



Cisco UCS Performance Manager Migration Guide

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Americas Headquarters

Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
<http://www.cisco.com>
Tel: 408 526-4000
800 553-NETS (6387)
Fax: 408 527-0883

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Preface

Cisco UCS Performance Manager Migration Guide provides detailed instructions for migrating an existing Cisco UCS Performance Manager or Cisco UCS Performance Manager Express deployment from version 1.1.x to version 2.0.x (Previous versions must be upgraded first. For more information, refer to the *Cisco UCS Performance Manager Installation Guide* for version 1.1.x.)

Note For convenience, this document uses "Cisco UCS Performance Manager" generically. Differences between Cisco UCS Performance Manager and Cisco UCS Performance Manager Express are noted explicitly.

Supported client and browser combinations

Note All browsers must have Adobe® Flash® Player 11 installed, or a more recent version.

Client OS	Supported Browsers
Windows 7 and 8.1	Internet Explorer 10 and above (compatibility mode is not supported)
	Firefox 30 and above
	Chrome 30 and above
Macintosh OS/X	Firefox 30 and above
	Chrome 30 and above
	Safari 7 and above
Linux/RHEL	Firefox 30 and above
	Chrome 30 and above

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Migration process overview

The migration process involves a combination of tools and procedures you perform on your version 1.1.x and 2.0.x systems. The process may be performed as many times as you wish, and you may use both systems simultaneously, until you are ready to retire your version 1.1.x system.

There are many architectural differences between the two versions of Cisco UCS Performance Manager. The differences between the technologies used for storing and visualizing performance data affect migration the most.

- Version 1.1.x relies on the *RRDtool* suite to store and display performance data. The storage technology is a fixed-size, round-robin database file for each monitored device or component. The size of a database file depends on the monitoring interval and the amount of history to maintain.
- Version 2.0.x stores the raw values of all monitoring data, for all devices and components, in a central OpenTSDB/HBase cluster. Clients may request raw or consolidated data from a central query server, and use any data visualization tool to display the data.

The duration of the migration process depends primarily on the amount of version 1.1.x performance data to convert and insert into the OpenTSDB/HBase cluster. Therefore, migrating performance data is optional.

The following topics describe the discrete portions of the migration process in greater detail.

Note The migration process requires that both Cisco UCS Performance Manager systems can use a common datastore or datastore cluster. In addition, the datastore must support 400 IOPS.

Preparing to migrate

On version 1.1.x systems, preparation includes verifying the integrity of databases, and downloading and installing the export toolbox. The database verification procedures are described in the *Cisco UCS Performance Manager Installation Guide*. The toolbox download procedure is described in the export chapter of this guide.

On version 2.0.x systems, preparation involves installing Cisco UCS Performance Manager on a master host. Once installed, monitoring is not started until migration completes. Otherwise, you must add devices to the version 2.0.x manually.

Exporting data

The following export steps are performed on the version 1.1.x system:

- 1 Download and install the export toolbox.
- 2 Start the interactive export script:

- a Once the script has identified the block storage that is attached to the virtual machine, it prompts you to create a virtual disk through your hypervisor.
- b The script locates the virtual disk, prepares it, and exports your data to it.
- c The script prompts you to remove the virtual disk through your hypervisor.

This guide includes the required hypervisor procedures, in an appendix.

The following list identifies the data that is exported:

- A file listing of all of the devices and components monitored by the version 1.1.x system.
- A copy of your Cisco UCS Performance Manager license file.
- The unique identifier of your version 1.1.x model database.
- The backup file of your version 1.1.x system, and a file containing the md5 hash of the backup file.

Note The dashboard architecture in version 2.0.x is changed, so dashboard settings are not migrated.

Importing data

The import process includes the following phases:

Setup

The Setup phase verifies that your Cisco UCS Performance Manager 2.0.x system is fully installed and ready to perform a migration. If necessary, the Cisco UCSPM v2 Migration Wizard installs required tools and initializes the migration services.

Validation

The Validation phase identifies the export file, unpacks it, and examines its contents. The time to complete this phase varies, depending on the size of the export file.

Migration

The Migration phase launches a variety of parallel processes to load your exported data into your version 2.0.x system. Typically, performance data takes much longer to process than the required data. So, when the required data is imported, you are notified that you may begin monitoring your environment. The performance data continues loading independently.

Import assumes that your version 2.0.x system is unused, and does not maintain any existing data in the system. To repeat an export-import cycle, you must install your version 2.0.x system again.

Post-migration steps

The final steps include validating the migration, detaching the virtual disk of export data, and removing the migration tools from your version 2.0.x system, if necessary.

Migration enables the display of some component data that was collected but not displayed on version 1.1.x systems. Specifically, Linux, Windows, vSphere, and Hyper-V server devices now display the following, previously-hidden components:

- Network Routes
- OS Processes
- File Systems
- IP Services

Previously, only Interfaces and Processor components were displayed. As a side effect, the migration changes the Last Change and Model Time values of the devices.

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Exporting data from your 1.1.x system

This chapter describes how to export data from Cisco UCS Performance Manager version 1.1.x. For information about upgrading an earlier version of Cisco UCS Performance Manager, refer to the *Cisco UCS Performance Manager Installation Guide* for your release.

You may export data as many times as you wish.

Installing the export toolbox

The procedures in this section describe how to download and install the export toolbox, which contains the export script, `export4`.

Downloading the export toolbox

To perform this procedure, you need:

- A workstation with internet access
- A command-line download utility such as [cURL](#)

- 1 Open a command window on a workstation with internet access.
- 2 Download the export toolbox.

The following example uses the cURL utility.

```
myUrl=https://github.com/zenoss/zenoss.toolbox/archive/develop.zip
curl -sL --insecure -o export_toolbox.zip $myUrl
```

Transferring the export toolbox

To perform this procedure, you need:

- A copy of the export toolbox (on your workstation)
- A file transfer utility such as [WinSCP](#)
- The hostname or IP address of the Cisco UCS Performance Manager 1.1.x virtual machine
- The password of the `root` account on the Cisco UCS Performance Manager 1.1.x virtual machine

- 1 Start the WinSCP utility.
- 2 Start an SFTP session with the Cisco UCS Performance Manager virtual machine.
 - a In the **Host name** field, enter the hostname or IP address of the virtual machine.

- b In the **User name** field, enter `root`.
 - c In the **Password** field, enter the password of the `root` account.
 - d Click **Login**.
- 3 Navigate to the source and target directories for the transfer.
 - a In the workstation pane (the left pane), navigate to the directory in which the export toolbox is located.
 - b In the virtual machine pane (the right pane), navigate to `/tmp`.
 - 4 Select and transfer the toolbox.
 - a In the workstation pane, select the export toolbox.
 - b From the **File** menu, select **Upload**.
 - 5 End the SFTP session.
 - From the **Session** menu, select **Disconnect**.

Installing the export toolbox

To perform this procedure, you need:

- Access to the console of the Cisco UCS Performance Manager version 1.1.x virtual machine, through VMware vSphere, Microsoft Hyper-V, or a text-based, remote shell utility such as *PuTTY*
 - The hostname or IP address of the Cisco UCS Performance Manager version 1.1.x virtual machine
 - The password of the `root` account on the Cisco UCS Performance Manager version 1.1.x virtual machine
- 1 Log in to the Cisco UCS Performance Manager virtual machine as `root`.
 - 2 From the **UCS Performance Manager Administration** menu, use the arrow keys to select **Root Shell**, and then press the **Enter** key.
 - 3 Switch the user account to `zenoss`.

```
su - zenoss
```

- 4 Install the toolbox.

```
easy_install /tmp/export_toolbox.zip
```

- 5 Log out of the Cisco UCS Performance Manager virtual machine.
 - a Switch the user account back to `root`.

```
exit
```

- b Exit the shell.

```
exit
```

- c From the **UCS Performance Manager Administration** menu, use the arrow keys to select **Exit**, and then press the **Enter** key.

Exporting data

To perform this procedure, you need the following:

- Access to the console of the Cisco UCS Performance Manager version 1.1.x virtual machine, through VMware vSphere, Microsoft Hyper-V, or a text-based, remote shell utility such as *PuTTY*
- The hostname or IP address of the Cisco UCS Performance Manager version 1.1.x virtual machine
- The password of the `root` account on the Cisco UCS Performance Manager version 1.1.x virtual machine

This procedure exports Cisco UCS Performance Manager version 1.1.x data for import into a version 2.0.x deployment of Cisco UCS Performance Manager. To ensure data integrity, the script in this procedure stops Cisco

UCS Performance Manager. The amount of time required to complete data collection is slightly longer than the time required to perform a complete backup of Cisco UCS Performance Manager.

- 1 Log in to the Cisco UCS Performance Manager virtual machine as `root`.
- 2 From the **UCS Performance Manager Administration** menu, use the arrow key to select **Root Shell**, and then press the **Enter** key.
- 3 Switch the user account to `zenoss`.

```
su - zenoss
```

- 4 Export data to a virtual disk.
 - a Start the interactive `export4` script.
Chose one of the following options:

```
Include all data: export4 -s
```

```
Exclude performance data: export4 -s -p
```

The script calculates the amount of space required for the backup, performs some validation steps, and then displays the following prompt:

```
Verify that the export disk is not added to the virtual machine ...

Enter root password when prompted ->
Password:
```

- b Enter the root password.
The script scans the virtual machine for attached block storage.

```
Add the export disk to the virtual machine now.
<ENTER> to continue, <CTRL+C> to quit ...
```

- c Add a virtual disk to the version 1.1.x virtual machine.
For more information, see [Creating a virtual disk](#) on page 17.
 - d When the virtual disk is added, press the **Enter** key.

```
New device identified -> /dev/sdb [900G]

WARNING: Ready to prepare /dev/sdb [900G] for export ...
<ENTER> to continue, <CTRL+C> to quit ...
```

- e Press the **Enter** key.
The script formats and mounts the virtual disk as a file system.

```
All Zenoss services will be stopped to export data for migration.
The services are restarted once the backup completes.
```

```
Press ENTER to continue or <CTRL+C> to quit
```

- f Press the **Enter** key.
The script stops services, performs a full backup, restarts services, and then displays the following prompt:

```
Unmounting - enter root password when prompted ->
Password:
```

- g Enter the root password.

The script uses the password to unmount the virtual disk file system.

```
Please remove the export disk from the virtual machine now...  
<ENTER> after removed...
```

- h** Remove the virtual disk from the version 1.1.x virtual machine.
For more information, see [Removing a virtual disk](#) on page 19.
- i** Press the **Enter** key.
- 5** Log out of the Cisco UCS Performance Manager virtual machine.
 - a** Switch the user account back to `root`.

```
exit
```

- b** Exit the shell.

```
exit
```

- c** From the **UCS Performance Manager Administration** menu, use the arrow keys to select **Exit**, and then press the **Enter** key.

3

Importing data into your 2.0.x system

This chapter describes how to import data from Cisco UCS Performance Manager version 1.1.x into version 2.0.x.

Note All import processing occurs on the version 2.0.x virtual machine. The version 1.1.x system is not contacted or otherwise affected by import processing.

You may import data as many times as you wish. However, you must reinstall your version 2.0.x system for each import.

The import process includes the following phases:

Setup

The Setup phase verifies that your Cisco UCS Performance Manager 2.0.x system is fully installed and ready to perform a migration. If necessary, the Cisco UCSPM v2 Migration Wizard installs required tools and initializes the migration services.

Validation

The Validation phase identifies the export file, unpacks it, and examines its contents. The time to complete this phase varies, depending on the size of the export file.

Migration

The Migration phase launches a variety of parallel processes to load your exported data into your version 2.0.x system. Typically, performance data takes much longer to process than the required data. So, when the required data is imported, you are notified that you may begin monitoring your environment. The performance data continues loading independently.

Note The export data includes the Cisco UCS Performance Manager user account information included in your version 1.1.x system. The information is imported into your version 2.0.x system, and the import process deletes existing accounts (of which there should be none).

Preparing to import

To perform the procedures in this chapter, Cisco UCS Performance Manager version 2.0.x must be installed and deployed in your environment. For more information, refer to the *Cisco UCS Performance Manager Installation Guide* for version 2.0.x.

In addition, the virtual disk containing your version 1.1.x export data must be attached to your version 2.0.x virtual machine. For more information, see [Attaching a virtual disk](#) on page 20.

Note If your version 1.1.x system supports 100 or more devices, increase the number of CPU cores available to your version 2.0.x system from 8 to 16 before starting an import. You may reduce the number of cores back to 8 when migration is complete.

The migration process is managed by the Cisco UCSPM v2 Migration Wizard, a browser-based application that is hosted on your version 2.0.x virtual machine. To gain access to the wizard, you need a supported browser and the password of the `root` or `ccuser` account. For more information about supported browsers, see [Preface](#) on page 4.

When you are ready to start the Cisco UCSPM v2 Migration Wizard, open the following URL in a web browser. Replace `UCS-PM-Master` with the IP address, hostname, or fully-qualified domain name of your version 2.0.x virtual machine:

```
https://UCS-PM-Master:8090/
```

When prompted, provide the username and password of the `root` or `ccuser` account.

Setup phase

The Setup phase verifies that your Cisco UCS Performance Manager 2.0.x system is fully installed and ready to perform a migration. If necessary, the Cisco UCSPM v2 Migration Wizard installs required tools and initializes the migration services.

The following list describes the steps of the Setup phase, in order:

Checking Control Center version

Migration processing requires Control Center version 1.1. Earlier versions are not supported.

Checking number of deployed applications

Control Center supports multiple applications. However, migration processing stops if the number of applications deployed in Control Center is greater than one. Together, this step and the next step ensure that the correct databases are populated during import.

Getting name of deployed application

The supported application is `ucspm`. Together, this step and the previous step ensure that the correct databases are populated during import.

If you experience an error in the Setup phase, the most likely source is an incorrect or incomplete installation of your version 2.0.x virtual machine. For more information about installing Cisco UCS Performance Manager version 2.0.x, refer to the *Cisco UCS Performance Manager Installation Guide*.

Validation phase

The Validation phase identifies the export file, unpacks it, and examines its contents. The time to complete this phase varies, depending on the size of the export file.

Finding and mounting IMPORT4 disk

This step verifies that the virtual disk attached in the previous procedure is available for use during the migration process.

Verifying initialization has been run

The initialization script ensures that the `Imp4MariaDB` and `Imp4OpenTSDB` services are started, and that their worker daemons are ready to begin processing. The services do not include separate databases, just worker daemons specialized for importing content from a version 1.1.x system.

Run initialization

If the previous step reveals that initialization has not run, this step runs it.

Verifying export file location

This step verifies that the path discovered in the previous step is valid.

Confirming the export file is valid

This step verifies that the path discovered previously is an archive file (`tar`), and that it contains a subset of the expected contents.

Reviewing disk space requirements

The validation script calculates the amount of free space that is available on the partition where the export file is located, and reports an error if the amount of free space is less than 3x the size of the export file.

Discovering the contents of the export file

This step extracts the contents of the export file, which includes the following items:

- A file listing of all of the devices and components monitored by the version 1.1.x system.
- A copy of your Cisco UCS Performance Manager license file.
- The unique identifier of your version 1.1.x model database.
- The backup file of your version 1.1.x system, and a file containing the md5 hash of the backup file. The backup file is created when you run the `export4` script on the 1.1.x system.

This step creates an md5 hash of the backup file, and then compares it with the hash packaged in the export file, to ensure the file was not corrupted since its creation. In addition, the compressed contents of the backup file are extracted and written to disk.

Note If the compressed contents are corrupted, or if the amount of free space is inadequate, this step fails. Return to your version 1.1.x system and create a new export file.

Validation discovered the following objects

This step lists the contents of the backup file that was unpacked in the previous step. A backup file contains the first three items, and may include the fourth item:

Model data

Model data describes the relationships among the devices and components—virtual machines, controllers, interfaces, disks, power supplies, blades, and so on—in a data center environment. Cisco UCS Performance Manager creates or updates model data at regular intervals. Migrating this data populates the model database of your version 2.0.x system with the latest information about your environment, and provides context for the event data.

ZenPacks

A ZenPack modifies or extends the base of Cisco UCS Performance Manager. Migrating and updating ZenPacks ensures that the correct device classes are included in your version 2.0.x system.

Event data

An event is the Cisco UCS Performance Manager representation of an important occurrence in a data center environment. Events are generated by Cisco UCS Performance Manager, such as when a threshold is exceeded, or by external programs, such as `syslog` messages or SNMP traps. Migrating this data maintains the history of device-specific issues.

Performance data

Performance data contains each data point that has been collected over the past 12 months, for each device on your version 2.0.x system. The data is exported as a copy of each device's RRD file. Migrating this data is optional.

If you experience errors in the Validation phase, the most likely solution is to create a new export file on your version 1.1.x system.

Migration phase

The Migration phase launches a variety of parallel processes to load your exported data into your version 2.0.x system. Typically, performance data takes much longer to process than the required data. So, when the required data is imported, you are notified that you may begin monitoring your environment. The performance data continues loading independently.

4

Post-migration tasks

This chapter describes the required and optional tasks you may perform after the migration is complete.

Note When migration is finished, you may detach the virtual disk used for export data, and discard its contents. For more information, see [Removing a virtual disk](#) on page 19.

Validating your migration

To validate your migration, log in to your Cisco UCS Performance Manager, version 2.0.x browser interface and perform the following checks:

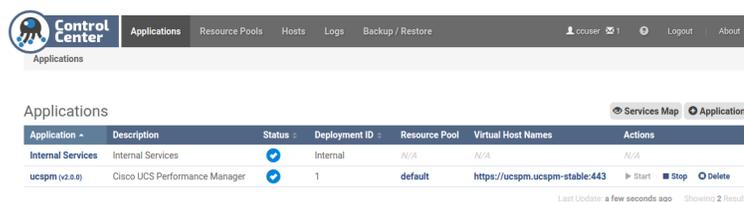
- On the **INFRASTRUCTURE** tab, review devices to determine whether any are missing.
- On the **INFRASTRUCTURE** tab, select devices randomly and review the amount of history present in their performance graphs.
- On the **EVENTS** tab, display the **Events Archive** page. If the archive is empty, the migration did not succeed.

To repeat an export-import cycle, you must install your version 2.0.x system again. For more information, refer to the *Cisco UCS Performance Manager Installation Guide*.

Removing migration software

This procedure removes the ZenPacks.zenoss.Import4 ZenPack from Cisco UCS Performance Manager, and removes the Imp4MariaDB and Imp4OpenTSDB services from Control Center.

- 1 Log in to the Control Center browser interface.



- 2 In the **Applications** table, identify the name of the Cisco UCS Performance Manager instance to modify.
- 3 Stop the **Imp4MariaDB** and **Imp4OpenTSDB** services.
 - a Scroll down to the **Services** table, and then locate the **Imp4MariaDB** and **Imp4OpenTSDB** services. The services are located in the **Infrastructure** hierarchy.
 - b In the **Actions** column, click the **Stop** control of the **Imp4MariaDB** and **Imp4OpenTSDB** services.

Stopped services have a grey circle icon in the **Instances** column.

- 4 Stop the **Zenoss** service, and then verify its subservices are stopped.
 - a In the **Actions** column of the **Services** table, click **Stop**.
 - b In the **Service** column, click **Zenoss**, and then scroll down to verify all subservices are stopped.
- 5 Create a snapshot.
 - a Log in to the Control Center master host as `root` or `ccuser`.
 - b Create a snapshot.

```
serviced service snapshot ucspm
```

On completion, the `serviced` command returns the ID of the new snapshot.

- 6 Restart the **zeneventserver** and **Zope** services.

To restart the services with the CLI, enter the following command for each child service. Replace *Name* with the name of the service to start:

```
serviced service start Name
```

To restart the services with the browser interface, perform the following substeps:

- a Click the **Zenoss** service to expand its child services.
- b Scroll down to the **zeneventserver** service.
- c In the **Actions** column, click the **Start** control of the **zeneventserver** service.
- d Scroll down to the **Zope** service.
- e In the **Actions** column, click the **Start** control of the **Zope** service.

In the **Services** table, the Failing icon (a red circle with an exclamation point) in the **Status** column represents the cumulative result of one or more customized health checks. To view the status of individual health checks, move the pointer over the icon, which displays a pop-up.

When all of the health checks of the required services are passing, proceed to the next step.

- 7 Disable and stop the `import4` service.

```
systemctl disable import4 && systemctl stop import4
```

- 8 Remove the `ZenPacks.zenoss.Import4` ZenPack.

```
serviced service run zope zenpack-manager \
  uninstall ZenPacks.zenoss.Import4
```

- 9 Remove the **Imp4MariaDB** and **Imp4OpenTSDB** services.

```
serviced service rm Imp4MariaDB
serviced service rm Imp4OpenTSDB
```

- 10 Refresh the Control Center browser interface, and then start the services in the **Zenoss** hierarchy.

- a Select the window of the Control Center browser interface, and then press the **F5** key.

The **Imp4MariaDB** and **Imp4OpenTSDB** services remain in the Control Center browser interface until the window is refreshed, even though they are removed.

- b In the **Actions** column of the **Zenoss** hierarchy, click the **Start** control.

A

Hypervisor procedures

This section includes procedures for creating, removing, and attaching virtual disk drives through VMware vSphere and Microsoft Hyper-V.

Creating a virtual disk

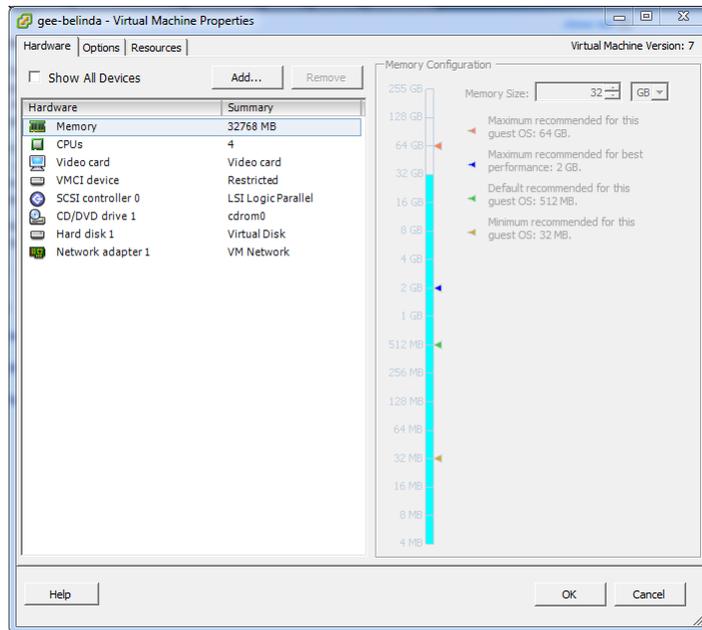
Perform one of the procedures in this section to create a virtual disk for export data.

Note The migration process requires that both Cisco UCS Performance Manager systems can use a common datastore or datastore cluster. In addition, the datastore must support 400 IOPS.

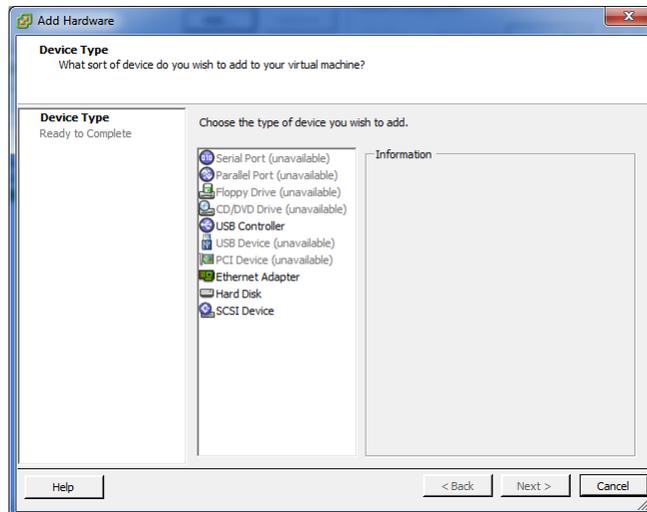
Creating a virtual disk with vSphere

To perform this task, you need a VMware vSphere client.

- 1 Use the VMware vSphere Client to log in to vCenter as `root`, or as a user with superuser privileges, and then display the **Home > Inventory > Inventory** view.
- 2 In the left column, right-click on the Cisco UCS Performance Manager version 1.1.x virtual machine, and then select **Edit Settings....**

Figure 1: Virtual Machine Properties dialog

- 3 On the **Hardware** tab, click the **Add...** button.



- 4 In the **Add Hardware** dialog, select **Hard Disk**, and then click the **Next >** button.
- 5 In the **Select a Disk** pane, click the **Create a new virtual disk** radio button, and then click the **Next >** button.
- 6 In the **Create a Disk** pane, configure the virtual disk.
 - a In the **Capacity** area, set the disk size to the estimated value returned by the `export4` script.
For more information, see [Estimating the export file size](#).
 - b In the **Disk Provisioning** area, click the radio button of the option you prefer.
 - c In the **Location** area, click the **Specify a datastore or datastore cluster** radio button, and then use the **Browse...** button to select a datastore.
Select a datastore that both Cisco UCS Performance Manager systems can use.
 - d Click the **Next >** button.
- 7 In the **Advanced Options** pane, set the mode.
 - a In the **Mode** area, check the **Independent** check box.
 - b Click the **Persistent** radio button.

- c Click the **Next >** button.
- 8 In the **Ready to Complete** pane, confirm the virtual disk configuration, and then click the **Finish** button.
- 9 At the bottom of the **Virtual Machine Properties** dialog, click the **OK** button.

Creating a virtual disk with Hyper-V

To perform this task, you need:

- A Microsoft Remote Desktop client
- Administrator privileges on a Microsoft Hyper-V server

This procedure creates a new virtual disk for export data.

- 1 Use a Microsoft Remote Desktop client to log in to a Hyper-V host as Administrator, or as a user with Administrator privileges.
- 2 Start **Hyper-V Manager**.
- 3 In the left column, select the server that is hosting your version 1.1.x system, and then right-click to select **New > Hard Disk...**
- 4 In the **New Virtual Hard Disk Wizard** dialog, navigate to the **Choose Disk Format** panel.
- 5 Click the **VHDX** radio button, and then click the **Next >** button.
- 6 In the **Choose Disk Type** panel, click the **Dynamically expanding** radio button, and then click the **Next >** button.
- 7 In the **Specify Name and Location** panel, enter a name for the disk in the **Name** field, and then click the **Next >** button.
- 8 In the **Configure Disk** panel, click the **Create a new blank virtual hard disk** radio button, enter the amount of disk space estimated by the `export4` script in the **Size** field, and then click the **Next >** button.
- 9 In the **Summary** panel, review the virtual disk settings, and then click the **Finish** button.
- 10 In **Hyper-V Manager**, right-click the virtual machine of your version 1.1.x system, and then select **Settings...**
- 11 In the **Settings** dialog, select **SCSI Controller** from the **Hardware** list in the left column.
- 12 In the **SCSI Controller** area on the right side, select **Hard Drive**, and then click the **Add** button.
- 13 In the **Hard Drive** area, click the **Virtual hard disk** radio button, and then click the **Browse** button.
- 14 In the **Open** dialog, select the hard disk image created previously, and then click the **Open** button.
- 15 In the **Settings** dialog, click the **OK** button.

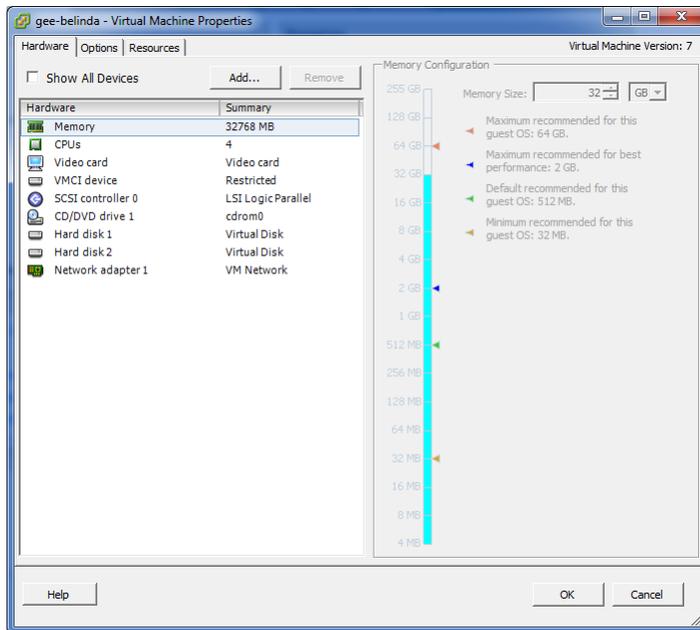
Removing a virtual disk

Perform one of the procedures in this section to detach the virtual disk that contains your export data.

Removing a virtual disk from a vSphere virtual machine

To perform this task, you need a VMware vSphere client.

- 1 Use the VMware vSphere Client to log in to vCenter as `root`, or as a user with superuser privileges, and then display the **Home > Inventory > Inventory** view.
- 2 In the left column, right-click on the Cisco UCS Performance Manager version 1.1.x virtual machine, and then select **Edit Settings...**



- 3 In the **Hardware** table, select the virtual disk used to export data.
- 4 Verify that you selected the correct virtual disk by reviewing the information on the right side of the dialog.
- 5 Make a note of the virtual disk's datastore and file name.
- 6 Remove the virtual disk.
 - a In the **Virtual Machine Properties** dialog, click the **Remove** button.
 - b In the **Removal Options** area, click the **Remove from virtual machine** radio button.
 - c At the bottom of the dialog, click the **OK** button.

Detaching a virtual disk from a Hyper-V virtual machine

To perform this task, you need:

- A Microsoft Remote Desktop client
- Administrator privileges on a Microsoft Hyper-V server

This procedure removes a virtual disk containing export data.

- 1 Use a Microsoft Remote Desktop client to log in to a Hyper-V host as Administrator, or as a user with Administrator privileges.
- 2 Start **Hyper-V Manager**.
- 3 In **Hyper-V Manager**, right-click the virtual machine of your version 1.1.x system, and then select **Settings...**
- 4 In the **Settings** dialog, select the hard drive added previously from the list under **SCSI Controller** in the left column.
- 5 In the **SCSI Controller** area on the right side, click the **Remove** button, and then click the **OK** button.

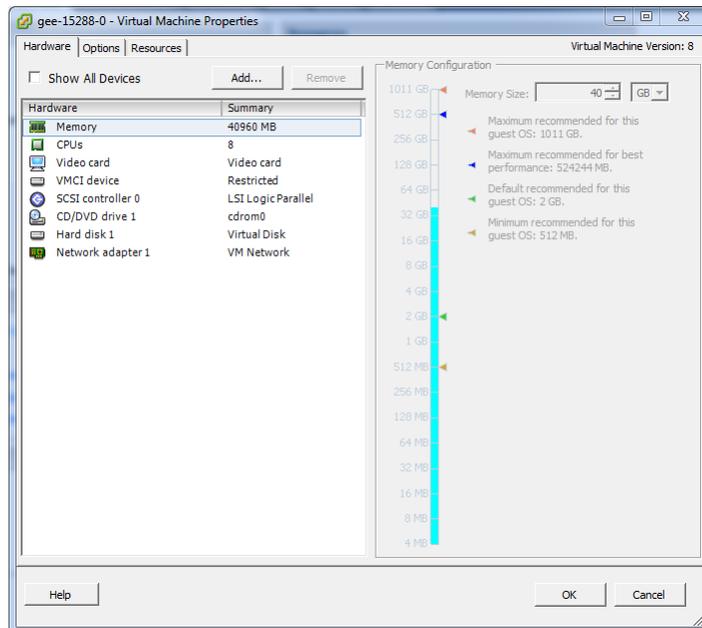
Attaching a virtual disk

Perform one of the procedures in this section to attach the virtual disk that contains your export data.

Attaching a virtual disk to a vSphere virtual machine

To perform this task, you need a VMware vSphere client.

- 1 Use the VMware vSphere Client to log in to vCenter as `root`, or as a user with superuser privileges, and then display the **Home > Inventory > Inventory** view.
- 2 In the left column, right-click on the Cisco UCS Performance Manager version 2.0.x virtual machine, and then select **Edit Settings....**



- 3 On the **Hardware** tab, click the **Add...** button.
- 4 In the **Add Hardware** dialog, select **Hard Disk**, and then click the **Next >** button.
- 5 In the **Select a Disk** pane, click the **Use an existing virtual disk** radio button, and then click the **Next >** button.
- 6 In the **Select Existing Disk** pane, identify the virtual disk to attach.
 - In the **Disk File Path** area, enter the path of the virtual disk used to export data.
 - Click the **Browse...** button to navigate to the disk.
 When you are finished identifying the virtual disk, click the **Next >** button.
- 7 In the **Advanced Options** pane, set the mode.
 - a In the **Virtual Device Node** area, check the **Independent** check box.
 - b Click the **Persistent** radio button.
 - c Click the **Next >** button.
- 8 In the **Ready to Complete** pane, confirm the virtual disk configuration, and then click the **Finish** button.
- 9 At the bottom of the **Virtual Machine Properties** dialog, click the **OK** button.

Attaching a virtual disk to a Hyper-V virtual machine

To perform this task, you need:

- A Microsoft Remote Desktop client
- Administrator privileges on a Microsoft Hyper-V server

This procedure adds an existing virtual disk to a virtual machine.

- 1 Use a Microsoft Remote Desktop client to log in to a Hyper-V host as Administrator, or as a user with Administrator privileges.
- 2 Start **Hyper-V Manager**.
- 3 In **Hyper-V Manager**, right-click the virtual machine of your version 2.0.x system, and then select **Settings....**
- 4 In the **Settings** dialog, select **SCSI Controller** from the **Hardware** list in the left column.

- 5 In the **SCSI Controller** area on the right side, select **Hard Drive**, and then click the **Add** button.
- 6 In the **Hard Drive** area, click the **Virtual hard disk** radio button, and then click the **Browse** button.
- 7 In the **Open** dialog, select the hard disk image that contains export data, and then click the **Open** button.
- 8 In the **Settings** dialog, click the **OK** button.