



Multi-Protocol On-board Ethernet Multi-function Print Server

NETWORK USER'S GUIDE

M7250N

Please read this manual thoroughly before using this machine on your network. You can view this manual in PDF format from the CD-ROM at any time, please keep the CD-ROM in a convenient place for quick and easy reference at all times.



Definitions of notes

We use the following icon throughout this User's Guide:



Notes tell you how you should respond to a situation that may arise or give tips about how the operation works with other features.

Trademarks

Lenovo, Lenovo 联想, 联想, and other Lenovo markings or identification are either trademarks or registered trademarks in Chinese Mainland and/or other countries/territories of Lenovo (Beijing) Limited or its affiliates.

Apple and Macintosh are registered trademarks and Safari is a trademark of Apple Inc.

HP, Hewlett-Packard, Jetdirect and PCL are registered trademarks of Hewlett-Packard Company.

PostScript is a registered trademark of Adobe Systems Incorporated.

Windows Vista is either a registered trademark or a trademark of Microsoft Corporation in the United States and other countries.

Microsoft, Windows and Windows Server are registered trademarks of Microsoft Corporation in the United States and/or other countries.

Java and all Java-based trademarks and logos are trademarks or registered trademarks of Sun Microsystems, Inc. in the United States and other countries.

Firefox is a registered trademark of the Mozilla Foundation.

All other terms, brand and product names mentioned in this User's Guide are registered trademarks or trademarks of their respective companies.

Compilation and publication notice

Under the supervision of Lenovo (Beijing) Limited, this manual has been compiled and published, covering the latest product's descriptions and specifications.

The contents of this manual and the specifications of this product are subject to change without notice.

Lenovo reserves the right to make changes without notice in the specifications and materials contained herein and shall not be responsible for any damages (including consequential) caused by reliance on the materials presented, including but not limited to typographical and other errors relating to the publication.

©2008 Lenovo (Beijing) Limited.

IMPORTANT NOTE

- Windows® XP in this document represents Windows® XP Professional, Windows® XP Professional x64 Edition and Windows® XP Home Edition.
- Windows® Server 2003 in this document represents Windows® Server 2003 and Windows® Server 2003 x64 Edition.
- Windows Vista® in this document represents all editions of Windows Vista®.

Table of Contents

1	Introduction	1
	Overview	1
	Network features.....	2
	Network printing.....	2
	Network scanning.....	2
	Network PC Fax	2
	Management utilities.....	2
	Types of network connections	4
	Network connection example	4
	Protocols.....	6
	TCP/IP protocols and functionalities.....	6
	Other protocol.....	8
2	Configuring your machine for a network	9
	Overview	9
	IP addresses, subnet masks and gateways	9
	IP address	9
	Subnet mask.....	10
	Gateway (and router).....	11
	Step by step chart.....	11
	Setting the IP address and subnet mask.....	12
	Using the BRAdmin Light utility to configure your machine as a network printer	12
	Using the control panel to configure your machine for a network.....	14
	Using other methods to configure your machine for a network	14
	Changing the print server settings.....	15
	Using the BRAdmin Light utility to change the print server settings	15
	Using the control panel to change the print server settings.....	15
	Using Web Based Management (web browser) to change the print/scan server settings	15
	Using Remote Setup to change the print server settings (not available for Windows Server® 2003)	16
	Using other methods to change print server settings	16
3	Control panel setup	17
	LAN menu.....	17
	TCP/IP	17
	Ethernet.....	24
	Scan to FTP.....	24
	Restoring the network settings to factory default.....	25
	Printing the Network Configuration List	26
4	Network printing from Windows®: basic TCP/IP Peer-to-Peer printing	27
	Overview	27
	Configuring the standard TCP/IP port.....	28
	Printer driver not yet installed	28
	Printer driver already installed	28
	Other sources of information	29

5	Internet printing for Windows®	30
	Overview	30
	IPP printing for Windows® 2000/XP, Windows Vista® and Windows Server® 2003	31
	For Windows Vista®	31
	For Windows® 2000/XP and Windows Server® 2003	33
	Specifying a different URL	35
	Other sources of information	35
6	Network printing from Macintosh®	36
	Overview	36
	Printing from a Macintosh® using the Simple Network Configuration capabilities	36
	How to choose the printer driver (TCP/IP)	36
	Other sources of information	40
7	Web Based Management	41
	Overview	41
	How to configure the print server settings using Web Based Management (web browser)	42
	Password information	43
	Changing the Scan to FTP configuration using a web browser	43
8	Security features	44
	Overview	44
	Security methods for E-mail notification	44
	POP before SMTP (PbS)	44
	SMTP-AUTH (SMTP Authentication)	44
	APOP (Authenticated Post Office Protocol)	44
	Using E-mail notification with user authentication	45
9	Troubleshooting	47
	Overview	47
	General problems	47
	Network print software installation problems	48
	Printing problems	50
	Scanning and PC Fax problems	51
	Protocol-specific troubleshooting	53
	Windows® 2000/XP, Windows Vista® and Windows Server® 2003 IPP troubleshooting	53
	Web Based Management (web browser) troubleshooting (TCP/IP)	53
A	Appendix A	54
	Using services	54
	Other ways to set the IP address (for advanced users and administrators)	54
	Using DHCP to configure the IP address	54
	Using BOOTP to configure the IP address	55
	Using RARP to configure the IP address	56
	Using APIPA to configure the IP address	56
	Using ARP to configure the IP address	56
	Using the TELNET console to configure the IP address	57

Installation when using web services (For Windows Vista® users)	59
Installation when using a Network Print Queue or Share (printer driver only)	60

B	Appendix B	61
----------	-------------------	-----------

Print server specifications	61
Ethernet wired network	61
Function table and default factory settings	62
Entering Text	64

C	Index	66
----------	--------------	-----------

Overview

The Lenovo machine can be shared on a 10/100 Mb wired Ethernet network using the internal network print server. The print server supports various functions and methods of connection depending on the operating system you are running on a network supporting TCP/IP. These functions include printing, scanning, PC Fax send, PC Fax receive, Remote Setup and Status Monitor. The following chart shows what network features and connections are supported by each operating system.

Operating Systems	Windows® 2000 Windows® XP Windows® XP Professional x64 Edition Windows Vista®	Windows Server® 2003 Windows Server® 2003 x64 Edition	Mac OS® X 10.2.4 or greater
10/100BASE-TX Wired Ethernet (TCP/IP)	✓	✓	✓
Printing	✓	✓ ¹	✓
BRAdmin Light	✓	✓	✓
Web Based Management (web browser)	✓	✓	✓
Internet Printing (IPP)	✓	✓	
Scanning	✓		✓ ²
PC Fax Send	✓		
PC Fax Receive	✓		
Remote Setup	✓		
Status Monitor	✓		✓

To use the Lenovo machine through a network, you need to configure the print server, and set up the computers you use.

¹ Via network only

² Scan to FTP only

Network features

Your Lenovo machine has the following basic network features.

Network printing

The print server provides printing services for Windows® 2000/XP, Windows Vista® and Windows Server® 2003 supporting the TCP/IP protocols and Macintosh® (Mac OS® X 10.2.4 or greater) supporting the TCP/IP protocols.

Network scanning

You can scan documents over the network to your computer (See *Network Scanning* in the Software User's Guide).

Network PC Fax

You can directly send a PC file as a PC Fax over your network (See *Lenovo PC-FAX Software* in the Software User's Guide for a complete description). Windows® users can also PC Fax receive (See *PC-FAX receiving* in the Software User's Guide).

Management utilities

BRAdmin Light (for Windows®)

BRAdmin Light is a utility for initial setup of Lenovo network connected devices. This utility can search for Lenovo products on your network, view the status and configure basic network settings, such as IP address. The BRAdmin Light utility is available for Windows® 2000/XP, Windows Vista® and Windows Server® 2003 computers. BRAdmin Light will be installed automatically when you install the printer driver. If you have already installed the printer driver, you don't have to install it again.

Remote Setup

The Remote Setup software allows you to configure network settings from a Windows® computer. (See *Remote Setup* in the Software User's Guide).

Web Based Management (web browser)

The Web Based Management allows you to monitor Lenovo printer's status or change some of its configuration settings using a web browser.



Note

We recommend Microsoft Internet Explorer 6.0[®] (or greater) or Firefox[®] 1.0 (or greater) for Windows[®] and Safari[™] 1.0 for Macintosh[®]. Please also make sure that JavaScript and Cookies are always enabled in whichever browser you use. We recommend you upgrade to Safari[™] 1.2 or greater to enable JavaScript. If a different web browser is used, make sure it is compatible with HTTP 1.0 and HTTP 1.1.

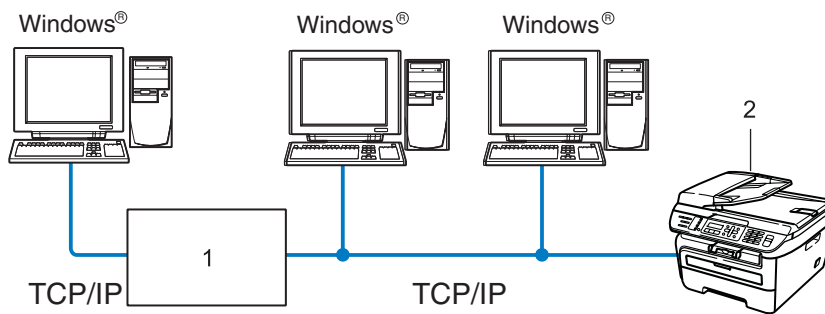
Types of network connections

Network connection example

Generally there are two types of network connections: Peer-to-Peer and Network Shared environment.

Peer-to-Peer printing using TCP/IP

In a Peer-to-Peer environment, each computer directly sends and receives data to each device. There is no central server controlling file access or printer sharing.



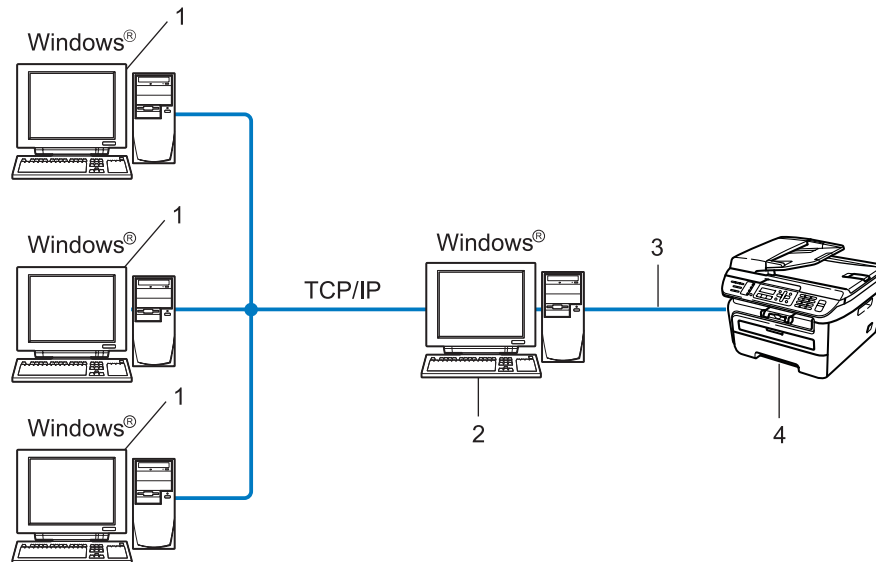
1 Router

2 Network printer (your machine)

- In a smaller network of 2 or 3 computers, we recommend the Peer-to-Peer printing method as it is easier to configure than the Network Shared printing method described on the following page. See *Network Shared printing* on page 5.
- Each computer must use the TCP/IP Protocol.
- The Lenovo machine needs to have an appropriate IP address configuration.
- If you are using routers, the Gateway address must be configured on the computers and the Lenovo machine.
- The Lenovo machine can also communicate with Macintosh® (TCP/IP compatible operating systems).

Network Shared printing

In a Network Shared environment, each computer sends data via a centrally controlled computer. This type of computer is often called a “Server” or a “Print Server”. Its job is to control the printing of all print jobs.



1 Client computer

2 Also known as “Server” or “Print server”

3 TCP/IP or USB (where available)

4 Printer (your machine)

- In a larger network, we recommend a Network Shared printing environment.
- The “server” or the “print server” must use the TCP/IP print protocol.
- The Lenovo machine needs to have an appropriate IP address configuration unless the machine is connected via the USB interface at the server.

Protocols

TCP/IP protocols and functionalities

Protocols are the standardized sets of rules for transmitting data on a network. Protocols allow users to gain access to network connected resources.

The print server used on this Lenovo product supports the TCP/IP (Transmission Control Protocol/Internet Protocol) protocol.

TCP/IP is the most popular set of protocols used for communication such as Internet and E-mail. This protocol can be used in almost all operating systems such as Windows® and Macintosh®.

The following TCP/IP protocols are available on this Lenovo product.



Note

- You can configure the protocol settings by using the HTTP (web browser). See *How to configure the print server settings using Web Based Management (web browser)* on page 42.
 - For security features, see *Security methods for E-mail notification* on page 44.
-

DHCP/BOOTP/RARP

By using the DHCP/BOOTP/RARP protocols, the IP address can be automatically configured.



Note

To use the DHCP/BOOTP/RARP protocols, please contact your network administrator.

APIPA

If you do not assign an IP address manually (using the control panel of the machine or the BRAdmin software) or automatically (using a DHCP/BOOTP/RARP server), the Automatic Private IP Addressing (APIPA) protocol will automatically assign an IP address from the range 169.254.1.0 to 169.254.254.255.

DNS client

The Lenovo print server supports the Domain Name System (DNS) client function. This function allows the print server to communicate with other devices by using its DNS name.

LPR/LPD

Commonly used printing protocols on a TCP/IP network.

SMTP client

Simple Mail Transfer Protocol (SMTP) client is used to send E-mails via Internet or Intranet.

Port9100

Another commonly used printing protocol on a TCP/IP network.

IPP

The Internet Printing Protocol (IPP Version 1.0) allows you to print documents directly to any accessible printer via the internet.

mDNS

mDNS allows the Lenovo print server to automatically configure itself to work in a Mac OS® X Simple Network Configured system. (Mac OS® X 10.2.4 or greater).

TELNET

The Lenovo print server supports TELNET server for command line configuration.

SNMP

The Simple Network Management Protocol (SNMP) is used to manage network devices including computers, routers and Lenovo network ready machines in a TCP/IP network.

LLMNR

The Link-Local Multicast Name Resolution protocol (LLMNR) resolves the names of neighboring computers, if the network does not have a Domain Name System (DNS) server. The LLMNR Responder function works in both the IPv4 or IPv6 environment when using a computer that has the LLMNR Sender function such as Windows Vista®.

Web services

The Web Services protocol enables Windows Vista® users to install the Lenovo printer driver by right clicking the machine icon from the **Start / Network** selection. (See *Installation when using web services (For Windows Vista® users)* on page 59). The Web Services also lets you check the current status of the machine from your computer.

Web server (HTTP)

The Lenovo print server is equipped with a built in web server that allows you to monitor its status or change some of its configuration settings using a web browser.



Note

We recommend Microsoft Internet Explorer 6.0® (or greater) or Firefox® 1.0 (or greater) for Windows® and Safari™ 1.0 for Macintosh®. Please also make sure that JavaScript and Cookies are always enabled in whichever browser you use. We recommend you upgrade to Safari™ 1.2 or greater to enable JavaScript. If a different web browser is used, make sure it is compatible with HTTP 1.0 and HTTP 1.1.

FTP

The File Transfer Protocol (FTP) allows the Lenovo machine to scan black and white or color documents directly to an FTP server located locally on your network or on the internet.

IPv6

This machine is compatible with IPv6, the next generation internet protocol.

1

Other protocol

LLTD

The Link Layer Topology Discovery protocol (LLTD) lets you locate the Lenovo machine easily on the Windows Vista® network map. Your Lenovo machine will be shown with a distinctive icon and the node name. The default setting for this protocol is Off.

Overview

Before using your Lenovo machine on your network, you must install the Lenovo software and also configure the appropriate TCP/IP network settings on the machine itself. To do this, we recommend that you use the Lenovo installer on the Lenovo CD-ROM as this will guide you through the software and network installation. Please follow the instructions in the supplied Quick Setup Guide.



Note

If you do not wish to, or are unable to use the Lenovo installer or any of Lenovo's software tools, you can also use the machine's control panel to change network settings. For more information, see *Control panel setup* on page 17.

IP addresses, subnet masks and gateways

To use the machine in a networked TCP/IP environment, you need to configure the IP address and subnet mask. The IP address you assign to the print server must be on the same logical network as your host computers. If it is not, you must properly configure the subnet mask and the gateway address.

IP address

An IP address is a series of numbers that identifies each computer connected to a network. An IP address consists of four numbers separated by dots. Each number is between 0 and 255.

■ Example: In a small network, you would normally change the final number.

- 192.168.1.1
- 192.168.1.2
- 192.168.1.3

How the IP address is assigned to your print server:

If you have a DHCP/BOOTP/RARP server in your network (typically Windows® 2000/XP, Windows Vista® or Windows Server® 2003 network) the print server will automatically obtain its IP address from the DHCP server and register its name with any RFC 1001 and 1002-compliant dynamic name services.



Note

On smaller networks, the DHCP server may be the router.

For more information on DHCP, BOOTP and RARP, see *Using DHCP to configure the IP address* on page 54, *Using BOOTP to configure the IP address* on page 55 and *Using RARP to configure the IP address* on page 56.

If you do not have a DHCP/BOOTP/RARP server, the Automatic Private IP Addressing (APIPA) protocol will automatically assign an IP address from the range 169.254.1.0 to 169.254.254.255. For more information on APIPA, see *Using APIPA to configure the IP address* on page 56.

If the APIPA protocol is disabled, the IP address of a Lenovo print server is 192.0.0.192. However, you can easily change this IP address number to match with the IP address details of your network. For information on how to change the IP address, see *Setting the IP address and subnet mask* on page 12.

Subnet mask

Subnet masks restrict network communication.

■ Example: Computer 1 can talk to Computer 2

- Computer 1

IP Address: 192.168.1.2

Subnet Mask: 255.255.255.0

- Computer 2

IP Address: 192.168.1.3

Subnet Mask: 255.255.255.0



Note

0 denotes that there is no limit to communication at this part of the address.

In the above example, we can communicate with anything that has an IP address that begins with 192.168.1.x.

Gateway (and router)

A gateway is a network point that acts as an entrance to another network and sends data transmitted via the network to an exact destination. The router knows where to direct data that arrives at the gateway. If a destination is located on an external network, the router transmits data to the external network. If your network communicates with other networks, you may need to configure the Gateway IP address. If you do not know the Gateway IP address then contact your Network Administrator.

2

Step by step chart

1 Configure the TCP/IP settings.

- Configure the IP address → See page 12
- Configure the subnet mask → See page 12
- Configure the gateway → See page 12

2 Change the print server settings.

- Using the BRAdmin Light utility → See page 15
- Using the control panel → See page 15
- Using the Web Based Management (web browser) → See page 15
- Using the Remote Setup → See page 16
- Using other methods → See page 16

Setting the IP address and subnet mask

Using the BRAdmin Light utility to configure your machine as a network printer

2

BRAdmin Light

The BRAdmin Light utility is designed for initial setup of the Lenovo network connected devices. It also can search for Lenovo products in a TCP/IP environment, view the status and configure basic network settings, such as IP address. The BRAdmin Light utility is available for Windows® 2000/XP, Windows Vista®, Windows Server® 2003 and OS® X 10.2.4 or greater.

How to configure your machine using the BRAdmin Light utility



Note

- Please use the BRAdmin Light utility version that was supplied on the CD-ROM with your Lenovo product.
- If you are using personal Firewall software, disable it. Once you are sure that you can print, re-start your personal Firewall software.
- Node name: The node name appears in current BRAdmin Light. The default node name of the network card in the printer is “BRNxxxxxxxxxxxx”.
- The default password for Lenovo print servers is “**access**”.

1 Start the BRAdmin Light utility.

- For Windows® 2000/XP, Windows Vista® and Windows Server® 2003 users

Click **Start / All Programs**¹ / **Lenovo / BRAdmin Light / BRAdmin Light**.

¹ **Programs** for Windows® 2000 users

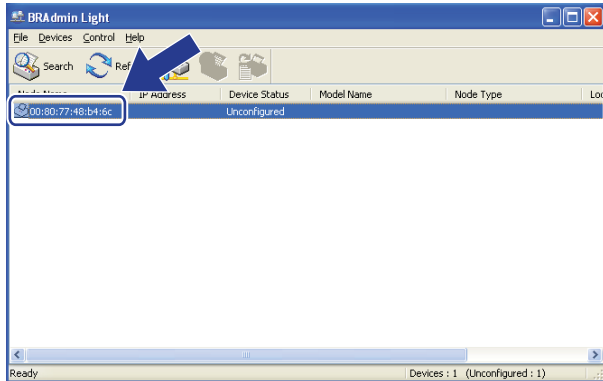
- For Mac OS® X 10.2.4 or greater users

Double-click **Mac OS X** or **Macintosh HD** (Startup Disk) / **Library / Printers / Lenovo / Utilities / BRAdmin Light.jar** file.

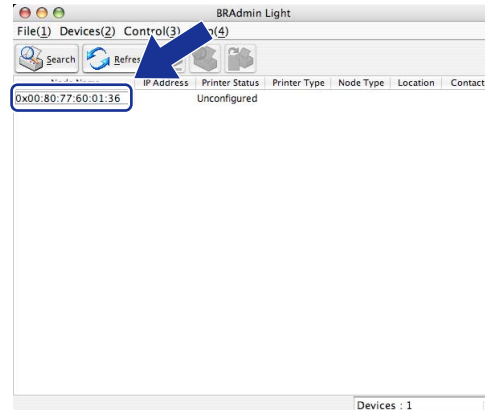
2 BRAdmin Light will search for new devices automatically.

- 3 Double-click the unconfigured device.

Windows®



Macintosh®

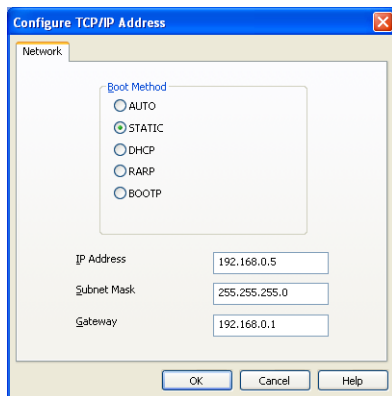


Note

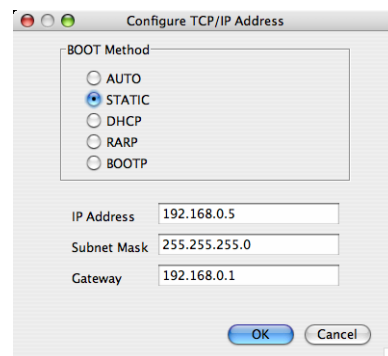
- If the print server is set to its factory default settings without using a DHCP/BOOTP/RARP server, the device will appear as **Unconfigured** in the BRAdmin Light utility screen.
- You can find the node name and Ethernet address (MAC address) by printing the Network Configuration List. See *Printing the Network Configuration List* on page 26.

- 4 Choose **STATIC** from **Boot Method**. Enter the **IP Address**, **Subnet Mask** and **Gateway** (if needed) of your print server.

Windows®



Macintosh®



- 5 Click **OK**.
- 6 With the correctly programmed IP address, you will see the Lenovo print server in the device list.

Using the control panel to configure your machine for a network

You can configure your machine for a network using the control panel **LAN** menu. See *Control panel setup* on page 17.

Using other methods to configure your machine for a network

You can configure your machine for a network using other methods. See *Other ways to set the IP address (for advanced users and administrators)* on page 54.

Changing the print server settings

Using the BRAdmin Light utility to change the print server settings

2

- 1 Start the BRAdmin Light utility.
 - For Windows® 2000/XP, Windows Vista® and Windows Server® 2003 users
Click **Start / All Programs** ¹ / **Lenovo / BRAdmin Light / BRAdmin Light**.
 - ¹ **Programs** for Windows® 2000 users
- 2 Choose the print server which you want to change the settings.
- 3 Choose **Network Configuration** from the **Control** menu.
- 4 Enter a password. The default password is “**access**”.
- 5 You can now change the print server settings.

Using the control panel to change the print server settings

You can configure and change the print server settings using the control panel **LAN** menu. See *Control panel setup* on page 17.

Using Web Based Management (web browser) to change the print/scan server settings

A standard web browser can be used to change your print server settings using the HTTP (Hyper Text Transfer Protocol). See *How to configure the print server settings using Web Based Management (web browser)* on page 42.

Using Remote Setup to change the print server settings (not available for Windows Server® 2003)

Remote Setup for Windows®

2

The Remote Setup application allows you to configure network settings from a Windows® application. When you access this application, the settings on your machine will be downloaded automatically to your PC and displayed on your PC screen. If you change the settings, you can upload them directly to the machine.

- 1 Click the **Start** button, **All Programs** ¹, **Lenovo**, **M7250N**, then **Remote Setup**.

¹ **Programs** for Windows® 2000 users

- 2 Enter a password. The default password is “**access**”.
- 3 Click **TCP/IP**.
- 4 You can now change the print server settings.

Using other methods to change print server settings

You can configure your network printer using other methods. See *Other ways to set the IP address (for advanced users and administrators)* on page 54.

LAN menu

Before using your Lenovo product in a network environment, you need to configure the correct TCP/IP settings.

In this chapter, you will learn how to configure the network settings using the control panel, located on the front of the machine.

The LAN menu selections of the control panel allow you to set up the Lenovo machine for your network configuration. Press **Menu**, then press **▲** or **▼** to choose LAN. Proceed to the menu selection you wish to configure. See *Function table and default factory settings* on page 62.

Please note that the machine is supplied with the BRAdmin Light utility and Remote Setup applications for Windows®, which also can be used to configure many aspects of the network. See *Changing the print server settings* on page 15.

TCP/IP

This menu has ten sections: BOOT Method, IP Address, Subnet Mask, Gateway, Node Name, WINS Config, WINS Server, DNS Server, APIPA and IPv6.

BOOT Method

This selection controls how the machine obtains an IP address. The default setting is Auto.



Note

If you do not want your print server configured via DHCP, BOOTP or RARP, you must set the BOOT Method to Static so that the print server has a static IP address. This will prevent the print server from trying to obtain an IP address from any of these systems. To change the BOOT Method, use the machine's control panel, BRAdmin Light utility, Remote Setup or Web Based Management (web browser).

- 1 Press **Menu**.
- 2 Press **▲** or **▼** to choose LAN.
Press **OK**.
- 3 Press **▲** or **▼** to choose TCP/IP.
Press **OK**.
- 4 Press **▲** or **▼** to choose BOOT Method.
Press **OK**.
- 5 Press **▲** or **▼** to choose Auto¹, Static², RARP³, BOOTP⁴ or DHCP⁵.
Press **OK**.
 - If you chose Auto, RARP, BOOTP or DHCP, go to 6.
 - If you chose Static, go to 7.

- 6 Enter how many times the machine tries to obtain the IP address. We recommend you to enter 3 or more. Press **OK**.

- 7 Press **Stop/Exit**.

- 1 Auto mode
In this mode, the machine will scan the network for a DHCP server, if it can find one, and if the DHCP server is configured to allocate an IP address to the machine, then the IP address supplied by the DHCP server will be used. If no DHCP server is available, then the machine will scan for a BOOTP server. If a BOOTP server is available, and it is configured correctly, the machine will take its IP address from the BOOTP server. If a BOOTP server is not available, the machine will scan for a RARP server. If a RARP server also does not answer, the IP Address is set using the APIPA protocol, see *Using APIPA to configure the IP address* on page 56. After the machine is initially powered ON, it may take a few minutes for the machine to scan the network for a server.
- 2 Static mode
In this mode the machine's IP address must be manually assigned. Once entered the IP address is locked to the assigned address.
- 3 RARP mode
The Lenovo print server IP address can be configured using the Reverse ARP (RARP) service on your host computer. For more information on RARP, see *Using RARP to configure the IP address* on page 56.
- 4 BOOTP mode
BOOTP is an alternative to RARP that has the advantage of allowing configuration of the subnet mask and gateway. For more information on BOOTP, see *Using BOOTP to configure the IP address* on page 55.
- 5 DHCP mode
Dynamic Host Configuration Protocol (DHCP) is one of several automated mechanisms for IP address allocation. If you have a DHCP server in your network (typically a Windows® 2000/XP, Windows Vista® network) the print server will automatically obtain its IP address from a DHCP server and register its name with any RFC 1001 and 1002 compliant dynamic name services.



Note

On smaller networks, the DHCP server may be the router.

IP Address

This field displays the current IP address of the machine. If you have chosen a BOOT Method of Static, enter the IP address that you wish to assign to the machine (check with your network administrator for the IP address to use). If you have chosen a method other than Static, the machine will attempt to determine its IP address using the DHCP or BOOTP protocols. The default IP address of your machine will probably be incompatible with the IP address numbering scheme of your network. We recommend that you contact your network administrator for an IP address for the network the unit will be connected on.

- 1 Press **Menu**.
- 2 Press **▲** or **▼** to choose LAN.
Press **OK**.
- 3 Press **▲** or **▼** to choose TCP/IP.
Press **OK**.
- 4 Press **▲** or **▼** to choose IP Address.
Press **OK**.
- 5 Press **1** to choose Change.
- 6 Enter the IP address.
Press **OK**.
- 7 Press **Stop/Exit**.

Subnet Mask

This field displays the current subnet mask used by the machine. If you are not using DHCP or BOOTP to obtain the subnet mask, enter the desired subnet mask. Check with your network administrator for the subnet mask to use.

- 1 Press **Menu**.
- 2 Press **▲** or **▼** to choose LAN.
Press **OK**.
- 3 Press **▲** or **▼** to choose TCP/IP.
Press **OK**.
- 4 Press **▲** or **▼** to choose Subnet Mask.
Press **OK**.
- 5 Press **1** to choose Change.
- 6 Enter the Subnet Mask address.
Press **OK**.
- 7 Press **Stop/Exit**.

Gateway

This field displays the current gateway or router address used by the machine. If you are not using DHCP or BOOTP to obtain the gateway or router address, enter the address you wish to assign. If you do not have a gateway or router, leave this field blank. Check with your network administrator if you are unsure.

- 1 Press **Menu**.
- 2 Press **▲** or **▼** to choose LAN.
Press **OK**.
- 3 Press **▲** or **▼** to choose TCP/IP.
Press **OK**.
- 4 Press **▲** or **▼** to choose Gateway.
Press **OK**.
- 5 Press **1** to choose Change.
- 6 Enter the Gateway address.
Press **OK**.
- 7 Press **Stop/Exit**.

Node Name

You can register the machine name on the Network. This name is often referred to as a NetBIOS name; it will be the name that is registered by the WINS server on your network. Lenovo recommends the name "BRNxxxxxxxxxxx".

- 1 Press **Menu**.
- 2 Press ▲ or ▼ to choose **LAN**.
Press **OK**.
- 3 Press ▲ or ▼ to choose **TCP/IP**.
Press **OK**.
- 4 Press ▲ or ▼ to choose **Node Name**.
Press **OK**.
- 5 Press **1** to choose **Change**.
- 6 Enter the Node Name.
Press **OK**.
- 7 Press **Stop/Exit**.

WINS Config

This selection controls how the machine obtains the IP address of the WINS server.

- 1 Press **Menu**.
- 2 Press ▲ or ▼ to choose **LAN**.
Press **OK**.
- 3 Press ▲ or ▼ to choose **TCP/IP**.
Press **OK**.
- 4 Press ▲ or ▼ to choose **WINS Config**.
Press **OK**.
- 5 Press ▲ or ▼ to choose **Auto or Static**.
Press **OK**.
- 6 Press **Stop/Exit**.

Auto

Automatically uses a DHCP request to determine the IP addresses for the primary and secondary WINS servers. You must set the BOOT Method to Auto for this feature to work.

Static

Uses a specified IP address for the primary and secondary WINS servers.

WINS Server

Primary WINS Server IP Address

This field specifies the IP address of the primary WINS (Windows® Internet Name Service) server. If set to a non-zero value, the machine will contact this server to register its name with the Windows® Internet Name Service.

Secondary WINS Server IP Address

This field specifies the IP address of the secondary WINS server. It is used as a backup to the Primary WINS server address. If the Primary server is unavailable, the machine still can register itself with a secondary server. If set to a non-zero value, the machine will contact this server to register its name with the Windows® Internet Name Service. If you have a primary WINS server, but no secondary WINS server, simply leave this field blank.

- 1 Press **Menu**.
- 2 Press **▲** or **▼** to choose `LAN`.
Press **OK**.
- 3 Press **▲** or **▼** to choose `TCP/IP`.
Press **OK**.
- 4 Press **▲** or **▼** to choose `WINS Server`.
Press **OK**.
- 5 Press **▲** or **▼** to choose `Primary` or `Secondary`.
Press **OK**.
- 6 Press **1** to choose `Change`.
- 7 Enter the WINS Server address.
Press **OK**.
- 8 Press **Stop/Exit**.

DNS Server

Primary DNS Server IP Address

This field specifies the IP address of the primary DNS (Domain Name System) server.

Secondary DNS Server IP Address

This field specifies the IP address of the secondary DNS server. It is used as a backup to the Primary DNS server address. If the Primary server is unavailable, the machine will contact the Secondary DNS server. If you have a primary DNS server, but no secondary DNS server, simply leave this field blank.

3

- 1 Press **Menu**.
- 2 Press **▲** or **▼** to choose `LAN`.
Press **OK**.
- 3 Press **▲** or **▼** to choose `TCP/IP`.
Press **OK**.
- 4 Press **▲** or **▼** to choose `DNS Server`.
Press **OK**.
- 5 Press **▲** or **▼** to choose `Primary` or `Secondary`.
Press **OK**.
- 6 Press **1** to choose `Change`.
- 7 Enter the DNS Server address.
Press **OK**.
- 8 Press **Stop/Exit**.

APIPA

The setting of **On** will cause the print server to automatically allocate a Link-Local IP address in the range (169.254.1.0 - 169.254.254.255) when the print server cannot obtain an IP address through the BOOT Method you have set (see *BOOT Method* on page 17). Choosing **Off** means the IP address doesn't change, when the print server cannot obtain an IP address through the BOOT Method you have set.

- 1 Press **Menu**.
- 2 Press **▲** or **▼** to choose **LAN**.
Press **OK**.
- 3 Press **▲** or **▼** to choose **TCP/IP**.
Press **OK**.
- 4 Press **▲** or **▼** to choose **APIPA**.
Press **OK**.
- 5 Press **▲** or **▼** to choose **On** or **Off**.
Press **OK**.
- 6 Press **Stop/Exit**.

IPv6

This machine is compatible with IPv6, the next generation internet protocol. If you want to use the IPv6 protocol, choose **On**. The default setting for IPv6 is **Off**.

- 1 Press **Menu**.
- 2 Press **▲** or **▼** to choose **LAN**.
Press **OK**.
- 3 Press **▲** or **▼** to choose **TCP/IP**.
Press **OK**.
- 4 Press **▲** or **▼** to choose **IPv6**.
Press **OK**.
- 5 Press **▲** or **▼** to choose **On** or **Off**.
Press **OK**.
- 6 Press **Stop/Exit**.

Ethernet

Ethernet link mode. Auto allows the print server to operate in 100BASE-TX full or half duplex, or in 10BASE-T full or half duplex mode by auto negotiation.

You can fix the server link mode to 100BASE-TX Full Duplex (100B-FD) or Half Duplex (100B-HD) and 10BASE-T Full Duplex (10B-FD) or Half Duplex (10B-HD). This change is valid after the print server has been reset (default is `Auto`).



Note

If you incorrectly set this value, you may not be able to communicate with your print server.

- 1 Press **Menu**.
- 2 Press **▲** or **▼** to choose `LAN`.
Press **OK**.
- 3 Press **▲** or **▼** to choose `Ethernet`.
Press **OK**.
- 4 Press **▲** or **▼** to choose `Auto`, `100B-FD`, `100B-HD`, `10B-FD` or `10B-HD`.
Press **OK**.
- 5 Press **Stop/Exit**.

Scan to FTP

You can choose the default color file type for the Scan to FTP function.

- 1 Press **Menu**.
- 2 Press **▲** or **▼** to choose `LAN`.
Press **OK**.
- 3 Press **▲** or **▼** to choose `Scan to FTP`.
Press **OK**.
- 4 Press **▲** or **▼** to choose `Color 150 dpi`, `Color 300 dpi`, `Color 600 dpi`, `Gray 100 dpi`, `Gray 200 dpi`, `Gray 300 dpi`, `B&W 200 dpi` or `B&W 200x100 dpi`.
Press **OK**.
- 5 If you chose `Color 150 dpi`, `Color 300 dpi`, `Color 600 dpi`, `Gray 100 dpi`, `Gray 200 dpi` or `Gray 300 dpi` in ④, press **▲** or **▼** to choose `PDF` or `JPEG`.
If you chose `B&W 200 dpi` or `B&W 200x100 dpi` in ④, press **▲** or **▼** to choose `PDF` or `TIFF`.
Press **OK**.
- 6 Press **Stop/Exit**.



Note

For how to operate Scan to FTP, see *Network Scanning* of the Software User's Guide on the CD-ROM.

Restoring the network settings to factory default

If you wish to reset the print server back to its default factory settings (resetting all information such as the password and IP address information), please follow these steps:



Note

This function restores all network settings to the factory default.

3

- 1 Press **Menu**.
- 2 Press **▲** or **▼** to choose **LAN**.
Press **OK**.
- 3 Press **▲** or **▼** to choose **Factory Reset**.
Press **OK**.
- 4 Press **1** to choose **Reset**.
- 5 Press **1** to choose **Yes** for reboot.
- 6 The machine will re-start. You can now reconnect the network cable and configure the network settings to work with your network.

Printing the Network Configuration List



Note

Node name: Node name appears in the Network Configuration List. The default node name is "BRNxxxxxxxxxxxx".

The Network Configuration List prints a report listing all the current network configuration including the network print server settings.

3

- 1 Press **Menu**.
- 2 Press ▲ or ▼ to choose `Print Reports`.
Press **OK**.
- 3 Press ▲ or ▼ to choose `Network Config`.
Press **OK**.
- 4 Press **Start**.

Overview

To connect your printer to your network, you need to follow the steps in the Quick Setup Guide. We recommend that you use the Lenovo installer application on the CD-ROM which we have provided with the printer. By using this application, you can easily connect your printer to your network and install the network software and printer driver which you need to complete the configuration of your printer for a network. You will be guided by the on-screen instructions until you are able to use your Lenovo network printer.

If you are a Windows® user and want to configure your machine without using the Lenovo installer application, use the TCP/IP protocol in a Peer-to-Peer environment. Please follow the instructions in this chapter. This chapter explains how to install the network software and the printer driver which you will need to be able to print using your network printer.



Note

- You must configure the IP address on your machine before you proceed with this chapter. If you need to configure the IP address, see *Setting the IP address and subnet mask* on page 12 first.
- Verify the host computer and the machine are either on the same subnet, or that the router is properly configured to pass data between the two devices.
- If you are connecting to a Network Print Queue or Share (printing only), see *Installation when using a Network Print Queue or Share (printer driver only)* on page 60 for installation details.
- The default password for Lenovo print server is “**access**”.

Configuring the standard TCP/IP port

Printer driver not yet installed

- 1 Put the supplied CD-ROM into your CD-ROM drive. If the model name screen appears, choose your machine. If the language screen appears, choose your language.
- 2 The CD-ROM main menu will appear. Click **Network Applications**.
- 3 Click **Printer Driver**.
- 4 Click **Next** in response to the Welcome message. Follow the on-screen instructions.
- 5 Choose **Standard Installation** and click **Next**.
- 6 Choose **Lenovo Peer-to-Peer Network Printer**, and then click **Next**.
- 7 Follow the on-screen instruction, and then click **OK**.



Note

Contact your administrator if you are not sure about the location and name of the printer on the network.

- 8 Continue through the wizard clicking **Finish** when complete.

Printer driver already installed

If you have already installed the printer driver and wish to configure it for network printing, follow these steps:

- 1 For Windows Vista®:
Click the **Start** button, **Control Panel**, **Hardware and Sound**, and then **Printers**.
For Windows® XP and Windows Server® 2003:
Click the **Start** button and choose **Printers and Faxes** windows.
For Windows® 2000.
Click the **Start** button and choose **Settings** and then **Printers**.
- 2 Right click on the printer driver you wish to configure, and then choose **Properties**.
- 3 Click the **Ports** tab and click **Add Port**.
- 4 Choose the port that you wish to use. Typically this would be **Standard TCP/IP Port**. Then click the **New Port...** button.
- 5 The **Standard TCP/IP Port Wizard** will start. Click **Next**.
- 6 Enter the IP address of your network printer. Click **Next**.
- 7 Click **Finish**.
- 8 Close **Printer Ports** and **Properties** dialog box.

Other sources of information

See *Configuring your machine for a network* on page 9 to learn how to configure the IP address of the printer.

Overview

Windows® 2000/XP, Windows Vista® and Windows Server® 2003 users can print using TCP/IP and the standard Network Printing IPP protocol software built into Windows® 2000/XP, Windows Vista® and Windows Server® 2003 installation.



Note

- You must configure the IP address on your printer before you proceed with this chapter. If you need to configure the IP address, see *Chapter 2* first.
- Verify the host computer and machine are either on the same subnet, or that the router is properly configured to pass data between the two devices.
- The default password for Lenovo print servers is “**access**”.

IPP printing for Windows® 2000/XP, Windows Vista® and Windows Server® 2003

Use the following instructions if you wish to use the IPP printing capabilities of Windows® 2000/XP, Windows Vista® and Windows Server® 2003.

For Windows Vista®

- 1 Click the **Start** button, **Control Panel**, **Hardware and Sound**, and then **Printers**.
- 2 Click **Add a printer**.
- 3 Choose **Add a network, wireless or Bluetooth printer**.
- 4 Click **The printer that I want isn't listed**.
- 5 Choose **Select a shared printer by name** and then enter the following in the URL field:
http://printer's IP address:631/ipp (where "printer's IP address" is the printer's IP address or the node name.)



Note

If you have edited the hosts file on your computer or are using a Domain Name System (DNS), you can also enter the DNS name of the print server. As the print server supports TCP/IP and NetBIOS names, you can also enter the NetBIOS name of the print server. The NetBIOS name can be seen in the Network Configuration List. To learn how to print the Network Configuration List, see *Printing the Network Configuration List* on page 26. The NetBIOS name assigned is the first 15 characters of the node name and by default it will appear as "BRNxxxxxxxxxxx".

- 6 When you click **Next**, Windows Vista® will make a connection with the URL that you specified.
 - If the printer driver has already been installed:
 - 1 You will see the printer selection screen in the **Add Printer Wizard**. Click **OK**.
If the appropriate printer driver is already installed on your computer, Windows Vista® will automatically use that driver. In this case, you will simply be asked if you wish to make the driver the default printer, after which the **Add Printer Wizard** will complete. You are now ready to print.
 - 2 Go to 11.
 - If the printer driver has NOT been installed:

One of the benefits of the IPP printing protocol is that it establishes the model name of the printer when you communicate with it. After successful communication you will see the model name of the printer automatically. This means that you do not need to inform Windows Vista® about the type of printer driver to be used.

Go to 7.
- 7 If your printer is not in the list of supported printers, click **Have Disk**. You will then be asked to insert the driver disk.

- 8 Click **Browse** and choose the appropriate Lenovo printer driver that is contained on the CD-ROM or in the network share. Click **Open**.
- 9 Click **OK**.
- 10 Specify the model name of the printer. Click **OK**.

**Note**

- When the **User Account Control** screen appears, click **Continue**.
- If the printer driver that you are installing does not have a Digital Certificate you will see a warning message. Click **Install this driver software anyway** to continue with the installation. The **Add Printer Wizard** will then complete.

- 11 You will see the **Type a printer name** screen in the **Add Printer Wizard**. Check the **Set as the default printer** check box if you want to use this printer as the default printer, and then click **Next**.
- 12 To test the printer connection, click **Print a test page**, and then click **Finish**. The printer is now configured and ready to print.

For Windows® 2000/XP and Windows Server® 2003

- 1 For Windows® XP and Windows Server® 2003:
Click the **Start** button and choose **Printers and Faxes**.
For Windows® 2000:
Click the **Start** button and choose **Settings** and then **Printers**.
- 2 For Windows® XP and Windows Server® 2003:
Click **Add a printer** to start the **Add Printer Wizard**.
For Windows® 2000:
Double click the **Add Printer** icon to start the **Add Printer Wizard**.
- 3 Click **Next** when you see the **Welcome to the Add Printer Wizard** screen.
- 4 Choose **Network Printer**.
For Windows® XP and Windows Server® 2003:
Choose **A network printer, or a printer attached to another computer**.
For Windows® 2000:
Choose **Network Printer**.
- 5 Click **Next**.
- 6 For Windows® XP and Windows Server® 2003:
Choose **Connect to a printer on the Internet or on a home or office network** and then enter the following in the URL field:
http://printer's IP address:631/ipp
(where "printer's IP address" is the printer's IP address or the node name.)
For Windows® 2000:
Choose **Connect to a printer on the Internet or on your intranet** and then enter the following in the URL field:
http://printer's IP address:631/ipp
(Where "printer's IP address" is the printer's IP address or the node name).



Note

If you have edited the hosts file on your computer or are using a Domain Name System (DNS), you can also enter the DNS name of the print server. As the print server supports TCP/IP and NetBIOS names, you can also enter the NetBIOS name of the print server. The NetBIOS name can be seen in the Network Configuration List. To learn how to print the Network Configuration List, see *Printing the Network Configuration List* on page 26. The NetBIOS name assigned is the first 15 characters of the node name and by default it will appear as "BRNxxxxxxxxxxxx".

- 7 When you click **Next**, Windows® 2000/XP and Windows Server® 2003 will make a connection with the URL that you specified.

■ If the printer driver has already been installed:

- 1 You will see the printer selection screen in the **Add Printer Wizard**.

If the appropriate printer driver is already installed on your computer, Windows® 2000/XP and Windows Server® 2003 will automatically use that driver. In this case, you will simply be asked if you wish to make the driver the default printer, after which the **Add Printer Wizard** will complete. You are now ready to print.

- 2 Go to 12.

■ If the printer driver has NOT been installed:

One of the benefits of the IPP printing protocol is that it establishes the model name of the printer when you communicate with it. After successful communication you will see the model name of the printer automatically. This means that you do not need to inform Windows® 2000/XP and Windows Server® 2003 about the type of printer driver to be used.

Go to 8.

- 8 The driver installation starts automatically.



Note

If the printer driver that you are installing does not have a Digital Certificate you will see a warning message. Click **Continue Anyway**¹ to continue with the installation.

¹ Yes for Windows® 2000 users

- 9 For Windows® XP and Windows Server® 2003:
Click **Have Disk**. You will then be asked to insert the driver disk.
For Windows® 2000:
Click **OK** when you see the **Insert Disk** screen.
- 10 Click **Browse** and choose the appropriate Lenovo printer driver that is contained on the CD-ROM or in the network share.
For example, choose the “X:\driver\win2kxpvista¹\your language” folder (where X is your drive letter).
Click **Open**.
- ¹ winXp64Vista64 for 64-bit OS users
- 11 Click **OK**.
- 12 Check **Yes** if you want to use this printer as the default printer. Click **Next**.
- 13 Click **Finish** and the printer is now configured and ready to print. To test the printer connection, print a test page.

Specifying a different URL

Please note that there are several possible entries that you can enter for the URL field.

`http://printer's IP address:631/ipp`

This is the default URL and we recommend that you use this URL.

`http://printer's IP address:631/ipp/port1`

This is for HP® Jetdirect® compatibility.

`http://printer's IP address:631/`



Note

If you forget the URL details, you can simply enter the above text (`http://printer's IP address/`) and the printer will still receive and process data.

Where “printer's IP address” is the printer's IP address or the node name.

- For example:

`http://192.168.1.2/` (if the printer's IP address is 192.168.1.2.)

`http://BRN123456765432/` (if the printer's node name is BRN123456765432.)

Other sources of information

For how to configure the IP address of the printer, see *Configuring your machine for a network* on page 9.

Overview

This chapter explains how to print from a Macintosh® on a network using the Simple Network Configuration capabilities on Mac OS® X 10.2.4 or greater.

For more information on how to install the Lenovo standard printer driver on a Network, see the Quick Setup Guide included with the machine.

Printing from a Macintosh® using the Simple Network Configuration capabilities

With the release of Mac OS® X 10.2, Apple® introduced Simple Network Configuration capabilities.

The Simple Network Configuration capabilities of Mac OS® X lets you create an instant network of computers and smart devices by connecting them to each other. The smart devices automatically configure themselves to be compatible with your network. Before using the Simple Network Configuration capabilities, you must install the printer driver. For installing the printer driver, see the Quick Setup Guide we provided with the printer.

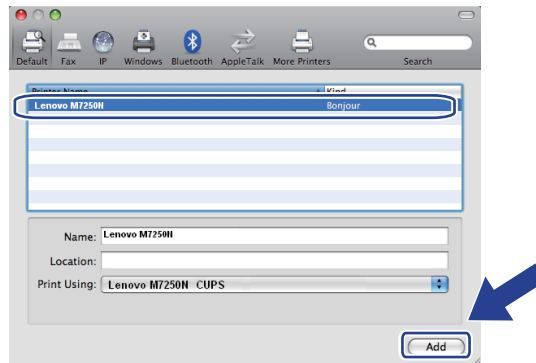
You do not need to manually configure any IP address or network strings within the printer as the printer will automatically configure itself.

How to choose the printer driver (TCP/IP)

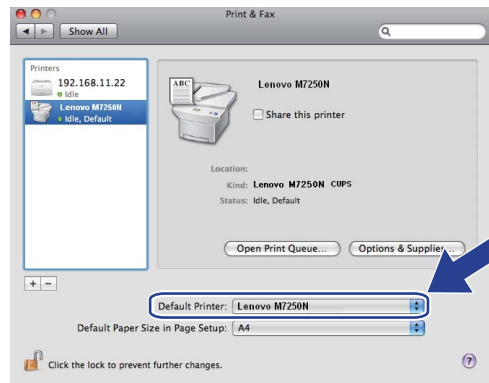
For Mac OS® X 10.5

- 1 Turn the power of the machine ON.
- 2 From the **Apple** menu, choose **System Preferences**.
- 3 Click **Print & Fax**.
- 4 Click **+** button to add your machine.

- 5 Choose **Lenovo M7250N**, and then click **Add**.



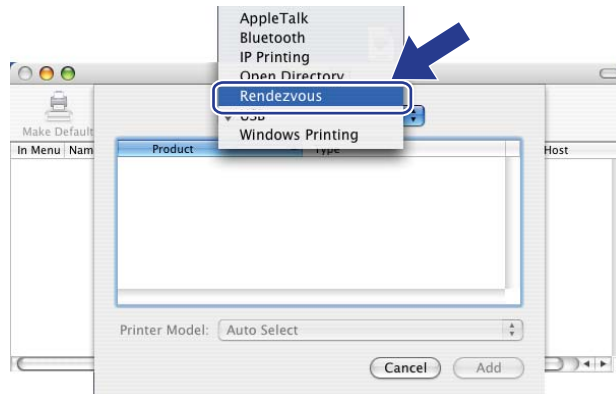
- 6 From the **Default Printer** pull-down list choose your model to set as the default printer. The printer is now ready.



For Mac OS® X 10.2.4 to 10.4.x

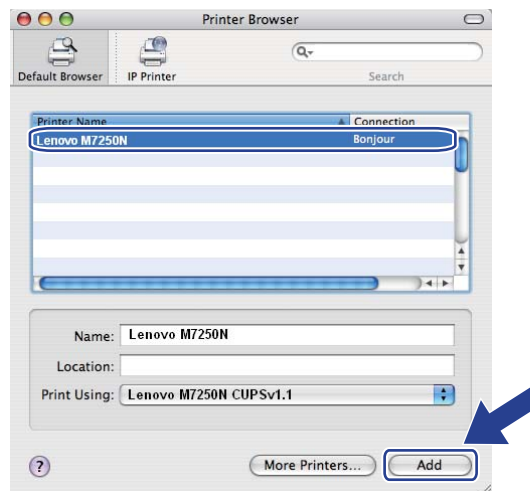
- 1 Turn the power of the machine ON.
- 2 From the **Go** menu, choose **Applications**.
- 3 Open the **Utilities** folder.
- 4 Double click the **Printer Setup Utility** icon.
For Mac OS® X 10.2.x, click the **Print Center** icon.
- 5 Click **Add**.
For Mac OS® X 10.4, Go to 7.
For Mac OS® X 10.2.4 to 10.3.x, Go to 6.

- 6 (For Mac OS® X 10.2.4 to 10.3.x) Make the following selection.

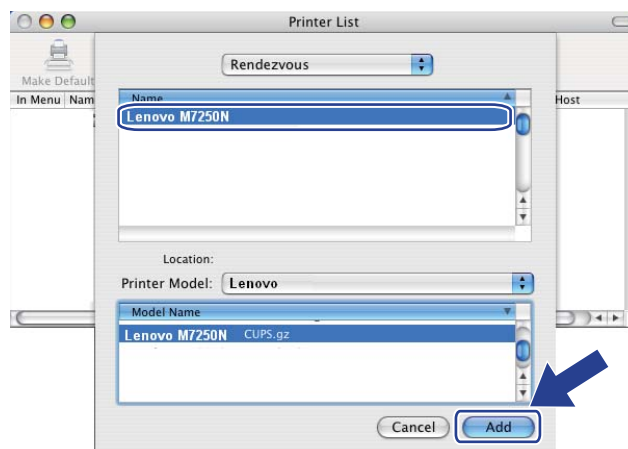


- 7 Choose **Lenovo M7250N**, and then click **Add**.

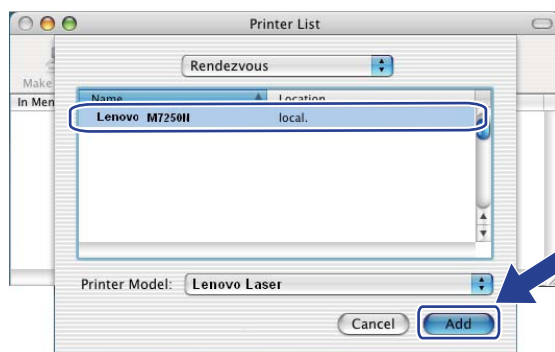
(Mac OS® X 10.4.x)



(Mac OS® X 10.3.x)



(Mac OS® X 10.2.x)



- 8 Click the printer, then click **Make Default** to set the printer as the default printer. The printer is now ready.

Other sources of information

For how to configure the IP address of the printer, see *Configuring your machine for a network* on page 9.

Overview

A standard Web Browser can be used to manage your machine using the HTTP (Hyper Text Transfer Protocol). You can get the following information from a machine on your network using a web browser.

- Printer status information
- Change Fax configuration items, such as General Setup, Quick-Dial settings and Remote Fax
- Change network settings such as TCP/IP information.
- Configure Scan to FTP
- Software version information of the machine and print server
- Change network and machine configuration details



Note

We recommend Microsoft Internet Explorer 6.0[®] (or greater) or Firefox[®] 1.0 (or greater) for Windows[®] and Safari[™] 1.0 for Macintosh[®]. Please also make sure that JavaScript and Cookies are always enabled in whichever browser you use. We recommend you upgrade to Safari[™] 1.2 or greater to enable JavaScript. If a different web browser is used, make sure it is compatible with HTTP 1.0 and HTTP 1.1.

You must use the TCP/IP protocol on your network and have a valid IP address programmed into the print server and your computer.



Note

- To learn how to configure the IP address on your machine, see *Configuring your machine for a network* on page 9.
- You can use a web browser on most computing platforms, for example, Macintosh[®] and UNIX[®] users are also able to connect to the machine and manage it.
- You can also use the BRAdmin applications to manage the printer and its network configuration.

How to configure the print server settings using Web Based Management (web browser)

A standard web browser can be used to change your print server settings using the HTTP (Hyper Text Transfer Protocol).



Note

To use a web browser, you will need to know the IP address or node name of the print server.

- 1 Start your web browser.
- 2 Type “http://printer’s IP address/” into your browser. (where “printer’s IP address” is the printer’s IP address or the node name)

■ For example:

http://192.168.1.2/ (if the printer’s IP address is 192.168.1.2.)

http://BRN123456765432/ (if the printer’s node name is BRN123456765432.)



Note

- If you have edited the hosts file on your computer or are using a Domain Name System (DNS), you can also enter the DNS name of the print server. As the print server supports TCP/IP and NetBIOS names, you can also enter the NetBIOS name of the print server. The NetBIOS name can be seen in the Network Configuration List. To learn how to print the Network Configuration List, see *Printing the Network Configuration List* on page 26. The NetBIOS name assigned is the first 15 characters of the node name and by default it will appear as “BRNxxxxxxxxxxxx”.
- For Macintosh® users, you can have easy access to the Web Based Management System by clicking the machine icon on **Status Monitor** screen. For more information, see the Software User’s Guide on the CD-ROM.

- 3 Click **Network Configuration**.
- 4 Enter a user name and a password. The default User Name is “**admin**” and the default password is “**access**”.
- 5 Click **OK**.
- 6 You can now change the printer server settings.



Note

If you have changed the protocol settings, restart the printer after clicking **Submit** to activate the configuration.

Password information

Web Based Management offers two levels of password access. Users are able to access to the **General Setup**, **Fax Settings** and **Copy Settings**. The default user name for User is “**user**” (case sensitive) and the default password is “**access**”.

Administrators are able to access all settings. The login name for the Administrator is “**admin**” (case sensitive) and the default password is “**access**”.

Changing the Scan to FTP configuration using a web browser

You can configure and change the following Scan to FTP settings using a web browser. Click **Administrator Settings** on the M7250N web page, and then click **Scan to FTP**. See *Chapter 4* of the Software User's Guide for more details on Scan to FTP.

- **Profile Name** (Up to 14 characters)
- **Host Address** (FTP server address)
- **Username**
- **Password**
- **Store Directory**
- **File Name**
- **Quality** (Color 150, Color 300, Color 600, B&W 200, B&W 200 x 100, Gray 100, Gray 200 and Gray 300)
- **File Type** (PDF, JPEG or TIFF)
- **Passive Mode** (On or Off)
- **Port Number**

Overview

This chapter explains the security features supported by your Lenovo machine and how to configure them. You can also learn how to manage your network printer securely.

Security methods for E-mail notification

The Lenovo print server supports the following security methods for E-mail notification.

POP before SMTP (PbS)

The user authentication method for sending E-mail from a client. The client is given permission to use the SMTP server by accessing the POP3 server before sending the E-mail.

SMTP-AUTH (SMTP Authentication)

SMTP-AUTH expands SMTP (the Internet E-mail sending protocol) to include an authentication method that ensures the true identity of the sender is known.

APOP (Authenticated Post Office Protocol)

APOP expands POP3 (the Internet receiving protocol) to include an authentication method that encrypts the password when the client receives E-mail.

Using E-mail notification with user authentication

To use the E-mail notification function via a secure SMTP server that requires user authentication, you need to use POP before SMTP or SMTP-AUTH method. These methods prevent an unauthorized user from accessing the mail server. You can use Web Based Management (web browser), to configure these settings.



Note

You need to match the settings of POP3/SMTP authentication with one of the E-mail servers. Contact your network administrator or your internet service provider about the configuration before using.

How to configure the POP3/SMTP settings using Web Based Management (web browser).

- 1 Start your web browser.
- 2 Type “http://printer’s IP address/” into your browser (where “printer’s IP address” is the printer’s IP address or the node name.).

■ For example:

`http://192.168.1.2/` (if the printer’s IP address is 192.168.1.2.)

`http://BRN123456765432/` (if the printer’s node name is BRN123456765432.)



Note

If you have edited the hosts file on your computer or are using a Domain Name System, you can also enter the DNS name of the print server. As the print server supports TCP/IP and NetBIOS names, you can also enter the NetBIOS name of the print server. The NetBIOS name can be seen in the Network Configuration List. To learn how to print the Network Configuration List, see *Printing the Network Configuration List* on page 26. The NetBIOS name assigned is the first 15 characters of the node name and by default it will appear as “BRNxxxxxxxxxxx”.

- 3 Click **Network Configuration**.
- 4 Enter a user name and a password.



Note

The login name for the Administrator is “**admin**” (case sensitive) and the default password is “**access**”.

- 5 Click **Configure Protocol**.
- 6 Make sure that the **POP3/SMTP** setting is **Enable**, and then click **Advanced Setting** of **POP3/SMTP**.

- 7 You can configure the **POP3/SMTP** settings on this page.



Note

- You can also change the SMTP port number using Web Based Management. This is useful if your ISP (Internet Service Provider) implements the “Outbound Port 25 Blocking (OP25B)” service, and you are not using the ISP’s SMTP server. By changing the SMTP port number to a specific number which your SMTP server decide (for example, port 587), you will be able to send E-mail via the SMTP server. You will also need to check **SMTP-AUTH** of **SMTP Server Authentication Method** to enable the SMTP server authentication.
- If you can use both POP before SMTP and SMTP-AUTH, we recommend choosing SMTP-AUTH.
- If you choose POP before SMTP for the SMTP Server Authentication Method, you need to configure the POP3 settings. You can also use the APOP method.
- For more information, see the Help text in the Web Based Management.
- You can also confirm whether the E-mail settings are correct after configuration by sending a test E-mail.

- 8 After configuring, click **Submit**. The Test E-mail Send Configuration dialog appears.
- 9 Follow the instructions on-screen if you want to test with the current settings.

Overview

This chapter explains how to resolve typical network problems you may encounter when using the machine.

This chapter is divided into the following sections:

- General problems
- Network print software installation problems
- Printing problems
- Scanning and PC Fax problems
- Protocol-specific troubleshooting

General problems

CD-ROM is inserted, but does not start automatically

If your computer does not support Autorun, the menu will not start automatically after inserting the CD-ROM. In this case, execute **start.exe** in the root directory of the CD-ROM.

My computer cannot find the machine/print server

I cannot make a necessary connection to the machine/print server.

My machine/print server does not appear in the window of Remote Setup or BRAdmin Light.

- For Windows®

The Firewall setting on your computer may be rejecting the necessary network connection to the machine. In this case, you will need to disable the Firewall on your computer and install the drivers again.

Windows® XP SP2 users:

- 1 Click the **Start** button, **Control Panel**, **Network and Internet Connections**.
- 2 Click **Windows Firewall**.
- 3 Click the **General** tab. Make sure that **Off (not recommended)** is selected.
- 4 Click **OK**.



Note

After the Lenovo software package is installed, enable your Firewall again.

Windows Vista® users:

- 1 Click the **Start** button, **Control Panel**, **Network and Internet**, **Windows Firewall** and click **Change settings**.

- 2 When the **User Account Control** screen appears, do the following.
 - Users who have administrator rights: Click **Continue**.
 - For users who do not have administrator rights: Enter the administrator password and click **OK**.
- 3 Click the **General** tab. Make sure that **Off (not recommended)** is selected.
- 4 Click **OK**.

**Note**

After the Lenovo software package is installed, enable your Firewall again.

- For Macintosh®

Choose your machine again in the DeviceSelector application located in **Mac OS X** or **Macintosh HD** (Startup Disk)/**Library/Printers/Lenovo/Utilities/DeviceSelector**.

Network print software installation problems

The Lenovo print server is not found during the setup of the network print software or from the installation of the printer driver of the Lenovo machine in Windows®.

The Lenovo print server is not found using the Simple Network Configuration capabilities of Mac OS® X.

Make sure you have completed the IP address setting of the Lenovo print server according to Chapter 2 of this User's Guide before installing the network print software or printer driver.

Check the following:

- 1 Make sure that the machine is powered on, is on-line and ready to print.
- 2 Check to see if there is any LED activity. Lenovo print servers have two LEDs on the back panel of the machine. The upper orange LED shows Speed status. The lower green LED shows Link/Activity (Received/Transmit) status.
 - The upper LED is orange: The Speed LED will be orange if the print server is connected to a 100BASE-TX Fast Ethernet network.
 - The upper LED is off: The Speed LED will be off if the print server is connected to a 10BASE-T Ethernet network.
 - The lower LED is green: The Link/Activity LED will be green if the print server is connected to a Ethernet network.
 - The lower LED is off: The Link/Activity LED will be off, if the print server is not connected to the network.

- 3 Print the Network Configuration List and check if the settings such as IP address settings are correct for your network. The problem may be the result of a mismatched or duplicate IP address. Verify that the IP address is correctly loaded into the print server, and make sure that no other nodes on the network have this IP address. For information on how to print the Network Configuration List, see *Printing the Network Configuration List* on page 26.

- 4 Verify that the print server is on your network as follows:

■ **For Windows®**

Try pinging the print server from the host operating system command prompt with the command:

Click **Start, All Programs**¹, **Accessories** then choose **Command Prompt**.

¹ **Programs** for Windows® 2000 users

```
ping ipaddress
```

Where `ipaddress` is the print server IP address (note that in some instances it can take up to two minutes for the print server to load its IP address after setting the IP address).

■ **For Mac OS® X 10.2.4 or greater**

- 1 From the **Go** menu, choose **Applications**.

- 2 Open the **Utilities** folder.

- 3 Double click the **Terminal** icon.

- 4 Try pinging the print server from the Terminal window:

```
ping ipaddress
```

Where `ipaddress` is the print server IP address (note that in some instances it can take up to two minutes for the print server to load its IP address after setting the IP address).

- 5 If you have tried 1 to 4 above and it does not work, then reset the print server back to the default factory settings and try from the initial setup again. For information on how to reset to the default factory settings, see *Restoring the network settings to factory default* on page 25.

- 6 (For Windows®)

If the installation failed, the Firewall on your computer may be blocking the necessary network connection to the machine. In this case, you will need to disable the Firewall on your computer and re-install the drivers. For how to disable the Firewall, see *General problems* on page 47. If you are using personal Firewall software, see the User's Guide for your software or contact the software manufacturer.

Printing problems

Print job is not printed

Check the status and configuration of the print server are correct.

- 1 Make sure that the machine is powered on, is on-line and ready to print.
- 2 Print the Network Configuration List of the machine and check if the settings such as IP address settings are correct for your network. The problem may be the result of mismatched or duplicate IP address. Verify that the IP address is correctly loaded into the print server, and make sure that no other nodes on the network have this IP address. For information on how to print the Network Configuration List, see *Printing the Network Configuration List* on page 26.
- 3 Verify that the print server is on your network as follows:
 - **For Windows®**
 - 1 Try pinging the print server from the host operating system command prompt with the command:


```
ping ipaddress
```

Where `ipaddress` is the print server IP address (note that in some instances it can take up to two minutes for the print server to load its IP address after setting the IP address).
 - 2 If a successful response is received, then proceed to *Windows® 2000/XP, Windows Vista® and Windows Server® 2003 IPP troubleshooting* on page 53. Otherwise, proceed to 4.
 - **For Mac OS® X 10.2.4 or greater**
 - 1 From the **Go** menu, choose **Applications**.
 - 2 Open the **Utilities** folder.
 - 3 Double click the **Terminal** icon.
 - 4 Try pinging the print server from the Terminal window:


```
ping ipaddress
```

Where `ipaddress` is the print server IP address (note that in some instances it can take up to two minutes for the print server to load its IP address after setting the IP address).
- 4 If you have tried 1 to 3 above and it does not work, then reset the print server back to the default factory settings and try from the initial setup again. For information how to reset to the default factory settings, see *Restoring the network settings to factory default* on page 25.

Error during printing

If you try to print while other users are printing large amounts of data (e.g. many pages or pages with a large amount of graphics at high resolution), the printer is unable to accept your print job until the ongoing printing is finished. If the waiting time of your print job exceeds a certain limit, a time out situation occurs, which causes the error message. In such situations, execute the print job again after the other jobs are completed.

Scanning and PC Fax problems

The network scanning feature does not work in Windows®

The network PC Fax feature does not work in Windows®

Firewall settings on your PC may be rejecting the necessary network connection. Follow the instructions below to disable the Firewall. If you are using personal Firewall software, see the User's Guide for your software or contact the software manufacturer.

Windows® XP SP2 users:

- 1 Click the **Start** button, **Control Panel**, **Network and Internet Connections** and then **Windows Firewall**. Make sure that **Windows Firewall** on the **General** tab is set to On.
- 2 Click the **Advanced** tab and **Settings...** button of **Network Connection Settings**.
- 3 Click the **Add** button.
- 4 To add port 54925 for network scanning, enter the information below:
 1. In **Description of service**: Enter any description, for example, "Lenovo Scanner".
 2. In **Name or IP address (for example 192.168.0.12) or the computer hosting this service on your network**: Enter "Localhost".
 3. In **External Port number for this service**: Enter "54925".
 4. In **Internal Port number for this service**: Enter "54925".
 5. Make sure **UDP** is selected.
 6. Click **OK**.
- 5 Click the **Add** button.
- 6 To add port 54926 for network PC Fax, enter the information below:
 1. In **Description of service**: Enter any description, for example, "Lenovo PC Fax".
 2. In **Name or IP address (for example 192.168.0.12) or the computer hosting this service on your network**: Enter "Localhost".
 3. In **External Port number for this service**: Enter "54926".
 4. In **Internal Port number for this service**: Enter "54926".
 5. Make sure **UDP** is selected.
 6. Click **OK**.

- 7 If you still have trouble with your network connection, click the **Add** button.
- 8 To add port 137 for network scanning, network printing and network PC Fax receiving, enter the information below:
 1. In **Description of service**: Enter any description, for example, "Lenovo PC Fax receiving".
 2. In **Name or IP address (for example 192.168.0.12) or the computer hosting this service on your network**: Enter "Localhost".
 3. In **External Port number for this service**: Enter "137".
 4. In **Internal Port number for this service**: Enter "137".
 5. Make sure **UDP** is selected.
 6. Click **OK**.
- 9 Make sure if the new setting is added and is checked, and then click **OK**.

**Note**

After the Lenovo software package is installed, enable your Firewall again.

Windows Vista® users:

- 1 Click the **Start** button, **Control Panel**, **Network and Internet**, **Windows Firewall** and click **Change settings**.
- 2 When the **User Account Control** screen appears, do the following.
 - Users who have administrator rights: Click **Continue**.
 - For users who do not have administrator rights: Enter the administrator password and click **OK**.
- 3 Make sure that **on (recommended)** is selected on the **General** tab.
- 4 Click the **Exceptions** tab.
- 5 Click the **Add port...** button.
- 6 To add port 54925 for network scanning, enter the information below:
 1. In **Name**: Enter any description, for example, "Lenovo Scanner".
 2. In **Port number**: Enter "54925".
 3. Make sure **UDP** is selected.
 4. Click **OK**.
- 7 Click the **Add port...** button.
- 8 To add port 54926 for network PC Fax, enter the information below:
 1. In **Name**: Enter any description, for example, "Lenovo PC Fax".
 2. In **Port number**: - Enter "54926".
 3. Make sure **UDP** is selected.
 4. Click **OK**.
- 9 Make sure that the new setting is added and is checked, and then click **Apply**.

- 10 If you still have trouble with your network connection such as network scanning or printing, check **File and Printer Sharing** box in the **Exceptions** tab and then click **Apply**.

**Note**

After the Lenovo software package is installed, enable your Firewall again.

Protocol-specific troubleshooting

Windows® 2000/XP, Windows Vista® and Windows Server® 2003 IPP troubleshooting

I want to use a different Port number other than 631.

If you are using Port 631 for IPP printing, you may find that your firewall may not let the print data through. If this is the case, use a different port number (port 80), or configure your Firewall to allow Port 631 data through.

To send a print job using IPP to a printer using Port 80 (the standard HTTP port) enter the following when configuring your Windows® 2000/XP, Windows Vista® and Windows Server® 2003 system.

`http://ipaddress/ipp`

The “Go to printer’s Web site” option in Windows® XP and Windows Vista® is not working

The “Get More Info” option in Windows® 2000 and Windows Server® 2003 is not working

If you are using a URL of:

`http://ipaddress:631` or `http://ipaddress:631/ipp`

the **Get More Info** option in Windows® 2000/XP, Windows Vista® and Windows Server® 2003 will not function. If you wish to use the **Get More Info** option, use the following URL:

`http://ipaddress`

This will then force Windows® 2000/XP, Windows Vista® and Windows Server® 2003 to use Port 80 to communicate with the Lenovo print server.

Web Based Management (web browser) troubleshooting (TCP/IP)

- 1 If you cannot connect to the print server using your web browser it may be worth checking the Proxy Settings of your browser. Look in the Exceptions setting and if necessary, type in the IP address of the print server. This will stop your computer from trying to connect to your ISP or proxy server every time you wish to look at the print server.
- 2 Make sure that you are using the correct web browser, we recommend Microsoft Internet Explorer 6.0® (or greater) or Firefox® 1.0 (or greater) for Windows® and Safari™ 1.0 for Macintosh®. Please also make sure that JavaScript and Cookies are always enabled in whichever browser you use. We recommend you upgrade to Safari™ 1.2 or greater to enable JavaScript. If a different web browser is used, make sure it is compatible with HTTP 1.0 and HTTP 1.1.

Using services

A service is a resource that can be accessed by computers that wish to print to the Lenovo print server. The Lenovo print server provides the following predefined services (do a `SHOW SERVICE` command in the Lenovo print server remote console to see a list of available services): Enter `HELP` at the command prompt for a list of supported commands.

Service (Example)	Definition
BINARY_P1	TCP/IP binary
TEXT_P1	TCP/IP text service (adds carriage return after each line feed)
PCL_P1	PCL [®] service (switches PCL-compatible printer to PCL [®] mode)
BRNxxxxxxxxxxx	TCP/IP binary
BRNxxxxxxxxxxx_AT	PostScript [®] service for Macintosh [®]
POSTSCRIPT_P1	PostScript [®] service (switches PCL-compatible printer to PostScript [®] mode)

Where “xxxxxxxxxxx” is your machine’s Ethernet address (MAC address).

Other ways to set the IP address (for advanced users and administrators)

For information on how to configure your machine for a network using the BRAdmin Light utility, see *Setting the IP address and subnet mask* on page 12.

Using DHCP to configure the IP address

The Dynamic Host Configuration Protocol (DHCP) is one of several automated mechanisms for IP address allocation. If you have a DHCP server in your network, the print server will automatically obtain its IP address from the DHCP server and register its name with any RFC 1001 and 1002-compliant dynamic name services.



Note

If you do not want your print server configured via DHCP, BOOTP or RARP, you must set the BOOT Method to static so that the print server has a static IP address. This will prevent the print server from trying to obtain an IP address from any of these systems. To change the BOOT Method, use the machine’s control panel `LAN` menu, BRAdmin applications, Remote Setup or Web Based Management (web browser).

Using BOOTP to configure the IP address

BOOTP is an alternative to RARP that has the advantage of allowing configuration of the subnet mask and gateway. In order to use BOOTP to configure the IP address make sure that BOOTP is installed and running on your host computer (it should appear in the `/etc/services` file on your host as a real service; type `man bootpd` or refer to your system documentation for information). BOOTP is usually started up via the `/etc/inetd.conf` file, so you may need to enable it by removing the “#” in front of the bootp entry in that file. For example, a typical bootp entry in the `/etc/inetd.conf` file would be:

```
#bootp dgram udp wait /usr/etc/bootpd bootpd -i
```

Depending on the system, this entry might be called “bootps” instead of “bootp”.



Note

In order to enable BOOTP, simply use an editor to delete the “#” (if there is no “#”, then BOOTP is already enabled). Then edit the BOOTP configuration file (usually `/etc/bootptab`) and enter the name, network type (1 for Ethernet), Ethernet address (MAC address) and the IP address, subnet mask and gateway of the print server. Unfortunately, the exact format for doing this is not standardized, so you will need to refer to your system documentation to determine how to enter this information. Some examples of typical `/etc/bootptab` entries include:

```
BRN008077310107 1 00:80:77:31:01:07 192.168.1.2
```

and:

```
BRN008077310107:ht=ethernet:ha=008077310107:\
ip=192.168.1.2:
```

Certain BOOTP host software implementations will not respond to BOOTP requests if you have not included a download filename in the configuration file. If this is the case, simply create a null file on the host and specify the name of this file and its path in the configuration file.

As with RARP, the print server will load its IP address from the BOOTP server when the printer is powered on.

Using RARP to configure the IP address

The Lenovo print server's IP address can be configured using the Reverse ARP (RARP) facility on your host computer. This is done by editing the `/etc/ethers` file (if this file does not exist, you can create it) with an entry similar to the following:

```
00:80:77:31:01:07    BRN008077310107
```

Where the first entry is the Ethernet address (MAC address) of the print server and the second entry is the name of the print server (the name must be the same as the one you put in the `/etc/hosts` file).

If the RARP daemon is not already running, start it (depending on the system the command can be `rarpd`, `rarpd -a`, `in.rarpd -a` or something else; type `man rarpd` or refer to your system documentation for additional information).

The Lenovo print server will get the IP address from the RARP daemon when the printer is powered on.

Using APIPA to configure the IP address

The Lenovo print server supports the Automatic Private IP Addressing (APIPA) protocol. With APIPA, DHCP clients automatically configure an IP address and subnet mask when a DHCP server is not available. The device chooses its own IP address in the range 169.254.1.0 through to 169.254.254.255. The subnet mask is automatically set to 255.255.0.0 and the gateway address is set to 0.0.0.0.

By default, the APIPA protocol is enabled. If you want to disable the APIPA protocol, you can disable it using control panel of the machine. For more information, see *APIPA* on page 23.

If the APIPA protocol is disabled, the default IP address of a Lenovo print server is 192.0.0.192. However, you can easily change this IP address number to match with the IP address details of your network.

Using ARP to configure the IP address

If you are unable to use the BRAdmin application and your network does not use a DHCP server, you can also use the ARP command. The ARP command is available on Windows® systems that have TCP/IP installed. To use ARP enter the following command at the command prompt:

```
arp -s ipaddress ethernetaddress
ping ipaddress
```

Where `ethernetaddress` is the Ethernet address (MAC address) of the print server and `ipaddress` is the IP address of the print server. For example:

■ Windows® systems

Windows® systems require the dash “-” character between each digit of the Ethernet address (MAC address).

```
arp -s 192.168.1.2 00-80-77-31-01-07
ping 192.168.1.2
```



Note

You must be on the same Ethernet segment (that is, there cannot be a router between the print server and operating system) to use the `arp -s` command.

If there is a router, you may use BOOTP or other methods described in this chapter to enter the IP address. If your administrator has configured the system to deliver IP addresses using BOOTP, DHCP or RARP your Lenovo print server can receive an IP address from any one of these IP address allocation systems. In which case, you will not need to use the ARP command. The ARP command only works once. For security reasons, once you have successfully configured the IP address of a Lenovo print server using the ARP command, you cannot use the ARP command again to change the address. The print server will ignore any attempts to do this. If you wish to change the IP address again, use a Web Based Management (web browser), TELNET (using the SET IP ADDRESS command) or factory reset the print server (which will then allow you to use the ARP command again).

Using the TELNET console to configure the IP address

You can also use the TELNET command to change the IP address.

TELNET is an effective method to change the machine’s IP address. But a valid IP address must already be programmed into the print server.

Type `TELNET <command line>` at the command prompt of the system prompt, where `<command line>` is the IP address of the print server. When you are connected, push the Return or Enter key to get the “#” prompt. Enter the password “**access**” (the password will not appear on the screen).

You will be prompted for a user name. Enter anything in response to this prompt.

You will then get the `Local>` prompt. Type `SET IP ADDRESS ipaddress`, where `ipaddress` is the desired IP address you wish to assign to the print server (check with your network administrator for the IP address to use). For example:

```
Local> SET IP ADDRESS 192.168.1.3
```

You will now need to set the subnet mask by typing `SET IP SUBNET subnet mask`, where `subnet mask` is the desired subnet mask you wish to assign to the print server (check with your network administrator for the subnet mask to use). For example:

```
Local> SET IP SUBNET 255.255.255.0
```

If you do not have any subnets, use one of the following default subnet masks:

255.0.0.0 for class A networks

255.255.0.0 for class B networks

255.255.255.0 for class C networks

The leftmost group of digits in your IP address can identify the type of network you have. The value of this group ranges from 1 through 127 for Class A networks (e.g., 13.27.7.1), 128 through 191 for Class B networks (e.g., 128.10.1.30), and 192 through 255 for Class C networks (e.g., 192.168.1.4).

If you have a gateway (router), enter its address with the command `SET IP ROUTER routeraddress`, where `routeraddress` is the desired IP address of the gateway you wish to assign to the print server. For example:

```
Local> SET IP ROUTER 192.168.1.4
```

Type `SET IP METHOD STATIC` to set the method of IP access configuration to static.

To verify that you have entered the IP information correctly, type `SHOW IP`.

Type `EXIT` or Ctrl-D (i.e., hold down the control key and type “D”) to end the remote console session.

Installation when using web services (For Windows Vista[®] users)



Note

Verify the host computer and print server are either on the same subnet, or that the router is properly configured to pass data between the two devices.

- 1 Click **Start**, then choose **Network**.
- 2 The machine's Web Services Name will be shown with the printer icon. Right click the machine you want to install.



Note

The Web Services Name for the Lenovo machine is your model name and the Ethernet address (MAC address) of your machine (e.g. Lenovo M7250N.)

- 3 From the pull down menu, click **Install**.
- 4 When the **User Account Control** screen appears, do the following.
 - Users who have administrator rights: Click **Continue**.
 - For users who do not have administrator rights: Enter the administrator password and click **OK**.
- 5 Choose **Locate and install driver software (recommended)**.
- 6 Insert Lenovo CD-ROM.
- 7 Choose **Don't search online** and then **Browse my computer for driver software (advanced)** on your computer.
- 8 Choose your CD-ROM drive and then the **driver \ win2kxpvista¹ \ your language** folder. Click **OK**.
- 9 Click **Next** to begin installation.

¹ winXp64Vista64 for 64-bit OS users

Installation when using a Network Print Queue or Share (printer driver only)



Note

If you are going to connect to a shared printer on your network, we recommend that you ask your system administrator about the queue or share name for the printer prior to installation.

- 1 Start the CD-ROM installation menu program according to the Quick Setup Guide.
- 2 Choose the model name and your language (if necessary), and then click **Network Applications**.
- 3 Click **Printer Driver**.
- 4 Click **Next** in response to the Welcome message. Follow the on-screen instructions.
- 5 Choose **Standard Installation** and click **Next**.
- 6 Choose **Network Shared Printer**, and then click **Next**.
- 7 Choose your printer's queue, and then click **OK**.



Note

Contact your administrator if you are not sure about the location and name of the printer in the network.

- 8 Click **Finish**. Setup is now complete.

Print server specifications

Ethernet wired network

Network Board Model name	NC-6600h
LAN	You can connect your machine to a network for Network Printing, Network Scanning, PC Fax and Remote Setup. ^{1 2}
Support for	Windows® 2000 Professional, Windows® XP, Windows® XP Professional x64 Edition, Windows Vista®, Windows Server® 2003 and Windows Server® 2003 x64 Edition ² Mac OS® X 10.2.4 or greater
Protocols	<p>TCP/IP for IPv4: ARP, RARP, BOOTP, DHCP, APIPA (Auto IP), WINS/NetBIOS name resolution, DNS resolver, mDNS, LLMNR responder, LPR/LPD, Custom Raw Port/Port9100, IPP, FTP server, FTP client, POP before SMTP, SMTP AUTH, APOP, TELNET, SNMPv1, HTTP server, TFTP client and server, SMTP client, ICMP, Web services</p> <p>TCP/IP for IPv6: (Turned off as default) NDP, RA, DNS resolver, mDNS, LLMNR responder, LPR/LPD, Custom Raw Port/Port9100, IPP, FTP server, FTP client, POP before SMTP, SMTP AUTH, APOP, TELNET, SNMPv1, HTTP server, TFTP client and server, SMTP client, ICMPv6, Web services</p> <p>Other: LLTD responder</p>
Network type	Ethernet 10/100 BASE-TX Auto Negotiation (Wired LAN)
Management utilities	<p>BRAdmin Light for Windows® 2000 Professional, Windows® XP, Windows® XP Professional x64 Edition, Windows Vista®, Windows Server® 2003, Windows Server® 2003 x64 Edition</p> <p>Client computers with a web browser supporting Java™</p>

¹ PC Fax and Remote Setup are available for Windows® only

² Printing only for Windows Server® 2003

Function table and default factory settings

The factory settings are shown in Bold with an asterisk.

Main menu	Submenu	Menu selections	Options	Page
5.LAN	1.TCP/IP	1.BOOT Method	Auto* Static RARP BOOTP DHCP (If you choose Auto, RARP, BOOTP or DHCP, you will be asked to enter how many times the machine tries to obtain the IP address.)	17
		2.IP Address	[000-255] . [000-255] . [000-255] . [000-255] [000] . [000] . [000] . [000]* ¹	18
		3.Subnet Mask	[000-255] . [000-255] . [000-255] . [000-255] [000] . [000] . [000] . [000]* ¹	19
		4.Gateway	[000-255] . [000-255] . [000-255] . [000-255] [000] . [000] . [000] . [000]*	19
		5.Node Name	BRNxxxxxxxxxxxxx (up to 15 characters)	19
		6.WINS Config	Auto* Static	20
		7.WINS Server	Primary [000-255] . [000-255] . [000-255] . [000-255] [000] . [000] . [000] . [000]*	21
			Secondary [000-255] . [000-255] . [000-255] . [000-255] [000] . [000] . [000] . [000]*	
		8.DNS Server	Primary [000-255] . [000-255] . [000-255] . [000-255] [000] . [000] . [000] . [000]*	22
			Secondary [000-255] . [000-255] . [000-255] . [000-255] [000] . [000] . [000] . [000]*	
		9.APIPA	On* Off	23

Main menu	Submenu	Menu selections	Options	Page
5.LAN (continued)	1.TCP/IP (continued)	0.IPv6	On Off*	23
	2.Ethernet		Auto* 100B-FD 100B-HD 10B-FD 10B-HD	24
	3.Scan to FTP		<div> Color 150 dpi* Color 300 dpi Color 600 dpi Gray 100 dpi Gray 200 dpi Gray 300 dpi B&W 200 dpi B&W 200x100 dpi </div> <div> (If you choose Color option) PDF* JPEG (If you choose Gray option) PDF JPEG* (If you choose B&W option) PDF* TIFF </div>	24
	0.Factory Reset	1.Reset	1.Yes 2.No	25
		2.Exit	—	

¹ On connection to the network, the machine will automatically set the IP address and Subnet Mask to values appropriate for your network.

Entering Text

When setting certain menu selections, you will need to type text characters. The dial pad keys have letters printed on them. The keys: **0**, **#** and ***** do not have printed letters because they are used for special characters.

Press the appropriate dial pad key the number of times shown in this reference table to access the character you want.

Press Key	one time	two times	three times	four times	five times	six times	seven times	eight times	nine times
2	a	b	c	A	B	C	2	a	b
3	d	e	f	D	E	F	3	d	e
4	g	h	i	G	H	I	4	g	h
5	j	k	l	J	K	L	5	j	k
6	m	n	o	M	N	O	6	m	n
7	p	q	r	s	P	Q	R	S	7
8	t	u	v	T	U	V	8	t	u
9	w	x	y	z	W	X	Y	Z	9

For menu selections that do not allow lower case character selection, please use this reference table:

Press Key	one time	two times	three times	four times	five times
2	A	B	C	2	A
3	D	E	F	3	D
4	G	H	I	4	G
5	J	K	L	5	J
6	M	N	O	6	M
7	P	Q	R	7	P
8	T	U	V	8	T
9	W	X	Y	9	W

Inserting spaces

To enter a space in a fax number, press ► once between numbers. To enter a space in a name, press ► twice between characters.

Making corrections

If you entered a letter incorrectly and want to change it, press ◀ to move the cursor to the incorrect character, and then press **Clear/Back**.

Repeating letters

To enter a character on the same key as the previous character, press ► to move the cursor right before pressing the key again.

Special characters and symbols

Press *****, **#** or **0**, and then press **◀** or **▶** to move the cursor to the symbol or character you want.

Press **OK** to choose it. The symbols and characters below will appear depending on your menu selection.

Press ***** for (space) ! “ # \$ % & ' () * + , - . / €

Press **#** for : ; < = > ? @ [] ^ _ ¥ ~ ‘ | { }

Press **0** for Ä Ë Ö Ü À Ç È É 0

C

Index

A

APIPA	6, 23, 56
APOP	44
ARP	56

B

BINARY_P1	54
BOOTP	6, 18, 55
BRAdmin Light	1, 2
BRNxxxxxxxxxxxx	54
BRNxxxxxxxxxxxx_AT	54

C

Control panel	15
---------------------	----

D

DHCP	6, 18, 54
DNS client	6
DNS server	22
Domain	31, 33, 45

F

Factory default	25
Firewall	47, 49, 51

G

Gateway	19
---------------	----

H

Hyper Text Transfer Protocol	15
------------------------------------	----

I

Internet printing	1, 30
IP address	9, 18
IPP	7, 31
IPv6	8, 23

L

LLMNR	7
LLTD	8
LPR/LPD	6

M

Macintosh Printing	36
mDNS	7

N

Network Configuration List	26
Network printing	27
Network shared printing	5
Node name	19

O

Operating systems	1
-------------------------	---

P

Password	30
PCL_P1	54
Peer-to-Peer	4
Ping	49, 50
POP before SMTP	44, 45
Port9100	6
POSTSCRIPT_P1	54
Print server setting	15
Protocol	6

R

RARP	6, 18, 56
Remote Setup	1, 16
Restoring the network settings	25
RFC 1001	54

S

Service	54
Simple Network Configuration for Mac OS® X	48
SMTP client	6
SMTP-AUTH	44, 45
SNMP	7
Specifications	61
Status Monitor	1
Subnet mask	10, 19

T

TCP/IP	6, 17
TCP/IP printing	27
TELNET	7, 57

Text

- entering 64
- special characters 65

TEXT_P1 54

Trademarks i

W

Web Based Management (web browser) 15

Web server (HTTP) 7

Web services 7, 59

WINS Config 20

WINS Server 21