

## Configuring shared Windows folders for maximum network protection

### STEP 1

#### Print this page

We suggest that you print this page before you start.

Expand each section by clicking the "+" before you actually print.

### STEP 2

#### Choose your operating system

##### I use Windows XP

1

Click **Start > My Computer**.

2

Right-click drive **C**.

3

Click **Sharing and Security**.

4

If you see the link "If you understand the risk but still want to share . . . ," click the link.

5

In the Network Sharing and Security section, examine to see if either of the two check boxes is checked.

To disable sharing uncheck them.

6

Close the Sharing and Security dialog box.

7

Double-click the **Shared Documents** folder.

8

See if it contains any shortcuts to files or folders.

If it does, and you do not want them shared, delete them.

From Symantec Corporation:

[http://service1.symantec.com/SUPPORT/tsgeninfo.nsf/docid/2000091415173339?OpenDocument&src=sec\\_doc\\_nam](http://service1.symantec.com/SUPPORT/tsgeninfo.nsf/docid/2000091415173339?OpenDocument&src=sec_doc_nam)

# File and Printer Sharing in Windows Vista

## (From Microsoft TechNet support pages)

Published: November 08, 2006 | Updated: May 14, 2007

### On This Page

- [Abstract](#)
- [Differences in File and Printer Sharing in Windows Vista](#)
- [Configuring File and Printer Sharing Behavior in Windows Vista](#)
- [Sharing a Folder or Printer in Windows Vista](#)
- [Accessing a Shared Folder or Printer with Windows Vista](#)
- [Common Questions with Windows Vista File and Printer Sharing](#)
- [For More Information](#)

### Abstract

Microsoft® Windows Vista™ has made some important changes to the way that file and printer sharing works. This article describes the changes and provides step-by-step instructions for sharing files and printers and connecting to shared files and printers from a computer running Windows Vista for a small-office or home office network that does not use the Active Directory® domain service.

This article is designed for IT professionals and experienced users that are familiar with file and printer sharing in Windows. If you are new to file and printer sharing, see the following Windows Vista help topics:

- [File sharing essentials](#)
- [Share files with someone](#)
- [Sharing files with the Public folder](#)
- [Share a printer](#)

[↑Top of page](#)

### Differences in File and Printer Sharing in Windows Vista

The differences in file and printer sharing in Windows Vista are the following:

- The default workgroup name in Windows Vista has been changed to WORKGROUP. In Windows® XP Home Edition, the default workgroup name is MSHOME. If you upgrade a computer running Windows XP Home Edition to Windows Vista, it will keep its existing workgroup name. However, new computers with Windows Vista can have a different workgroup name than the other computers on your network. With different workgroups, it takes more time and effort to view all of the computers on the network.
- Windows Vista uses the Public folder, rather than the Shared Documents folder in Windows XP, to simplify file sharing. With Public folder sharing enabled, the public folders and all of the folders within the Public folder are automatically shared with the name Public. You do not have to configure file sharing on

separate folders. You only have to either move or copy the file or folder you want to share on the network to the Public folder.

- Windows Vista by default does not allow simple file sharing. Access to shared folders, including the public folder (if shared), requires a user name and password. Simple file sharing is enabled by default in Windows XP Home Edition.

[↑ Top of page](#)

## Configuring File and Printer Sharing Behavior in Windows Vista

Configuring file and printer sharing behavior in Windows Vista consists of the following:

- Setting the workgroup name to be the same as the other computers
- Setting the network location type
- Enabling file and printer sharing options

### Setting the Workgroup Name

For easier and faster discovery of computers on your home network, it is highly recommended that all computers on a home network be configured for the same workgroup name. If computers are in multiple workgroups, it can take additional time and effort to discover all of the computers on the network.

To find out the existing workgroup name for a computer running Windows XP, do the following:

1. Click **Start**, right-click **My Computer**, and then click **Properties**.
2. In the **System Properties** dialog box, click the **Computer Name** tab and note the name of the workgroup.

Figure 1 shows an example.

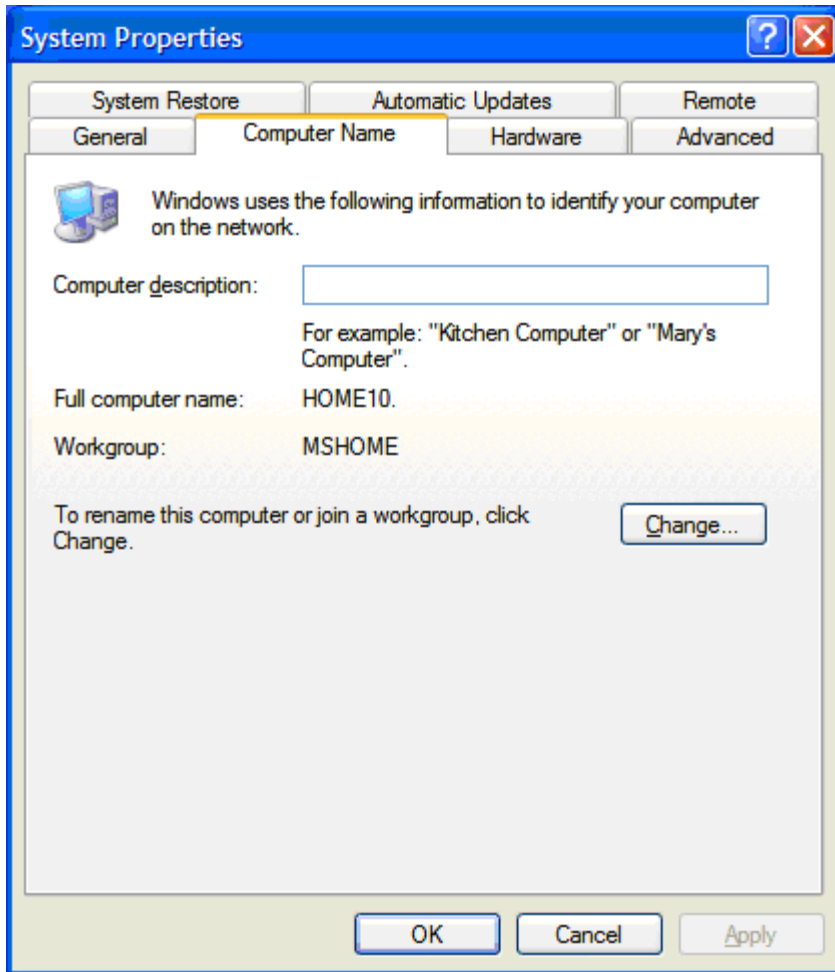


Figure 1: The workgroup name in Windows XP

To find out the existing workgroup name for a computer running Windows Vista, click **Start**, right-click **Computer**, and then click **Properties**.

In the **System** window, the workgroup name is listed in the **Computer name, domain, and workgroup settings** section. Figure 2 shows an example of the **System** window with the workgroup name highlighted.

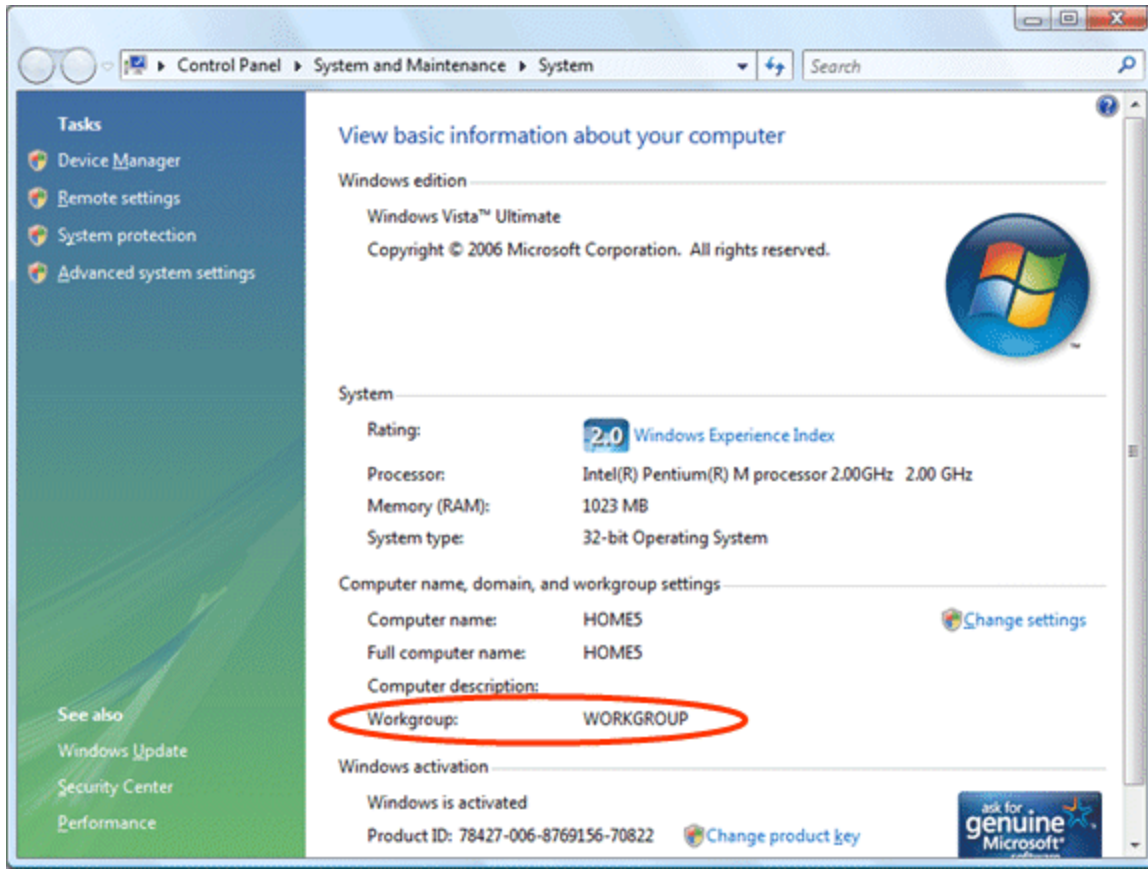


Figure 2: The workgroup name in Windows Vista

To configure the workgroup name for a computer running Windows Vista:

1. In the **Computer name, domain, and workgroup settings** section of the **System** window, click **Change settings**.
2. On the **Computer Name** tab of the **System Properties** dialog box, click **Change**.
3. In the **Computer Name/Domain Changes** dialog box, type the name of the workgroup being used by the other computers on your network in **Workgroup**, and then click **OK**. Figure 3 shows an example.
4. When you are prompted with a welcome message box, click **OK**. When prompted with a message box to restart your computer, click **OK**.
5. Click **Close**. When prompted to restart the computer, click **Restart Now**.

Figure 3 shows an example of the **Computer Name/Domain Changes** dialog box.

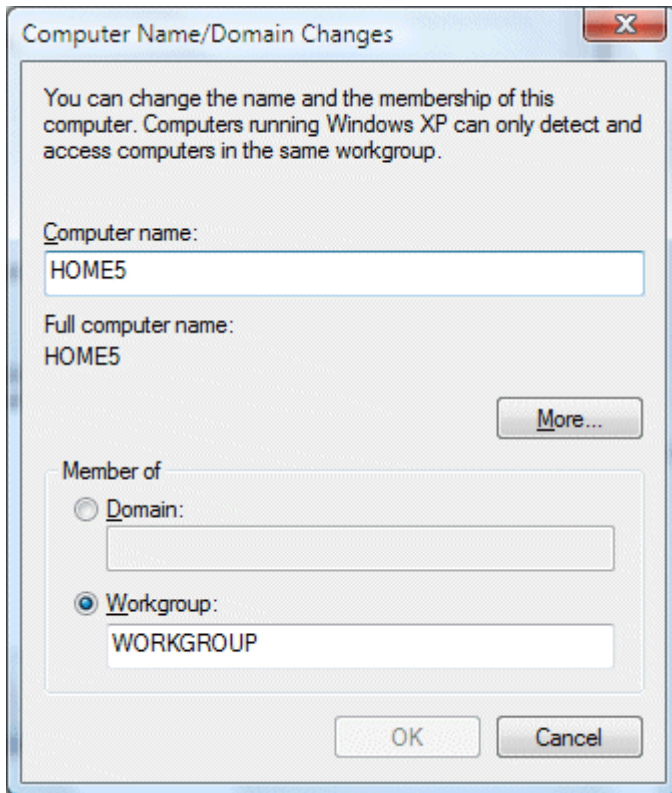


Figure 3: An example of the Computer Name/Domain Changes dialog box

### Setting the Network Location Type

The network location type in Windows Vista is a setting that allows Windows Vista to automatically configure security and other settings based on the type of network to which the computer is connected. The Windows Vista network location types are the following:

- **Domain** The computer is connected to a network that contains an Active Directory domain controller for the domain to which the computer is joined. An example a domain network type is an organization intranet.
- **Public** The computer is connected to a network that has a direct connection to the Internet. Examples of public network types are public Internet access networks such as those found in airports, libraries, and coffee shops.
- **Private** The computer is connected to a network that has some level of protection from the Internet and contains known or trusted computers. Examples of private network types are home networks or small office networks that are located behind an Internet gateway device that provides firewalling against incoming traffic from the Internet.

For small office or home office networks, you want to make sure that the network location type is set to private.

To view the current network location type, do the following, click **Start**, right-click **Network**, and then click **Properties**.

The **Network and Sharing Center** window displays the network location type in parentheses after the network name. Figure 4 shows an example of the **Network and Sharing Center** window with the network location type highlighted.

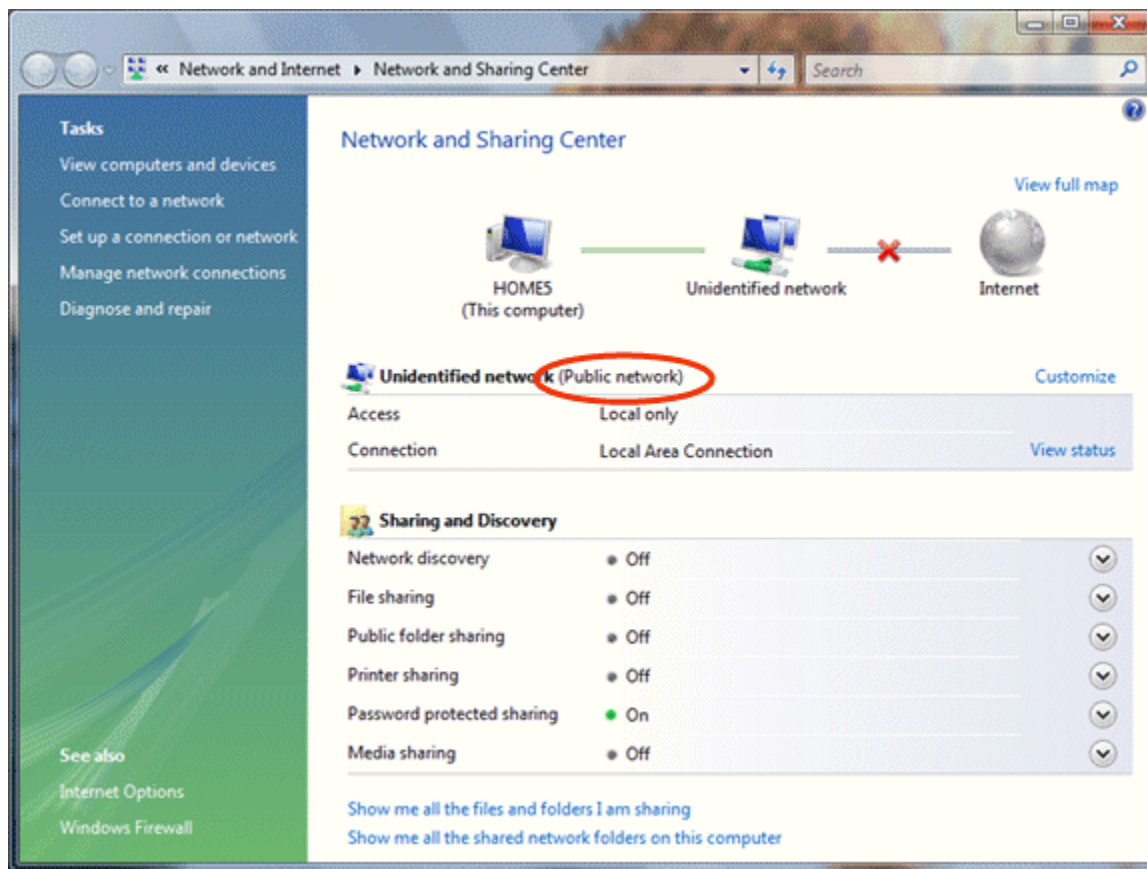


Figure 4: An example of the Network and Sharing Center window

If your network type is **Public**, do the following:

1. To the right of the network name and location type, click **Customize**.
2. In the **Set Network Location** dialog box, click **Private**, and then click **Next**.
3. In the **Successfully set network settings** dialog box, click **Close**.

### Enabling File and Printer Sharing Options

By changing your network location type to private, network discovery is automatically enabled in the **Sharing and Discovery** section of the **Network and Sharing Center** window. The following additional file and printer sharing options must be manually enabled:

- File sharing
- Public folder sharing
- Printer sharing
- Password protected sharing

When all of these sharing and discovery options are enabled, your computer can:

- Locate other computers and devices on your home network and have other computers locate your computer
- Share its folders
- Share its Public folder
- Share its printers
- Require user names and passwords for other computers that connect to the shared folders and printers of this computer

To enable file sharing, do the following:

1. In the **Sharing and Discovery** section of the **Network and Sharing Center** window, click the down arrow next to **File sharing**.
2. Within the **File sharing** settings, click **Turn on file sharing**, and then click **Apply**.

To enable public folder sharing, do the following:

1. In the **Sharing and Discovery** section of the **Network and Sharing Center** window, click the down arrow next to **Public folder sharing**.
2. Within the **Public folder sharing** settings, click one of the following:
  - If you want to share the public folder so that other computers on the network can access the Public share to open files, but not create or change files, click **Turn on sharing so anyone with network access can open files**. This is the default setting.
  - If you want to share the public folder so that other computers on the network can access the Public share to open files and also create or change files, click **Turn on sharing so anyone with network access can open, change, and create files**.
3. Click **Apply**.

To enable printer sharing and share all of your connected printers, do the following:

1. In the **Sharing and Discovery** section of the **Network and Sharing Center** window, click the down arrow next to **Printer sharing**.
2. Within the **Printer sharing** settings, click **Turn on printer sharing**, and then click **Apply**.

To enable password protected sharing, do the following:

1. In the **Sharing and Discovery** section of the **Network and Sharing Center** window, click the down arrow next to **Password protected sharing**.
2. Within the **Password protected sharing** settings, click **Turn on password protected sharing**, and then click **Apply**.

### **Password Protected Sharing**

With password protected sharing enabled, other computers on your network will not be able to access your shared folders, including the Public folder, without a user name or password that corresponds to a user account on the

computer with the shared folder. When a user on another computer tries to connect to the shared folder, they will send the user name and password of the account that they used to log on to their own computer. For example, if they logged on to their computer with the "Bob" account and a password, then the "Bob" name with its password is sent when connecting to a shared folder on another computer.

If there is a "Bob" account with its password on the computer that is sharing the folder, the shared folder connection will be successful (provided the "Bob" account is specified as one of the accounts that can access the share). However, if there is no "Bob" account on the computer that is sharing the folder, the shared folder connection will fail and the user on the other computer will be prompted with a dialog box to type in a user name and password. At this point, the user on the computer attempting to connect can type the name and password of an account on the computer sharing the folder that is specified as one of the accounts that can access the share.

To prevent shared folder connection failures, you can do one of the following:

- Add the same accounts and passwords to all of the computers on your network

For example, if you have three computers in your home and four family members that use them, add all four accounts with their passwords corresponding to your family members to all three computers. When this is done, each family member can access the shared folders of the other computers, regardless of which computer they are using. This is the recommended method, which provides protection of shared folders and prevents shared folder connection failures.

- Disable password protected sharing

When you disable password protected sharing, the computer sharing the folder does not require a user account or password. Anyone on your network can access the shared folders of the computer (provided the folder was shared for the Guest or Everyone account). This behavior is equivalent to simple file sharing in Windows XP.

To disable password protected sharing, do the following:

1. In the **Sharing and Discovery** section of the **Network and Sharing Center** window, click the down arrow next to **Password protected sharing**.
2. Within the **Password protected sharing** settings, click **Turn off password protected sharing**, and then click **Apply**.

[↑ Top of page](#)

## Sharing a Folder or Printer in Windows Vista

To share a folder in Windows Vista, do the following:

1. Ensure that file sharing is enabled as described in the "Enabling File and Printer Sharing Options" section of this article.
2. Click **Start**, and then click **Computer**.
3. In the **Computer** window, navigate to the folder containing the folder that you want to share.
4. Right-click the folder that you want to share, and then click **Share**. The **File Sharing** window is displayed.
5. If you have password protected sharing enabled, use the **File Sharing** window to select which users can access the shared folder and their permission level. To allow all users, select **Everyone** in the list of users. By default, the permission level for a selected user is Reader. Users cannot change files or create new files

in the share. To allow a user to change files or folders or create new files or folders, select Co-owner as the permission level. Figure 5 shows an example of configuring users and permission levels in the **File Sharing** window.

If you have password protected sharing disabled, use the **File Sharing** window to select the Guest or Everyone account. This is equivalent to simple file sharing in Windows XP.

6. When complete, click **Share**, and then click **Done**.

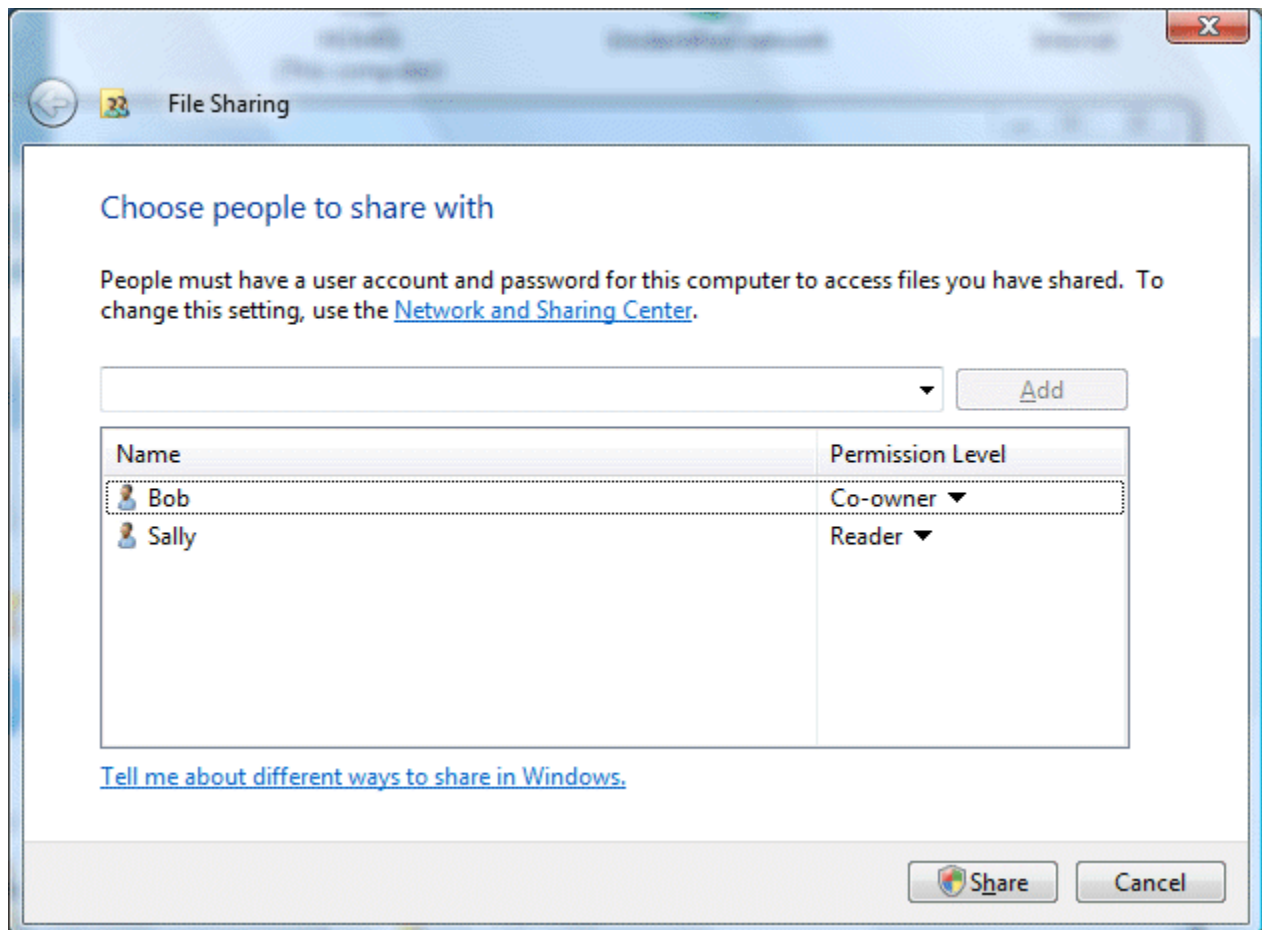


Figure 5: An example of the File Sharing window

You can also share a folder from the folder's properties by doing the following:

1. In the **Computer** window, navigate to the folder containing the folder that you want to share.
2. Right-click the folder that you want to share, and then click **Properties**. Windows Vista displays the folder properties window.
3. Click the **Sharing** tab. Figure 6 shows an example. Click **Share** for the **File Sharing** dialog box previously described. To configure advanced sharing options, click **Advanced Sharing**.

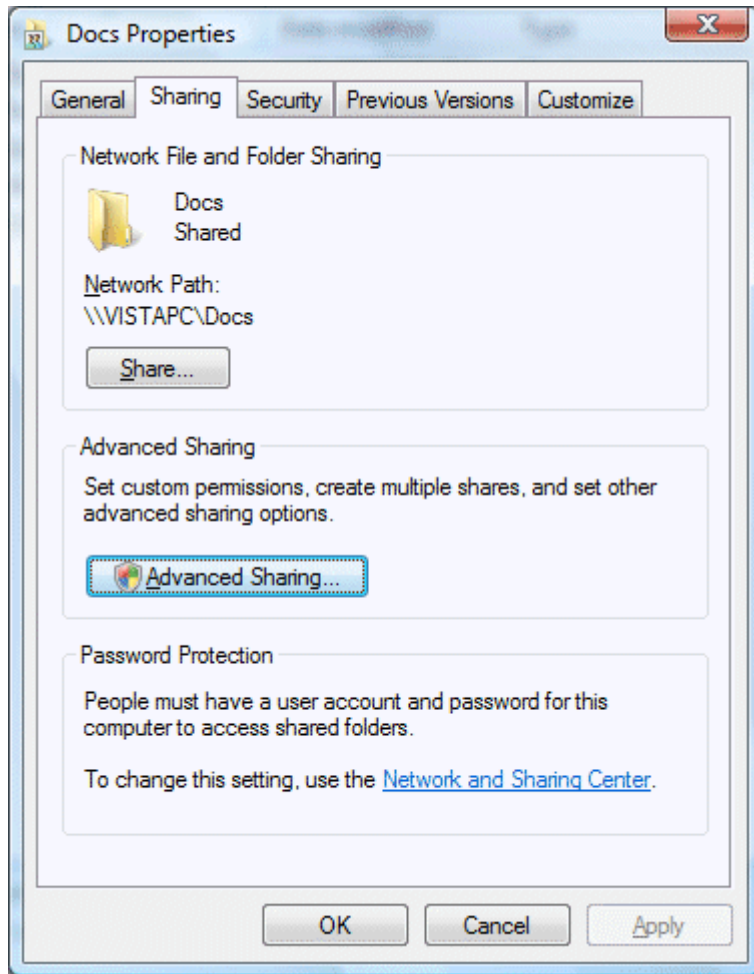


Figure 6: An example of the Sharing tab for the properties of a folder

When you click **Advanced Sharing**, Windows Vista displays the **Advanced Sharing** dialog box. Figure 7 shows an example.

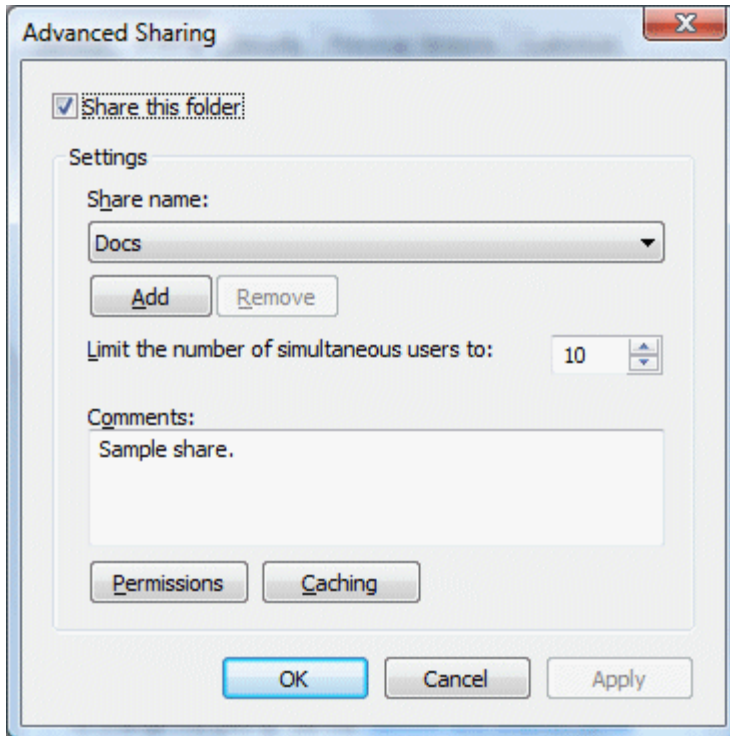


Figure 7: An example of the Advanced Sharing dialog box

From this dialog box, you can do the following:

- Create more than one share for the same folder with different share names.  
Click **Add** to specify the new share name, a description for the share, the number of users allowed to connect, and share permissions (by default, the Everyone group has Read permissions).
- Specify the maximum number of users that can be connected to the shared folder.  
In **Limit the number of simultaneous users to**, specify 1 to 10.
- Add a comment to the shared folder that appears to users when they are browsing for shared folders.  
Type a description for the share in **Comments**.
- Specify folder share permissions.  
Click **Permissions** to specify individual user or group names and their permissions to access the files in the shared folder. Figure 8 shows an example.
- Specify whether the contents of the folders of the share can be made available offline.  
Click **Caching** and specify offline settings.

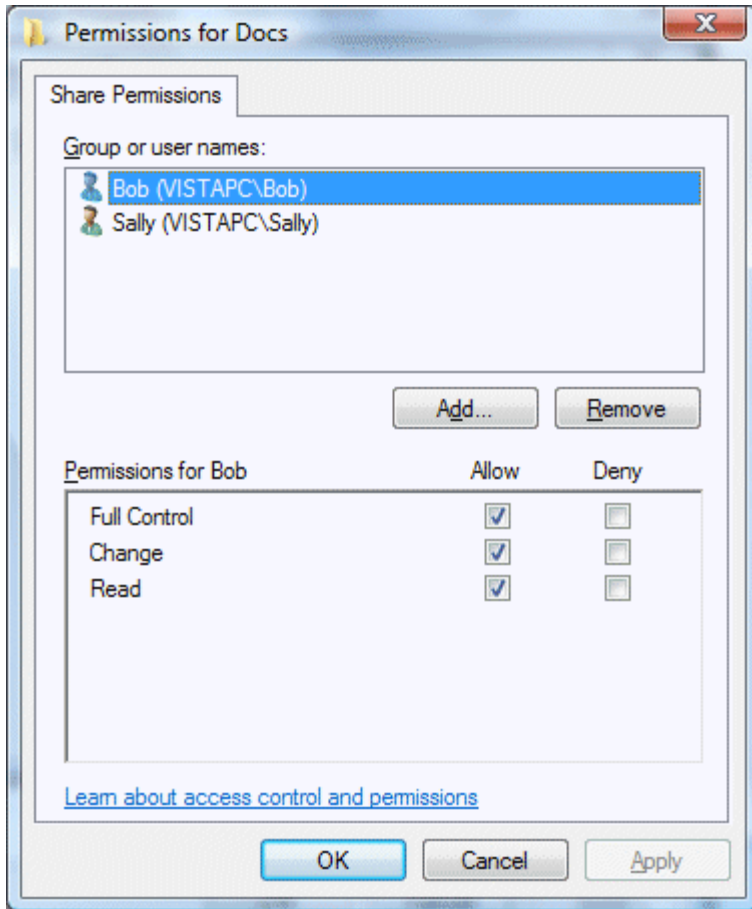


Figure 8: An example of the Permissions dialog box

To verify that the folder is shared, do the following:

1. Click **Start**, right-click **Network**, and then click **Properties**.
2. Under the **Sharing and Discovery** section of the **Network and Sharing Center** window, click **Show me all the shared network folders on this computer**.

A window displays the shared folders and printers. Verify that the window contains the folder that you just shared.

Figure 9 shows an example.



Figure 9: An example of the list of shared folders and printers

If you share any folder within your user folder (click **Start**, and then click your user name), such Documents or Pictures, then other computers will see a folder named Users in the list of shared folders on this computer. For example, if the user Bob shares his Desktop folder on his computer named BobPC, it means that Bob has shared his c:\users\bob folder, which includes the Desktop folder. Bob's Desktop folder is now available at \\bobpc\users\bob\desktop.

### Sharing Your Printers

To share your printers in Windows Vista, ensure that printer sharing is enabled as described in the "Enabling File and Printer Sharing Options" section of this article.

To verify that your printers are shared, do the following:

1. Click **Start**, right-click **Network**, and then click **Properties**.
2. Under the **Sharing and Discovery** section of the **Network and Sharing Center** window, click **Show me all the shared network folders on this computer**.
3. In the list of shared resources, verify that your printers are listed.

[↑ Top of page](#)

### Accessing a Shared Folder or Printer with Windows Vista

To access a shared folder from a computer running Windows Vista, do the following:

1. Click **Start**, and then click **Network**. The **Network** window displays a list of computers in the workgroup of the computer. Figure 10 shows an example.
2. Double-click the name of the computer containing the shared folder that you want to access.
3. Double-click the shared folder that you want to access.

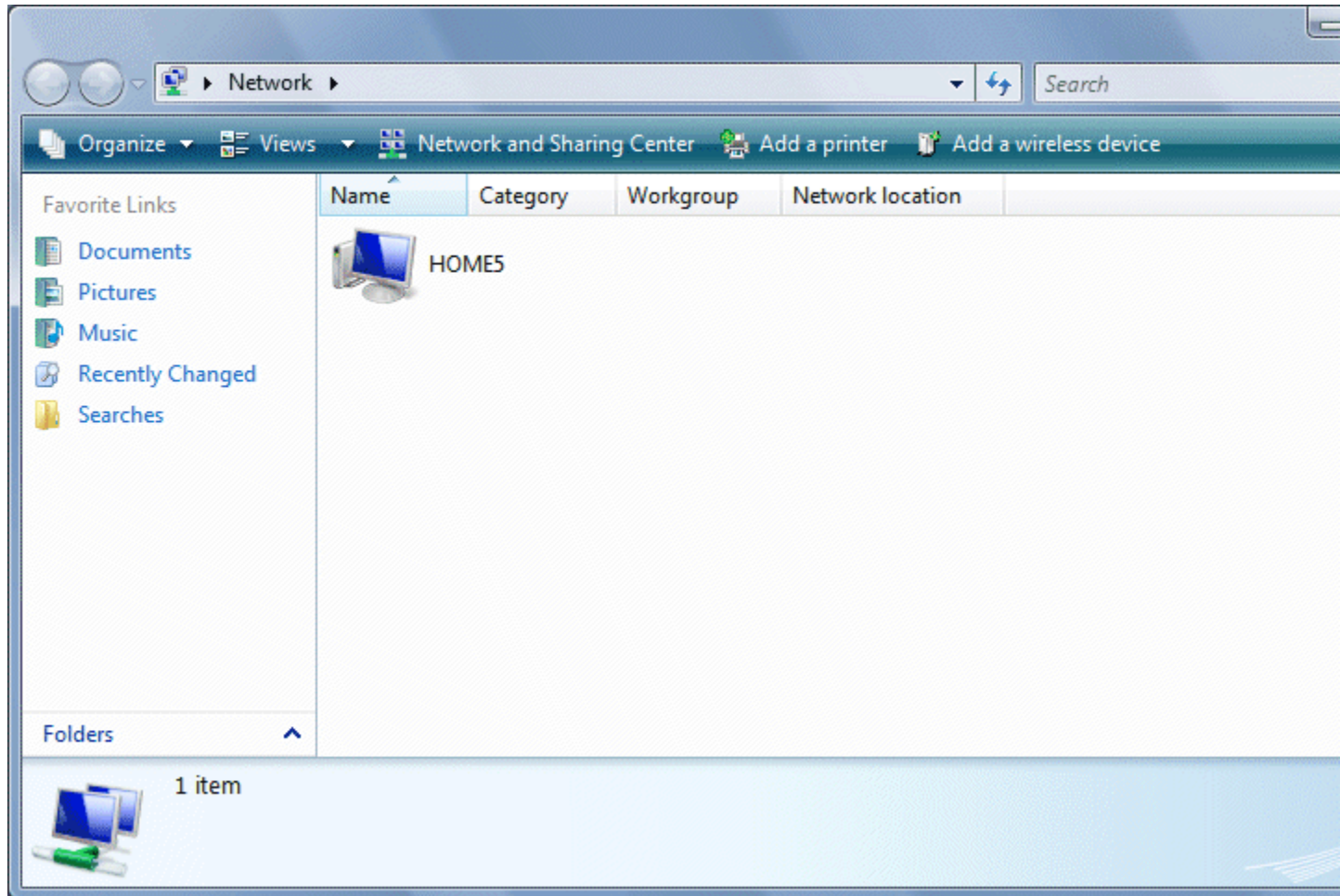


Figure 10: An example of the Network window

If the shared folder is on a computer running Windows Vista that has network discovery enabled, it should appear in the **Network** window quickly. If the computer containing the shared folder is on a computer running Windows XP, it might take up to 15 minutes for the computer to appear in the **Network** window.

If the computer that you are trying to access has password protected sharing enabled, the possibilities are the following:

- If you are logged in using a user account that has been added to the computer sharing the folder and that name has been added to the list of users who have access to the folder, the shared folder connection will be successful.
- If you are logged in using a user account that has not been added to the computer sharing the folder, you will be prompted to provide a user name and password of an account on the computer sharing the folder that has been added to the list of users who have access to the folder.

- If you are logged in using a user account that has been added to the computer sharing the folder but has not been added to the list of users who can access the share, the shared folder connection will be denied.

If the computer that you are trying to access has password protected sharing disabled, the possibilities are the following:

- In most cases, the access to the shared folder will be successful without prompting for a user name and password.
- In some cases, you will be prompted to provide a user name and password. You should type the name **guest** with no password to access the shared folder.
- If the shared folder does not have the Guest or Everyone account in its list of allowed users, shared folder access can fail even after prompting you for the name of the Guest account. To correct this, add the Guest or Everyone account to the list of allowed users on the share.

### Accessing a Shared Printer

To access a shared printer from a computer running Windows Vista, do the following:

1. Click **Start**, and then click **Network**. The **Network** window displays a list of computers in the workgroup of the computer.
2. Double-click the name of the computer containing the shared printer that you want to access.
3. Right-click the shared printer that you want to access, and then click **Connect**. Alternately, you can double-click on **Printers** to see just the list of shared printers, and then right-click the shared printer that you want to access, and then click **Connect**.

After you have connected to the shared printer, you will be able to print to this shared printer as long as the printer and the computer sharing the printer are turned on.

[↑Top of page](#)

### Common Questions with Windows Vista File and Printer Sharing

The following sections describe common questions about file and printer sharing in Windows Vista.

#### Using a Third-Party Firewall

Windows Vista includes a built-in host-based firewall known as Windows Firewall. When network discovery or file and printer sharing are enabled, Windows Firewall automatically allows the corresponding incoming traffic. However, many users use a different firewall product such as Windows Live OneCare or PC-cillin. These firewalls by default might block incoming network discovery and file and printer sharing traffic. If a firewall product other than Windows Firewall is being used, Windows Vista displays an information message above the **Sharing and Discovery** section of the **Network and Sharing Center** window. Figure 11 shows an example.

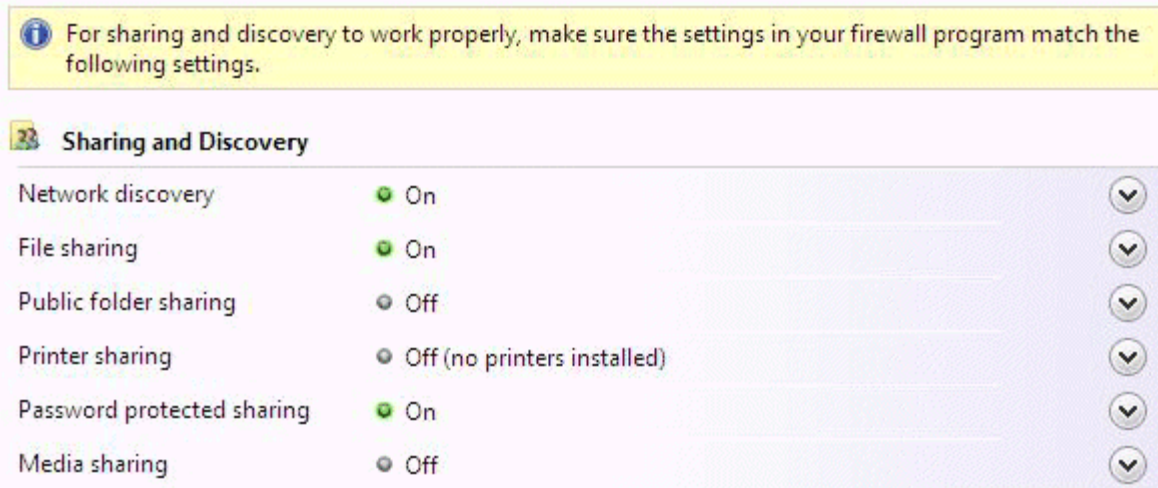


Figure 11: The information message in the Network and Sharing Center window when Windows Firewall is not being used

If you are using a firewall other than Windows Firewall, you must configure the firewall to allow incoming network discovery and file and printer sharing traffic.

For network discovery of other computers running Windows Vista, you must allow the following incoming Transmission Control Protocol (TCP) and User Datagram Protocol (UDP) traffic:

- UDP 3702
- TCP 5357
- TCP 5358

For network discovery of computers running Windows XP and for file and printer sharing for both Windows Vista and Windows XP, you must allow the following incoming traffic:

- UDP 137
- UDP 138
- TCP 139
- TCP 445

For network discovery of network devices, you must allow the following incoming traffic:

- UDP 1900
- TCP 2869

For more information about how to configure your third-party firewall to allow incoming traffic, see the documentation for your third-party firewall.

### **Cannot Authenticate to a Shared Folder from a Windows Vista-based Computer**

If you cannot authenticate when accessing a shared folder from a Windows Vista-based computer on a computer running a version of Windows prior to Windows XP (such as Windows 98 or Windows 95), a computer running an

operating system other than Microsoft Windows, or to a network device, the cause might be a mismatch in the configured support for NTLM 2, an authentication protocol that is used for file and printer sharing connections. By default, Windows Vista is configured to use NTLM 2.

To resolve this issue, you can do one of the following:

- Enable NTLM 2 support on the computer or device to which the Windows Vista-based computer is attempting to connect. For computers running versions of Windows prior to Windows XP, see [How to enable NTLM 2 authentication](#). For computers running operating systems other than Windows, see the operating system's product documentation for information about how to enable NTLM 2 support. For network devices, see the device's product documentation or Web site for information about how to enable NTLM 2 support or download a firmware update that supports NTLM 2. This is the preferred solution.
- If you cannot update the computers running operating systems other than Windows or your network devices to support NTLM 2, change the HKEY\_LOCAL\_MACHINE\System\CurrentControlSet\Control\Lsa\LMCompatibilityLevel registry value on the computer running Windows Vista to 1. This solution is not recommended.

### Folder Security and Share Permissions

Folder security defines what users can do within folders. To configure folder security, right-click a folder in the **Computer** window, and then click the **Security** tab. Share permissions must match the folder security for access to a share to be successful. For example, if the share permissions allow access to both Bob and Sally, but the folder security only allows Bob, then Sally will not be able to access the share. You must add the Sally account to the folder security settings.

For another example, when a user disables password protected sharing, the default share permissions for new shares include the Everyone group. If the folder security specifies access for the Users group, another computer that is not using an account on the sharing computer will not be able to access the share. Another computer that is not using an account on the sharing computer will be using the Guest account, which is not a member of the Users group. To allow this other computer to access the share, you must add the Guest account to the folder security settings.

### Administrative Shares and Sharing the Root of a Drive

Windows XP by default created administrative shares for the root folders of the fixed drives of the computer. For example, for the root of the C: drive on the computer named BobPC, Windows XP automatically shared \\bobpc\c\$. The "\$" at the end of the share name means that the share name will not appear in the list of shares. For computers running Windows Vista that are members of a workgroup, these administrative shares exist but are blocked for network access for security reasons. You can create your own shares to share your drives from the root of the drive, but Microsoft highly recommends that you share only the folders that you need to, rather than the entire drive.

To share the root of a drive, do the following:

1. Right-click the drive in the **Computer** window, and then click **Share**. Windows Vista displays the properties for the drive with the **Sharing** tab selected.

The **Share** button and the **File Sharing** dialog box are not available.

2. Click **Advanced Sharing**.

3. In the **Advanced Sharing** dialog box, click **Share this folder** and specify the share name, permissions, and other settings as needed.
4. Click **OK**, and then click **Close**.

Because the "*driveletter\$*" shares already exist, you cannot share the root of a drive with the name "*driveletter\$*". However, you can share it with another name, such as "*driveletter*". For example, you cannot share the root of your C: drive as "C\$", but you can share it as "C".

### **Viewing Shares Without the Network Window**

If the computer that you are trying to access for a shared folder or printer does not appear in the **Network** window, you can try to view the shares of the computer by clicking **Start**, typing `\\ ComputerName`, and then pressing **Enter**.

For example, to view the shares of the computer named BobPC, click **Start**, type `\\bobpc`, and then press **Enter**.

### **Getting Additional Help With Questions About Windows Vista File and Printer Sharing**

For help in answering a specific question about Windows Vista file and printer sharing that is not described in this article, submit your question to the [Discussions in Windows Vista Networking and Sharing](#) newsgroup.

[↑ Top of page](#)

### **For More Information**

For more information about networking features in Windows Vista, see the [Windows Vista Networking Web site](#).