Smart Software Manager satellite Installation Guide

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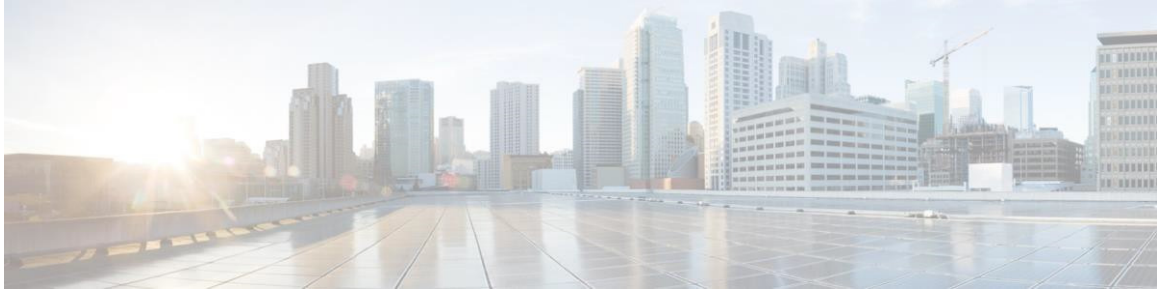

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Preface

This preface contains the following sections:

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 ands and keywords that you enter literally as shown.
Italic	Italic text indicates arguments for which the user supplies the values.
[x]	Square brackets enclose optional arguments (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.

Convention	Description
[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 non-quoted set of characters. Do not use quotation marks around the string or the string will include the quotation marks.
`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.
italic screen font	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.

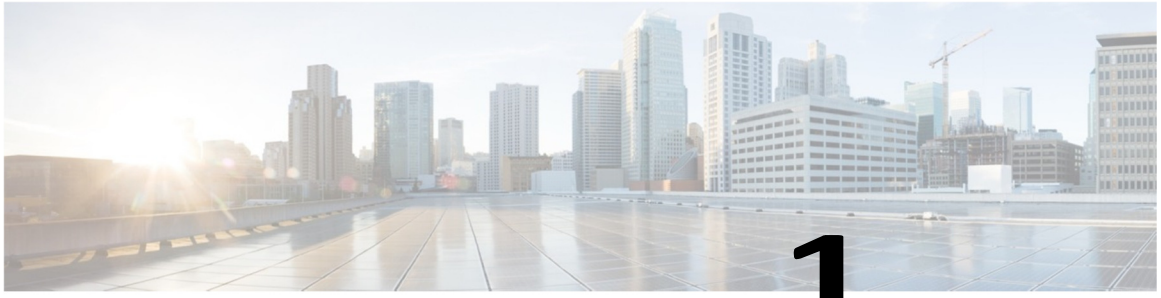
Note The pencil icon is an alert that the reader should special take note of the information provided in the noted section. Notes contain helpful suggestions or references to material not covered in the manual.

Caution The caution icon is an alert to the reader that a section includes procedural information that must be followed carefully to avoid doing 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*, at: http://www.cisco.com/c/en/us/td/docs/general/whatsnew/whatsnew.html.

Subscribe to *What's New in Cisco Product Documentation*, which lists all new and revised Cisco technical documentation, as an RSS feed and deliver content directly to your desktop using a reader application. The RSS feeds are a free service.



CHAPTER 1

Overview

This chapter contains the following sections:

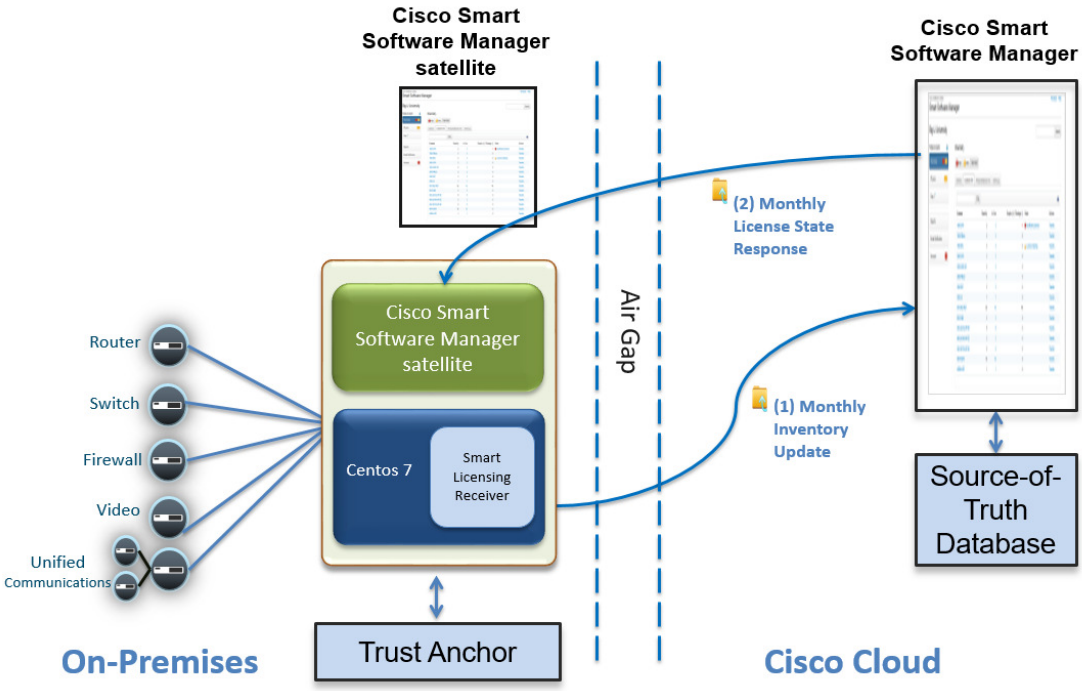
- Device Terminology
- System Requirements

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

In a typical scenario, customers are able to view their installed base from the cloud-based Cisco Smart Software Manager using a highly secure Internet connection, protected by various levels of user authorization and encrypted passwords. However, for security-sensitive customers who do not want to manage their installed base with a direct Internet connection, Smart Licensing provides Smart Software Manager satellite software, which can reside on customer premises. Devices or software products self-register and report license consumption to the Smart Software Manager satellite as though it were a replicate of the Smart Software Manager.

The satellite version of Smart Licensing contains a subset of Cisco Smart Software Manager functionality and must communicate with the latter periodically to operate. Customers need to synchronize their local databases with the Cisco portal to make sure that the most recent purchases are reflected in their local copies. This may be initiated automatically or manually. The automatically scheduled synchronizations can be daily, weekly, or monthly, and, depending on the frequency, the data on the satellite can be as current as the portal on a daily basis. On the other hand, the manual synchronization involves a file transfer at least once a month and represents an air gap for high-security customers. Figure 1 depicts the Smart Software Manager satellite deployment.

Figure 1. Smart Software Manager satellite Deployment



Device Terminology

Term	Description
ESXi	Virtualization platform used to create the virtual machines as a set of configuration and disk files.
Open Virtual Appliance or Application (OVA) file	Package that contains the following files used to describe a virtual machine and saved in a single archive, using .TAR packaging: • Descriptor file (.OVF) • Manifest (.MF) and certificate files (optional)
Open Virtual Machine Format (OVF)	Platform-independent method of packaging and distributing Virtual Machines (VMs).
Virtual Machine (VM)	Virtualized x86 PC environment in which a guest operating system and associated application software can run. Multiple VMs can operate on the same host system concurrently.
vSphere Client	User interface that enables users to connect remotely to vCenter Server or ESXi from any Windows PC. You can use the primary interface for vSphere Client to create, manage, and monitor VMs, their resources, and the hosts. vSphere Client also provides console access to VMs.

System Requirements

Note Ensure that you have an 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 Smart Software Manager satellite has the following minimum configuration:

- 50GB-200GB hard disk
- 8GB Memory
- 4 vCPUs

Supported Web Browsers

Smart Software Manager satellite supports the following web browsers:

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

Deploying Smart Software Manager satellite

This chapter contains the following sections:

Introduction

Cisco provides different formats for the installing Smart Software Manager satellite software on different operating systems. This section provides the installation prerequisites for each platform and detailed installation procedures.

Smart Software Manager satellite OVA Installation

Smart Software Manager satellite can be installed from an OVA file**.** When you open the OVA file, Smart Software Manager satellite extracts the VM and imports it into whatever virtualization software you have installed on your computer.

You must provide, install, and configure the following external components before you install the OVA file:

- ESXi v5.x or above host with sufficient OVA resources
- vSphere Client v5.x

Deploying and Installing Smart Software Manager satellite OVA

To deploy the OVA file and install Smart Software Manager satellite, perform the following steps:

1. Connect to the UCS EXSi server by logging into vSphere Client.

2. Choose **File > Deploy OVF Template**.

3. In the Deploy OVF Template—Source window, do the following:
   a. Browse to the OVA file in the Deploy from a file or URL field.

   b. Click **Next** to open the Deploy OVF Template—OVF Template Details window.

4. In the Deploy OVF Template—OVF Template Details window, do the following:
   a. Review the product information, including the size of the file and the VM disk.
   b. Click Next.

5. In the Deploy OVF Template—Name and Location window, do the following:
   a. In the Name field, enter a name for the OVA file installation. The name must be unique within the inventory folder and has up to 80 characters.
   b. In the Inventory Location tab (vCenter), choose the location for hosting the OVA file.
   c. Click **Next**.

6. In the Deploy OVF Template—Disk Format window, do the following:
   a. In the Datastore field, enter the datastore in which to store the OVA file.
   b. In the Available space (GB) field, enter the value for disk space availability.
   c. For Provision, click the **Thick Provision disk format** radio button.
   d. Click **Next**.

7. In the Deploy OVF Template—Network Mapping dialog box, click **Next**.

   Note: You do not need to configure the Deploy OVF Template—Network Mapping dialog box.

8. In the Ready to Complete window, do the following:
   a. Review the deployment settings information.
   b. Check the Power on after deployment check box.
   c. Click **Finish** to install the image.

9. Power on the VM. When prompted, log in and configure initial settings at the console on your vSphere Client.

10. Now you can configure Smart Software Manager satellite by following the steps in 'Setting Up Smart Software Manager satellite.'.

Configuring the satellite

Network Setup with CLIs

Before you can access the satellite, you must first configure the IP address, network mask, gateway, and DNS server addresses using the standard CentOS commands before being able to connect to the satellite CentOS shell.

To access the CentOS shell and satellite GUI, login using default Username/Password

Default User: **`admin`**
Default Password: **`Admin!23`**

When you login the first time, you will be prompted to change your password which will be used for all future shell access. It is recommended you choose a secure password which is not easily forgot.

To configure or edit the IP address, you can use the following CLI script to configure IP and DNS.

```
[admin@localhost ~]# sudo conf ip
```

To configure IPv4:

```
sudo conf ip <interface-name(eth0)> <IP> <NetMask> <Gateway>
```

To configure DNS:

```
sudo conf dns <DNS ip-address1> [DNS ip-address2]
```

Alternatively, you can directly edit and make changes to the interface config file from command line by editing the 'ifcfg-eth0' file using native CentOS commands; for exampe:

```
vi /etc/sysconfig/network-scripts/ifcfg-eth0
```

Please refer to https://wiki.centos.org/FAQ/CentOS7 for specific details on the CentOS commands.

Connecting to the satellite

In a web browser, enter the URL for the satellite in the format, http://<ip-address>:8080 or https://<ip-address>:8443, to launch Smart Software Manager satellite. The login screen appears. Upon logging in using the admin credentials (defaults are admin/Admin!23), you are presented with a screen that asks you to select the following options:

- **Configure a new satellite**, or
- **Configure by importing data from a satellite backup file –** this option allows you to restore a backup file from your hard drive, which includes configuration settings and registered product instances.

Click **Next** to continue.

Network Settings

If you are configuring a new satellite, you are presented with the **Network Interfaces, DNS Settings, and NTP Settings** screen with the information configured using CentOS commands above. You can change these parameters by selecting **Edit Network Settings,** which allow you to verify or make changes to the IP address, add a 2nd network interface, adjust DNS parameters and synchronize with an NTP server.
Click Next **to continue.**

If you are restoring satellite from a backup, the system automatically reboots and presents you with an option to synchronize and a login screen.

Setting the Time

Procedure

To sync the time with the NTP server:

1. Click the **NTP** tab in the **Edit Network Settings** to synchronize the satellite time with the NTP server, or
2. Click on **Sync Time Now** on the **Network Settings** UI to sync the time.
3. Click **Next** to go to the **Setup Method** tab.

Setup Method

Before registration, set up the satellite with Network or Manual connectivity. In the **Setup Method** screen, you can select either **Network Setup** (Internet connectivity), or **Manual Setup** (no Internet connectivity

Click **Next** to continue
You will be presented with a **Single Sign-On** screen. Enter your credentials and continue.
Click **Allow** on the **Request For Approval** screen

Registering the satellite

After the above steps, you must register your satellite with Cisco SSM to establish identity, which is 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 receive an immediate response, confirming the registration, from Cisco Smart Software Manager.

Registering via a Network

Procedure

1. Select the **Network Setup** radio button for online registration, and then click **Next**. You are presented with a CCO Single Sign-On screen.
2. Click **Log In** and use the CCO credentials.
3. After the Single SignOn screen, click **Allow**.
4. Enter the satellite name.
5. Select **Smart Account** from the list you have access to.
6. Add a new Virtual Account or use an existing account. You can have multiple virtual accounts.
7. Click **Register Satellite**. A warning alerts you that this process might take some time.
8. Click **Continue** to confirm. The system automatically restarts during this process. After restart, the satellite returns to the same step the user was in before the restart. The system returns to the **Synchronization Settings** page with **Network Setup** option selected.
9. Click **Next**. Note that 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). For networked environment, this can be scheduled at various intervals.
10. In the next screen with the **Summary** dialog box, you are provided with a Summary of the satellite settings. Click **Configure Satellite**. The registration process completes and returns you to the main screen on the **General** tab.

What to do next

This completes the satellite configuration process. Product instances can register to the satellite. In addition, 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 satellite is completely disconnected, follow this procedure to register it manually.

Procedure

1. Select the **Manual Setup** radio button for offline registration and click **Next**.
2. Click **Generate Registration File** and save the file to your computer. The system generates a registration request file.
3. Go to Cisco Smart Software Manager and click **Satellites**.
4. In the **Satellites** tab, click **New Satellite**.
5. In the **New Satellite** dialog box, enter the name of the satellite that requires registration.
6. 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.
7. 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.
8. Click **Create Authorization File**.

9. When prompted, click **Download Authorization File** and save it to your computer. Previously you had 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.
10. 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.
11. Click **Upload** to upload the authorization file.
12. Click **Register Satellite**. The system automatically restarts during this process. After restart, the satellite returns to the same step the user was in before the restart.
13. On the **Synchronization Settings** page, select **Manual Synchronization**. click **Next**. You will get a warning that 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).
14. 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. Product instances can register to the satellite. In addition, you can now navigate 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 *Cisco Smart Software Manager satellite User Guide* to view or perform various tasks of Smart Licensing.

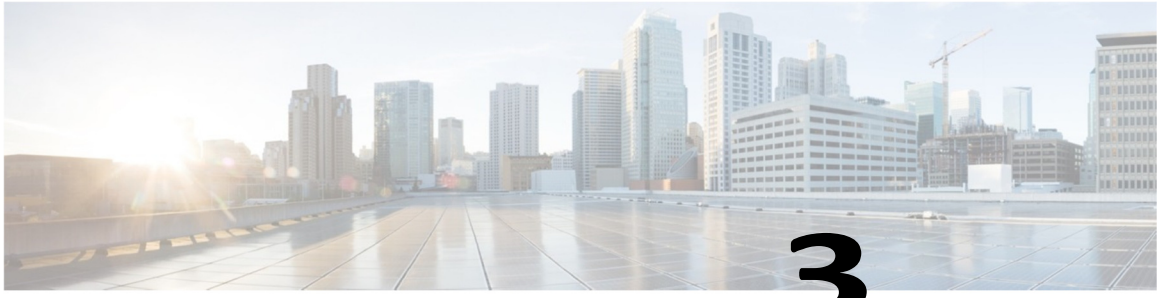
Enabling HA Monitoring with Zabbix

If you are running a High Availability satellite configuration, Zabbix, a registered trademark of Zabbix LLC, is the software used to monitor this deployment. Zabbix is packaged with the satellite OVA so there are no specific installation tasks to enable it. It will be available with the satellite installation.

To login to Zabbix (after you have successfully registered the primary satellite) to see the various dashboards and statuses of the nodes, use the VIP address and port 9090. For example, https://VIP-address:9090 enables you to get to the Zabbix dashboard.

Zabbix is also supported in the active/standby configuration in that when the primary satellite fails, the VIP will point to the standby satellite and you can access Zabbix after a failover.

To find out detailed information about how to use various Zabbix monitoring functions, please refer to www.zabbix.com.



CHAPTER 3

Upgrading Smart Software Manager satellite

If you are running a 2.x release and want to upgrade to any minor release, you can use the upgrade procedures posted with the upgrade patch on CCO. However, this only works within a minor product release upgrade and not across a major product releases such as version 2.x to 3.x.

If you are running 2.x and want to upgrade to 3.0.x, you need to apply a 2.5.x patch to migrate the registered product instances.

Procedure

1. Apply the 2.5.x patch on your 2.x system using the **Administration** tab using **Manual** upgrade procedure.
2. After the patch is successfully applied, you are running satellite 2.5.x.
3. Login to this satellite 2.5.x, and under the **Upgrade** tab, you have a new option **Backup System for 3.x Migration.** Click on it to create a backup of this satellite 2.5.x system.
4. Install a separate 3.0.x satellite.
5. Login to a 3.0.x satellite and select **Configure by importing data from a satellite backup file.**
6. Follow the same steps described in the **Network Settings** section above and register your satellite.
7. You have now migrated from a 2.5.x satellite to a 3.0.x satellite with all the registered product instances.
8. Shut down your previous 2.5.x satellite.