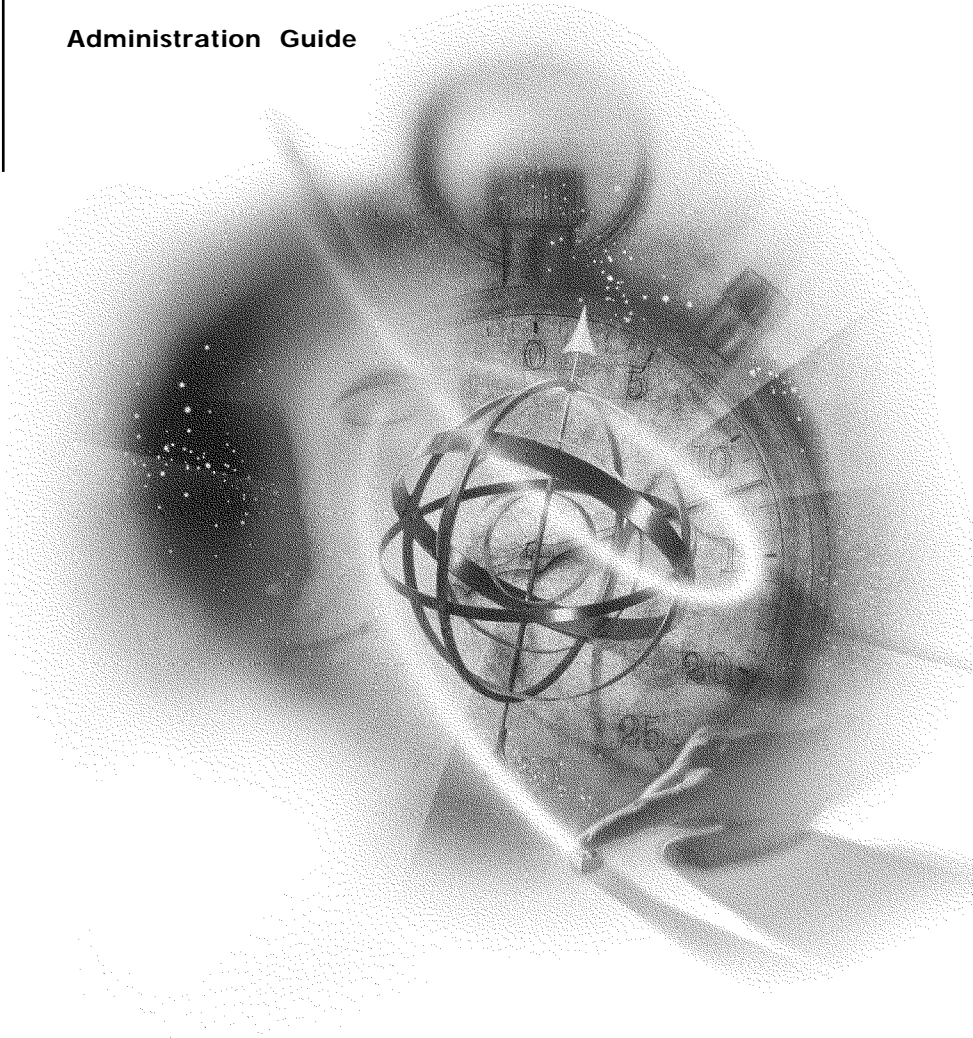**NetWare Management Portal**

**Administration Guide**

NetWare® 5.1

NETWORKING SOFTWARE

# Novell®

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# Contents

# **1** NetWare Management Portal

## Overview

The NetWare® Management Portal™ lets you manage NetWare servers through a Web browser on a client workstation. This new tool allows you to manage your server from any location on your network where a Web browser is available.

The NetWare Management Portal supports typical as well as new server management features, which allow you to accomplish the following tasks:

- Mounting and dismounting volumes

- Accessing files on volumes and DOS partitions

- Managing server connections

- Configuring SET parameters

- Monitoring system resources

- Viewing server console screens

- Downing, restarting, or resetting a server

- Browsing the NDS tree and viewing partitions

In addition to typical server management functions, Portal provides new tools for you to manage a server's health and resources by doing the following tasks:

- Checking the general server health status

- Viewing the status of all loaded modules, including memory usages for each NLM

- ◆ Viewing information about all hardware adapters, hardware resources, and processor data

- ◆ Monitoring the health of many server processes and resources

# Using the NetWare Management Portal

## System Requirements

The NetWare Management Portal requires NetWare 5.1and will not load on previous NetWare versions. PORTAL.NLM is automatically loaded on the server and requires no setup or configuration.

Portal is accessed through a Web browser. The minimum browser requirements are Netscape* 4.5 or Internet Explorer 5.

## Accessing the NetWare Management Portal

To access Portal:

1 Open your Web browser.

2 In the address (URL) field, enter

   **http://***server's TCP/IP address*

   For example,

   **http://***137.65.123.11*

   If the NetWare Enterprise Web Server is installed on your server, you will have to add the port number 8008 at the end of the IP address. For example, if your Portal server's IP address is 137.65.123.11, you would enter 137.65.123.11:8008 in the Address field of your browser.

3 Click Login.

   Log in as Admin or an admin equivalent to have access to all the features.

# Portal Features

This section provides a brief description of NetWare Management Portal features.

Online help is provided in each section of the Portal to provide detailed information about each feature and function.

## Main Page

**Server Information.** The header section of the main page contains the following information:

- The server's name
- The NetWare version
- The version and date of SERVER.EXE
- The version and date of PORTAL.NLM
- The server's total up time

**Server Health Status.** A traffic light health indicator shows the status of the server:

- A green indicates a good status.
- A yellow indicates a suspect status.
- A red indicates a bad status.

The indicator is also a link to the Server Health page. See for more information.

**Login/Logout.** The Login button is available if you are not logged in. A Logout button, which closes your current browser window, is displayed if you are logged in. Unless all browser windows are closed, your Portal session remains open, and you will not need to log in again.

You can tell what your login status is on the front page. The Login button indicates that you're not currently logged in; otherwise you'll see "Greetings *Username*" just below the Server Health traffic light.

**Main Page Configuration.** You can access the configuration page by clicking the NetWare Management Portal text in the header area. The configuration page allows you to adjust port numbers, start and stop the HTTP log file, and toggle settings for viewing hidden SET parameters and hidden console commands. You can also unload and reload the PORTAL.NLM and setup IP filtering to control access to Portal.

**Support Connection Link.** The Novell® logo in the upper-right corner is a link to the Novell NetWare Support Connection Web page. This provides a direct link to the Novell Web site for current server patch kits or updates.

**Customizing the Main Page.** You can add text, graphics, and custom links to the Portal front page by creating an HTML file named PRTLANNC.HTM and placing it in the Portal server's SYS:\LOGIN directory. Any information in this file will appear at the bottom of the main page.

Since this file will be included in the HTML code that generates the front page, do *not* include the <body> and </body> tags.

**Home Button.** Every page has a Home button which links back to the main page.

## Volume Management

From the Volume Management tab, you are provided a list of the server's volumes and as well as access to the server's DOS partitions. The attributes and mount status of volumes are also provided. From this page you can view and manage the server's file system.

**NSS Volumes.** Only limited functionality is available under Volume Management when working with NSS volumes. Basic file access is available, but the volume attributes cannot be changed via Portal for NSS volumes.

**File Access Rights.** Your access to directories and files on the NetWare partitions, as well as your ability to copy files to and from any given directory, are governed by your NDS login. Admin rights are required for access to the server's DOS partition.

When browsing through files and directories on the server's DOS partition (under Local Server Partitions on the Volume Management tab), be aware that setting the Shareable attribute on a DOS file will not have any effect unless SHARE is loaded in DOS.

**Browsing the File System.** You can view the file system on volumes or DOS partitions, browse directories and files, and view and change attributes of files, directories, and volumes. To browse a volume or partition, click the desired drive or volume. Click the directory names to move down the tree. Click the double dots to move up the tree.

**File and Directory Information.** Clicking the Info icon for a directory or file provides specific file and directory information such as creation date, rights, and file space use. This screen also allows you to delete or rename a directory or file. For directories, you can also create a new subdirectory (on NetWare volumes only).

**View Individual Files.** If your browser is set up to recognize a certain file extension, for example.TXT, you can click a file of that type and view it directly in Portal. Otherwise, you can download any file to your local machine by clicking the filename. (This also applies to the files on the server's DOS partition.)

**File Upload.** If you have rights to write to the current directory that you're viewing via Portal, there is an Upload button that will allow you to copy a file from any other mapped drive to that directory. Portal allows the uploading of only one file at a time.

**Mount/Dismount.** With admin rights, you can mount and dismount volumes by clicking the Mounted status column for a given volume. You'll be asked to confirm your choice before the volume is actually dismounted.

If you choose to dismount the SYS volume, the icons used by Portal (which reside in SYS:\LOGIN) may no longer display correctly. When you remount the SYS volume, and re-load the page, the icons will re-display.

## Server Management

**Connection Management.** From this screen you can do the following:

- ◆ View current connections
- ◆ Clear specific connections
- ◆ Clear all not logged in connections
- ◆ Broadcast messages to all users

For a specific connection you can view the login time, connection number, network address, login status, files in use, etc. and send a message to that specific connection.

Connection information via the Portal differs slightly from Monitor. Portal's Connection Information screen includes all information about Connection 0. Another difference is that Portal does not use the asterisk character to mark connections that don't count against the server's connection limit.

**Memory Management.** This screen lets you view server memory statistics as well as a pie chart showing current memory usage. There are also links to view statistics on Swap File, individual NLM memory usage, and Virtual Memory information.

**SET Parameters.** From this screen you can view and change settings for any SET parameter. You can view the current value, minimum and maximum values where appropriate, help descriptions, and where applicable, the name of the NLM that owns the SET parameter. The settings can also be saved to a text file on the SYS: volume for reference.

**System Resources.** This screen lists all the Resource Tags in use at any given time. You can view details on each resource by clicking it. Specific information is provided in the online Help.

**Profiling and Debug Information.** This screen provides a list of threads and the percent of CPU time each is using. Click the thread name to view specific thread information. Click the percent value to see profile details. You can view Profile CPU execution details for an individual NLM by clicking the NLM name.

Under Additional Debug Operations you can profile calls to a specific procedure, disassemble code, dump memory, and dump stack information at that location while the server is still running.

**System Statistics.** From this screen you can view the following statistics:

- Network management information
- Kernel statistic information
- LSL statistical information
- Media manager statistical information

**Screens.** This page lets you view all current server console screens. The System Console screen allows for simple command-line input such as typing **version**, or loading/unloading a module. The command line input supports up to 32 characters.

You can control the refresh rate of this display by choosing a page refresh rate at the top of the window. Refresh is suspended when you click Command Line Input.

All other server screens are view-only, and do not allow user input.

**Down Server Options.** Allows the Admin user to down, restart, or reset (warm boot) the server. You will be asked to confirm your choice before the actions is taken.

**IMPORTANT:** The Reset button does a warm boot on the server machine, so if your AUTOEXEC.BAT does not include the command to load the server, you will lose access to the server.

When the browser loses communication with the Portal server, the front page traffic light will go dark. When communication is re-established with the server, the traffic light will again display the server's status.

## Application Management

**Module List.** This screen provides a list all NLMs currently loaded on the server. You can sort the list by module name, code/data size, or memory usage by clicking the column heading. Click the memory value for an individual NLM to view detailed memory statistics for that module.

Click a module name for detailed info (flags, resources, memory use details, module dependency list, and so on) as well as an option to unload the NLM if there are no module dependencies.

There is also an entry field at the top of this page to load an NLM on the server.

**Address Space/Memory Protection.** This screen provides information about modules running in protected address spaces on the server. Click an address space name to view a listing of all NLMs loaded there.

You can also load an individual module or execute an NCF to load several modules into the same protected address space.

This screen also displays the current memory protection SET parameter settings. You can change the settings by clicking the link to the Memory Protection SET parameter page.

**Registry.** This page allows you to view the entire NetWare Registry tree structure. This view is read only.

**Winsock 2.0 Management.** This screen shows detailed information on Winsock Sockets and Applications, and Global API counter information. You can close an individual socket by clicking the button at the bottom of the socket detail page.

## NDS Management

Tree Walker allows you to view the current NDS tree. You can get details on and delete individual objects.

**WARNING:** Use the delete function with caution since the Admin user can delete any object including the Admin object itself.

The NDS Partitions page provides information about NDS partitions on the server.

## Remote Server Access

The Remote Server Access tab lets you access other servers that have Portal loaded on them.

You can also access the file system of non-Portal servers in your current tree. Clicking Netware Servers will load an additional module called NWRSA (NetWare Remote Server Access) and then list other non-Portal servers reported by SLP in the current server's tree (5.*x* and 4.*x* servers only). No health monitoring or other administrative options are available on these servers.

When the list of NetWare servers is first displayed, it may include servers outside the current tree, as reported by SLP. The question mark (?) icon next to the server name indicates that Portal is checking its availability. The question mark icon changes to a server icon if it is in the current tree. The question mark icon will be removed if the server is not in the current tree.

The filtering of the server list may take several minutes if the list is long. You can re-load the page to refresh the list.

## Hardware Management

**Hardware Adapters.** This page lists all storage and network adapters on the server. Click the individual adapter name for detailed information on each (device name, type, capacity, partition info, and so on). Links to LAN and disk performance, and statistical data are also available.

**Processor Information.** From this screen you can view detailed information and the status of all processors available on the server. If more than one processor is present, you can stop and start processors individually (except for P0).

**Hardware Resources.** This screen provides detailed information on interrupts, slots, ports, DMA (if applicable), and shared memory.

**PCI Device Information.** The screen provides details on each PCI device listed by HIN (hardware instance number) and gives links to additional details on the Status register and Command register for each.

## Health Monitors

This page is accessed by clicking either the Health Monitors tab or the traffic signal health indicator. This page provides the health status (green, yellow, or red) for all known components of the system, as well as current, peak, and maximum values. The peak value is the highest number that has been reached since the PORTAL.NLM was last loaded.

If any item in the list changes to yellow or red, the traffic light on the main page will change to reflect the problem.

The Server Health status, reported by the traffic light, is updated every five seconds, but the graphic will only refresh if the status has changed. The Server Up Time (days:hours:minutes:seconds) does not tick, but it will be updated if you reload the page.

Click the question mark (?) icon for component-specific help for each line item on the Server Health page. This info outlines the specific health criteria (thresholds) for green/yellow/red in that category. It also provides suggestions in some cases for what might be going wrong in that category if a yellow or red indicator is displayed.

The following items are tracked on the Server Health page:

- DS thread usage
- Work to do response time
- Allocated server processes
- Available server processes
- Abend/debug information (if the server has abended and recovered automatically)
- CPU utilization (for each processor, if there is more than one)
- Connection usage
- Available memory
- Virtual memory performance
- Cache performance
- DS status (loaded or open)
- Packet receive buffers
- Available ECBs
- LAN traffic
- Available disk space
- Available directory entries
- Disk throughput

**Multi-Server Health.** The Multiple Server Monitor option in Portal allows you to monitor the health of any or all of the Portal servers on your network. Follow the link under Health Monitors to access a list of all Portal servers visible to the current server. Use the check boxes to indicate which servers you'd like to monitor. When you click the Build Server Monitoring page, you'll see a one-line display for each server, with a traffic light indicator (green/yellow/red) and the server name.

From this page, you can click the server name to go to that server's front page (the same as from the Remote Server Access / Portal Servers page), or you can click the traffic light icon to jump directly to the target server's Health Monitoring page.

You can build a customized list of Portal servers to monitor and update the page at an interval that you define. If any of the servers in your list turn yellow or red, you'll see it when the page refreshes.

The format of the Multi-Server Health Monitoring page can be controlled to some extent by specifying the number of columns to use (the default is 3), the time interval (in seconds) between health updates (the default is 10), and the length of the server name to display. The default is to display the full server name, but if you are monitoring many servers or if you've specified many columns, you may want to display only the first few characters of a server's name, for example.

If one of the traffic light icons turns black on the Multi-Server Health Monitoring Page, the current Portal server has lost communication with that particular server (if it is being re-booted, for example). If the server later re-establishes communication, the traffic light will be updated on the next page refresh.

Depending on the memory use on your workstation and the Web browser you are using, the Multi-Server Health Monitoring page may yield unpredictable results if more than 40 servers are being monitored simultaneously. In some cases, you may have to shut down the browser if it stops responding in this situation.

# Security

## SSL

By default, NetWare Management Portal is installed with SSL enabled. SSL can be disabled for Portal by commenting out the following lines in the server's AUTOEXEC.NCF:

load nile.nlm
load httpstk.nlm /SSL /keyfile:"SSL Certificate IP"
load nicisdi.xlm s
load sasdfm.xlm
load sas.nlm
load pki.nlm

**IMPORTANT:** Without SSL on your Portal server, the information passed between the browser and the server is not secure. For this reason, you should probably not disable SSL on a production server.

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