VeRsIoN=2.10 Novell Client 32 Overview Help

See also

Caching Database Files

Database files are often opened in a mode that does not allow caching. Client 32* uses a feature called Opportunistic Locking to cache database files and improve performance of database operations on the client workstation.

If you enable Opportunistic Locking, Client 32 caches a database file if no other users are using the file. If another computer opens the file while your computer has file data cached, caching for the file is turned off.

See also

Caching File Data

To increase a workstation's speed when saving files over the network, Client 32* saves files first to the client's cache before sending the data to the server. This enables you to continue with other tasks while Client 32 saves data to the network in the background. For more information, see Cache Writes in the NWCFG95.HLP help file.

* Novell trademark. ** Third-party trademark. For more information, see Trademarks.

Client 32 Overview

What Is Client 32?
New Features
Installation and Maintenance
Comparing Client 32* with Other NetWare* Clients

* Novell trademark. ** Third-party trademark. For more information, see Trademarks.

Client 32 Performance

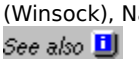
Several architectural advances make Client 32* faster than any other NetWare* Client* available. Client 32 caches frequently used data, such as file and network information, resulting in less traffic on the network and faster response times on the client computer. Also, Client 32 uses a 32-bit architecture in NetWare Loadable Module* (NLM*) format that improves performance over the VLM* client.

* Novell trademark. ** Third-party trademark. For more information, see Trademarks.

Client 32 Protocol Support

Client 32* supports several industry-standard protocols:

Windows** 95** implementations of TCP/IP, Server Messenger Blocks (SMB), Windows Sockets (Winsock), Named Pipes, and NetBIOS.



Client 32 IPX* protocol stack supports the Windows 95 WSOCK32.DLL.

Simple Network Management Protocol (SNMP).

NetWare* Client* 32 for Windows 95 can coexist with the Microsoft** Client for Microsoft Networks and its File and printer sharing for Microsoft Networks service (SMB server).

* Novell trademark. ** Third-party trademark. For more information, see Trademarks.

Client 32 Stability

Client 32* is the most stable client requester for NetWare* networks on the market. The requester runs in protected mode, so other programs running on a computer cannot interfere with memory reserved for the requester. If network services fail, the client can try to reconnect with the service and rebuild the computer's network environment while the computer is running.

* Novell trademark. ** Third-party trademark. For more information, see Trademarks.

Client 32 Support for Dial-Up Networking

Client 32* supports Windows** 95** Dial-Up Networking. If your computer has a modem, ISDN network adapter, or an X.25 network connection, you can use the Dial-Up Networking program that comes with Windows 95. For more information about Dial-Up Networking, see the Microsoft** Windows 95 Resource Kit.

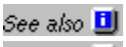
Client 32 uses the IPX* 32-bit Protocol for Novell* NetWare Client 32 for Dial-Up Networking.

When you make a dial-up connection through your modem, your network connections through other network adapters are disconnected.

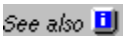
Comparing Client 32 with Other NetWare Clients

Client 32* has an advanced architecture that departs from that used by the VLM* software. The new architecture enables Windows** 3.1*x* and DOS clients to run the client software in protected mode. Client 32 also requires less than 4 KB of conventional memory, while enabling larger network cache sizes.

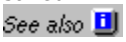
NetWare* Client* 32 for Windows 95** also differs from the VLM software and NetWare Client 32 for DOS and Windows in the following ways:



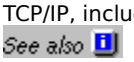
Client 32 is not loaded using the STARTNET.BAT file. Windows 95 loads Client 32 at startup.



Usually, there is no NET.CFG file. Configuration is done using property sheets, and settings are saved in the registry.



Client 32 is compatible with Microsoft** implementations of Winsock, Named Pipes, NetBIOS, and TCP/IP, included with Windows 95.



There is no Target Service Agent for Storage Management Serves* (SMS*).

Client 32 uses the Windows 95 interface and extends the functionality of Network Neighborhood, Explorer, and Control Panel. This includes support for network printers, network passwords, user profiles, and system policies.

See also

Ensuring the Data Integrity of the Cache

Client 32* keeps data in the client's memory untill the server responds that it has saved the data. If a server becomes unavailable while Client 32 is saving data to the server, Client 32 sends the data to the server again as soon as a connection becomes available. The reliability of this safeguard depends on the setting of the Auto Reconnect Level parameter.

See also

Improved Configuration

Client 32* automatically adjusts key parameters, such as the number of open sockets and the number of open files, as necessary. For these parameters, there are no configuration hassles.

You can set parameters for Client 32 using the **Network** control panel. Many changes you make to Client 32 parameters are immediate--in which case, you don't have to reboot the computer to make the changes effective.

Improved Memory Usage and Caching

Client 32* requires only 5 KB of conventional memory; remaining memory is allocated to extended memory. Depending on how much memory a computer has available, Client 32 can use up to 75% of free memory as cache memory.

By default, the amount of memory that is allocated for caching is 25% of the memory that is free when the CLIENT32.NLM file loads, which is after Windows** 95** is loaded. You can set the cache size by using the Max Cache Size parameter or you can turn caching off by setting the value of the File Cache Level parameter to 0.

Note

In this release, the memory used by the cache is statically allocated and not shared with the system. Future releases will support shared system memory, which means that Client 32 will return memory to the system when required.

See also

Installation and Maintenance

If you are a network supervisor, you can distribute Client 32* to the computers on your network using the Automatic Client Upgrade (ACU) or NetWare Application Manager. You can also upgrade Windows** 3.1*x* computers to Windows 95** and Client 32 in one installation process called the MSBATCH Setup.

Client 32 is built for easy maintenance. You can update the software easily on your own computer and on computers across the network as users log in using Automatic Client Upgrade. Client 32 also stores configuration information in the workstation's registry, so you can manage Client 32 parameters using the System Policy Editor.

* Novell trademark. ** Third-party trademark. For more information, see Trademarks.

See also

LAN Driver Compatibility

Client 32* supports 32-bit and 16-bit, ODI and NDIS LAN drivers. You should use a 32-bit LAN driver if one is available for your network adapter.

ODI LAN drivers offer the advantages of protocol independence, stability, and higher performance over comparable NDIS drivers. Because Client 32 modules use the NetWare* Loadable Module* (NLM*) format, you can use the same ODI LAN drivers that run on NetWare* 4* servers. Also, most third-party vendors supply both 16- and 32-bit ODI drivers with their network adapters. The ODI specification also allows support for FDDI network adapters. Arcnet and other topologies supported by 16-bit NetWare clients are supported in Client 32 by using a 16-bit ODI LAN driver with PC32MLID.

NetWare Client* 32* for Windows** 95** supports the following LAN drivers:

See also 32-bit ODI LAN drivers that comply with the specifications in the *ODI* Developer's Guide for NetWare Server Driver Hardware Specific Modules Driver Specification Version 3.3* or *NetWare HSMs (C language) Version 1.10*. Some certified drivers for NetWare 4.1 are compatible with Client 32.

See also 16-bit ODI LAN drivers.

See also 32-bit and 16-bit Network Device Interface Specification** (NDIS**) adapter drivers.

Novell has tested only the drivers included in this release.

* Novell trademark. ** Third-party trademark. For more information, see Trademarks.

NetWare Application Manager

For more information about the NetWare Application Manager, see the APPSNAP.HLP file.

New Features

- Windows** Login
- Integration with Explorer and Network Neighborhood
- Windows 95** NDS* Support
- Improved Configuration
- Improved Performance
- Improved Caching
- Support for Dial-Up Networking
- 32-bit LAN Driver Support
- Multiple Protocol Support
- Using World Wide Web Browsers

* Novell trademark. ** Third-party trademark. For more information, see Trademarks.

See also

Overview of Fine Tuning

You can optimize Client 32* for your networking environment by adjusting the parameters to give you the highest performance where you need it the most. The default values for Client 32 parameters are set for excellent speed without excessive memory usage. You can adjust Client 32 to use less memory or to reduce the risk of data loss at the cost of speed.

The following table illustrates the effects of optimizing Client 32 for speed, data integrity, and memory:

Optimizing for	Reduces
Speed	Memory, Data Integrity
Data Integrity	Speed
Memory	Speed

Running Out of Server Disk Space

Client 32* saves files to the workstation's memory before writing them to the server. This enables applications to continue working while Client 32 saves data to the network in the background.

If you save a file to a network folder that does not have a enough space to store the file, Client 32 reports that the network folder is out of disk space, even though the application you saved the file from reported that it saved the file successfully.

If this happens, you should save the file to another folder or save the file to the same folder again after creating more space in the folder.

The following describes a scenario that illustrates this problem:

1. An application writes data to a network drive.
2. Client 32 returns a success code to the application. The application continues with other processes.
3. Client 32 begins transferring the data from the client computer's cache memory to the server.
4. During the transfer, the server returns an OUT_OF_DISK_SPACE error code to Client 32.
5. Client 32 reports the following status message on the client computer:

   "Out of disk space writing file <filename> to server <server name>."

   "Try deleting some files before continuing."

   "Warning: You will lose data if you hit 'Cancel'."

If you choose **Retry** after making room on the folder, Client 32 writes the file to the folder with no loss of data. If you choose **Cancel**, Client 32 ends the data transfer process and the file is not saved on the server. The user should save the file to another folder to avoid losing the file.

If you want Client 32 to save data directly to a network drive, set the Cache Writes parameter to "off."

Trademarks

Novell Trademarks

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Network Driver Interface Specification and NDIS are trademarks of PC-Plus Communications LP.

See also

Using 16-bit ODI LAN Drivers

Client 32 supports 16-bit ODI LAN drivers that comply with the *Novell ODI Specification: 16-bit DOS Client HSMs* .

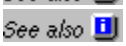
If you use a 16-bit ODI driver with Client 32, Setup loads a software shim to convert the 16-bit APIs used by 16-bit ODI drivers to 32-bit APIs. The shim provided with Client 32 for this conversion is PC32MLID.LAN.

Using World Wide Web Browsers

World Wide Web authors are familiar with the use of Uniform Resource Locators (URLs) to link HyperText Markup Language (HTML) documents on the Internet. By using a different form of the URL and Client 32*, you can use NetScape** Navigator** version 2.0 or later to view documents on your enterprise NetWare* servers. This technology might be an advantage for you because you can do the following:

Maintain document links using NetWare Directory Services* (NDS*) aliases

Use authenticated connections to restrict access to your documents



Browse documents on NetWare servers

Administer your Web domain using NDS

Take advantage of NetWare performance

Serve documents using your enterprise IPX* network

Avoid the extra hassles of maintaining a HyperText Transport Protocol (HTTP) server

Uniform Resource Locators

You get these advantages by replacing the "http:" URL (such as http://www.novell.com) with a "file:" URL. The URL can use either NDS or bindery names. For example, a URL with an NDS name might be

file:////MyTree/MyOrg/MyServerVol/MyDir/Home.html

The equivalent URL using a bindery name might be

file:////MyServer/MyVol/MyDir/Home.html

Using an NDS Alias in a URL

The URL can also include an NDS alias. For example, if there is an NDS directory alias called MyHome in container MyOrg pointing to MyDir, the equivalent URL using the MyHome alias would be

file:////MyTree/MyOrg/MyHome/Home.html

This not only allows hiding the true path name, but also allows moving an entire subtree to another server simply by changing the directory alias.

NetWare Security for Browsing Documents

Since you are using NetWare, all of the regular file server permissions are still in effect. This means that people can view your documents only if they have rights to view them. This is a very powerful feature because now you can choose who views things and who doesn't.

Browsing Various Document Types

By using NetScape Navigator and the "file:" URL, you can view not only HTML documents but also other types of documents. NetScape Navigator allows you to set up programs to run based on file extension. For example, you can configure NetScape Navigator to run WordPerfect* to view documents with a .WPD extension. Other examples include running a video player for .AVI files and a sound player for .WAV files.

The Limitations

Although this is exciting technology, be aware that the "file:" URL can't do everything the "http:" URL does. HTTP includes a programmatic interface called CGI. This enables a URL to cause special programs to execute to perform various services by including odd character strings such as "?122,64.". The NetWare "file:" URL can handle only static documents and cannot directly implement the CGI interface. You can still embed CGI URLs in your documents, but they require the services of an HTTP server.

What Is Client 32?

NetWare* Client* 32* for Windows** 95** enables computers running Windows 95 to access Novell* Network resources. Client 32 is the fastest and most reliable client software yet. Client 32 is also easy to install and maintain and offers seamless integration between Novell network services and Windows 95.

* Novell trademark. ** Third-party trademark. For more information, see Trademarks.

See also

Windows 95 Integration

Client 32* fits into the Windows** 95** environment, enhancing the functionality of Windows 95 utilities such as Explorer and Network Neighborhood. This makes managing Client 32 a familiar process, and enhances the manageability of Windows 95 computers. Client 32 also supports long filenames.

* Novell trademark. ** Third-party trademark. For more information, see Trademarks.

Windows 95 NDS support

Client 32* gives Windows** 95** users the most comprehensive access to NetWare* Directory Services* architecture. Using Client 32, you can browse for network services across multiple trees and use network services such as printing from Network Neighborhood and Explorer.

Client 32 also enables you to run Novell's administrator utilities such as NetWare Administrator (NWADMIN) and NetWare Application Manager on Windows 95 computers. You can use these utilities to manage user accounts, NDS* objects, and user software.

* Novell trademark. ** Third-party trademark. For more information, see Trademarks.

See also

Windows Login

It’s never been easier to log in to a NetWare* network. You can log in to a network and run login scripts from a Windows** environment. If a network supervisor enables the advanced login, the requester also enables users to determine the login script and startup options they use.