

File Sharing Application Note

LOCAL NETWORK SERVICES

In addition to its WAN security and routing features, the InterJak provides file and printer sharing services, thereby providing your network with many of the benefits of a full Windows NT server. Because most network users are already familiar with the standard Windows networking model, the InterJak device makes resources available through the standard Windows tools, such as the Network Neighborhood and network printer setup. InterJak also supports many of the standard Microsoft networking features, such as network authentication, resource browsing, file sharing, print sharing and name resolution.

FILE SHARING

You are able to connect a hard disk directly to the InterJak, which will then make the disk available to users on the network automatically. After you have connected a new disk, you are able to use the Web Manager to configure it with security options and to do disk maintenance and checking. Because InterJak supports Windows networking, it is able to make its services available to Windows users through the Windows Network Neighborhood, thereby making it very easy for users to find and use the extra storage space. Network administrators can configure the InterJak to publish several different shares, each with different access privileges. Also, the InterJak supports the concept of *home shares*, which can automatically provide each new user with a private folder. The InterJak device is able to identify and authenticate users either by using the standard Windows authentication server, or by using its own built-in user database.

CONNECTING USB AND IEEE 1394 STORAGE DEVICES

Both USB and IEEE 1394 drives can be connected and disconnected to and from the InterJak at any time. There is not need to shut down the InterJak.

Supported File Systems

Table 1 lists the file systems supported by the InterJak.

File system	Application	Comment
ISO 9660	CD-ROM	Standard CD-ROM file system
FAT 16	DOS compatible volumes	This format is not often used. It is provided for compatibility with some existing volumes
FAT 32 (default)	ZIP, JAZ, DOS/Windows compatible disks	This is the most common format for read/write disks. It is compatible with all newer Windows

Supported Storage Devices

Any type of storage device that uses the file systems listed above, provides a USB or IEEE 1394 port and uses the standard USB or IEEE 1394 storage device driver can be connected to the InterJak.

Generally, we recommend that you use IEEE 1394 drives rather than USB drives because IEEE 1394 provides better performance. For an up-to-date list of devices tested for compatibility with InterJak, please select the support section at <http://www.filanet.com>.

AUTOMATED OPERATION

The InterJak provides plug-and-play functionality for connecting and removing storage volumes.

■ **Automatic storage sharing:** when you connect a new hard disk, the InterJak automatically discovers it and publishes the entire volume as a share on the network that is available to all users. If the disk has been formatted with more than one volume, then each volume will appear as a separate disk.

■ **Automatic check for dismounting:** while a disk is connected, the InterJak continually confirms that it is available. If you disconnect the disk, InterJak will notice the change and will no longer display the disk or any of its partitions as available to the network.

■ **Home directories:** you can choose to allow a disk to provide home directories, which are automatically created for each user the first time they access the disk. The home directory for each user is visible and accessible only to the user for whom it was made. See “Using Home Directories” on page 3 for details.

■ **Portability between InterJak devices:** If you have used the Web Manager to configure one or more shares on a volume, your settings are stored in a special directory on that volume, which allows your settings to be automatically read and recreated on another InterJak if you physically disconnect and move the disk.

NOTE *The first time you connect a disk to an InterJak, the entire disk is available as a single share (called the “root share”). Its name will be derived from the disk label.*

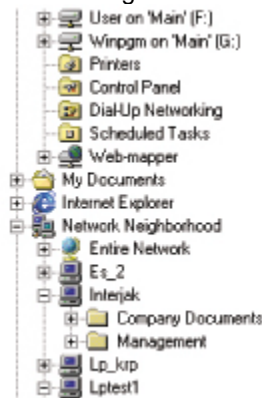
NOTE *If you connect a new disk to an InterJak and then enable home directories on that disk, then the root share will both contain the home directories and still be available on the network. Other users will therefore be able to access all of the home directories via the root share. To prevent this, use the Web Manager to remove the root share or add one or more standard shares.*

To create standard shares or home shares and to set access privileges for them, use the **services:Storage sharing** settings of the InterJak Web Manager.

CLIENT COMPUTER ACTIONS

All of the storage shares connected to an InterJak are made available to authorized users just like shares connected to other types of servers. Windows clients will be able to view all of the storage shares connected to an InterJak (and to which they have been granted access) by using the Windows Network Neighborhood. Here, the InterJak appears as a server with its own icon, below which are listed the available shares.

Figure 1 Windows Network Neighborhood showing an InterJak with connected storage shares.



CREATING SHARES USING WEB MANAGER

The **Services:Storage Sharing** settings of the Web Manager allows you to add, change and remove shares on any volume connected to the InterJak. Initially, when you connect a new volume to the InterJak, the entire volume is published as a single share with no access restrictions. The first time you create a new share, you effectively create a new directory on the volume, which is published on the network as if it were its own volume. At the same time, an additional directory called “.smbconf” will be added at the root level of the volume. This directory will not be visible as a share on the network and is only useful to InterJak devices. The .smbconf directory is used by the InterJak to store configuration information, thereby allowing this information to be maintained if you remove the disk and then connect it to the same or to another InterJak. The directory contains a *share descriptor file* called “shares”. The share descriptor file stores the settings you have made for the shares.

After you have created the first share, each new share will be created as a new directory on the volume and its setting will be stored in the .smbconf directory. The Web Manager enables you to make the following settings for each share:

- Share name, as seen on the network
- Windows “comment” field, which is shown to Windows clients
- Disk partition on which the share is created
- Actual path on the volume
- Browsable in the Windows Network Neighborhood (yes/no)
- Access control (available to all users or restricted to a specific list of users)
- Read/write access (read-only for all, read/write for all, or read for all with a list of specific users with write permission)

Use the **Services:Storage Sharing** page of the InterJak Web Manager to make these settings.

NOTE *The user authentication method and other security settings are maintained on the **Services:Storage Sharing:User Authentication** page of the Web Manager.*

USING HOME DIRECTORIES

Home directories provide each user with a private space on the network to use for backup or extra storage. The first time a user accesses a volume that you have configured for containing home directories, the InterJak automatically creates a new share and configures it to be readable only for that user. If you choose to enable home directories, you must select a volume on which to create them. Only one volume per InterJak can be configured for this purpose. Use the **Services:Storage Sharing:Home Shares** page of the Web Manager to make these settings.

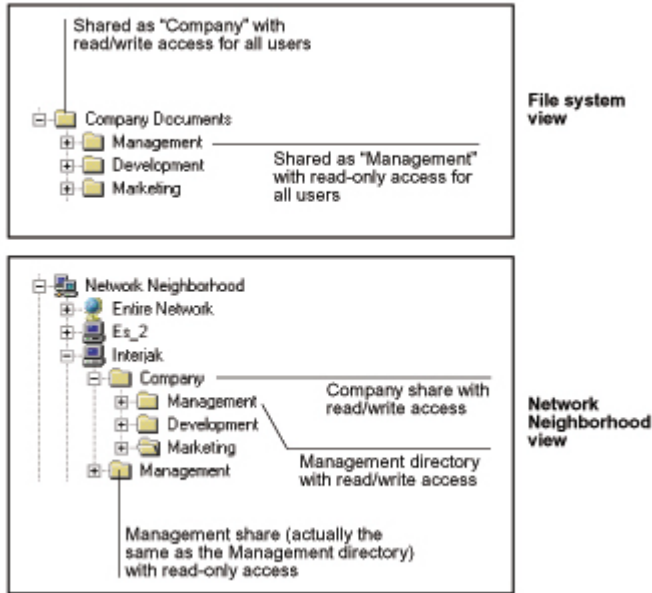
NOTE *If you connect a new disk to an InterJak and then enable home directories on that disk, then the root share will both contain the home directories and still be available on the network. Other users will therefore be able to access all of the home directories via the root share. To prevent this, use the Web Manager to remove the root share or add one or more standard shares.*

READ AND WRITE PROTECT OPTIONS

Each time you create or edit a share, you are able to set both read and write access independently.

When you are setting up access rights to your various shares, you must be aware that certain combinations of settings can deliver unexpected results. For example, if the InterJak publishes several shares drawn from directories that are actually nested inside one another on the disk, then you could get the unexpected result illustrated in Figure 29. Here, the administrator wanted to make the “Management” directory read-only, but it appears with write access when a user accesses the share that points to a directory that is above the Management directory in the actual file system.

Figure 2 In this situation, the “Management” directory is not always write protected as might otherwise be expected.



MOVING STORAGE DEVICES

Using InterJak Storage Devices on Windows Computers

The InterJak uses the same file system as Windows (see “Supported File Systems” on page 1). This means that you can move a disk from the InterJak to a Windows system and be able to view all of its files on your computer. You will be able to view all of the directories that were created by the InterJak, including the `.smbconf` directory, which holds the file sharing information read by the InterJak. (see “Creating Shares Using Web Manager” on page 2).

Provided that you do not remove the `.smbconf` directory or edit its files, then the share definitions will be preserved the next time you connect the disk to an InterJak. Note, however, that Windows does not use this directory; the share status of the disk and its directories is controlled by the Windows operating system while it is connected to a computer running Windows.

Moving Storage Devices between InterJak devices

As mentioned above, a special directory is created on each InterJak-connected hard disk for which you have created shares using the InterJak Web Manager. This directory holds your file share settings. This means that if you move a hard disk from one InterJak to another, the storage share settings will still take effect once the disk is connected to the other InterJak.

Reconnecting Storage Device to the Same InterJak

If you remove a hard disk from an InterJak and then re-attach it later, all of your share settings will be maintained provided that you have not removed or edited the files of the `.smbconf` directory.

USING DISK UTILITIES VIA WEB MANAGER

The `Services:Storage Sharing:Storage Maintenance` page of the InterJak Web Manager provides tools for setting the volume label, initializing, formatting and checking storage devices connected to the InterJak.

