

Installing VMware Tools

The following sections describe how to install VMware Tools:

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Don't Forget VMware Tools

It is very important that you install VMware Tools in the guest operating system.

With the VMware Tools SVGA driver installed, Workstation supports significantly faster graphics performance.

The VMware Tools package provides support required for shared folders and for drag and drop operations.

Other tools in the package support synchronization of time in the guest operating system with time on the host, automatic grabbing and releasing of the mouse cursor, copying and pasting between guest and host, and improved mouse performance in some guest operating systems.

The installers for VMware Tools for Windows, Linux, FreeBSD and NetWare guest operating systems are built into VMware Workstation as ISO image files. (An ISO image file looks like a CD-ROM to your guest operating system and even appears as a CD-ROM in Windows Explorer. You do not use an actual CD-ROM to install VMware Tools, nor do you need to download the CD-ROM image or burn a physical CD-ROM of this image file.)

VMware Tools for Windows supports Windows 95, Windows 98, Windows Me, Windows NT 4.0, Windows 2000, Windows XP and Windows Server 2003 guest operating systems.

When you choose **File > Install VMware Tools** from the VMware Workstation menu, VMware Workstation temporarily connects the virtual machine's first virtual CD-ROM drive to the ISO image file that contains the VMware Tools installer for your guest operating system and begins the installation process.

VMware Tools for Windows Guests

The detailed steps for installing VMware Tools depend on the version of Windows you are running. The steps that follow show how to install VMware Tools in a Windows XP guest. Some steps that are automated in newer versions of Windows must be performed manually in Windows 9x and Windows NT.

Note: If you are running VMware Workstation on a Windows host, and your virtual machine has only one CD-ROM drive, the CD-ROM drive must be configured as an IDE or SCSI CD-ROM drive. It cannot be configured as a generic SCSI device.

To add an IDE or SCSI CD-ROM drive, see [Adding, Configuring and Removing Devices in a Virtual Machine](#). For information about generic SCSI, see [Connecting to a Generic SCSI Device](#).

Installing VMware Tools in a Windows Guest Operating System

1. Power on the virtual machine.
2. When the guest operating system starts, prepare your virtual machine to install VMware Tools.

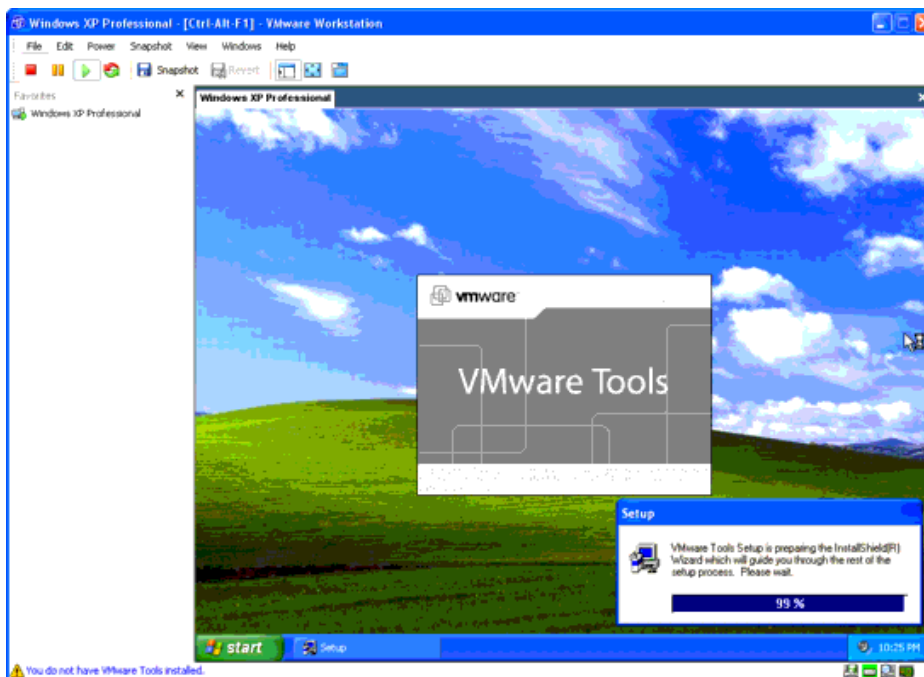
Choose **File > Install VMware Tools**.

The remaining steps take place inside the virtual machine.

3. If you have autorun enabled in your guest operating system (the default setting for Windows operating systems), a dialog box appears after a few seconds. It asks if you want to install VMware Tools. Click **Yes** to launch the InstallShield wizard.

If autorun is not enabled, the dialog box does not appear automatically. If it doesn't appear, run the VMware Tools installer. Click **Start > Run** and enter `D:\setup\setup.exe` where D: is your first virtual CD-ROM drive.

Note: You do not use an actual CD-ROM to install VMware Tools, nor do you need to download the CD-ROM image or burn a physical CD-ROM of this image file. The VMware Workstation software contains an ISO image that looks like a CD-ROM to your guest operating system and even appears as a CD-ROM in Windows Explorer. This image contains all the files needed to install VMware Tools in your guest operating system. When you finish installing VMware Tools, this image file no longer appears in your CD-ROM drive.



4. Follow the on-screen instructions.
5. On Windows Server 2003 , Windows Me, Windows 98 SE and Windows 98 guests, the SVGA driver is installed automatically and the guest operating system uses it after it reboots. With Windows 2000 and Windows XP guests, you do not have to reboot to use the new driver.

Additional Steps for Some Versions of Windows When Migrating from Old Disk Versions

If you are migrating a VMware Workstation 2 disk to VMware Workstation 4 and your guest operating system is Windows NT, Windows Me, Windows 98 or Windows 95, you need to configure the video driver by hand. Instructions open automatically in Notepad at the end of the installation process. If the Notepad window is hidden, bring it to the front by clicking the **Notepad** button on the Windows taskbar.

For details, see the steps below that correspond to your guest operating system.

Windows NT

1. After installing VMware Tools, click **Finish**. The Display Properties dialog box appears.
2. Click the **Display Type** button. The Display Type dialog box appears.
3. Click the **Change** button. The Change Display dialog box appears.
4. Select **VMware, Inc.** from the **Manufacturer** list.
5. Select **VMware SVGA** as the display adapter and click **OK**.
6. Click **Yes** in response to the on-screen question about third-party drivers to install the driver, then click **OK** to confirm the drivers were installed.
7. Click **Close** from the Display Type dialog box, then click **Close** from the Display Properties dialog box.
8. Click **Yes** to restart Windows NT and start using the new video driver.
9. The VMware Tools background application is launched automatically when you reboot your virtual machine.

Windows Me

1. After installing VMware Tools, click **Finish**. The Display Settings dialog box appears.
2. Click the **Advanced** button.
3. Click the **Adapter** tab.
4. Click the **Change** button. This starts the Update Device Driver Wizard.

5. The wizard now presents two options. Choose the second option to **Specify the location of the driver**.

Click **Next**.

6. Check the **Specify a location** checkbox. Enter the following path:

D:\video\win9x

D: is the drive letter for the first virtual CD-ROM drive in your virtual machine.

Click **OK**.

7. Windows Me automatically locates your driver.
8. Select the **VMware SVGA II** display adapter and click **Next**.
9. Click **Next** to install the driver.

If you are upgrading a virtual machine created under VMware Workstation 2, you may see a dialog box that warns, "The driver you are installing is not specifically designed for the hardware you have.... Do you wish to continue?" Click **Yes**.

After the driver is installed, click **Finish**.

10. Click **Yes** to restart Windows Me and start using the new video driver.
11. The VMware Tools background application starts automatically when you reboot your virtual machine.

Windows 98

1. After installing VMware Tools, click **Finish**. The Display Settings dialog box appears.
2. Click the **Advanced** button. The Standard Display Adapter (VGA) Properties dialog box appears. If you are upgrading from a previous version of the VMware drivers, this dialog box is titled VMware SVGA Properties.
3. Click the **Adapter** tab.
4. Click the **Change** button. This starts the Update Device Driver Wizard. Click **Next**.
5. The wizard presents two options. Choose the option to **Display a list of all drivers in a specific location**. Click **Next**.
6. Select **Have Disk**. The Install From Disk dialog box appears.
7. Enter the following path:

D:\video\win9x

D: is the drive letter for the first virtual CD-ROM drive in your virtual machine.

Click **OK**.

8. Select **VMware SVGA** display adapter and click **OK**.
9. Answer **Yes** to the on-screen question, then click **Next** to install the driver. After the driver is installed, click **Finish**.
10. Click **Close** in the SVGA Properties dialog box, then click **Close** in the Display Settings dialog box.
11. Click **Yes** to restart Windows 98 and start using the new video driver.
12. The VMware Tools background application starts automatically when you reboot your virtual machine.

Windows 95

1. After installing VMware Tools, click **Finish**. The Display Settings dialog box appears.
2. Click the **Advanced Properties** button. The Advanced Display Properties dialog box appears.
3. Click the **Change** button. The Select Device dialog box appears.
4. Select **Have Disk**.
5. Enter the following path:

```
D:\video\win9x
```

D: is the drive letter for the first virtual CD-ROM drive in your virtual machine.

Click **OK**.

6. Click **OK** again to install the driver.
7. Click **Close** from the Advanced Display Properties dialog box, then click **Close** from the Display Setting dialog box.
8. Click **Yes** to restart Windows 95 and start using the new video driver.
9. The VMware Tools background application starts automatically when you reboot your virtual machine.

VMware Tools for Linux Guests

1. Power on the virtual machine.

2. After the guest operating system has started, prepare your virtual machine to install VMware Tools.

Choose **File > Install VMware Tools**.

The remaining steps take place inside the virtual machine.

3. Be sure the guest operating system is running in text mode. You cannot install VMware Tools while X is running.
4. As root (`su -`), mount the VMware Tools virtual CD-ROM image, change to a working directory (for example, `/tmp`), uncompress the installer, then unmount the CD-ROM image.

Note: You do not use an actual CD-ROM to install VMware Tools, nor do you need to download the CD-ROM image or burn a physical CD-ROM of this image file. The VMware Workstation software contains an ISO image that looks like a CD-ROM to your guest operating system. This image contains all the files needed to install VMware Tools in your guest operating system.

Note: Some Linux distributions use different device names or organize the `/dev` directory differently. If your CD-ROM drive is not `/dev/cdrom`, modify the following commands to reflect the conventions used by your distribution.

```
mount /dev/cdrom /mnt
cd /tmp
tar xzf /mnt/vmware-linux-tools.tar.gz
umount /mnt
```

5. Run the VMware Tools installer.

```
cd vmware-tools-distrib
./vmware-install.pl
```

6. Log out of the root account.

```
exit
```

7. Start X and your graphical environment.

8. In an X terminal, launch the VMware Tools background application.

```
vmware-toolbox &
```

Note: You may run VMware Tools as root or as a normal user. To shrink virtual disks, you must run VMware Tools as root (`su -`).

Starting VMware Tools Automatically

You may find it helpful to configure your guest operating system so VMware Tools starts when you start your X server. The steps for doing so vary depending on your Linux

distribution and your desktop environment. Check your operating system documentation for the appropriate steps to take.

For example, in a Red Hat Linux 7.1 guest using GNOME, follow these steps.

1. Open the Startup Programs panel in the GNOME Control Center.
Main Menu (click the foot icon in the lower left corner of the screen) > **Programs** > **Settings** > **Session** > **Startup Programs**
2. Click **Add**.
3. In the **Startup Command** field, enter `vmware-toolbox`.
4. Click **OK**, click **OK** again, then close the GNOME Control Center.

The next time you start X, VMware Tools starts automatically.

Uninstalling VMware Tools

If you need to remove VMware Tools from your Linux guest operating system, log on as root (`su -`) and run the following command:

```
vmware-uninstall-tools.pl
```

VMware Tools for FreeBSD Guests

1. Power on the virtual machine.
2. Prepare your virtual machine to install VMware Tools.

Choose **File** > **Install VMware Tools**.

The remaining steps take place inside the virtual machine, not on the host computer.

3. Be sure the guest operating system is running in text mode. You cannot install VMware Tools while X is running.
4. As root (`su -`), mount the VMware Tools virtual CD-ROM image, change to a working directory (for example, `/tmp`), uncompress the installer, then unmount the CD-ROM image.

Note: You do not use an actual CD-ROM to install VMware Tools, nor do you need to download the CD-ROM image or burn a physical CD-ROM of this image file. The VMware Workstation software contains an ISO image that looks like a CD-ROM to your guest operating system. This image contains all the files needed to install VMware Tools in your guest operating system.

```
mount /cdrom  
cd /tmp
```

```
tar xzf /cdrom/vmware-freebsd-tools.tar.gz
umount /cdrom
```

5. Run the VMware Tools installer.

```
cd vmware-tools-distrib
./vmware-install.pl
```

6. Log out of the root account.

```
exit
```

7. Start X and your graphical environment

8. In an X terminal, launch the VMware Tools background application.

```
vmware-toolbox &
```

Note: You may run VMware Tools as root or as a normal user. To shrink virtual disks, you must run VMware Tools as root (`su -`).

Note: In a FreeBSD 4.5 guest operating system, sometimes VMware Tools does not start after you install VMware Tools, reboot the guest operating system or start VMware Tools on the command line in the guest. An error message appears:

```
Shared object 'libc.so.3' not found.
```

The required library was not installed. This does not happen with full installations of FreeBSD 4.5, but does occur for minimal installations. To fix the problem of the missing library, take the following steps:

1. Insert and mount the FreeBSD 4.5 installation CD or access the ISO image file.
2. Change directories and run the installation script.

```
cd /cdrom/compat3x
./install.sh
```

Installing VMware Tools in a NetWare Virtual Machine

1. Power on the virtual machine.
2. Prepare your virtual machine to install VMware Tools.

Choose **File > Install VMware Tools**.

The remaining steps take place inside the virtual machine.

3. Load the `CD9660.NSS` driver so the CD-ROM device mounts the ISO image as a volume. In the system console, type

```
LOAD CD9660.NSS
```


4. When the driver finishes loading, you can begin installing VMware Tools. In the system console, type

```
vmwtools:\setup.ncf
```

5. Restart the guest operating system. In the system console, type

```
restart server
```