

## Print Server FAQ (Frequently Asked Questions)

Date : 7/8/98

### Note:

1. The "**Print Server**" here are refer to PLANET's Ethernet print server -xPS-5P-y, and the "**print server**" are refer to all types of printer servers.
2. You can use the "Find" function of your browser to locate the topic your are looking for efficiently.

## General Questions :

### Question 1: What is the Print Server ?

The Print Server is designed to provide simple and efficient printer sharing. All users on the LAN, regardless of operating system or network protocol, will be able to use the printer(s) connected to the Print Servers. By connecting your printers to a Print Server instead of a file server or workstation, you will reduce system loading and increase printing performance and allow different network protocols to be used simultaneously.

### Question 2 : What kinds of network environment does the Print Server support ?

Print Server supports IPX/SPX, TCP/IP, NetBeui, and Appletalk simultaneously. That means network users can print jobs to Print Server from heterogeneous network at the same time. (for example : from Netware, Unix, Windows or MAC environment). Depending on the model, you can use 10base2, 10 baseT, or 100 baseT LAN connections.

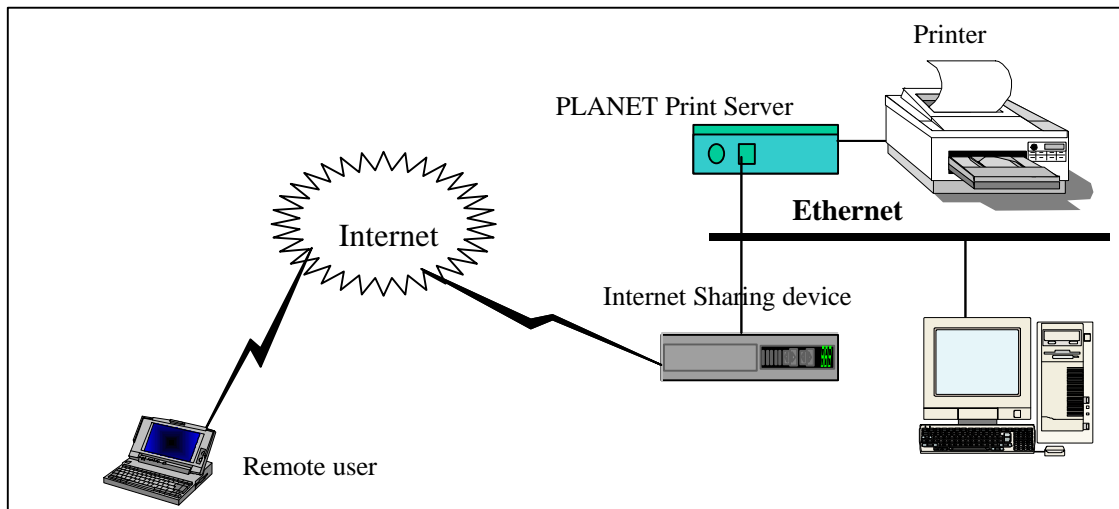
### Question 3: How many printers can be attached to print server ?

Print Server models that we provide can support up to 3 parallel printers.  
We also have one model with 1 serial port.

### Question 4 : What is Internet Printing ?

#### 1. Internet Printing

What: PLANET Internet Printing (InetP) allows remote users to print jobs to the desired company site through Internet E-mail.



How: The remote user can submit documents in two ways:

- a. Use the InetP's driver and setup the remote printer and then print to this printer from any application.
- b. Use e-mail application. and send a PRN file to the PLANET Print Server's e-mail address. PLANET Print Server will access the Mail Server periodically and then retrieve and print the file.

Questions:

You can imagine the following cases:

1. You want to ask your remote site- factory to print paper to your office.
2. Perhaps, you will say "What's the difference with e-mail? E-mail can make it.". The difference is, you get a hardcopy automatically, without downloading your e-mail and missing with file attachments.
3. You have some branch offices. You use faxes a lot to communicate with them, but you are concerned about the resolution on fax pages.
4. There are many jobs you have to do. So you do them overtime at home. And next day you should present them at early in the morning. Before presenting, you must give each attendee copy but a copy is over 30 pages. Thus, you ask by yourself "who can help me?" If you could print one good copy, the office staff could photocopy it.
5. You made some good documents using your software. Your customers want them. Thus you always send them hardcopy by FedEx. But sometimes you don't think FedEx is express.

PLANET provides a perfect solution to these questions. It's the InetP.

Benefits:

**a. Save money.**

- You don't need to setup a remote network through a leased line to print a file from a remote site.
- The printing destination doesn't need any extra application to print the file. They don't need to

have the same software as the sender.

- The remote users don't need a printer or an expensive printer. For example, laser printer or color printer.

**b. Save Time**

- You don't need to read e-mail and then print it out.
- Your client can get it at once.
- You can print your file from home and then collect it at work.

**c. Higher resolution, much better than a fax.**

- The quality is the same as printing directly to your printer.

## Question 5: What is Web Admin ? Can standard Internet Browser manage Print Servers ?

Web Administration provides users to manage Print Server through Web browsers like Microsoft Internet Explorer or Netscape Navigator. We strongly believe that the Internet is the big trend. Right now, we need to install the Web admin utility on a Windows NT server with IIS2.0 (or above) you can then use a standard internet browser on any LAN PC what configuration methods are available to manage Print Server.

## Question 6: How do I configure Print Server in my network ?

Network operating system	Management Utility	Diskette Label
IPX/SPX (NetWare 3.x, 4.x)	PCONSOLE, WPCONFIG, Bi-Admin	IPX/SPX utility
TCP/IP (Unix)	FTP, Telnet	standard unix command
TCP/IP (Windows NT)	FTP, Telnet, Bi-Admin, Web-admin	Bi-admin for PS PS Web-admin utility
TCP/IP (Window 95)	Bi-Admin	Bi-admin for PS
NetBeui (Window 95 )	Bi-Admin	Bi-admin for PS
Appletalk (Ethertalk)	PSTools	Appletalk utility

## Question 7 : What kind of Printing method does the Print Server support?

Network Operating System	Printing Method	Diskette Label /Installation
IPX/SPX (Netware 3.x, 4.x)	Print Server Mode Remote Printer Mode	IPX/SPX utility (Provide quickset.exe utility)
TCP/IP (Unix)	FTP, LPD, PSfilter	TCP/IP utility (install.sh for PSfilter)
TCP/IP (Windows NT)	LPD	N/A
TCP/IP (Win95/NT)	PrServer monitor port	PTP for Win95/NT

NetBeui (Win95/NT)	PrServer monitor port	PTP for Win95/NT
NetBeui (WFW3.11)	PrServer	PTP for WFW
Appletalk (Ethertalk)	Chooser	AppleTalk Utility
TCP/IP (POP3/SMTP)	Internet Printing Port	Internet Printing for PS

### **Question 8 : How to I upgrade my Print Server with new Firmware code ?**

We provide a download utility that you can install Win95/NT.

After you install the download utility on your Win95/NT platform, you can

use this utility to browse the network , select the regarding Print Server and download the appropriate firmware update.

### **Question 9 : Do I need to shutdown File server( Netware, Unix, or Windows NT..) when I install Print Server on my network ?**

No. You do not need to shutdown file server when you install Print Server. What you need to do is to install Print Server's management utility, configure the Print Server , configure the File Server or client PCs, and start printing.

### **Question 10 : Does Print Server support DHCP ?**

DHCP stands for Dynamic Host Configuration Protocol. It allows a computer to obtain its own IP address automatically rather than having it entered manually. Thus, PLANET's print servers can get its IP address from a DHCP server if the DHCP parameter of the print server is set to YES.

### **Question 11 : Does Print Server support Direct Socket Interface printing ?**

This function works for VAX machines. It uses socket number 4010, 4020, and 4030 to print users jobs. It provides another printing method for VAX machines.

### **Question 12 : Why external Print Server is better than internal Print Server ?**

There are so many advantages to use external Print Server than to use internal Print Server.

For example :

1. Usage for any kind of Printers : Most internal Print Server support only a single model of printer. If you change your current printer in the future, you cannot this internal print server any more. You are forced to purchase a new Print Server. External Print Server can support any kind of printers. You do not have to replace new print server when you replace printer.
2. Easy to install : With external Print Server, you do not have to power off Printer, look for screw driver to open up printer, insert internal print server, power on printer, ...

**Question 13 : What is different between 10Mbps Print Server and 10/100Mbps Print Server ?**

10Mbps Print Server can only support 10Mbps wiring. 10/100Mbps Print Server can support 10Mbps or 100Mbps wiring. If you have plan to increase bandwidth up to 100Mbps in the future, you can purchase 10/100Mbps Print Server which can work 10Mbps now, and you do not need to change Print Server's setting after you increase bandwidth up to 100Mbps

**Question 14 : Do I need to install any software from/to file server when I install Print Server ?**

No. You do not have to. Print Server will service printing job automatically after you install print server completely.

(Except you configure Print Server as remote printer mode under NetWare environment. )

**Question 15 : Does Print Server support http embedded ? Can users use standard web browser to manage Print Server ?**

Print Server does not support http embedded right now. You can not use standard web browser to manage Print Server if you do not install Web Admin utility in Windows NT Server 4.0 with IIS2.0. Refer to Print Server's User's Guide for more detail.

**Question 16 : What bi-directional information is available with Print Server ?**

Print Server can get bi-directional information from printer if the printer supports PJI. The Print Server can automatically detect whether the printer supports PJI and presents that information when requested in WindowsNT/95 based management utility. The Print Server can detect the following information : page count, dpi, paper size ....

## Macintosh

### **Question 1: Can I connect an EPSON stylus color or stylus color 800 to the Print Server under the Macintosh environment ?**

#### **Ans.**

Yes. You can connect the Epson Stylus color 800 to the Print Server under MAC.

- (1) Please download EPSON stylus color 800 driver for MAC from [ftp.epson.com](http://ftp.epson.com) . You will have a driver - SC800 (AT) after you install on MAC
- (2) Use Print Server's management utility to change Printer Type from "LaserWriter" to "EPSONLQ2"
- (3) add a EPSON stylus color 800 printer on Desktop

### **Question 2 : Can I connect an EPSON Stylus color 3000 to the Print Server under the Macintosh environment ?**

Ans :

Yes. You can connect the Epson Stylus color 3000 to the Print Server under MAC.

- (4) Please download EPSON stylus color 3000 driver for MAC from [ftp.epson.com](http://ftp.epson.com) . You will have a driver - SC3000 (AT) after you install on MAC
- (5) Use Print Server's management utility to change Printer Type from "LaserWriter" to "EPSONLQ2"
- (6) add a EPSON stylus 3000 printer on Desktop
- (7) You need to disable ink level and status checking when you print documents to EPSON stylus color 3000.

### **Question 3 : Can I connect an HP890C printer to the Print Server in Macintosh environment ?**

Ans :

1. Yes. You can connect HP890C printer to Print Server in the Macintosh if you buy a HP deskjet driver for MAC from infowave corp. Please contact infowave corp. for more information. ([www.infowave.net](http://www.infowave.net))

### **Question 4 : HP DeskJet 1120C Printer ?**

Can I connect an HP1120C printer to Print Server in the Macintosh environment ?

Ans :

Yes. You can connect HP DeskJet 1120C printer to Print Server in Macintosh if you buy a HP DeskJet1120Cdriver for MAC from infowave corp.. Please contact infowave corp. for more information. ([www.infowave.net](http://www.infowave.net)). To use infowave's stylescript driver for HP DeskJet 1120C, you need to use Print Server's management utility to change type from " LaserWriter" to " DeskWriter".

## NetWare

**Question 1: - Not Printing -The print job can not be printed when the Print Server had been completely installed and the CAPTURE command used to reroute LPT1 to the queue serviced by the Print Server on the file server.**

**Ans:**

### **STEP 1 : Check the printer cable**

1. Connect printer cable to PC and print a job via the LPT port on PC (local printing)
2. IF the job can be printed , GOTO STEP 2
3. IF the job cannot printed, check the printer and printer cable
4. Troubleshoot the printer and printer driver until the job can be printed out

### **STEP 2 : (2.1) Connect the printer cable back to Print Server**

1. Make sure the user is in the Queue Users list
2. Make sure the user is in the Print Server Users list

### **STEP 3 : Issue the CAPTURE command again**

1. Use CAPTURE /SH to verify the status of CAPTURE
2. Try to print a simple text file at DOS prompt  
(EXAMPLE : copy file\_name LPT1)
3. IF the print job still can not be printed out , GOTO STEP 4

### **Step 4 : Check the job status of the job that is not printing**

If Status is Ready:

(This means that the job is in the queue, but has not yet been picked up by the print server)

1. Check whether the print server is attached to the queue or not at "Currently Attached Servers" in PCONSOLE
2. If it is not, check the mapping of the defined printer to queue in " Print Server Configuration"
3. Check that the print server is running or not
4. Check "Queue Status" to set all parameters in "Operator Flag" to "yes"
5. Reset printer
6. Recheck printer hardware, physical cabling, and serial cable pin-outs(if you use serial port)

If Status is Active :

(This means that the print server is servicing the job but the job is not printing)

1. Check the physical cabling again
2. Bring down the print server and re-initialize it
3. Change to another printer and try it again (Maybe this is compatibility problem between Printer and Print Server)

### If Status is Adding

(This means that the application or command is sending the job now)

1. Check Timeout and AutoEndCap with CAPTURE /SH
2. Issue EndCap
3. Check the sending application by checking the file size in PCONSOLE. If the file size is growing, data is still being sent.

### If the job has disappeared from the queue

(This means that the print server has correctly serviced the job, but there is a problem with the printer, or the job's data format)

1. Recheck printer hardware, physical cabling, and serial cable pin-outs (if you use serial port)
2. Recheck data format for compatibility with printer configuration.

## Question 2:- Quickset fails -QUICKSET fails to configure the Print Server as a Print Server or Remote Printer in NetWare 3.x and NetWare 4.x

### Ans.

#### STEP 1 : Check LEDs on the Print Server

Green LED	Red LED	Print Server Status
Off	Off	No power to the Print Server
On	On	Hardware error or connection with file server has been lost.
On	Off	The Print Server is working normally
On	Flashing	The Print Server is locating the master file server or attaching to the print server
Flashing	On or Off	The print server is transmitting to or receiving data from the network

#### STEP 2 : Check Network Cable

1. Make sure the Network Cable is working properly.
2. Connect Network Cable before you power on the Print Server.
3. Connect ONE network cable at a time.

#### STEP 3 : Check File Server Name

- If your File Server name is longer than 20 characters, please shorten it. The Print Server cannot work with File Server names longer than 20 characters.

#### STEP 4 : Use "set" Command

1. At the console, issue the command  
SET

2. From the resulting list, choose "1. Communication"  
Check the value for  
Set Reply To Get Nearest Server
3. If this is OFF, set it to ON.

## **STEP 5 : Login file server as supervisor/Admin**

- Login to the NetWare file server as supervisor, or a user with supervisor rights.

## **STEP 6 : Run Quickset**

1. QUICKSET.EXE is in the IPX/SPX utility diskette came with Print Server, or in the DOS directory on the CD-ROM. Copy this file to an appropriate directory on your hard disk.
2. Run the Quickset program, providing the necessary parameters. (Quickset /? will provide a brief explanation of the required parameters.)

## **STEP 7 : Use an alternative method**

If QUICKSET still does not function properly, use PCONSOLE and PSCONFIG to configure the Print Server, instead of QUICKSET. Using these programs will provide better feedback which may help reveal the underlying problem.

## **Question 3:- Print Server Prints garbage -The Print server prints garbage. What can be done?**

Ans.

Use the following procedure to identify and solve the problem.

### **Step 1: Print a diagnostic file**

Print a diagnostic file using the PSCONFIG program, by following this procedure:

1. Run PSCONFIG
2. Select the desired Print Server from the Print Server List
3. Select "Print Diagnostic Report" for each port (Parallel Port 1, Parallel Port 2, Parallel Port 3, Serial Port, as appropriate)
4. Check if it still prints garbage
  - If no, the problem may be caused by in-correct system configuration. GOTO Step 2.
  - If yes, Check your printers. If your printer is OK, call your dealer.

### **Step 2: Print a text file and a graphic file**

1. If the text file print correctly but the graphic file prints garbage, then the specify /NT (no tabs) option for NPRINT or CAPTURE commands.
2. If both all print correctly , then GOTO Step 3.

### **Step 3: Temporarily disable the Print Server**

If you use NetWare 4.x, you should login to the NetWare 4.x as a bindery user.

NetWare 2.x and 3.x

1. Run PCONSOLE, Select *Print Queue Information*, select the print queue that the Print Server services, select *Current Queue Status*.
2. Set *Servers can service entries in queue* to NO.
3. Press Esc and select *Print Queue ID*. Record its queue ID.
4. Send your test files to the print queue using normal print commands.

NetWare 4.x bindery and NDS modes

1. Run PCONSOLE, select *Print Queues*, select the print queue that your Print Server services, select *Status*.
2. Set *Allow service by current print servers* to NO.
3. Press Esc and select *Information*, and record its queue ID.
4. Send your test files to the print queue using normal print commands.

#### Step 4: Print test files using local printing

1. Disconnect the printer attached to your Print Server and connect it to LPT1 of your PC.
2. Change to the drive and then the directory on the file server that contains the print queue. The directory will have the name of the queue ID (e.g. \queues\Q\_ID for NDS mode or system\Q\_ID for Bindery mode).
3. The test files you printed in step 2 should be in the queue directory. Print these files to the local printer using the COPY command with the /b option.  
For Example:

```
copy /b test.txt LPT1
```

#### Step 5: Compare the printouts from the PC and the Print Server.

1. If the printouts are the same, then the problem is NOT the Print Server. The problem might be that an incorrect printer driver was chosen or the timeout setting in the CAPTURE command is too short.
2. If the printouts are NOT the same, there may be a problem with the Print Server. Call your dealer.

#### Step 6: Re-enable queue service.

1. Disconnect the printer attached to LPT1 of your PC and connect it to your Print Server.
2. For NetWare 2.x or 3.x, run PCONSOLE and Select *Print Queue Information*. Then select the Print Server's print queue and select *Current Queue Status*. Set *Servers can service entries in queue* to YES
3. For NetWare 4.x bindery and NDS modes, run PCONSOLE and select *Print Queues*. Then select the print queue and select *Status*. Set *Allow service by current print servers* to YES.

### **Question 4: - NetWare 4.x Bindery Emulation - The Print Server does not work well when it is configured using Bindery emulation mode under NetWare 4.x with service pack 4.**

#### **Ans.**

This problem will be fixed on F/W 6010 for Print Server with full protocol support (IPX/SPX, TCP/IP, NetBeui & AppleTalk).

We recommend that you configure the Print Server using NDS mode under NetWare 4.x if possible.

## Question 5 : Does Print Server support NetWare 4.x (NDS) ?

Yes. Print Server supports both bindery and NDS for NetWare 4.x. We provide a very simple installation utility – Quickset.exe which will setup Print Server under NetWare 3.x or 4.x in seconds.

## Question 6 : Does Print Server support NetWare Print Server mode or Remote Printer mode ?

Yes. Print Server will support either NetWare Print Server mode or Remote Printer mode.

Print Server mode is faster than remote printer mode. A disadvantage of using NetWare's

Print Server mode is to occupy a user license. If you do not care about user licenses,

NetWare Print Server mode may be preferred.

	Print Server Mode	Remote Printer Mode
Printing Performance	Faster	slower
PSERVER.NLM in F/S	N/A	Yes
User License	1	N/A
System Loading on F/S	Lighter	Heavy

## Q7 : How to install Print Server as Print Server mode and attach to two NetWare File Servers simultaneous ?

Assume : Print Server name is SC123456

### Case 1 : NetWare 3.x and NetWare 4.x (NDS)

Step 1 : Login to NetWare 4.x as admin user (Admin user is NDS user)

```
run QUICKSET.EXE SC123456 /Q1= HP4P
```

Step 2 :

Step 2-1 Login, with supervisor rights, to the another file server ( NetWare 3.x)

Step 2-2 run PCONSOLE

#### *Create Queue :*

Step 2-3 select Print Queue Information

Step 2-4 Press [Insert] key to add a new queue

Step 2-5 Type a queue name, and press [ENTER]

Step 2-6 Repeat Step 2-3 to Step 2-5 until you have the desired number of queueus

#### *Add a Print Server*

Step 2-7 select Print Server Information

Step 2-8 Press [Insert] key to add the Print Server which name is same as you did at Step 1

#### *Assign Printers*

Step 2-9 Select the Print Server just added

Step 2-10 Select Print Server Configuration

Step 2-11 Select Printer Configuration

Step 2-12 At Name field : Printer 0 ; At Type field : Select Parallel, LPT1

Step 2-13 Press [ESC] and select YES and Select [ESC] to exit

***Associate printers with Print Queues***

Step 2-14 Select Queues Serviced by Printer from the Print Server Configuration Menu

Step 2-15 Select a printer you want to assign a print queue to

Step 2-16 Press [INSERT] key

Step 2-17 Select the queue that you want the printer to service

Step 2-18 Press [ENTER] twice

Step 2-19 EXIT PCONSOLE

Step 3 :

Step 3-1 : Run PSCONFIG

Step 3-2 : Select this Print Server which you did at step 1

Step 3-3 : Select “ Set to NetWare Print Server Mode “

Step 3-4 : Key in all information on this part :

Tree Name : NetWare 4.x's tree name

Context Name : Enter Print Server NDS context ( this is same context at you did quickset program)

Master File server name : Netware 3.x 's file server name

Step 3-5 : Replace the print server name with the name set at you did at step 1 (Quickset)

Step 3-6 : Select Execute Setup

Step 3-7 : Reset Print Server

**Note : In this case 1, you can run quickset twice to install Print Server to attach two file server too.**

**Case 2 : NetWare 3.x and NetWare 4.x ( Bindery mode ) :**

Step 1 : Login to NetWare 4.x as supervisor user (supervisor user is bindery user)

run QUICKSET.EXE SC123456 /Q1= HP4P

Step 2 :

Step 2-1 Login, with supervisor rights, to the another file server ( NetWare 3.x)

Step 2-2 run PCONSOLE

***Create Queue :***

Step 2-3 select Print Queue Information

Step 2-4 Press [Insert] key to add a new queue

Step 2-5 Type a queue name, and press [ENTER]

Step 2-6 Repeat Step 2-3 to Step 2-5 until you have the desired number of queueus

***Add a Print Server***

Step 2-7 select Print Server Information

Step 2-8 Press [Insert] key to add the Print Server which name is same as you did at Step 1

***Assign Printers***

Step 2-9 Select the Print Server just added

Step 2-10 Select Print Server Configuration

Step 2-11 Select Printer Configuration

Step 2-12 At Name field : Printer 0 ; At Type field : Select Parallel, LPT1

Step 2-13 Press [ESC] and select YES and Select [ESC] to exit

#### ***Associate printers with Print Queues***

Step 2-14 Select Queues Serviced by Printer from the Print Server Configuration Menu

Step 2-15 Select a printer you want to assign a print queue to

Step 2-16 Press [INSERT] key

Step 2-17 Select the queue that you want the printer to service

Step 2-18 Press [ENTER] twice

Step 2-19 EXIT PCONSOLE

#### **Step 3 :**

Step 3-1 : Login, with supervisory rights, the master file server (NetWare 4.x) of this Print Server.

Step 3-2 : Run PCONSOLE

Step 3-3 : Select Print Servers then select this print server from Print Server list

Step 3-4 : Select “ Serviced Netware servers “ => Press [Insert] key => Select NetWare 3.x => [enter]

Step 3-5: Reset Print Server

#### **Case 3 : NetWare 3.x and NetWare 3.x**

Step 1 : Login to NetWare 3.x as supervisor user (supervisor user is bindery user)

```
run QUICKSET.EXE SC123456 /Q1= HP4P
```

Step 2 :

Step 2-1 Login, with supervisor rights, to the another file server ( NetWare 3.x)

#### **Step 2-2 run PCONSOLE**

##### **Create Queue :**

Step 2-3 select Print Queue Information

Step 2-4 Press [Insert] key to add a new queue

Step 2-5 Type a queue name, and press [ENTER]

Step 2-6 Repeat Step 2-3 to Step 2-5 until you have the desired number of queueus

##### **Add a Print Server**

Step 2-7 select Print Server Information

Step 2-8 Press [Insert] key to add the Print Server which name is same as you did at Step 1

#### ***Assign Printers***

Step 2-9 Select the Print Server just added

Step 2-10 Select Print Server Configuration

Step 2-11 Select Printer Configuration

Step 2-12 At Name : Printer 0

At Type : Select Parallel, LPT1

Step 2-13 Press [ESC] and select YES and Select [ESC] to exit

### **Associate printers with Print Queues**

Step 2-14 Select Queues Serviced by Printer from the Print Server Configuration Menu

Step 2-15 Select a printer you want to assign a print queue to

Step 2-16 Press [INSERT] key

Step 2-17 Select the queue that you want the printer to service

Step 2-18 Press [ENTER] twice

Step 2-19 EXIT PCONSOLE

Step 3 :

Step 3-1 : Login, with supervisory rights, the master file server (NetWare 3.x) of this Print Server.

Step 3-2 : Run PCONSOLE

Step 3-3 : Select Print Servers Information then select this print server from Print Server list

Step 3-4 : Select Print Server Configuration then select File Server To Be

Serviced => Insert the file server name of the other file servers to be serviced by your Print Server.

Step 3-5 : Reset Print Server

## Unix - TCP/IP

**Question 1: Install.sh failed - Using install.sh failed when trying to install psfilter (proprietary printing method) for the Print Server in a Unix environment. The C compiler and Socket library were available as required.**

**Ans.**

Try the following procedure.

**STEP 1: Complete TCP/IP Basic Setup**

1. Ensure that the Print Server is device is recognized as a valid device on your LAN, with a valid IP Address.
2. Check the Print Server responds to a "ping"  
e.g. `ping ps_name`

**STEP 2 :Modify install.sh**

3. Use the vi editor or replacement to load the install.sh file.
4. Change `#!/bin/sh` to `#!/bin/ksh`

**Step 3: Run install.sh**

1. Run install.sh without parameters, and provide the correct information when prompted.
2. If install.sh is still not successful, GOTO Step 4.

**Step 4: Compile and test psfilter manually**

1. Make a backup copy of psfilter.c
2. If your Unix type is System V, use vi or another editor to change psfilter.c as follows:  
`#define SVR4 0` to `#define SVR4 1`
3. Compile psfilter.c with the following command:  
`cc -o PSfilter psfilter.c -lsocket -lnsl`
4. This should create the executable Psfilter. Check for error messages from your compiler.
5. Print a test file, using Psfilter, with the following command:  
`/full_path/PSfilter -DPrintServer_name -v < file_name &`  
Where:  
`full_path` is the directory where Psfilter is installed  
`PrintServer_name` is the name assigned to the Print Server during basic setup  
`file_name` is the name of the file you wish to print.
6. If this fails, check for an error log file, `PSErrLogxxxxx`, in the directory `/tmp`, and see if it provides some clues to the problem.
7. If this foreground printing is successful, run Install.sh again to create the printer objects required to allow Psfilter to be used with the system print commands.

## Question 2: Arp table in Windows NT server - I can not add an entry into the arp table on Windows NT

**Ans.**

### Windows NT 3.1

Windows NT 3.1 does not support LPD daemon printing, so the Print Server cannot be used with this configuration. We suggest you upgrade your Windows NT to a later version.

### Windows NT 3.51

Perform the following steps to resolve the problem on Windows NT3.51

1. List the contents of the arp table by using the following command:

```
arp -a
```

2. If there are some entries in the table, add the Print Server entry with the following command:

```
arp -s IP_address 00-c0-02-ab-cd-ef
```

Where

IP\_address : This is a unique IP address which will be assigned to Print Server

00- c0-02-ab-cd-ef : This is Print Server name which is recorded on the bottom of

Print Server. ( For example : SC123456 => 00-c0-02-12-34-56 )

If the arp table is empty, ping any active device on the network (except the Win NT host), using the name of the active device.

You can then use arp command to add it to the table, as shown above.

### Windows NT 4.0

You can add a new entry into the arp table even if the arp table is empty. Simply use arp command to add it to the table , as shown above.

## Question 3: HP UX 9.04 - I cannot run install.sh to install the Print Server on HP UX version 9.04

**Ans.**

On HP\_UX version 9.04 you need to modify dumb\_int.sh file, as described in the following procedure:

1. Use the vi editor or replacement to load the install.sh file.
2. Change #!/bin/sh to #!/bin/ksh
3. You can now run install.sh as described in the user guide.

## Question 4: IP Address Unknown - The Print Server's IP address is not known and so it cannot be used.

**Ans.**

If the firmware version is above 5000, you can use this following procedure to solve this problem

## Unix Environment

1. Find the physical (hardware) address of the Print Server. Look on the base of the unit for a sticker with default name in the form Scxxyyzz (SC following by 6 digits). The physical (hardware) address of the Print Server is 00.c0.02.xx.yy.zz (Where xxyyzz are the digits from the default name).

2. Add an new entry for the Print Server to the arp table with the following command:

```
arp -s yyy.yyy.yyy.yyy 00:c0:02:xx:xx:xx
```

Where

yyy.yyy.yyy.yyy is the new IP address you want to assign to the Print Server. The arp -s command maps the IP address to the physical (hardware) address.

3. Connect to the Print Server using ftp, with the following command.

```
ftp yyy.yyy.yyy.yyy
```

Where

yyy.yyy.yyy.yyy is the IP Address you used in the arp table.

Enter the password when requested. If no password has been set, just press *Enter*.

4. Reset the Print Server to it default setting with the following commands:

```
ftp>get DEFAULTC
```

```
ftp>quit
```

5. Wait about 5 seconds until the LEDs stop flashing in sequence. The entire configuration will now be reset to the factory default values. The IP Address will be 0.0.0.0, and the password cleared (no password).

6. You can now proceed as for a first-time installation and configuration.

Windows environment:

1. Under Windows 95/NT, run the management utility BiAdmin (provided with the Print Server).
  - You should see the Print Server on the device list. Select it, and change the IP Address to the desired setting.
2. Under Window 3.1/95, run the management utility WPCConfig (provided with the Print Server). This program uses the IPX/SPX protocol to connect to the Print Server.
  - Ensure Windows 3.1/95 supports IPX/SPX protocol.
  - Select the Print Server, and change the IP Address to the desired setting.

## **Question 5: Dot Matrix printer under SCO - A big printing job does not complete if I connect a dot matrix printer to Print Server under SCO unix.**

### **Ans.**

This problem occurs with Firmware version 6.0 release 00. It is solved with Firmware version 6.0 release 11. Please upgrade to this version.

## Question 6: LPD Printing with SCO 5.0 - How do I setup PrintServer's LPD printing method under SCO 5.0?

### Ans.

Before you start the following procedure, ensure that the Print Server has a valid IP Address and is recognized as a valid device on your LAN. (It responds to a *ping* command.) Refer to the user guide for details on the */etc/hosts* entry and assigning an IP Address to the Print Server.

1. Run the X Windows program. If it is not already running, start it with the following command:

```
startx
```

2. Click " System Administration " folder
3. Click " Printer " folder, then " Printer Manager " folder
4. Choose and Click " LPD icon " from the menu bar
5. Enter Host name (the name of the Print Server, as defined in */etc/hosts*) or click "Select" and then select the Print Server name.
6. For "Printer details", enter the logical printer names, ensuring that the first 2 characters of the name are L1, L2 or L3 (up to L8 on multi-port models). The Print Server requires that logical printer names start with L1 to L8 (e.g. L1\_HP4L, L2epson, etc).  
Note that logical printers must also be defined on the Print Server itself. See the user guide for details.
7. Exit "System Administration" and select the "Unix" icon from the main screen of X windows.
8. Test the printer by printing a file:

```
lp -d printer_name print_job
```

Where

*printer\_name* is the name of a logical printer created above.

*print\_job* is the file you wish to print.

## Question 7: Printing under AIX 4.1/4.2 - How do I install LPD printing under AIX 4.1 or AIX 4.2

### Ans.

Use the following procedure. Before commencing, ensure that Print Server has been configured with the IP Address and the name you wish to use.

### LPD Printing Configuration

1. Add the print server name to the file */etc/hosts.lpd*. If you have not changed the name, use the default name shown on a sticker on the base of the unit (SCxxxxxx).
2. Add the Print Server and its IP Address to the arp table with the following command:

```
arp -s ether PS_Name 00:c0:02:xx:xx:xx
```

Where

*PS\_Name* is the name of the Print Server

*00:c0:02:xx:xx:xx* is the physical (hardware) address of the Print Server unit. The hardware address is derived from the default name shown on the base of the unit - xxxxxx are the digits from the default name, following the "SC".

3. Start the LPD daemon using the following command:  

```
start src -s qdaemon
```
4. Run the administrator tool by typing the command:

smit

5. Choose *Print Spooling* -> *Manage Print Server* -> *Start the print Server Subsystem (LPD Daemon)* -> *OK*
6. Check that the LPD subsystem has been started. (Check the processes running, make sure it includes "`/usr/sbin/lpd`")
7. Choose *Print Spooling* -> *Add a Print Queue* -> *Remote (LPD)* -> *Standard Processing*
8. Under the "Add a Standard Remote Print Queue" screen, enter the following information:
  - Name of queue to add: (Enter any queue name).
  - Hostname of remote server: (As defined in HOSTS file).
  - Name of queue on remote server: (Enter logical printer name - L1, L2 ...).
  - Type of print spooler on remote server: (Select "AIX version 3 or 4" ).
  - Description of printer on remote server: (Enter descriptive text).
9. Click "OK" and "Done".
10. Check remote printer device by selecting:  
*Print Spooling* -> *List All Print Queue*
11. Do a test print:

```
lp -d printer_name print_job
```

Where

`printer_name` is the name of the queue and logical printer you created.

`print_job` is the file you wish to print.

## Question 8: How to install PSfilter under Aix 4.2

Step 1 :

Login to IBM AIX as root

Step 2 : Assign an IP address to the Print Server

- (1) Add the print server name to the file `/etc/hosts.lpd`. If you have not changed the name, use the default name shown on a sticker on the base of the unit (`SCxxxxxx`).
- (2) Add the Print Server and its IP Address to the arp table with the following command:

```
arp -s ether PS_Name 00:c0:02:xx:xx:xx
```

Where

`PS_Name` is the name of the Print Server

`00:c0:02:xx:xx:xx` is the physical (hardware) address of the Print Server unit. The hardware address is derived from the default name shown on the base of the unit - `xxxxxx` are the digits from the default name, following the "SC".

- (3) Configure Print Server
  - (a) `tftp PS_NAME`
  - (b) `tftp> get CONFIG`
  - (c) `tftp> quit`
  - (d) `vi CONFIG`
  - (e) Edit parameters which you want to change in the CONFIG file  
(You must fill in Print Server's IP address at `IP_address` item)

- (f) tftp PS\_NAME
- (g) tftp> put CONFIG
- (h) tftp> get RESET
- (i) Wait for a moment because it is doing RESET
- (j) tftp> quit

Note : You can use Print Server's management utility for windows to configure Print Server too.

### Step 3 : Setup for PSfilter

- Before you begin, you must make sure that you had installed C complier in IBM AIX. If you did not installed before, you can not use PSfilter. (Please see user's guide for LPD printing protocol)

#### (1) Copy files

Insert the "TCP/IP Support" diskette in your IBM AIX's disk driver and type the following command :

```
tar xvf /dev/driver_name ./LPTI [ENTER]
```

Note : driver\_name is The floppy driver name  
./LPTI is Destination directory

#### (2) Compile psfilter.c

To compile psfilter.c, type the following command

```
cd LPTI [ENTER]  
./mycc [ENTER]
```

Note : PSfilter will be generated in /LPTI/LPsource directory

#### (3) Create a fake printer device for each printer attached to the Print Server by typing :

```
cp /dev/null /dev/printer_name
```

Note : printer\_name is the name you assigned to the printer connected to Print Server.

#### (4) Change the access permission of the print device by typing

```
chmod 666 /dev/printer_name
```

Note : printer name is the name which you create at step3-(3)

(5) Create a virtual printer by typing :

smit

The smit administration tool will ask the following questions :

=> select "Add printer queue"

=> select "file"

=> select printer type from the printer type list

=> input "printer\_name" (you created at step3-(3))

in "Name of existing file in /dev directory" box

=> input "print\_queue\_name" (You named it by yourself)

in "Name of New Print Queues to Add " box

Note : there are four printer types to choose, it depends on  
your printer attached to print server

(6) Create a backend script file

To create a backend script file, do the following:

A: Go to the directory where you want to create the backend script file

B: Choose a backend script file name

C: Use the following command to create the backend script file :

```
vi backend_script_file_name_in_step_B
```

D: Enter the following lines as follows :

```
#!/bin/sh
```

```
/usr/lib/lpd/piobe $* | <full_path> PSfilter -D <PS_NAME> <options>
```

Note : <full\_path> is the location of the PSfilter program  
<PS\_NAME> is print server name you defined at /etc/hosts  
<options> : please refer to the PSfilter print options in  
user's guide

E: Add execution permission to the backend script file

Suppose the backend script file name choosen in Step3-(6)-C  
is script.1 at /LPTI/LPsource/ directory

```
chmod +x script.1
```

F: Associate queue device with the script file, do the following :

If using AIX 3.x, type "smit chqueuedev". If using AIX 4.x, type

"smit pq\_chquedev"

Name of Queue Device : input "printer\_name"

(you named it at step3-(3))

Queue to which queue device is attached : input "print\_queue\_name"

(you named it at step3-(5))

BACKEND PROGRAM pathname : /<full\_path>/backend\_script\_file\_name

(for example: /LPTI/LPsource/script.1 )

ACCESS MODE of backend output file : both read and write (default)

Print HEADER pages : never (default)

Print TRAILER pages : never (default)

ALIGN page if printer has been idle : never (default)

Number of FORM FEEDS when printer goes idle(num.) : 0

#### (7) Install more printers

Repeat step3-(3) to step3-(6) until each printer has been configured

#### (8) Check the /etc/qconfig file to see whether the backend program of the queue device is correctly modified. The /etc/qconfig file should include the following :

print\_queue\_name:

device = printer\_name

printer\_name:

file=/dev/printer\_name

header=never

trailer=never

access=both

backend=/<full\_path>/backend\_script\_file\_name

#### Step4 : Printing :

lp -dprint\_queue\_name file\_name

## **Question 9: LPD Printing under Unix - Does the Print Server support LPD printing method under the Unix environment?**

### **Ans.**

Yes, it does. An overview of the installation is listed below. Detailed information for various versions of Unix is contained in the user guide.

1. Hardware Installation - install the Print Server in your LAN, and connect the printers.
2. Make the Print Server a valid device on your LAN, by assigning an IP Address to it, and making the appropriate entries in the /etc/hosts file and the arp table.
3. Configure the Print Server as required (e.g. create logical printers). Configuration can be done with ftp, or one of the management tools shipped with the Print Server.
4. Use lpadmin or substitute to create the necessary LPD printer objects and associate them with the Print Server
5. Print using the normal system commands (e.g. System V use "lp", for BSD use "lpr")

## **Question 10: Printing Methods under Unix - What printing methods does the Print Server support in the Unix environment?**

### **Ans.**

The Print Server can be used in any of the following ways.

- LPD - The Print Server can be installed as an LPD printer. No software needs to be installed, but both the Unix system and the Print Server need to be configured. The Print Server can be configured using ftp.
- PSfilter - This is a proprietary printing system provided with the Print Server. Using this method requires a C compiler and socket library so that the provided source code can be compiled for your system. A utility - install.sh - is provided to simplify installation of PSfilter. Once installed, print jobs are routed through PSfilter by the printer interface.
- DSI (Direct Socket Interface) - If your system is already using DSI, you can easily install the Print Server using this method.
- FTP - ftp can be used to configure the Print Server, and also used for printing. However, printing with ftp is NOT recommended, because:
  - Print jobs are not spooled (queued).
  - Only one ftp connection is possible, so only one user can print at a time, even on multi-port Print Servers.

## **Question 11: Using both Unix and NT Server - I use the LPD printing method on both Unix and NT Server, printing to the same printer. Jobs from the Unix system print OK, but the NT Server generates garbage. Why?**

### **Ans.**

This problem can be solved by setting up logical printers as follows. You can use any of the configuration methods to define the logical printers on the Print Server.

#### **For the Unix system**

Set logical printer 1 (L1) to service jobs from Unix

Use the following settings for L1:

- L1\_PROUT : P1
- L1\_PREST :
- L1\_POSTR :
- L1\_CHGLF : Yes

### **For the NT System**

Use logical printer 2 (L2) to service jobs from the NT system.

Use the following settings L2:

- L1\_PROUT : P1
- L1\_PREST :
- L1\_POSTR :
- L1\_CHGLF : No
- 

### **Question 12: Using Linux - How do I install the Print Server under Linux**

#### **Ans.**

Linux is similar to BSD Unix. Use the same procedure as for BSD systems.

## Windows Peer-to-Peer Networks

### Question 1: What's Peer-to-Peer? What is a Peer-to-Peer Network?

#### Ans.

##### Peer-to-Peer Networks

A Peer-to-Peer Network is a network (LAN) which has no server. A server is a dedicated computer which provides disk space and other services to the PCs on the LAN. Because there is no server, all PCs are considered to be equal or "peers" - hence the name.

Typically, a peer-to-peer network consists of 2 to 20 PCs running Windows 95. Windows 95 has built-in networking support which makes it easy to create a peer-to-peer network.

It is possible to share a printer connected to the parallel port of one PC, but doing so has some drawbacks.

- The PC with the printer must be ON and functioning normally.
- The PC with the printer will suffer a performance loss when the printer is being used.
- The printer normally cannot work at top speed.

Using a Print Server overcomes these problems. The printer or printers are connected to the PrintServer, and each PC prints directly to the PrintServer without the data passing through another PC.

To allow this, the software supplied with the Print Server must be installed on each PC.

### Question 2: Network Protocols - What does "TCP/IP" and "NetBEUI" mean?

#### TCP/IP and NetBeui

These are **network protocols** supplied with Windows 95 and Windows NT. Windows for Workgroups (Win 3.11) was supplied with NetBeui only.

A **network protocol** is the set of rules and procedures which PCs use to communicate with each other.

The Print Server supports TCP/IP and NetBeui under Windows 95 or NT, and NetBeui under Windows for Workgroups. Under Windows 95 or NT, you choose the protocol when you install the software.

The software creates a new printer port. Once the appropriate printer driver is associated with this port, you are ready to print.

### Question 3 : Reinstallation - I tried to re-install the Peer-to-Peer printer driver, but got an error message. What should I do?

#### Ans.

Follow this procedure.

1. Reboot the PC
2. Under Win95, delete or rename the file  
    \system\prtserv.dll
3. Under WinNT, delete or rename the file  
    \system32\prtserv.dll
4. Reboot PC again.

5. Run Setup again to reinstall the Peer-to-Peer printer driver

## Question 4 : Why I cannot print jobs from HP DeskJet professional printer series ?

You must disable printer bi-directional function :

1. Windows 95 system : Select HP printer → Select properties → Details → Spool Setting → Disable “bi-directional Support for this printer” . Click OK to exit.
2. Windows NT 4.0 system : Select HP printer → Select properties → Port → Click “ Enable bi-directional Support ” to disable function → OK to exit.

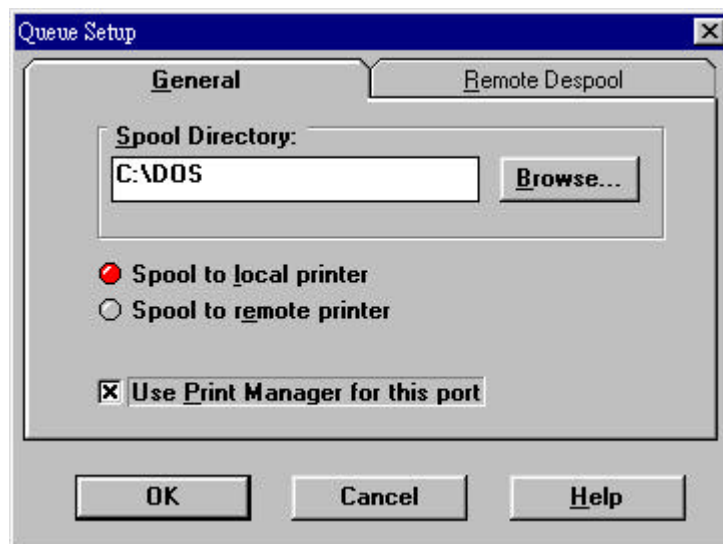
## Question 5 : Why I can't print jobs from Epson Stylus color printer series in Windows 95 with Peer to Peer printing?

### ANS:

Epson's proprietary Print Spool Manager is not compatible with Print Server driver .To solve this problem , you must use Windows Print Manager , and also rename Print Server port name.

- 1.To use the Windows Spool Manager

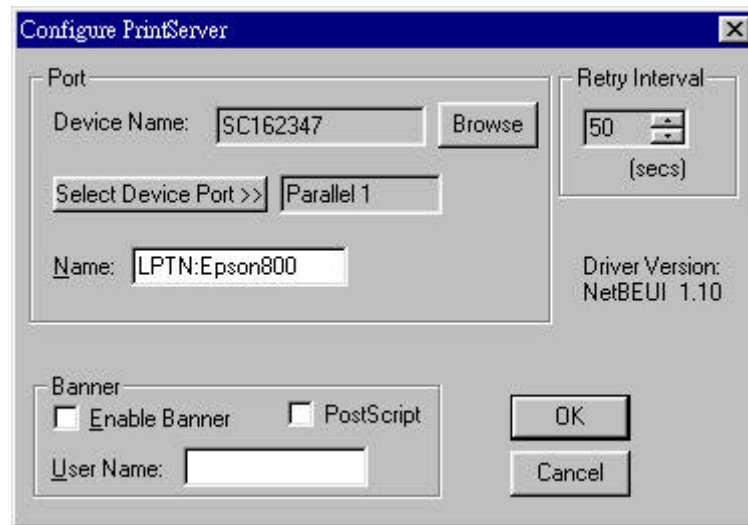
- a. Start the Epson Spool Manager .
- b. Double click the Print queue for the Epson stylus printer ( or select queue Setup from the menu ).
- c. Click the “Use Print Manager for this port” box . Then click OK to exit.



- 2.Rename Print Sever Port name

You have two methods to rename Print Server port name

- a. Select Epson stylus printer => Select properties =>Details =>Add Port=>other=>Print Server Port=>OK =>Browse for attached printer .Enter a name for the Port which begins with LPTN: , e.g.LPTN:Epson800 . Click OK to save and exit



Note: If you Enter name for the Port but received a Error Message “ LPTN:is an invalid port name” ,You must download new PTP driver from our ftp web site [ftp.planet.com.tw](http://ftp.planet.com.tw) the directory was located

`\print_server\utility\PTP_printing\95NT1100.exe`

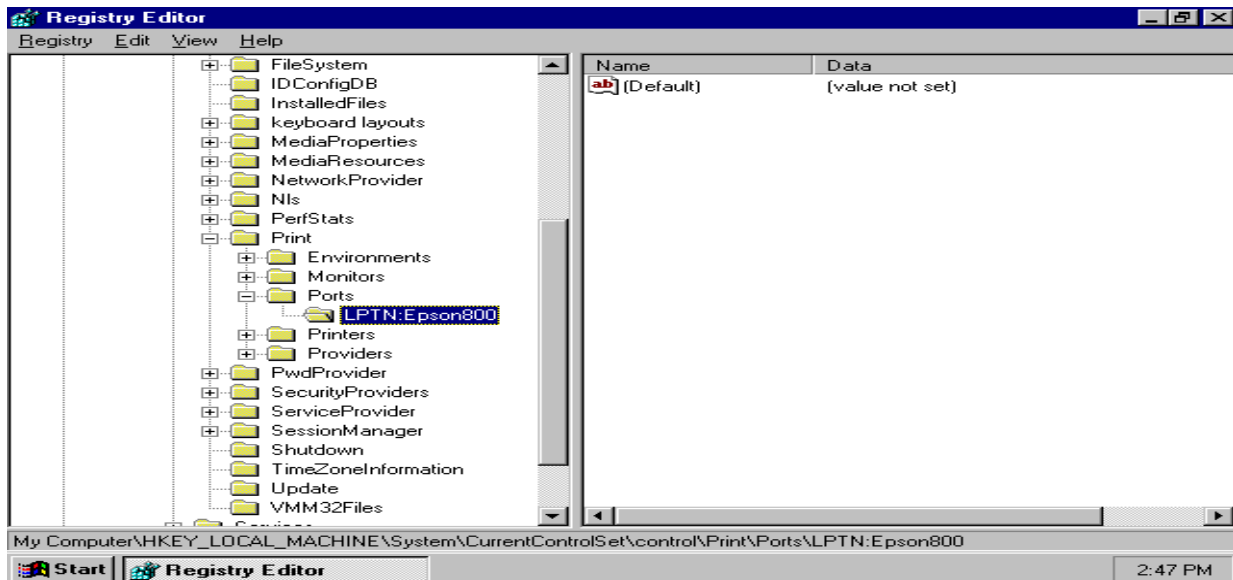
and reinstall new driver.

b. Modify registry

Run regedit.exe

`\HKEY_LOCAL_MACHINE\System\CurrentControlSet\Control\Print\Ports\..`

Change PrServer to LPTN:Epson800 => Reboot PC



## Question 6 : Why I can't print jobs from Epson Stylus color printer series in Windows 95 with Novell file server ?

### ANS:

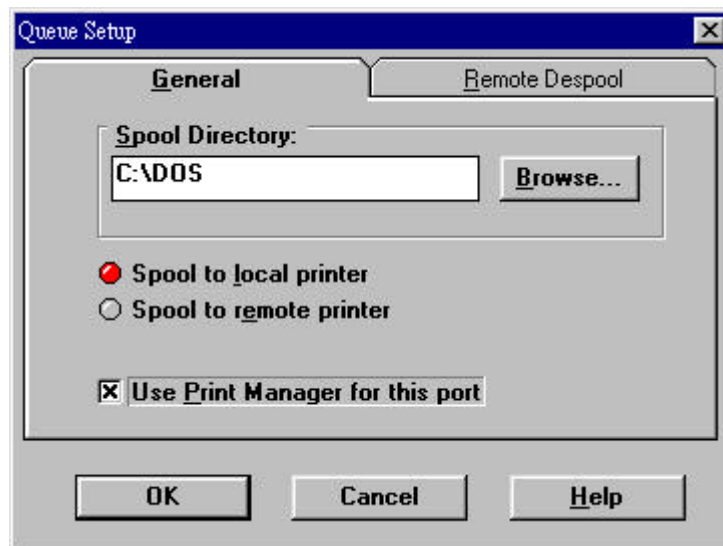
Epson's proprietary Print Spool Manager is not compatible with Novell queues. To solve this problem, you must use Windows Print Manager and set Remote Despool tab to Novell queues in Epson Spool Manager.

1. To use the Windows Spool Manager

d. Start the Epson Spool Manager.

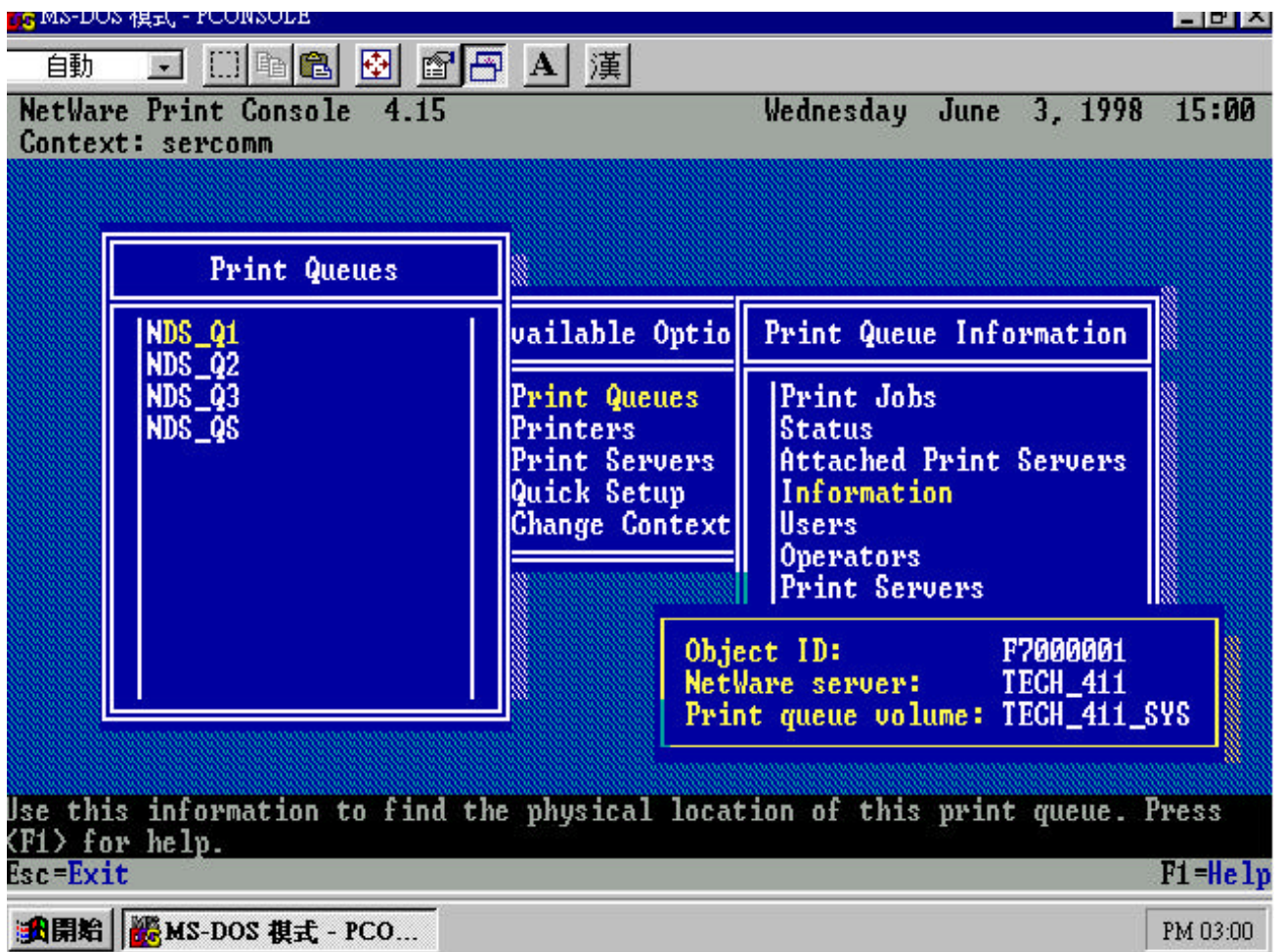
e. Double click the Print queue for the Epson stylus printer ( or select queue Setup from the menu ).

f. Click the "Use Print Manager for this port" box. Then click OK to exit.

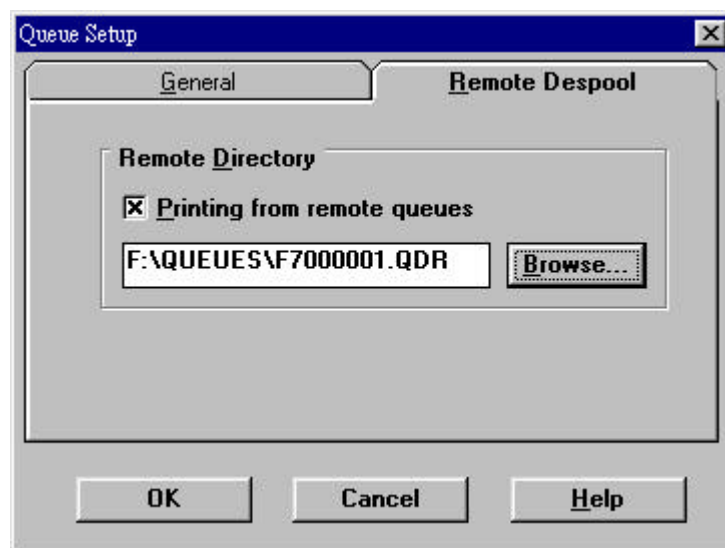


2. Remote Despool tab to Novell queues in Epson Spool Manager

a. Run pconsole to find Novell queues ID



- b. In Epson Spool Manager select “Remote Despool”  
=>Printing from remote queues use=>Browse to select Novell queues=>Click OK to exit.



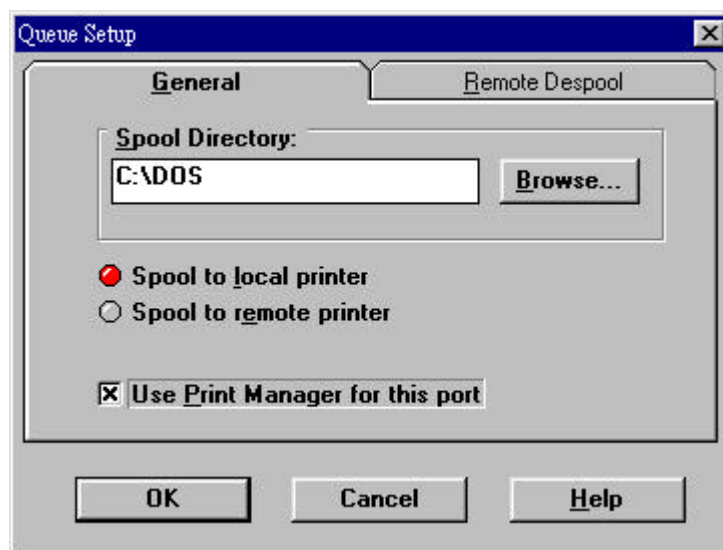
## Question 7 : Why I can't print jobs from Epson Stylus color printer series in Windows 95 with NT server ?

### ANS:

Epson's proprietary Print Spool Manager is not compatible with NT queues. To solve this problem, you must use Windows Print Manager.

To use the Windows Spool Manager

- g. Start the Epson Spool Manager.
- h. Double click the Print queue for the Epson stylus printer ( or select queue Setup from the menu ).
- i. Click the "Use Print Manager for this port" box. Then click OK to exit.



## Question 8 : Why I cannot use new Lexmark's printer driver with Print Server's PTP printing driver ?

### Ans :

Lexmark release the newest PCL, PostScript printer driver for their laser printer.

Print Server's PTP printing driver is not fully compatible with Lexmark's local printer driver, but is compatible with Lexmark's network print driver.

Please follow the procedure to use it.

1. During installation MUST select "Network printer.",  
(refer to our PTP trouble shooting in manuals)
2. Goto printer property -> press "Details" -> press "Spool settings" -> press "Restore Defaults" button -> select "Print directly to the printer" radio box

## Firmware Upgrades

### Question: How is a Firmware Upgrade done?

#### Ans.

The upgrade procedure is described below. Please note the following points.

- Although the Print Server supports a wide variety of platforms, the upgrade software must be run under Windows 95 or Windows NT.

- You need the upgrade program, available at our ftp site :

```
//ftp.planet.com.tw/print_server/firmware
```

- There are different firmware codes for different products. You must use the correct firmware code for your product. Firmware code is available as follows:

For Print Server products:

```
//ftp.planet.com.tw/print_server/firmware/Print_server_model
```

- For LAN/WAN devices, like IG-100, IP sharer products:  

```
//ftp.planet.com.tw/lanwan/...
```

### 1.0 Overview

This document contains release notes for the Download Utility. The Download Utility provides a simple way to Upgrade your firmware on Print Server and Communication Server Devices.

### 2.0 System Requirements

- Windows 95
- Ethernet network (NDIS driver)

### 3.0 Installation

1. Run the SETUP.EXE program on the floppy.
2. The program will be installed (by default) in the directory C:\Program Files\DLUTIL

### 4.0 Limitations

1. Files Required
  - This Utility needs W32NdisApi.DLL and Ndishook.VxD to be in the same directory as the executable.
2. "Fail to Open Adapter"
  - If, when you run the Download Utility, it shows the message: "Fail to Open Adapter !", this is probably because the device driver does not provide support for the type of access being attempted.
  - In this case, try using a different workstation or network card.
3. OLEAUT32.DLL
  - If you installed Win95 by upgrading your Win 3.1, it is important for you to make sure that you replaced your OLEAUT32.dll file with the new Win95 version.
  - Otherwise, there will be an error message when you execute your program:  
"DLUTIL.exe file is linked to missing export OLEAUT32.DLL:420"

## 5.0 Operation

1. Start the program by clicking the **DOWNLOAD** icon.
2. Click the **SELECT** button to choose the binary file (\*.BIN) which matches your device (e.g. CS110.BIN for Communication Server model CS110). File information will be shown when a file is selected. Ensure that you select the correct file for your device.
3. Press the **BROWSE** button. The program will search the network for all active devices and display a device list. All active network devices are listed by their default name. The default name is the alphanumeric character string in the form SCXXXXXX (SC followed by 6 digits) found on the base of the device.
4. Press the **DOWNLOAD** button to download the file you selected to the target device.
5. If the file does not match the device, an error message will be shown.

## 6.0 Warnings

1. There must **NOT** be **ANY KIND** of router between the PC running the upgrade software and the target device.
2. **DO NOT** power off the target device during the download procedure. The results of a power loss are unpredictable.