

## Choosing a Network Adapter Card Driver

If you have been using the Microsoft client for NetWare before installing the Novell client, you have been using an NDIS driver for your network adapter card. You can continue to use this NDIS driver with the Novell client, or you can install a Novell ODI driver.

Consider these factors before changing your driver:

- ◆ There are a limited number of ODI drivers available for this release. Check to see if an ODI driver is available for your adapter card before changing drivers.
- ◆ Your workstation will have better NetWare performance if you use an ODI driver. ODI drivers are designed to maximize the performance of NetWare clients. If you are concerned about NetWare performance on the workstation, we recommend you use an ODI driver.
- ◆ The NetWare client will work automatically with an installed NDIS driver. You do not need to install another driver or change your configuration.

## Compatible Third-party Software

This version of the Novell NetWare Client for Windows NT supports

- ◆ 32-bit applications that are supported by Windows NT
- ◆ 16-bit Microsoft Windows applications that use the 16-bit NWCALLS library set

## Configurable Parameters

You can control various components of the NetWare Client for Windows NT through the "Network Settings" dialog. (Access the "Network Settings" dialog by choosing "Control Panel" from the "Main" group, then select "Network.")

The documentation in this file describes only how to access each dialog so you can change a particular parameter. Select "Help" in each dialog for information on the individual settings, such as minimum values, maximum values, and the effect of the parameter.

### **To configure a parameter of the NetWare client**

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Control broadcast messages

IPX/SPX configuration

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Token ring settings, node address override, slot number

## Configuring NetWare/IP Support

### **To configure a parameter of the NetWare client**

1. Log in to the Windows NT workstation as an NT user who is a member of the "Administrators" group.
2. From the "Main" group, select "Control Panel."
3. From the "Control Panel," select "Network."
4. Select the "Novell NetWare/IP Support" option.
5. From the "Network Settings" dialog, select "Configure."
6. Use the available settings to configure the following:
  - ◆ NetWare/IP Domain
  - ◆ Preferred DSS
  - ◆ Nearest NetWare/IP Server
  - ◆ NSQ Broadcasts
  - ◆ Auto Retries
  - ◆ Retry Time

Select "Help" for more information on these settings.

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## Control Broadcast Messages

You can select which broadcast messages you want to receive at the workstation.

You can receive

- ◆ All messages
- ◆ Only messages sent from the server
- ◆ No messages

### **To change the type of broadcast messages received**

1. From the "Control Panel," select the "NetWare" icon.
2. From the "Broadcast Messages" box, select "Receive All," "Receive Servers Only," or "Receive None."  
Select "Help" for information on this setting.
3. Select "Close."

## IPX/SPX Configuration

Adjusting these parameters can affect the performance of the workstation.

You can specify

- ◆ The number of SPX connections
- ◆ The number of SPX system buffers
- ◆ The number of times to resend SPX packets
- ◆ The delay time between retries
- ◆ The abort timeout
- ◆ The listen timeout
- ◆ The verify timeout

### **To change the IPX/SPX configuration**

1. From the "Control Panel," select the "Network" icon.
2. From the "Installed Network Software" list, select "Novell NetWare IPX/SPX Transport."
3. Select "Configure."
4. Change the settings as needed.  
Select "Help" for more information or to see default values and ranges for each setting.
5. Select "OK."

## NetWare/IP Support

NetWare/IP Support allows your Windows NT Client to access NetWare services over a TCP/IP network.

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## Installing Novell's NetWare/IP Support

### To install Novell's NetWare/IP Support

1. Log in to the Windows NT workstation as an NT user who is a member of the "Administrators" group.
2. From the "Main" group, select "Control Panel."
3. From the "Control Panel," select "Network."
4. From the "Network Settings" dialog, select "Add Software."
5. Scroll to "Novell NetWare/IP Support." Select this item and then select "Continue."

Novell NetWare/IP Support is now installed.

## Installing a Network Adapter Card Driver

If you have an ODI driver that doesn't have a corresponding NDIS driver, you must proceed with installing a network adapter card driver.

For more information, see "[Choosing a network adapter card driver.](#)"

Complete this procedure after [installing the NetWare client software](#) on the workstation.

### To install a network adapter card driver

1. From the "Main" group, select "Control Panel."
2. From the "Control Panel," select "Network."
3. From the "Network Settings" dialog, select "Add Adapter."
4. Select the type of network adapter card that is installed in the workstation and select "Continue." To install an ODI driver, select a driver that begins with ODI. If the driver you want is not available, select "Cancel."

If you selected a driver, you are prompted to insert a disk in drive A:.

5. Insert "NetWare Client for Windows NT" disk 2 into drive A: and select "Continue."
6. Select the settings for the network adapter card in the dialog and select "OK."  
Select "Help" for more information on these settings.
7. Select the frame type used on your network, then select "OK." If you don't know the frame type, select "AUTODETECT."  
Select "Help" for more information on this setting.
8. From the "Network Settings" dialog, select "OK."

You must restart the workstation for the NetWare client to become active.

**Note:** After installation, NetWare client components appear in the "Installed Network Software" and "Installed Adapter Cards" lists in the "Network Settings" dialog where they can be [configured](#).

## Installing the NetWare Client Software

Before installing the NetWare Client for Windows NT, be sure that any existing NetWare client software provided by Microsoft has been removed from the Windows NT workstation. (remove existing NetWare client software)

### To install the client software on the workstation

1. Log in to the Windows NT workstation as an NT user who is a member of the "Administrators" group.
2. From the "Main" group, select "Control Panel."
3. From the "Control Panel," select "Network."
4. From the "Network Settings" dialog, select "Add Software."
5. Scroll to the bottom of the "Network Software:" list box and select "<Other> Requires disk from manufacturer;" then select "Continue."  
You are prompted to insert a disk in drive A:.
6. Insert the NetWare Client for Windows NT "Install" disk into drive A: and select "OK."
7. From the "Select OEM Option" dialog, select "Novell NetWare Client Services" and select "OK."
8. At this point, the installation program will detect your existing network adapter from Microsoft's NDIS information.
9. If a driver is detected, you will be asked if you want to change to ODI.

If you select "No," the installation will bind to the NDIS driver and no additional setup will be necessary.

If you select "Yes," the ODI driver will be selected and a list of the settings will be shown. These settings have already been defined, so no changes are necessary.

If you have installed an NDIS driver that has no corresponding ODI driver, then the installation program will automatically bind to your NDIS driver and no further changes will be necessary.

The client software and driver are installed on the workstation.

If you have an ODI driver that doesn't have a corresponding NDIS driver, you must install a driver for the network adapter card.

## Mapping NetWare Drives

You can map (assign) a drive letter to a specific directory path on the network.

### To create a network drive mapping in File Manager

1. From the "Disk" menu, select "Connect Network Drive," or select the "Connect Drive" button on the toolbar.
2. "File Manager" will display its first available drive letter in the "Drive" box. You can accept this drive letter, or scroll the "Drive" box to select another one.
3. Select the network path from the "Shared Directories" window.  
**Note:** In the "Shared Directories" box, the NetWare Services path is displayed. Select your NetWare 4 server from the NetWare Directory Services path or the NetWare Servers path. NetWare 3 servers can only be selected in the NetWare Servers path.
4. By default, you are connected under the username you used to login to Windows NT. You can map a network drive under a different username by typing it in the "Connect As" box.
5. If you do not want your drive mapping to be permanent, clear the "Reconnect At Logon" box.  
You can also map NetWare drives by using Microsoft's Net Use command. For more information, see your Microsoft Windows NT documentation.

### To disconnect your network drive mapping

1. From "File Manager," select "Disconnect Network Drive" from the "Disk" menu, or select the "Disconnect Drive" button on the toolbar.
2. Select one or more network drives and select the "OK" button.  
Select "Help" under "File Manager" for more information on disconnecting from a network drive.

## NWCALLS Library

Windows 16-bit DLLs for Windows NT are different than traditional Windows 16-bit DLLs

The following 16-bit NetWare Windows libraries are supported in Windows NT:

<u>Name</u>	<u>Size</u>	<u>Date</u>
NWCALLS.DLL	106041	02-10-95
NWIPXSPX.DLL	46464	02-10-95
NWCLIENT.DLL	50584	02-10-95
NWNET.DLL	169375	02-10-95

The above libraries have the same names as the traditional 16-bit NetWare Windows libraries, but provide functionality unique to Windows NT. If you have 16-bit windows applications that are not running correctly in Windows NT, verify that the above 16-bit windows libraries are being used. Some recommendations for running NetWare-aware 16-bit applications in Windows NT follow:

1. Some applications install to the network with one or more of the traditional 16-bit Windows libraries(DLLs) being installed with the application. In this scenario, it is recommended that you delete the traditional DLLs that have the same name as the above DLLs from the application directory and have the DLLs only accessible from the client. Using this option allows you to run the same 16-bit Windows applications from the NetWare server for both Windows 3.x and Windows NT workstations.
2. If your installation has the traditional 16-bit windows DLLs copied only to the application directory on the server and are not accessible at the client, you can duplicate your application structure under an NT directory on the server and remove ALL the NetWare traditional 16-bit Windows DLLs and replace them with the above 16-bit Windows NT specific DLLs.

If a 16-bit Windows application still does not function after completing the above steps, it is possible that the application requires a NetWare 16-bit DLL that is not supported in Windows NT.

## Prerequisites

NetWare/IP Support Prerequisites:

Before you can use NetWare/IP Support, you must have

- ◆ Microsoft's TCP/IP Services installed on your Windows NT workstation
- ◆ Access to a NetWare/IP Server on the network

## Services Provided

NetWare/IP provides the following support services:

- ◆ The Domain SAP/RIP Service (DSS) maintains two types of information required by NetWare servers and clients:
  - ◆ Service Advertising Protocol (SAP) information about the available NetWare services.
  - ◆ Routing Information Protocol (RIP) information about routes between NetWare servers.Once configured, the DSS automatically maintains this information and makes it available to all NetWare/IP nodes. NetWare/IP servers and clients use DSS servers to obtain service and routing information.
- ◆ The Domain Name System (DNS) is a distributed database system used to locate computers in TCP/IP internetworks. NetWare/IP servers and clients use DNS to locate the DSS server.

## Name Context, Preferred Tree, Preferred Server

You can control

- ◆ The preferred tree and name context for a NetWare Directory Services connection
- ◆ The preferred server for a bindery services connection

These settings apply to the workstation, not to a specific user. Users who log in using this workstation make their network connections using this name context, preferred tree, or preferred server.

### **To change or specify a name context, preferred tree, or preferred server**

1. From the "Control Panel," select the "Network" icon.
2. Select "Novell NetWare Client Services" in the "Installed Network Software" list, then select "Configure."
3. Type the "Name Context" or select a "Preferred Tree" or "Preferred Server" from the drop-down list as needed.

Select "Help" for more information on each of these settings.

4. Select "OK."

These changes will not take effect until you restart the workstation.



## NetWare/IP Parameters

### Required Parameters

There are no required parameters when you install NetWare/IP Support if a DSS server is on the same subnetwork as the NetWare/IP client. The client will be automatically configured.

If there is no DSS server on the same subnetwork as the NetWare/IP client, at least one of the following local parameter values must be configured during installation:

- ◆ NetWare/IP domain, which specifies the NetWare/IP domain to which this client belongs. When the NetWare/IP domain is specified, DNS is used to locate any available DSS server on the network  
DNS must be configured correctly in Microsoft's TCP/IP Services so that DSS servers can be located.
- ◆ Preferred DSS, which specifies the IP addresses, or subnetwork IP addresses of up to five DSS servers that are closest to this client

### Optional Parameters

The NetWare/IP client may optionally use values for the following parameters to optimize performance:

- ◆ Initial DSS contact retries, which specifies the number of times the client will attempt to communicate with a given DSS server at startup. The default is one retry in a range of 0 to 50.
- ◆ Retry interval, which specifies the time interval in seconds between attempts to retry communicating with a given DSS server at startup. The default is 4 seconds in a range of 1 to 100 seconds.
- ◆ Nearest server, which specifies the IP address, or subnetwork IP address of the NetWare/IP server closest to this client.
- ◆ NSQ broadcast, which specifies whether this client will use Nearest Server Query (NSQ) broadcasts to locate the nearest server. By default, NSQ broadcast is set to On.

### Global Parameters

In addition to the local parameters, the NetWare/IP client also obtains network-wide configuration information from the DSS, such as the virtual IPX network number, UDP port numbers for NetWare/IP service, and DSS–NetWare/IP synchronization interval.

## Network Adapter Card Settings

You can change the settings specified for the network adapter card.

### **To change the network adapter card settings**

1. From the "Control Panel," select the "Network" icon.
2. From the "Installed Adapter Cards" list, select the adapter card.
3. Select "Configure."
3. Change adapter card settings as desired.  
Select "Help" for information on these settings.
4. Select "OK" to save changes.  
Restart the workstation for the changes to take effect.

## Packet Burst Mode, Retry Count

You can turn on or turn off Packet Burst mode to control the performance of the workstation.

### **To turn on or turn off Packet Burst mode or adjust retry count**

1. From the "Control Panel," select the "Network" icon.
2. Select "Novell NetWare Client Services" in the "Installed Network Software" list.
3. Select "Configure."
4. Select "Advanced."
5. Select or deselect "Burst Mode" as desired.  
Select "Help" for more information on this parameter.
6. Adjust "Retry Count" as desired.  
Select "Help" for more information on this parameter.
7. Select "OK."

## Prerequisites

The following checklist will help you prepare your workstation for installing NetWare Client for Windows NT. You must have

- ◆ A workstation running MS Windows NT
- ◆ A hard disk with 3 MB of free storage for NetWare Client for Windows NT files
- ◆ 12 MB of RAM
- ◆ A network adapter card installed in your workstation
- ◆ A network running NetWare 3 or higher
- ◆ No existing NetWare client software provided by Microsoft (remove existing NetWare client software)

## Print Configuration

From the NetWare client, you can

- ◆ Capture a printer
- ◆ End the capture of a printer
- ◆ Control form feed, banner, and notification settings for a captured printer

### **To capture a printer**

1. From the "Control Panel," select the "NetWare" icon.
2. From the "Port Assignment" list, select the printer port.
3. From the "Available Queues" list, select a print queue.  
Select "Help" for more information on this setting.
4. Select "Close."

### **To end the capture of a printer**

1. From the "Control Panel," select the "NetWare" icon.
2. From the "Available Queues" list, select "None."  
Select "Help" for more information on this setting.
3. Select "Close."

### **To change form feed, banner, and notification setting**

1. From the "Control Panel," select the "NetWare" icon.
2. In the "Print Configuration" box, select or deselect the settings you want to change.  
Select "Help" for more information on these settings.
3. Select "Close."

## Private DOS Support Session

You can have independent NetWare bindery sessions in DOS with unique drive mappings.

### **To start a private DOS Support session**

1. From the "Program Manager," select the "NetWare" group.
2. Select the "DOS Support" icon.
3. Type a network drive letter (such as E: or F:) and press <Enter>.
4. Log in to the desired servers.
5. To end the DOS session, type "Exit" and press <Enter>.

## Removing a Network Adapter Card Driver

When you remove a LAN driver, any settings connected with that driver are also removed, such as the port number and IRQ settings. You should have specified these settings when you installed the LAN driver. Also, if you are using the TCP/IP protocol stack, settings such as IP address and net mask are removed.

### **To remove an existing network adapter card driver**

1. Log in to the Windows NT workstation as an NT user who is a member of the "Administrators" group.
2. From the "Main" group, select "Control Panel."
3. Select "Network."
4. From the "Installed Adapter Cards" list, select the driver you want to remove.
5. Select "Remove."

The driver and all settings are removed.

## Removing Existing Client Software

Remove any existing NetWare client software provided by Microsoft from the Windows NT workstation before you install the NetWare Client for Windows NT.

You can only have one type of NetWare client software installed on the workstation. The installation program will not install the NetWare client if Novell NetWare Client Services provided by Microsoft is still installed.

When the existing NetWare client is removed, no files are deleted; removing the client simply breaks the bindings between Windows NT and the active client. You can easily reinstall a client you have removed by removing the active client and installing the old one.

### **To remove the client software provided by Microsoft**

1. Log in to the Windows NT workstation as a user who is a member of the "Administrators" group.
2. From the "Main" group, select "Control Panel."
3. Select "Network."
4. From the "Installed Network Software" list, select "Client Service for NetWare," or select "Gateway Service for NetWare" if running Windows NT Server.
5. Select "Remove."  
The Microsoft client for NetWare is removed. Any existing NDIS drivers and the driver settings remain intact.
6. Reboot the workstation before installing the NetWare client software.



## Supported NetWare Utilities

You can perform most NetWare client tasks with the Windows utilities File Manager, Print Manager, and NWADMIN32. However, if you prefer using the command-line utilities, use the "DOS Support" icon located in the NetWare group that is created when you install the NetWare client. The "DOS Support" icon launches a private DOS session providing NetWare API support for utilities such as MAP, CAPTURE, and FILER. (Note: the native "MS DOS Command Prompt" located in the Main group does not have NetWare API support.)

This release does not support the use of VLMs for a NetWare connection through an "MS DOS Command Prompt" icon. (The VLM client software was developed for NetWare Directory Services and the NetWare 4 products.) Consequently, only bindery-based NetWare utilities can be used in a private DOS Support session.

You can use NetWare utilities that are bindery-based and that run in a private DOS Support session. (You must have a bindery connection to use these utilities.)

### **You can use:**

- ◆ NetWare utilities that are bindery-based and that run in a private DOS Support session. (You must have a bindery connection to use these utilities.)

### **You cannot use:**

- ◆ NetWare utilities that are NDS-based (except for NWADMIN32 which comes with this product).
- ◆ NetWare utilities designed to run in Microsoft Windows or Windows for Workgroups (such as NetWare Administrator or NetWare User Tools).
- ◆ NetWare utilities in an "MS DOS Command Prompt" session (only private DOS Support sessions are supported).

## Token Ring Settings, Node Address Override, Slot Number

Use this dialog to set the Token Ring Bit and the Token Ring Snap Bit for token ring networks, override the node address of the network adapter card, or specify the slot number of the adapter card for an EISA or MCA bus.

### **To change token ring settings, override the node address, or specify a slot number**

1. From the "Control Panel," select the "Network" icon.
2. From the "Installed Adapter Cards" list, select the adapter card.
3. Select "Configure."
4. Select "Advanced."
5. Select "MSB" (Most Significant Bit) or "LSB" (Least Significant Bit) for each token ring setting as desired.  
Select "Help" for more information on these settings.
6. Type the node address in hexadecimal format as desired.  
Select "Help" for more information on this setting.
7. Type the slot number of the adapter card as desired.  
Select "Help" for more information on this setting.
8. Select "OK."

## Unsupported Microsoft Client Features

This version of the Novell NetWare client for Windows NT does not support Remote Access Service (RAS) used by Windows NTAS.

If you want to use RAS, continue using Microsoft's "Client Service for NetWare."



