



Cisco Smart Software Manager satellite User Guide

First Published: 02/16/2015

Last Modified: 06/13/2016

Copyright © 2015 Cisco Systems, Inc.

THE SPECIFICATIONS AND INFORMATION REGARDING THE PRODUCTS IN THIS MANUAL ARE SUBJECT TO CHANGE WITHOUT NOTICE. ALL STATEMENTS, INFORMATION, AND RECOMMENDATIONS IN THIS MANUAL ARE BELIEVED TO BE ACCURATE BUT ARE PRESENTED WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. USERS MUST TAKE FULL RESPONSIBILITY FOR THEIR APPLICATION OF ANY PRODUCTS.

THE SOFTWARE LICENSE AND LIMITED WARRANTY FOR THE ACCOMPANYING PRODUCT ARE SET FORTH IN THE INFORMATION PACKET THAT SHIPPED WITH THE PRODUCT AND ARE INCORPORATED HEREIN BY THIS REFERENCE. IF YOU ARE UNABLE TO LOCATE THE SOFTWARE LICENSE OR LIMITED WARRANTY, CONTACT YOUR CISCO REPRESENTATIVE FOR A COPY.

The Cisco implementation of TCP header compression is an adaptation of a program developed by the University of California, Berkeley (UCB) as part of UCB's public domain version of the UNIX operating system. All rights reserved. Copyright © 1981, Regents of the University of California.

NOTWITHSTANDING ANY OTHER WARRANTY HEREIN, ALL DOCUMENT FILES AND SOFTWARE OF THESE SUPPLIERS ARE PROVIDED "AS IS" WITH ALL FAULTS. CISCO AND THE ABOVE-NAMED SUPPLIERS DISCLAIM ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, THOSE OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT OR ARISING FROM A COURSE OF DEALING, USAGE, OR TRADE PRACTICE.

IN NO EVENT SHALL CISCO OR ITS SUPPLIERS BE LIABLE FOR ANY INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES, INCLUDING, WITHOUT LIMITATION, LOST PROFITS OR LOSS OR DAMAGE TO DATA ARISING OUT OF THE USE OR INABILITY TO USE THIS MANUAL, EVEN IF CISCO OR ITS SUPPLIERS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Any Internet Protocol (IP) addresses and phone numbers used in this document are not intended to be actual addresses and phone numbers. Any examples, command display output, network topology diagrams, and other figures included in the document are shown for illustrative purposes only. Any use of actual IP addresses or phone numbers in illustrative content is unintentional and coincidental.

Cisco and the Cisco logo are trademarks or registered trademarks of Cisco and/or its affiliates in the U.S. and other countries. To view a list of Cisco trademarks, go to this URL: <http://www.cisco.com/go/trademarks>. Third-party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1110R)



The Java logo is a trademark or registered trademark of Sun Microsystems, Inc. in the U.S. or other countries.

Contents

Preface	v
Audience	v
Document Conventions	v
Obtaining Documentation and Submitting a Service Request	vi
Cisco Smart Software satellite Overview	7
About Cisco Smart Software Manager satellite	7
System Setup Overview	8
System Requirements.....	8
Supported Web Browsers	9
Setting Up Cisco Smart Software Manager satellite	11
Cisco Smart Software Manager satellite Configuration	11
Registering the satellite via GUI	11
Registering via a Network.....	11
Registering Manually.....	12
Registering the satellite via a CLI	13
Setting the Time	14
Using Cisco Smart Software Manager satellite	15
Licenses, Product Instances, and Registration Tokens	15
Virtual Accounts.....	16
Virtual Account Panes	16
Viewing Virtual Account Information	18
Creating a Product Instance Registration Token	18
Viewing Product Instance Registration Tokens.....	18
Managing Product Instance Registration Tokens	19
Viewing Licenses in a Virtual Account	19
Viewing Product Instances in a Virtual Account.....	19
Transferring a Product Instance	20
Removing a Product Instance.....	20
Viewing Event Logs.....	20
Exporting to CSV Files	20
Synchronization Alerts and Actions	21
Synchronization Pane.....	22
Scheduling Synchronization for Satellites	22
Reports Pane	24
Running Reports	24

Administration Pane	25
Creating a New Administrator	25
Generating Diagnostic Log Files	26
Network	26
Edit Network Settings	26
Launch Network Diagnostics.....	27
System Settings	27
Configuring Headers and Footers	27
Configuring SSLv3	28
Upgrade Cisco Smart Software Manager satellite with Automated Software Delivery	28
Using the Network Upgrade.....	28
Scheduling Network Upgrades	29
Using the Manual Upgrade	29
Upgrading from Version 2.0 to 2.X.....	30
Backward Compatibility	31
Troubleshooting	33
Client Registration Issues.....	33
Manual Synchronization Issues.....	33
Network Synchronization Issues	33
Appendix: A:.....	35
Registering Product Instances to satellite.....	35



Preface

[Audience](#) on page v

[Document Conventions](#) on page v

[Obtaining Documentation and Submitting a Service Request](#) on page vi

Audience

This guide is intended for site administrators who will manage Cisco Smart-enabled software installation and licensing.

Document Conventions

Command descriptions use the following conventions:

Convention	Description
bold	Bold text indicates the commands and keywords that you enter literally as shown.
<i>Italic</i>	Italic text indicates arguments for which the user supplies the values.
[x]	Square brackets enclose an optional element (keyword or argument).
[x y]	Square brackets enclosing keywords or arguments separated by a vertical bar indicate an optional choice.
{x y}	Braces enclosing keywords or arguments separated by a vertical bar indicate a required choice.
[x {y z}]	Nested set of square brackets or braces indicate optional or required choices within optional or required elements. Braces and a vertical bar within square brackets indicate a required choice within an optional element.
variable	Indicates a variable for which you supply values, in context where italics cannot be used.
string	A nonquoted set of characters. Do not use quotation marks around the string or the string will include the quotation marks.

Examples use the following conventions:

Convention	Description
screen font	Terminal sessions and information the switch displays are in screen font.
boldface screen font	Information you must enter is in boldface screen font.
<i>italic screen font</i>	Arguments for which you supply values are in italic screen font.
< >	Nonprinting characters, such as passwords, are in angle brackets.
[]	Default responses to system prompts are in square brackets.
!, #	An exclamation point (!) or a pound sign (#) at the beginning of a line of code indicates a comment line.

This document uses the following conventions:

Note: Means *reader take note*. Notes contain helpful suggestions or references to material not covered in the manual.

Caution: Means *reader be careful*. In this situation, you might do something that could result in equipment damage or loss of data.

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, using the Cisco Bug Search Tool (BST), submitting a service request, and gathering additional information, see [What's New in Cisco Product Documentation](#).

To receive new and revised Cisco technical content directly to your desktop, you can subscribe to the [What's New in Cisco Product Documentation RSS feed](#). RSS feeds are a free service.

Cisco Smart Software satellite Overview

[About Cisco Smart Software Manager satellite](#) on page 7

[System Setup Overview](#) on page 8

[Supported Web Browsers](#) on page 9

About Cisco Smart Software Manager satellite

Cisco Smart Software Manager satellite is a component of Cisco Smart Licensing and works in conjunction with Cisco Smart Software Manager (CSSM) to intelligently manage customer product licenses, providing near real-time visibility and reporting of Cisco licenses that customers purchase and consume.

Customers who, either for policy or network reachability reasons, do not want to manage their Cisco products directly using Cisco Smart Software Manager residing at software.cisco.com, can choose to install Cisco Smart Software Manager satellite on-premises. Devices or software products register and report license consumption to the Cisco Smart Software Manager satellite as though it were a replicate of the Cisco Smart Software Manager hosted within the customer's premises.

Your installation package of the OVA/ KVM/Hyper-V build for Cisco Smart Software Manager satellite should consist of the following:

- JeOS (Just Enough Operating System)
- Smart call home Transport gateway
- Smart Software Satellite

Smart Call Home Transport gateway is a secure transport mechanism to transfer Cisco licensing data from the satellite to Cisco Smart Software Manager (the smart licensing back-end).

Default HTTPS User Access

After installation and setup, you access the satellite via a browser. If you select HTTP as the URL, the satellite will automatically roll over to HTTPS

For example, if you enter `http://172.125.15.17:8080`, it will default to `https://172.125.15.17:8443`. Alternatively, you can simply use `https://172.125.14.17:8443`.

Immediate satellite Registration

The registration process has changed from the previous version. With past versions, registration required a 48-hour wait for Cisco to create and sign certificates that are used to ensure secure communications between the satellite and product instances, as well as between the satellite and Cisco Smart Software Manager. With newer versions of Cisco products, you are able to manage devices and the satellite immediately after the satellite registration process to Cisco Smart Software Manager completes (without the 48-hour wait).

Automatic HTTPS Registration From Product Instances

With the latest Smart Software Manager satellite release, newer Cisco products can communicate with Smart Software Manager satellite via HTTPS without the need to manually install a Transport Gateway (TG) HTTPS certificate (download the certificate from [Cisco.com](https://cisco.com) and issue various CLIs) as before. This eliminates the cumbersome task of having to perform this step for every product instance, especially in a large network with thousands of product instances.

Upgrading Smart Software Manager satellite

Upgrading Cisco Smart Software Manager satellite can be completed from the user interface either manually or automatically. When you choose to upgrade, the Smart Software Manager satellite software is modified while the system is running with the current

configuration and licensing information. In the event the upgrade fails, the satellite will automatically roll back to the prior version without affecting the satellite operations. The GUI upgrade leverages Cisco Automated Software Delivery (ASD), which allows customers to check for an available software upgrade. The feature also provides options to automatically download and install the upgrade. As the name implies, ASD requires the satellite to be connected to cisco.com for the upgrade process. (See *Smart Software Manager satellite User Guide* for more information.)

Note: If you upgrade Smart Software Manager satellite to a newer version and the upgrade fails, you can roll back to the previous version of the software. However, if the upgrade completes successfully, you cannot roll back to a previous version. To downgrade to an earlier version, you must have previously performed a backup (using VMware snapshot for example) prior to upgrading. Use the backup image to restore the previous Smart Software Manager satellite version.

Simplified Network Setup

The following CLI scripts are added to the JeOS administrator shell to simplify the satellite configuration and registration:

- `conf satellite -network`
- `conf satellite-registration`

Network Utility

Network setup and troubleshooting tools are provided via a new user-friendly GUI, which currently supports IPV4 addresses. CLI will only be available for the initial configuration including specifying IP address, DNS/ NTP addresses, network mask, and default gateway. After the satellite is successfully registered (either via CLI or GUI), all CLI access will be disabled and customers can use the Network Utility GUI to change network configurations or to run various troubleshooting commands such as Ping, Traceroute, and Namespace Lookup.

Configurable Headers and Footers

Headers and footers on the satellite UI and reports are now configurable, enabling them to align with security classification.

System Setup Overview

Cisco Smart Software Manager satellite portal is divided into two main sections: a **Navigation** pane on the left and the main **Work** pane.

Note: Ensure that you are assigned to a Smart Account before you proceed with the tasks mentioned in this section.

You can use the **Navigation** pane to do the following tasks:

- View the list of virtual accounts
- Set up synchronization schedules
- Run reports against your virtual accounts
- Administer upgrades and manage users

System Requirements

Note: Ensure that you are assigned to a Smart Account before you proceed with the tasks mentioned in this section.

Ensure that the software image supplied for the installation of Cisco Smart Software Manager satellite has the following configuration:

- 50GB-200GB hard disk (OVA requires 200GB)
- 8GB Memory
- 4 CPUs

Your installation package of the OVA, KVM, or Hyper-V build for Cisco Smart Software Manager satellite should consist of the following:

- **JEOS**
- **Smart call home Transport Gateway**
- **Smart Software Manager satellite**

For details on installing and setting up the satellite, see *Cisco Smart Software Manager satellite Installation Guide*.

Supported Web Browsers

The following web browsers are supported for Cisco Smart Software Manager satellite:

- Chrome 32.0 and later versions
- Firefox 25.0 and later versions
- Safari 6.0.5

Note: Javascript 1.5 or later must be enabled in your browser.

Setting Up Cisco Smart Software Manager satellite

[Cisco Smart Software Manager satellite Configuration](#) on page 11

[Registering the satellite via GUI](#) on page 11

[Registering the satellite via a CLI](#) on page 13

[Setting the Time](#) on page 14

Cisco Smart Software Manager satellite Configuration

To configure the satellite, you need to:

- Register the satellite either via a network or manually.
- Synchronize the time with an NTP server.

Note: For more details on the installation process, see *Cisco Smart Software Manager satellite Installation Guide*.

Registering the satellite via GUI

After installing the Cisco Smart Software Manager satellite, you must register your satellite with Cisco Smart Software Manager (CSSM) to establish identity required for secure on-going communication. You can register the satellite using the online or offline method through the GUI. The online (network) option requires a network connection; you would use the offline (manual) when you are disconnected from the Cisco Smart Software Manager portal. After you complete the satellite registration process, you will receive an immediate response, confirming the registration, from Cisco Smart Software Manager.

Registering via a Network

Procedure

1. Launch the Cisco Smart Software Manager satellite application using either `http://<ipaddress>:8080` or `http://<ipaddress>:8443`.
2. Log in to the satellite using your user id and password for the satellite.
3. On the **Time Settings** tab, ensure that the time on the satellite is accurate to synchronize with the Cisco licensing cloud. If the time varies, make sure that the JEOS platform on which the satellite is running is in sync with the NTP server.
4. Click **Next**.
5. On the **Setup Method** screen, select the **Network Setup** radio button for online registration and click **Next**.
6. When presented with a CCO Single-Sign-On screen, login using our CCO credentials and click **Log In**.
7. In the **Request for Approval** dialog box, click **Allow** and specify the following:
 - a) Enter the satellite name.
 - b) Select **Smart Account**.
 - c) Add a new Virtual Account or use an existing account.

You can have multiple virtual accounts.

8. Click **Register Satellite**.
9. When prompted, confirm the Satellite registration and view the status displays to make sure the registration completes successfully.

The system will automatically restart during this process. After restart, the satellite will return to the same step the user was in before the restart.

10. Click **Next**.

The system proceeds to the **Synchronization Settings** page with **Network Setup** selected. A periodic synchronization must happen between the satellite and the Cisco Smart Software Manager to update the license entitlement and usage (30 days is recommended; 90 days is required). This section allows you to set up the connection between the Cisco Smart Software Manager satellite and the Cisco.com cloud portal to synchronize on-demand or at different time intervals using the Network Synchronization.

11. In the **Satellite Setup Summary** dialog box, click **Configure Satellite**.

The registration process completes and returns you to the main screen on the **General** tab.

Note: You can modify this setting and schedule synchronization timing later in the **Synchronization** page of the Cisco Smart Software Manager satellite portal. For more details, see [Scheduling Synchronization for Satellites](#) on page 22.

What to do next

This completes the satellite configuration process. You can now navigate to the Cisco Smart Software Manager and view the details of the satellite you just registered under the refreshed **Satellites** pane.

Refer to the other sections of the *User Guide* to view or perform various tasks of Smart Licensing.

Registering Manually

If the Cisco Smart Software Manager satellite is completely disconnected, follow this procedure to register it manually.

Procedure

1. Launch the Cisco Smart Software Manager satellite application using either `http://<ipaddress>:8080` or `http://<ipaddress>:8443`.
2. Log in to the satellite using your user id and password for the satellite.
3. On the **Time Settings** tab, ensure that the time on the satellite is accurate to synchronize with the Cisco licensing cloud. If the time varies, make sure that the JEOS platform on which the satellite is running is in sync with the NTP server.
4. Click **Next**.
5. On the **Setup Method** screen, select the **Manual Setup** radio button for online registration and click **Next**.
6. Click **Generate Registration File** and save the file to your computer.
The system generates a registration request file.
7. Go to Cisco Smart Software Manager and click **Satellites**.
8. In the **Satellites** tab, click **New Satellite**.
9. In the **New Satellite** dialog box, enter the name of the satellite that requires registration.
10. Click the **Browse** button located next to the **Registration File** field and select the registration file that was generated on the satellite in a previous step.
11. In the **Virtual Accounts** field, select an existing Virtual Account that you want the new satellite to manage.
You can also create a new Virtual Account if you have the appropriate access (in other words, Smart Account Administrator). You can have multiple virtual accounts.
12. Click **Create Authorization File**.
13. When prompted, click **Download Authorization File** and save it to your computer.
Previously you'd have to wait 48 hours, but now you can download the registration response file immediately.
You can also see that the new satellite is created in the refreshed **Satellite** tab.
14. In the Cisco Smart Software Manager satellite, at the **Register Satellite** step, click **Browse** and navigate to the location where the authorization file was downloaded.
15. Click **Upload** to upload the authorization file.
16. Click **Register Satellite**.

The system will automatically restart during this process. After restart, the satellite will return to the same step the user was in before the restart.

17. On the **Synchronization Settings** page, click **Next**.

A periodic synchronization must happen between the satellite and the Cisco Smart Software Manager to update the license entitlement and usage (30 days is recommended; 90 days is mandatory).

18. In the **Satellite Setup Summary** dialog box, review the summary details and click **Configure Satellite** if the configuration is correct.

What to do next

This completes the satellite configuration process. You can now go to the Cisco Smart Software Manager and view the details of the satellite under the refreshed **Satellites** pane.

Refer to the other sections of the *User Guide* to view or perform various tasks of Smart Licensing.

Registering the satellite via a CLI

The satellite can be registered to CSSM through a question-response CLI script in the JeOS administrator shell, which is functionally equivalent to the satellite GUI online registration function (Internet connectivity with CSSM is required).

Note: You can enter **Ctrl-X + Enter** at any time after the CLI prompts you for input, if you want to exit from the script (except when you are prompted for your CCO password).

Procedure

1. At the command prompt, enter `conf satellite-registration`.

If the satellite is already registered, a notification immediately appears, so that you can avoid completing the following steps unnecessarily.

2. At the prompt, enter the name of the satellite.

3. Enter the Cisco.com user name and password to access the Smart Account.

The system displays a list of Smart Accounts that you can access on Cisco.com.

4. Select the number associated with the desired Smart Account.

If you enter the wrong number, the system prompts you again.

A list displays eligible virtual accounts under that Smart Account. Eligible virtual accounts exclude the default virtual account and include virtual accounts that do not contain any product instances in them (in other words, product instances that had already been registered with CSSM).

5. Choose one or more of the virtual accounts in the list by entering the number of that virtual account and pressing **Enter**.

6. (Optional) To add additional virtual accounts, place your cursor on a blank line and press **Enter**.

7. At the confirmation prompt, type **y**.

The system displays a message while it registers with CSSM. This can take several minutes, during which time messages display regarding the registration progress.

After the process completes, the satellite displays a message that notifies you of the registration status. If the registration was successful, you can open CSSM and the Satellites tab shows the registered satellites under it. If the registration was unsuccessful, the message will contain information about why it failed, so you can correct the issue.

8. (Optional) If you terminate the JeOS shell before the final step (submission to CSSM for satellite registration), you can safely start the process again by entering the command `conf satellite-registration` at the admin shell prompt

If the admin shell is terminated during the last step after the registration request has been submitted to CSSM, the registration will continue. Barring any other errors, the satellite will successfully register (whether or not the CLI is able to display that fact).

If the system experiences network connectivity issues, this tool might time out while waiting for a response from the server, which will result in a return to the admin shell prompt:

- If this timeout occurs during any step prior to the final registration, this tool can be safely started again.

- If the time out happens during the final registration step, there is a chance that this satellite instance may end up in an undetermined state. If you have questions about the registration process, first check your CSSM Satellites tab and check whether the satellite appears within it. For other issues, contact Cisco support.

Setting the Time

Procedure

To sync the time with the NTP server:

- Click **Next** under the **Time Settings** tab.
- Click **Sync Time Now**.

Using Cisco Smart Software Manager satellite

[Licenses, Product Instances, and Registration Tokens](#) on page 15

[Virtual Accounts](#) on page 16

[Virtual Account Panes](#) on page 16

[Synchronization Alerts and Actions](#) on page 21

[Synchronization Pane](#) on page 22

[Reports Pane](#) on page 24

[Administration Pane](#) on page 25

[Upgrade Cisco Smart Software Manager satellite with Automated Software Delivery](#) on page 28

[Upgrading from Version 2.0 to 2.X](#) on page 30

[Backward Compatibility](#) on page 31

Licenses, Product Instances, and Registration Tokens

Licenses

- Term licenses—Licenses that automatically expire after a set amount of time: one year, three years, or whatever term was purchased.
- Perpetual licenses—Licenses that do not expire.
- Demo Licenses—Licenses that expire after 60 days. Demo licenses are not intended for production use.

Product Instances

A product instance is an individual device or software with a unique device identifier (UDI) that is registered using a product instance registration token. You can register several instances of a product with a single registration token. Each product instance can have one or more licenses that reside in the same Virtual Account.

Product instances must periodically connect to the Cisco Smart Software Manager satellite servers during a specific renewal period. If a product instance fails to connect, it continues to use the license and retains its latest status from the satellite until its ID certificate expires after 1 year from the last contact. If you remove the product instance, its licenses are released and made available within the Virtual Account.

Product Instance Registration Tokens

A product requires a registration token to register to the satellite before it can report license consumption. Registration tokens are stored in the Product Instance Registration Token Table that is associated with your Smart Account. Once the product is registered, the registration token is no longer necessary and can be revoked and removed from the table. Registration tokens can be valid from 1 to 365 days.

Note: For details on creating a token, see [Creating a Product Instance Registration Token](#) on page 18

Virtual Accounts

Virtual Accounts are collections of licenses and product instances. The licenses can be organized for your company into separate logical entities. You can use Virtual Accounts to organize licenses by business unit, product type, IT group, or whatever makes sense for your organization. For example, if you segregate your company into different geographic regions, you can allot the Virtual Account for each region to hold the licenses and product instances for that region.

You can view only those Virtual Accounts that were assigned for a particular satellite in a Smart Account. Note that a satellite can have multiple virtual accounts, but a virtual account can only belong to one satellite.

When you are working with Virtual Accounts:

- You can view Virtual Accounts in Cisco Smart Software Manager satellite, but you cannot create or remove them. Virtual Accounts must be created and managed in the Smart Account Management on software.cisco.com.
- All new licenses and product instances are placed in a virtual account. You choose the virtual account when you register a product instance.
- You can view and obtain the most recent virtual account data after the satellite synchronizes with the Cisco Smart Software Manager.

Virtual Account Panes

Virtual account panes include the following:

- Alert Bar
- General Tab
- License Tab
- Product Instances Tab
- Event Log Tab

Alert Bar

Any license or product instance that is not in compliance with the licensing agreement creates an alert. The **Alert Bar** provides a summary of the alerts in the virtual account. Alerts are listed in the tables on the **Licenses** and **Product Instances** tabs and are summarized in the **Alert Bar**.

If you choose the **Major** or **Minor** button to view alerts, the **Alert Bar**, which appears below the alert buttons, shows one row per alert. If there are no alerts, the alert buttons are hidden.

The main portion of an alert contains the alert description. On the right of an alert are links to appropriate actions.

On the right of the alert is the **Action Due** field, which shows how much time remains for you to take action on the alert.

- The **Major** button enables you to view all major alerts, such as Out-of-Compliance conditions, and take action on a specific alert. In addition to any other action links, all major alerts contain a link to a **Troubleshooting** dialog box that provides information about how to resolve the alert.
- The **Minor** button allows you to view all minor alerts, such as expiring licenses, and take action on a specific alert. Minor alerts are promoted to major alerts if not acted upon within their time limit.

With minor alerts, you have the following options:

- **Remind Later**—Notifications are dismissed until half of the time that is displayed in the **Action Due** field has passed.
- **Dismiss**—No notifications are displayed until the next time that the error is generated.

- The **Hide Alerts** button allows you to collapse the alerts.

General Tab

The **General** tab displays information about the specific virtual account and the registration tokens that are associated with the virtual account. From the **General** tab, you can do the following:

- View information about the virtual account.
- Edit the virtual account.
- View a list of existing product instance registration tokens.
- Create new product instance registration tokens.
- Copy, download, or revoke registration tokens. Revoked registration tokens can be left in the list or removed.

Licenses Tab

The **Licenses** tab displays information about all of the licenses in your virtual account. From the **Licenses** tab, you can do the following:

- View a list of all licenses in the virtual account.
- Filter the licenses by the license identifier.
- View information about a specific license and which product is using it.
- View information about the alerts for specific licenses and fix the issue.
- Export the list of licenses to a `.csv` file.

Note: You cannot transfer licenses in Cisco Smart Software Manager satellite. You can transfer licenses using Cisco Smart Software Manager.

Product Instances Tab

The **Product Instances** tab displays information about all of the product instances in your virtual account. From the **Product Instances** tab, you can do the following:

- View a list of all product instances.
- Transfer product instances between virtual accounts.
- Filter the product instances by the product identifier.
- View information about a specific product instances and what licenses it consumes.
- View information about the alerts for a specific product instance.
- Remove a specific product instance from the virtual account which in turn removes from the smart account.
- Export a list of product instances to a `.csv` file.

Event Log Tab

The **Event Log** tab displays information about all of the events in a virtual account. Events are actions that you have taken using Cisco Smart Software Manager satellite such as adding and removing licenses and products, adding and renaming virtual accounts, and so on. From the **Event Log** tab, you can do the following:

- View a detailed list of all events in the selected virtual account.
- Filter the events by license or by product.

- Export the list to a .csv file.

Note: You can view or obtain the most recently updated data after you have synchronized the satellite with the Cisco Smart Software Manager.

Viewing Virtual Account Information

Procedure

1. In the **Navigation** pane, click a Virtual Account.
2. Click the **General** tab.

Creating a Product Instance Registration Token

Product instance registration tokens are used to register a product for smart licensing. You must generate a token to register the product and add the product instance to a specified virtual account. When you create a new token, it is added to the Product Instance Registration Token table of that virtual account in which the product will be registered.

Procedure

1. In the **Navigation** pane, click an existing virtual account.
2. On the **General** tab, click **New Token**.
3. In the **Create Registration Token** dialog box, complete the following fields:

Name	Description
Virtual Account field	Displays the virtual account under which the registration token will be created.
Description field	The description of the registration token. Note: Specify a description that will help you identify the token.
Expire After field	The time limit for the token to be active up to 365 days.

4. Click **Create Token**.

Viewing Product Instance Registration Tokens

You can view the registration tokens for a Virtual Account. These registration tokens can be used to register new product instances in the Virtual Account.

Procedure

1. In the **Navigation** pane, click a virtual account.
2. Click the **General** tab.
This page has two sections: **Virtual Account** and **Product Instance Registration Tokens**.
3. In the **Product Instance Registration Tokens** section, the following details are displayed in a table:

Name	Description
Tokens field	The token ID that was generated. You can click the link to view or copy the entire length of the token string.
Expiration Date field	The time limit for the token to be active.
Description field	The description of the registration token.
Created By field	The user who created the token.

Name	Description
Actions links	<p>Choose one of the following actions:</p> <ul style="list-style-type: none"> • Copy—Copy the token to your clipboard. • Download—Download the token to your local machine in a text file format. • Revoke—Revoke the token. Revoked tokens can no longer be used. • Remove—Remove a revoked token from the Product Instance Registration Token table.

Managing Product Instance Registration Tokens

Procedure

1. In the **Navigation** pane, click an existing virtual account.
2. On the **General** tab, locate the token in the **Product Instance Registration Token** table that you want to manage.
3. In the **Product Instance Registration Token** table, perform one of the following actions:
 - **Copy**—Copy the token to your clipboard.
 - **Download**—Download the token to your local machine in a text file format.
 - **Revoke**—Revoke the token. Revoked tokens can no longer be used.
 - **Remove**—Remove a revoked token from the **Product Instance Registration Token** table.

Viewing Licenses in a Virtual Account

Note: You cannot transfer licenses to or from a different Virtual Account in Cisco Smart Software Manager satellite. You can transfer licenses using Cisco Smart Software Manager.

Procedure

1. In the **Navigation** pane, click a virtual account.
2. Click the **Licenses** tab.
3. You can export the license list to a `.csv` file from this pane.
4. Click the license ID to see detailed information about a license.

The system displays the **License Detailed Information** dialog box. This dialog box has the tabs **Overview**, **Product Instances**, and **Event Log**.

Viewing Product Instances in a Virtual Account

Procedure

1. In the **Navigation** pane, click a virtual account.
2. Click the **Product Instances** tab.
3. You can export the list of product instances to a `.csv` file.
4. Click the product instance name to see detailed information about a product instance.

Note: A cluster setup icon by the right side of the product instance indicates a high availability of routers for that specific product instance.

The system displays the **Product Instance Details** dialog box. This dialog box has the tabs **Overview** and **Event Log**.

What to do next

You can transfer a product instance to a different virtual account or delete product instances.

Transferring a Product Instance

Caution: Transferring a product instance from one virtual account to another virtual account does not result in the corresponding licenses being transferred. You will have to transfer the licenses separately through Cisco Smart Software Manager.

Procedure

1. In the **Navigation** pane, click an existing virtual account.
2. Click the **Product Instances** tab.
3. In the **Product Instances** table, locate the product instance that you want to transfer.

Note: Enter a value in the **Filter** combo box and click **Filter** to limit the number of entries that are displayed.

4. In the **Actions** column, click the **Transfer** link for the product instance that you want to transfer.
5. In the **Transfer Product Instance** dialog box, complete the following fields:

Name	Description
Name field	The name of the product instance and the product name.
Transfer To drop-down list	Choose the virtual account that you want to transfer the product instance to.

6. Click **OK** to transfer the product instance.

Removing a Product Instance

When you remove a product instance from the satellite, you are removing it only from the table. The licenses that the product instance was using are still available and can be used by other products. You must re-register the product instance with the Cisco Smart Software Manager cloud or satellite, so that CSSM or satellite can communicate with the product again.

Procedure

1. In the **Navigation** pane, click an existing virtual account.
2. Click the **Product Instances** tab.
3. In the **Product Instances** table, locate the product instance that you want to remove.

Note: Enter a value in the **Filter** combo box and click **Filter** to limit the number of entries that are displayed.

4. In the **Actions** column, click the **Remove** link for the product instance that you want to remove.
5. In the **Confirm Remove Product Instance** dialog box, click **Remove Product Instance**.

Viewing Event Logs

The event log shows the event message, the time of the event, and the user (if any) associated with the event.

Procedure

1. In the **Navigation** pane, click a virtual account.
2. Click the **Event Log** tab.
3. You can export the event list to a `.csv` file from this pane.

Exporting to CSV Files

Procedure

1. In the **Navigation** pane, click a virtual account.

2. On the **License**, **Product Instances**, **Event Log**, or **Users** page, click the **CSV** icon in the upper right.
3. Use the **File Save** dialog box to save the file on your hard drive.

Note: The system uses a platform-dependent dialog box to save the file. The dialog box varies slightly depending on the browser and operating system that you are using.

Synchronization Alerts and Actions

The synchronization process enables you to setup a connection between Cisco Smart Software Manager satellite and the Cisco Smart Software Manager by communicating through Cisco.com at different time intervals to transfer data. Following are the synchronization buttons and alerts that you will find on the work pane of the Cisco Smart Software Manager satellite:

- **Last Synchronization**
- **Synchronize Now / Manual Synchronization**
- **Synchronization Alerts**

Last Synchronization

This button is available in the upper right corner of the work pane. It indicates the time when the most recent synchronization was successfully completed. Click this button. The dialog has two sections: **Status** and **Settings**.

In the **Status** section, you can view the **Last Successful Synchronization** and the **Next Synchronization Due By** information. Beside the **Status** field, you will find a link to **View Log**. Click this link to view the synchronization activity table that lists the time, type and the status of synchronization.

In the **Settings** section, you will find the details pertaining to the mode of synchronization chosen and the results of the synchronization attempts displayed. Click the **Edit** button beside the **Settings** field to modify the synchronization settings. For more details on these settings, see [Scheduling Synchronization for Satellites](#) on page 22

Click **View Synchronization Data File** link in the bottom right of this dialog to download the synchronization data file.

Synchronize Now / Manual Synchronization

This toggle button is displayed in the upper right corner, next to the **Last Successful Synchronization** button. This button changes according to the synchronization modes chosen. Each of these scenarios is explained in the following points:

- In the **Synchronization Settings** section of the **Synchronization** page, if you choose **Network Synchronization** mode, the **Synchronize Now** button is displayed. Click this button to synchronize and update satellite data instantly. This method of synchronization works for network deployed environments only.

Note: Port 443 must be enabled for communications between the Cisco Smart Software Manager satellite and the Cisco Smart Software Manager.

- In the **Synchronization Settings** section, of the **Synchronization** page, if you choose **Manual Synchronization** mode, the **Manual Synchronization** button is displayed. Click this button to use the file-based synchronization option.

Note: For more details, see [Scheduling Synchronization for Satellites](#) on page 22

Synchronization Alerts

They indicate an impending problem. Alerts are displayed on the alert bar in the work pane. Two types of alerts can be generated due to the following conditions:

- **Synchronization Overdue**—Any instance of Cisco Smart Software Manager satellite that has not synchronized with Cisco for over 31 days will receive this overdue alert. All product instances associated with it will automatically be unregistered and the satellite will be removed from the Cisco Smart Software Manager if no synchronization occurs within 90 days.

- **Synchronization Attempt Failed**—This type of alert is displayed when you attempt to synchronize data from Cisco Smart Software Manager to Cisco and the network connection fails.

Note: If there are no alerts, the alert buttons are hidden.

The main portion of an alert contains the alert description. On the right of an alert are links to appropriate actions. For example, the alert `Synchronization Attempt Failed` has links to the **Dismiss** button that you can use to clear this alert message until the next time that the error is generated.

Synchronization Pane

The **Synchronization** pane includes the following sections:

- **Synchronization Mode**
- **Synchronization Data Security Settings**
- **Synchronization Schedule**

Note: For more information, see [Scheduling Synchronization for Satellites](#) on page 22.

Synchronization Mode

This section allows you to set up the connection between the Cisco Smart Software Manager satellite and the Cisco Smart Software Manager to synchronize manually or at different time intervals using the following mode options:

- **Network Synchronization**—Data is synchronized and updated on demand or at scheduled time periods in this mode. Port 443 is used for communication between the Smart Software Manager satellite and the Smart Manager. You can choose this mode if you are able to connect to Cisco.com periodically. This type of synchronization is suitable for network enabled environments.
- **Manual Synchronization**—Data is transferred through a file download and upload process in this synchronization mode. You can choose this mode if you do not have network connectivity or cannot establish a connection to communicate with Cisco Smart Software Manager.

Synchronization Data Security Settings

This section provides you an option to exclude the following secured data while transferring the product instance data file to Cisco cloud portal:

- **Hostnames**—The host name of the computer on which you perform the synchronization schedule. This data will be excluded during transfer when you check this checkbox.
- **IP Addresses**—The IP Address of the computer on which you perform the synchronization schedule. This data will be excluded during transfer when you check this checkbox.
- **MAC Addresses**—The Media Access Control (MAC) Address of the computer on which you perform the synchronization schedule. This data will be excluded during transfer when you check this checkbox.

Synchronization Schedule

This section allows you to set up a schedule and synchronize data between the satellite and Cisco Smart Software Manager. You can choose the frequency and the time for scheduling the synchronization.

Scheduling Synchronization for Satellites

You can schedule a chosen date and time for synchronizing the satellite with the software manager.

Procedure

1. In the **Navigation** pane, click **Synchronization**.

On the **Synchronization** page, you have three sections: **Synchronization Mode**, **Synchronization Schedule**, and the **Synchronization Data Security Settings**.

2. In the **Synchronization Mode** section, click the radio button to choose the type of synchronization you prefer. It can be one of the following modes as listed in the table:

Name	Description
Network Synchronization	Data is transferred and synchronized at scheduled time periods which you can choose from the options provided in Step 4. You can schedule a time to connect and transfer data between the Smart Cisco Smart Software Manager satellite and Cisco cloud portal.
Manual Synchronization	Data is transferred through a file upload and download process in a manual synchronization mode. Select this mode if you cannot establish a connection between the Cisco Smart Software Manager satellite and Cisco cloud portal. Note: If you choose this option, go to Step 5.

3. In the **Synchronization Schedule** section, you can set up the synchronization schedule. Each of these fields and the options are explained in the following table:

Note: The **Synchronization Schedule** option is visible when you choose to perform network synchronization only.

Name	Description
Frequency field	Choose the schedule to synchronize and update data from the drop-down list. It can be one of the following: <ul style="list-style-type: none"> • Daily—This method allows you to synchronize on a daily basis at a specified time. • Weekly—This method allows you to synchronize only once a week at a specified time and day of the week. • Monthly—This method allows you to synchronize only once a month at a specified time and date.
Time field	The time in an hour and minute format.
Date field	The day of the week chosen for weekly synchronization or a particular date for the monthly synchronization as applicable in the Frequency field.

4. The instructions in this step are applicable when you choose **Manual Synchronization** mode in Step 3. Clicking the **Manual Synchronization** radio button in Step 3, displays a **Manual Synchronization** menu button in the upper right corner of this page. Click this button and complete the following steps in this dialog to perform manual synchronization:
5. In the **Manual Synchronization** dialog box, perform the following steps:
 - a) Click the **Download** button to download the satellite data file to your local hard disk. A data file is generated and opens the local file directory to save. Choose a location where you want to save the data file.
 - b) Login to the Cisco Smart Software Manager and click the **Satellites** tab.
 - c) In the **Satellites** page, locate the satellite for which you want data synchronization.
 - d) Click **File Sync** link against the satellite in the **Actions** column of this page.
 - e) In the **Synchronize Satellite** dialog box, click **Browse** to upload the data file that was generated in the satellite.

- f) Click **Generate Response File** to generate a response file that has the data synchronized. The **Synchronization Response File Generated** dialog is displayed to confirm.
- g) Click **Download Response File** to download the response file to your local hard disk.
- h) Login to the Cisco Smart Software Manager satellite.
- i) Click **Upload** in the bottom of the **Manual Synchronization** dialog box to upload the response file and complete the manual synchronization process.

After this step completes, the license entitlement and usage on both Cisco Smart Software Manager and satellite are identical for the virtual accounts that are associated with the satellite.

6. In the **Synchronization Data Security Settings** section, check the check box next to any of the following client secured data to be excluded while transferring the product instance data file to Cisco cloud portal. It can be one or more of the following:

Name	Description
Hostnames check box	The host name of the computer on which you perform the synchronization schedule. This data will be excluded during data transfer, when you check this check box.
IP Addresses check box	The IP Address of the computer on which you perform the synchronization schedule. This data will be excluded during data transfer, when you check this check box.
MAC Addresses check box	<p>The Media Access Control (MAC) Address of the computer on which you perform the synchronization schedule. This data will be excluded during data transfer, when you check this check box.</p> <p>Note: MAC Address is a unique identifier assigned to a network interface for communications. This is provided to the hardware of the network adapters at the time of manufacturing. It is hardwired or hard-coded onto your computer's network interface card (NIC) and used for communication on the physical network segment.</p>

Reports Pane

The **Reports** pane enables you to run different reports against your virtual accounts. The reports table displays the following information for each supported report. You can run a **Licenses** or **Product Instances** report:

Name	Description
Name area	The name of the Cisco Smart Software Manager satellite report. Click the link to view the specific report page.
Description area	The description of the report.

Running Reports

Procedure

1. In the **Navigation** pane, click **Reports**.
2. On the **Reports** page, choose the report that you want to run.
3. In the **Report Settings** pane, complete the following fields:

Name	Description
Name field	The name that you want to assign to the report.

Name	Description
Description field	The optional description that you want to use for the report.
Virtual Account drop-down list	Choose one or more virtual accounts that you want to run the report against. Choose All Virtual Accounts to run the report against all virtual accounts. Note: You can run reports for only those virtual accounts to which you have access.
Product Type field (product instance reports only)	The product type that you want to run the report against. You can choose one or more product families.

4. In the **Actions** pane, choose an action. This can be one of the following:

- **Run Report**
- **Export to Excel**
- **Export to CSV**

Clicking **Run Report** opens the report in a new browser window. Clicking **Export to Excel** or **Export to CSV** opens a **File Save** dialog box.

Administration Pane

As a Cisco Smart Software Manager satellite license administrator, you can use functionalities in the Administration pane to:

- Create a new user, remove an existing user, and view user profile data on the **Users** tab.
- Upgrade Cisco Smart Software Manager satellite to a new version on the **Upgrade** tab.
- Generate diagnostic logs of your user experience, which will allow the Cisco Support team to optimize the benefits of Smart Licensing, on the **Diagnostic Logs** tab.

The **Users** tab provides a table with the following information and options:

Name	Description
User Name	The name of the user. Click the link to view the complete information of the user.
Full Name	The full name of the user.
Actions	Click Delete if you choose to delete a user permanently from the application. Confirm the deletion at the prompt.

The **Administration** pane also provides buttons to create a new administrator sequence and for exporting data to CSV files.

Creating a New Administrator

Use the following procedure to create a new satellite Administrator (the only role on the satellite). This is local to the satellite only and does not affect the Smart Account on Cisco Smart Software Manager.

Procedure

1. In the **Navigation** pane, click **Administration**.
2. On the **Administration** page, click **New Administrator**.
3. In the **New Administrator** dialog box, complete the following fields:

Name	Description
Username field	The name or ID provided for the user. The username should contain a minimum of 4 alphanumeric characters.
Full Name field	The first and last name of the user.
Password field	Enter the user's password. The password should contain a minimum of 6 characters and include 1 number, 1 upper case, and 1 special character.
Re-enter Password field	Re-enter the password.
User must change password at first login check box	Check the check box to force the user to change the password after the first login.

4. Click **OK**.

Generating Diagnostic Log Files

Use the following procedure to generate diagnostic logs for your Cisco Support.

Procedure

1. In the **Navigation** pane, click **Administration**.
2. On the **Administration** page, click **Diagnostic Logs**.
3. Specify the date range for the log file:
 - Select a pre-set the date range from the drop down menu.
 - Select **Date Range** to display a window in which you can enter beginning and ending dates for the data sample.
4. Click **Generate Zip File** to download your diagnostic log to your computer desktop.

This file should then be sent as an email attachment to Cisco Support.

Network

The **Network** tab in **Administration** provides setup and troubleshooting tools through the GUI.

Command Line Interface (CLI) is only available for the initial configuration including specifying IP address, DNS/NTP addresses, network mask, and default gateway. After the satellite is successfully registered, all CLI access is disabled after setup to provide additional security.

The **Network** tab shows the current setup of the satellite.

Use **Edit Network Settings** to change network interfaces, DNS, and NTP configurations.

Use **Launch Network Diagnostic** to run ping, traceroute, and namespace lookup.

Edit Network Settings

If you change the Network Address the following series of actions may be required:

- You might need to update the Smart Call Home transport URL on each of your registered Product Instances so they can continue communicating with the satellite.
- The URL to reach this administrative interface will be changed.
- You will need to synchronize the satellite to complete the change.
- You will be asked to **Confirm Network Address Change** and given the choice to **Continue** or **Cancel**. If you click **Continue** the change will be made and a page will be displayed with the message **Administration Interface URL Changed**. You will be given the new URL at this point. Be sure to update any bookmarks with the new URL.

- When you go to the new URL and log into the satellite, a **Synchronize Needed to Complete IP Address Change** alert message will be displayed and remain visible until you complete the sync.
- Once the sync is completed, an alert informs you to "**Verify Transport Settings on Registered Product Instances** - The network address of this Smart Software Manager satellite has been changed. If necessary, update the Smart Call Home transport URL configured on your registered Product Instances to ensure that they can communicate with the satellite."

Procedure

1. Scroll to the bottom of the **Network** tab.
2. Click **Edit Network Settings**.
3. On the **Network Interfaces** tab, the **Administration Network Interface - eth0** drop-down menu is disabled and will show only as Enabled. If you have multiple network interfaces, the Status drop-down menu will be available for all other interfaces except eth0, as follows:
 - **Enabled**
 - **Disabled**

The Hardware Address will show below the drop-down menu.
4. Click **Network Interfaces** tab.
5. Under **IPv4**, the **Configuration** drop-down menu for **eth0** is disabled and will only show as **Manual**. If you have multiple Network Interfaces, the **Configuration** drop-down menu will be available for all other interfaces except eth0, as follows:
 - **DHCP**
 - **Manual**
 - **Not Configured**
6. Enter the IP Address, Subnet, and Gateway information.
7. If you want to change the domain name server configuration, click the **DNS** tab and enter the DNS servers and Search Domains.
8. If you want to change the NTP server configuration, click the **NTP** tab and enter NTP server address.
Use the **Sync Time Now** link to immediately sync your satellite server time with the selected NTP server.
9. Click **OK** or **Cancel** when you're done.

Launch Network Diagnostics

Procedure

1. At the bottom of the **Network Tab** in **Administration** click **Launch Network Diagnostic**.
2. Choose the **Network Interface** from the drop-down menu.
3. Enter **Hostname** or **IP Address**.
4. Click **Ping** and the results will display in the box.
5. Click **Traceroute** and results will display in the box.
6. Click **Namespace Lookup** and results will display in the box.
7. Use **Clear Output** to clear the out put box.
8. Use **Cancel** if you want to cancel the current search.

System Settings

The **System Settings** tab in **Administration** allows you to set up Headers and Footers and SSLv3.

Configuring Headers and Footers

Custom Headers and Footers are now user configurable enabling them to align with federal security classification. Text will be displayed on the top and bottom of satellite login page, all application pages and reports generated by the satellite. These headers and footers allow users to provide classification markings and other meaningful designation.

Procedure

1. In the **Administration** pane, click **System Settings**.
2. To set/change custom and footers:
 - a) Under **Custom Headers/Footers**, check the **Display custom headers and footers** check box.
 - b) In the **Text** field, type in what you want your header and footer to say.
A preview of your text is shown in the **Preview** area.
 - c) Select the font size from the **Text Size** drop-down menu.
 - d) Select the header and footer color from the **Color** drop-down menu.
 - e) Click **Save**.
3. To disable custom headers and footers:
 - a) Under **Custom Headers/Footers**, clear the **Display custom headers and footers** check box.
 - b) Click **Save**.
 - c) Refresh your browser.

Configuring SSLv3

This tab allows you to enable SSL (Secure Socket Layer) v3 and backward compatibility with certain products. The satellite defaults to TLS (Transport Layer Security), so if a device with an old smart agent image tries to make a handshake with SSLv3, it will fail. Therefore, we provide this option for older products that are still using SSL v3 and enable SSLv3 communication with the satellite.

Procedure

1. In the **Administration** pane, click **System Settings**.
2. In the SSLv3 Compatibility section, set the **Enable SSLv3** check box as desired.
3. Click **Save**.

Upgrade Cisco Smart Software Manager satellite with Automated Software Delivery

Note: The information in this section applies to users of Cisco Smart Software Manager satellite Version 2.1 and later. If you are using Version 2.0, see [Upgrading from Version 2.0 to 2.X](#) on page 30.

The Cisco Smart Software Manager satellite includes an upgrade feature, Automated Software Delivery (ASD). With ASD, you can check whether a software upgrade is available. ASD also provides options for you to automatically download and install the upgrade. To use ASD, the satellite must be connected to cisco.com to complete the upgrade process.

Using ASD also lets you bypass the End User License Agreement (EULA) acceptance step that is required when you download the upgrade from Cisco.com. It only provides the message to inform you that you are bound by the EULA.

To proceed with the manual upgrade, see [Using the Network Upgrade](#) on page 28

Using the Network Upgrade

Procedure

1. Log in to the Cisco Smart Software Manager satellite and click the **Administration** button.
2. Click the **Upgrade** tab.
3. Under the Network Upgrade heading, click **Check for Upgrade Now**.
 - If your satellite has the current version, Cisco Smart Software Manager satellite displays a message that no new version is available.

- If a newer version is available, that version number is shown and you can click **View Release Notes** to review information about this update.

4. Click **Upgrade Now**.

The system downloads the patch and initiates the upgrade.

- The download can take up to 10 minutes depending on the size of the patch file and the speed of the Internet connection.
- The system displays the download progress and when that is complete, informs you of the upgrade status.
- The satellite is automatically restarted at the end of the upgrade process. If the upgrade fails, you can click **View Error Logs** for more information.

Note: If you need to cancel the upgrade, you can click **Cancel**, but only during the download process. After the upgrade begins, you cannot abort the process.

5. When the upgrade process completes, follow Steps 1 through 3 to verify that the latest version is installed.

Scheduling Network Upgrades

When you use the network upgrade schedule feature, you choose:

- How often you want Cisco Smart Software Manager satellite to check for updates
- What actions you want Cisco Smart Software Manager satellite to take when a new version is available.

Follow these steps to schedule and configure your network updates:

Procedure

1. Log in to the Cisco Smart Software Manager satellite and click the **Administration** button.
2. Click the **Upgrade** tab.
3. Click the option, **Automatically check for available upgrades**.
4. Use the drop-down menus for Frequency, Time, and Day of Week to configure when and how often you want Cisco Smart Software Manager satellite to check for updates.
5. Click the **If Upgrade Available** drop-down menu to choose an installation method option:
 - **Display Alert Message.** This option displays an alert message that allows you to dismiss it or perform a network upgrade. For information on using the manual upgrade process, see [Using the Network Upgrade](#) on page 28
 - **Display Alert and Download Upgrade.** This option automatically downloads a patch file and alerts you after the download completes. However, you can dismiss the alert and perform the upgrade when you want. When you are ready to upgrade, follow the instructions in [Using the Network Upgrade](#) on page 28. To begin the upgrade, you click **Upgrade Now**.
 - **Display Alert, Download, and Upgrade.** This option automatically downloads and installs a new upgrade. A message alerts you of a successful upgrade. If the upgrade fails, you can click **View Error Log** to check for the cause.

Note: All of the installation method options offer a link to the Release Notes within the alert message.

6. Click **Save** to save your changes.

Note: If you choose the monthly schedule option and the 29th does not exist for that month, the scheduled action rolls over to the next month.

Using the Manual Upgrade

The manual upgrade option is not part of the ASD feature, but is included in the user interface, alongside the ASD options. The manual upgrade allows you to view available downloads" from Cisco.com, but requires that you manually initiate the upgrade, yourself.

Procedure

1. Under the Manual Upgrade heading, click the **View Available Download** link, which directs you to the Cisco.com satellite download page for the latest release.
2. Download the patch file directly from Cisco.com.
3. Select **Choose File** and the patch file you downloaded to your PC from the previous step.
4. Click **Upload** to put it to the satellite.
5. Click **Upgrade Now** to complete the upgrade process.

After the upgrade completes, you are directed to the satellite login page.

Upgrading from Version 2.0 to 2.X

Before you Begin

- In order to upgrade Smart Software Manager satellite Version 2.0 to 2.X, you must have satellite Version 2.0 installed and running.
- You must be authorized to run Bash shell scripts on the system you are upgrading.
- We highly recommend that you back up your virtualized environment before running the upgrade script because you cannot downgrade to a previous version of Cisco Smart Software Manager satellite after you upgrade.

This upgrade process must be done via the Bash shell.

Procedure

1. Download Cisco Smart Software Manager satellite version 2.1 patch file from Cisco.com to your local machine.
2. Use the **collectorlogin** command to upload the patch file to the Cisco Smart Software Manager satellite virtual machine.
For example: `scp ~/Downloads/sp-17.0.1-0-0-lnx64.zip collectorlogin@172.20.222.75:~/sp-17.0.1-0-0-lnx64.zip` where the file name should be exact name provided by JeOS.

Note: The default password for **collectorlogin** is **Collector12!User**

To reset the collectorlogin password, log in as admin to satellite and issue the command, **pwdreset collectorlogin 180**

3. Log in with SSH to Smart Software Manager satellite console.
4. Open a command shell and run the following Linux command:
`sudo /opt/LCM/bin/lcmagent-apply.tcl SP filename &`
5. After the `sudo` command has completed, use the following command to check the log:
`tail -f /opt/LCM/logs/install`
6. To check the status of the upgrade, use the following command:
`cat /op/LCM/info/satellite_upgrade_status.txt`
The upgrade process takes approximately 3 to 5 minutes.

If there are errors, you will receive the appropriate error messages and an automatic roll-back occurs. You are then redirected to the Cisco Smart Software Manager satellite log in screen for the 2.0 release.

7. After the upgrade is complete, verify that the Cisco Smart Software Manager satellite login screen shows version 2.1.
8. If the 2.0 satellite was previously registered with CSSM, you need to synchronize the satellite with Cisco's licensing servers and restart the Cisco Smart Software Manager satellite.

If you do not resynchronize the satellite with CSSM, support for multi-tier certificate hierarchy, which allows smart agents to use HTTPS to register with satellite without downloading a self-signed certificate, may not be available. In addition, devices cannot use HTTPS to register to the satellite and users using HTTPS on their browsers will receive an untrusted certificate or certificate not signed by Cisco Root message.

Backward Compatibility

The multi-level certificate hierarchy capability requires changes in Cisco Smart Software Manager, Transport Gateway, Cisco Smart Software Manager satellite, and the Smart Agent. All of these things have to work together to:

- Eliminate the 48-hour wait during satellite to CSSM registration.
- Automatically enable HTTPS communication between product instances and the satellite without having to download and install a self-sign certificate. This requires the Smart Call Home profile to use HTTPS as the transport, set via the destination transport https command.

There are some cases where the Smart Agent embedded within a Smart License enabled product has not upgraded to this multi-tier certificate hierarchy capability (e.g, still using three-tier certificate). In these cases, the Cisco Smart Software Manager satellite needs to support the 3-tier smart agents that want to use HTTPS to communicate with the satellite.

We have the following cases:

Devices with new Smart Agent registering to the latest satellite release

Devices that have implemented the latest Smart Agent code register successfully with latest satellite using multi-tier certificate hierarchy.

Devices with new Smart Agent registering to a back-level satellite

Devices that have implemented the latest Smart Agent code dynamically validate the certificate chain (from device to satellite to Cisco Root).

Devices with old Smart Agent registering to the latest satellite release

When a customer installs the latest satellite release, its registration with Cisco Smart Software Manager is instantaneous. During this process, the satellite also requests a previous three-tier certificate. When devices with older Smart Agent registers with the satellite, you get a registration failure message that informs you to wait 48 hours and perform a network or manual synchronization to get the backward compatible (three-tier) certificate and re-register. Afterwards, these devices can successfully register to the satellite.

In this case, as HTTPS is used for device to satellite communication, you need to ensure following steps:

- Smart Call Home profile uses HTTPS as the transport
- After the satellite (with the multi-level certificate hierarchy function) registers successfully to CSSM, the product instance (with back-level smart agent) which tries to register with satellite will fail with an error message as below:

```
Compatibility Error: The satellite is not currently compatible with the Smart Licensing Agent
version on this product. If it has been 48 hours since the satellite was registered, synchronize
the satellite with Cisco's licensing servers to enable compatibility with older agent versions
and then try the registration again.
```

- User waits for 48 hours
- User runs an on-demand network or manual sync between satellite and CSSM.
- User re-registers the product instance to satellite.

If you perform a fresh 2.1 satellite install, after registration and upon logging, you will see the following message:

```
Version Compatibility Note - Temporarily, this satellite will only be able to register Product
Instances that are using the Smart Licensing Agent version 1.5 or later (use the "show license"
commands on the Product Instance to see the agent version). To enable registration of Product
Instances using older versions of the agent, wait two business days after the satellite's initial
registration and then synchronize the satellite.
```

This means that after 48 hours, the three-tier certificate will be obtained by satellite from CSSM during the sync to support three-tier smart agents.

Troubleshooting

[Client Registration Issues](#) on page 33

[Manual Synchronization Issues](#) on page 33

[Network Synchronization Issues](#) on page 33

Client Registration Issues

If you experience issues with the client registration process, take the following actions:

- Ensure that the satellite configuration is correct.

Please refer to the Network tab under Administration pane in the *Smart Software Manager satellite User Guide* or "Configuring the IP Address" section in the *Smart Software Manager satellite Installation Guide*, available at <http://www.cisco.com/web/ordering/smart-software-manager/index.html>.

- Verify that the Call-Home configuration on the client points to the satellite.

Please refer to the section "Sample of SCH Profile to Use Smart Software Manager satellite on the Cloud Service Router" in the *Smart Software Manager satellite Installation Guide*.

- Verify the token has been generated from the satellite.

Please refer to [Creating a Product Instance Registration Token](#) on page 18.

Your firewall settings should allow traffic to and from satellite for the following:

- satellite IP address ports 443 and 80
 - 443 if using HTTPS
 - 80 if using HTTP to communicate with satellite
- satellite IP address port 8443 to get access to satellite portal

Manual Synchronization Issues

If you experience issues with the manual synchronization process, take the following actions:

- Verify the time on the satellite is correct.

Please refer the section "Verifying Time Sync with the NTP" in the *Smart Software Manager satellite Installation Guide*, available at <http://www.cisco.com/web/ordering/smart-software-manager/index.html>.

- Ensure port 443 (HTTPS) is allowed through your firewall.
- Verify the licenses in the associated Virtual Account.
- Make sure that you are uploading and downloading the YAML (request and response) files to the correct satellite. You can do this by verifying that the file names include the name of the satellite that you are synchronizing.

Network Synchronization Issues

If you experience issues with the network synchronization process, take the following actions:

- Ensure port 443 (HTTPS) is allowed through your firewall.
 - tools.cisco.com ports 443
 - api.cisco.com ports 443
- Verify that the satellite can reach the configured DNS server.
- Verify that the satellite can reach Cisco.com.
- Verify that the time on the satellite is correct.

Please refer the section "Verifying Time Sync with the NTP" in the *Smart Software Manager satellite Installation Guide*, available at <http://www.cisco.com/web/ordering/smart-software-manager/index.html>.

- Verify the associated Virtual Account has the licenses expected.

Appendix A:

[Registering Product Instances to satellite](#) on page 35

Registering Product Instances to satellite

Once the satellite is operational, smart-enabled product instances can register to the satellite and report license consumption. This registration is between the product instances to the satellite and is different from the registration between the satellite and Cisco Smart Software Manager.

Smart-enabled product instances register to satellite via CLI or GUI depending on the product. For more information on this, refer to the specific platform Configuration Guide. For CSR Smart Licensing configuration, please refer to <http://www.cisco.com/c/en/us/td/docs/routers/csr1000/software/configuration/csr1000Vswcfg/licensing.html>

Ensure you have the following commands configured in the respective router platforms:

- For IOS-XR platforms, "Cr1 optional"
- For IOS/XE platforms, use "revocation-check none".

Sample SCH Profile to Use Smart Software Manager satellite on the Cloud Service Router

Procedure

1. **enable**
Enables privileged EXEC mode. Enter your password if prompted.
2. **configure terminal**
Enters global configuration mode.
3. **call-home**
Enters call-home configuration mode.
4. **contact-email-address email address**
Specify a valid email ID.
5. **profile name**
Specify the profile name.

Note: CiscoTAC-1 is the default profile.
6. Choose **destination transport http** or **destination transport https**.
Sets the transport to HTTP or HTTPS. Additionally, depending on your choice, use either example a (for HTTP) or example b (for HTTPS) below.
 - a) For **destination address http** use *http from TG*.
Accesses the SCH Transport Gateway URL.

Note: The destination URL is `http://<ip-address>:80/Transportgateway/services/DeviceRequestHandler`.
 - b) For **destination address https** use *https from TG*.
Accesses the SCH Transport Gateway URL.

Note: The destination URL is `https://<ip-address>:443/Transportgateway/services/DeviceRequestHandler`.

7. **active**

Activates the profile specified in step 5.

8. **exit**

Saves and exits the current configuration mode and returns to privileged EXEC mode.

9. **end**

Returns to privileged EXEC mode.

10. **wr**

Saves the configuration.

The following configuration is only a sample for CSR for HTTP. Please see platform specific configurations for the call-home profile config.

Example:

```
Router#configure terminal
Router(config)#call-home
Router(cfg-call-home)#contact-email-addr aaa@cisco.com
Router(cfg-call-home)#profile CiscoTAC-1
Router(cfg-call-home-profile)#active
Router(cfg-call-home-profile)#destination transport-method http
Router(cfg-call-home-profile)#no destination transport-method email
Router(cfg-call-home-profile)#destination address http
```

<http://172.19.76.177:80/Transportgateway/services/DeviceRequestHandler>

The following configuration is only a sample for CSR for HTTPS. Please see platform specific configurations for the call-home profile config.

Example:

```
Router# configure terminal
Router(config)#call-home
Router(cfg-call-home)#contact-email-addr aaa@cisco.com
Router(cfg-call-home)#profile CiscoTAC-1
Router(cfg-call-home-profile)#active
Router(cfg-call-home-profile)#destination transport-method https
Router(cfg-call-home-profile)#no destination transport-method email
Router(cfg-call-home-profile)#destination address https
```

<https://172.19.76.177:443/Transportgateway/services/DeviceRequestHandler>