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Novell: How It Handles Desktop Information (11/94)

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TOPIC -----

Does Novell duplicate the function of the Apple Desktop file or the Desktop Manager implementation on AppleShare?

What does the Resource Manager do when the desktop size exceeds the Resource Manager addressability limit?

DISCUSSION -----

The AppleTalk Filing Protocol requires that each server maintain a desktop database containing information associating documents with applications and files with icons. This information helps the Finder know which icons to display for files, and which applications to launch when documents are opened. The Finder uses this database to build the familiar Macintosh graphical user interface.

In addition to a name, every Macintosh file has a four-character type code that identifies the nature of the file, and a four-character Creator code that identifies the application that created the file. For example, a document created by MacWrite has a Type value of WORD and a Creator value of MACA. The desktop database uses these values to find the appropriate icon for files of type WORD. Likewise, the desktop finds the appropriate application used for opening or printing files of this type using the value MACA.

When the Finder on a Macintosh workstation displays the contents of a server folder in a window, it attempts to find the appropriate icon for each file. First, the Finder looks in memory to see if it found the correct icon in a recent search. Then, it looks on the local Macintosh hard disk. If the icon is not found, the Finder requests the icon from the server. If the server volume's desktop database contains the appropriate icon, the server sends the icon to the Macintosh. If the icon is not found locally or in the server volume's desktop database, the Finder displays a generic icon for the file.

Once the Finder has determined that an icon cannot be found for a particular file type, it will not ask the server again until the Finder is restarted. This optimization prevents the Finder from repeatedly making the same request, which would slow the server.

In NetWare for Macintosh 4.0, the desktop database is stored in two files in the DESKTOP.AFP folder at the root of each volume. AFP.NLM creates the folder and database files on each volume that supports the Macintosh name space. These files, ICON.BTV and APPL.BTV, are in a proprietary, highly-optimized format, and are not meant to be used by programs other than AFP.NLM.

Maintaining and Rebuilding the Desktop Database

The Macintosh Finder and AFP.NLM share the responsibility of maintaining the desktop database. The Macintosh Finder incrementally updates the desktop database when it copies new files to the server volume. In version 7 and later, the Finder always ensures that when a document is copied to the server volume, the appropriate icons are also copied, if necessary. The Finder also updates the desktop database whenever it copies an application to the server volume, so that the application can be launched when documents are opened or printed.

NetWare for Macintosh is ultimately responsible for the contents and integrity of the desktop database for each of the volumes it supports. While it is possible to rebuild a server's desktop database using the System 6 Finder (but not MultiFinder), doing so will not enable you to locate the new color icons used in System 7. NetWare for Macintosh can examine all the files on each volume, and can rebuild the desktop database on each of its supported volumes. Because this process is carried out on the server, it is much faster and more efficient than rebuilding the desktop from a Macintosh workstation.

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09 Nov 1994 - Additional information on Novell Desktop file included.

Support Information Services

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