

The Author ID to search for customers/invoices. This is required for the NewAccount follow up type, as well as for the NewPurchase and Purchase types if ProductIDs is omitted.

ProductIDs

For the NewPurchase and Purchase follow up types, a comma separated value list of Product IDs to filter purchases on. Only customers who purchase one of the given Product IDs will be sent an email. If this is omitted, all products on the Author ID will be considered.

FollowupType

The follow up type. This can be one of three values:

- NewAccount - Sends follow ups to newly created customers (regardless of whether they purchase).
- NewPurchase - Sends follow ups to customers after their first purchase.
- Purchase - Sends follow ups to customers after any purchase.

DaysBack

The number of days in the past to look for customers/invoices to send the emails for. For example, specifying a value of 7 will send notifications to invoices which were entered one week back or customers created one week back.

Customer Subscription Expiration Mailings and Process

This mailing sends summary notification emails regarding license expiration to customers who have licenses nearing expiration or expired.

The process first finds all customers with an applicable license expiring a given number of days from the current date. For each of these customers, an email is then sent containing a summary of license expiration data for all applicable licenses, regardless of expiration date.

The summary lists the licenses by expiration date, starting with the earliest expiration date. Expired licenses will be highlighted in bold and red, while licenses nearing expiration are highlighted in bold, as shown in the following image:

License ID	Product	Licensee	Expiration Date
	Protection PLUS 4 Professional Edition CD		July 02, 2007
	Protection PLUS 4 Professional Edition		January 29, 2010
	SOLO Server Metering Single Domain License		January 29, 2010
	Protection PLUS 4 Professional Edition		February 29, 2012
	SOLO Server Unlimited Domains License		December 15, 2012
	Protection PLUS 4 Internet Edition CD		January 20, 2013
	Protection PLUS 5 SDK .NET Edition 1 Developer License		February 19, 2013
	SOLO Server Single Domain License		January 01, 2014
	SOLO Server Components SOLO Lite		January 20, 2015
	Protection PLUS 5 SDK .NET Edition Site License		January 29, 2015
	Protection PLUS 4 Enterprise Edition		February 02, 2015

Mailing Parameters

This mailing supports the following search and replace parameters:

- [varCustomerID] - The Customer ID.
- [varEmail] - The customer's e-mail address.
- [varFirstName] - The customer's first name.
- [varContactName] - The customer's contact name.
- [varCompanyName] - The customer company name, or the customer's first and last name if no company name is specified.
- [varAuthorName] - The Company Name of the author.
- [varPassword] - The customer password. **Important Note:** We strongly recommended *not* using this. For customers who have chosen their own password, the value will be masked with * characters and not useful to the user.
- [varDaysToExpiration] - The number of days to expiration.
- [varLicenses] - An HTML table containing a summary of all customer licenses and their expiration dates.

Mailing Sample Content

Body (HTML)

<p>This email is to let you know that your subscription on one or more software products will expire in [varDaysToExpiration] days, as shown below. The following table will also list any other licenses you have and their expiration dates:</p>

[varLicenses]

<p>We hope that you have enjoyed our product. To ensure that your access is not interrupted, please renew your subscription before time runs out.</p>

<p>Contact us for more information about renewing your subscription!</p>

How to Send

This mailing is sent through the Customer Subscription Expiration Notification **Daily Process**.

SOLO Server Shared and Dedicated URL authors will need to contact support@softwarekey.com to set up and enable this process.

Daily Process Input Xml Elements

The *Input Xml* for this process includes the following elements:

MailingID

The Mailing ID of the mailing to be sent. See **Creating Custom Mailings** for details on configuring custom mailings, and see above for the supported search and replace fields.

AdminEmail

Optional email address to send a summary notification email to. Note that multiple AdminEmail elements can be specified to send to multiple email addresses.

NotifyOnNoProcessingData

Optional True/False value which determines whether an administrative email notification is sent when no data was found to process. If omitted, the default is false.

BCCAdminEmails

Optional True/False value which determines whether the customer email notification is BCC'd to the AdminEmail emails.

OverrideOfferProduct

Optional True/False value which determines whether to override the Notify Product setting on the customer record. If omitted or set to false, emails will only be sent to eligible customers with the Notify Product setting enabled, while if set to true, all eligible customers will receive an email regardless of the Notify Product setting.

DaysToExpiration

The number of days prior to license expiration to send the email. This number of days is added to the current date, and any customer with applicable licenses expiring on this date are notified. Note that a negative value can be specified to send notifications after expiration.

ProductIDsCsv

A comma separated value list of Product IDs to search for expiring licenses on.

IncludedProdOptionsCsv

A comma separated value list of Product Option IDs to search for expiring licenses on.

ExcludedProdOptionsCsv

A comma separated value list of Product Option IDs to exclude from the search for expiring licenses. Used to filter out specific options when using the ProductIDsCsv input parameter.

CCLicenseeEmails

True/False. Whether to CC the notification to the licensee email addresses when present on the license(s).

ExcludeUpgradeLicenses

Whether to exclude licenses with a status of Upgrade for options configured with an Upgrade Behavior of Deactivate.

ExcludeActivePaymentPlanLicenses

Optional True/False value which determines whether to exclude licenses which are associated with an active payment plan instance.

Daily Maintenance Process

This process performs daily maintenance processing. This is a several step process, and the *Input Xml* contains an element for each maintenance step as follows:

Daily Process Input Xml Elements

ProcessAffiliateDailyTraffic

True/False. This step consolidates all of the daily traffic data stored in the *AffiliateRawTraffic* table and into the *AffiliateDailyTraffic* table, removing the previous day's data from the *AffiliateRawTraffic* table. Also adds any traffic from trial downloads (the *DLDemoLog* table) that are associated with affiliates to the *AffiliateDailyTraffic* table.

ConvertHoldingInvoicesToShipping

True/False. This step will find invoices with a status of *Holding* and a *Hold Date* of the current date, set the status to *Shipping*, and clear the *Hold Date*.

DeleteLicensesAndInvoices

True/False. This step deletes all *Invoice* and *License* records which are marked for deletion. This will also delete any dependencies these licenses and invoices have (including refunds, unlock history, and store credits).

PurgeOrphanedCarts

True/False. This step deletes all cart records that have not been accessed in the last 30 days that do not have a customer associated with them, as well as all carts older than 6 months.

UpdateTrialDownloadLogWithCustomerID

True/False. This step updates the trial download log with *CustomerIDs* based on email matches with the customer table. This allows downloaded trials to be tied to customers who have made a purchase (thereby creating a customer record in *SOLO Server*), and also allows *SOLO Server* to calculate the conversion rate from trials to purchases.

ResetLoginViewCCNumbers

True/False. This step updates all user records to no longer have view credit card number permission for security reasons.

MaskDeclinedOrdersDaysBack

Numeric (default 1). This step permanently masks all credit card numbers stored in the *DeclinedOrders* table entered prior to the specified number of days back from the current date for security reasons. Use a value of 0 to disable this.

MaskInvoicesDaysBack

Numeric (default 180). This step permanently masks all credit card numbers stored in the *Invoices* table entered prior to the specified number of days back from the current date for security reasons. Use a value of 0 to disable this.

MaskDisabledStoredPaymentsDaysBack

Numeric (default 30). This step permanently masks all credit card numbers stored on the *StoredPaymentInfo* table and associated with a payment plan instance marked inactive prior to the specified number of days back from the current date (and not also associated with an active payment plan instance) for security reasons. In addition, any payment plan instances associated with a closed author account will now be disabled, allowing the process to then subsequently mask the stored payments.

PurgeAuthorLoginAudit

True/False. This step will permanently delete all author LoginAudit records which are no longer within the scope of the author login velocity check.

First Activation Followup Mailings and Process

Use this mailing to send follow up e-mails to all customers who have activated a specified product for the first time. The email will be sent a specified number of days after the first activation.

Mailing Parameters

This mailing supports the following search and replace parameters:

- [varCustomerID] - The Customer ID.
- [varEmail] - The customer's e-mail address.
- [varFirstName] - The customer's first name.
- [varContactName] - The customer's contact name.
- [varCompanyName] - The customer company name, or the customer's first and last name if no company name is specified.
- [varLicenseID] - The License ID.
- [varPassword] - The customer Password. **Important Note:** We strongly recommended *not* using this. For customers who have chosen their own password, the value will be masked with * characters and not useful to the user.
- [varActivationPassword] - The license Activation Password.
- [varProductName] - The product name.
- [varOptionName] - The product option name.
- [varProductID] - The Product ID.

Mailing Sample Content

Body (Text)

It's been a few days since you activated your [varProductName]. We hope you are enjoying [varProductName] as you explore its full capabilities.

We want to ensure that you benefit from everything [varProductName] has to offer. Please feel free to contact our support department with any questions. Keep this email handy, as it has information that will help us help you.

Customer ID: [varCustomerID]

Registered e-mail: [varEmail]

Contact Name: [varContactName]

License ID: [varLicenseID]

Our support department can be contacted via email at support@my_company.com.

How to Send

This mailing is sent by the First Activation Followup **Daily Process**.

SOLO Server Shared and Dedicated URL authors will need to contact support@softwarekey.com to set up and enable this process.

Daily Process Input Xml Elements

The *Input Xml* for this process includes the following elements:

MailingID

The Mailing ID of the mailing to be sent. See **Creating Custom Mailings** for details on configuring custom mailings, and see above for the supported search and replace fields.

AdminEmail

Optional email address to send a summary notification email to. Note that multiple AdminEmail elements can be specified to send to multiple email addresses.

NotifyOnNoProcessingData

Optional True/False value which determines whether an administrative email notification is sent when no data was found to process. If omitted, the default is false.

BCCAdminEmails

Optional True/False value which determines whether the customer email notification is BCC'd to the AdminEmail emails.

OverrideOfferProduct

Optional True/False value which determines whether to override the Notify Product setting on the customer record. If omitted or set to false, emails will only be sent to eligible customers with the Notify Product setting enabled, while if set to true, all eligible customers will receive an email regardless of the Notify Product setting.

ProductsCsv

A comma separated value list of Product IDs to send emails for. Optional when ProdOptionsCSV is specified, otherwise required.

ProdOptionsCvx

A comma separated value list of Product Option IDs to send emails for. Optional when ProductsCSV is specified, otherwise required.

DaysBack

The number of days after activation to send the emails.

Non Activated License Notification Mailings and Process

Use this mailing to send notification e-mails to customers who have not activated a new license a specified number of days since license creation.

Mailing Parameters

The following search and replace fields are supported for this mailing:

- [varCustomerID] - The Customer ID.
- [varEmail] - The customer's e-mail address.
- [varFirstName] - The customer's first name.
- [varContactName] - The customer's contact name.
- [varCompanyName] - The customer company name, or the customer's first and last name if no company name is specified.
- [varLicenseDetails] - Details of all applicable licenses.

Mailing Sample Content

Body (Text)

We were reviewing our records and noticed that you completed your purchase a few days ago but have not activated your license yet.

We want to ensure that you are able to successfully activate and utilize your software.

Customer ID: [varCustomerID]

Registered e-mail: [varEmail]

Contact Name: [varContactName]

[varLicenseDetails]

Please feel free to contact our support department with any questions. Our support department can be contacted via email at support@my_company.com.

Keep this email handy, as it has information that will help us help you.

How to Send

This mailing is sent through the Non Activated License Notification **Daily Process**.

SOLO Server Shared and Dedicated URL authors will need to contact support@softwarekey.com to set up and enable this process.

Daily Process Input Xml Elements

The *Input Xml* for this process includes the following elements:

MailingID

The Mailing ID of the mailing to be sent out. See **Creating Custom Mailings** for details on configuring custom mailings, and see above for the supported search and replace fields.

AdminEmail

Optional email address to send a summary notification email to. Note that multiple AdminEmail elements can be specified to send to multiple email addresses.

NotifyOnNoProcessingData

Optional True/False value which determines whether an administrative email notification is sent when no data was found to process. If omitted, the default is false.

BCCAdminEmails

Optional True/False value which determines whether the customer email notification is BCC'd to the AdminEmail emails.

OverrideOfferProduct

Optional True/False value which determines whether to override the Notify Product setting on the customer record. If omitted or set to false, emails will only be sent to eligible customers with the Notify Product setting enabled, while if set to true, all eligible customers will receive an email regardless of the Notify Product setting.

AuthorID

The Author ID to search for licenses on. This is optional if ProductIDs is used.

ProductIDs

A comma separated value list of Product IDs to filter purchases on. Only customers who own one of the given Product IDs will be sent an email. If this is omitted, all products on the Author ID will be considered.

DaysBackInterval

The number of days from purchase to send the first notification as well as the number of days between subsequent notifications. For example, setting this to 7 will send a notification one week after purchase and then once every week thereafter until the NotificationCount has been reached.

NotificationCount

The total number of notifications to send.

Pending Payment Plan Notification Mailings and Process

This mailing will send a notification e-mail to customers who have a payment plan instance due for payment specified number of days in the future. This is used to send reminders to customers that they will be charged in the near future in an effort to reduce support inquiries and chargeback attempts.

Mailing Parameters

The following search and replace fields are supported for this mailing:

- [varCustomerID] - The Customer ID.
- [varEmail] - The customer's e-mail address.
- [varFirstName] - The customer's first name.
- [varContactName] - The customer's contact name.
- [varCompanyName] - The customer company name, or the customer's first and last name if no company name is specified.
- [varRenewals] - An HTML table containing a summary of all payment plan instances which will be billed.

Mailing Sample Content

Body (HTML)

```
<p>This e-mail is not a bill - This is a friendly reminder that your credit card on file will soon be charged for your monthly fees.</p>

<p>Customer ID: [varCustomerID]</p>

[varRenewals]

<p>Once the credit card on file has been successfully billed, a copy of your invoice will be emailed to you for your records.</p>
```

How to Send

This mailing is sent through the Pending Payment Plan Notification **Daily Process**. To enable this mailing, follow the instructions on **Sending Billing Reminders**.

SOLO Server Shared and Dedicated URL authors will need to contact support@softwarekey.com to set up and enable this process.

Daily Process Input Xml Elements

The *Input Xml* for this process includes the following elements:

MailingID

The Mailing ID of the mailing to be sent out. See **Creating Custom Mailings** for details on configuring custom mailings, and see above for the supported search and replace fields.

AdminEmail

Optional email address to send a summary notification email to. Note that multiple AdminEmail elements can be specified to send to multiple email addresses.

NotifyOnNoProcessingData

Optional True/False value which determines whether an administrative email notification is sent when no data was found to process. If omitted, the default is false.

BCCAdminEmails

Optional True/False value which determines whether the customer email notification is BCC'd to the AdminEmail emails.

OverrideOfferProduct

Optional True/False value which determines whether to override the Notify Product setting on the customer record. If omitted or set to false, emails will only be sent to eligible customers with the Notify Product setting enabled, while if set to true, all eligible customers will receive an email regardless of the Notify Product setting.

DaysAhead

The number of days in the future when the payment plan instances to send notification for will be processed.

AuthorIDCsv

A comma separated value list of Author IDs to include during processing. If blank or omitted, all authors will be included.

SuppressRenewals

True/False as to whether to only send notifications for payment plan instances with expiring credit cards.

Product Serial Number Check Process

This process checks for any products configured for assigned from list serial numbers that are out of or nearly out of available serial numbers, and sends an email alert if any are found. This process only needs to run if there are products in SOLO Server which are using assigned from list serial numbers. The *Input Xml* for this process contains the following elements:

Daily Process Input Xml Elements

AdminEmail

Optional email address to send a summary notification email to. Note that multiple AdminEmail elements can be specified to send to multiple email addresses.

AuthorID

Optional. When specified, the process only targets products on the given AuthorID.

Threshold

The number of remaining serial numbers below which the remaining stock is considered low and an email notification is sent.

Shipment Notification Mailings and Process

Use this mailing to send shipping notification emails to customers whose orders have been marked shipped and/or a summary email to specific email addresses.

Mailing Parameters

The following search and replace fields are supported for this mailing:

- [varCustomerID] - The Customer ID.
- [varEmail] - The customer's e-mail address.
- [varFirstName] - The customer's first name.
- [varContactName] - The customer's contact name.
- [varCompanyName] - The customer company name, or the customer's first and last name if no company name is specified.
- [varAuthorName] - The author name.
- [varShipDate] - The shipping date.
- [varShipMethod] - The shipping method (short name).
- [varTrackingNo] - The shipping tracking number.
- [varInvoiceNo] - The invoice number.
- [varOrderDetails] - A placeholder where the HTML invoice will be inserted. The surrounding HTML should take this into account. This is only supported for HTML e-mails.

Mailing Sample Content

Body (HTML)

```
<p>This email is to notify you that your order is ready to ship on [varShipDate] via [varShipMethod]! Your tracking number is [varTrackingNo].</p>[varOrderDetails]
```

How to Send

This mailing is sent through the Shipping Notification **Daily Process**.

SOLO Server Shared and Dedicated URL authors will need to contact support@softwarekey.com to set up and enable this process.

Daily Process Input Xml Elements

The *Input Xml* for this process includes the following elements:

MailingID

The Mailing ID of the mailing to be sent. See **Creating Custom Mailings** for details on configuring custom mailings, and see above for the supported search and replace fields.

AdminEmail

Optional email address to send a summary notification email to. Note that multiple AdminEmail elements can be specified to send to multiple email addresses.

NotifyOnNoProcessingData

Optional True/False value which determines whether an administrative email notification is sent when no data was found to process. If omitted, the default is false.

BCCAdminEmails

Optional True/False value which determines whether the customer email notification is BCC'd to the AdminEmail emails.

AuthorID

Optional. When specified, the process only targets invoices for the given Author ID.

DaysBack

The number of days back from the current date to search on the invoice shipping date. In most cases, this should be set to one to pick up invoices shipped the previous day.

Subscription Expiration Notification Mailings and Process

Use this mailing to send notifications to all customers whose licenses will expire a specified number of days in the future. A separate email will be sent for each license even if multiple licenses expire on the same day.

Mailing Parameters

The following search and replace fields are supported for this mailing:

- [varCustomerID] - The Customer ID.
- [varEmail] - The customer's e-mail address.
- [varFirstName] - The customer's first name.
- [varContactName] - The customer's contact name.
- [varCompanyName] - The customer company name, or the customer's first and last name if no company name is specified.
- [varAuthorName] - The author name.
- [varProductName] - The product name.
- [varOptionName] - The product option name.
- [varExpirationDate] - The license expiration date.
- [varLicenseID] - The License ID.
- [varPassword] - The customer Password. **Important Note:** We strongly recommended *not* using this. For customers who have chosen their own password, the value will be masked with * characters and not useful to the user.
- [varActivationPassword] - The license Activation Password.

Mailing Sample Content

Body (Text)

This email is to let you know that your subscription for [varProductName] [varOptionName], License ID [varLicenseID], will expire on [varExpirationDate].

We hope that you have enjoyed our product. To ensure that your access is not interrupted, please renew your subscription before time runs out.

Contact us for more information about renewing your subscription today!

How to Send

This mailing is sent through the Subscription Expiration Notification **Daily Process**.

SOLO Server Shared and Dedicated URL authors will need to contact support@softwarekey.com to set up and enable this process.

Daily Process Input Xml Elements

The *Input Xml* for this process includes the following elements:

MailingID

The Mailing ID of the mailing to be sent. See **Creating Custom Mailings** for details on configuring custom mailings, and see above for the supported search and replace fields.

AdminEmail

Optional email address to send a summary notification email to. Note that multiple AdminEmail elements can be specified to send to multiple email addresses.

NotifyOnNoProcessingData

Optional True/False value which determines whether an administrative email notification is sent when no data was found to process. If omitted, the default is false.

BCCAdminEmails

Optional True/False value which determines whether the customer email notification is BCC'd to the AdminEmail emails.

OverrideOfferProduct

Optional True/False value which determines whether to override the Notify Product setting on the customer record. If omitted or set to false, emails will only be sent to eligible customers with the Notify Product setting enabled, while if set to true, all eligible customers will receive an email regardless of the Notify Product setting.

DaysToExpiration

The number of days prior to license expiration to send the email. Note that a negative value can be specified to send notifications after expiration.

ProdOptionCsv

A comma separated value list of Product Option IDs to send the email for.

CCLicenseeEmails

True/False. Whether to CC the notification to the licensee email address when present on the license.

Trial Teaser (Product) Mailings and Processes

This mailing can be used to follow-up or provide a "teaser" to prospects who have requested a trial through **Trial Tracking**.

The mailing is sent a specified number of days after the trial tracking request and **Trial Welcome Mailing** is sent. For example, if your software has a 30 days trial period, you could send the teaser email in 26 days to contact the user towards the end of their trial period.

SOLO Server Shared URL customers who would like to use this mailing need to contact support@softwarekey.com and sign up for **Trial Tracking and Marketing Services**.

Mailing Parameters

The following search and replace fields are supported for this mailing:

- [varFirstName] = The first name of the evaluator.
- [varLastName] = The last name of the evaluator.
- [varRegID] - The trial Registration ID.
- [varProductName] - The product name.
- [varProductID] - The Product ID.

Mailing Sample Content

Body (Text)

Your free trial will expire soon. We hope that you have enjoyed your free trial of [varProductName].

We know your time is precious, and you have put a lot of time and effort into getting everything set up while learning more about [varProductName].

Don't lose all of your hard work - purchase your full access software license now!

How to Send

This mailing is sent through either of two **Daily Processes** - the Single and Global Trial Teaser Processes.

Global Trial Teaser Process

To configure a product for the global trial teaser process.

- Use the menu *Configure / Products*.
- Click on a Product.
- Use the drop-down *Actions / Edit* to get to the Edit Product page.
- Set the *Trial Teaser Mailing* field to the correct mailing.
- Set the *Trial Teaser Days Back* field to the number of days to send the teaser after the **Trial Welcome Mailing** is sent.

Next, the Trial Teaser Notification (Global) **Daily Process** must be set up. The *Input Xml* for this process is not required as there are no input parameters. This is already configured for SOLO Server Shared and Dedicated URL.

Single Trial Teaser Process

The single trial teaser process requires no product setup. It is intended for special scenarios where the default global process is not sufficient, and allows sending multiple teaser emails.

SOLO Server Shared and Dedicated URL authors will need to contact support@softwarekey.com to set up and enable this process.

Daily Process Input Xml Elements

The *Input Xml* for this process includes the following elements:

MailingID

The Mailing ID of the mailing to be sent out. See [Creating Custom Mailings](#) for details on configuring custom mailings, and see above for the supported search and replace fields.

AdminEmail

Optional email address to send a summary notification email to. Note that multiple AdminEmail elements can be specified to send to multiple email addresses.

NotifyOnNoProcessingData

Optional True/False value which determines whether an administrative email notification is sent when no data was found to process. If omitted, the default is false.

BCCAdminEmails

Optional True/False value which determines whether the customer email notification is BCC'd to the AdminEmail emails.

ProductID

The Product ID to send teasers for.

DaysBack

The number of days since the trial was downloaded that the email should be sent.

MultipleTeaserMode

True/False as to whether to run in Multiple Teaser Mode. When run in this Multiple Teaser Mode, the query to gather trial records will not filter out records already marked with a TeaserSent date. This allows sending multiple teaser emails for a given product. When not in Multiple Teaser Mode, the query to gather trial records will filter out records already sent a teaser email.

Verifying Email Sending Domains

For security and email deliverability purposes, each email domain that is used by SOLO Server Automation to send emails must have specific DNS records configured to advertise that our email sending provider is an authorized sender. More information can also be found in our [blog post on email deliverability](#).

The list displayed on this page shows all domains you have currently configured as sender domains for outgoing email. To allow us to send email for your domains, two Domain Name Service (DNS) records must be added for each domain. Your IT administrator responsible for managing DNS for your domains will want to go into your provider's control panel and add the listed CNAME records to your DNS zone for any not already noted as verified. Our email sending provider has put together some [guides for popular webhosts](#).

Once the entries are added in DNS, you can return to this page to verify that each entry has been verified. Note that it may take some time for the verification process to complete.

Trial Tracking Overview

Instead of placing a direct trial download link on your website, you can **utilize trial tracking to build your ROI**.

SOLO Server can provide this add-on service for tracking trial downloads, sending teaser emails to customers who have requested a trial, and other useful features. The trial download can be located anywhere, so you do not need to provide us a copy of the installation file. The trial tracking service offers the following features:

- Contact and demographic information can be collected from the user and stored in the SOLO Server database.
- Using a combination of a tracking cookie and email matching with existing customers, SOLO Server can tie trial downloads to online purchases, allowing conversion rates to be calculated.
- A welcome email can optionally be sent to the customer at the time of trial request. To ensure the user submits a valid email address, you can include the trial download link in this email sent by SOLO Server.
- A follow up teaser email can optionally be sent to customers who do not purchase a specified number of days from the initial download.
- Trial download information can be viewed per customer on the customer details page, allowing you to calculate marketing information such as how long a user evaluated the product before purchase, whether they purchased after a teaser email was sent, etc.
- Several reports are available to analyze trial downloads and conversions:
 - **Trial Conversions Report**
 - **Trial Download Log Report**
 - **Trial Download Summary Report**
- Trial installation information can be monitored. See **Monitoring Trial Installation**.

Important

Trial tracking is an add-on service. On the Author Home page in SOLO Server, expand the Account Upgrades and submit a request to enable this service.

Self Hosted Trial Tracking

With self hosted trial tracking, you create and host the trial download request form. In order to use self hosted trial tracking, follow these steps:

1. Create the trial download form to be hosted on your site. See **Self Hosted Trial Tracking Form Setup**.
2. Optionally compose a welcome email (see **Trial Welcome (Product) Mailings**) that will be sent to the customer when the trial is initially downloaded.
3. Optionally compose teaser email (see **Trial Teaser (Product) Mailings**) that is sent to customers who download the trial but do not purchase for a specified number of days.
4. Upload your trial to your ISP or a download location of your choice.
5. Go to the SOLO Server menu *Configure / Products*, choose your Product that has the trial, and click the drop down *Actions / Edit*. Update these settings in the Trial Information section:
 - **Trial URL** - Set this to the URL to download the trial from. This can either be a link to a page on your web site, or a direct link to the download file. This link will be displayed to the customer on the confirmation page with instructions to click it to download the trial. This field will be ignored if the Trial Text HTML field is populated. If you use this field, the following confirmation message will be displayed to the customer:
Thank you for requesting a trial of Product Name. You may download the file by clicking on the download link below. Click [HERE](#) to download.
 - **Trial Text HTML** - Enter HTML to be displayed to the user on the confirmation page. This will override the default HTML displayed, and override the Trial URL.
 - **Optionally, you can leave both of the above fields blank if you are sending a welcome mailing with download instructions.** In this case, the following confirmation message will be displayed to the customer:
Thank you for requesting a trial of Product Name. An email has been sent to the email address you entered, email@email.com. This email contains instructions to download and install the trial.
 - **Trial Welcome Mailing** - Set to the **Trial Welcome (Product) mailing template** that was previously created.
 - **Trial Teaser Mailing** - Set to the **Trial Teaser (Product) mailing template** that was previously created.
 - **Trial Teaser Days Back** - Set to the number of days after the trial is downloaded in order to send the Trial Teaser Mailing campaign.
 - In each of the above three cases, your existing custom HTML will be used for the headers and footers on the page.

Whether you are sending mailings or not, we recommend **passing in a SuccessURL and a FailureURL from your form**. Upon success or failure, SOLO Server will redirect the user to these URLs. This gives you the most control over the information you are providing to the prospect.

Once the initial setup is complete, you can add trials for additional products by creating new forms on your site that submit different ProductIDs and configuring the above settings for the corresponding Products.

Important

Trial tracking is an add-on service. **Contact us** for current pricing and availability.

Self Hosted Trial Tracking Form Setup

To set up your own **self hosted trial tracking** request form, follow these steps:

1. Incorporate the source from the following sample form into a page on your web site:

<http://secure.softwarekey.com/solo/templates/TrialSignupSample.htm>

This sample page contains all fields available for capture within the SOLO Server database. Notice that the form posts to the `trialsingup.asp` page on SOLO Server, and calls a validation routine on submission. The validation routine relies on validation methods from the `client_validations.js` file on SOLO Server, which is included in the page as well. For more information on this, see **Client Validation Script**. The fields included on the sample trial download form are as follows:

- Customer contact details:
 - Company Name
 - First Name
 - Last Name
 - Email Address (required)
 - First Name
 - Last Name
 - Address Line 1
 - Address Line 2
 - City
 - State/Province
 - Postal Code
 - Country
 - Phone
 - Other information:
 - Source (i.e. Heard From)
 - Misc 1-7 - These fields are user defined, and can each capture a string of 50 characters or less.
2. **Determine which contact details fields you want to capture from your customers.** The only required field is the email address, in the form field "Email". In the following steps, the Email field/validation routine cannot be deleted, or an error will be returned upon posting the form.
 - Delete the form entry and the validation routine for any fields you do not want to capture.
 - For the remaining fields, determine which ones you want to require. For these fields, update the validation routine so that last term is true, for example:
 - `ValidateStringField(theForm.FirstName, "First Name", true)`
 3. **For the "MiscX" fields, determine what miscellaneous demographic information you want to capture for each field.** You can capture data for none of these fields up to all 7 of these fields. Once you have determined what, if any demographic information you want to capture.
 - Delete the form entry and the validation routine for any fields you do not want to capture.
 - For the remaining fields
 - Update the form to show a descriptive label for each field.
 - Update the validation routine so the second term matches the descriptive label for the field, for example:
 - `ValidateStringField(theForm.Misc1, "Age", false)`
 - If the field is required, update the validation routine so that the last term is true (see example above for the contact details fields).
 - Note that it is not required that the MiscX fields be text fields. You can also use drop down lists (the values for each entry must not exceed 50 characters) and checkboxes. If you decide to use something other than a textbox, just be sure you use the same "MiscX" name for the input.
 4. In addition, there are several hidden fields in the form, described below:
 - **ProductID** - Set to the ProductID the trial is for. **This is required, and if omitted, an error will be returned upon posting the form.**
 - **SuccessURL** - If you want to host the success page yourself, set the to the URL you would like SOLO Server to redirect to after successfully saving the data. This is optional, and if omitted SOLO Server will use the Trial Text HTML or Trial URL to display the success message to the user.
 - **FailureURL** - If you want to host a failure page yourself, set to the URL you would like SOLO Server redirect to if there is an error. This is optional, and if omitted SOLO Server will display an error message to the customer. Error messages are returned to this page in the "error" querystring parameter, and can be the following values:

- Invalid Product - The ProductID is invalid or is missing
- Trial Disabled - The account does not have trial tracking enabled
- Missing Email - The email address is missing
- Invalid Email - The email address is invalid
- Invalid Configuration - The current trial configuration is invalid. This means that the trial parameters on the product are set up such that there was no Trial Mailing Welcome, Trial Text HTML, or Trial URL, and a SuccessURL was not posted with the form. Because of this, the customer has received no instructions to download and install the trial.
- **DistributorID** - The DistributorID to be associated with the trial download. This is optional. If omitted, SOLO Server will attempt to find a DistributorID from the distributor tracking cookie if it is present.

Note the *OtherInfo* field at the top of the form. This field is optional and used for a "honeypot" CAPTCHA. This works by attempting to trick automated form filling bots into populating a field not visible to a regular visitor (note the table row is hidden through the css display property). If this field is included and found by SOLO Server to be populated, SOLO Server will reject the request on the assumption that an automated spam bot is filling out the form.

If you are experienced with javascript, you can extend the validation routine to perform more precise checking of the contact information fields, specifically validating that the state/province and postal code fields are valid values for US and Canadian addresses using the *ValidateUSStateField*, *ValidateCAProvinceField*, *ValidateUSPostalCode*, and *ValidateCAPostalCodeField* functions. In these cases, you must come up with conditional processing code, only using these methods if the country is US or Canada accordingly. See [Client Validation Script](#) for more details.

Important

Trial tracking is an add-on service. [Contact us](#) for current pricing and availability.

Trial Tracking Using the Automation Client

Trial tracking data can also be posted to the SOLO Server `trialsignup.asp` page using the automation client functions `SK_PostEvalData` and `SK_PostEvalDataEx`. This is useful if you distribute a trial through a means other than online download.

To implement this into your program, first refer to the function documentation for the functions following these links:

- [SK_PostEvalData](#)
- [SK_PostEvalDataEx](#)

Use of this function with the `trialsignup.asp` page requires that for the `<url>` parameter, the following value is used:

- `/solo/products/trialsignup.asp?ProductID=<ProductID>&FromApp=true` (note that for users running their own SOLO Server instance with solo installed in the root, the `/solo` portion of this should be dropped)

Also, the `<email>` parameter is required to be a valid value, as this is the field used to tie new customers to existing trial sign ups, so you should not pass in an empty value for this field.

Due to the limited number of parameters supported by these functions, a majority of the fields available when posting a form to this page are not available as function parameters. To get around this, you can pass these parameters in the querystring of the `<url>` parameter. Refer to the trial signup sample page at <http://secure.softwarekey.com/solo/templates/TrialSignupSample.htm> for the field names you can use in the querystring for these additional parameters. Note that the `<firstname>`, `<lastname>`, `<email>`, and `<phone>` parameters are the same as those on the form, and the `<ud1>` through `<ud5>` parameters in the function correspond to the Misc1 - Misc5 fields on the form, so all of these fields should be passed as parameters and not through the querystring. Note that if you decide to pass along the state/province and/or postal code, if the address is US or Canadian, you should ensure that the state/province and postal code is valid. If the country is passed along, it should be a valid SOLO Server country string. See [State Codes and Country Strings](#) as well as [Client Validation Script](#) for details on validation.

SOLO Server will return the following codes as the Registration Result to indicate the success or failure of the posting:

- 0 - Success. In this case the `<regid>` parameter will be populated by the Registration ID
- 100 - Failure. Invalid Product - No ProductID was passed in.
- 101 - Failure. Invalid Product - Invalid ProductID was passed in.
- 102 - Failure. Trial Disabled - Trial tracking is not enabled.
- 103 - Failure. Missing Email - No email address passed in.
- 104 - Failure. Invalid Email - An invalid email address was passed in.
- 105 - Failure. Invalid Parameters - `FromApp=true` is missing from the querystring.

Monitoring Trial Installation

For customers installing the evaluation copy of your software while an Internet connection is active, the trial tracking service allows you to monitor when the setup is initiated and completed. Most commercial installation packages allow you to create a custom dialog and post data to a URL. Design a custom dialog that asks the user for their Contact Name, EMail Address, and Source (how they heard of your product).

At the start of the installation, post these variables to http://secure.softwarekey.com/solo/products/demo_status.asp when using SOLO Server Shared URL:

- **ProductID** = (your product ID in SOLO Server)
- **ContactName** = user-supplied data
- **EMail** = user-supplied data
- **Source** = user-supplied data
- **Status** = START

SOLO Server will attempt to find a trial download record with this e-mail address. If not found, it will create one. At the completion of installation, post these variables to the same URL:

- **ProductID** = (your product ID in SOLO Server)
- **EMail** = user-supplied data
- **Status** = COMPLETE

If successful, the script will return the string "Result = 1<p>"

Trial Table Fields

When you download the **Trial Download Log Report** in excel csv format, the file will contain the following fields:

Product Name

DateAccessed

The date of the first download of the trial for the given email address

Company

The customer company

Contact

The customer contact name (preserved for backwards compatibility the current version of SOLO Server uses FirstName/LastName)

FirstName

The customer first name

LastName

The customer last name

Address1

The customer address line 1

Address2

The customer address line 2

Address3

The customer address line 3 (preserved for backwards compatibility the current version of SOLO Server uses City/StateProvince/PostalCode)

City

The customer city

StateProvince

The customer state/province

PostalCode

The customer postal code

Country

The customer country

Voice

The customer voice phone number

Email

The customer email

Source

The source of the trial download

LastReturnVisit

The date the trial was last downloaded for the given email address

ReturnCount

The number of times the trial has been downloaded for the given email address

InstallStart

The start time of the trial installation. See [Monitoring Trial Installation](#).

InstallComplete

The completion time of the trial installation. See [Monitoring Trial Installation](#).

CustomerID

The CustomerID associated with the trial download. This is populated when the customer either makes a purchase and the trial tracking cookie is present, or by an email match on with an existing customer.

DistributorID

The Distributor/AffiliateID associated with the trial download

DistributorName

The Distributor/Affiliate name associated with the trial download

Misc1-7

These fields match up to the miscellaneous demographic data collected by the trial form.

PLUS Automation Client Scripts

There are two (2) ways to programmatically exchange data with SOLO Server:

1. SOLO Server exposes several **Web Services** that can be consumed by an application. Refer to the Web Services documentation for additional details.
2. The Protection PLUS Automation Client library has several functions that communicate with SOLO Server over standard HTTP or HTTPS protocols. This topic describes the SOLO Server script files that are compatible with the Automation Client library.

There is data overlap in some of the scripts. Click on the script name for details on that particular script.

Note that each of the values associated with the HTML Return Strings of the script are terminated with an HTML tag such as `<br>` or `<p>`. If you write a custom routine to interface with these scripts or create your own script to communicate with the PLUS Automation Client, make sure that you adhere to this convention.

In: /solo/customers

Path	Description
Download.asp	Allows the downloading of an ESD (Electronic Software Delivery) file from SOLO Server for a given License ID. Note that this script has been replaced with the newer DownloadFile.aspx script.
DownloadFile.aspx	Allows the downloading of an ESD (Electronic Software Delivery) file from SOLO Server for a given License ID.
GetLicenseInfo1.asp	Gets extended licensing information about a License ID, including Company Name, Contact Name, Contact E-Mail Address, License Status, Download Expiration Date, Activations Left, Date License ID was entered, Product ID, and Product Option ID.
GetLicenseStatus.asp	Retrieves License Status, Replaced By, and License Update fields from the Licenses table.
GetRegData.asp	Obtains the Customer information associated with a License record.
License_Return.asp	"Checks in" or Returns a license activation to the server.
UpdateCheck.asp	Validates License status and checks for new version availability.

In: /solo/postings

Path	Description
CountPost.asp	Posts numeric usage values to a specific license.
PostRegData.asp	Posts Customer Registration information for a given license. Note that for US and Canadian addresses, the state/province code and postal should be valid. The country should be passed in as a valid SOLO Server country string. See State Codes and Country Strings as well as Client Validation Script for details on validation.
StringPost.asp	Posts string usage values to a specific license.

In: /solo/products

Path	Description
trialsignup.asp	Posts evaluation/trial sign-up data from applications.

In: /solo/unlock

Path	Description
GetCode.asp	Gets Protection PLUS activation code(s) for a given license.
GetInvoiceLicenseIDList.asp	Obtains a list of License IDs associated with a given Invoice.

Download.asp

Important

This script has been replaced with the newer **DownloadFile.aspx** script.

Purpose:

Download an ESD file for a given license through Protection PLUS.

HTTP Method:

GET

URL:

secure.softwarekey.com/solo/customers/download.asp

Automation Client Function:

SK_FILEDOWNLOAD

Function Input Variables:

- l: License ID for the download attempt
- pw: Password associated to the LicenseID. This can be either the customer password or the license activation password.

HTML Return Strings:

Remarks:

This page can be used with the Automation Client function, SK_FILEDOWNLOAD, to download an ESD file from SOLO Server.

Errors:

- 100: If the LicenseID and CustomerPW are blank, the combination could not be found in the database, or the license status is not OK.
- 200: If the download expiration on the license has passed.
- 300: The file cannot be found on the server

Notes:

DownloadFile.aspx

Purpose:

Download an ESD file for a given license through Protection PLUS.

HTTP Method:

GET

URL:

secure.softwarekey.com/solo/customers/downloadfile.aspx

Automation Client Function:

SK_FILEDOWNLOAD

Function Input Variables:

- l: License ID for the download attempt
- pw: Password associated to the LicenseID. This can be either the customer password or the license activation password.

HTML Return Strings:

Remarks:

This page can be used with the Automation Client function, SK_FILEDOWNLOAD, to download an ESD file from SOLO Server.

Errors:

- 100: If the LicenseID and CustomerPW are blank, the combination could not be found in the database, or the license status is not OK.
- 200: If the download expiration on the license has passed.
- 300: The file cannot be found on the server

Notes:

GetLicenseInfo1.asp

Purpose:

Gets extended licensing information about a License ID, including Company Name, Contact Name, Contact EMail Address, License Status, Download Expiration Date, Activations Left, Date License ID was entered, Product ID, and Product Option ID.

HTTP Method:

GET

URL:

secure.softwarekey.com/solo/customers/getlicenseinfo1.asp

Automation Client Functions:

SK_GetRegData, SK_GetRegDataEx

Input Variables:

LicenseID: License ID to verify status of license.

CustomerPW: Password associated to License ID. This can be either the customer password or the license activation password.

HTML Return Strings:

- Licensed Company = : Returns the company name
- Licensed Contact = : Returns the Contact Name
- Licensed E-Mail = : Returns the Contact's email address
- Licensed Phone = : Status of the License ID
- Licensed UD1 = : Returns the "Download Until" date field
- Licensed UD2 = : Unlocks Left associated to License ID
- Licensed UD3 = : Date the License ID was entered
- Licensed UD4 = : Product ID associated to the License ID
- Licensed UD5 = : Product Option ID associated to the License ID
- Error Response = : Only returned if there is an error

Remarks:

This page retrieves the extended information associated to a License ID. If there was an error, the "Error Response = " string is displayed along with the error code. For a list of error codes returned from this page, please reference the list below.

Errors:

100: If the LicenseID and CustomerPW are blank or the combination could not be found in the database.

GetLicenseStatus.asp

Purpose:

Retrieves License Status, Replaced By, and License Update fields from the Licenses table.

HTTP Method:

GET

URL:

secure.softwarekey.com/solo/customers/getlicensestatus.asp

Automation Client Functions:

SK_GetLicenseStatus, SK_GetLicenseStatsEX

Function Input Variables:

- LicenseID: License ID for the license you want to post to
- CustomerPW: Password associated to <LicenseID>

Optional Input Variables:

ProdID: the Product ID in which you want to compare the LicenseID's ProductID to.

HTML Return Strings:

- License Status = (space equals space then data)
- License ReplacedBy =
- License Update =
- Error Response =

Remarks:

If successful, the strings "License Status = ", "License ReplacedBy = " and "License Update = " are displayed, along with their associated fields of the Licenses table. If it fails, the string "Error Response = " with a value greater or equal to 100 following that string. View the Errors below for possible errors.

Errors:

- 100: If the LicenseID is blank or could not be found in the database.
- 200: If <ProdID> is passed in, this will return if the <ProdID> is not equal to the Product ID associated to the <LicenseID>.

Notes:

- To add additional optional input variables, the Password function parameter should have these values appended. For example:
- Password = "userpassword&ProdID=1234"

GetRegData.asp

Purpose:

Obtains the Customer information associated to a License record.

HTTP Method:

GET

URL:

secure.softwarekey.com/solo/customers/getregdata.asp

Automation Client Functions:

SK_GetRegData, **SK_GetRegDataEx**

Input Variables:

- LicenseID: License ID for activation attempt
- CustomerPW: Password associated to the LicenseID. This can be either the customer password or the license activation password.

HTML Return Strings:

- Licensed Company = : Company Name
- Licensed Contact = : Contact Name
- Licensed E-Mail = : Email Address
- Licensed Phone = : Phone Number
- Licensed UD1 = : Mailing Address 1
- Licensed UD2 = : Mailing Address 2
- Licensed UD3 = : City, State, Postal Code
- Licensed UD4 = : Country
- Licensed UD5 = : Fax Number
- Error Response =

Remarks:

When successful, the "Licensed" strings above will appear on the page. If there is an error, the "Error Response" string will be displayed with the associated error code (see below for a list of codes that can be generated).

Errors:

100: If the LicenseID and CustomerPW are blank or the combination could not be found in the database.

License_Return.asp

Important

This script has been deprecated and should no longer be used. Instead, use the newer **Deactivation feature available through the newer SOLO Server Web services.**

Purpose:

"Checks in" or Returns a license activation to the server.

HTTP Method:

POST

URL:

secure.softwarekey.com/solo/customers/license_return.asp

Automation Client Functions:

SK_PostStrings, SK_PostStringEx

Input Variables:

- LicenseID: License ID for the license you want to post to
- string1: password associated to <LicenseID>. This can be either the customer password or the license activation password.
- string2: Computer Id in which was successfully activated through getcode.asp
- string3: Not used
- string4: Not used
- string5: Not used

HTML Return Strings:

- String update result = (space equals space then data)
- License Update =

Remarks:

If the strings are properly posted, the value returned after the string "String update result = " will be 0. If there was an error, it will return a value 100 or greater. View the Errors below for possible errors.

Errors:

- 100: The <LicenseID> is blank or could not be found in the database.
- 101: The <LicenseID> has not been activated before.
- 102: The Computer ID passed in was never activated under <LicenseID>
- 106: The Computer ID passed into <string2> was not a fully numeric value.

UpdateCheck.asp

Purpose:

Validates License status and checks for new version availability.

HTTP Method:

GET

URL:

secure.softwarekey.com/solo/customers/updatecheck.asp

Automation Client Functions:

SK_UpdateCheck

Input Variables:

- Flags: Currently unused
- Options: Currently unused
- LicenseID: License ID to verify status of license.
- Password: Password associated to License ID. This can be either the customer password or the license activation password.
- ProductID: Product ID associated to the Product you want to check for an upgrade on
- ProdName: Product Name of the Product ID
- LanguageCode: The language in which you want to display the message.
(Defaults to English "en" if none is provided.)
- Ver1: First field of a 4 digit version number
- Ver2: Second field of a 4 digit version number
- Ver3: Third field of a 4 digit version number
- Ver4: Forth field of a 4 digit version number

Optional Input Variables:

- VerifyDaysToDL: Verify that the Days To Download Field has not passed. Note that for product options configured for perpetual download (Days to Download of 0), this is ignored and no verification will take place.

HTML Return Strings:

- License Status =
- License ReplacedBy =
- License Update =
- VersionString =
- ActionToTake =
- URLInfo =
- URLFile =
- LatestFreeVersion =
- ReleaseDate =
- ShortMessage =
- Error Response =

Remarks:

- This checks the status of the LicenseID before proceeding to check if an update is available associated to the Product ID and the Version given in "Ver1.Ver2.Ver3.Ver4".

- For help setting up new Product Updates as well as more information on the return strings above, please view the **Product Updates** section of this manual.

Errors:

- 100: If the LicenseID and CustomerPW are blank or the combination could not be found in the database.
- 300: If the VerifyDaysToDownload is passed in as a value of 1 and the "Days To Download" associated to License ID has elapsed.

Notes:

- To add additional optional input variables, the Password function parameter should have these values appended. For example:
- Password = "userpassword&VerifyDaysToDL=1"

CountPost.asp

Purpose:

Posts numeric usage values to a specific license.

HTTP Method:

POST

URL:

secure.softwarekey.com/solo/postings/countpost.asp

Automation Client Functions:

SK_PostCounters, SK_PostCounterEx

Input Variables:

- LicenseID: License ID for the license you want to post to
- counter1: First Numeric value
- counter2: Second Numeric value
- counter3: Third Numeric value
- counter4: Forth Numeric Value
- counter5: Fifth Numeric Value

HTML Return Strings:

- Counter update result = (space equals space then data)
- License Update =
- Error Response =

Remarks:

If a counter is properly posted, the value returned after the string "Counter update result = " will be 0. If there was an error, it will return a value 100 or greater. View the Errors below for possible errors.

"License Update = " will return the License Update field for the given <LicenseID>

Errors:

100: If the LicenseID is blank or could not be found in the database.

PostRegData.asp

Purpose:

Posts Customer Registration information for a given license.

If an **Activation (Product) Mailing** is configured on the Product ID, postregdata.asp will also send that mailing to the customer if the customer email address was blank prior to this registration and if the license has only one activation logged.

HTTP Method:

POST

URL:

secure.softwarekey.com/solo/postings/postregdata.asp

Automation Client Functions:

SK_PostRegData

Input Variables:

- LicenseID: License ID for the license you want to post to
- Password: Password associated to License ID. This can be either the customer password or the license activation password.
- flags: Value to determine different functionality(see remarks below)
- CompanyName: Customer's Company Name
- Firstname: Customer's First Name
- Lastname: Customer's Last Name
- address1: The first line of the Customer's Address
- address2: The second line of the Customer's Address
- city: Customer's city
- state: Customer's state
- postalcode: Customer's Postal or Zip code
- country: Customer's Country
- phone: Customer's phone number
- fax: Customer's Fax number
- email: Customer's Email address

HTML Return Strings:

- Registration Result = (space equals space then data)
- Error Response =

Remarks:

If the registration information is properly posted, then the value after "Registration Result = " will be 0. If not, "Error Response = X" will be displayed where X is one of the Errors listed below.

The flags parameter is passed as a 32 character string representing 32 0/1 bits. The most significant bit is on the left and the least significant bit is on the right. Although only 3 bits are currently used, all 32 characters must be passed in order to be processed correctly.

ABCDEFGHIJKLMNOPQRSTUVWXYZ123456

- A = not used
- B = not used

- C = not used
- D = not used
- E = not used
- F = not used
- G = not used
- H = not used
- I = not used
- J = not used
- K = not used
- L = not used
- M = not used
- N = not used
- O = not used
- P = not used
- Q = not used
- R = not used
- S = not used
- T = not used
- U = not used
- V = not used
- W = not used
- X = not used
- Y = not used
- Z = not used
- 1 = not used
- 2 = not used
- 3 = not used
- 4 = set to 1 to enable Offer Products bit on this customer record
- 5 = set to 1 to enable Offer Partners bit on this customer record
- 6 = set to 0 to prevent an already registered customer record from being overwritten. In this case, Error 102 is returned.

Errors:

- 100: If the <LicenseID> is blank or could not be found in the database.
- 101: If the <password> is blank or does not match the <LicenseID>
- 102: If the <LicenseID> has already been registered and the Overwrite flag (last bit in flags bit field) is set to "0".

StringPost.asp

Purpose:

Posts string usage values to a specific license.

HTTP Method:

POST

URL:

secure.softwarekey.com/solo/postings/stringpost.asp

Automation Client Functions:

SK_PostStrings, SK_PostStringEx

Input Variables:

LicenseID: License ID for the license you want to post to

- string1: First String
- string2: Second String
- string3: Third String
- string4: Forth String
- string5: Fifth String

HTML Return Strings:

- String update result = (space equals space then data)
- License Update =
- Error Response =

Remarks:

If the strings are properly posted, the value returned after the string "String update result = " will be 0. If there was an error, it will return a value 100 or greater. View the Errors below for possible errors.

"License Update = " will return the License Update field for the given <LicenseID>

Errors:

100: If the LicenseID is blank or could not be found in the database.

GetCode.asp

Purpose:

Gets Protection PLUS activation code for a given license.

HTTP Method:

GET

URL:

secure.softwarekey.com/solo/unlock/getcode.asp

Automation Client Functions:

SK_GetTCData, SK_GetTCDataEx, SK_GetTCDataDlg, SK_ProcEZTrig1

Function Input Variables:

- LicenseID: License ID for activation attempt
- CustomerPW: Password associated to the LicenseID. This can be either the customer password or the license activation password.
- code1 : Session ID, UserCode1, or cenum
- code2 : Computer ID, UserCode2, or compno

Optional Input Variables:

- ProdID: Product ID to verify against License ID
- ProdOptionID: Product Option ID to verify against License ID
- ProductVersion: Product version in the format NNN.NNN.NNN.NNN. Refer to **Product Option Field** Minimum Activation Version for more information.

HTML Return Strings:

- Registration code1 = : Protection PLUS Reg Key 1
- Registration code2 = : Protection PLUS Reg Key 2
- License Update = : License Update field associated with License
- Error Response =
- No More Keys available! : returned when Activations Left=0

Remarks:

This page can be used with the Automation Client functions listed above, and Instant Protection PLUS 3.

Errors:

- 100: If the LicenseID and CustomerPW are blank or the combination could not be found in the database.
- 101: If the Product Option Type associated with LicenseID is not valid.
- 103: If the code2 is entered as a value of 0.
- 200: If the ProdID is passed in and the value passed in is not associated to the LicenseID passed in.

Notes:

To add additional optional input variables, the Password function parameter should have these values appended. For example:

- Password = "userpassword&ProdID=1234"

GetInvoiceLicenseIDList.asp

Purpose:

Obtains list of License IDs associated with a given Invoice.

HTTP Method:

GET

URL:

secure.softwarekey.com/solo/unlock/getinvoicelicenseidlist.asp

Automation Client Functions:

SK_GetTCData, SK_GetTCDataEx

Input Variables:

- LicenseID: Invoice Number in which you want to retrieve all License IDs
- CustomerPW: Password associated to the <LicenseID> or Invoice Number

HTML Return Strings:

- Registration code1 = 0 (space equals space zero)
- Registration code2 = 0
- License Update = : see remarks below
- Error Response =

Remarks:

This page can be used with the Automation Client functions listed above.

When successful, all the License IDs associated to the invoice will be displayed after the "License Update = " string. The list will be followed by a "
" HTML tag. The list of License IDs are delineated by a "|" (pipe) for ease of parsing. Here is an example of the data returned:

- License Update = 1611820|1611821|1611822|1611823|1611824|1611825|

Errors:

100: If the LicenseID and CustomerPW are blank or the combination could not be found in the database.

Notes:

A sample implementation of this functionality can be found in the Visual Basic 6 Automation Client DLL AdvLic sample in your Protection PLUS 4 SDK installation.

SOLO Server Return / Error Codes

Important

SOLO Server has a number of interfaces available for programmatic access. **Older scripts** referenced by the Automation Client library and **Web Service interfaces** have Return Code values that are documented in the manual topic for each script. More recent Web Service interfaces share a common list of Return Codes, which are documented below.

For other return codes not listed below, such as those from Protection PLUS, [view our directory of return / error codes](#).

For additional information regarding these Return Codes, please [open a support ticket](#) and a member of our Technical Support staff will respond to your query as promptly as possible.

Return Code	Description
5000	Invalid Encryption Key ID: For security purposes, these Web services use public-private key encryption and digital signatures. In order to determine the keys used server side for decryption/encryption and signature verification/creation, each request is required to include an EncryptionKeyID XML element containing the author's unique EncryptionKeyID. This Return Code is generated when this element is either missing or the EncryptionKeyID itself is not valid.
5001	Encryption required: For security purposes, these Web services require that all XML content aside from the EncryptionKeyID be encrypted and include a digital signature of the encrypted portion by the keys corresponding to the EncryptionKeyID. This Return Code is generated when this portion of the XML is not properly encrypted.
5002	Signature required: For security purposes, these Web services require that all XML content aside from the EncryptionKeyID be encrypted and include a digital signature of the encrypted portion by the keys corresponding to the EncryptionKeyID. This Return Code is generated when the digital signature has been erroneously omitted.
5003	Decryption failure: For security purposes, these Web services require that all XML content aside from the EncryptionKeyID be encrypted and include a digital signature of the encrypted portion by the keys corresponding to the EncryptionKeyID. This Return Code is generated when the encrypted portion of the XML cannot be successfully decrypted.
5004	Verification of digital signature failed: For security purposes, these Web services require that all XML content aside from the EncryptionKeyID be encrypted and include a digital signature of the encrypted portion by the keys corresponding to the EncryptionKeyID. This Return Code is generated when digital signature cannot be verified.
5005	Invalid parameters: Each Web method has optional and required input content. This Return Code is generated when one or more required input elements are missing.

5006	Security Check Failure: This Return Code is generated when too many failed activation attempts are made in a short period of time, suggesting the possibility of a "brute force attack" to acquire a successful activation. On the License Details page, click the "Reset Activation Check" button to clear the temporary block.
5007	Invalid Computer ID: This Return Code is generated when the UserCode2 (ComputerID) value in the request XML is either an invalid numeric value or 0 (zero).
5008	Invalid Activation Data: The License ID and/or Password could not be validated by SOLO Server. Make sure the user has a valid License ID and Password and is keying them correctly when attempting activation.
5009	Unregistered customer: If the RequireRegistration XML element is included and specified as True for an activation request, the system will verify that the customer is registered and reject the activation if the customer is indeed not registered. This Return Code is generated when this condition occurs.
5010	Invalid Product ID: If the ProductID XML element is included and populated for an activation request, the system will verify that this value matches the ProductID associated with the License ID. This Return Code is generated when this check fails.
5011	Invalid Product Option ID: If the ProdOption XML element is included and populated for an activation request, the system will verify that this value matches the ProdOption associated with the License ID. This Return Code is generated when this check fails.
5012	Invalid Product Version: The version of the application is less than the Minimum Activation Version specified on the Product Option.
5013	No Remaining Activations: The user has consumed the maximum number of activations allocated to the License ID.
5014	Invalid Product Option ID Type: An invalid Product Option Type has been specified for the associated License ID. You must select one of the PLUS Option Types to be able to use the license for activation.
5015	Invalid Installation ID: This return Code is generated when the InstallationID in the request XML is invalid.
5016	Deactivated Installation: The Installation ID has been deactivated within SOLO Server. A SOLO Server user must re-enable the Installation ID or issue a new License ID / Password to be able to continue.
5017	Invalid License Status: The License ID status, as displayed on the License Details page within SOLO Server, is something other than "OK".
5018	No remaining deactivations: This Return Code is generated by a failed deactivation request due to the absence of any remaining deactivations for the License ID.

5019	License ID has expired: This Return Code is generated when the specified expiration date of the License ID is now in the past.
5020	Internal authentication failed: This Return Code is generated when authentication has failed for an internal call to a Web method.
5021	Invalid IP address detected: The IP address of the activating machine is not among the Allowed Activation IPs as displayed on the License Details page in SOLO Server. This Return Code is only applicable if the Product Option associated with the License ID has been configured to restrict activation to one or more client IP addresses.
5022	Invalid System Time: The date/time as displayed by the system clock is not within the threshold specified by SOLO Server. The user must correct the system clock to be able to continue.
5023	Protection PLUS 5 SDK Access Not Enabled: This Return Code is generated when a call to a web method which requires access to SoftwareKey's Protection PLUS 5 SDK fails because either the author does not have a Protection PLUS 5 SDK license or the license has yet to be enabled by SoftwareKey.
5024	Invalid XML document: The XML document is not properly formatted and cannot be loaded.
5025	Plug-in failed: When a pre-activation plug-in is configured on a Product Option, this Return Code is generated during activation when there is an error loading or executing the plug-in not handled by the plug-in itself.
5026	Plug-in processing failed: When a pre-activation plug-in is configured on a Product Option, this Return Code is generated during activation when the plug-in processing indicates that the activation should be rejected.
5027	Invalid Network Session: The Network Session has been closed or has expired.
5028	No Network Seats Remaining: No more network seats are currently free. This error will continue to be returned for the License ID until another network session is closed or expires.
5029	Invalid Trigger Code Data: This Return Code is generated when the trigger code data is not valid.
5030	Protection PLUS 5 evaluation expired: This Return Code is generated when the Protection PLUS 5's license has expired.
5031	SOLO Server evaluation expired: This Return Code is generated when the SOLO Server's license has expired.
5032	Network Floating Access Not Enabled: Access to the network floating licensing features in SOLO Server are not enabled. Applies only to SOLO Server Shared and Dedicated URL.

5033

Account Closed: The account for the software author has been closed. Applies only to SOLO Server Shared and Dedicated URL.

5034

Network Floating Access Invalid Domain: Access to the network floating licensing features in SOLO Server are not allowed through the current domain. Applies only to SOLO Server Shared / Custom URL.