# Cisco UCS Management Pack Suite Installation and Deployment Guide, Release 4.x For Microsoft System Center Operations Manager

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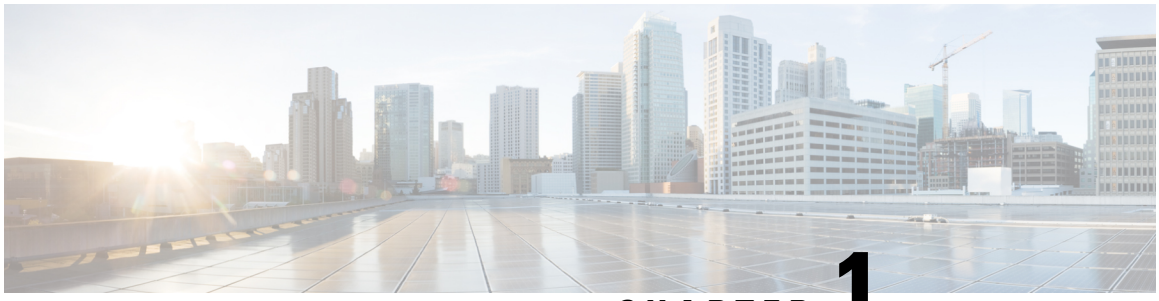


CHAPTER 1

# Preface

This preface includes the following sections:


- Audience, on page 1
- Conventions, on page 1
- Related Cisco UCS Documentation, on page 3
- Documentation Feedback, on page 3


## Audience

This guide is intended primarily for data center administrators with responsibilities and expertise in one or more of the following:

- Server administration
- Storage administration
- Network administration
- Network security

## Conventions

This document uses the following conventions:

| Conventions | Indication |
|---|---|
| bold font | Commands an keywords and user-entered text appear in bold font. |
| *italic* font | Document titles, new or emphasized terms, and arguments for which you supply values are in *italic* font. |
| [ ] | Elements in square brackets are optional. |
| { x \| y \| z } | Required alternative keywords are grouped in braces and separated by vertical bars. |

| Conventions | Indication |
|---|---|
| [ x \| y \| z ] | Optional alternative keywords are grouped in brackets and separated by vertical bars. |
| string | A nonquoted set of characters. Do not use quotation marts around the string or the string will include the quotation marks. |
| `courier` font | Terminal sessions and information the system displays appear in `courier` 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** Means reader take a note. Notes contain helpful suggestions or references to material not covered in the manual.

**Tip** Means the following information will help you solve a problem. The tips information might not be troubleshooting or even an action, buy could be useful information, similar to a Timesaver.

**Caution** Means reader be careful. In this situation, you might perform an action that could result in equipment damage or loss of data.

**Timesaver** Means *the described action saves time*. You can save time by performing the action described in the paragraph.

**Warning** IMPORTANT SAFETY INSTRUCTIONS

This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. Use the statement number provided at the end of each warning to locate its translation in the translated safety warnings that accompanied this device.

SAVE THESE INSTRUCTIONS

# Related Cisco UCS Documentation

### Documentation Roadmaps

For more information, you can access the related documents from the following links:

- Cisco UCS Manager Management Pack User Guide, Release 4.x
- Cisco IMC Management Pack User Guide, Release 4.x
- Cisco UCS Central Management Pack User Guide, Release 4.x
- Cisco UCS Management Pack Suite Installation and Deployment Guide, Release 4.x
- Cisco UCS Documentation Roadmap
- Cisco UCS C-Series Documentation Roadmap
- Cisco UCS Central Configuration Guides

### Other Documentation Resources

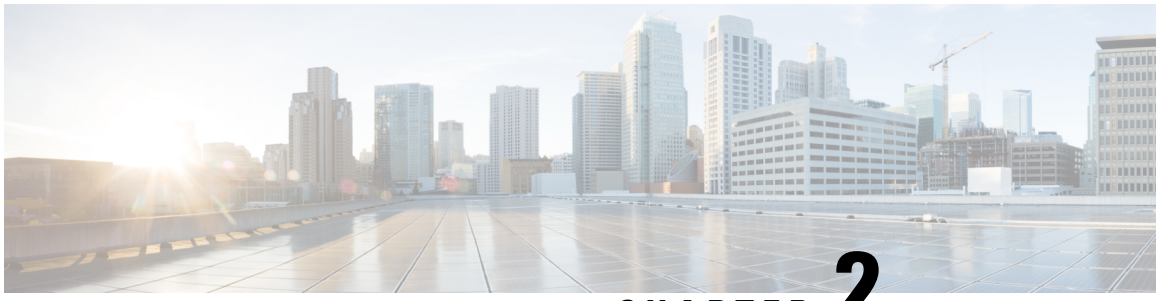
An ISO file containing all B and C-Series documents is available at the following URL:https://software.cisco.com/download/type.html?mdfid=283853163&flowid=25821 From this page, click **Unified Computing System (UCS) Documentation Roadmap Bundle**.

The ISO file is updated after every major documentation release.

Follow Cisco UCS Docs on Twitter to receive document update notifications.

# Documentation Feedback

To provide technical feedback on this document, or to report an error or omission, please send your comments to ucs-docfeedback@cisco.com. We appreciate your feedback.



CHAPTER 2

# Overview

This chapter contains the following sections:


- About Cisco UCS Management Pack Suite, on page 5
- System Requirements, on page 5


# About Cisco UCS Management Pack Suite

Management Pack is a definition file with predefined monitoring settings. It enables you to monitor a specific service or application in Operations Manager. These predefined settings include discovery information which allows Operations Manager to automatically detect and start the monitoring services and applications. It also has a knowledge base which contains error details, troubleshooting information, alerts, and reports which helps to resolve the problems detected in the environment.

The Cisco IMC Management Pack monitors a group of Cisco IMC standalone Cisco UCS C-Series and E-Series servers. It has object discoveries for discovering the Cisco IMC servers and rules to monitor the server health, and raise alerts for the server faults.

The Cisco UCS Manager Management Pack provides visibility to the health, performance, and availability of a Cisco UCS domain through a single, familiar, and easy-to-use interface. The management pack contains rules to monitor chassis, blade servers, rack servers, and service profiles across multiple Cisco UCS domains.

The Cisco UCS Central Management Pack has rules to monitor global service profiles and organizations across multiple Cisco UCS Central. It provides visibility of health and alerts through familiar and easy-to-use interface.

# System Requirements

The following system requirements are for Management Servers, Gateway Servers or Operations Manager Windows Agents (trusted or untrusted boundary) with Cisco UCS Monitoring Service running on them.

Verified versions of System Center Operations Manager are as follows:

- 2019 UR2
- 2019
- 1807
- 1801

- 2016
- 2012 R2
- 2012

### Management and Gateway Servers

System requirement for Management Server and Gateway Server are as per the Microsoft recommendations mentioned, see https://docs.microsoft.com/en-us/system-center/scom/system-requirements

### Operations Manager Windows Agents

The following are the System requirement for Windows agents, trusted or untrusted boundary running Cisco UCS Monitoring Service:

#### Hardware

- Processor Architecture—64-bit with Quad-core or higher
- Memory—8 GB or higher
- Free Disk Space — 50 MB or higher
- Network Connection — 1 MBps or faster

#### Operating System

Ensure that 64-bit version of the following operating systems are installed with the latest service packs:

- Windows Server 2019
- Windows Server 2016
- Windows Server 2012 R2
- Windows Server 2012
- Windows Server 2008 R2

#### Software

Install the following software components before installing the Cisco UCS monitoring service on management servers:

| Cisco UCS MP Version | .NET Framework Version | Windows PowerShell Version |
|---|---|---|
| 4.1.4 or higher | 4.7.1 or higher | 5.1 or higher |
| 4.1.3 and earlier | 4.6 or higher | 3.0 or higher |

### Supported Cisco UCS Manager Releases

Cisco UCS Management Pack Suite for Microsoft System Center Operations Manager is compatible with the following Cisco UCS Manager releases:

- Release 4.1

- Release 4.0
- Release 3.2
- Release 3.1
- Release 3.0
- Release 2.5
- Release 2.2
- Release 2.1

### Supported Cisco IMC Release

Cisco UCS Management Pack Suite for Microsoft System Center Operations Manager is compatible with the following Cisco IMC releases:

- Release 4.1

**Note** Supported only for Cisco UCS Management Pack Suite version 4.1.4 or higher.

- Release 3.1

**Note** Supported only for Cisco UCS Management Pack Suite v4.1.1 or higher.

- Release 3.0

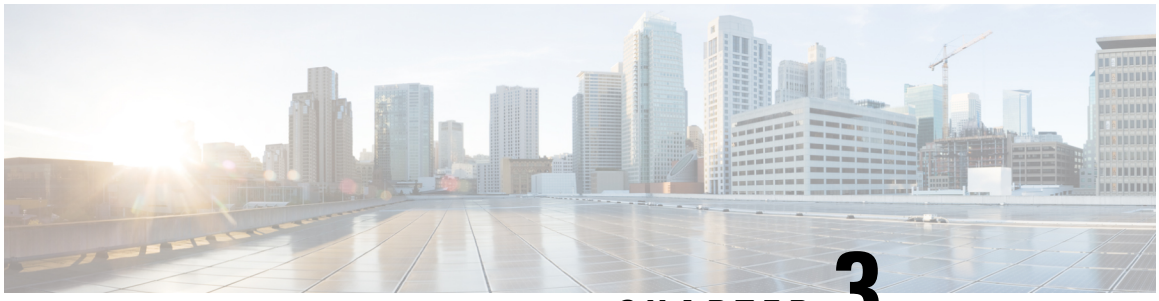
**Note** Supported only for Cisco UCS Management Pack Suite v4.1.1 or higher.

- Release 2.0(3) or higher

### Supported Cisco UCS Central Releases

Cisco UCS Management Pack Suite for Microsoft System Center Operations Manager is compatible with the following Cisco UCS Central releases:

- Release 2.0
- Release 1.5
- Release 1.4
- Release 1.3



CHAPTER 3

# Install Cisco UCS Management Packs

This chapter contains the following sections:


- Checklist to Install Cisco UCS Management Pack Suite, on page 9
- Installing the Cisco UCS Management Pack Suite, on page 10
- Installing Cisco UCS Monitoring Service, on page 11
- Upgrading the Cisco UCS Monitoring Service, on page 12
- Silent Installation of Cisco UCS Monitoring Service, on page 12
- Upgrading the Cisco UCS Management Pack Suite, on page 12
- Adding a Firewall Exception for the Cisco UCS Monitoring Service, on page 13


# Checklist to Install Cisco UCS Management Pack Suite

1. Ensure that you have one of the following privileges on Management Server, Gateway Server or Agent Managed Computers (trusted or untrusted boundaries):
   - Domain Administrator
   - Domain user with local administrative privileges
2. Ensure that the system used for installing Cisco UCS Management Pack and UCS Monitoring Service is part of the domain.
3. Validate the Operating System of the system or server with one of the following:
   - Windows Server 2019
   - Windows Server 2016
   - Windows Server 2012 R2
   - Windows Server 2012
   - Windows Server 2008 R2
4. Validate the Operations Manager version with one of the following:
   - Operations Manager 2019
   - Operations Manager 1807

- Operations Manager 1801
- Operations Manager 2016 RTM (Updated with latest CUs)
- Operations Manager 2012 RTM (Updated with latest CUs)
- Operations Manager 2012 SP1 (Updated with latest CUs)
- Operations Manager 2012 R2 (Updated with latest CUs)

5. Ensure the following products are installed on the server or agent used for Cisco Monitoring Service:

| Cisco UCS MP Version | .NET Framework Version | Windows PowerShell Version |
|---|---|---|
| 4.1.4 or higher | 4.7.1or higher | 5.1 or higher |
| 4.1.3 and earlier | 4.6 or higher | 3.0 or higher |

# Installing the Cisco UCS Management Pack Suite

For importing Management Packs using Operations Manager console, you must have administrative privileges. For more information on the access privileges, see https://technet.microsoft.com/en-in/library/hh212691.aspx.

You can also click Play on this Video to watch how to import the Cisco UCS Management Pack Suite.

**Step 1** On the Cisco.com download site for Cisco UCS Management Partner Ecosystem Software, download the Cisco UCS management pack suite file and unzip the file into a folder.

**Step 2** Launch **Operations Manager** console.

**Step 3** Navigate to **the Administration** > **Management Packs** > **Import Management Packs** tab.

**Step 4** On the **Import Management Pack** page, click **Add** and select **Add from the disk**.
An **Online Catalog Connection** dialog box appears.

**Step 5** Click **No**, if you do not want to search the management pack dependencies online.

**Step 6** Navigate to the unzipped management pack suite files folder.

**Step 7** From the list of files, select the mandatory files:

- *Cisco.Ucs.Views.Library.mpb*
- *Cisco.Ucs.Core.Library.mpb*
- *Cisco.Ucs.Monitoring.Service.mpb*

**Step 8** Other management pack files can be imported based on your machine requirements. For example, select *Cisco.Ucsm.mpb* for UCS Manager, *Cisco.UCS.CSeries.mpb* for Cisco IMC, and *Cisco.UCSCentral.mpb* for UCS Central

**Step 9** Click **Open**.

**Step 10** Click **Install on the Import Management Packs** page.

It may take few minutes to import the files.

### What to do next

Install the Cisco UCS Monitoring Service.

# Installing the Management Pack Suite Using Scripts

**Step 1** On the Cisco.com download site for Cisco UCS Management Partner Ecosystem Software, download the Cisco UCS management Pack suite file and unzip the file into a folder.

**Step 2** Open Windows PowerShell, and navigate to the folder where the unzipped management Pack Suite file is saved.

**Step 3** Change the directory to **Scripts** folder.

**Step 4** Run the **Import-ManagementPacks.ps1** command with one of the following switch parameters:

a) **All**—Imports all the management packs
b) **UCSManager**—Imports UCS Manager Management Pack and other required management packs.
c) **UCSCentral**—Imports UCS Central Management Pack and other required management packs.
d) **IMCGroup**—Imports IMC Management Pack and other required management packs.
e) (Optional) **Path**—This parameter is required when the management packs are moved to a different directory location.

# Installing Cisco UCS Monitoring Service

Depending on whether you want to monitor through management server, gateway server or an agent managed computers, you can install the monitoring service on any of these server.

You can also click Play on this Video to watch how to install the Cisco UCS Monitoring Service.

### Before you begin

- For Cisco UCS Monitoring Service version 4.1.4 or higher, install .NET Framework 4.7.1 or higher.

  For Cisco UCS Monitoring Service version 4.1.3 or below, install .NET Framework 4.6 or higher.
- You must have local administrative privileges.

  For more information on the access privileges, see

  https://technet.microsoft.com/en-in/library/hh212691.aspx.

**Step 1** Navigate to the folder in which the unzipped Cisco UCS Management Pack Suite is stored.

**Step 2** Select the monitoring service installer .msi file, and launch the installer.

**Step 3** In the **Setup** wizard, click **Next**.

**Step 4** In the **License Agreement** page, do the following:

a) Review and accept the **EULA**.
b) Click **Next**.

**Step 5** In the **Product Registration** page, complete the following:

a) Enter a username.
b) (Optional) Enter the name of your organization.

The username is required, but the organization name is optional.

c) Click **Next**.

**Step 6** In the **Select Installation Folder** page, accept the default installation folder or click **Browse** to navigate to a different folder, and then click **Next**.

**Step 7** On the **Ready to Install** page, click **Install** to start the installation.

Once the Cisco UCS monitoring service is successfully installed, the **Installation Complete** message appears.

**Step 8** Click **Finish**.

**Note** The same installation procedure is followed to install the monitoring service on agent managed computers and gateway servers.

# Upgrading the Cisco UCS Monitoring Service

**Step 1** Run the Cisco UCS Monitoring Service installer on the system where the earlier version of the Monitoring Service is installed.

**Step 2** If the system detects earlier version, you are prompted to upgrade the Monitoring Service. Click **Upgrade**.

**Step 3** After the installation is complete, run the Monitoring Service installer on each system where previous installation of Monitoring Service is available.

# Silent Installation of Cisco UCS Monitoring Service

Cisco UCS Monitoring Service can be installed in a non interactive manner.

**Step 1** Run the command prompt with access to admin privileges.

**Step 2** Navigate to the directory where the Monitoring Service installer is saved.

**Step 3** Run the **Cisco.Ucs.Monitoring.Service.v4.x.x.0-x64.msi /quiet** command.

# Upgrading the Cisco UCS Management Pack Suite

The Cisco UCS Management Pack Suite, Release 4.x does not support direct upgrade from 3.x version and 2.6 version. Uninstall the previous version and install the 4.x version.

However, you can use migration scripts to migrate the UCS domains and IMC Groups instance templates from previous version of Cisco UCS Manager Management Pack and Cisco IMC Management Pack respectively to the latest Cisco UCS Management Pack Suite, Release 4.x.

Supported Cisco UCS Manager Management Pack for Migration

- Version 3.1(2)
- Version 3.1(1)

Supported Cisco IMC Management Pack for Migration

- Version 1.2(1)
- Version 1.1(1)

You can download the migration scripts from https://communities.cisco.com/docs/DOC-67249

Any Cisco UCS Management Pack Suite, Release 4.x can be upgraded to the latest Management Pack release.

**Step 1** Download and Import latest management packs.

To install the Cisco UCS Management Pack, see Installing the Cisco UCS Management Pack Suite, on page 10.

**Step 2** Upgrade the Monitoring Service Upgrading the Cisco UCS Monitoring Service, on page 12

**Step 3** Once the monitoring service is installed, from the **Scripts** folder run the **Update-UcsScomAllInstance** script in the PowerShell window.

**Note** Wait for few minutes before executing the script. If there is any exception while executing, retry after few minutes.

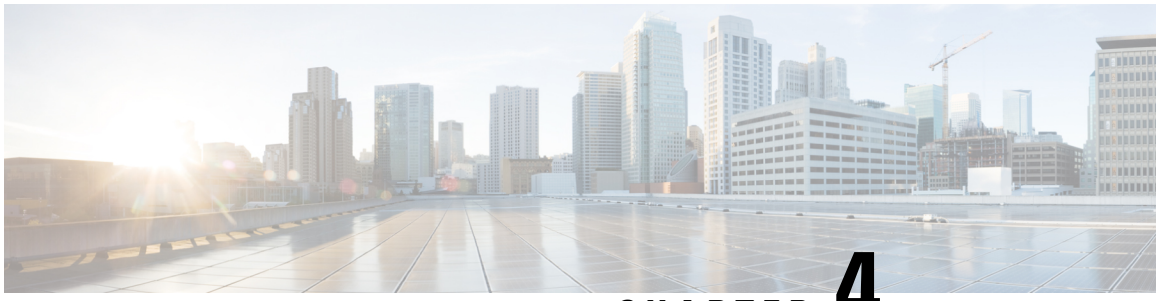
**Step 4** Once all the instances are upgraded, close the PowerShell window.

**Step 5** Close and reopen the Operations Manager console.

# Adding a Firewall Exception for the Cisco UCS Monitoring Service

Before you monitor a Cisco UCS domain, enable the following inbound rules in the Windows Firewall with Advanced Security on the computer where you run the Cisco UCS Management Service:

- File and Printer Sharing:
  - Echo-Request—ICMPv4-In
  - Echo-Request—ICMPv6-In
- Remote Service Management (RPC)
- Remote Service Management (RPC-EPMAP)



CHAPTER 4

# Uninstall the Management Packs

This chapter contains the following sections:


- Uninstalling Cisco UCS Management Packs, on page 15
- Uninstalling Cisco UCS Monitoring Service, on page 16


# Uninstalling Cisco UCS Management Packs

## Using Operations Manager Console

**Step 1** Launch **Operations Manager** console.

**Step 2** Navigate to **Adminstration** > **Management Packs**.

A list of management pack appears on the right pane.

**Step 3** Select the management packs that you want to uninstall.

**Step 4** From the **Actions** pane, click **Properties**.

**Step 5** Click the **Dependencies** tab.
A list of all the Management Packs that depend on the selected Management Pack appears.

**Step 6** Note the dependencies, and click **Cancel**.
You are redirected to the **Operations Manager** page.

**Step 7** Select the management pack and its dependencies, and click **Delete**.

## Using Powershell script

**Step 1** On the cisco.com download site for Cisco UCS Management Partner Ecosystem software, download the Cisco UCSM Management Pack Suite file and unzip the file into a folder.

**Step 2** Open Windows Powershell and navigate to the folder where the unzipped management Pack suite file is saved.

**Step 3** Move to the **Scripts** folder.

**Step 4** Run the **CleanUp-ManagementPacks.ps1** command with one of the following switch parameters:

- UCSManager—Removes UCS Manager Management Pack and its dependent management packs
- UCSCentral—Removes UCS Central Management Pack and its dependent management packs
- IMCGroup—Removes IMC Management Pack and its dependent management packs
- All—Removes all the Management Packs and its dependent management packs

## Using Operations Manager Cmdlets

**Step 1** Launch **Operations Manager Shell**.

**Step 2** To uninstall the management pack, run the following command:

a) To remove all UCS domain instances added for monitoring, run the **Get-SCOMManagementPack** | *Where-Object{$_References.Contains("CiscoUcsm")}* | **Remove-SCOMManagementPack** cmdlet.

b) To remove Cisco IMC management pack, run the **Get-SCOMManagementPack** | *Where-Object {$_.References.Contains("CiscoUCSCSeries")}* | **Remove-SCOMManagementPack** cmdlet.

c) To remove UCS Central management pack, run the **Get-SCOMManagementPack** | *Where-Object {$_.References.Contains("CiscoUCSCentral")}* | **Remove-SCOMManagementPack** cmdlet.

**Note** It might take sometime to remove all the associated instances from the Operations Manager.

# Uninstalling Cisco UCS Monitoring Service

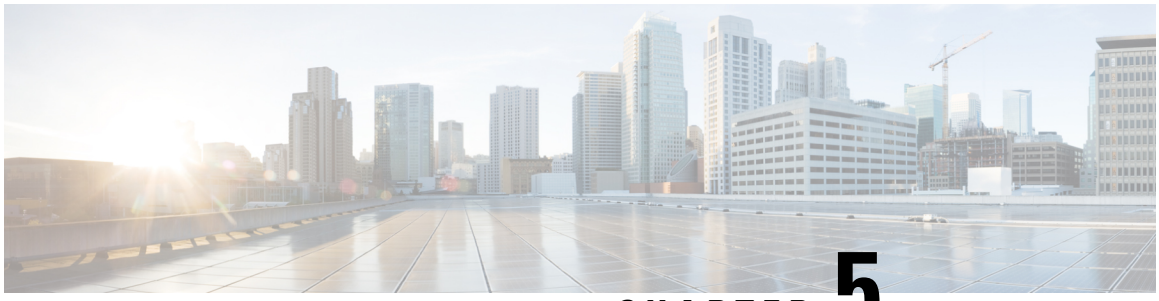
**Step 1** Go to Control Panel.

**Step 2** Select **Program and Features**.

**Step 3** Select the **Uninstall a program**.

**Step 4** Select **Cisco UCS Monitoring Service(v4.x)**, and click **Uninstall**.

**Step 5** Click **Yes** to confirm.



CHAPTER 5

# Deployment and Sizing Information

This chapter contains the following sections:


- Deployment Scenarios on Trusted Boundry, on page 17
- Deployment Scenarios on Untrusted Boundary, on page 21


# Deployment Scenarios on Trusted Boundry

## Single Machine Deployment of Monitoring Service

**Before you begin**

The necessary Management Packs must be imported in the Management Group.

**Step 1** Add an Agent Managed Computer (AM)

**Step 2** Run the installer on the AM and install the Monitoring Service

**Step 3** While adding the UCS instances or IMC Group instances from the Operations Manager console, select the AM as the Service Machine.

The following tables displays the sizing information for the above approach:

***Table 1: UCS Manager Sizing Details***

| Agent Managed Computer | Hardware Specification | Number of blades Monitored |
|---|---|---|
| AM | Intel® Xeon® CPU E5-4640 0@ 2.40 G Hz (2 processors)<br>RAM 12.0 GB<br>64-bit Operating system | ~140 with default private bytes<br>~200 with private bytes value ~1.5 GB |

*Table 2: Cisco IMC Sizing Details*

| Agent Managed Computer | Hardware Specification | Number of blades Monitored |
|---|---|---|
| AM | Intel® Xeon® CPU E5-4640 0@ 2.40 G Hz (2 processors)<br>RAM 12.0 GB<br>64-bit Operating system | ~500 |

*Table 3: Cisco UCS Central Sizing Details*

| Agent Managed Computer | Hardware Specification | Number of blades Monitored |
|---|---|---|
| AM | Intel® Xeon® CPU E5-4640 0@ 2.40 G Hz (2 processors)<br>RAM 12.0 GB<br>64-bit Operating system | ~200 with private bytes value ~1.5 GB |

## Single Machine Deployment of Monitoring Service-Alternate Method

### Before you begin

The necessary Management Packs must be imported in the Management Group.

**Step 1** Run the installer on a Management Server, and install the Monitoring Service.

**Step 2** While adding the UCS instances or IMC Group instances from the Operations Manager console, select the Management Server (MS) as the Service Machine.

*Table 4: UCS Manager Sizing Details*

| Management Server | Hardware Specification | Number of blades Monitored |
|---|---|---|
| MS | Intel® Xeon® CPU E5-4640 0@ 2.40 G Hz (2 processors)<br>RAM 12.0 GB<br>64-bit Operating system | ~500 |

*Table 5: Cisco IMC Sizing Details*

| Management Server | Hardware Specification | Number of blades Monitored |
|---|---|---|
| MS | Intel® Xeon® CPU E5-4640 0@ 2.40 G Hz (2 processors)<br>RAM 12.0 GB<br>64-bit Operating system | ~1100 |

*Table 6: Cisco UCS Central Sizing Details*

| Management Server | Hardware Specification | Number of blades Monitored |
|---|---|---|
| MS | Intel® Xeon® CPU E5-4640 0@ 2.40 G Hz (2 processors)<br>RAM 12.0 GB<br>64-bit Operating system | ~600 with default private bytes<br>~1000 with private bytes value ~2.5 GB |

# Multiple Machine Deployment of Monitoring Service

**Before you begin**

The necessary Management Packs must be imported in the Management Group.

**Step 1** Add Agent Managed Computer (AM).

You can add more than one agent managed computer. For example, AM1, AM2, AM3.

**Step 2** Run the installer on all the added agent managed computers and install the Monitoring Service.

**Step 3** While adding the UCS instances or IMC Group instances from the Operations Manager console, select the AM from which you want to monitor the instances as the Service Machine.

The following tables displays the sizing information for the above approach:

*Table 7: UCS Manager Sizing Details*

| Agent Managed Computer | Hardware Specification | Number of blades Monitored per Server |
|---|---|---|
| AM1<br>AM2<br>AM3 | Intel® Xeon® CPU E5-4640 0@ 2.40 G Hz (2 processors)<br>RAM 12.0 GB<br>64-bit Operating system | ~140 with default private bytes<br>~200 with private bytes value ~1.5 GB |

*Table 8: Cisco IMC Sizing Details*

| Agent Managed Computer | Hardware Specification | Number of blades Monitored per Server |
|---|---|---|
| AM1<br>AM2<br>AM3 | Intel® Xeon® CPU E5-4640 0@ 2.40 G Hz (2 processors)<br>RAM 12.0 GB<br>64-bit Operating system | ~500 |

*Table 9: Cisco UCS Central Sizing Details*

| Agent Managed Computer | Hardware Specification | Number of blades Monitored per Server |
|---|---|---|
| AM1<br>AM2<br>AM3 | Intel® Xeon® CPU E5-4640 0@ 2.40 G Hz (2 processors)<br>RAM 12.0 GB<br>64-bit Operating system | ~140 with default private bytes<br>~200 with private bytes value ~1.5 GB |

## Multiple Machine Deployment of Monitoring Service-Alternate Method

### Before you begin

The necessary Management Packs must be imported in the Management Group.

**Step 1** Run the installer on a Management Server, and install the Monitoring Service.

You can add more than one Management Servers. For example, MS1, MS2, MS3.

**Step 2** While adding the UCS instances or IMC Group instances from the Operations Manager console, select a Management Server (MS) as the Service Machine.

*Table 10: UCS Manager Sizing Details*

| Management Server | Hardware Specification | Number of blades Monitored per Server |
|---|---|---|
| MS1<br>MS2<br>MS3 | Intel® Xeon® CPU E5-4640 0@ 2.40 G Hz (2 processors)<br>RAM 12.0 GB<br>64-bit Operating system | ~500 with default private bytes |

*Table 11: Cisco IMC Sizing Details*

| Management Server | Hardware Specification | Number of blades Monitored per Server |
|---|---|---|
| MS1<br>MS2<br>MS3 | Intel® Xeon® CPU E5-4640 0@ 2.40 G Hz (2 processors)<br>RAM 12.0 GB<br>64-bit Operating system | ~1100 |

*Table 12: Cisco UCS Central Sizing Details*

| Management Server | Hardware Specification | Number of blades Monitored per Server |
|---|---|---|
| MS1<br>MS2<br>MS3 | Intel® Xeon® CPU E5-4640 0@ 2.40 G Hz (2 processors)<br>RAM 12.0 GB<br>64-bit Operating system | ~600 with default private bytes<br>~1000 with private bytes value ~2.5 GB |

# Deployment Scenarios on Untrusted Boundary

Distributed deployment of Operations Manager can consists of Gateway Servers which are installed on a different un-trusted boundary to the Management Group. These Gateway servers monitor the Agent Managed Computers locally and send the monitoring information to the connected Management Server.

The Management Group (MG) has two management servers; MS1 and MS2. Gateway Server (GW) is connected to MS1. GW belongs to a different Active Directory than MS1 or MS2. Assuming that there are multiple instances to be monitored, few instances are on same network as MS1 or MS2, and the rest belongs to the same network as GW.

### Before you begin

The necessary Management Packs must be imported in the Management Group.

**Step 1** Add an Agent Managed Computer to Management Server, either MS1 or MS2.

**Step 2** Add an Agent Managed Computer AM2 to GW1.

You can add one or more Agent Managed Computers.

**Step 3** Run the installer on AM1 and install the Cisco UCS Monitoring Service.

**Step 4** Run the installer on AM2 and install the Cisco UCS Monitoring Service.

Run the installer for additional Agent Managed Computer.

**Step 5** While adding Cisco UCS or IMC Group instances from the Operations Manager Console select AM1 as the Service Machine.

Alternatively, Agent Managed Computer added in Step 3 can also be selected as Service Machine from **Add Monitoring Wizard**.

The following tables display the sizing information for the above approach:

*Table 13: Cisco UCS Manager Sizing Details*

| Agent Managed Computer | Hardware Specification | Number of blades Monitored per Server |
|---|---|---|
| AM1<br>AM2<br>AM3 | Intel® Xeon® CPU E5-4640 0@ 2.40 G Hz (2 processors)<br>RAM 12.0 GB<br>64-bit Operating system | ~140 with default private bytes<br>~200 with private bytes value ~1.5 GB |

*Table 14: Cisco IMC Sizing Details*

| Agent Managed Computer | Hardware Specification | Number of blades Monitored per Server |
|---|---|---|
| AM1<br>AM2<br>AM3 | Intel® Xeon® CPU E5-4640 0@ 2.40 G Hz (2 processors)<br>RAM 12.0 GB<br>64-bit Operating system | ~500 |

*Table 15: Cisco UCS Central Sizing Details*

| Agent Managed Computer | Hardware Specification | Number of blades Monitored per Server |
|---|---|---|
| AM1<br>AM2<br>AM3 | Intel® Xeon® CPU E5-4640 0@ 2.40 G Hz (2 processors)<br>RAM 12.0 GB<br>64-bit Operating system | ~140 with default private bytes<br>~200 with private bytes value ~1.5 GB |

# Multiple Machine Deployment of Monitoring Service-Alternate Method

### Before you begin

The necessary Management Packs must be imported in the Management Group.

**Step 1** Run the installer on either MS1 or MS2, and install the Monitoring Service.

You can add more than one Management Servers. For example, MS1, MS2, MS3.

**Step 2** Run the installer on GW1, and install the Monitoring Service.

**Step 3** While adding the UCS instances or IMC Group instances from the Operations Manager console, select either MS1 or MS2 as the Service Machine to monitor the instances which belong to the same network.

**Step 4** While adding UCS or IMC Group instances from the Operations Manager Console select GW1 as the Service Machine for monitoring the instances which belongs to the same network as GW1.

*Table 16: UCS Manager Sizing Details*

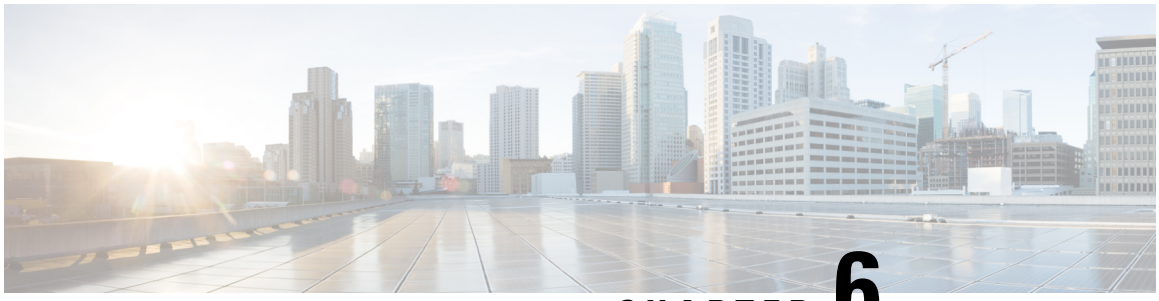
| Management Server | Hardware Specification | Number of blades Monitored per Server |
|---|---|---|
| MS1<br>GW1 | Intel® Xeon® CPU E5-4640 0@ 2.40 G Hz (2 processors)<br>RAM 12.0 GB<br>64-bit Operating system | • MS1—~500 servers with default private bytes<br>• GW1—~500 servers with default private bytes |

*Table 17: Cisco IMC Sizing Details*

| Management Server | Hardware Specification | Number of blades Monitored per Server |
|---|---|---|
| MS1<br>GW1 | Intel® Xeon® CPU E5-4640 0@ 2.40 G Hz (2 processors)<br>RAM 12.0 GB<br>64-bit Operating system | • MS1—~1100 servers<br>• GW1—~1100 servers |

*Table 18: Cisco UCS Central Sizing Details*

| Management Server | Hardware Specification | Number of blades Monitored per Server |
|---|---|---|
| MS1<br>GW1 | Intel® Xeon® CPU E5-4640 0@ 2.40 G Hz (2 processors)<br>RAM 12.0 GB<br>64-bit Operating system | • ~600 with default private bytes<br>• ~1000 with private bytes value ~2.5 GB |



CHAPTER 6

# Troubleshooting

This chapter contains the following sections:


- Cisco UCS Monitoring Stopped, on page 25


## Cisco UCS Monitoring Stopped

Cisco UCS monitoring stops, an alert message appears, and the service machine state changes to critical.

To resolve the issue, follow these steps:

**Step 1** Navigate to the **Monitoring Service** dashboard.

**Step 2** Select the service which is stopped and is in critical state.

**Step 3** In the right pane, click **Start the Service**.

**Step 4** Click **Run**.

You can verify whether the service is running from the service.msc dialog box.

## Cisco UCS Monitoring Service Log

The current Cisco UCS Management Pack version supports **Cisco UCS Monitoring Service** logging.

You can view the logs at the following locations:

- UCS Manager—"`%PROGRAMDATA%\Cisco\UCS Manager\Logs`"
- UCS Central—"`%PROGRAMDATA%\Cisco\UCS Central\Logs`"
- Cisco IMC—"`%PROGRAMDATA%\Cisco\IMC Servers\Logs`"

In the above mentioned locations, you can view logs for each Cisco UCS domain, UCS Central and IMC group instances which are being monitored.

# Logging Levels While Monitoring UCS Domain, UCS Central, and IMC Servers

- Error—Logs any errors or exceptions
- Info—Logs Errors, Exceptions, and informational messages
- Debug—Logs errors, exceptions, informational, and debug messages

**Note** Default logging level is set to **Info**.

# Changing the Logging Levels

Log in to the computer hosting the **Cisco UCS Monitoring Service**, and complete the following steps to change the logging level:

**Step 1** Launch the **PowerShell** window.

**Step 2** Enter the **$wcf = New-WebServiceProxy http://localhost:8732/UcsMonitoringService** command to connect to the monitoring service

**Step 3** To view the current log, enter the **$wcf.GetLogLevel()** command.

**Step 4** To change the logging level, enter Info/Error/Exception/Debug level as a parameter. For example, **$wcf.SetLogLevel("Info")**.

# Generating Cisco UCS Monitoring Service Technical Support Bundle

**Step 1** Launch the **Operations Manager** console.

**Step 2** Navigate to **Monitoring** > **Cisco UCS Monitoring** > **Cisco UCS Monitoring Service** > **Monitoring Service Dashboard**.

**Step 3** In the right pane select the server on which the selected monitoring service is running.

**Step 4** In the **Cisco UCS Monitoring Service Task** area, click **Generate Tech Support**.

Run Task - Generate Tech Support page appears.

**Step 5** Click **Run**.

**Step 6** Click **Close** to exit from the current window.

The tech support file is stored in your local system.

**Step 7** To view the tech support file folder on the server for which the task is run, navigate to `"%PROGRAMDATA%\Cisco\TechSupport"` folder.

**Note** We recommend you to change the logging level to **Debug** and wait for one to two days before generating the tech support file. This helps to capture required information for debugging the problem.

# Generating Cisco UCS Monitoring Service Installer Log File

If an error occurs during installation, enter the **msiexec -i "installer_path\installer file name" -l*v "logfilename"** command at the prompt to generate the installer log file.

For example, **Cisco.Ucs.Monitoring.Service.v4.1.4.0-x64.msi**.