

# **Integrating Macintosh Computers With a Windows NT Network**

**by Joel Hawks**

Microsoft Windows is the most prevalent operating system in corporate America. Windows NT is quickly becoming universally employed in corporations because of its advanced security, and it is likely to continue to gain prominence when NT 5.0 is released. Nevertheless, every company has the need to create brochures, presentations, web sites, and graphically-intensive work. These tasks are usually performed using Macintosh computers. As a result, companies often have problems integrating both operating systems on the same network. Fortunately, Macs can be effectively connected to an NT network. Once connected to an NT network, Mac users can share files with Windows users and print to Windows printers. Additionally, Windows NT allows PC machines to print to Macintosh printers. All of this functionality is included in the NT Server software.

## ***Installing “Services for Macintosh” on an NT Server***

To connect Mac computers to an NT network, you must first install the “Services for Macintosh” module that is included in the NT Server software. The process to install the module on the NT server is described below.

1. Double-click “Network” in the Control Panel, and open the “Services” tab.
2. Click the “Add” button, scroll down until you see “Services for Macintosh,” and click “OK.”
3. Enter the path that contains the NT Server software. This is usually the I386 directory. Click “OK,” then click “OK” again.

The installation of the “Services for Macintosh” module is now complete. A message appears telling you to restart your machine. Choose “Yes,” and the computer will restart.

### ***Setting the Attributes of Mac-Accessible Volumes***

Next, you should set up attributes for the Mac-accessible volumes. Do this by selecting “Macfile” from the Control Panel. This Control Panel is used to change the name of the Server that the Macs will see. The Macfile Control Panel can also be used to add log-on messages if you wish. Click the “OK” button when done. Then click the “Close” button and exit the Control Panel. The computer must be restarted if you changed the name of the server.

### ***Creating Mac-Accessible Volumes***

Next, you must create Mac-Accessible volumes on the NT server. Follow the steps listed below.

1. Create a new folder on the NTFS partition. Give the folder a name that makes sense to you, then share the folder.
2. From the Server Manager, select the server on which you are working. Then select “MacFile,” click “Volumes,” then choose “Create Volume.”
3. Enter the volume name, which is the name of the new folder you created on the NTFS partition.
4. Enter the full path name of the folder— for example “c:\Macintosh Folder.”
5. Set volume security and user limits.
6. Click the “Permissions” button and assign any necessary restrictions. Click “OK” and exit from the Server Manager. The NT server has now been completely set up to work with Macintosh computers.

## ***Connecting a Mac to an NT Network***

The next step is to set up the Macs for the NT connection. Any Mac connected to an NT network must be running at least Mac OS 6.0.7. Follow the procedures listed below.

1. Select the Chooser from the Apple Menu.
2. Click "Appleshare." A list of servers that are available will appear.
3. From the list, select the NT server. Then click "OK."
4. Log on as a guest. You can log on as a registered user, but you must make sure you have an account on the NT server. Click "OK."
5. You will see a list of Shared Volumes. You may only see one volume, the Microsoft UAM Volume. Select the Microsoft UAM Volume click "OK."
6. Click "OK," and close the Chooser. The Microsoft UAM Volume Icon now appears on your desktop.
7. Open the Microsoft UAM Volume. Drag the folder called AppleShare Folder into your System Folder.
8. Restart the Mac.
9. Log on to the NT server through the Chooser, choose "Microsoft Authentication," and click "OK." Then, select a Mac volume.

The NT volume will appear as an icon on your desktop. Everything that you put in that volume will be stored on the NT server and is available to all others who have rights to that folder. Because Windows users will be able to access your files, it is a good idea to add the three character DOS extension to the end of file names. NT has a built-in conversion program that will automatically translate files created in most major Mac applications to a corresponding Windows program. If you have some applications that do not easily convert, there are some third party programs that can help. Some useful conversion programs are Conversions Plus and Mac-In-DOS for the PC, and MacLink Plus for the Macintosh (MacLink Plus comes with Mac OS 7.6 and 8.0).

## ***Sharing Mac and PC Printers on an NT Network***

To share Mac and PC printers on the same network, you must set up printing services. This is done solely on the NT server. Use the following steps.

1. On the NT Server, start the Print Manager by clicking the “Start” button. Choose “Programs,” “Accessories,” and “Print Manager.” Then select “Printer/Create Printer.”
2. Type in a name for the printer and select a driver from the available list. Include a description of the printer if you wish.
3. If the printer is a networked Macintosh printer, select “Other” from the “Print To” menu. After you select “Other,” choose “AppleTalk Printing Devices” from the Dialog box that appears. Then, click “OK.”
4. In the “Available AppleTalk Printing Devices” dialog box, select a printing device. Click “OK,” then click “Share This Printer on the Network.” Click “OK” again.

The printer is now available for the PC users as usual in the Print Manager.

To access PC printers, Mac users will need to create a user account. On the NT Server, start “Control Panel/Services,” select “Print Server for Macintosh,” and click the “Startup” button. In the “Log On As” section, click “System Account.” This will enable all Mac users to access the printer. Click “OK,” then “Close.” The Macs will now have access to all printers by selecting “LaserWriter” in the Chooser.

## ***Conclusion***

No matter how powerful and popular Microsoft Windows and Windows NT become, Macintosh will continue to have its place in corporate America. It is very important to know how to take advantage of the strengths that each platform has to offer. Knowing how to integrate the two together will give you the ability to grow as the industry grows.

### ***Bibliography***

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### ***About the Author***

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