

Appendix

Appendix	1
Set IP Address Using DHCP/BOOTP/RARP/ARP	2
Setting IP Address Using DHCP (WindowsNT4.0)	2
Setting IP Address Using DHCP (Windows2000)	4
Setting IP Address Using BOOTP	6
Setting IP Address Using RARP	7
Setting IP Address Using ARP	8
About NetBEUI	10
About TELNET	12

Print Server Card Users Manual

Set IP Address Using DHCP/BOOTP/RARP/ARP

Setting IP Address Using DHCP (WindowsNT4.0)

This section explains how to set up IP address using DHCP of Windows NT4.0 server.



NOTE

- * Register IP address and Ethernet address on WindowsNT4.0 DHCP server. IP address will be set to Print Server Card by turning the power on.



TIP

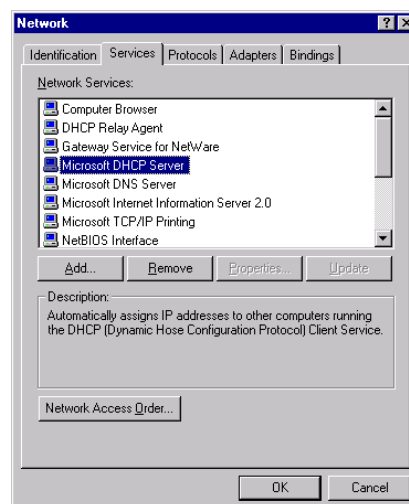
- * If you do not register the IP address, a different address will be assigned every time you turn on the power of the printer which Print Server Card is installed.

1. Go to **Control Panel - Network** and select **Service**. In Network Service, add **Microsoft DHCP Server**.

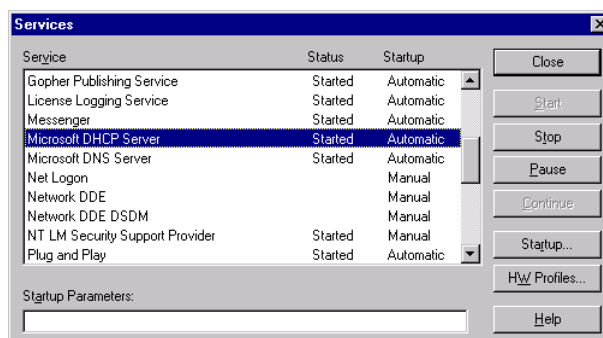


TIP

- * You need to have the right to log in.

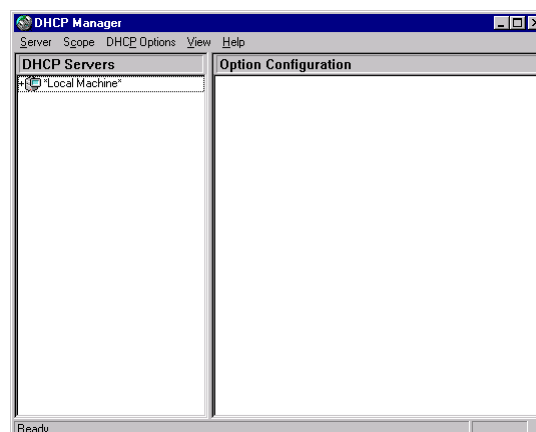


2. Go to **Control Panel** select **Service** and start **Microsoft DHCP Server**.

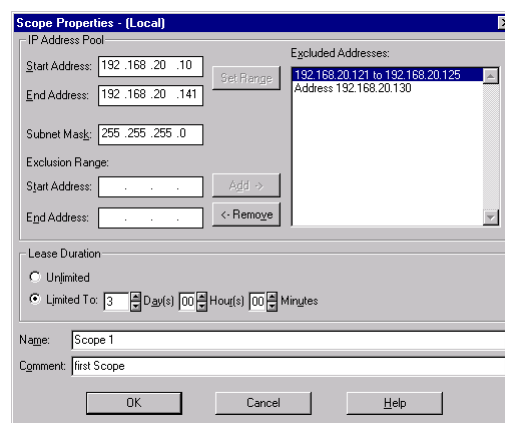


Print Server Card Users Manual

- From **Program** go to **Administrative Tools (Common)** start DHCP manager.



- Select **Scope - Create** and set up IP address pool.

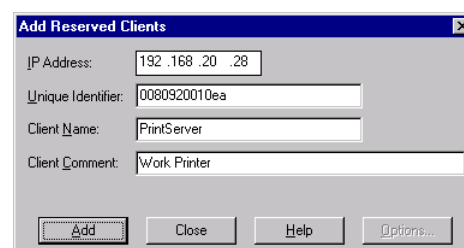


- Select **Scope - Add Reservation** and set up configuring IP address and Ethernet address.



TIP

* Step 5 is unnecessary if you do not need to fix IP address.

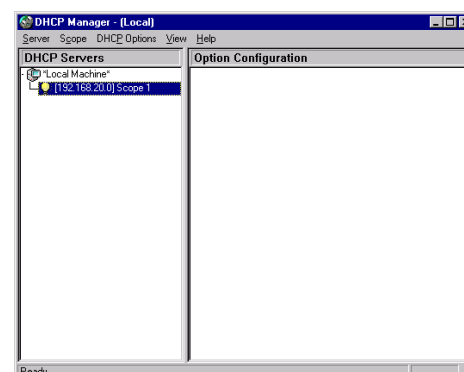


- Select **Scope** and activate the created scope. Turn on the power of printer which the Print Server Card is inserted.



NOTE

* Selecting **Scope - Active Lease** will enable you to check the IP address assigning status.



Print Server Card Users Manual

Setting IP Address Using DHCP (Windows2000)

This section explains how to set up IP address using DHCP of Windows2000 server.



TIP

- * Register IP address and Ethernet address on Windows2000 DHCP server. IP address will be set to Print Server Card by turning the power on.



NOTE

- * If you do not register the IP address, a different address will be assigned every time you turn on the power of the printer which Print Server Card is installed.

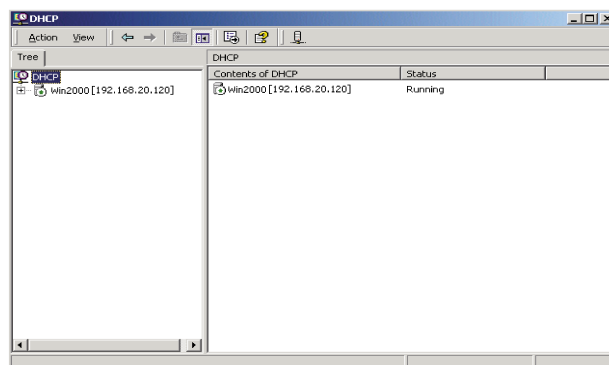
1. Go to **Start - Setting - Control Panel - Add/Remove Programs - Add/Remove Windows Components** and open **Windows Components Wizard**. In Component, select Other **Network Files and Print Services**. Select **Dynamic Host Configuration Protocol (DHCP)** and click **OK**. You will return to the **Windows components Wizard**. Click **Next**. When all the setups are completed, click **Finish**.

2. From **Control Panel** go to **Administrative Tools** start DHCP manager.



TIP

- * You need to have the right to log in.
- * Starts **DHCP Server** service in advance.



3. From **Add - New** go to **Scope** start **Add Scope Wizard**. Follow the wizard to setup.



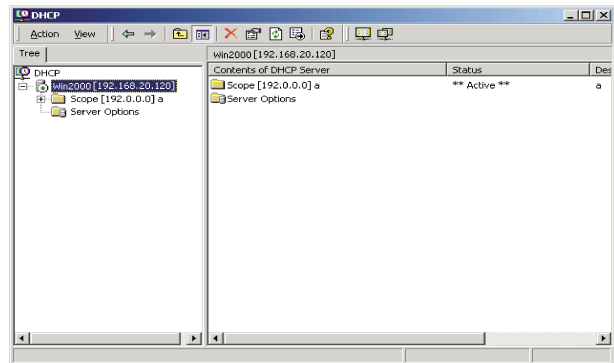
TIP

- * Please refer to the help of Windows2000 for detail.



Print Server Card Users Manual

4. Complete necessary setup and activate the scope added.



5. Turn on the power of the printer.

Print Server Card Users Manual

Setting IP Address Using BOOTP

This section explains how to set up IP address using BOOTP.

Register IP address and Ethernet address on BOOTP server. IP address will be set to Print Server Card by turning the power on.



TIP

- * To set IP address by BOOTP, you will need a workstation that is running BOOTP within the network.

Setting IP address using UNIX BOOTP server (HP-UX9.x).

1. Add the following to /etc/bootptab.

Ex. If IP address is 192.168.20.28, host name is "pbox1"

```
pbox1:\
ht=ether:\           # Target hardware type is ETHERNET
ha=0080920010ea:\    # Target hardware address
ip=192.168.20.28:\   # Target IP address
gw=192.168.20.254:\  # Default gateway address (If required)
sm=255.255.255.0:    # Target subnet mask (If required)
```

2. Add the following to /etc/inetd.conf

```
bootps dgram udp wait root /etc/bootpd bootpd
```

3. reset inetd.

```
kill -1 1
```

4. Restart Print Server Card and printer.

Print Server Card Users Manual

Setting IP Address Using RARP

This section explains how to set IP address using RARP .

Add Ethernet address of Print Server Card and intended IP address to /etc/ethers of UNIX. Then start RARPD. IP address will set to Print Server Card by turning the power on.



TIP

* To set IP address by RARP, you need a workstation with RARP daemon within the network.

Setting IP address using UNIX RARP server (SunOS4.1x).

1. Add IP address and Ethernet address combination to /etc/ethers.

```
00:80:92:00:10:ea 192.168.20.28 # pbox1
```

2. Start RARPD

```
rarpd -a
```

3. Restart Print Server Card and printer.

Print Server Card Users Manual

Setting IP Address Using ARP

There are two ways of setting IP address by ARP.

Method 1. Register IP address and Ethernet Address combination and PING command.



- * You can find out the Ethernet Address of Print Server Card from the seal on Print Server Card.
- * Setting IP address in this method does not register IP address to Print Server Card, so it will be erased with turning off the printer. Be sure to register IP address by TELNET or utility.
- * When using in Windows95/98/Me or NT environment, IP address and Ethernet Address of other LAN peripherals must be registered before registering in ARP table so as to add an ARP table. After setting an IP address by this method, be sure to PING command to other computer and register in ARP table.

Setup IP address using Method 1

Print Server Card Ethernet Address: 00:80:92:00:10:ea

IP Address to set: 192.168.20.28

1. Turn the power on Print Server Card
2. By using ARP command, register IP address and Ethernet Address combination to ARP table.
(UNIX)

```
arp -s 192.168.20.28 00:80:92:00:10:ea temp
```

(Windows95/98/Me, WindowsNT4.0, Windows2000/XP in DOS)

```
arp -s 192.168.20.28 00-80-92-00-10-ea
```

3. Command PING.

```
PING 192.168.20.28
```

4. If you get reply from Print Server Card, set up is completed.

(UNIX)

```
192.168.20.28 is alive.
```

(Windows 95/98/Me, WindowsNT4.0, Windows2000/XP)

```
reply from 192.168.20.28: byte=32 time=xxms TTL=255
```


Print Server Card Users Manual

Method 2. Continuously PING the IP address.

Print Server Card determines IP address in conditions below.

- (1) Only one Print Server Card exists in the network
- (2) It is in factory default (IP address is 0.0.0.0).
- (3) More than 10 ARP request is thrown to Print Server Card within 1 minute.
- (4) After ARP, the receiving packet is "ICMP Echo Request".



- * Setting IP address in this method does not register IP address to Print Server Card, so it will be erased with turning off the printer. After setting an IP address by this method, be sure to register IP address by TELNET or utility.
- * If there are more than one Print Server Card in the network while doing this method, you may register same IP address to two Print Server Card. Be sure to setup only one by one.

Setup IP address using Method 2

IP address to be set: 192.168.20.28

1. Turn on the power of the Print Server Card.
2. PING command.

```
Ping 192.168.20.28
```

3. Continue PING command until you receive reply from Print Server Card. If you receive reply, set up is completed.

(UNIX)

```
192.168.20.28 is alive.
```

(Windows95/98/Me, WindowsNT4.0, Windows2000/XP in DOS)

```
reply from 192.168.20.28: byte=32 time=xxms TTL=255
```

```
*  
*  
*  
*
```

Print Server Card Users Manual

About NetBEUI

This section explains how to print using NetBEUI protocol.

When you connect Print Server Card to the network you will see **Sharp-Printer Workgroup** in **Entire Network** of **Network Neighborhood**. In the workgroup a printer and a computer (Print Server Card) with two folders will be added. You can add printer, change printer status, set up, connect to HTTP server through this computer (Print Server Card). Depending on printer, you may see message of writing error with NetBEUI printing in that case. If there is a problem, use TCP/IP protocol.

Examples

- * Tried to print while the printer was off line.
- * Tried to print when paper was out.
- * Tried to print when another machine tried to print using NetBEUI.
- * Tried to print while using another protocol.
- * Error occurred while printing.

During the above situation you will see an error message. If you have problems, use TCP/IP protocol.

Sharp-Printer Structure

\\SC001141	:Computer (Print Server Card)
\\SC001141\LPT	:Printer
\\SC001141\report\Report.txt	:Setup Report (Read only)
\\SC001141\report>Status.txt	:System Status Report (Read only)
\\SC001141\setup\WebSetup	:Short Cut File (Read only)

Setup Report

Reports Print Server Card's configuration status when power is turned on.

System Status Report

When this folder is opened, reports Print Server Card's status.

Print Server Card Users Manual

Short Cut File

When you set IP address to Print Server Card shortcut (Web Setup) will be created. By double clicking on shortcut icon, you can browse Print Server Card's homepage.



TIP

* This does not work unless TCP/IP is set.

Print Server Card Users Manual

About TELNET

After setting up the IP address, parameters can be setup with TELNET in your UNIX or TCP/IP software. TELNET allows you to display and set parameters for Print Server Card by using the command. Below is some examples.



TIP

- * Login by **admin** user to change the parameters.
admin user password is **Sharp** in factory default.

Example of display when logged in using TELNET

```
Sharp AR-NC5J Ver 01.00.00 TELNET server.  
Copyright(C) 2001 SHARP CORPORATION  
Copyright(C) 2001 Japan Computer Industry Inc.  
login: admin  
'admin' user needs password to login.  
password:  
User 'admin' logged in.
```

No.	Item	Value	(level.1)

1	Configure General		
2	Configure TCP/IP		
3	Configure NetWare		
4	Configure AppleTalk		
5	Configure NetBEUI/NetBIOS		
97	Display Status		
98	Reset Settings to Defaults		
99	Exit		

Please select(1 - 99)?

Print Server Card Users Manual

Configure General Menu [1]

No.	Item	Value	(level.2)
1	: Change admin Password	: ""	
2	: Print status page after bootup	: YES	
99	: Back to prior menu		

Please select(1 - 99)?

Configure TCP/IP Menu [2]

No.	Item	Value	(level.2)
1	: TCP/IP Protocol	: ENABLE	
2	: DHCP/BOOTP	: DISABLE	
3	: RARP	: DISABLE	
4	: IP Address	: 192.168.20.28	
5	: Subnet Mask	: 0.0.0.0	
6	: Default Gateway	: 0.0.0.0	
7	: Use FTP/LPD Banner	: NO	
99	: Back to prior menu		

Please select(1 - 99)?

Print Server Card Users Manual

Configure NetWare menu[3]

No.	Item	Value	(level.2)
1	: NetWare Protocol	: ENABLE	
2	: Frame Type	: 802.2	
3	: Operation Mode	: PSERVER	
4	: Printer Name	: "SC0010EA-prn1"	
5	: PSERVER Mode		
6	: RPRINTER Mode		
99	: Back to prior menu		

Please select(1 - 99)?

PSERVER Mode is enabled [3-5]

No.	Item	Value	(level.3)
1	: Print Server Name	: "SC0010EA"	
2	: Login Password	: ""	
3	: Job Polling(sec.)	: 4	
4	: Bindary Mode	: ENABLE	
5	: File Server		
6	: NDS		
99	: Back to prior menu		

Please select(1 - 99)?

File Server menu [3-5-5]

No.	Item	Value	(level.4)
1	: FSERVER Name 1	: ""	
2	: FSERVER Name 2	: ""	
3	: FSERVER Name 3	: ""	
4	: FSERVER Name 4	: ""	
5	: FSERVER Name 5	: ""	
6	: FSERVER Name 6	: ""	
7	: FSERVER Name 7	: ""	
8	: FSERVER Name 8	: ""	
99	: Back to prior menu		

Please select(1 - 99)?

Print Server Card Users Manual

NDS menu [3-5-6]

No.	Item	Value	(level.4)
1	: NDS Tree	:	" "
2	: NDS Context	:	" "
99	: Back to prior menu		

Please select(1 - 99)?

RPRINTER Mode menu [3-6]

No.	Item	Value	(level.3)
1	: PSERVER Name 1	:	" "
2	: PSERVER Name 2	:	" "
3	: PSERVER Name 3	:	" "
4	: PSERVER Name 4	:	" "
5	: PSERVER Name 5	:	" "
6	: PSERVER Name 6	:	" "
7	: PSERVER Name 7	:	" "
8	: PSERVER Name 8	:	" "
9	: Job Timeout(sec.)	:	10
99	: Back to prior menu		

Please select(1 - 99)?

AppleTalk is enabled [4]

No.	Item	Value	(level.2)
1	: AppleTalk Protocol	:	ENABLE
2	: Zone Name	:	"*"
3	: Printer Name	:	"SC0010EA"
99	: Back to prior menu		

Please select(1 - 99)?

NetBEUI is eanbled [5]

No.	Item	Value	(level.2)
1	: NetBEUI Protocol	:	ENABLE
2	: Computer Name	:	"SC0010EA"
3	: Workgroup	:	"Sharp-Printer"
4	: Comment	:	"Sharp AR-NC5J"
99	: Back to prior menu		

Please select(1 - 99)?

Print Server Card Users Manual

Display Status menu [97]

Display Status

1 : prn1

2 : system

99 : Back to prior menu

Please select(1 - 99)?

prn1 menu [97-1]

prn1:

Ready

Print Server Card Users Manual

System menu [97-2]

[GENERAL]

model name	Sharp AR-NC5J
version	01.00.00
printer name	
link status	10BASE-T
duplex mode	HALF
Hardware addr	00:80:92:00:13:67
Status print	YES

[TCP/IP]

status	enabled
DHCP/BOOTP	disabled
IP address	192.168.40.148
subnet mask	255.255.255.0
gateway	192.168.40.254

[NetWare]

status	enabled
packet type	SNAP
network number	00000004
print mode	RPRINTER
connected PS 0	BRAVO-PS
NDS Tree	MH
NDS Context	MH

[AppleTalk]

status	enabled
zone name	TEST01
type name	LaserWriter
object name	SC001367

[NetBEUI]

status	enabled
computer name	SC001367
workgroup name	Sharp-Printer
master browser	SC001367

Print Server Card Users Manual

Reset Settings to Defaults menu [98]

Reset Settings to Defaults

1 : YES

2 : NO

Please select(1 - 2)?

Exit menu [99]

Exit

1 : Save and Exit

2 : Exit without Saving

99 : Back to prior menu