Cisco UCS Server Configuration Utility User Guide

For Cisco UCS C-Series Servers

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CONTENTS

Preface

This preface describes the organization and conventions of the *Cisco UCS Server Configuration Utility, Release 5.0*. It also provides information on how to obtain related documentation and submit a service request.

Audience

This guide is intended primarily for data center administrators with responsibilities and expertise in server, storage, and network administration and network security.

Organization

This guide is organized as follows:

Chapter	Title	Description
Chapter 1	Overview	Provides an introduction to the utility and the features it provides.
Chapter 2	Launching UCS Server Configuration Utility	Contains information on booting the utility.
Chapter 3	Understanding UCS Server Configuration Utility User Interface	Contains information about the GUI and its elements.
Chapter 4	Viewing Server Inventory	Contains information about viewing the server inventory
Chapter 5	Viewing Server Health	Contains information about viewing the server health.
Chapter 6	Configuring RAID Levels	Contains information about RAID levels.
Chapter 7	Installing Operating Systems	Contains information about installing the operating systems.
Chapter 8	Troubleshooting	Contains troubleshooting information and frequently asked questions.

Related Documentation

The documentation set for the Cisco Unified Computing System (UCS) C-Series rack-mount servers is described in the roadmap document at the following link:

Cisco UCS C-Series Documentation Roadmap

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see *What's New in Cisco Product Documentation* at: http://www.cisco.com/en/US/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.

Overview

The Cisco UCS Server Configuration Utility (SCU) is an application that helps you manage various tasks on your server. The utility helps you easily set up and manage your servers from a single application.

UCS-SCU reduces the complexity and time associated with setting up and maintaining Cisco C-Series servers. Server deployment is made easier. It guides you through questions to help quickly configure the server through automatic recognition of server hardware, with minimal reboots and an automated unattended operating system installation.

Using the SCU, you can perform the following tasks:

- Upgrade, troubleshoot, and configure the UCS C-Series server
- View server inventory
- Configure RAID volumes on attached hard drives
- Install an operating system
- View server health and logs

Note Cisco UCS SCU does not support Internationalization.

This chapter includes the following sections:

Supported Operating Systems

UCS-SCU supports unattended installation of the following operating systems:

- Windows Server 2016
- Windows Server 2012
- Windows Server 2012 R2
- Windows Storage Server 2012
- Windows Storage Server 2012 R2

- Red Hat Enterprise Linux 5 Update 10
- Red Hat Enterprise Linux 5 Update 11
- Red Hat Enterprise Linux 6 Update 4 (x86-64)
- Red Hat Enterprise Linux 6 Update 5
- Red Hat Enterprise Linux 6 Update 6
- Red Hat Enterprise Linux 6 Update 7
- Red Hat Enterprise Linux 6 Update 8
- Red Hat Enterprise Linux 6 Update 9
- Red Hat Enterprise Linux 7.0
- Red Hat Enterprise Linux 7 Update 1
- Red Hat Enterprise Linux 7 Update 2
- Red Hat Enterprise Linux 7 Update 3
- SUSE Linux Enterprise Server 11 (SP3)
- SUSE Linux Enterprise Server 11 (SP4)
- SUSE Linux Enterprise Server 12
- SUSE Linux Enterprise Server 12 SP2
- VMware ESXi 5.1
- VMware ESXi 5.5
- VMware ESXi 6.0
- VMware ESXi 6.5
- Ubuntu 12.04
- Ubuntu 14.04
- Ubuntu 16.04
- CentOS 6.6
- CentOS 6.7
- CentOS 6.8

Supported Platforms

UCS-SCU is supported on the following Cisco platform:

- UCS-C22 M3
- UCS-C24 M3
- UCS-C220 M3
- UCS-C240 M3
- UCS-C3160 M3
- UCS-S3260 M3
- UCS-S3260 M4
- UCS-C240 M4

- UCS-C220 M4
- UCS-C460 M4

Supported Peripheral Devices

Table 1-1 shows the SIOC and LSI controller devices supported by UCS-SCU.

Table 1-1 SIOC and LSI Controller Devices

Server	SIOC	LSI Controller	RAID Levels Supported
C3160	Intel I350, Cisco VIC 1227	• Storage Servers (SLOT-MEZZ)	• 0,1,5,6,10,50,60 **Note** Single virtual drive should not contain more than thirty-two number of HDDs.
S3260 M3, S3260 M4	UCSC-C3260-SIOC	• Storage Servers (SLOT-MEZZ)	• 0,1,5,6,10,50,60 **Note** Single virtual drive should not contain more than thirty-two number of HDDs.
C22, C24	Intel I350	• 9265-8i • 9240-8i • 9220-4i • 9220-8i	• 0, 1, 5, 10
C220, C240	Intel I350	• LSI 9266-8i • Cisco UCSC RAID SAS 2008M-8i • LSI Embedded MegaRAID	• 0, 1, 5, 6,10, 50, 60 • 0, 1, 5, 10, 50 • 0, 1, 5 (if TSOC is installed in the server), 10
C220 M4	Intel I350	• 3108 • LSI Embedded MegaRAID	• 0, 1, 1E, 5, 6, 10, 50, and 60
C240 M4	Intel I350	• 3108	• 0, 1, 1E, 5, 6, 10, 50, and 60
C460 M4	X540	• 3108 • 9361	• 0, 1, 1E, 5, 6, 10, 50, and 60 • 0, 1, 5, 6, 10, 50, and 60

Note The UCS-SCU RAID configuration utility detects the physical drivers only once when you enter this function area after the system is rebooted. Do not remove or add hard disk drivers while navigating within this function area.

Note Some LSI RAID controllers take time to complete the operation during RAID configuration. SCU does not have any control over this issue. As a workaround, you can either recreate the RAID or wait for the operation to complete.

Hardware Requirements

The following are the minimum hardware requirements for UCS-SCU:

- CD-ROM drive—A USB CD/DVD-ROM drive is required to be able to boot and run the UCS-SCU. You can also use the virtual media option in the CMC KVM to boot UCS-SCU.
- Mouse—Some functions require a standard mouse (PS/2 or USB) for navigation.
- USB disk on key device—Functions such as saving UCS-SCU logs require a USB disk on key.
- RAM—A minimum of 1 GB RAM. If the available RAM is less than the minimum recommended value, UCS-SCU will not function properly.
- Network adapter—Some optional functions, such as, downloading the OS drivers from support.cisco.com, require network access. Any single onboard NIC adapter connection is supported.

Note Currently UCS-SCU supports only Intel adapters.

- RAID Cards—RAID configuration and OS installation are supported on select controllers.

Launching UCS Server Configuration Utility

UCS Server Configuration Utility (SCU) is a bootable image based on a 64-bit Linux kernel and can be used to perform operations such as configure RAID logical volume, install operating systems, and perform diagnostics on Cisco rack servers. It is designed to run on one server at a time.

Note You can launch UCS-SCU from the F6 boot option on UCS C220 M3 and C240 M3 servers.

This chapter contains the following sections:

Obtaining ISO Image From cisco.com

To find the ISO file download for your server online, follow these steps:

Step 1 Go to http://www.cisco.com/cisco/software/navigator.html.

Step 2 Click **Unified Computing** in the middle column.

Step 3 Click **Cisco UCS C-Series Rack-Mount Standalone Server Software** in the right-hand column.

Step 4 Click the name of your server model in the right-hand column.

Step 5 In the Select a Software Type list, select **Unified Computing System (UCS) Server Configuration Utility**.

The Download Software page appears listing the release version and the UCS-SCU image.

Step 6 Click **Download Now** to download the ISO file.

Step 7 Verify the information on the next page, then click **Proceed With Download**. If prompted, use your cisco.com credentials to log in.

Step 8 Continue through the subsequent screens to accept the license agreement and browse to a location where you want to save the SCU ISO file.

Booting UCS-SCU

You can launch the UCS-SCU application using one of the following options:

Using Virtual Media

You can use KVM Console to boot the UCS-SCU application with virtual media.

This section includes the following sections:

About KVM Console

KVM Console is an interface accessible from CMC that emulates a direct keyboard, video, and mouse (KVM) connection to the server. KVM Console allows you to connect to the server from a remote location.

Note KVM Console requires Java Runtime Environment (JRE) version 1.6.0 or higher.

KVM Console has the following tabs:

- KVM—This tab displays the UCS-SCU application when the application is booted.
- Virtual Media—This tab allows you to map the following to a virtual drive:
  - CD/DVD on your computer or your network
  - Disk image files (ISO or IMG files) on your computer or your network
  - USB flash drive on your computer

Entering Virtual KVM Console

To enter the virtual KVM Console, follow these steps:

Step 1 Log in to Cisco IMC.

Step 2 Select the server node to launch the corresponding KVM console.

Step 3 Click **Launch KVM Console**.

Virtual KVM Console displays the server console.

Booting From Virtual KVM Console

Before You Begin

- Download the UCS-SCU ISO image file from cisco.com. For information on how to download the image, go to the "Obtaining ISO Image From cisco.com" section on page 2-1.

To boot the UCS-SCU application using virtual KVM Console, follow these steps:

Step 1 Log in to Cisco IMC from your desktop.

Step 2 Click **Launch KVM Console** to launch KVM Console.

Step 3 Click the **Virtual Media** tab.

The Virtual Media tab opens.

Step 4 Click **Add Image.**

Step 5 Navigate to and select the ISO file and click **Open** to mount the image.

Step 6 In the Client View section, select the check box in the Mapped column for the ISO file that you added and then wait for the mapping to complete.

KVM Console displays the progress in the Details section.

Step 7 Reboot the server by clicking **Power Cycle Server** in the CMC.

Step 8 Press **F6** when the server starts to select a boot device.

The boot selection menu appears.

Step 9 Use the arrow keys to select Cisco Virtual CD/DVD and then press **Enter**.

The server boots using the UCS-SCU image and launches the application in the KVM tab.

Using Physical Media

Before You Begin

- Download the UCS-SCU ISO image file from cisco.com. For information on how to download the image, go to the "Obtaining ISO Image From cisco.com" section on page 2-1.
- Create an .iso CD using an application that burns .iso CDs.

To boot the application on your server using a physical CD/DVD, follow these steps:

Step 1 Connect the USB DVD drive to the server through the USB port.

Step 2 Insert the physical media on to your DVD drive.

Step 3 Restart the server and press **F6** to enter the boot selection menu. Select **CDROM drive** as the boot device.

The server boots using the UCS-SCU image and starts the application.

Exiting UCS-SCU

To exit the UCS-SCU application, follow these steps:

Step 1 Remove the .iso disk from the disk drive.

Step 2 Click **Reboot** and then click **Yes** to confirm reboot of your server.

Understanding UCS Server Configuration Utility User Interface

The UCS-SCU GUI is a web-based management interface that allows you to perform tasks such as operating system installation, RAID configuration, and firmware updates.

This section includes the following sections:

License Agreement

After UCS-SCU boots up, the first interface is the End User License Agreement. Select **I Accept** and click **Next** to agree to this license.

UCS-SCU GUI Home Page

Figure 3-1 shows the UCS-SCU GUI and the different elements in the GUI and Table 3-1 shows the description of each element.

Figure 3-1 UCS-SCU GUI

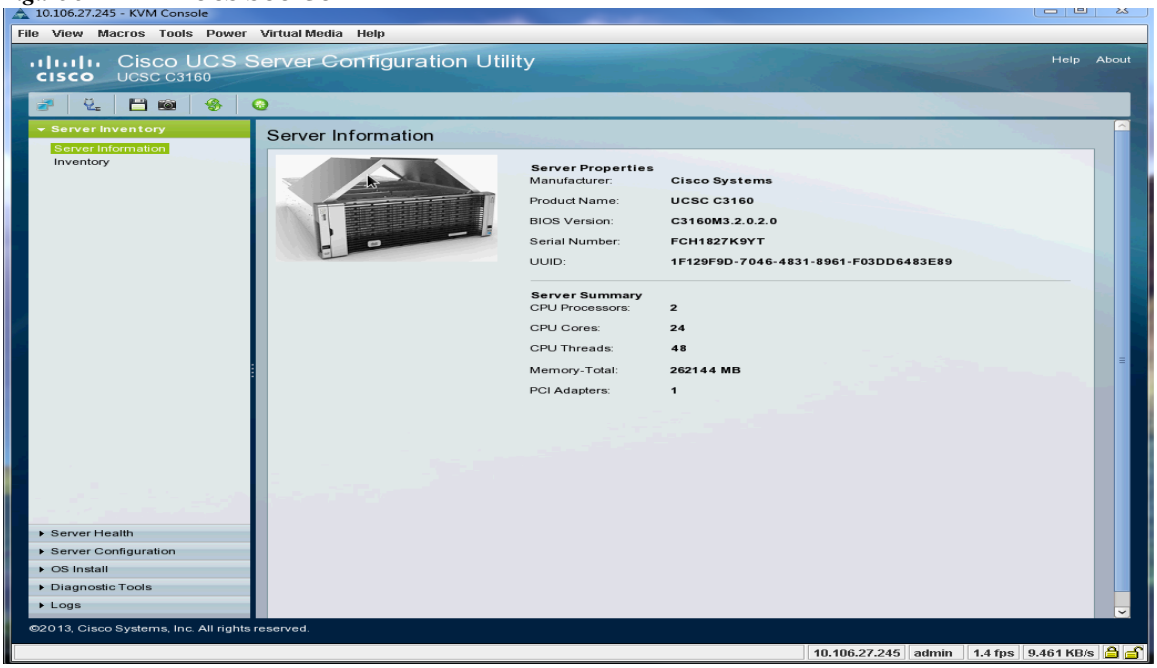

Table 3-1 UCS-SCU GUI Elements

Element	Description
Navigation Pane	Displays on the left side in the UCS-SCU user interface. See Table 3-2 for a description of all the navigation pane elements.
Toolbar	Displays on the left-hand top corner and has a set of icons. See Table 3-3 for a description of all the toolbar icons.
Help	Opens a window in the application that displays context-sensitive help for the displayed page.
Content Pane	Displays on the right side of the GUI. Different pages appear on the content pane depending on the tab that you select in the Navigation Pane.

This section includes the following topics:

Navigation Pane

Table 3-2 describes the elements in the Navigation Pane.

Table 3-2 Navigation Pane Elements

Element	Description
Server Inventory	Displays the server information and inventory. Contains links to the following pages: • Server Information • Inventory For more information about Server Inventory, go to Chapter 4, "Viewing Server Inventory."
Server Health	Displays the health of the subsystems on your server such as CPUs, memory, power supplies, fans, storage, PCI devices, BIOS, and CMC. For more information about Server Health, go to Chapter 5, "Viewing Server Health"
Server Configuration	Configures a RAID volume on attached hard drives of your server. Contains links to the RAID configuration pages: For more information about Server Configuration, go to Chapter 7, "Configuring RAID Levels"
OS Install	Installs the RHEL, SLES, Windows, and ESXi operating systems in a fully unattended mode. The most recent drivers for all onboard components are added from the Tools and Drivers CD or from other supported locations during the operating system installation. For more information about OS Install, go to Chapter 6, "Installing Operating Systems"

Toolbar Pane

Table 3-3 lists and describes all the UCS-SCU icons that you can use to perform specific tasks.

Table 3-3 Toolbar Elements

Toolbar Icon	Name	Function
	Network Configuration	Configures the IP address, DNS and Subnet mask, and Cisco.com credentials.
	Probe Server	Performs health check.

Table 3-3 Toolbar Elements (continued)

Toolbar Icon	Name	Function
	Save Logs	Saves logs to an USB.
	Refresh	Refreshes the content area, if supported.
	Reboot	Reboots the server.

This section describes the toolbar elements in more detail:

- Configuring a Network, page 3-4
- Performing Server Health Check, page 3-5
- Saving Logs, page 3-5
- Rebooting the Server, page 3-5

Configuring a Network

To configure a network, follow these steps:

Step 1 Click the **Network Configuration** button on the toolbar.

The Network Configuration dialog box appears.

Step 2 In the Network Configuration dialog box, do the following:

a. Select IP Address from DHCP server or Static IP Address. If you select Static IP Address, do the following:

- In the IP Address field, enter the IPv4 address.
- In the Subnet Mask field, enter the subnet IPv4 address.
- In the Gateway field, enter the gateway IPv4 address.
- (Optional) In the DNS field, enter the DNS IPv4 address.

Note Go to Step b. if you want to download software and drivers from cisco.com.

b. Select Direct Connection to internet or Manual Proxy. If you select Manual Proxy, do the following:

- In the HTTP Proxy Server URL field, enter the URL of the proxy server. The maximum limit is 45 characters.
- In the Port field, enter the port number. The maximum limit is 5 characters. By default, it is 8080.

- In the Proxy Server UserName field, enter the user name of the proxy server. The maximum limit is 45 characters.
- In the Proxy Server Password field, enter the password of the proxy server. The maximum limit is 45 characters.

Step 3 Click **Configure** to save the settings.

Network configuration is a one-time process, and if you have not configured your network, you are prompted to configure it during the following procedures:

- When you are updating images to Cisco Flexible Flash.
- When you are downloading drivers from the network share or cisco.com during the operating system installation. (See "Installing Operating Systems" section on page 6-1).

Performing Server Health Check

The Probe Server functionality allows to perform a health check of the server subsystems. When you click the Probe Server icon, the server health check is initiated.

To view the health check results, click the **Server Health** tab in the navigation pane.

For more information about the Server Health tab, go to Chapter 5, "Viewing Server Health".

Saving Logs

You can use the Save Logs functionality to save your log files. Before using Save Logs, you must insert a USB flash drive or vMedia for storing the log files.

Rebooting the Server

To reboot the server, follow these steps:

Step 1 Click the **Reboot** icon on the toolbar.

The Reboot dialog box appears.

Step 2 Click **Yes** to reboot.

The server is rebooted, and the UCS-SCU GUI reappears.

Viewing Server Inventory

This chapter provides information on viewing the server inventory.

You can use the server inventory functionality to perform an inventory of your server. You can view details such as server summary, server properties, and an inventory of subsystems on your server such as CPU, memory, power supplies, fans, IO devices, storage, BIOS, and CMC.

To view the inventory of your server, follow these steps:

Step 1 Click the **Server Inventory** tab on the left navigation pane.

Step 2 Click the **Server Information** tab on the left navigation pane. The server properties and server summary appear.

Step 3 Click the **Inventory** tab to view an inventory of your server's subsystems, such as CPU, memory, power supplies, fans, IO devices, storage, BIOS, and CMC.

Table 4-1 explains the various subsystem details you can view.

Table 4-1 Server Inventory Properties

Subsystem	Description
CPU	Displays the socket name, status, number of cores, number of threads, vendor, version, cores enabled, and signature of the CPUs on your server.
Memory	Displays the size, data width, locator, speed, and serial number of the DIMMs on your server.
Power Supplies	Displays the input power, output power (in watts), part number, version, serial number, and product name of the power supply units on your server.
Fans	Displays the status, power state, and speed of the fans on your server.
IO Devices	Displays the type, vendor, description, and MAC address and serial number of the I/O devices on your server.
Storage	Displays the type, description, vendor, size, bus information, and serial number of the storage devices on your server.
BIOS	Displays the vendor, version, physical ID, size, capacity, and boot order of the BIOS on your server.
CMC	Displays the IP address, MAC address, firmware version, and IPMI version of the CMC on your server.

Viewing Server Health

This chapter provides information on viewing the health of your servers.

With the Server Health functionality, you can view the health of all the subsystems of your server (such as memory, processor, power supply, hard disk, fans, chipset, and CMC) along with the status and message of a specific subsystem.

To view the health of your server, follow these steps:

Step 1 Click the **Server health** tab in the left navigation pane.

The server health displays in the right-hand content pane, along with the status and message for a specific subsystem.

Step 2 Click **Probe Server** from the toolbar to view the latest status of the subsystem. Click **Server Health** again to refresh the page after clicking on probe server

Step 3 Click the line corresponding to a subsystem to view details of your server health in the Server Health Details pane.

Note The message column in the server health pane displays the first issue corresponding to the subsystem. If the subsystem has multiple issues, they will appear in the Server Health Details pane.

Installing Operating Systems

The unattended operating system installation function helps you install the Microsoft Windows and RedHat Linux operating systems. UCS-SCU has integrated device drivers including RAID drivers to seamlessly install operating systems on supported RAID logical arrays without additional load driver steps or devices such as the USB.

UCS-SCU supports operating system installation only on virtual disks, and solid state disk (SSD) in AHCI mode. Installation on physical disks is not supported. All UCS-SCU supported operating systems are organized into three groups: Windows, Linux and RHEL.

Note Before you begin the operating system installation, be sure that you have disabled the Watchdog Timer. If this feature is enabled and the value is set for a time duration that is less than the time needed to install the OS, the operating system installation process is interrupted. This Watchdog Timer feature automatically reboots or powers off the server after the specified time duration.

You can use the following two options to install the operating system:

- ESXi Install, page 6-1—Use the ESXi Install option to install the operating system with the customized settings.
- Quick Install, page 6-4—Use the Quick Install option to install the operating system with the default settings.
- Custom Install, page 6-6—Use the Custom Install option to modify the default settings prior to installing the operating system.

ESXi Install

The ESXi Install option allows you to install the operating system and customize the default settings.

Step 1 To enter the unattended operating system installation function area, click **OS Install** in the left navigation pane.

The OS Install page appears.

Step 2 Click the **ESXi** radio button and choose an ESXi version from the Operating System drop-down list.

The Edition drop-down list appears.

Step 3 Click **Next**.

The OS Install page of the selected ESXi version appears.

Basic Configuration

To configure the basic configuration settings, follow these steps:

Step 1 In the **Basic Configuration** area, do the following:

a. In the **Root Password** field, enter the root password.

b. In the **Confirm Root Password** field, reenter the root password.

c. From the **Media Type** drop-down list, choose the disk on which you want install OS. This can be one of the following:

Note A disk that is detected during SCU boot is listed under **Media Type**.

- **Local Disk**—Refers to the local HDD available on the target server.
- **SAN Disk**—Following SAN disks are supported for ESXi installation:
  - **Remote Disk**—Refers to the SAN based FCoE disk allocated on the target server.
  - **iSCSI Disk**—This refers to SAN based iSCSI disks configured on the target server. If you choose this option, then review and update the following parameters:

Table 6-1 iSCSI parameters

Parameter	Description
iSCSI Target Address field	Supports IPv4 address only.
Interface Name drop-down list	Lists the interfaces that have iSCSI enabled. You must choose the interface with which the iSCSI Target can be reached. As a pre-requisite the selected interface's option ROM must be pre-configured with iSCSI details.
Initiator IP address field	Enter Initiator IP Address. This IP address is bound to the selected Interface and used for iSCSI operations
Subnet Mask field	Subnet mask for the Initiator IP.
Gateway IP field	Gateway IP address.

Parameter	Description
IQN Name field	Allows you to enter the initiator IQN name. Required if ACL mandates connection with a specific IQN Name. **Note** If the value is left blank an auto-generated IQN name would be used. **Note** IQN Name might be required depending on vendor target configuration.
CHAP Username field	Required if the target ACL enables CHAP and mandates access via CHAP credentials.
CHAP Password field	Required if the target ACL enables CHAP and mandates access via CHAP credentials.

Note iSCSI Disk is always listed under **Media Type**. If you choose iSCSI disk for OS installation, then you are required to enter the required input fields to discover the iSCSI target. To discover the iSCSI target, click **Get Disks** button.

Note When configuring iSCSI parameters in CMC, configure values for primary target only and leave the secondary target values blank. If you configure secondary target then ESXi installation will fail.

Note Installation of ESXi on iSCSI software targets are not supported through SCU.

d. From the **Select Disk** drop-down list, select the disk on which the OS will be installed.

Network Settings

The Network Settings allows you to enter the network configuration settings for the onboard network adapters that are detected by the operating system during installation. These settings do not affect the network settings for the CMC. We recommend that you set different IP addresses for the operating system and CMC. The network interface column lists each network adapter detected by the UCS-SCU. Your operating system may have a different name for the interface after you install the operating system.

Note Only one of the active network should be configured, and this network interface will be ESXi management network.

To configure the network settings, follow these steps:

Step 1 Click **Network Settings** to open the corresponding window.

The Network Settings window displays the link status of available network interfaces and the corresponding IP address, subnet mask, gateway, DNS, link status, vendor, type, and MAC address.

Step 2 To edit the Network Settings, do the following:

a. Select a network interface and click **Edit.**

The Network Settings dialog box is displayed.

b. In the **Network Settings** dialog box, do the following:

- Select IP Address from DHCP server or Static IP Address. If you select Static IP Address, do the following:
  - In the **IP Address** field, enter the IPv4 address.
  - In the **Subnet Mask** field, enter the subnet IPv4 address.
  - In the **Gateway** field, enter the gateway IPv4 address.
  - In the **DNS** field, enter the DNS IPv4 address.

Click **OK**.

Other OS Install

Quick Install

The Quick Install option allows you to quickly install the operating system with the default parameters. You can view the OS Install page with the default parameters depending on the target operating system. The Quick Install method does not require any user input and is a one-click operating system installation method.

To perform the quick installation of the OS, follow these steps:

Step 1 To enter the unattended operating system installation function area, click **OS Install** in the left navigation pane.

The OS Install page appears.

Step 2 Click any one of the operating system radio buttons.

Step 3 From the Operating System drop-down list, select the version of the operating system.

Step 4 (For Windows) From the Edition drop-down list, select the edition of the operating system.

The Default Settings area and the Quick Install and Custom Install buttons appear.

Table 6-2 shows the default parameters that are displayed in the Default Settings area for the Windows OS.

Table 6-2 Default Parameters (for Windows)

Parameter	Default Value
Time Zone	Central American Standard Time
Name	admin

Table 6-2 Default Parameters (for Windows)

Parameter	Default Value
Organization	Organization
Computer Name	Computer
Network	DHCP
Work Group Name	WORKGROUP
Drivers	All drivers will be installed from the SCU boot media
Firewall	Disabled
RDP	Disabled
Disk Details	
Disk Name	LSI
Disk Size	Minimum 40 GB
Partition Details	
Drive Letter	C
File System	NTFS
Size (MB)	Depends on logical disks

Table 6-3 shows the default parameters that are displayed in the Default Settings area for the Red Hat Enterprise Linux OS.

Table 6-3 Default Parameters (for Red Hat Enterprise Linux)

Parameter	Default Value
Time Zone	America/New_York
Name	root
Default Password	password
Network	DHCP
Drivers	All drivers will be installed from the SCU boot media
Disk Details	
Disk Name	LSI
Disk Size	Depends on logical disks
Partition Details	
Drive Letter	
File System	ext3
Size (MB)	Depends on logical disks
Drive Letter	
File System	linux-swap
Size (MB)	2048

Table 6-4 shows the default parameters that are displayed in the Default Settings area for the SUSE Linux Enterprise Server (SLES) OS.

Table 6-4 Default Parameters (for SLES)

Parameter	Default Value
Time Zone	America/New_York
Name	root
Default Password	password
Network	DHCP
Drivers	All drivers will be installed from the SCU boot media
Disk Details	
Disk Name	LSI0-Logical Vol-2
Disk Size	Depends on logical disks
Partition Details	
Drive Letter	/
File System	ext3
Size (MB)	Depends on logical disks
Drive Letter	swap
File System	linux-swap
Size (MB)	Minimum 2048

Step 5 Click **Quick Install** to complete the installation.

A progress bar is displayed that indicates the tasks being performed and the percentage of completion.

Note Be sure that logical disks are created before you install the operating system. If logical disks are not available, the following occurs:

- The disk details are not displayed under Default Settings area
- The Quick Install and Custom Install buttons are not displayed
- The following warning message is displayed:

```
OS Installation cannot be done as no logical disks found in the system. Please use RAID
Configuration to create logical disks.
```

Custom Install

The Custom Install option allows you to customize the default settings.

Note If no parameters are modified, the custom installation performs with the default parameters. Table 6-2 and Table 6-3 displays the default parameters for the Windows and Red Hat Enterprise Linux operating systems and downloads the drivers from the SCU boot media.

This section covers the custom installation procedures for the following operating systems:

- Windows Server Operating System Installation, page 6-7
- Linux Server Series Operating System Installation, page 6-12
- SUSE Linux Server Operating System Installation, page 6-13

Windows Server Operating System Installation

For unattended Windows Server operating system installation, follow these steps:

Step 1 To enter the unattended operating system installation function area, click **OS Install** in the left navigation pane. The OS Install page appears.

Step 2 Click the **Windows** radio button and choose an operating system from the Operating System drop-down list.

The Edition drop-down list appears.

Step 3 From the Edition drop-down list, choose an edition.

The Default Settings area and the Quick Install and Custom Install buttons appear.

Note The Windows Server 2008 R2 option in the drop-down list is the same for both Windows Server 2008 R2 and Windows Server 2008 R2 SP1. Depending on the installation CD used (Win2k8 R2 or Win2k8R2 SP1), the corresponding Windows OS version gets installed.

Step 4 Click **Custom Install**.

A progress bar displays indicating the tasks being performed and the percentage of completion. A new OS Install page appears with the following list of collapsible windows:

- Personalization—To set the personalization settings, go to Personalization, page 6-8.
- Installation Partitions—To set the installation partition settings, go to Installation Partitions, page 6-8.
- Network Settings—To set the network settings, go to Network Settings, page 6-9.
- Installation Drivers—To set the driver settings, go to Installation Drivers, page 6-10.

Step 5 Click **Install**.

A progress bar is displayed that indicates the tasks being performed and the percentage of completion. An OS Install dialog box appears which prompts you to remove the UCS-SCU media and insert the required operating system CD.

Step 6 Insert the operating system CD and click **Ok**.

The system reboots and installation of the operating system begins.

Personalization

To configure the personalization settings, follow these steps:

Step 1 Click **Personalization** to open the corresponding window.

Step 2 In the Personalization window, do the following:

a. From the Time Zone drop-down list, choose a time zone.

b. In the Name field, enter a name for the administrator. The maximum limit is 20 characters.

c. In the Organization field, enter a name of the organization of the administrator. The maximum limit is 15 characters.

d. Select one of the License Information radio buttons and enter the 25 character product key if license needs to be activated.

e. In the Computer Name field, enter the name of the server. The maximum limit is 15 characters.

f. In the Description field, enter the description of the server. The maximum limit is 25 characters

Installation Partitions

To configure the installation partition settings, follow these steps:

Step 1 Click **Installation Partitions** to open the corresponding window.

Step 2 In the Installation Partitions window, do the following:

a. From the Select Disk drop-down list, choose a disk to create a logical partition.

b. Click a disk name to view the corresponding partition details.

The disk entry expands and displays the partition name, drive letter, file system, and the space used in MB.

c. To edit a partition, do the following:

- Choose a partition to edit and click **Edit**.

  The Edit Partition dialog box is displayed.

- In the Edit Partition dialog box, do the following:
  - From the Drive Letter drop-down list, choose a drive.
  - In the Size text field, enter the partition size.

  Note The size cannot be more than the available disk space.

  - From the File system drop-down list, choose a file system.
  - Click **OK** to save your changes.

d. To create a new partition, do the following:

- Choose a free space and click **New**.

  A Create Partition dialog box is displayed.

- In the Create Partition dialog box, do the following:

- From the Driver Letter drop-down list, choose a drive.
- In the Size field, edit the disk size.

Note The size cannot be more than the available disk space.

- From the File System drop-down list, choose a file system.
- Click **Ok**.

e. To remove a partition, do the following:

- Choose the partition to delete and click **Delete**.

  The OS Install dialog box is displayed.

- Click **Yes** to delete the partition.

Note In the Red Hat Enterprise Linux, the Root and Swap partitions are necessary. If you do not specify their sizes during the partition process, the UCS-SCU generates an alert message and suggests an alternate partition solution. Accept it if you are not familiar with Linux partitions.

Network Settings

The Network Settings allows you to enter the network configuration settings for the onboard network adapters that are detected by the operating system during installation. These settings do not affect the network settings for the CMC. We recommend that you set different IP addresses for the operating system and CMC. The network interface column lists each network adapter detected by the UCS-SCU. Your operating system may have a different name for the interface after you install the operating system.

To configure the network settings, follow these steps:

Step 1 Click **Network Settings** to open the corresponding window.

The Network Settings window displays the link status of available network interfaces and the corresponding IP address, subnet mask, gateway, DNS, link status, vendor, type, and MAC address.

Step 2 In the Network Settings window, do the following:

a. In the Work Group or Network Domain area, choose one of the following options:

- Select **No network** or **No domain** radio button when a network or domain does not need to be added. Enter a workgroup name in the Work Group Name field. The maximum limit is 20 characters.
- Select the **Join this Domain** radio button and do the following:
  - In the Domain Name text field, enter the name of the domain. The maximum limit is 20 characters.
  - In the Domain Username, enter the user name of the domain. The maximum limit is 20 characters.
  - In the Domain password, enter the password of the domain.The maximum limit is 20 characters.

b. Select or deselect the **Enable Remote Access (RDP)** radio button for remote access settings.

c. Select or deselect the **Disable Firewall** radio button for firewall settings.

d. In the DNS Suffix/Domain field, specify the DNS suffix of the domain.The maximum limit is 25 characters.

e. In DNS Suffix Search Order 1 field, enter a DNS suffix search order. The maximum limit is 25 characters.

f. In the DNS Suffix Search Order 2 field, enter another DNS suffix search order. The maximum limit is 25 characters.

g. In the Proxy Address field, enter the IP address or name of the proxy server. The maximum limit is 30 characters.

h. In the Port field, enter the port number of the proxy server. The maximum limit is 5 characters.

i. Edit the Network Settings by doing the following:

- Select a network interface and click **Edit.**

  The Network Settings dialog box displays.

- Select IP Address from DHCP server or Static IP Address. If you select Static IP Address, do the following:
  - In the IP Address field, enter the IPv4 address.
  - In the Subnet Mask field, enter the subnet IPv4 address.
  - In the Gateway field, enter the gateway IPv4 address.
  - In the DNS field, enter the DNS IPv4 address.
  - Click **OK**.

Installation Drivers

UCS-SCU displays all available drivers downloaded from the driver source. Deselect the drivers that you do not want to install. If you want to install an operating system on a RAID volume, select the driver for the appropriate RAID controller.

To configure the installation driver settings, follow these steps:

Step 1 Click **Installation Drivers** to open the corresponding window.

Step 2 Select the drivers that you want to install from the Choose Drivers to Install table.

If drivers are not available in the Choose Drivers to Install table, download the drivers using the Installation Drivers toolbar. To download the drivers, choose one of the following options:

- Downloading from SCU Boot media, page 6-10
- Downloading from Network Share, page 6-11
- Downloading from USB, page 6-11

Downloading from SCU Boot media

To directly use the driver packages that are stored in the Tools and Drivers CD, follow this step:

Step 1 Click **From SCU Boot media** in the toolbar.

A progress message is displayed and the list of drivers are populated in the Choose Drivers to Install table.

Note UCS-SCU selects this option as default.

Downloading from Network Share

To download a driver package stored on a network share folder, follow these steps:

Step 1 Click **From Network Share** in the toolbar.

If your network is not configured or if user credentials are not entered, the Network Configuration dialog box is displayed. If your network is configured or if user credentials are entered, the Network Location dialog box is displayed. If you need to configure your network, go to Step 2. If you do not need to configure your network, go to Step 3.

Step 2 In the Network Configuration dialog box, enter the IP addresses to configure the network. For more information about configuring the network, go to the "Configuring a Network" section on page 3-4

Step 3 In the Network Location dialog box that is displayed, do the following:

a. In the User Name field, enter the login name to the network location.

b. In the Password field, enter the password to the network location.

c. In the Network Location field, enter the path name of the zip folder which contains the drivers.

d. Click **Connect**.

A file dialog box is displayed that lists the zip folders containing drivers.

e. Select a zip file.

f. Click **Open**.

The selected zip file appears as a package name in the Network Location dialog box.

g. Click **Ok**.

A progress message is displayed and the list of drivers are populated in the Choose Drivers to Install table.

Downloading from USB

To download the drivers that are stored in your USB key or USB hard drive, follow these steps:

Step 1 Click **From USB** in the toolbar.

A file dialog box is displayed that lists the USB folders.

Step 2 Navigate to the zip file that contains the drivers.

Step 3 Click **Ok**.

A progress message is displayed and the list of drivers are populated in the Choose Drivers to Install table.

Linux Server Series Operating System Installation

For unattended Linux operating system installation, follow these steps:

Step 1 Enter the unattended operating system installation function area by clicking **OS Install** in the left navigation pane.

The OS Install page appears.

Step 2 Click the **RHEL** radio button and choose an operating system from the Operating System drop-down list.

The Default Settings area and the Quick Install and Custom Install buttons appear.

Step 3 Click **Custom Install**.

A progress bar is displayed that indicates the tasks being performed and the percentage of completion. A new OS Install page appears with the following list of collapsible windows:

- Basic Configuration—To set the personalization settings, go to Basic Configuration, page 6-12.
- Installation Partitions— To set the installation partition settings, go to Installation Partitions, page 6-8.
- Package Selection—To set the package selection settings, go to Package Selection, page 6-13.
- Network Settings—To set the network settings, go to Network Settings, page 6-13.
- Installation Drivers—To set the driver settings, go to Installation Drivers, page 6-10.

Step 4 Click **Install**.

A progress bar is displayed that indicates the tasks being performed and the percentage of completion. An OS Install dialog box appears.

Step 5 Click **Ok**.

Step 6 Remove the UCS-SCU media and insert the required operating system CD.

Basic Configuration

To configure the basic configuration settings, follow these steps:

Step 1 Click **Basic Configuration** to open the corresponding window.

Step 2 In the Basic Configuration window, do the following:

a. In the Root Password field, enter the root password.

b. In the Confirm Root Password field, reenter the root password.

c. From the Default Language drop-down list, choose a default language.

d. From the Keyboard drop-down list, choose the type of keyboard layout.

e. From the Time Zone drop-down list, choose the time zone.

f. In the Additional Languages list, select all languages that apply.

Package Selection

To configure the package selection settings, follow these steps:

Step 1 Click **Package Selection** to open the corresponding window.

Step 2 Select all check boxes that apply.

Network Settings

To configure the network settings, follow these steps:

Step 1 Click **Network Settings** to open the corresponding window.

The Network Settings window displays the link status of available network interfaces and the corresponding IP address, subnet mask, gateway, DNS, link status, vendor, type and MAC address.

Step 2 To edit the Network Settings, do the following:

a. Select a network interface and click **Edit.**

The Network Settings dialog box is displayed.

b. In the Network Settings dialog box, do the following:

- Select IP Address from DHCP server or Static IP Address. If you select Static IP Address, do the following:
  - In the IP Address field, enter the IPv4 address.
  - In the Subnet Mask field, enter the subnet IPv4 address.
  - In the Gateway field, enter the gateway IPv4 address.
  - In the DNS field, enter the DNS IPv4 address.
- Click **OK**.

SUSE Linux Server Operating System Installation

To perform an unattended SLES operating system installation, follow these steps:

Step 1 To enter the unattended operating system installation function area, click **OS Install** in the left navigation pane.

The OS Install page appears.

Step 2 Click the **SLES** radio button and choose an operating system from the Operating System drop-down list.

The Default Settings area and the Quick Install and Custom Install buttons appear.

Step 3 Click **Custom Install**.

A progress bar is displayed that indicates the tasks being performed and the percentage of completion. A new OS Install page appears with the following list of collapsible windows:

- Basic Configuration—To set the personalization settings, go to Basic Configuration, page 6-12.
- Installation Partitions—To set the installation partition settings, go to Installation Partitions, page 6-8.
- Package Selection—To set the package selection settings, go to Package Selection, page 6-13.
- Network Settings—To set the network settings, go to Network Settings, page 6-13.
- Installation Drivers—To set the driver settings, go to Installation Drivers, page 6-10.

Step 4 Click **Install**.

A progress bar is displayed that indicates the tasks being performed and the percentage of completion. An OS Install dialog box appears.

Step 5 Click **Ok**.

Step 6 Remove the UCS-SCU media and insert the required operating system CD.

Basic Configuration

To configure the basic configuration settings, follow these steps:

Step 1 Click **Basic Configuration** to open the corresponding window.

Step 2 In the Basic Configuration window, do the following:

- In the Root Password field, enter the root password.
- In the Confirm Root Password, reenter the root password.
- From the Default Language drop-down list, choose a default language.
- From the Keyboard drop-down list, choose the type of keyboard layout.
- From the Time Zone drop-down list, choose the time zone.

Package Selection

To configure the package selection settings, follow these steps:

Step 1 Click **Package Selection** to open the corresponding window.

Step 2 Select all check boxes that apply.

Network Settings

To configure the network settings, follow these steps:

Step 1 Click **Network Settings** to open the corresponding window.

The Network Settings window displays the link status of available network interfaces and the corresponding IP address, subnet mask, gateway, DNS, link status, vendor, type, and MAC address.

Step 2 To edit the Network Settings, do the following:

a. Select a network interface and click **Edit.**

The Network Settings dialog box displays.

b. In the Network Settings dialog box, do the following:

- Select IP Address from DHCP server or Static IP Address. If you select Static IP Address, do the following:
  - In the IP Address field, enter the IPv4 address
  - In the Subnet Mask field, enter the subnet IPv4 address.
  - In the Gateway field, enter the gateway IPv4 address.
  - In the DNS field, enter the DNS IPv4 address.
- Click **OK**.

Configuring RAID Levels

RAID Configuration

You can use the RAID Configuration functionality to configure the on-board or PCIe supported RAID controller cards.

If your system has multiple RAID controllers, UCS-SCU displays a list of all available RAID cards, and physical and logical disks on the RAID Configuration page.

The following RAID configuration options are available:

- Automatic setup with redundancy
- Automatic setup without redundancy
- Single RAID levels—RAID 0, RAID 1, RAID 5 and RAID 6
- Nested RAID levels—RAID 10, RAID 50 and RAID 60

This section includes the following sections:

RAID Configuration Page Components

This section describes the RAID Configuration page and contains the following topics:

Physical Disks Table

The Physical Disks table in the RAID Configuration page lists the following:

- ID—The identifying number of the physical disk.
- Slot—The slot in which the physical disk belongs.
- State—The status of the disk. For more information about the various disk states, go to Table 7-1.
- Size—The size of the physical disk.
- Device Speed—The disk access speed of the controller.

- Link Speed—The link speed of the controller.
- Logical Disk—The logical disk to which the physical disk belongs to.

Table 7-1 describes the various disk status conditions.

Table 7-1 Disk Status Conditions

Status Condition	Description
Online	The drive is already used in another array.
Global Hotspare	The drive will be used to repair any array in the system that had a drive failure, if the failed drive is equal to, or smaller than the hot spare drive.
Unconfigured Good	The drive is unused or available.
Ready	The drive is online and operating correctly.
Offline	The drive is offline or absent. No actions can be performed on the drive until it is back online.
Unconfigured Bad	The drive is not operational and needs to be replaced. Disks with a status of "Unconfigured bad" cannot be used for RAID configurations.
Foreign	The drive is part of an array created on a different controller, or created within one enclosure and moved to another on the same controller. It can be used to create a new array after clearing the configuration.

Logical Disks Table

The logical disks pane in the RAID Configuration page displays the information about the logical disks.

Table 7-2 explains the RAID array attributes.

Table 7-2 RAID Array Attributes

Option	Description
ID	Unique ID to the logical disk.
Size	Logical drive size. The maximum value depends on RAID level selected and the physical disks size involved.
Primary RAID level	RAID 0 (Data striping), 1 (Disk Mirroring), 5 (Data Striping with Striped Parity), 6 (Distributed Parity and Disk Striping).
Secondary RAID Level	Applicable only for nested RAID levels.
Stripe size	Size of the data stripe across all disks. Each physical disk has a smaller stripe of data. The sum of all the stripes equals the stripe size.
Read policy	No Read Ahead, Read Ahead, Adaptive. Read Ahead will read additional consecutive stripes. Adaptive will turn on Read Ahead for sequential reads and turn it off for random reads.

Table 7-2 RAID Array Attributes

Option	Description
Write policy	Write Through or Write Back. With Write Through, I/O completion for write operations is signaled when the data is written to the disk. With Write Back, I/O completion is signaled when the data is transferred to cache.
Cache policy	Direct I/O or Cached I/O. Choose Direct I/O for unchecked read and write operations. Choose Cached I/O to cache all write operations and check the cache first for read operations.

Configuring RAID Arrays

Only unconfigured good disks can be used for RAID configuration. Disks that are already part of RAID are not available for RAID configuration.

To create custom or multiple RAID arrays, follow these steps:

Step 1 Click **Server Configuration** in the left navigation pane and then click RAID configuration.

The RAID Configuration page displays with the list of physical disks and logical disks.

Step 2 Click the **Configure RAID** icon on the top-right of the page.

The RAID Configuration page appears.

Step 3 From the RAID level drop-down list, select one of the following RAID levels:

- Automatic Setup without Redundancy, page 7-4
- Automatic Setup with Redundancy, page 7-4

Note The automatic setup with or without redundancy overrides all the existing RAID arrays.

- Single-Level RAID Configuration, page 7-5
- Nested RAID Configuration, page 7-5

Step 4 Click **Create Array**.

Note The Create Array button is enabled only if the minimum required number of drive groups are created.

A progress bar is displayed and then a RAID Configuration dialog box appears depicting the completion of a RAID configuration.

Step 5 Click **OK**.

The RAID Configuration page appears. You can view the following:

- The drive group information is displayed in the Logical Disks table.
- The physical disks information is displayed in the Physical Disks table.
- The status of the physical disks that are part of the drive group changes to Online and the status of the backup physical disk changes to Hot spare.

Automatic Setup without Redundancy

Automatic setup without redundancy requires one or more hard drives. UCS-SCU creates RAID 0 with this option.

Note This option does not work, if number of HDDs are more than thirty-two.

Table 7-3 shows the default values that are displayed for automatic setup without redundancy.

Table 7-3 Default Values for Automatic Setup without Redundancy

Parameters	Values
Controller	MegaRAID SAS <*family*>
RAID Level	0
Stripe Size	64
Read Policy	No Read Ahead
Writer Policy	Write Back
Cache Policy	Direct IO
Size (MB)	Depends on the physical disk size

Note The common parameters, except for total size, are the default values for the controller.

Automatic Setup with Redundancy

Automatic setup with redundancy is the default RAID configuration option. This configuration requires at least two physical drives to be available. If two physical disks are not available, the default RAID configuration would be automatic setup without redundancy.

Note This option does not work, if number of HDDs are more than thirty-two.

Table 7-4 shows the default values that are displays.

Table 7-4 Default Values for Automatic Setup with Redundancy

Parameters	Values
Controller	MegaRAID SAS <*family*>
RAID Level	1
Stripe Size	64
Read Policy	No Read Ahead
Writer Policy	Write Back
Cache Policy	Direct IO
Size (MB)	Depends on the size of the logical disk

Note The common parameters, except for total size, are the default values for the controller.

Single-Level RAID Configuration

To configure single level RAID, follow these steps:

Step 1 From the RAID drop-down list, select a RAID level (**0** or **1** or **5** or **6**).

The Drive Groups pane appears with a list of physical disks and drive groups. For more information about a physical disk, hover the cursor over the physical disk until the tooltip is displayed.

Step 2 From the Physical Disks list, select the physical disks that you want to include in the Drive Groups list.

Table 7-5 displays the minimum number of physical disks required for each of the RAID levels.

Table 7-5 Minimum Number of Required Physical Drives

RAID Level	Number of Physical Disks Required
RAID 0	1
RAID 1	2
RAID 5	3
RAID 6	4

Step 3 Click **Create Drive Group**.

Note The Create Drive Group button remains disabled until the minimum number of physical disks for a RAID level is selected.

The selected physical disks are included in the Drive Groups list.

Note The Delete Drive Group button remains disabled until a drive group is created.

Step 4 From the Physical Disks list, choose a drive to be a hot spare drive or a standby drive.

Step 5 From the Stripe Size list, choose a stripe size for the RAID level.

Step 6 From the Read Policy list, choose a read policy for the RAID level.

Step 7 From the Write Policy list, choose a write policy for the RAID level.

Step 8 From the Cache Policy list, choose a cache policy for the RAID level.

Step 9 In the Size (MB) text field, enter the size of the logical disk in MB.

Nested RAID Configuration

Nested RAID levels have primary and secondary RAID levels. You need to create a minimum of two drive groups in nested RAID levels and the drive groups should have the same number of physical disks.

To configure nested RAID levels, follow these steps:

Step 1 From the RAID drop-down list, select a nested RAID level.

The Drive Groups pane appears with a list of physical disks and drive groups. For more information about a physical disk, hover the cursor over the physical disk until the tooltip is displayed.

Step 2 From the Physical Disks list, select the physical disks that you want to include in the Drive Groups list.

Table 7-6 displays the minimum number of physical disks and data groups required.

Table 7-6 Minimum Number of Required Physical Drives and Data Groups

RAID Level	Minimum Number of Physical Disks	Minimum Number of Data Groups
RAID 10	4	2
RAID 50	6	2
RAID 60	8	2

Step 3 Click **Create Drive Group**.

Note The Create Drive Group button remains disabled until the minimum number of physical disks for a RAID level is selected.

The selected physical disks are included in the Drive Groups list.

Note The Delete Drive Group button remains disabled until a drive group is created.

Step 4 From the Stripe Size list, choose a stripe size for the RAID level.

Step 5 From the Read Policy list, choose a read policy for the RAID level.

Step 6 From the Write Policy list, choose a write policy for the RAID level.

Step 7 From the Cache Policy list, choose a cache policy for the RAID level.

Step 8 In the Size (MB) text field, enter the size of the logical disk in MB.

Clearing RAID Arrays

You can use the RAID Configuration page to delete all the created virtual disks or specific disks to free up the disk space.

This section contains the following topics:

Deleting All the Virtual Disks

To clear up all the disks, follow these steps:

Step 1 Click **Server Configuration** in the left navigation pane and then click RAID configuration.

The RAID Configuration page displays with the list of physical disks and logical disks.

Step 2 Click the **Clear Configuration** icon on the top-right of the page.

The RAID Configuration dialog box appears.

Step 3 Click **Yes** to confirm the operation.

All the virtual disks under Logical Disks are cleared and the state of the hard disks change to Unconfigured Good.

Deleting Single or Multiple Disks

In single RAID levels and nested RAID levels, if the number of unconfigured good physical disks is less than the minimum disks required for the selected RAID level, a RAID Configuration dialog box appears specifying that logical disks need to be deleted to free up the physical disks.

To clear up the logical disks, follow these steps:

Step 1 Click Yes in the RAID Configuration dialog box that appears.

A Delete Logical Disks dialog box appears.

Step 2 Select the logical disk to be deleted. The physical disks that are part of the logical disk is displayed at the bottom of the dialog box.

Note If you delete a logical disk, all the information stored in the disk will be inaccessible.

Step 3 Click **Delete**.

Troubleshooting

This chapter lists various troubleshooting options available when using the UCS-SCU application.

UCS-SCU Issues and Solutions

- The OS installation process is interrupted and the server is rebooted.

  Determine the value set for the Watchdog Timer. The Watchdog Timer is a new feature in the BIOS of the C-series servers. If this feature is enabled and the value is set for a time duration that is less than the time needed to install the OS, then the OS installation process is interrupted. This Watchdog Timer feature automatically reboots or powers off the server after the specified time duration. Before you begin the OS installation process, disable the Watchdog Timer feature.

- UCS-SCU displays the following message even after mapping the virtual USB or connecting the physical USB:

```
No USB Disk on Key detected
```

  - For USB devices mapped through vmedia, try selecting the **USB reset** from the vmedia GUI (virtual media session -> details -> USB reset)
  - For a physical USB device, check the vendor and product information or try a different device.

- After installing Windows OS, the KVM mouse does not work and Windows Device Manager displays a yellow bang for the USB human interface device.

  Check the version of CMC. Ensure that you have the latest version of CMC installed on your server.

- Windows installation fails and the following message is displayed:

```
Selected disk has MBR partition table. On EFI systems, Windows can only be installed to
GPT disks.
```

  The EFI CD ROM device for the virtual drive was used to boot the Windows 2008 image. Use the CD ROM device from BIOS CD ROM order.

- After installing the Windows operating system through UCS-SCU, Windows Device Manager displays some devices with a yellow bang.
  - The device may not be in the Cisco support matrix.
  - You may not have selected some device drivers in the SCU GUI.

- Windows setup fails with BSOD 0x7B (inaccessible boot device).

  You may not have selected the device driver for boot controller in SCU GUI.

- CMC change does not reflect in UCS-SCU immediately.

Changes made to virtual disks using CMC may not be immediately viewable in the SCU user interface, if the server is booted with SCU. Reboot the server to synchronize with CMC.

- During the Power On Self-Test (POST), both LSI embedded MegaRAID and LSI 2008 controller are detected but only the LSI 2008 controller is viewed in the UCS-SCU.

  Both LSI embedded MegaRAID and LSI 2008 are not supported together in the UCS-SCU. If you have both, then only LSI 2008 gets detected. Remove the controller for the LSI embedded MegaRAID to get detected.

- SCU inventory is impacted

  Check to see if the server has a USB drive with GPT partition plugged-in. If so, either remove the USB drive and reboot to SCU or use/re-format the USB stick with non-GPT partition.

- OS installation fails on the interactive and non interactive SCU

  If the virtual disk size is greater than 2 TB, OS installation fails and the following message is displayed:

```
Unable to install OS.
```

  Create a virtual disk with a size lesser than 2 TB.