VMware Remote Console for vSphere

VMware Remote Console 10.0

This document supports the version of each product listed and supports all subsequent versions until the document is replaced by a new edition. To check for more recent editions of this document, see http://www.vmware.com/support/pubs.

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About VMware Remote Console   1

VMware Remote Console provides access to virtual machines from remote clients and performs console and device operations such as configuring operating system settings and monitoring the virtual machine console for VMware vSphere. VMware Remote Console can also modify virtual machine settings such as RAM, CPU cores, and disks.

The *VMware Remote Console for vSphere* guide describes the tasks required to install the VMware Remote Console application.

Note   When you connect to a vSphere virtual machine with VMware Remote Console, you can perform console interaction as well as device operations, power operations, and settings management. When you connect to a vRealize Automation virtual machine, you are limited to console interaction only.

Parts of this guide do not apply to VMware Remote Console for vRealize Automation.

■   Some of Chapter 4, "Using the VMware Remote Console Application," on page 11

■   All of Chapter 5, "Configuring and Managing Virtual Machines," on page 19

■   All of Chapter 6, "Configuring and Managing Devices," on page 21

For more information, see the *VMware Remote Console for vRealize Automation* guide.

Intended Audience

This information is intended for administrators and users who need to access virtual machine consoles and connect client-side devices.

Where to Find Additional Information

For additional information on known issues and workarounds, see the VMware Remote Console Release Notes.

Install VMware Remote Console on a Client

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VMware Remote Console provides user-guest interaction in the various products and environments that require it. This section details the tasks required to install VMware Remote Console on Windows, Apple OS X, and Linux.

Procedure

1   Navigate to the VMware Remote Console download page, and select the link for your platform.

www.vmware.com/go/download-vmrc

Alternatively, on the vSphere Web Client virtual machine Summary page, click the gear icon in the lower right corner of the console thumbnail, and select **Install Remote Console**.

2   Run your platform installation.

   ■   Windows

Double click the `.msi` installer and follow the prompts.

   ■   Linux

With root privileges, run the `.bundle` installer and follow the prompts.

   ■   Apple OS X

Double click the `.dmg` to open it, then double-click the VMware Remote Console icon inside to copy to the Applications folder.

After installation, VMware Remote Console opens when you click Uniform Resource Identifiers (URIs) that begin with the `vmrc://` scheme. VMware Workstation, Player, and Fusion also handle the `vmrc://` URI scheme.

Make VMware Remote Console Your Default Console

You can make VMware Remote Console the default instead of the web console within the vSphere client.

Procedure

1   On the vSphere Web Client virtual machine Summary page, click the gear icon in the lower right corner of the console thumbnail.

2   Select **Change Default Console**.

3   Select **VMware Remote Console** and click **OK**.

When VMware Remote Console is the default, clicking the console thumbnail or **Actions > Open Console** launches VMware Remote Console.

Open a Virtual Machine Remote Console

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You can open a virtual machine console using VMware Remote Console through the vSphere or ESXi Web Client.

To open an external virtual machine console, do the following:

Prerequisites

■   Verify that VMware Remote Console is installed on your local system.

■   In vSphere, select a virtual machine and navigate to the **Summary** page.

■   If you need to connect VMware Remote Console to a remote virtual machine through a proxy server, set the VMWARE_HTTPSPROXY environment variable.

On your local client, set the environment variable to:

`VMWARE_HTTPSPROXY=proxy-server-IP-or-FQDN:3128`

Procedure

◆   The steps you take depend on client and configuration.

■   From vSphere Web Client 6.0 or newer, click the gear icon in the lower right corner of the console thumbnail, and click **Launch Remote Console**.

■   If VMware Remote Console is the default vSphere Web Client console, click the console thumbnail or **Actions > Open Console** .

See "Make VMware Remote Console Your Default Console," on page 7.

■   If you are using vSphere version 5.5 Update 2b or Update 3, click **Open with VMRC**.

■   If you are using the ESXi Web Client, click **Actions > Console > Launch remote console**.

Using the VMware Remote Console Application

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VMware Remote Console provides remote virtual machine access to your mouse and international keyboard.

When you click in the console window of a virtual machine that does not have VMware Tools running, the virtual machine takes control of mouse and keyboard input. To release the mouse and keyboard back to your local client, press the following keys:

- For Windows or Linux, press **Ctrl+Alt**.

- For Apple OS X, press **Ctrl+Command**.

Note VMware Remote Console can send the Ctrl+Alt+Delete key sequence to a remote virtual machine. If your local client intercepts and reacts to Ctrl+Alt+Delete, VMware Remote Console also includes a menu option to send Ctrl+Alt+Delete without using the keyboard.

This chapter includes the following topics:

Shutting Down a Guest Operating System

A remote virtual machine shutdown can be soft (controlled) or hard (abrupt).

- A soft shutdown lets the guest operating system gracefully close applications before completely shutting down.

  Soft shutdown usually appears as **Shut Down** on the menu and is preferred so that you avoid potential data loss.

- A hard shutdown is the equivalent of pressing the power-off button regardless of what applications might be running.

  Hard shutdown usually appears as **Power Off** on the menu but might be useful if a soft shutdown fails or is not required. For example, you might be planning to restore a snapshot, so you do not need to carefully manage the state of the virtual machine.

Default shutdown options can be overridden in virtual machine power settings (Settings > Options > Power).

Use the Remote Operating System to Shut Down a Guest

You can use VMware Remote Console to shut down a virtual machine by sending key sequences to the remote operating system.

You can send the Ctrl+Alt+Delete key sequence to shut down or log off a remote virtual machine with either of the following techniques:

■ Press the key sequence on your client keyboard. The key sequence is sent to the remote virtual machine unless your client intercepts and reacts to it.

■ If your client intercepts and reacts to the key sequence, use the VMware Remote Console menu instead.

Prerequisites

Power on the virtual machine.

Procedure

◆ To use the VMware Remote Console menu, follow the steps for your operating system.

　　■ Windows

　　　Select **VMRC > Send Ctrl+Alt+Del**.

　　■ Linux

　　　Select **Virtual Machine > Send Ctrl+Alt+Del**.

　　■ Apple OS X

　　　Select **Virtual Machine > Send Ctrl-Alt-Del**.

Use VMware Remote Console to Shut Down a Guest

You can use VMware Remote Console menus to shut down a remote virtual machine.

When VMware Tools are installed, VMware Remote Console provides soft shutdown options by default. VMware Remote Console sends a hard shutdown if VMware Tools are not installed or if the virtual machine is unresponsive.

Prerequisites

■ Power on the virtual machine.

■ Verify that the virtual machine is in a safe state.

　A hard shutdown while the virtual machine is still processing might cause data loss. Use a soft shutdown whenever possible.

Procedure

◆ Follow the steps for your operating system.

　　■ Windows

　　　Select **VMRC > Power > Shut Down Guest** or **Power Off**.

　　■ Linux

　　　Select **Virtual Machine > Power > Power Off Guest**.

　　■ Apple OS X

Select **Virtual Machine > Shut Down**.

Apple OS X includes additional hard shutdown options that are not available on Windows or Linux. To send a hard shutdown, press and hold the Alt key while accessing the same menu.

Restarting a Guest Operating System

A remote virtual machine restart can be soft (controlled) or hard (abrupt).

- A soft restart lets the guest operating system gracefully close applications before completely restarting.

  A soft restart usually appears as **Restart** on the menu and is preferred so that you avoid potential data loss.

- A hard restart is the equivalent of pressing the power-off and power-on buttons, regardless of what applications might be running.

  A hard restart often appears as **Reset** on the menu but might be useful if a soft restart fails or is not required. For example, a virtual machine might not be responding, and you might want to sacrifice its current state to get it running again.

Default restart options can be overridden in virtual machine power settings (Settings > Options > Power).

Use the Remote Operating System to Restart a Guest

You can use VMware Remote Console to restart a virtual machine by sending key sequences to the remote operating system.

You can send the Ctrl+Alt+Delete key sequence to restart a remote virtual machine with either of the following techniques:

- Press the key sequence on your client keyboard. The key sequence is sent to the remote virtual machine unless your client intercepts and reacts to it.

- If your client intercepts and reacts to the key sequence, use the VMware Remote Console menu instead.

Prerequisites

Power on the virtual machine.

Procedure

◆ To use the VMware Remote Console menu, follow the steps for your operating system.

- Windows

  Select **VMRC > Send Ctrl+Alt+Del**.

- Linux

  Select **Virtual Machine > Send Ctrl+Alt+Del**.

- Apple OS X

  Select **Virtual Machine > Send Ctrl-Alt-Del**.

Use VMware Remote Console to Restart a Guest

You can use VMware Remote Console menus to restart or reset a remote virtual machine.

When VMware Tools are installed, VMware Remote Console provides soft restart options by default. VMware Remote Console sends a hard reset if VMware Tools are not installed or if the virtual machine is unresponsive.

Prerequisites

■ Power on the virtual machine.

■ Verify that the virtual machine is in a safe state.

A hard reset while the virtual machine is still processing might cause data loss. Use a soft restart whenever possible.

Procedure

◆ Follow the steps for your operating system.

■ Windows

Select **VMRC > Power > Restart Guest**.

■ Linux

Select **Virtual Machine > Power > Restart Guest**.

■ Apple OS X

Select **Virtual Machine > Restart**.

Apple OS X includes additional hard reset options that are not available on Windows or Linux. To send a hard reset, press and hold the Alt key while accessing the same menu.

Suspend and Resume a Virtual Machine

Suspending a virtual machine saves its current state. When you resume the virtual machine, applications that were running before the virtual machine was suspended resume in their running state with their content unchanged.

How quickly the suspend and resume operations perform depends on how much data changed after you started the virtual machine. The first suspend typically takes longer than subsequent suspend operations.

Procedure

1 To suspend a virtual machine, follow the steps for your operating system.

■ Windows

Select **VMRC > Power > Suspend**, and click **Yes** to confirm.

If soft power operations are configured for the virtual machine in Workstation, Suspend Guest appears in the menu instead of Suspend. The virtual machine is displayed as powered on if the remote virtual machine is started by another user.

■ Linux

Select **Virtual Machine > Power > Suspend**, and click **Yes** to confirm.

■ Apple OS X

Select **Virtual Machine > Suspend**.

2 To resume a virtual machine, follow the steps for your operating system.

■ Windows

Select **VMRC > Power > Power On**.

■ Linux

Select **Virtual Machine > Power > Power On**.

- Apple OS X

  Select **Virtual Machine > Power On**.

Install VMware Tools

You can use VMware Remote Console for Windows or Linux to install VMware Tools for virtual machines.

Prerequisites

Power on the virtual machine.

Procedure

◆ Follow the steps for your operating system.

- Windows

  Select **VMRC > Manage > Install VMware Tools**.

- Linux

  Select **Virtual Machine > Install VMware Tools**.

- Apple OS X

  The option is not available.

When VMware Tools are already installed, the option changes to **Reinstall VMware Tools**.

If a guest operating system or version is incompatible with VMware Tools, the option is disabled.

Configure VMware Tools Updates for a Specific Virtual Machine

You can use VMware Remote Console to configure virtual machines to update VMware Tools.

Procedure

1 Follow the steps for your operating system.

- Windows

  Select **VMRC > Manage > Virtual Machine Settings**.

- Linux

  Select **Virtual Machine > Virtual Machine Settings**.

- Apple OS X

  Select **Virtual Machine > Settings**.

2 On the **Options** tab, select **VMware Tools** and the update option that you want.

Table 4-1. VMware Tools Update Options

Option	Description
Update manually (do nothing)	You must update VMware Tools manually. A message appears on the status bar of the guest operating system when a new version of VMware Tools is available.
Update automatically	VMware Tools is updated automatically when a new version is available. The status bar indicates when an update is in progress.

To install a VMware Tools update, use the same procedure that you used for installing VMware Tools the first time.

Using a Removable Device in a Virtual Machine

You can use VMware Remote Console to connect, disconnect, and change the settings for removable devices in a virtual machine.

To use the removable device VMware Remote Console options, virtual machines need to be powered on. If you are using a USB device, you should experiment and become familiar with the way that VMware Remote Console handles USB devices.

Connect a Removable Device in a Virtual Machine

You can use VMware Remote Console to connect removable devices for a virtual machine.

Procedure

◆ Follow the steps for your operating system.

■ Windows

Select the virtual machine, select **VMRC > Removable Devices**, select the device, and select **Connect**.

■ Linux

The menu is not available. Instead, click the removable device icon in the toolbar below the console window.

■ Apple OS X

Select the virtual machine, select **Virtual Machine >** *device-category* **> Removable Devices**, select the device, and select **Connect**.

A device category might be, for example, **USB & Bluetooth** for USB devices.

After you connect a device in Apple OS X, the **Connect** option changes to **Disconnect**, and information about the device appears below the **Connect / Disconnect** submenu item.

For example, if you selected the **CD/DVD (IDE)** option, the ISO or DMG file appears, along with another choice for selection.

When the device is connected to the virtual machine, a check mark appears next to the name of the device, and a device icon appears on the virtual machine taskbar.

If the device is connected to the client through a USB hub, the virtual machine sees only the USB device, not the hub.

Change a Removable Device in a Virtual Machine

You can use VMware Remote Console to change the settings for a removable device by modifying virtual machine settings.

Procedure

◆ Follow the steps for your operating system.

■ Windows

Select the virtual machine, select **VMRC > Removable Devices**, select the device, and select **Settings**.

■ Linux

The menu is not available. Instead, click the removable device icon in the toolbar below the console window.

■ Apple OS X

Select the virtual machine, select **Virtual Machine > Settings**.

Disconnect a Removable Device in a Virtual Machine

You can use VMware Remote Console to disconnect removable devices for a virtual machine.

Procedure

◆ Follow the steps for your operating system.

■ Windows

Select the virtual machine, select **VMRC > Removable Devices**, select the device, and select **Disconnect**.

■ Linux

The menu is not available. Instead, click the removable device icon in the toolbar below the console window.

■ Apple OS X

Select the virtual machine, select **Virtual Machine > *device-category* > Removable Devices**, select the device, and select **Disconnect**.

A device category might be, for example, **USB & Bluetooth** for USB devices.

Configuring and Managing Virtual Machines

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You can change virtual machine options such as the name of a virtual machine and guest OS.

This chapter includes the following topics:

- "Change the Name of a Virtual Machine," on page 19
- "Change the Guest Operating System for a Virtual Machine," on page 19

Change the Name of a Virtual Machine

When you run a virtual machine, its name appears in the title bar.

Procedure

1 Follow the steps for your operating system.

- Windows

  Select **VMRC > Manage > Virtual Machine Settings**.

- Linux

  Select **Virtual Machine > Virtual Machine Settings**.

- Apple OS X

  Select **Virtual Machine > Settings > General**.

2 On the **Options** tab, select **General**.

3 Enter the new name.

4 To save your settings, click **OK**.

Change the Guest Operating System for a Virtual Machine

If you upgrade the guest operating system that is installed in a virtual machine, or if you specify the wrong operating system version when you create the virtual machine, you must change the guest operating system type that is configured for the virtual machine.

When you change the operating system type, the virtual machine configuration (`.vmx`) file changes. The guest operating system itself does not change. To upgrade the guest operating system, obtain the appropriate software from the operating system vendor.

Prerequisites

Power off the virtual machine.

Procedure

1   Follow the steps for your operating system where VMware Remote Console is installed.

      ■   Windows

           Select **VMRC > Manage > Virtual Machine Settings**.

      ■   Linux

           Select **Virtual Machine > Virtual Machine Settings**.

      ■   Apple OS X

           Select **Virtual Machine > Settings > General**.

2   On the **Options** tab, select **General**.

3   Select the new operating system and version.

4   Click **OK** to save your changes.

Configuring and Managing Devices 6

You can use VMware Remote Console to add devices to virtual machines, including DVD and CD-ROM drives, floppy drives, USB controllers, virtual and physical hard disks, parallel and serial ports, generic SCSI devices, and processors. You can also modify settings for existing devices.

This section does not apply for vRealize Automation users. You can configure and manage devices only using vRealize Automation web client. For more information, see the *VMware Remote Console for vRealize Automation* guide.

This chapter includes the following topics:

Change the Memory Allocation for a Virtual Machine

You can use VMware Remote Console to adjust the amount of memory that is allocated to a virtual machine.

Prerequisites

Power off the virtual machine.

Procedure

1   Follow the steps for your operating system.

- Windows

   Select **VMRC > Manage > Virtual Machine Settings**.

- Linux

   Select **Virtual Machine > Virtual Machine Settings**.

- Apple OS X

   Select **Virtual Machine > Settings > Processors & Memory**.

2   On the **Hardware** tab, select **Memory**.

The Memory panel includes information to help you select the appropriate amount of memory for the virtual machine. The high end of the range is determined by the amount of memory that is allocated to all running virtual machines.

3   Align the slider with the corresponding icon to change the amount of memory.

The color-coded icons indicate the maximum recommended memory, the recommended memory, and the guest operating system minimum memory amounts.

4   To save your settings, click **OK**.

Change the Virtual Processor Settings

You can use VMware Remote Console to modify the number of processors by viewing the virtual machine hardware settings.

Prerequisites

Power off the virtual machine.

Procedure

1   Follow the steps for your operating system.

- Windows

   Select **VMRC > Manage > Virtual Machine Settings**.

- Linux

   Select **Virtual Machine > Virtual Machine Settings**.

- Apple OS X

   Select **Virtual Machine > Settings > Processors & Memory**.

2   On the **Hardware** tab, select **Processors**.

3   You can change the **Number of processors** and **Number of cores per processor** settings.

The values available under each setting depend on associated server and hardware. For example, 1, 2, 4, 8, 16, 32, 64, and 128 might be available as selections under the number of processors.

After you commit a change to this setting, the original setting is discarded and no longer appears as an option.

4   (Optional) If you want to disable acceleration in the virtual machine, in the Virtualization engine pane, select **Disable acceleration for binary translation**.

Disabling acceleration slows down virtual machine performance, but use it for troubleshooting if VMware Remote Console stops responding when you install or run software inside a virtual machine.

5   To save your settings, click **OK**.

Add a New Virtual Hard Disk to a Virtual Machine

To increase storage space, you can use VMware Remote Console to add a new virtual hard disk to a virtual machine. Any of these devices can be a virtual or physical hard disk, or DVD or CD-ROM drive.

Virtual hard disks are stored as files on the client computer or on a network file server. A virtual IDE drive or SCSI drive can be stored on a physical IDE drive or on a physical SCSI drive.

Procedure

1   Follow the steps for your guest operating system.

  ■   Windows

      Select **VMRC > Manage > Virtual Machine Settings**.

  ■   Linux

      Select **Virtual Machine > Virtual Machine Settings**.

  ■   Apple OS X

      The option is not available.

2   On the **Hardware** tab, click **Add**.

3   In the New Hardware wizard, select **Hard Disk**.

4   Select **Create a new virtual disk**.

5   Select the disk type.

Option	Description
IDE	Create an IDE device. You can add up to four IDE devices to a virtual machine.
SCSI	Create a SCSI device. You can add up to 60 SCSI devices to a virtual machine.

6   (Optional) To exclude the disk from snapshots, select **Independent** for the mode and select a persistence option.

Option	Description
Persistent	Disks in persistent mode behave like conventional disks on a physical computer. All data written to a disk in persistent mode is written permanently to the disk.
Nonpersistent	Changes to disks in nonpersistent mode are discarded when you power off or reset the virtual machine. With nonpersistent mode, you always restart the virtual machine with a virtual disk in the same state. Changes to the disk are written to and read from a redo log file that is deleted when you power off or reset the virtual machine.

7   Set the capacity for the new virtual hard disk.

The range of available capacity depends on server and hardware.

8   Specify how to allocate the disk space.

Option	Description
Allocate all disk space now	Allocating all of the disk space when you create the virtual hard disk can enhance performance, but it requires all of the physical disk space to be available now. If you do not select this setting, the virtual disk starts small and grows as you add data to it.
Store virtual disk as a single file	Select this option if the virtual disk is stored on a file system that does not have a file size limitation.
Split virtual disk into multiple files	Select this option if the virtual disk is stored on a file system that has a file size limitation. When you split a virtual disk less than 950GB, a series of 2 GB virtual disk files are created. When you split a virtual disk greater than 950 GB, two virtual disk files are created. The maximum size of the first virtual disk file is 1.9 TB and the second virtual disk file stores the rest of the data.

9   Accept the default filename and location, or browse to and select a different location.

10 Click **Finish** to add the new virtual hard disk.

The wizard creates the new virtual hard disk. The disk appears to the guest operating system as a new, blank hard disk.

11 To save your settings, click **OK**.

12 Use the guest operating system tools to partition and format the new drive.

Add an Existing Virtual Hard Disk to a Virtual Machine

You can use VMware Remote Console to reconnect an existing virtual hard disk that was removed from a virtual machine.

Procedure

1   Follow the steps for your guest operating system.

■   Windows

Select **VMRC > Manage > Virtual Machine Settings**.

■   Linux

Select **Virtual Machine > Virtual Machine Settings**.

■   Apple OS X

The option is not available.

2   In the Add Hardware wizard, select **Hard Disk**.

3   Select **Use an existing virtual disk**.

4   Specify the path name and filename for the existing disk file.

5   Click **Finish** to add the existing virtual hard disk.

6   To save your settings, click **OK**.

Compact a Virtual Hard Disk

You can use VMware Remote Console to compact a virtual hard disk. Compacting reclaims unused space in the virtual disk. If a disk has empty space, this process reduces the amount of space the virtual disk occupies on the client drive.

Prerequisites

- Power off the virtual machine.

- Verify that the virtual disk is not mapped or mounted. You cannot compact a virtual disk while it is mapped or mounted.

- Verify that the disk space is not preallocated for the virtual hard disk. If the disk space was preallocated, you cannot compact the disk.

- If the virtual hard disk is an independent disk, verify that it is in persistent mode.

Procedure

1 Follow the steps for your operating system.

   - Windows

     Select **VMRC > Manage > Virtual Machine Settings**.

   - Linux

     Select **Virtual Machine > Virtual Machine Settings**.

   - Apple OS X

     The option is not available.

2 On the **Hardware** tab, select the virtual hard disk to compact.

3 In the **Disk Utilities** pane, click **Compact**.

4 After the disk compacting process is complete, click **OK**.

Defragment a Virtual Hard Disk

You can use VMware Remote Console to defragment a virtual hard disk.

Like physical disk drives, virtual hard disks can become fragmented. Defragmenting disks rearranges files, programs, and unused space on the virtual hard disk so that programs run faster and files open more quickly. Defragmenting does not reclaim unused space on a virtual hard disk.

Defragmenting can take considerable time.

Prerequisites

- Verify that you have allocated adequate free working space on the client.

  For example, if the virtual hard disk is contained in a single file, there must be free space equal to the size of the virtual disk file. Other virtual hard disk configurations require less free space.

- Verify that the virtual disk is not mapped or mounted.

  You cannot defragment a virtual disk while it is mapped or mounted.

Procedure

1 From within in the guest operating system, run a disk defragmentation utility.

2   If disk space is not allocated previously for the virtual hard disk, use the VMware Remote Console defragmentation tool to defragment it.

    a   Power off the virtual machine.

    b   Follow the steps for your operating system.

- Windows

   Select **VMRC > Manage > Virtual Machine Settings**.

- Linux

   Select **Virtual Machine > Virtual Machine Settings**.

- Apple OS X

   The option is not available.

    c   On the **Hardware** tab, select the virtual hard disk.

    d   Select **Defragment** in the **Disk Utilities** pane.

    e   When the defragmentation process is finished, click **OK**.

3   Run a disk defragmentation utility on the client.

Remove a Virtual Hard Disk from a Virtual Machine

You can use VMware Remote Console to remove a virtual hard disk, which disconnects it from a virtual machine. Removal does not delete files from the client.

Procedure

1   Follow the steps for your operating system.

- Windows

   Select **VMRC > Manage > Virtual Machine Settings**.

- Linux

   Select **Virtual Machine > Virtual Machine Settings**.

- Apple OS X

   Select **Virtual Machine** and select the desired hard disk.

2   In the **Settings** window, expand **Advanced options > Remove Hard Disk**

3   On the **Hardware** tab, select the virtual hard disk and click **Remove**.

4   To save your settings, click **OK**.

Add a DVD or CD-ROM Drive to a Virtual Machine

You can use VMware Remote Console to add one or more DVD or CD-ROM drives to a virtual machine. You can connect the virtual DVD or CD-ROM drive to a physical drive or an ISO image file.

You can configure the virtual DVD or CD-ROM drive as an IDE or a SCSI device, regardless of the type of physical drive that you connect it to. For example, if the client has an IDE CD-ROM drive, you can set up the virtual machine drive as either SCSI or IDE and connect it to the client drive.

Procedure

1 Follow the steps for your operating system.

- Windows

  Select **VMRC > Manage > Virtual Machine Settings**.

- Linux

  Select **Virtual Machine > Virtual Machine Settings**.

- Apple OS X

  The option is not available.

2 On the **Hardware** tab, click **Add**.

3 In the Add Hardware wizard, select **DVD/CD Drive**.

4 Select a physical drive or ISO image file to connect to the drive.

Option	Description
Use physical drive	The virtual machine uses a physical drive.
Use ISO image	The drive connects to an ISO image file.

5 Configure the physical drive or ISO image file.

Option	Description
Physical drive	Select a specific drive, or select **Auto detect** to allow VMware Remote Console to auto-detect the drive to use.
ISO image file	Type the path or browse to the location of the ISO image file.

6 To connect the drive or ISO image file to the virtual machine when the virtual machine powers on, select **Connect at power on**.

7 Click **Finish** to add the drive to the virtual machine.

The drive initially appears as an IDE drive to the guest operating system.

8 (Optional) To change which SCSI or IDE device identifier to use for the drive, select the drive and click **Advanced**.

9 To save your settings, click **OK**.

Add a Floppy Drive to a Virtual Machine

You can use VMware Remote Console to configure a virtual floppy drive to connect to a physical floppy drive or an existing or blank floppy image file. You can add up to two floppy drives to a virtual machine.

Prerequisites

Power off the virtual machine.

Procedure

1 Follow the steps for your operating system.

- Windows

  Select **VMRC > Manage > Virtual Machine Settings**.

- Linux

  Select **Virtual Machine > Virtual Machine Settings**.

- Apple OS X

  The option is not available.

2 On the **Hardware** tab, click **Add**.

3 In the Add Hardware wizard, select **Floppy Drive**.

4 Select the floppy media type.

Option	Description
Use a physical floppy drive	The virtual machine uses a physical floppy drive.
Use a floppy image	The drive connects to an floppy image (`.flp`) file.

5 If you selected the physical floppy drive media type, select a specific floppy drive or select **Auto detect** to allow VMware Remote Console to auto-detect the drive to use.

6 If you selected the floppy image type, provide the name or browse to the location of a floppy image (`.flp`) file.

7 To connect the drive or floppy image file to the virtual machine when the virtual machine powers on, select **Connect at power on**.

8 To add the drive to the virtual machine, click **Finish**.

9 To save your settings, click **OK**.

Add a Virtual Network Adapter to a Virtual Machine

You can add up to 10 virtual network adapters to a virtual machine.

Procedure

1 Follow the steps for your operating system.

- Windows

  Select **VMRC > Manage > Virtual Machine Settings**.

- Linux

  Select **Virtual Machine > Virtual Machine Settings**.

- Apple OS X

  The option is not available.

2 On the **Hardware** tab, click **Add**.

3 Select **Network Adapter**.

4 Click **Finish** to add the virtual network adapter to the virtual machine.

5 To save your settings, click **OK**.

Add a USB Controller

A USB controller is required to use a smart card in a virtual machine, regardless of whether the smart card reader is a USB device. You can add one USB controller to a virtual machine. You can use VMware Remote Console to add devices compatible with USB 1.1, USB 2.0, or USB 3.0.

Prerequisites

Power off the virtual machine.

Procedure

1 Follow the steps for your operating system.

- Windows

  Select **VMRC > Manage > Virtual Machine Settings**.

- Linux

  Select **Virtual Machine > Virtual Machine Settings**.

- Apple OS X

  The option is not available.

2 On the **Hardware** tab, click **Add**.

3 In the Add Hardware wizard, select **USB Controller**.

4 Select the USB compatibility version from the drop-down menu.

5 To add the USB controller, click **Finish**.

Configure Sound Card Settings

You can use VMware Remote Console to configure a virtual sound device. The VMware virtual sound device is compatible with a Creative Technology Sound Blaster Audio API.

Procedure

1 Follow the steps for your operating system.

- Windows

  Select **VMRC > Manage > Virtual Machine Settings**.

- Linux

  Select **Virtual Machine > Virtual Machine Settings**.

- Apple OS X

  The option is not available.

2 On the **Hardware** tab, click **Add** and select **Sound Card**.

3 Configure one or more sound card settings.

Option	Description
Use default host sound card	Connects to the default host or client sound device.
Specify host sound card	(Windows clients only) Select which sound card to use if you have more than one physical sound card on the host system or client.

4 To automatically connect the sound device to the virtual machine when you power on the virtual machine, select **Connect at power on**.

5 To save your changes, click **Finish**.

Add a Parallel Port to a Virtual Machine

You can use VMware Remote Console to attach up to three bidirectional parallel (LPT) ports to a virtual machine. Virtual parallel ports can output to parallel ports or to files on the client.

Parallel ports are used for a variety of devices, including printers, scanners, dongles, and disk drives. Although these devices can connect to the client, only printers can reliably connect to virtual machines by using parallel ports.

Prerequisites

Power off the virtual machine.

Procedure

1   Follow the steps for your operating system.

- Windows

    Select **VMRC > Manage > Virtual Machine Settings**.

- Linux

    Select **Virtual Machine > Virtual Machine Settings**.

- Apple OS X

    The option is not available.

2   On the **Hardware** tab, click **Add**.

3   In the Add Hardware wizard, select **Serial Port**.

4   Select where the virtual serial port sends output.

Option	Description
Use a physical parallel port	Send output to a physical serial port on the client.
Use output file	Send output to a file on the client. Either locate an existing output file or browse to a directory and type a filename to create a new output file.
Output to named pipe	Set up a direct connection between two virtual machines, or a connection between a virtual machine and an application on the client.

5   To connect the port to the virtual machine when the virtual machine powers on, select **Connect at power on**.

6   To add the virtual serial port to the virtual machine, click **Finish**.

Add a Serial Port to a Virtual Machine

You can use VMware Remote Console to add up to four serial (COM) ports to a virtual machine. Virtual serial ports can output to physical serial ports, files, or named pipes.

You might want to add a virtual serial port to a virtual machine to make devices such as modems and printers available to the virtual machine. You can also use virtual ports to send debugging data from a virtual machine to the client or to another virtual machine.

NOTE   The virtual printer feature configures a serial port to make client printers available to the guest. You do not need to install additional drivers in the virtual machine.

Prerequisites

Power off the virtual machine.

Procedure

1   Follow the steps for your operating system.

■   Windows

Select **VMRC > Manage > Virtual Machine Settings**.

■   Linux

Select **Virtual Machine > Virtual Machine Settings**.

■   Apple OS X

The option is not available.

2   On the **Hardware** tab, click **Add**.

3   In the New Hardware wizard, select **Serial Port**.

4   Select where the virtual parallel port sends output.

Option	Description
Use a physical parallel port	Select a parallel port on the client.
Use output file	Send output from the virtual parallel port to a file on the client. Either locate an existing output file or browse to a directory and type a filename to create a new output file.

5   To connect the virtual parallel port to the virtual machine when the virtual machine powers on, select **Connect at power on**.

6   Click **Finish** to add the virtual parallel port to the virtual machine.

What to do next

If you set up a connection between two virtual machines, the first virtual machine is set up as the server. Repeat this procedure for the second virtual machine, but set it up as the client by selecting This end is the client when you configure the named pipe.

Add a Generic SCSI Device to a Virtual Machine

You must add a generic SCSI device to the virtual machine to map virtual SCSI devices on a virtual machine to physical generic SCSI devices on the client. You can use VMware Remote Console to add up to 60 generic SCSI devices to a virtual machine.

Prerequisites

Procedure

1   Follow the steps for your operating system.

■   Windows

Select **VMRC > Manage > Virtual Machine Settings**.

■   Linux

Select **Virtual Machine > Virtual Machine Settings**.

■   Apple OS X

The option is not available.

2   On the **Hardware** tab, click **Add**.

3   In the Add Hardware wizard, select **Generic SCSI Device**.

4   Select the physical SCSI device to map to the virtual SCSI device.

When you type the path to the SCSI device on a Linux client, do not enter `/dev/st0` or `/dev/sr0`.

5   To connect the device when the virtual machine powers on, select **Connect at power on**.

6   To add the device, click **Finish**.

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