

FYI: Double Drive Mappings

FYI

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TITLE: Double Drive Mappings
DOCUMENT ID#: FYI.P.6039
DATE: October 29, 1991
PRODUCT: NetWare Lite
PRODUCT VERSION: All versions
SUPERSEDES: NA

SYMPTOM: Net utility reports a single drive letter mapped to two different directories.

ISSUE/PROBLEM

Double Drive Mappings

If you are using NetWare Lite on the same network with Native NetWare (NetWare v3.11 or v2.2) you may encounter the situation where NetWare Lite's Net utility reports a single drive letter mapped to two different directories simultaneously (i.e. two F:'s). These "double drive mappings" will occur in the following scenario:

Map a drive letter with NetWare Lite (e.g. net map f: cdrive server1).

Login to a NetWare v3.11 or v2.2 server. If your server's system login script has a drive mapping that uses the same drive letter (f:) as the previous NetWare Lite mapping it will override the mapping without giving the usual NetWare warning "drive already in use by local drive". Note: You will get the warning if you map from the command line.

If you then return to NetWare Lite's Net utility, and select drive mappings, you will see that f: appears as a NetWare Lite drive mapping and also as a Native NetWare Mapping.

When this situation occurs the mapping to Native NetWare will be the active mapping. NetWare Lite will flag its own mapping inactive and therefore inaccessible to the user. The

NetWare Lite mapping can not be deleted as long as it is inactive. To make the NetWare Lite mapping active, delete the Native NetWare mapping.

FYI: Fax Document Index

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TITLE: Fax Document Index
DOCUMENT ID#: FYI.P.6038
DATE: October 29, 1991
PRODUCT: NetWare Lite
PRODUCT VERSION: All versions
SUPERSEDES: NA

SYMPTOM: NA

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FYI: Running a Dedicated Server

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TITLE: Running a Dedicated Server
DOCUMENT ID#: FYI.P.6036
DATE: October 29, 1991
PRODUCT: NetWare Lite
PRODUCT VERSION: All versions
SUPERSEDES: NA

SYMPTOM: Slow network performance.

ISSUE/PROBLEM

Running a Dedicated Server

Network performance can be improved by running servers as dedicated. A dedicated server is one that does not run simultaneously as a client. Also, the less the server is used as a workstation the better it will perform as a server.

Performance may be further enhanced by running the auxiliary utility DEDICATE.COM found in the C:\NWLITE directory. If DEDICATE.COM isn't in the NWLITE directory, it can be copied from the original (or backup) product installation disk. Load DEDICATE after loading SERVER. This can be accomplished by entering "DEDICATE" at the DOS command prompt if C:\NWLITE is in your PATH, or "C:\NWLITE\DEDICATE" if it is not. Adding this command to the STARTNET.BAT file will load DEDICATE every time you bring up the server.

FYI: Server Optimization and Functions

FYI

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TITLE: Server Optimization and Functions
DOCUMENT ID#: FYI.P.6037
DATE: October 29, 1991
PRODUCT: NetWare Lite
PRODUCT VERSION: All versions
SUPERSEDES: NA

SYMPTOM: NA

ISSUE/PROBLEM

Server Optimization and Functions

Disk Caches

NetWare Lite does not ship with a disk cache. We have tested with several (read many) commercially available disk cache products and found them to be quite inexpensive while adding significant performance to the NetWare Lite server software. We suggest for higher performance of the NetWare Lite server that a disk cache be acquired and installed on the server machines. Some cache tuning may be necessary for best results.

Server Configuration

For best performance we suggest that receive buffer and read buffer sizes be increased to what is supported by the network topology (i.e. ethernet, token ring) up to a maximum of 4096 bytes using a multiple of 512 bytes. In fact, if 4096 is selected then the server will truncate the value to the maximum value supported by the topology. This tuning allows clients to request more data from (or send more data to) the server with each read (write) operation. When more data is sent, fewer requests are necessary and better performance is obtained. This enhancement does increase the size of SERVER when it is resident in DOS.

Depending on the "load" being placed on the server, it may be beneficial to increase the number of receive buffers and read buffers. In general, we have found that 8-12 receive buffers is enough for even the most heavily loaded server. Similarly, 5-10 read buffers is sufficient. These values need not be more than one or two above the number of simultaneous connections (up to our suggested maximums of 8-12 receive buffers and 5-10 read buffers).

Mapping vs. SUBSTing

If your machine is a server and you would like to map to yourself, it is recommended that you SUBST to yourself instead of mapping to yourself. SUBST is a DOS command that lets you assign a drive letter to a directory on another drive. For example, if you usually map to yourself with G: to the Network Directory APPS, and if APPS is actually the C:\APPS directory, the NET MAP G: APPS could be replaced by SUBST G: C:\APPS. To remove this substitution, you would type SUBST G: /D. Using this substitution, rather than a mapping, will result in better performance for operations done on drive G:.

Mapping Local Drive

You can map drives that are local, for example A: or B:, and use them temporarily as network drives. However as a general practice, it is not recommended. If you run out of drive letters to map, increase LASTDRIVE in your CONFIG.SYS.

Use of ASSIGN

Do not use ASSIGN with NetWare Lite. The DOS reference manual (3.3) recommends that you use SUBST instead of ASSIGN and explains how to do so.

FYI: Removing a Server

FYI

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TITLE: Removing a Server
DOCUMENT ID#: FYI.P.6035
DATE: October 29, 1991
PRODUCT: NetWare Lite
PRODUCT VERSION: All versions
SUPERSEDES: NA

SYMPTOM: NA

ISSUE/PROBLEM

Removing a Server

If you set up your machine as a server and want to remove the server software from your hard drive, complete the following:

1. Boot your machine without loading SERVER.
2. Run the original INSTALL.EXE that came on the installation diskettes.
3. Select "Make this machine a server". When asked to select the network interface card, press ESC and exit the INSTALL utility. The server is now removed from your hard disk drive.

FYI: Renaming Servers and Reconnection

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TITLE: Renaming Servers and Reconnection
DOCUMENT ID#: FYI.P.6034
DATE: October 29, 1991
PRODUCT: NetWare Lite
PRODUCT VERSION: All versions
SUPERSEDES: NA

SYMPTOM: NA

ISSUE/PROBLEM

Renaming Servers and Reconnection

Whenever a server is renamed, you should reboot that server as soon as possible and have the clients that were connected to that server, re-login. Clients cannot reconnect to a server that was renamed.

FYI: Improving Server Performance

FYI

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TITLE: Improving Server Performance
DOCUMENT ID#: FYI.P.6033
DATE: October 29, 1991
PRODUCT: NetWare Lite
PRODUCT VERSION: All versions
SUPERSEDES: NA

SYMPTOM: Slow performance of the Server.

ISSUE/PROBLEM

Improving Server Performance

It has been found that fragmented files on the hard disk drive of a server can adversely affect performance. It is

suggested that you periodically unfragment the files on the hard disk drive of each server. This can be done using any of a number of disk optimizing or disk compression tools available in the market place. MAKE SURE THE SERVER IS NOT RUNNING WHEN THIS TYPE OF OPERATION IS DONE!!!

NEVER run any low-level disk repair utilities on the hard disk drive of the server while the SERVER is loaded. This can cause corruption of data stored on the hard disk drive. This includes CHKDSK /F, disk doctor utilities, and disk optimizing utilities. Low-level utilities can only be run directly on the server machine. You cannot run them from clients that have a drive mapped to the server.

FYI: Disabling the Server

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TITLE: Disabling the Server
DOCUMENT ID#: FYI.P.6032
DATE: October 29, 1991
PRODUCT: NetWare Lite
PRODUCT VERSION: All versions
SUPERSEDES: NA

SYMPTOM: NA

ISSUE/PROBLEM

Disabling the Server

There is no way to remove the SERVER or CLIENT from memory once either is loaded. The SERVER can be disabled once loaded. Press CTRL-ALT-DEL, as if you were rebooting. When the Reboot window comes up, press 1 to disable the SERVER. This simply turns the functionality of the SERVER off, it is not removed from memory.

FYI: Compatibility with the NetWare Shell

FYI

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TITLE: Compatibility with the NetWare Shell
DOCUMENT ID#: FYI.P.6031
DATE: October 29, 1991
PRODUCT: NetWare Lite
PRODUCT VERSION: All versions
SUPERSEDES: NA

SYMPTOM: NA

ISSUE/PROBLEM

Compatibility with the NetWare Shell

If your site is currently using Novell NetWare and you are installing NetWare Lite on the same LAN, then there are some guidelines that should be followed in order for both to function properly.

NetWare Lite functions on a single LAN segment. In other words, NetWare Lite packets DO NOT cross Novell bridges (NetWare Lite packets do cross MAC layer bridges or repeaters, however.) In a site that has existing NetWare, each NetWare Lite network will be constrained to a single LAN segment.

If there are workstations that will load both the NetWare shell and NetWare Lite software we strongly suggest the following load order:

IPX (either the IPX you had or IPXODI that came with NetWare Lite; either one but NOT both)

DOS Share (SHARE.EXE, if becoming a SERVER)

NetWare Lite Server (SERVER.EXE, if desired)

NetWare Lite Client (CLIENT.EXE, if desired)

Once you have installed the CLIENT to a workstation that will also be running the NetWare Shell, you will need to modify your AUTOEXEC.BAT or appropriate batch file to load the files in the correct order. Note: with LASTDRIVE set, the NetWare Shell will map the first drive past LASTDRIVE to the SYS:LOGIN directory of the NetWare server for you to login. If LASTDRIVE is not set, DOS defaults it to E:, thus F: would be mapped to SYS:LOGIN. Also, if you use the MAP *1:= command in your login script, *1 means the first drive past LASTDRIVE. If you are dependant on certain drives being mapped with certain letters, changing LASTDRIVE may change which drive letters are mapped. Be aware that all drive letters, A: - Z:, can be mapped to NetWare servers (NetWare Lite can only map A: - LASTDRIVE).

FYI: Loading IPXODI A

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TITLE: Loading IPXODI A
DOCUMENT ID#: FYI.P.6030
DATE: October 29, 1991
PRODUCT: NetWare Lite
PRODUCT VERSION: All versions
SUPERSEDES: NA

SYMPTOM: NA

ISSUE/PROBLEM

Loading IPXODI A

In the STARTNET.BAT file that is created for you, the line "IPXODI A" appears. The parameter "A" tells IPXODI to only load IPX, this makes it so IPXODI takes up less memory. If you have an application that needs SPX to run, remove the "A" from this line when loading IPXODI then SPX will also be loaded. You can

type "IPXODI ?" to see a list of all available options for IPXODI.

FYI: Workstation Time

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TITLE: Workstation Time
DOCUMENT ID#: FYI.P.6029
DATE: 29OCT91
PRODUCT: NetWare Lite
PRODUCT VERSION: All versions
SUPERSEDES: NA

SYMPTOM: System time not synchronized on workstations.

ISSUE/PROBLEM

Workstation Time

To keep the system time of network clients synchronized we suggest that "NET TIME <server_name>" be placed in everyone's AUTOEXEC.BAT or STARTNET.BAT file. <Server_name> should be a machine that keeps "pretty good" time. This becomes especially important if NetWare Lite is being used in a software development environment where MAKE.EXE is being used. MAKE.EXE requires strict time synchronization. If "NET TIME" is used then MAKE.EXE will function smoothly. Furthermore, the time on all servers can be synchronized by using the "Time Synchronization" option in the "Supervise the Network" menu.

FYI: Auxiliary NetWare Lite Files

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TITLE: Auxiliary NetWare Lite Files
DOCUMENT ID#: FYI.P.6028
DATE: 29OCT91
PRODUCT: NetWare Lite
PRODUCT VERSION: All versions
SUPERSEDES: NA

SYMPTOM: NA

ISSUE/PROBLEM

Auxiliary NetWare Lite Files

Included with NetWare Lite are four extra programs that are not documented. These files are not needed for NetWare Lite to run, but add fun and functionality. They are: DEDICATE.COM, DEMO.EXE, NETBIOS.EXE, and NLSNIPES.EXE.

DEDICATE.COM -- DEDICATE is a little program that can be run on a server to improve performance. It is a useful program to be run on NetWare Lite machines that are acting as dedicated servers; or if a machine is a server/client and the client is not going to be active for a while. To run DEDICATE, type DEDICATE when in the C:\NWLITE subdirectory on the machine running SERVER.EXE.

DEMO.EXE -- DEMO is a networking demonstration program that shows how workstations can communicate using shared file access. When run, a "worm" is shown moving around on the screens of the workstations running DEMO.EXE. As the "worm" covers each screen, eventually the word "LITE" is shown. To run DEMO, change to the same directory on the same server on each machine that will be running DEMO. With DEMO.EXE in your PATH, type DEMO and press ENTER on each workstation. DEMO works best if run in a Left-to-Right fashion. That is, starting on the left-most workstation, run DEMO.EXE and move right running DEMO on each machine. The screens are "connected" starting left and moving right in the order which DEMO was started. Once running, you can drive your "worm" using the arrow key. DEMO will only support 9 workstations running simultaneously.

NETBIOS.EXE -- This is the NETBIOS that is included with regular NetWare. It can be loaded any time after IPXODI is

loaded. Some applications require the presence of NETBIOS. For this reason NETBIOS is provided with NetWare Lite. For more documentation on NETBIOS.EXE, contact the nearest Novell Authorized Reseller.

NLSNIPES.EXE -- NLSNIPES is a game. One to five users can play at a time. Everyone who wants to play NLSNIPES must map a drive to the same Network directory on the same server. To run, type NLSNIPES. You will then be asked for two initials, this uniquely identifies your "man" as you play. The first person to run NLSNIPES is the "starter". As people run NLSNIPES and enter their initials, they will see the initials of the other players that are entering the game. Once the desired group is ready, the "starter" will press ENTER to begin. Move your "man" through the maze killing snipes, generators, and other "men". For instructions on how to move and shoot, type "NLSNIPES /H" at the command-line.

FYI: Location Independence

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TITLE: Location Independence
DOCUMENT ID#: FYI.P.6027
DATE: 29OCT91
PRODUCT: NetWare Lite
PRODUCT VERSION: All versions
SUPERSEDES: NA

SYMPTOM: NA

ISSUE/PROBLEM

Location Independence

You will notice that NetWare Lite resources are location independent. Suppose you create a network directory named ALL_APPS on a server named DEPT_SERVER. Server DEPT_SERVER is a 8 MHz 286 machine with a 40 MB hard disk. All clients map drives

to ALL_APPS and use it every day. Now suppose you buy a 50 MHz 486 machine with a 1 GB disk drive on it. You want to move the network directory ALL_APPS to this new machine. You install this new machine and call it HOT_SERVER. You can then create a new network directory on this new server and call it ALL_APPS (same name as before). You then copy the files from DEPT_SERVER to HOT_SERVER. ALL_APPS can now be removed from DEPT_SERVER. All your clients will now use ALL_APPS from HOT_SERVER and nothing need be changed from the client's perspective. The clients don't need to know that the location of the network directory ALL_APPS has moved. This same principle applies to network printers.

FYI: NetWare Lite Pre-Release White Paper
FYI

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TITLE: NetWare Lite Pre-Release White Paper
DOCUMENT ID#: FYI.P.6026
DATE: 29OCT91
PRODUCT: NetWare Lite
PRODUCT VERSION: All versions
SUPERSEDES: NA

SYMPTOM: NA

ISSUE/PROBLEM

NetWare Lite Pre-Release White Paper

NetWare Lite TM is Novell's new peer-to-peer operating system. Its client/server architecture provides networking features for small LANs. NetWare Lite is designed to be easy to install and use. It supports disk and printer sharing for up to 25 nodes on a single physical LAN segment. Each node in the network can be configured as either a client, a server, or both. Both client and server are DOS terminate-and-stay-resident (TSR) programs. Therefore, the server operates in a nondedicated mode with DOS as the underlying operating system.

Program Details

NetWare Lite consists of three TSR software pieces, and a single utility.

The client supports the Microsoft interrupt 2fh redirector interface, and occupies approximately 12k of workstation memory.

The server is another DOS TSR that utilizes DOS networking server hooks. The average configuration requires 45k of workstation memory. The server runs in real mode on an IBM PC, XT, AT or compatible computer with a hard disk. The server uses DOS and the DOS file system to share files with network clients.

Both programs use Novell's IPX protocol. IPX is provided by a trio of TSRs that implement Novell's ODI protocol interface and MLID LAN board interface. The group of programs providing the IPX protocol requires approximately 15k of workstation memory, depending on the LAN driver used. NetWare Lite provides a group of MLID drivers with the product to support a large number of LAN boards. NetWare Lite also runs with other LAN boards if an MLID compliant driver is provided. NetWare Lite also runs over the older "linked" version of IPX, if already present. Network operations and administration are performed using a single utility that functions in either command-line or menu-driven mode. The utility incorporates extensive online user help.

The client and server communicate using a request/response protocol similar to that used by the dedicated NetWare operating system. The server can support up to 25 simultaneous client connections. All nodes on a NetWare Lite network, both clients and servers, reside on a single physical LAN segment, or on LAN segments connected via MAC layer bridges. The underlying operating system for the server and client is DOS version 3.x (3.1 and above), 4.x, 5.0 or DR DOS 6.0. Disk redirection, file attributes, and file sharing are supported, including enforcement of DOS sharing modes and record locking through DOS' SHARE.EXE. Printer redirection is supported through both DOS device I/O and BIOS printer services.

Network Features

The server provides network directories, that can be shared by a client as a redirected disk. A network directory associates a logical name to a subdirectory on a physical drive at the server. More than one network directory can be defined within

the same subdirectory tree on a server's physical disk. Both hard drives and floppy drives can be shared as network directories. The server can also provide network printers, that can be shared by a client as a redirected printer port. A network printer associates a logical name to a printer attached to the server.

Network security is enforced via user accounts. Access to network resources can be controlled on a per-user basis, using a simplified rights scheme implemented through access control lists. A user's identity is verified using password authentication. Passwords are encrypted both in the user database and during transmission on the network. A full range of user account restrictions and password requirements is enforced by the operating system.

Network directories can be manipulated dynamically, for instance a new network directory can be created and used without rebooting the server on which it resides.

Print jobs are spooled, and can be manipulated (held, deleted or other) while in the print queue at the server. The server supports both parallel and serial print devices, and can spool simultaneously to multiple printers. Print jobs can be controlled by a variety of printing options: printing a banner, number of copies, tab expansion, printer setup strings, holding a job, etc. Also supported is direct printing, whereby a job can begin despooling (printing) before it has finished being submitted to the print queue.

A variety of statistics is reported for servers. These can be monitored and used to reconfigure a server for enhanced memory utilization or performance. The network maintains an audit log so that activities on the network can be tracked. An error log is also kept, to aid in isolating and resolving problems with the network. The installation program includes verification that LAN cards, cables and IPX software are installed correctly and are operational. Additional miscellaneous features include the following: Messages can be sent to other users' video displays. It is possible to disable the reception and display of messages on your terminal. Time for all or part of the machines on the network can be synchronized. The server has a pop-up window that displays printer errors and necessary operator actions, and another window that requests confirmation when the user reboots the machine.

Operational Details (Advanced Features)

NetWare Lite's implementation of advanced networking techniques achieves simplicity of operation as well as network performance and robustness. Shared directories and printers and users are presented in a network-wide view. Network directories and printers can be used without reference to (or user's awareness of) the location of their physical component. Furthermore, client access to a resource is unaffected by moving the resource from one server to another. Although resources are presented to the user in a conglomerate view, servers operate independently of each other. Also, a single server or group of servers can go down without disrupting the rest of the network.

The user database is a distributed, replicated database. Therefore, user accounts are administered on a network-wide, rather than per-server basis. A user logs into the network, rather than into specific servers. The password is required only once (the client software, not the user, handles authentication with new servers as their resources are used). Only one account exists on the network for each user. This greatly simplifies user administration. If user accounts are administered when a portion of the network is down, the user database is resynchronized when that portion again becomes operational. Since the database is distributed, network operation continues even if only one server is functional.

The client can reconnect (transparently to the user) with a server and continue most operations even after a server has gone down and is brought back up. In such a case, drives need not be remapped nor must printer ports be recaptured. However, information for open DOS files cannot be retained through a server reboot.

NetWare Lite supports de-centralized network administration. Network resources and server configurations can be manipulated from any machine (running the client software) on the network. Remote administration of servers can be optionally disallowed per server.

The server implements a read-ahead cache for enhanced performance. NetWare Lite is also compatible with third party DOS-based disk caches. Several third party caches have been tested and found to enhance network performance by the same amount that they enhance local DOS disk performance.

NetWare Compatibility

NetWare Lite is compatible with NetWare. NetWare Lite software (both client and server) can use either the ODI implementation of IPX or the original linked implementation of IPX. The client and server both coexist with the NetWare DOS shell. Thus a client may have drives mapped to volumes on dedicated NetWare 286 or 386 servers, while simultaneously having other drives mapped to NetWare Lite network directories. Also, dedicated NetWare volumes can be chained into a NetWare Lite network by mapping a drive to the volume using the shell and then providing a network directory, based on that drive, to Lite clients through the non-dedicated NetWare Lite server. The same holds true for simultaneous port captures, and chained printer ports.

Applications Compatibility

NetWare Lite is compatible with application software that uses single-machine DOS calls. Also, NetWare Lite supports network applications that use only DOS networking APIs. This includes all DOS networking APIs. The NetWare application programming interface is not supported.

Peer-to-peer network level APIs are also supported. This includes IPX, SPX, and NetBIOS. To use the NetBIOS API with NetWare Lite, you must load Novell's NetBIOS emulator software (available separately).

FYI: Printing Conventions and Suggestions

FYI

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TITLE:	Printing Conventions and Suggestions
DOCUMENT ID#:	FYI.P.6025
DATE:	29OCT91
PRODUCT:	NetWare Lite
PRODUCT VERSION:	All versions
SUPERSEDES:	NA
SYMPTOM:	NA

ISSUE/PROBLEM

Printing Conventions and Suggestions

Chances are you bought this product to share one or more printers. For this reason, give special attention to the following remarks:

Local Network Printers

Once a printer is assigned as a network printer, you should only access that printer through the network. You may have a printer attached to your workstation that has been defined as a Network Printer. In this case, you should capture a port when you wish to print to it. If you print to it directly (not using capture), you may cause print job corruption.

Characters Per Second and Print Buffers

Network printers are created in the NET menu utility in the "Supervise the Network" category. When a printer is created, you can configure the performance of the printer relative to the DOS running on the same machine where the printer is attached. This is done by modifying the "Chars per second" parameter in conjunction with the "Print buffer size" parameter of the server configuration. The print buffer is an area in memory where characters are stored before being printed. The larger the print buffer size, the less often the server will need to go to disk to read more characters to print. If the "Chars per second" value is high (relatively speaking) and the "Print buffer size" is large (relatively speaking) then the printer will be driven faster and the DOS running on that machine will be interrupted more often to send characters to the printer. The converse is also true if the value of "Chars per second" is low and "Print buffer size" is small. These values should also be tuned to the speed, or desired speed, of the printer. If the printer is physically a "slow" printer then setting the "Chars per second" parameter to a high number will have no effect. Additionally, if the "Chars per second" is set higher than the "Print buffer size" parameter then this will have little effect, as well.

Setup Strings

One of the options available on network printers is setup strings. You can define up to ten setup strings for each network printer. In short, a setup string is a series of characters that

put the printer into a particular mode (i.e. landscape mode, large characters mode). By default, the DEFAULT setup string is set to nothing. The DEFAULT setup string should be set to a sequence of values which reset the printer. Many printers use the string "1E 45" (<ESC>E) to reset the printer (check the documentation for your printer to find out what sequence resets the printer). The manual that came with the printer should describe the values that place the printer into different modes. Setup strings are always entered using hexadecimal codes.

By defining more than one setup string for a Network Printer it is possible to submit jobs that will print in different printer modes. Setup strings can be used as part of the "NET CAPTURE" command or in the "Print" category of the NET menu utility. An example of its use with "NET CAPTURE" is provided below.

Capture Settings

The term "capturing ports" refers to redirecting print jobs from the normal printing device to someplace else, in this case, a network printer. To capture a port you must first load CLIENT and login to the network. You can then access network printers by capturing ports with the "NET CAPTURE" command. There are several options available with this command. They are discussed in the manual, as well as in the on-line help in the NET menu utility and at the command-line when "NET CAPTURE HELP" is typed. A sample command-line might look like this:

```
NET CAPTURE LPT1 LASERJET B=N D=Y S=LANDSCAPE
```

This example specifies that all jobs sent to LPT1 of the local machine will be redirected to the network printer LASERJET. It also specifies that for all print jobs sent to LPT1 (LASERJET), there should be NO banner printed and each job should start printing before the job has been completely submitted (direct printing). Finally this job is printed using the LANDSCAPE setup string (created previously on printer LASERJET).

The LANDSCAPE setup string values are sent to the printer just previous to the data of each print job sent to LPT1. The DEFAULT setup string values are sent to the printer after each print job is printed (thus resetting the printer for the next job sent to this printer).

From the NET menu utility it is also possible to submit a print job and have the job immediately go on hold. When a print

job is on hold it is placed on the queue but not printed. It can be taken off hold (and thus printed) by selecting the job from the print job list and changing the flags of the job.

Capturing COM Ports

The documentation incorrectly states that as a client, you can capture COM1 or COM2. The COM1 and COM2 ports can only be used by a server. A network printer can be assigned to the COM1 or COM2 port. Clients can then capture LPT1, LPT2, or LPT3 to a network printer that has been created and assigned to COM1 or COM2.

Postscript printing

Because of the nature of postscript printers, special care must be taken when sending print jobs. You should make sure your capture has the following set:

```
BANNER=No
TABS=0
FORMFEED=No
```

You may also want to set the WAIT parameter to a value higher than 10 seconds. If your print job gets split to multiple jobs when printing to a postscript printer, you will want to increase the WAIT value. Increase it until your print job comes out all in one job.

Using WAIT=0

The WAIT=0 should only be used if the application you are using will close the print job. If the application does not close the print job, using WAIT=0 will keep the print job open until it is closed explicitly. A print job on LPT1 can be closed manually from the DOS command-line by sending a formfeed or <Ctrl>-L, displayed ^L (press and hold the Ctrl key while pressing the L key, then release the L key and Ctrl key). Type "ECHO ^L > LPT1". This sends a form feed character to LPT1 and closes the job. Generally using a WAIT value of 10 or so is adequate. CAUTION: If you use WAIT=0 and DIRECT=Y you will hold the printer until the print job is explicitly closed.

FYI: Make Shared Executables Read-Only
FYI

(Note: The origin of this information may be internal or external to Novell. Novell makes every effort within its means to verify this information. However, the information provided in this document is FOR YOUR INFORMATION only. Novell makes no explicit or implied claims to the validity of this information.)

TITLE: Make Shared Executables Read-Only
DOCUMENT ID#: FYI.P.6024
DATE: 29OCT91
PRODUCT: NetWare Lite
PRODUCT VERSION: All versions
SUPERSEDES: NA

SYMPTOM: Getting "Access denied" error.

ISSUE/PROBLEM

Make Shared Executables Read-Only

Executable files that will be run by more than one user at a time need to be marked as read-only. If they are not, then you may notice at times that you are temporarily denied access to a file you wish to run. For example, you may get a message that access was denied or that the EXE file could not be run. If this happens, mark the executable files read-only using the DOS ATTRIB command. Type ATTRIB +R *.EXE in the directory where the executable files reside. This example marks the *.EXE files read-only. All shared .COMs, .BATs, and .OVLs should be marked as well. The read-only attribute can be cleared using the same command replacing the +R with -R. (See DOS documentation for information on the ATTRIB command).

FYI: Shared Resources (Network Directories and Printers)

FYI

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TITLE: Shared Resources (Network Directories and Printers)

DOCUMENT ID#: FYI.P.6023
DATE: 29OCT91
PRODUCT: NetWare Lite
PRODUCT VERSION: All versions
SUPERSEDES: NA

SYMPTOM: NA

ISSUE/PROBLEM

Shared Resources (Network Directories and Printers)

Shared resources are those resources, network directories and printers, that are shared with clients on a network. We suggest that network directories and printers be given descriptive names. Good names for network directories might be: TURBOC, WORDPERFECT, GAMES, IBM_DOS_310 or PUBLIC. Good names for network printers might be: LASERJET_II, EPSON_DOT. Names that might not be good are CDRIVE, PRINTER1, PRINTER2. These names provide no indication of what applications or what kind of printers are being made available. You will notice that during NetWare Lite installation we create a CDRIVE network directory for you. When you become familiar with the product this resource ought to be given a more descriptive name.

FYI: Logging in After Installation

FYI

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TITLE: Logging in After Installation
DOCUMENT ID#: FYI.P.6022
DATE: 29OCT91
PRODUCT: NetWare Lite
PRODUCT VERSION: All versions
SUPERSEDES: NA

SYMPTOM: NA

ISSUE/PROBLEM

Logging in After Installation

The first time you login to a newly installed network there will be only one user defined on the network, SUPERVISOR. To login, type NET LOGIN SUPERVISOR or type NET and enter SUPERVISOR when prompted for a username.

If you are installing on a network where other servers are already running, the user accounts defined on the network will also be defined on servers you install. You will need to consult with the administrator of the network to find out what user accounts are defined and how you may login.

Note: The SUPERVISOR account on a newly installed network has no password. For security reasons it is recommended that you set a password on the SUPERVISOR account soon after installation. Do not forget this password!

FYI: Installing a Server

FYI

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TITLE: Installing a Server
DOCUMENT ID#: FYI.P.6021
DATE: October 29, 1991
PRODUCT: NetWare Lite
PRODUCT VERSION: All versions
SUPERSEDES: NA

SYMPTOM: NA

ISSUE/PROBLEM

Installing a Server

The computer you are installing NetWare Lite on must have a hard disk to be configured as a server. Do not simply copy the files off of the original (or backup) diskettes. To install

NetWare Lite and configure the computer as a server perform the following steps. Note that, depending on your current setup, the installation program may skip some of the steps.

1. Insert the diskette labeled "program" into the a: (or b:) drive.

2. Type a:install and press enter.

3. Use the arrow keys to highlight "Make this machine a server" and press enter.

4. Type in a name for the server and press enter.

5. Insert the diskette labeled "driver" into the a: drive and press esc.

6. Use the arrow keys to highlight the type of network card in your machine and press enter. If you are not sure which card to choose refer to the hardware documentation to determine what type of card you have or which interface it is compatible with.

7. A window showing default settings for your card is displayed. You may change these if necessary by highlighting the item and pressing enter, then highlighting the correct value and pressing enter. Refer to the hardware documentation if you are not sure what the settings should be. When the settings are correct press esc.

8. Answer yes or no to the "path" message.

9. FILES must be set in the CONFIG.SYS file for the server to run. The default value shown should work in most situations. If you know that you need to use a different value answer no to the "files" message and edit CONFIG.SYS appropriately.

10. BUFFERS must be set in the CONFIG.SYS file for the server to run. The default value shown should work in most situations. If you know that you need to use a different value answer no to the "buffers" message and edit CONFIG.SYS appropriately.

11. NetWare Lite is now installed. Press esc to exit the installation program.

See fax document "SERVER Only Instead of SERVER and CLIENT"

for more information on whether you should also install the client software.

FYI: Installing a Client and Server

FYI

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TITLE: Installing a Client and Server
DOCUMENT ID#: FYI.P.6020
DATE: October 29, 1991
PRODUCT: NetWare Lite
PRODUCT VERSION: All versions
SUPERSEDES: NA

SYMPTOM: NA

ISSUE/PROBLEM

Installing a Client and Server

The computer you are installing NetWare Lite on must have a hard disk to be configured as a server. Do not simply copy the files off of the original (or backup) diskettes. To install NetWare Lite and configure the computer as both server and client perform the following steps. Note that, depending on your current setup, the installation program may skip some of the steps.

1. Insert the diskette labeled "program" into the a: (or b:) drive.
2. Type a:install and press enter.
3. Use the arrow keys to highlight "Make this machine a client and a server" and press enter.
4. Type in a name for the server and press enter.
5. FILES must be set in the CONFIG.SYS file for the server

to run. The default value shown should work in most situations. If you know that you need to use a different value answer no to the "files" message and edit CONFIG.SYS appropriately.

6. BUFFERS must be set in the CONFIG.SYS file for the server to run. The default value shown should work in most situations. If you know that you need to use a different value answer no to the "buffers" message and edit CONFIG.SYS appropriately.

7. Insert the diskette labeled "driver" into the a: drive and press esc.

8. Use the arrow keys to highlight the type of network card in your machine and press enter. If you are not sure which card to choose refer to the hardware documentation to determine what type of card you have or which interface it is compatible with.

9. A window showing default settings for your card is displayed. You may change these if necessary by highlighting the item and pressing enter, then highlighting the correct value and pressing enter. Refer to the hardware documentation if you are not sure what the settings should be. When the settings are correct press esc.

10. Answer yes or no to the "path" message. Note that if the C:\NWLITE directory is not in the DOS path you will have to CD to it in order to use the net utility. You will also have to include the path for every net command executed at the command line.

11. Answer yes or no to the "lastdrive" message. Note that LASTDRIVE should be set to g: or higher to use the NET utility. If you answer no you must edit the CONFIG.SYS file to include a LASTDRIVE command and reboot before you can use any net command.

12. NetWare Lite is now installed. Press esc to exit the installation program.

FYI: Installing a Client

FYI

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to Novell. Novell makes every effort within its means to verify this information. However, the information provided in this document is FOR YOUR INFORMATION only. Novell makes no explicit or implied claims to the validity of this information.)

TITLE: Installing a Client
DOCUMENT ID#: FYI.P.6019
DATE: 29OCT91
PRODUCT: NetWare Lite
PRODUCT VERSION: All versions
SUPERSEDES: NA

SYMPTOM: NA

ISSUE/PROBLEM

Installing a Client

To install NetWare Lite and configure your computer as a client perform the following steps. Note that, depending on your current setup, the installation program may skip some of the steps.

1. Insert the diskette labeled "program" into the a: (or b:) drive.
2. Type a:install and press enter.
3. Verify that "Make this machine a client" is highlighted and press enter.
4. Type in the path of the directory where you want NetWare Lite installed or simply press enter to accept the default. You may include the a: or b: drive letter if your computer does not have a fixed disk installed. See the fax document "Assisting Floppy Based Clients" for more information on installing to a floppy diskette.
5. Insert the diskette labeled "driver" into the a: drive and press esc.
6. Use the arrow keys to highlight the type of network card in your machine and press enter. If you are not sure which card to choose refer to the hardware documentation to determine what type of card you have or which interface it is compatible with.

7. A window showing default settings for your card is displayed. You may change these if necessary by highlighting the item and pressing enter, then highlighting the correct value and pressing enter. Refer to the hardware documentation if you are not sure what the settings should be. When the settings are correct press esc.

8. Answer yes or no to the "path" message. Note that if the C:\NWLITE directory is not in the DOS path you will have to CD to it in order to use the net utility. You will also have to include the path for every net command executed at the command line.

9. Answer yes or no to the "lastdrive" message. Note that LASTDRIVE should be set to g: or higher to use the NET utility. If you answer no you must edit the CONFIG.SYS file to include a LASTDRIVE command and reboot before you can use any net command.

10. NetWare Lite is now installed. Press esc to exit the installation program.

FYI: Before Beginning Installation

FYI

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TITLE: Before Beginning Installation
DOCUMENT ID#: FYI.P.6018
DATE: 29OCT91
PRODUCT: NetWare Lite
PRODUCT VERSION: All versions
SUPERSEDES: NA

SYMPTOM: NA

ISSUE/PROBLEM

NetWare Lite is designed to allow multiple computers (nodes) in a physical LAN segment (network) to share resources like printers and disk space. Computers which make resources

available to the network are called servers. Computers which access resources are called clients. In NetWare Lite's peer-to-peer environment, almost any computer on the network can be a server, a client, or both. The only limitation is that a server must have a hard disk. However, there are other things to think about when deciding which computers will be servers, clients, or both. Before you begin installing NetWare Lite take a few minutes to consider the following.

Which computers have printers, applications, or data that need to be shared?

How big/fast are the hard disks and cpu's in the computers which will be part of the network?

Where will the computers and printers be located? Are they close enough together for the cabling system we plan to use?

What kind of network interface cards (NIC) will we use?

Can one of the computers be made a dedicated server in order to increase network performance?

Will any of the computers be connected to another network at the same time?

Which computers can be made physically secure?

How sensitive will information on this network be?

Who will be responsible for network administration?

All of these items will effect whether you decide to make a computer a server, a client, or both. In general, the machines with the fastest hard disk/cpu combinations should be made servers. Installing applications on the computer with the greatest disk capacity will facilitate centralized administration and maintenance but may not be the best choice from a performance standpoint. For example, suppose everyone on the network uses the same word processor which is installed on computer A, but only one person uses the spreadsheet application managing a large database. Since the spreadsheet application can demand large amounts of processing capacity it would probably be better to install the spreadsheet and database on a server other than computer A. That way the spreadsheet and word processor will not have to compete for processing time.

A major consideration in setting up any network is what type of cabling system (topology) will be used. The most important factor is distance between computers. Another factor is how cabling can be routed through your office or building. There are several widely used systems to choose from, each with its own advantages and disadvantages. For information on cabling and other hardware issues see the series of fax documents on "Hardware".

If there is only one server in your network or a particular server does not require access to other servers' resources, then you should consider making it a dedicated server. See fax document "Dedicated Servers" for more information on setting up a dedicated server.

For information on installing NetWare Lite in a pre-existing network see the series of fax documents on "NetWare and NetWare Lite".

Security requirements will also determine which computers should be servers/clients. NetWare Lite provides three levels of security to protect your sensitive data. However, it is best to physically protect computers containing sensitive material as well. This may mean having to place such computers behind locked doors.

How your network is administered will contribute significantly to user satisfaction. NetWare Lite greatly simplifies network administration by decentralizing the databases used to keep track of who can login, who has privileges to what, etc.. A major feature of NetWare Lite is the ability to administer the network from any computer on the network. This means that the person(s) who administer the network do not have to use "the" server to perform administrative tasks. For more information on administration and security see the series of fax documents on "Network Administration".

FYI: Assisting Floppy Based Clients

FYI

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or implied claims to the validity of this information.)

TITLE: Assisting Floppy Based Clients
DOCUMENT ID#: FYI.P.6017
DATE: 29OCT91
PRODUCT: NetWare Lite
PRODUCT VERSION: All versions
SUPERSEDES: NA

SYMPTOM: NA

ISSUE/PROBLEM

If there are workstations on the network that don't have hard disks then we suggest that NetWork Directories be set up to help those workstations. A DOS shared Network Directory should be created so that workstations with no hard disks can load DOS commands from the network. A Network Directory sharing IBM DOS version 3.10 (named IBM_DOS_310 perhaps) would be useful for those CLIENTs with only floppy drives to get to their version of DOS. In conjunction with this, the DOS environment variable "COMSPEC" should be set to allow you to load COMMAND.COM from across the network. For example, these lines could be included in an AUTOEXEC.BAT or STARTNET.BAT file:

```
NET MAP F: IBM_DOS_310
SET COMSPEC=F:\COMMAND.COM
```

In addition, workstations that only have floppies can be assisted by creating a Network Directory where the NetWare Lite utility (NET.EXE, NET.OVL, NET.HLP and LITE\$RUN.OVL) can be loaded; instead of always loading them from the floppy. We suggest that a Network Directory called NWLITE be created. This directory should be a SERVER's C:\NWLITE directory. We also suggest that this Network Directory be given default rights of READ and not the default of ALL.

All floppy-only CLIENTs should map a drive to this resource and add the drive to their DOS path. This will allow the loading of the NET utility from across the network; a much better than loading from floppy. For example, these lines could be included in an AUTOEXEC.BAT or STARTNET.BAT file:

```
NET MAP M: NWLITE
PATH=M:.;%PATH%
```

If you want to run the CLIENT from a floppy drive and have

that diskette be the boot diskette, the following configuration is suggested. (Where ever NE2000.COM appears, replace it with the appropriate driver name you are using. Also, L: and M: are simply used as examples; you may use any other valid driver letters. We map drive M: to the Network Directory NWLITE as described above. Similarly, L: is mapped to the Network Directory IBM_DOS_310 as described above.)

1. Create a bootable diskette using the `FORMAT A: /S` command.
2. Copy the following NetWare Lite files to the diskette:

```
LSL.COM
NE2000.COM
IPXODI.COM
CLIENT.EXE
NET.EXE
NET.CFG
```

3. Create an `AUTOEXEC.BAT` with the following lines added to it:

```
LSL
NE2000
IPXODI A
CLIENT
NET LOGIN
NET MAP L: IBM_DOS_310
NET MAP M: NWLITE
PATH=L:\;M:\;%PATH%
SET COMSPEC=L:\COMMAND.COM
```

4. Create an `CONFIG.SYS` with the following line added to it.

```
LASTDRIVE=M
```

For those Network Directories that contain applications (executables) the drives used to map to these applications should be included in the DOS environment variable `PATH`. For example, these lines could also be included in an `AUTOEXEC.BAT` or `STARTNET.BAT` file:

```
NET MAP G: TURBOC
NET MAP H: WORDPERFECT
NET MAP I: GAMES
```

SET PATH=G:\BIN;H:.;I:\TETRIS;%PATH%

FYI: Selecting "other" Card Driver During Installation
FYI

(Note: The origin of this information may be internal or external to Novell. Novell makes every effort within its means to verify this information. However, the information provided in this document is FOR YOUR INFORMATION only. Novell makes no explicit or implied claims to the validity of this information.)

TITLE: Selecting "other" Card Driver During
Installation
DOCUMENT ID#: FYI.P.6016
DATE: 29OCT91
PRODUCT: NetWare Lite
PRODUCT VERSION: All versions
SUPERSEDES: NA

SYMPTOM: NA

ISSUE/PROBLEM

Novell ships drivers on the NetWare Lite installation diskettes for the following Network Interface Cards (NIC's).

Network Interface Card Name	Driver Name

*OTHER CARDS	
3Com EtherLink II	3C503.COM
3Com EtherLink/MC	3C523.COM
Artisoft AE-2 Ethernet Adapter	NE2000.COM
IBM PC Network Baseband Adapter	PCN2L.COM
IBM PC Network Baseband Adapter/A	PCN2L.COM
IBM PC Network Baseband Adapter II	PCN2L.COM
IBM PC Network Baseband Adapter II/A	PCN2L.COM
IBM Token-Ring Adapter/A	TOKEN.COM
IBM Token-Ring Network 16/4 Adapter	TOKEN.COM
IBM Token-Ring Network 16/4 Adapter/A	TOKEN.COM
IBM Token-Ring Network Adapter II	TOKEN.COM
Novell/Eagle NE/2	NE2.COM
Novell/Eagle NE1000	NE1000.COM
Novell/Eagle NE2000	NE2000.COM
SMC PC130	TRXNET.COM

SMC PC130E	TRXNET.COM
SMC PS110	TRXNET.COM
Western Digital EtherCard PLUS Elite	WDPLUS.COM
Western Digital EtherCard PLUS Elite 10T	WDPLUS.COM
Western Digital EtherCard PLUS Elite 16	WDPLUS.COM
Western Digital EtherCard PLUS Elite 16T	WDPLUS.COM
Western Digital EtherCard PLUS Elite Combo	WDPLUS.COM

If your network interface card does not appear in this list refer to your hardware documentation to determine if your card is compatible with a card which is on the list. If you find a match you can select the compatible card type during installation. If your card is not compatible with any of the cards listed you will have to use the card driver supplied with the card or provide your own card driver. Any card drivers not supplied on the installation diskettes are considered to be "other" card drivers. Unfortunately, the installation program fails to complete properly if "other" is selected during installation. To install NetWare Lite with your "other" card driver complete the following steps.

1. Make backup copies of the original "program" and "driver" diskettes. If you have a 720K or 1.2M floppy drive you can copy both original diskettes onto one backup diskette.
2. Copy your card driver onto the backup diskette. If you made a separate backup diskette of the "program" and "driver" diskettes, you must copy the card driver to the "driver" backup diskette.
3. Begin the installation program as you normally would but use the backup diskette(s) instead of the originals.
4. When prompted to select a network interface card verify that "other" is highlighted and press enter.
5. When prompted to insert the diskette which contains your card driver, simply press esc.
6. Use the arrow keys to highlight the name of your card driver and press enter.
7. Continue following the installation program prompts until the program completes.
8. When the installation program completes, press esc to exit.

If you installed the card with non-default settings you will need to create a configuration file to inform IPX. The configuration file is named NET.CFG and should be located in the same directory as the other NetWare Lite program files. The NET.CFG created by NetWare Lite has the following format. Refer to your hardware documentation for information on setting up your card and what to include in NET.CFG.

```
# Setup the NE2000 card
  Link driver NE2000
      INT 3
      PORT 300
```

FYI: Optimizing a Server Hard drive

FYI

(Note: The origin of this information may be internal or external to Novell. Novell makes every effort within its means to verify this information. However, the information provided in this document is FOR YOUR INFORMATION only. Novell makes no explicit or implied claims to the validity of this information.)

```
TITLE:      Optimizing a Server Hard drive
DOCUMENT ID#: FYI.P.6014
DATE:      29OCT91
PRODUCT:   NetWare Lite
PRODUCT VERSION: All versions
SUPERSEDES: NA

SYMPTOM:   NA
```

ISSUE/PROBLEM

During the day to day work on your computer, files are deleted, rewritten, or replaced on the hard disk. This will eventually cause your files to be "fragmented". Fragmented refers to a file being divided into pieces and those pieces being located throughout your hard disk instead of in one contiguous block of disk space. Thus if you try and access one of these files the hard disk has to look for a single file in several places. This in turn causes your hard disk to respond slowly. The more fragmented your disk is, the slower it will respond. If the hard disk is in a NetWare Lite server the entire network can

be affected. To eliminate this effect consider "optimizing" your hard disk. A disk is optimized by rearranging the data so that files are not spread out over the disk. There are many different utilities available for optimizing hard disks.

Note: It is vital that no other stations access your hard disk while the utility is running.

Disk Optimizers can take a considerable amount of time to complete data arrangement. (20 minutes or more)

It is recommended that you have a backup of your vital information before optimizing.

If your hard disk is in a NetWare Lite server, the optimizing utility must be executed from the server itself and not from a client.

FYI: Resolving IRQ Conflicts

FYI

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TITLE: Resolving IRQ Conflicts
DOCUMENT ID#: FYI.P.6013
DATE: 29OCT91
PRODUCT: NetWare Lite
PRODUCT VERSION: All versions
SUPERSEDES: NA

SYMPTOM: NA

ISSUE/PROBLEM

A unique interrupt level (IRQ) must be assigned to your network interface card (NIC). Each manufacturer's NIC card is unique in the available interrupts it offers (refer to the network card's manual to determine its interrupt options). The following table may help in selecting an interrupt option that is not currently being used in your system. It is also possible to

get a specific reading of your interrupts from a computer utility program.

IRQ	XT	AT (286,386,486)
0	-	TIMER OUTPUT 0
1	-	KEYBOARD
2	EGA/VGA	EGA/VGA
3	COM2	COM2
4	COM1	COM1
5	HARD DISK	LPT2
6	-	FLOPPY DISK
7	LPT1	LPT1
8	-	REAL TIME CLOCK
9	-	-
10	-	-
11	-	-
12	-	-
13	-	COPROCESSOR
14	-	HARD DISK
15	-	-

NOTE: For best results you should try and use a free IRQ. If the chart shows that you are using all possible interrupts, it is possible that your ethernet or other NIC card may use an interrupt that is already being used. ie ... many programs do not address LPT1 on the interrupt level, hence if you have no free interrupts it is possible to assign two functions to the same interrupt.

FYI: Resolving I/O Conflicts

FYI

(Note: The origin of this information may be internal or external to Novell. Novell makes every effort within its means to verify this information. However, the information provided in this document is FOR YOUR INFORMATION only. Novell makes no explicit or implied claims to the validity of this information.)

TITLE: Resolving I/O Conflicts
DOCUMENT ID#: FYI.P.6012
DATE: 29OCT91
PRODUCT: NetWare Lite
PRODUCT VERSION: All versions

SUPERSEDES: NA

SYMPTOM: NA

ISSUE/PROBLEM

The ethernet, arcnet or other network card (NIC) will need to use an unique I/O address. The following table shows some possible conflicts. Column one shows the range from 200 to 3E0 (hex). Column two shows some possible conflicting devices. Select an I/O address that best fits your configuration, however, be aware that this table is generic. If problems persist consult the documentation of your specific system. It is also possible to get a listing of your I/O addresses with a computer utility program.

I/O address	Potential Conflicting devices
200	Game controller /Joystick (200-20F)
220	Novell Network Keycard
240	-
260	LPT2: (278-27F)
280	LCD display on Wyse 2108 PC
2A0	-
2C0	-
2E0	COM4:, GPIB-Adapter 0 (2E1) COM2:, Data acquisition (300-31F)
300	-
320	XT Hard Disk interface (320-32F)
340	-
360	LPT1: (378-37F)
380	SLDC/Sec Bi-Sync interface (380-38C)
3A0	Primary Bi-Sync interface (3A0-3A9) Monochrome display (3B0-3BB)
3C0	EGA display control (3C0-3CF) CGA display control (3D0-3CF)
3E0	COM3: (3E8-3EF) Floppy disk controller (3F0-3F7) COM1: (3F8-3FF)

FYI: Network Application

FYI

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to Novell. Novell makes every effort within its means to verify this information. However, the information provided in this document is FOR YOUR INFORMATION only. Novell makes no explicit or implied claims to the validity of this information.)

TITLE: Network Application
DOCUMENT ID#: FYI.P.6011
DATE: 29OCT91
PRODUCT: NetWare Lite
PRODUCT VERSION: All versions
SUPERSEDES: NA

SYMPTOM: NA

ISSUE/PROBLEM

Installing applications on NetWare Lite may be different than installing applications on NetWare. NetWare is, as you know, a very popular LAN. Many applications have NetWare specific installation options. These installation options DO NOT apply to NetWare Lite networks. NetWare Lite is a DOS peer-to-peer network. If the application being installed has network specific installations then "Other networks.." or "DOS peer-to-peer network" or the like, should be selected. DO NOT select NetWare or Novell installation options. See Appendix B in the documentation for more details about using NetWare Lite with NetWare.

In general, some consideration should be given when installing applications. If the application requires configuration information at the time it is installed, then consideration should be given to which CLIENTs (machines) will use the application. For example, say application TESTAPP.EXE is being installed and it asks what kind of monitor will be used with this application. Suppose that the machine you are sitting at has a VGA screen but no other machines on the network have VGA screens. If you were to select VGA then when this application is run from across the network from an CGA screen, it may not function properly. We have no specific guidelines on this subject, as a general solution may not be possible. This is a general problem with configuration of applications on a network.

FYI: Windows 3.0 Compatibility

FYI

(Note: The origin of this information may be internal or external to Novell. Novell makes every effort within its means to verify this information. However, the information provided in this document is FOR YOUR INFORMATION only. Novell makes no explicit or implied claims to the validity of this information.)

TITLE: Windows 3.0 Compatibility
DOCUMENT ID#: FYI.P.6010
DATE: 29OCT91
PRODUCT: NetWare Lite
PRODUCT VERSION: All versions
SUPERSEDES: NA

SYMPTOM: NA

ISSUE/PROBLEM

This section contains information about using NetWare Lite with Windows 3.0. Follow the suggestions outlined below to operate your Windows 3.0 environment.

Network vs. Local Installation of Windows

Install Windows locally, do not attempt to install it from a Network Directory. Follow the regular installation procedures using Windows diskettes. Windows INSTALL may indicate the presence of a "Microsoft Network (or 100% compatible)" network, change this selection to "No Network Installed".

Before Entering Windows

It is suggested that you set up your NetWare Lite environment before running Windows. Such operations include: logging into the network, mapping drives, and capturing ports.

Mapping Drives

If a server to which you have mapped a drive goes down, Windows will display a message indicating that the drive does not contain any files. Any attempt to access that drive will fail. Under regular DOS, this error is trapped and the client saves enough information to automatically restore the connection to that network directory when the downed server returns to the network. Windows prevents regular DOS from trapping this error. To restore connections to your mapped drive, exit Windows and re-issue the NET MAP command when the server is back on the network.

Printing

Use the NET CAPTURE command described in your NetWare Lite user manual to re-direct printing from your LPT1 or LPT2 ports to a network printer before you enter Windows. Configure your printer in Windows to either the LPT1.OS2 or LPT2.OS2 ports depending on which port you captured before entering Windows. Workstations that are configured as both server and client should use LPT1.OS2 or LPT2.OS2 to print from Windows.

Local Network Printers

Once a printer is assigned as a Network Printer, you should only access that printer through the network. You may have a printer attached to your workstation that has been defined as a Network Printer. In this case, you should capture a port when you wish to print to it. If you print to it directly (not using capture), you may cause print job corruption.

NetWare Lite Messages

Messages sent to network users through NetWare Lite will only appear when you open a DOS prompt or exit Windows.

FYI: NetWare Lite and 3rd Party Caches

FYI

(Note: The origin of this information may be internal or external to Novell. Novell makes every effort within its means to verify this information. However, the information provided in this document is FOR YOUR INFORMATION only. Novell makes no explicit or implied claims to the validity of this information.)

TITLE: NetWare Lite and 3rd Party Caches
DOCUMENT ID#: FYI.P.6009
DATE: 29OCT91
PRODUCT: NetWare Lite
PRODUCT VERSION: All versions
SUPERSEDES: NA

SYMPTOM: NA

ISSUE/PROBLEM

NetWare Lite does not ship with a disk cache. We have tested with several (read many) commercially available disk cache products and found them to be quite inexpensive while adding significant performance to the NetWare Lite SERVER software. We suggest for higher performance of the NetWare Lite SERVER that a disk cache be acquired and installed on the server machines. Some cache tuning may be necessary for best results.

FYI: Installing WordPerfect 5.x

FYI

(Note: The origin of this information may be internal or external to Novell. Novell makes every effort within its means to verify this information. However, the information provided in this document is FOR YOUR INFORMATION only. Novell makes no explicit or implied claims to the validity of this information.)

TITLE:	Installing WordPerfect 5.x
DOCUMENT ID#:	FYI.P.6008
DATE:	29OCT91
PRODUCT:	NetWare Lite
PRODUCT VERSION:	All versions
SUPERSEDES:	NA
SYMPTOM:	NA

ISSUE/PROBLEM

This document was created to help you run WordPerfect on a NetWare Lite server. If you want more than one user to have access to the WordPerfect program, you must make these changes. WARNING: If you plan on using WordPerfect on two or more machines, you must obtain a multiple-copy site license from the WordPerfect Corporation.

FASTPATH STEPS

DETAILED INSTRUCTIONS

- | | |
|--|---------------------------------|
| 1. cd c:\wp
directory where the WordPerfect files are located. This is usually called c:\wp. To change to this directory type "cd \wp" and press enter. | 1. It is necessary to be in the |
| 2. Type "install" | 2. WordPerfect has an |

installation procedure which allows you to change the machine's configuration. To access the installation menu, type "install" and press enter.

3. Select "Y" to continue with the installation procedure.

4. Select "Y" to install to your hard disk drive.

Note: You must have a hard drive to install your computer as a server with NetWare Lite.

5. At the installation customized menu, select "3" to perform a network installation onto a network.

6. At the Network Customization Installation file Menu, select "5" to allow the WordPerfect program files to be shared by multiple users. To check or create this file, select "5".

7. Press "Y" to create the WP{WP}.ENV file if necessary. If the WP{WP}.ENV file does not already exist, the computer will ask you if you want to create it. Select "Y" for yes.

Note: If this file already exists, the computer will skip this step.

8. At the Check WP{WP}.ENV File Menu, select "0" for other. The Check WP{WP}.ENV File menu appears and allows you to select the type of network environment you will be using. Since NetWare Lite is not listed, select "0" for other.

Note: Do NOT select 1 for Novell NetWare. This will not configure your machine for NetWare Lite.

9. Enter the directory screen, the computer

9. At the bottom of the

and path for setup will ask you for the path you want the setup files to be copied to. Normally you would set this path to the same location of the other WordPerfect files. If that is correct, type in that path and press enter. If not, change it to reflect the desired path.

10. Pres F7 to exit
Press installation
the

10. Installation is now complete.
the F7 function key to exit
installation menu.

From now on, when you start WordPerfect, the program will prompt you to enter a three letter username. This is to distinguish one user from another. Each user must go into the setup (shift-F1) and define the location of their own files. Each user must specify the drive letter they mapped WordPerfect to in NetWare Lite for the location of the system files.

Note: When printing documents from WordPerfect, make sure you load NetWare Lite before you load WordPerfect. And if your computer is installed as both a client and a server, make sure your startnet.bat file loads client before server (this is the default).

FYI: Loading CLIENT and SERVER into Upper Memory
FYI

(Note: The origin of this information may be internal or external to Novell. Novell makes every effort within its means to verify this information. However, the information provided in this document is FOR YOUR INFORMATION only. Novell makes no explicit or implied claims to the validity of this information.)

TITLE: Loading CLIENT and SERVER into Upper Memory
DOCUMENT ID#: FYI.P.6007
DATE: 29OCT91
PRODUCT: NetWare Lite
PRODUCT VERSION: All versions
SUPERSEDES: NA

SYMPTOM: NA

ISSUE/PROBLEM

Memory managers which load terminate-stay-resident programs (TSR's) such as CLIENT.EXE and SERVER.EXE into upper memory reserve a fixed length block of memory to load the program. As long as the program is the same size in memory as it is on disk, there will be no memory conflict. However, SERVER.EXE is actually larger when it is loaded than it is on disk. Since SERVER.EXE is larger, memory managers that do not account for such growth may load SERVER into too small of a memory block. This can cause memory corruption and the computer to hang. To avoid this type of problem, we suggest that you do not load SERVER into upper memory. CLIENT does not grow when loaded so it can be loaded "high".

FYI: The IPXODI Driver

FYI

(Note: The origin of this information may be internal or external to Novell. Novell makes every effort within its means to verify this information. However, the information provided in this document is FOR YOUR INFORMATION only. Novell makes no explicit or implied claims to the validity of this information.)

TITLE:	The IPXODI Driver
DOCUMENT ID#:	FYI.P.6006
DATE:	29OCT91
PRODUCT:	NetWare Lite
PRODUCT VERSION:	All versions
SUPERSEDES:	NA
SYMPTOM:	NA

ISSUE/PROBLEM

The IPX shipped with NetWare Lite (IPXODI) is not new and is not special to NetWare Lite. Novell has made a general decision to convert from "linked" IPX to IPXODI. IPXODI is shipped with the LAN Workplace for DOS product, and with DOS/Windows shell kit. Novell will convert from linked IPX to IPXODI for red-box NetWare in the near future. IPXODI is functionally identical to the linked version of IPX, although the LSL offers multiple-protocol and MLID capabilities. NetWare Lite can be run on top of either (but not both) linked IPX or IPXODI. STARTNET.BAT, which is created as part of the NetWare Lite installation, should be modified to NOT load LSL (the odi driver) and IPXODI if linked

IPX is already being loaded elsewhere (like in your AUTOEXEC.BAT).

FYI: Setting LASTDRIVE

FYI

(Note: The origin of this information may be internal or external to Novell. Novell makes every effort within its means to verify this information. However, the information provided in this document is FOR YOUR INFORMATION only. Novell makes no explicit or implied claims to the validity of this information.)

TITLE: Setting LASTDRIVE
DOCUMENT ID#: FYI.P.6005
DATE: 29OCT91
PRODUCT: NetWare Lite
PRODUCT VERSION: All versions
SUPERSEDES: NA

SYMPTOM: NA

ISSUE/PROBLEM

LASTDRIVE is a DOS command which is executed at boot time from the CONFIG.SYS file. The NetWare Lite NET utility uses LASTDRIVE to identify valid drives and provide compatibility with other NetWare products. The installation programs default value of LASTDRIVE=M: should work for most situations. If you wish to use a value other than M: be aware that LASTDRIVE should be set to G: or greater for NET to run. LASTDRIVE is set by including a command such as "LASTDRIVE=G:" in CONFIG.SYS. If you attempt to run NET with LASTDRIVE set lower than G:, or not set, you will have to increase the value of LASTDRIVE and reboot before any NET command can be executed.

When LASTDRIVE is set to F: network directories can be mapped to any drive letter up to LASTDRIVE (except C: if SERVER is loaded). However, F: must be mapped in order to map D: or E:. If the situation occurs where D: or E: is mapped and F: is not mapped, the LASTDRIVE error message will result upon execution of the next NET command. To avoid this problem set LASTDRIVE to G: or greater.

FYI: SERVER Only Instead of SERVER and CLIENT
FYI

(Note: The origin of this information may be internal or external to Novell. Novell makes every effort within its means to verify this information. However, the information provided in this document is FOR YOUR INFORMATION only. Novell makes no explicit or implied claims to the validity of this information.)

TITLE: SERVER Only Instead of SERVER and CLIENT
DOCUMENT ID#: FYI.P.6004
DATE: 29OCT91
PRODUCT: NetWare Lite
PRODUCT VERSION: All versions
SUPERSEDES: NA

SYMPTOM: NA

ISSUE/PROBLEM

NetWare Lite is designed to allow multiple computers (nodes) in a physical LAN segment (network) to share resources like printers and disk space. Computers which make resources available to the network are called servers. Computers which access resources are called clients. If a particular server does not require access to other servers' resources, then you should consider making it a server only. A server which does not run simultaneously as a client is called a "dedicated" server. Network performance can be improved by running servers as dedicated. Also, the less the server is used as a workstation the better it will perform as a server. Note that a workstation must be running as a client to use the NET utility, which is the interface for managing the network. This means that a computer which is configured as a server only must be managed from another network workstation which is a client. See fax document "Before Beginning Installation" for more information on deciding how to set up your network.

FYI: SHARE.EXE: Status Report 5

FYI

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to Novell. Novell makes every effort within its means to verify this information. However, the information provided in this document is FOR YOUR INFORMATION only. Novell makes no explicit or implied claims to the validity of this information.)

TITLE: SHARE.EXE: Status Report 5
DOCUMENT ID#: FYI.P.6003
DATE: 29OCT91
PRODUCT: NetWare Lite
PRODUCT VERSION: All versions
SUPERSEDES: NA

SYMPTOM: Status Report 5

ISSUE/PROBLEM

When loading the server, you may get "Status Report 5", which talks about SHARE.EXE not being loaded when the SERVER.EXE was executed. SHARE.EXE is a program that comes with DOS 3.1 or above. SHARE is the mechanism that allows files to be accessed simultaneously from multiple clients. If you get Status Report 5, you do not have SHARE.EXE in your PATH. Either add the appropriate directory to your PATH (where SHARE.EXE is located) or copy SHARE.EXE to the directory where NetWare Lite is installed. Although loading SHARE is not required for the server to run, it is strongly recommended. SHARE should be loaded before SERVER. SHARE should be tuned for proper performance. You may need to increase the values for locks (/L) and files (/F) if you run database applications, or if you have more than 4 users accessing the server. See your DOS documentation for more information on configuring SHARE. You do not need to load SHARE before loading CLIENT.

Note that when you increase the number of files that can be locked at one time (i.e., by increasing the /L: above the default of 20), you must also increase the amount of file space in the operating system's storage area (done by increasing the /F: above the default of 2048). Generally each open file requires an additional 20 bytes of storage space. See your DOS documentation for more information.

FYI: Top Support Issues

FYI

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TITLE: Top Support Issues
DOCUMENT ID#: FYI.P.6002
DATE: 29OCT91
PRODUCT: NetWare Lite
PRODUCT VERSION: All versions
SUPERSEDES: NA

SYMPTOM: Status Report 5

ISSUE/PROBLEM

SHARE.EXE: Status Report 5

When loading the server, you may get "Status Report 5", which talks about SHARE.EXE not being loaded when the SERVER.EXE was executed. SHARE.EXE is a program that comes with DOS 3.1 or above. SHARE is the mechanism that allows files to be accessed simultaneously from multiple clients. If you get Status Report 5, you do not have SHARE.EXE in your PATH. Either add the appropriate directory to your PATH (where SHARE.EXE is located) or copy SHARE.EXE to the directory where NetWare Lite is installed. Although loading SHARE is not required for the server to run, it is strongly recommended. SHARE should be loaded before SERVER. SHARE should be tuned for proper performance. You may need to increase the values for locks (/L) and files (/F) if you run database applications or if you have more than 4 users accessing the server. See your DOS documentation for more information on configuring SHARE. You do not need to load SHARE before loading CLIENT.

Loading SERVER Only Instead of SERVER and CLIENT

NetWare Lite is designed to allow multiple computers (nodes) in a physical LAN segment (network) to share resources like printers and disk space. Computers which make resources available to the network are called servers. Computers which access resources are called clients. If a particular server does not require access to other servers' resources, then you should consider making it a server only. A server which does not run simultaneously as a client is called a "dedicated" server. Network performance can be improved by running servers as

dedicated. Also, the less the server is used as a workstation the better it will perform as a server. Note that a workstation must be running as a client to use the NET utility, which is the interface for managing the network. This means that a computer which is configured as a server only must be managed from another network workstation which is a client. See fax document "Before Beginning Installation" for more information on deciding how to set up your network.

Setting LASTDRIVE

LASTDRIVE is a DOS command which is executed at boot time from the CONFIG.SYS file. The NetWare Lite NET utility uses LASTDRIVE to identify valid drives and provide compatibility with other NetWare products. The installation programs default value of LASTDRIVE=M: should work for most situations. If you wish to use a value other than M: be aware that LASTDRIVE should be set to G: or greater for NET to run. LASTDRIVE is set by including a command such as "LASTDRIVE=G:" in CONFIG.SYS. If you attempt to run NET with LASTDRIVE set lower than G:, or not set, you will have to increase the value of LASTDRIVE and reboot before any NET command can be executed.

Network Applications

Installing applications on NetWare Lite may be different than installing applications on NetWare. NetWare is, as you know, a very popular LAN. Many applications have NetWare specific installation options. These installation options DO NOT apply to NetWare Lite networks. NetWare Lite is a DOS peer-to-peer network. If the application being installed has network specific installations then "Other networks.." or "DOS peer-to-peer network" or the like, should be selected. DO NOT select NetWare or Novell installation options. See Appendix B in the documentation for more details about using NetWare Lite with NetWare.

Capturing Ports

The term "capturing ports" refers to redirecting print jobs from the normal printing device to someplace else, in this case, a network printer. To capture a port in the NetWare Lite environment you must have first loaded CLIENT and be logged in to the network. The NET CAPTURE command has the following format:

```
NET CAPTURE port printer server settings
```

where port, printer, server, and settings are replaced by your port name, server name, etc.. The following example captures print jobs sent to parallel port LPT1 and redirects them to the network printer named "LASER" on server "GEORGE" with banner printing turned off.

```
NET CAPTURE LPT1 LASER GEORGE b=n
```

See the user's manual or use the NET HELP CAPTURE command for a complete list of options to NET CAPTURE.

PostScript Printers

Because of the nature of postscript printers, special care must be taken when sending print jobs. You should make sure your capture has the following set:

```
BANNER=No  
TABS=0  
FORMFEED=No
```

You may also want to set the WAIT parameter to a value higher than 10 seconds. If your print job gets split to multiple jobs when printing to a postscript printer, you will want to increase the WAIT value. Increase it until your print job comes out all in one job.

Installing "other" Network Interface Card Drivers

When loading NetWare Lite you are prompted to select a network interface card driver. Unfortunately, the installation program fails to complete properly if "other" is selected. If you need to use a card driver not supplied on the original installation diskettes, you can avoid this problem by making a backup copy of the original diskettes and copying the card driver to the backup. Use the backup to install NetWare Lite. Note: If you make a separate backup of the "driver" diskette you must copy your card driver to the "driver" backup. See fax document "Selecting Other Card Driver During Installation" for a step-by-step procedure on how to do this.

The IPXODI Driver

The IPX shipped with NetWare Lite (IPXODI) is not new and is not special to NetWare Lite. Novell has made a general decision to convert from "linked" IPX to IPXODI. IPXODI is shipped with the LAN Workplace for DOS product, and with DOS/Windows shell

kit. Novell will convert from linked IPX to IPXODI for red-box NetWare in the near future. IPXODI is functionally identical to the linked version of IPX, although the LSL offers multiple-protocol and MLID capabilities. NetWare Lite can be run on top of either (but not both) linked IPX or IPXODI. STARTNET.BAT, which is created as part of the NetWare Lite installation, should be modified to NOT load LSL (the odi driver) and IPXODI if linked IPX is already being loaded elsewhere (like in your AUTOEXEC.BAT).

Loading CLIENT and SERVER into Upper Memory

Memory managers which load terminate-stay-resident programs (TSR's) such as CLIENT.EXE and SERVER.EXE into upper memory reserve a fixed length block of memory to load the program into. As long as the program is the same size in memory as it is on disk, there will be no memory conflict. However, SERVER.EXE is actually larger when it is loaded than it is on disk. Since SERVER.EXE is larger, memory managers that do not account for such growth may load SERVER into too small of a memory block. This can cause memory corruption and the computer to hang. To avoid this type of problem do not load SERVER into upper memory. CLIENT does not grow when loaded so it can be loaded "high".

Installing to a 360K Floppy Drive

Your computer must have a hard drive to be configured as a server. Therefore, installing to a floppy drive implies you are configuring your computer as a client only. All the files required to run as a client will fit on one 360K floppy diskette. The procedure for installing NetWare Lite to a floppy drive is essentially the same as installing to a hard drive. When the installation program prompts for the path to the directory where NetWare Lite will be installed, enter a: (or b:) and press return. The installation program will read files from the installation diskettes and then copy them to your diskette prompting you periodically to switch diskettes. Make sure that the diskette you are installing to is bootable by entering "sys a:" (or "sys b:") at the DOS command prompt. To run your computer as a NetWare Lite client, insert the new boot diskette into the a: drive and reboot. When the computer has finished booting, type "startnet" at the DOS command prompt and press enter. Running off a floppy drive can be slow. To improve your workstation performance, see fax document "Assisting Floppy-Based Clients".

FYI: Known Documentation Errors

FYI

(Note: The origin of this information may be internal or external to Novell. Novell makes every effort within its means to verify this information. However, the information provided in this document is FOR YOUR INFORMATION only. Novell makes no explicit or implied claims to the validity of this information.)

TITLE: Known Documentation Errors
DOCUMENT ID#: FYI.P.6001
DATE: 29OCT91
PRODUCT: NetWare Lite
PRODUCT VERSION: All versions
SUPERSEDES: NA

SYMPTOM: NA

ISSUE/PROBLEM

Your manual may contain one or more of the following errors.

Page 7 -- In the "Log in to NetWare Lite" section step 3, "NET LOGIN" should read "NET LOGIN SUPERVISOR".

Pages 36 and 60 --Incorrectly state that the supervisor privileges are not required. Supervisor privileges are required except for a server running on your own machine.

Page 106 -- Incorrectly states that COM1 and COM2 can be captured using the NET CAPTURE command. Only LPT1, LPT2, and LPT3 can be captured. However, network printers can be assigned to COM ports on servers.

Page 107 -- Is missing the "notify" capture setting. You can specify the notify option using "N=Y" or "NOTIFY=Y". If set, the server will send you a message when the print job is done.

Page 149 -- The discussion of network configuration files is not needed. The NetWare Lite INSTALL utility generates the correct NET.CFG file from the options you select during installation. After installation, you can edit the NET.CFG file using any standard ASCII text editor.

FYI: MASTER DOCUMENT

FYI

(Note: The origin of this information may be internal or external to Novell. Novell makes every effort within its means to verify this information. However, the information provided in this document is FOR YOUR INFORMATION only. Novell makes no explicit or implied claims to the validity of this information.)

TITLE: MASTER DOCUMENT
DOCUMENT ID#: FYI.P.6000
DATE: 29OCT91
PRODUCT: NetWare Lite
PRODUCT VERSION: All versions
SUPERSEDES: NA

SYMPTOM: NA

ISSUE/PROBLEM

MASTER DOCUMENT

NetWare Lite v 1.0

Welcome to Novell's NetWare Lite Fax Information System. This automated technical support allows you to retrieve up to date information on upgrade reports, installation tips, product information, etc., via fax machine 24 hours a day. Here's how to use it.

1. You can call from a regular touch-tone phone or a fax machine. If you do not call from a fax machine you will be prompted to enter the phone number of the fax machine where your fax should be sent.
2. Dial 1-8--NETWARE, press the star (*) key during the recorded message. This will transfer you to the fax system.
3. Follow the prompts. When the system asks which document you wish to receive enter the document number(s) listed in the master document. You can receive up to 3 documents per call.

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FYI: Printing Lotus 2.2 Spreadsheets In NetWare Lite
FYI

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TITLE: Printing Lotus 2.2 Spreadsheets In NetWare
Lite
DOCUMENT ID#: FYI.P.4507
DATE: 30OCT91
PRODUCT: NetWare Lite
PRODUCT VERSION: v1.0
SUPERSEDES: NA

SYMPTOM: Unable to print from Lotus 2.2.

ISSUE/PROBLEM

Why can't a user print Lotus 2.2 spreadsheets with NetWare Lite?

SOLUTION

Lotus prints directly to the LPT1 port (bypassing the BIOS table) when NetWare Lite server is loaded it takes the printer out of the BIOS table and puts it back in when the port is captured. This means that if a user wants to print from a machine that has Server loaded they will have to capture the printer port, even to print locally.

In order to print from Lotus: Load Lotus, activate the menus with the forward slash, select worksheet, global, default, printer, interface, then select "5" (DOS device LPT1).

FYI: Printing Problem. NetWare Lite, NE2000
FYI

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TITLE: Printing Problem. NetWare Lite, NE2000
DOCUMENT ID#: FYI.P.4694
DATE: 19NOV91

PRODUCT: NetWare Lite
PRODUCT VERSION: v1.0
SUPERSEDES: NA

SYMPTOM: NA

ISSUE/PROBLEM

A customer installed NetWare Lite using NE2000 cards set at Int 5. If they send a print job from a client to the server, the first job goes through fine, any print jobs after that do not print. Sometimes the system would hang as well.

SOLUTION

Changed the NE2000's from Int 5 to Int 3. The system is now working for them. We are not clear as to why this should work for them. They were not trying to print to LPT2 which normally uses Int 5.

FYI: Printing To COM Ports With NetWare Lite
FYI

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TITLE: Printing To COM Ports With NetWare Lite
DOCUMENT ID#: FYI.P.4755
DATE: 22NOV91
PRODUCT: NetWare Lite
PRODUCT VERSION: v1.0
SUPERSEDES: NA

SYMPTOM: Error displayed "Error: Unable to find server".

ISSUE/PROBLEM

User was trying to CAPTURE to the COM1 port from the workstation. When he issued the command as described on P.106 of the manual it returned an error:

NET CAPTURE COM1 LASER_Q
Error: Unable to find server LASER_Q

SOLUTION

The manual is WRONG, you cannot CAPTURE to a COM port from the workstation. The only way to CAPTURE to a serial device is to make it a shared network printer, ie connected to the Server machine running SERVER.EXE only. If you are running CLIENT.EXE then you can only CAPTURE to LPT1, LPT2 or LPT3.

FYI: Erroneous Printer Off-Line Message. NetWare Lite
FYI

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TITLE: Erroneous Printer Off-Line Message. NetWare
Lite
DOCUMENT ID#: FYI.P.4751
DATE: 22NOV91
PRODUCT: NetWare Lite
PRODUCT VERSION: v1.0
SUPERSEDES: NA

SYMPTOM: Getting a printer off-line error.

ISSUE/PROBLEM

Several customers have reported that after sending a print job to a network printer, the server where the printer is attached pops up a message indicating that the printer seems to be off-line when the printer is on-line. This has only happened with laser printers so far, most often HP II's. The message says to hit the escape key to continue. After pressing escape the user may get various results. The entire job may print, a few pages may print, or a single page may print. Pressing escape generally causes more pages to print. This may show up more when printing jobs that require down-loading fonts, landscape mode, or anything else that requires a long setup.

SOLUTION

Increase the "error wait time" which is set as part of the network printer definition. This parameter should not be confused with the "printer wait" parameter set in the CAPTURE command. These two parameters serve different functions. When the server receives an error message from the printer for any reason, the server will wait the error wait time before retrying. If the server gets another error it pops up the message. Increasing the error wait time will allow slow printers sufficient time to service the data in its buffer before the server retries sending more data.

The printer wait time is how long the client.EXE (captured port) will wait before assuming the job is closed.

FYI: NetWare Lite And Loading NETX Last
FYI

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TITLE: NetWare Lite And Loading NETX Last
DOCUMENT ID#: FYI.P.4725
DATE: 19NOV91
PRODUCT: NetWare Lite
PRODUCT VERSION: v1.0
SUPERSEDES: NA

SYMPTOM: Cannot run Net.

ISSUE/PROBLEM

The users have two IBM 55's and are using Tiara arcnet cards and the reference disk. He is generating his own IPX and using it to load the shells. When he typed Net the server would hang.

SOLUTION

We had him read off the startnet.bat file. He had the following:

IPX
netx
share
server
client

His problem was that he was loading netx. It isn't needed for NetWare lite unless you are going to attach to a 286 or 386 server and then it is a last thing that should be loaded. For example:

IPX
share
server
client
netx (optional)

FYI: Colorpal And NetWare Lite v1.0

FYI

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TITLE: Colorpal And NetWare Lite v1.0
DOCUMENT ID#: FYI.P.4710
DATE: 20NOV91
PRODUCT: NetWare Lite
PRODUCT VERSION: v1.0
SUPERSEDES: NA

SYMPTOM: NA

ISSUE/PROBLEM

The COLORPAL Colour Palette editor supplied with NetWare may be used to edit the Colour Palettes as used with NetWare Lite. COLORPAL is NOT supplied with NetWare Lite but may be used by performing the following steps:

1. Log in to your NetWare File Server

2. NCOPY SYS:PUBLIC\COLORPAL.* C:\NWLITE
NCOPY SYS:PUBLIC\SYSS\$.DAT C:\NWLITE
3. Log out from your NetWare File Server and Reboot your workstation. This is most important!
4. Change to the \NWLITE directory
5. COPY LITE\$RUN.OVL \$RUN.OVL
COPY LITE\$RUN.OVL IBM\$RUN.OVL
6. COLORPAL Make changes to the colours as you wish...
7. COPY IBM\$RUN.OVL LITE\$RUN.OVL
8. STARTNET
9. NET The screen of NET will now appear in your chosen colours.

To repeat the procedure either start again at step 3, if you have been logged in to a NetWare File Server, or step 4 if you have not.

COLORPAL edits the file IBM\$RUN.OVL to change the Colour Palette definitions for the default IBM 'short machine type'. However, in the NetWare Lite environment there is no idea of 'short machine type' hence the need for another copy of LITE\$RUN.OVL named simply \$RUN.OVL which COLORPAL requires to find its own Colour Palette.

FYI: "No Servers Were Found On NetWork" NetWare Lite
FYI

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TITLE: "No Servers Were Found On NetWork" NetWare
Lite
DOCUMENT ID#: FYI.P.4707
DATE: 20NOV91
PRODUCT: NetWare Lite
PRODUCT VERSION: v1.0
SUPERSEDES: NA

SYMPTOM: Attempting to login and receive an error "No servers were found on the network".

ISSUE/PROBLEM

The customer is running a server and a client on a couple of 386 Samsung machines. The server comes up fine but the client, upon attempting to login to the server, gets "no servers were found on the network". He tried replacing his WD Plus cards at the server and client, as well as terminators, T-connectors, and cables. He also tried various port and irq options. All of this to no avail.

SOLUTION

We asked him what he had in his autoexec.bat and config.sys files. He was running SUPERPCK from his autoexec.bat with the /em switch (loads it in extended memory). The SUPERPCK executable controls disk caching. We remarked that line out in his autoexec.bat and he logged in successfully from that point on.

Apparently there have been several problems arise with using Super PC-Kwik disk caching utility. This will not be a solution for those who need to run SUPERPCK in order to successfully accommodate certain 3rd-party applications. We're not exactly sure why this solution solved what would appear to be a communications problem.

FYI: Using CD-ROM As A Network Resource. NetWare Lite

FYI

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TITLE: Using CD-ROM As A Network Resource. NetWare
Lite
DOCUMENT ID#: FYI.P.4676
DATE: 14NOV91
PRODUCT: NetWare Lite
PRODUCT VERSION: v1.0
SUPERSEDES: NA

SYMPTOM: NA

ISSUE/PROBLEM

If a server has a cd-rom attached and wants to make it a network resource, he has to map a drive to it like he was a client.

If he doesn't map the drive and he tries to access the cd-rom while a different client is also trying to access the same file, the server may reboot or hang. This happens on a machine that loads server only.

If client is loaded on the server and a drive is not mapped, then you won't be able to access the drive locally at all (you'll get an access denied message)

SOLUTION

According to the engineers, this problem is due to the fact that the CD-ROM driver is using the same dos interrupts as our client.exe and server.exe files (int 2f). As long as you load client and server at the machine the CD-ROM is attached to and map a drive to the CD-ROM network directory, everything should work fine.

FYI: NetWare Lite And Gateway 8-Bit Card Problems

FYI

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TITLE: NetWare Lite And Gateway 8-Bit Card Problems
DOCUMENT ID#: FYI.P.4607
DATE: 11NOV91
PRODUCT: NetWare Lite
PRODUCT VERSION: v1.0
SUPERSEDES: NA

SYMPTOM: Server hangs after capturing to a port.

ISSUE/PROBLEM

Customer had a Gateway G/EtherLink 8-bit WS Adapter installed on his server/client. He could get the network up and everything worked fine until he captured a port to the server in question at which point the server would hang. He was using the latest version of Gateway's ODI driver, GEPCDODI.COM dated 7-3-91. The cards in the client machines were 16-bit Gateways.

SOLUTION

Using a 16-bit card in the server solved the problem. Gateway confirmed that their 8-bit cards may have some problems particularly in faster machines or in conjunction with 16-bit cards.

FYI: Error 0x4904 Attaching To Server. NetWare Lite
FYI

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TITLE: Error 0x4904 Attaching To Server. NetWare
Lite
DOCUMENT ID#: FYI.P.4587
DATE: 07NOV91
PRODUCT: NetWare Lite
PRODUCT VERSION: v1.0
SUPERSEDES: NA

SYMPTOM: Getting "Error 0x4904" when attaching to the
Server.

ISSUE/PROBLEM

Attempting to login to a new Lite installation. After supplying the user name they would get the above error. They had verified the network connection with the Lite install utility and comcheck from v2.x NetWare. This error means "Can't get Local Connection" which translates into a physical network problem. They were using Cnet NE1000 clone NICs with the ODI driver.

SOLUTION

The ODI driver was replaced with an IPX.COM for an NE1000 generated from WSGEN and the problem disappeared.