



Smart Software Manager satellite Installation Guide

Published: Jul, 2017

Americas Headquarters

CiscoSystems, Inc.

170 West Tasman Drive San Jose, CA 95134-1706 USA

<http://www.cisco.com> Tel: 408 526-4000

800 553-NETS (6387)

Fax: 408 527-0883

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 page 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.

© 2015 Cisco Systems, Inc. All rights reserved.



CONTENTS

CONTENTS	i
Preface	iii
Audience	3
Document Conventions	3
Obtaining Documentation and Submitting a Service Request	4
Overview	5
Device Terminology	6
System Requirements	6
Deploying Smart Software Manager satellite	8
Introduction	8
Smart Software Manager satellite ISO Installation	8
Smart Software Manager satellite OVA Installation	9
Deploying and Installing Smart Software Manager satellite OVA	9
Connecting to the satellite	10
Registering the satellite	11
Enabling HA Monitoring with Zabbix	12
Upgrading Smart Software Manager satellite	13

This page is intentionally left blank



Preface

This preface contains the following sections:

- [Audience, page iii](#)
- [Document Conventions, page iii](#)
- [Obtaining Documentation and Submitting a Service Request, page 4](#)

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 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.
<i>variable</i>	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.
<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.



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:

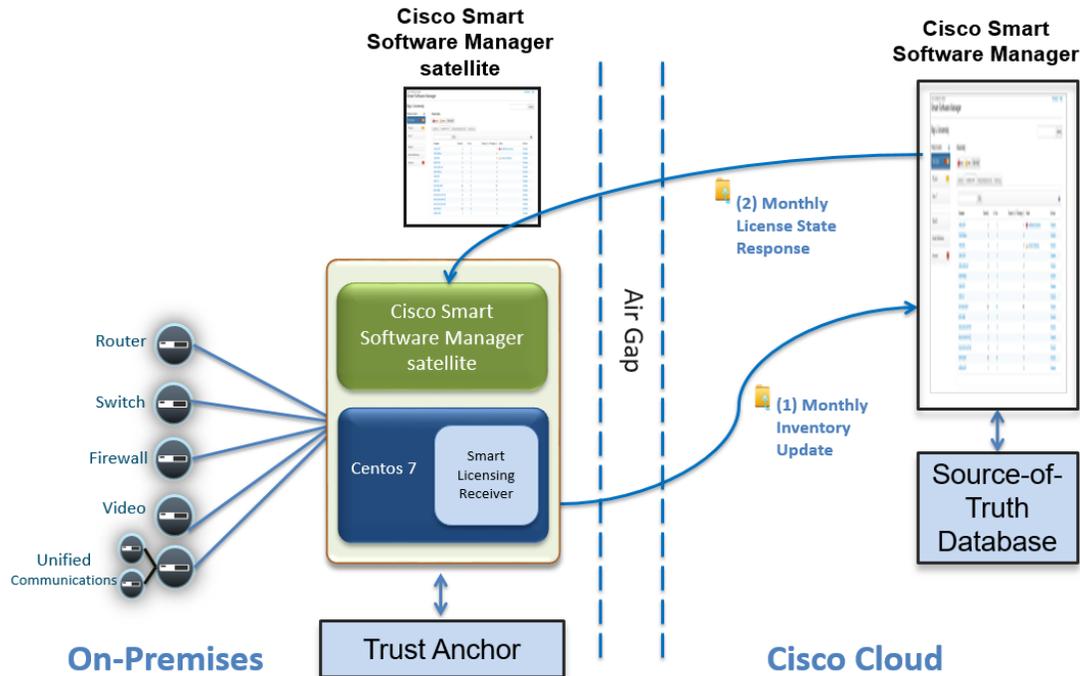
- [Device Terminology](#)
- [System Requirements](#)

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.
ISO Image	International Organization for Standardization file is an archive file that contains a disk image called ISO 9660 file system format.
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: <ul style="list-style-type: none"> • 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](#)
- [Smart Software Manager satellite OVA installation](#)
- [Configuring the satellite](#)
- [Connecting to the satellite](#)
- [Registering the satellite](#)

Introduction

Cisco Smart Software Manager satellite software is delivered as a CentOS 7 OVA or ISO image that can be deployed on various virtualized platforms (i.e., bare metal, OVA, Hyper-V, KVM, etc.), using standard CentOS installation procedures.

Smart Software Manager satellite ISO Installation

The following steps shows the satellite installation workflow to install an ISO image:

1. Download the ISO image from CCO
2. Create a VM
3. Mount the ISO image on a VM Manager
4. Enter the information requested on the Cisco SSM satellite Kickstart Installation UI
 - a. Setup Hostname
 - b. Select System Profile
 - c. Select Security Classification
 - d. SCAP Profile and Kernel fields are not selectable
 - e. Configure IP address, DNS settings, and Admin password

5. Wait until the installation completes (approximately 10-15 mins)
6. Dismount the ISO image so the system doesn't boot from there
7. Satellite system automatically boots up
8. Launch the satellite from a browser using the configured IP address
9. Select the option to configure a new satellite or restore from a backup
10. Follow the satellite menu options
 - a. Edit network settings
 - b. Synchronize time
 - c. Register the satellite with CSSM

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.’](#)

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

Configuring Cisco Common Services Platform Collector (CSPC)

If you are using the Cisco Common Services Platform Collector (CSPC) with Smart Software Manager satellite, please refer to the Smart Software Manager satellite User Guide to set it up before registering the satellite.

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, use <http://VIP-address:9090/zabbix>, enables you to get to the Zabbix dashboard (user/password: admin/zabbix).

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.



Upgrading Smart Software Manager satellite

If you are running a 2.x release and want to upgrade to another 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 release such as version 2.x to 3.x or 4.x.

To upgrade from a 2.x to a 4.0.0, you need to upgrade 2.x => 3.0.4 => 3.0.5 => 3.1.0 => 4.0.0.

Procedure for Upgrading from a 2.5.x to 3.0.4

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 3.0.4 satellite.
5. Login to a 3.0.x satellite and select **Configure by importing data from a satellite backup file**.
6. Use the procedure below to upgrade from 3.0.4 to 3.0.5

Procedures for Upgrading from a 3.0.4 to 3.0.5

1. Download a 3.0.5 patch from CCO
2. Apply a 3.0.5 patch using the Manual Upgrade instructions in the 3.0.5 Install Notes.
3. Go to the next step.

Procedures for Upgrading from a 3.0.5 to 3.1.0

1. Download a 3.1.0 patch from CCO.
2. Apply the 3.1.0 patch using the Manual Upgrade procedure in the Install Notes for 3.1.0.

Procedures for Upgrading from a 3.1.0 to 4.0.0

1. Run a backup for 3.1.0 satellite
2. Install satellite 4.0.0 ISO image
3. Restore the 3.1.0 backup from step #1