



Installation Guide for Cisco Unified SIP Proxy Release 9.0

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This document provides the technical information that you need to install Cisco Unified SIP Proxy Release 9.0 and contains the following topics:

- [Change History, page 1](#)
- [Overview, page 2](#)
- [Server Requirements, page 3](#)
- [Virtual Machine Requirements for Cisco Unified SIP Proxy, page 3](#)
- [Downloading the Cisco Unified SIP Proxy OVA, page 4](#)
- [Deploying the Cisco Unified SIP Proxy OVA, page 4](#)
- [Configuring the CUSP Software, page 7](#)
- [Configuring Cisco Unified SIP Proxy Application, page 10](#)
- [Cisco Smart Software Licensing, page 11](#)

Change History

This table lists all the changes made to this guide, the most recent changes appearing at the top.

Change	See	Date
Updated the Cisco UCS-E platform virtual machine requirements table title to include support for the Cisco UCS series with CPU speed less than 2.9 GHz.	See Virtual Machine Requirements for Low Speed Cisco UCS and Cisco UCS (E) Platforms, page 4 .	May 25, 2017



Overview

Cisco Unified SIP Proxy Release 9.0 supports operating within a VMware ESXi virtualized environment. The software is packaged as an OVA for installation within the ESXi environment (5.1 and above). For more information about the ESXi environment, see:

<http://www.vmware.com/products/vsphere/esxi-and-esx/overview.html>

Except the High Availability (HA) feature using Hot Standby Router Protocol (HSRP), Cisco Unified SIP Proxy Virtual application supports all the other features that are supported by Cisco Unified SIP Proxy on a SRE Module.

Server Requirements

There are two approaches to select a server for running Cisco Unified SIP Proxy Software within a VMware ESXi environment.

- [Specifications-based Platforms](#)

Specifications-based Platforms

This section provides information about specifications-based server platforms. See [Table 1](#) for information about specifications-based server platforms.

Table 1 **Specifications-based Server Platforms**

For information on...	See...
Hardware requirements	UC Virtualization Supported Hardware https://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/uc_system/virtualization/collaboration-virtualization-hardware.html
VMware installation and configuration	Implementing Virtualization Deployments https://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/uc_system/virtualization/virtualization-software-requirements.html

Virtual Machine Requirements for Cisco Unified SIP Proxy

Cisco Unified SIP Proxy Software requires VMware ESXi 5.1 and above. After configuring the server hardware, install VMware vSphere ESXi.



Note Cisco Unified SIP Proxy deployment requires 4 GB RAM and 80 GB disk space.

[Table 2](#) provides the hardware recommendations for virtualized Cisco UCS platform.

Table 2 **Virtual Machine Requirements for Cisco UCS Platform**

CPS	60 CPS	100 CPS	200 CPS	300 CPS	400 CPS
vCPU	1	2	4	4	4
RAM	4 GB	4 GB	4 GB	4 GB	4 GB
Disk	80 GB	80 GB	80 GB	80 GB	80 GB



Note CPU speed is greater than or equal to 2.99 GHz.

Table 3 provides the hardware recommendations for virtualized low speed Cisco UCS and Cisco UCS (E) platforms.

Table 3 *Virtual Machine Requirements for Low Speed Cisco UCS and Cisco UCS (E) Platforms*

CPS	40 CPS	100 CPS	200 CPS	300 CPS	400 CPS
vCPU	1	2	4	6	6
RAM	4 GB	4 GB	4 GB	4 GB	4 GB
Disk	80 GB	80 GB	80 GB	80 GB	80 GB



Note

CPU speed is less than 2.99 GHz.



Caution

Changing the default log file size impacts the performance of Cisco Unified SIP Proxy.



Caution

Over subscription of hardware by virtual machines running on hypervisor is not supported.

Downloading the Cisco Unified SIP Proxy OVA

To download the Cisco Unified SIP Proxy Server OVA template (virtual machine template), perform the following steps:

-
- Step 1** Open the Cisco Unified SIP Proxy Server site:
<http://www.cisco.com/c/en/us/support/unified-communications/unified-sip-proxy-software/tsd-products-support-series-home.html>
 - Step 2** If prompted, log in, using your Cisco.com user name and password.
 - Step 3** Locate the OVA in “Download Software” section and download the file.
-

Deploying the Cisco Unified SIP Proxy OVA




After downloading the Cisco Unified SIP Proxy OVA, use the following procedure to deploy the virtual machine template.

Prerequisites

The following are the prerequisites:

- Cisco Unified SIP Proxy OVA for installation
- Server with VMware ESXi environment installed
- VMware vCenter vSphere Client installed and operating

Procedure

-
- Step 1** In the vCenter vSphere Client GUI, select **File > Deploy OVF Template...**
The **Deploy OVF Template** dialog box appears.
- Step 2** Browse to the location where Cisco Unified SIP Proxy Server OVA file is downloaded. Click **Next**.
- Step 3** Review and confirm the software image details. Click **Next**.
- Step 4** Enter the name of the device in **Name** field. The name provided determines how the device appears in the left pane of the vCenter window.
- Step 5** Click **Next**.
The **Deploy OVF Template** dialog box displays disk format options.
-  **Note** If there are multiple server hosts running ESXi, select the host on which you want Cisco Unified SIP Proxy Server to run. Click **Next**.
-
- Step 6** Select any of the following **Thick provisioning format**.
- Thick Provision Lazy Zeroed
 - Thick Provision Eager Zeroed
- Step 7** Click **Next**.
The **Deploy OVF Template** dialog box displays the available networks.
- Step 8** Select the network under **Destination Networks** column. The selected network is used to communicate with the remote sites.
- Step 9** Click **Next**.
The **Deploy OVF Template** dialog box displays a summary of the options that you have configured.
- Step 10** Click **Finish** to deploy Cisco Unified SIP Proxy Server.
A dialog box indicates when the deployment is complete.
- Step 11** Select the VM instance, right click and choose **Edit Settings....**
Virtual Machine Properties dialog box appears.
- Step 12** Click the **Hardware** tab and set the values for memory and vCPU as provided in [Table 2](#).
- Step 13** Click the **Resources** Tab and select **CPU**. Adjust the Reservation and Shares to the value provided in [Table 2](#).
-  **Note** Select the **Unlimited** option if the call flow details and the expected call capacity expected are not clear (this option takes care of cases where the call load is more than the planned load and needs additional CPU resources).
-
- Step 14** Select **Memory** and change the reservation value as mentioned in the [Table 2](#).
-  **Note** Select the **Unlimited** option if the call flows details and expected call capacity expected are not clear (this option handles the cases where call load is more than the planned load and needs additional RAM).
-

Step 15 Save the settings and restart the VM.

Step 16 Select **Resource Allocation** and confirm the resource reservations.

Configuring the CUSP Software

When you open the first session, the system launches the post installation configuration tool, and asks you if you want to start configuration immediately.

Enter the appropriate response, **y** or **n**. If you enter **n**, the system will halt. If you enter **y**, the system will ask you to confirm, then begin the interactive post installation configuration process.

The following is an example:

```

IMPORTANT::
IMPORTANT::   Welcome to Cisco Systems Service Engine
IMPORTANT::   post installation configuration tool.
IMPORTANT::
IMPORTANT:: This is a one time process which will guide
IMPORTANT:: you through initial setup of your Service Engine.
IMPORTANT:: Once run, this process will have configured
IMPORTANT:: the system for your location.
IMPORTANT::
IMPORTANT:: If you do not wish to continue, the system will be halted
IMPORTANT:: so it can be safely removed from the router.
IMPORTANT::

Do you wish to start configuration now (y,n)? y
Are you sure (y,n)? y

*****
* Service Engine IP configuration *
*****

Please enter the IP address of your Module: 10.104.45.249
Please enter the netmask of your Module: 255.255.0.0
Please enter the default gateway for your Module: 10.104.45.245

The following IP configuration is set:

IP      : 10.105.45.249
NETMASK:255.255.0.0
GATEWAY: 10.104.45.245

Do you wish to use this configuration (y, n) [n]: y

Enter Hostname
(my-hostname, or enter to use se-10-104-45-249): Enter
Using se-10-104-45-249 as default

Enter Domain Name
(mydomain.com, or enter to use local domain): Enter
Using localdoamin as default

IMPORTANT:: DNS Configuration:
IMPORTANT::
IMPORTANT:: This allows the entry of hostnames, for example foo.cisco.com, instead
IMPORTANT:: of IP addresses like 1.100.10.205 for application configuration. In order
IMPORTANT:: to set up DNS you must know the IP address of at least one of your
IMPORTANT:: DNS Servers.

Would you like to use DNS (y,n)?y

Enter IP Address of the Primary DNS Server
(IP address): 10.104.45.245
Found server 10.104.45.245

```

Enter IP Address of the Secondary DNS Server (other than Primary)
 (IP address, or enter to bypass): **Enter**

Enter Fully Qualified Domain Name(FQDN: e.g. myhost.mydomain.com)
 or IP address of the Primary NTP server
 (FQDN or IP address, or enter for 10.104.45.245): **cantor.cisco.com**
 Found server cantor.cisco.com

Enter Fully Qualified Domain Name(FQDN: e.g. myhost.mydomain.com)
 or IP address of the Secondary NTP Server
 (FQDN or IP address, or enter to bypass): **Enter**

Please identify a location so that time zone rules can be set correctly.
 Please select a continent or ocean.

- 1) Africa
- 2) Americas
- 3) Antarctica
- 4) Arctic Ocean
- 5) Asia
- 6) Atlantic Ocean
- 7) Australia
- 8) Europe
- 9) Indian Ocean
- 10) Pacific Ocean

#? **2**

Please select a country.

- 1) Anguilla
- 2) Antigua & Barbuda
- 3) Argentina
- 4) Aruba
- 5) Bahamas
- 6) Barbados
- 7) Belize
- 8) Bolivia
- 9) Brazil
- 10) Canada
- 11) Cayman Islands
- 12) Chile
- 13) Colombia
- 14) Costa Rica
- 15) Cuba
- 16) Dominica
- 17) Dominican Republic
- 18) Ecuador
- 19) El Salvador
- 20) French Guiana
- 21) Greenland
- 22) Grenada
- 23) Guadeloupe
- 24) Guatemala
- 25) Guyana
- 26) Haiti
- 27) Honduras
- 28) Jamaica
- 29) Martinique
- 30) Mexico
- 31) Montserrat
- 32) Netherlands Antilles
- 33) Nicaragua
- 34) Panama
- 35) Paraguay
- 36) Peru
- 37) Puerto Rico
- 38) St Barthelemy
- 39) St Kitts & Nevis
- 40) St Lucia
- 41) St Martin (French part)
- 42) St Pierre & Miquelon
- 43) St Vincent
- 44) Suriname
- 45) Trinidad & Tobago
- 46) Turks & Caicos Is
- 47) United States
- 48) Uruguay
- 49) Venezuela
- 50) Virgin Islands (UK)
- 51) Virgin Islands (US)

#? **47**

Please select one of the following time zone regions.

- 1) Eastern Time
- 2) Eastern Time - Michigan - most locations
- 3) Eastern Time - Kentucky - Louisville area
- 4) Eastern Time - Kentucky - Wayne County
- 5) Eastern Time - Indiana - most locations
- 6) Eastern Time - Indiana - Daviess, Dubois, Knox & Martin Counties
- 7) Eastern Time - Indiana - Pulaski County
- 8) Eastern Time - Indiana - Crawford County
- 9) Eastern Time - Indiana - Pike County
- 10) Eastern Time - Indiana - Switzerland County
- 11) Central Time
- 12) Central Time - Indiana - Perry County
- 13) Central Time - Indiana - Starke County
- 14) Central Time - Michigan - Dickinson, Gogebic, Iron & Menominee Counties
- 15) Central Time - North Dakota - Oliver County
- 16) Central Time - North Dakota - Morton County (except Mandan area)
- 17) Mountain Time


```

18) Mountain Time - south Idaho & east Oregon
19) Mountain Time - Navajo
20) Mountain Standard Time - Arizona
21) Pacific Time
22) Alaska Time
23) Alaska Time - Alaska panhandle
24) Alaska Time - Alaska panhandle neck
25) Alaska Time - west Alaska
26) Aleutian Islands
27) Hawaii
#? 21

```

The following information has been given:

```

United States
Pacific Time

```

Therefore TZ='America/Los_Angeles' will be used.

Is the above information OK?

```

1) Yes
2) No
#? 1

```

```

Local time is now:      Mon Dec 5 11:20:17 PDT 2010.
Universal Time is now: Mon Dec 5 18:20:17 UTC 2010.
executing app post_install
executing app post_install done
Configuring the system. Please wait...
Changing owners and file permissions.
Tightening file permissions ...
Change owners and permissions complete.
Creating Postgres database .... done.
INIT: Switching to runlevel: 4
INIT: Sending processes the TERM signal
==> Starting CDP
STARTED: cli_server.sh
STARTED: ntp_startup.sh
STARTED: LDAP_startup.sh
STARTED: SQL_startup.sh
STARTED: dwnldr_startup.sh
STARTED: HTTP_startup.sh
STARTED: probe
STARTED: fndn_udins_wrapper
STARTED: superthread_startup.sh
STARTED: /bin/products/cusp/smartAgent_startup.sh

```

Waiting 49 ...

```

IMPORTANT::
IMPORTANT::      Administrator Account Creation
IMPORTANT::
IMPORTANT:: Create an administrator account.
IMPORTANT:: With this account, you can log in to the
IMPORTANT:: Cisco Unified SIP Proxy
IMPORTANT:: GUI and run the initialization wizard.
IMPORTANT::

```

Enter administrator user ID:

(user ID): **test**

tesEnter password for test:

(password):

Confirm password for test by reentering it:

(password):

```

SYSTEM ONLINE

se-10-104-45-249# show software versions
Cisco Unified SIP Proxy version (9.0.0)
Technical Support: http://www.cisco.com/techsupport Copyright (c) 1986-2010 by Cisco
Systems, Inc.

se-10-104-45-249# show software packages

Installed Packages:

- Installer (Installer application) (9.0.0)
- Bootloader (Primary) (Service Engine Bootloader) (2.1.30)
- Infrastructure (Service Engine Infrastructure) (9.0.0)
- Global (Global manifest) (9.0.0)
- CUSP (Cisco Unified SIP Proxy) (8.5.1)
- Bootloader (Secondary) (Service Engine Bootloader) (2.1.30.0)
- Core (Service Engine OS Core) (9.0.0)
- GPL Infrastructure (Service Engine GPL Infrastructure) (9.0.0)
SE-Module>

```

Configuring Cisco Unified SIP Proxy Application

Cisco Unified SIP Proxy can be configured in the following ways:

- [Configuring Cisco Unified SIP Proxy using GUI, page 10](#)
- [Configuring Cisco Unified SIP Proxy using CLI, page 10](#)
- [Configuring Cisco Unified SIP Proxy using SSH, page 10](#)

Configuring Cisco Unified SIP Proxy using GUI

Cisco Unified SIP Proxy can be configured using Graphical User Interface (GUI). The GUI can be accessed by using the IP address provided during installation.

For more information on configuring CUSP using GUI, refer to [GUI Configuration Guide for Cisco Unified SIP Proxy Release 9.0](#).

Configuring Cisco Unified SIP Proxy using CLI

Cisco Unified SIP Proxy can be configured using Command Line Interface (CLI).

For more information on configuring CUSP using CLI, refer to [CLI Configuration Guide for Cisco Unified SIP Proxy Release 9.0](#).

Configuring Cisco Unified SIP Proxy using SSH

Cisco Unified SIP Proxy users with administrator group privileges can configure using SSH. The user credentials for SSH are the same as configured in Cisco Unified SIP Proxy.

Cisco Smart Software Licensing

Cisco Smart Software Licensing is a standardized licensing platform that facilitates you to deploy and manage Cisco software licenses easily and quickly. Cisco Smart Software Licensing establishes a pool of software licenses that can be used across your network in a flexible and automated manner. It also provides visibility to your purchased and deployed licenses in your network. Cisco Smart Software Licensing removes the need for Product Activation Keys (PAKs) and reduces your license activation and registration time.

You must have a valid account in Cisco Smart Manager to configure smart licensing for Cisco Unified SIP Proxy. By logging into your account in Cisco Smart Manager, you can generate token ID for Cisco Unified SIP Proxy. The generated token ID is unique to your account and it is mandatory to provide the generated token ID during license registration. The Cisco Unified SIP Proxy (Smart Agent) contacts the Cisco Smart Manager (Cisco Datacentre) using Call Home or HTTP protocol and configures the license. Smart licenses can be configured using either Graphical User Interface (GUI) or Command Line Interface (CLI).

Once the smart licensing is enabled and configured using GUI or CLI, the Cisco Unified SIP Proxy sends the entitlement tag, token ID and other required information to the Smart Agent and registers with the Smart Manager (cloud server). The registration is valid for a period of one year. If the registration fails, then Cisco Unified SIP Proxy moves to evaluation mode. In evaluation mode, all features are supported for 90 days. Cisco Unified SIP Proxy stops working after the evaluation period.

After successful registration, the license count and other necessary details are sent to the Smart Manager for authorization. If the authorization is successful, the Cisco Unified SIP Proxy is in authorized state. If the requested number of licenses is within the purchased license count, Licensing Agent state moves to InCompliance state. If the requested number of licenses is more than the purchased licenses, Licensing Agent state moves to OutofCompliance state. The calls are allowed in OutofCompliance mode for a period of 90 days.

The authorization is renewed automatically every 30 days without the intervention of the users. In case the authorization renewal fails for 90 days, Cisco Unified SIP Proxy moves to the authorization expiry state. In this state all the calls are rejected and smart agent retries to renew the authorization every four hours.

For information on configuring smart licenses using GUI and CLI refer to [GUI Configurtaion Guide for Cisco Unified SIP Proxy Release 9.0](#) and [CLI Configuration Guide for Cisco Unified SIP Proxy Release 9.0](#).

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