

Installation Manual

PM IBM IPDS Ethernet



Professional printing solutions

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Great care has been taken to ensure that the information in this handbook is accurate and complete. However, should any errors or omissions be discovered or should any user wish to make suggestions for improving this handbook, please feel encouraged to send us the relevant details.

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Contents

1.	How to configure a Print Server	1-5
1.1	PrintGuide™	1-5
1.1.1	Start PrintGuide™	1-5
1.1.2	Saving and loading a monitor list.....	1-6
1.1.3	Monitor filters.....	1-6
1.1.4	Info Viewer.....	1-8
1.1.5	Discovery Preferences	1-9
1.1.6	Network settings.....	1-9
1.1.7	Save Configuration.....	1-10
1.2	Configuring the Print Server via PrintGuide	1-11
1.2.1	Configuring a logical printer in a Print Server.....	1-11
1.2.2	String Change.....	1-13
	Example: change character ■(0xCF) in CP 850 to € (0xD5) Sign. of CP 858	1-14
1.2.3	Saving a Configuration File	1-15
1.2.4	Reading a configuration file.....	1-16
1.2.5	Edit a configuration file.....	1-16
	Example: Define PSI paper path in an IPDS interface.....	1-16
1.2.6	Update a configuration file to Print Server.....	1-17
1.3	Configuring the Print Server via Web-Browser	1-19
1.3.1	Getting Started	1-19
1.3.2	Print Server Administration	1-21
1.3.2.1	General	1-21
1.3.2.2	Logical Printer	1-22
1.3.2.3	TCP/IP Settings.....	1-23
1.3.2.4	Mail Notification Settings	1-24
1.3.2.5	SMTP Settings	1-25
1.3.2.6	Password.....	1-26
1.3.3	Status:	1-27
1.3.4	How to	1-28
1.3.5	Technical Support	1-28
1.3.5.1	Frequently Asked Questions.....	1-29
1.3.5.2	Reporting Problems	1-30
1.3.5.3	Firmware update	1-31
1.3.5.4	Product and Service Information.....	1-31
1.4	Configuration via Telnet	1-32
1.4.1	Syntax.....	1-32

1.4.2	A Telnet session	1-32
1.4.3	Navigation keys:.....	1-32
1.4.4	Navigation chart	1-32
1.5	Configuration via ARP / PING.....	1-33
1.6	Configuration via a BOOTP server	1-34
1.6.1	How BOOTP works.....	1-34
1.6.2	Add an entry to BOOTP server database.....	1-34
1.6.3	Use of boot file	1-35
1.7	Configuration via a DHCP Server	1-35
1.7.1	How DHCP works	1-35
1.7.2	Install a DHCP server in Windows NT 4.0	1-35
1.7.3	Reserve an IP address.....	1-35
2.	How to do:	2-1
2.1.	How to configure an IBM RS/6000 / pSeries AIX host environment for printing.....	2-1
2.1.1	Set up the local host file.	2-1
2.1.2	Set up the local print queue on AIX 4.3 or 5.1.....	2-1
2.2.	How to view the status of the Print Server's logical printers	2-1
2.3.	How to upload the Print Server's configuration file	2-2
2.4.	How to set up the PrintServer (UNIX host) for use with MultiView DeskTop LPR	2-2
2.4.1	SCO UNIX OPENSERVR 5	2-2
2.5.	How can I define a paper source selection und IPDS Interface.....	2-5

1. How to configure a Print Server

Configuration methods

1.1 PrintGuide™

PrintGuide™ discovers, monitors and configures PSI IPDS Interface (MPI Easy Com III).

PrintGuide™ is your common interface to the PSI IPDS Interface Print Server.

Acts as:

- **Configuration Tool** - Once a Print Server has been attached to the network, you can use PrintGuide™ to discover and configure the Print Server.
- **Status Monitor** - When the Print Server is in operation, you can use PrintGuide™ to monitor the status of the Print Server.
- **Maintenance Tool** - If the Print Server needs updated firmware this can be accomplished with PrintGuide.

1.1.1 Start PrintGuide™

Click the Start menu, point to All Programs - MPI Tech - PrintGuide™ and click PrintGuide.

Monitor View

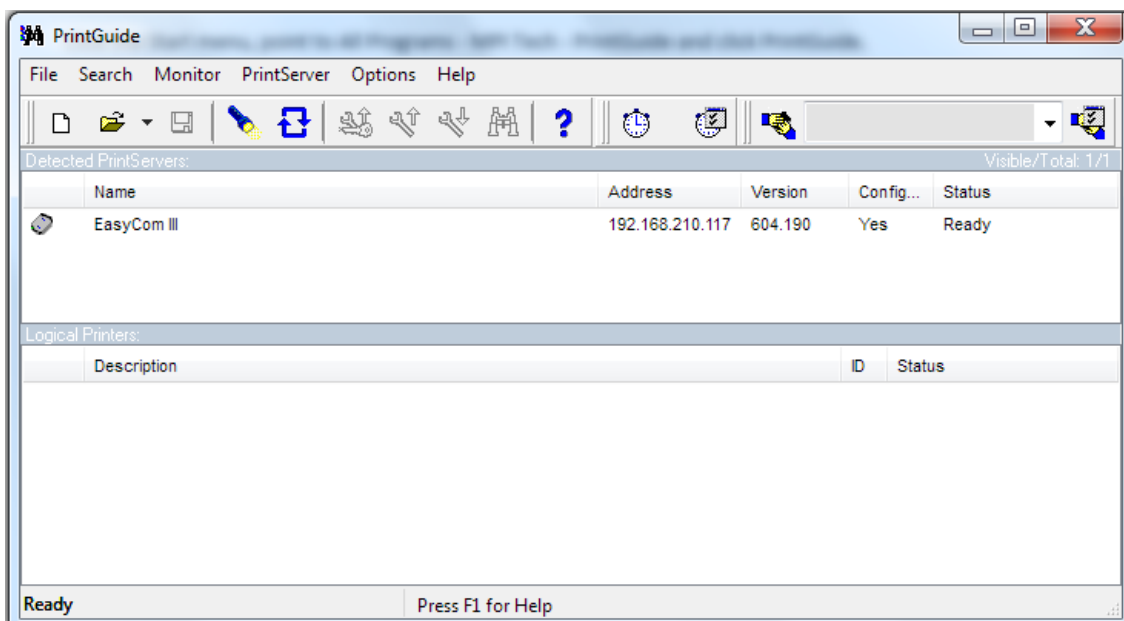


Figure 1

The initial screen, Monitor View, presents an overview of the discovered Print Servers and the status of the selected Print Server's logical printers.

Note: Lists in Monitor View can be sorted by clicking the column headings. Click Configured to see the not configured (new) Print Servers at the top of the list. Click Address to sort Print Servers according to their address (MAC or IP).

The list of logical printers shows you their status, but if you want to change settings for them, you have

to put PrintGuide™ into Configuration View (double-click a Print Server).

1.1.2 Saving and loading a monitor list

You can save the entire list of discovered devices to file at any time by selecting Save Monitor List from the Monitor menu.

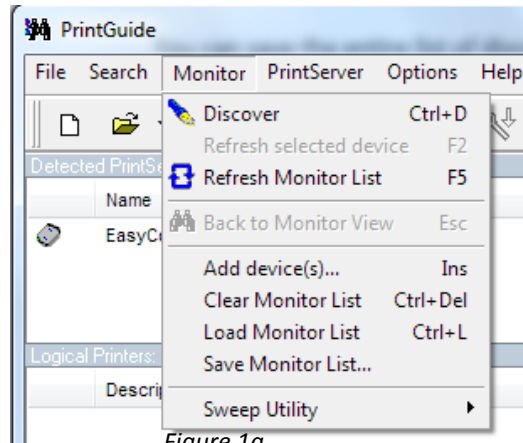


Figure 1a


Note: In the Preferences dialog (select Preferences from the Options menu) you can choose to save the list automatically when PrintGuide™ is closed. Refer to the on-line help for further details.

You can load the previously saved list of discovered devices from file at any time by selecting Load Monitor List from the Monitor menu.

Note: In the Preferences dialog, you can choose to load the list automatically when PrintGuide™ is started. Refer to the on-line help for further details.

1.1.3 Monitor filters

With this feature, you can define a list of filters to limit the number of Print Servers shown in the Monitor View. Filters can show device addresses within a certain range, all devices with a common part of a name, or all devices that are not ready etc. To define a filter, do the following:

1. Press the Monitor Filter Preferences button,  or click **Preferences** on the Options menu. A dialog is displayed asking you to create or whether you want to import a few demonstration filters that illustrate how you can use filtering. If you select “Yes” (they can be removed later), the **Preferences** dialog’s Monitor Filters tab is displayed as shown in Figure 2:

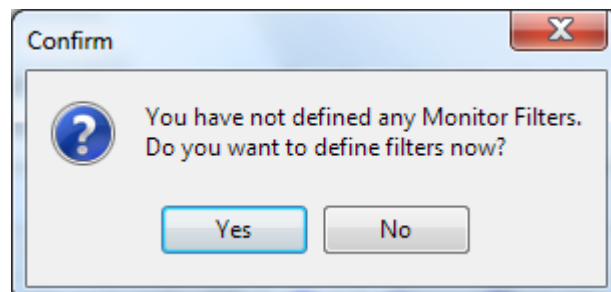
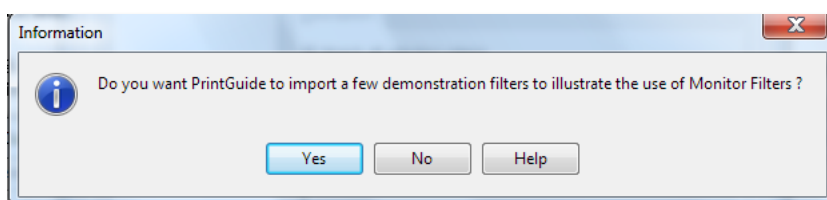


Figure 2



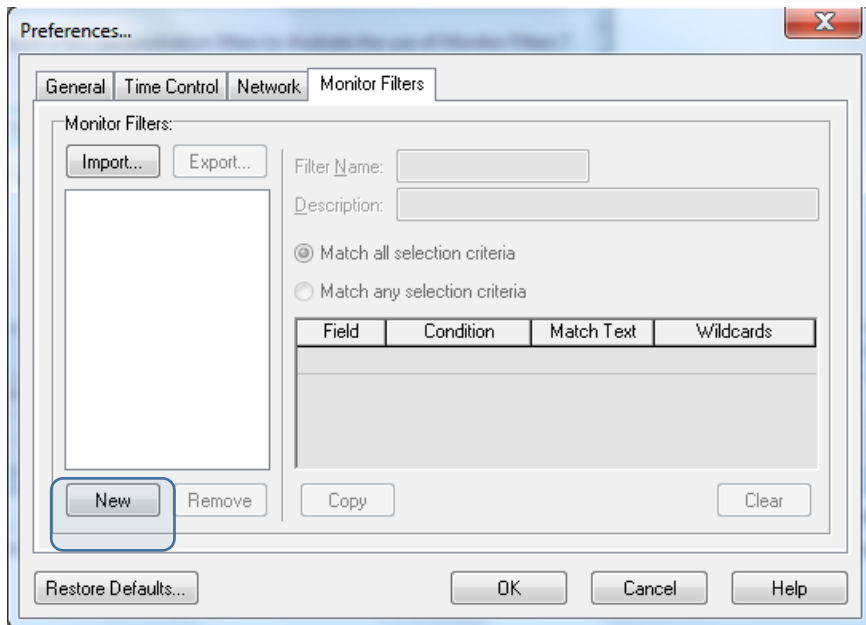


Figure3

1. Press the New button.
The Monitor Filters tab changes to let you define a new filter; see Figure 3.
2. Enter a Filter name and (if you want) a Description.

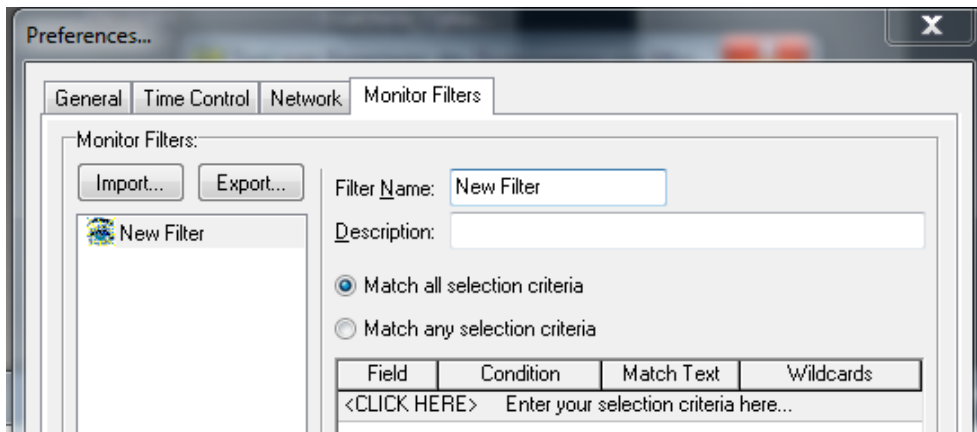


Figure3a

3. Now set up the conditions for the filter (click on the field beneath the headings to see the options) and save it by pressing OK. You can see how a filter is defined in Figure 4.

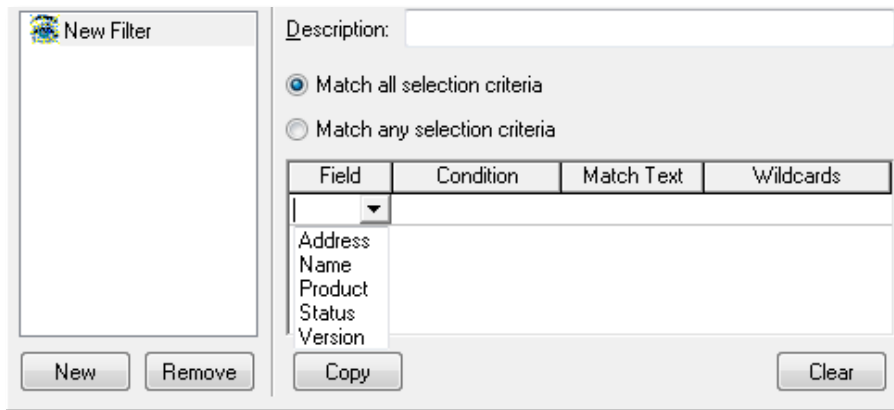


Figure4

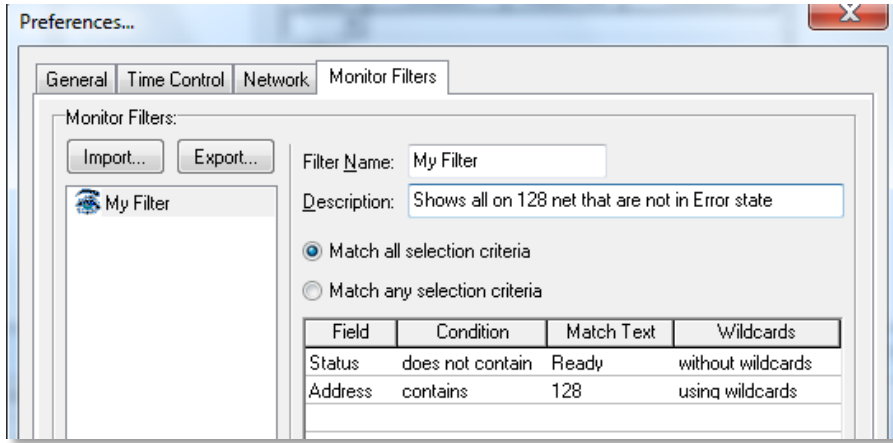



Figure4a

You can export the filters to a file and you can import them from a file. You can also copy the filters from a network drive to your own PC.

To activate or deactivate the filters in Monitor view, press the filter button  .

When the filters are activated, the text above the list of detected devices will say: **Detected Devices: (Filtered)** (see Figure 1). 

Note: The header of the monitor list shows the number of detected (filtered) devices along with the total number of devices on the network: **Devices: 22/36** in Figure 1.

1.1.4 Info Viewer

If you right-click the mouse on the highlighted Print Server and select the menu item Show Info Viewer in Menu Options, a window will be displayed giving you useful information about the selected Print Server. You can also select Show Info Viewer on the menu Options.

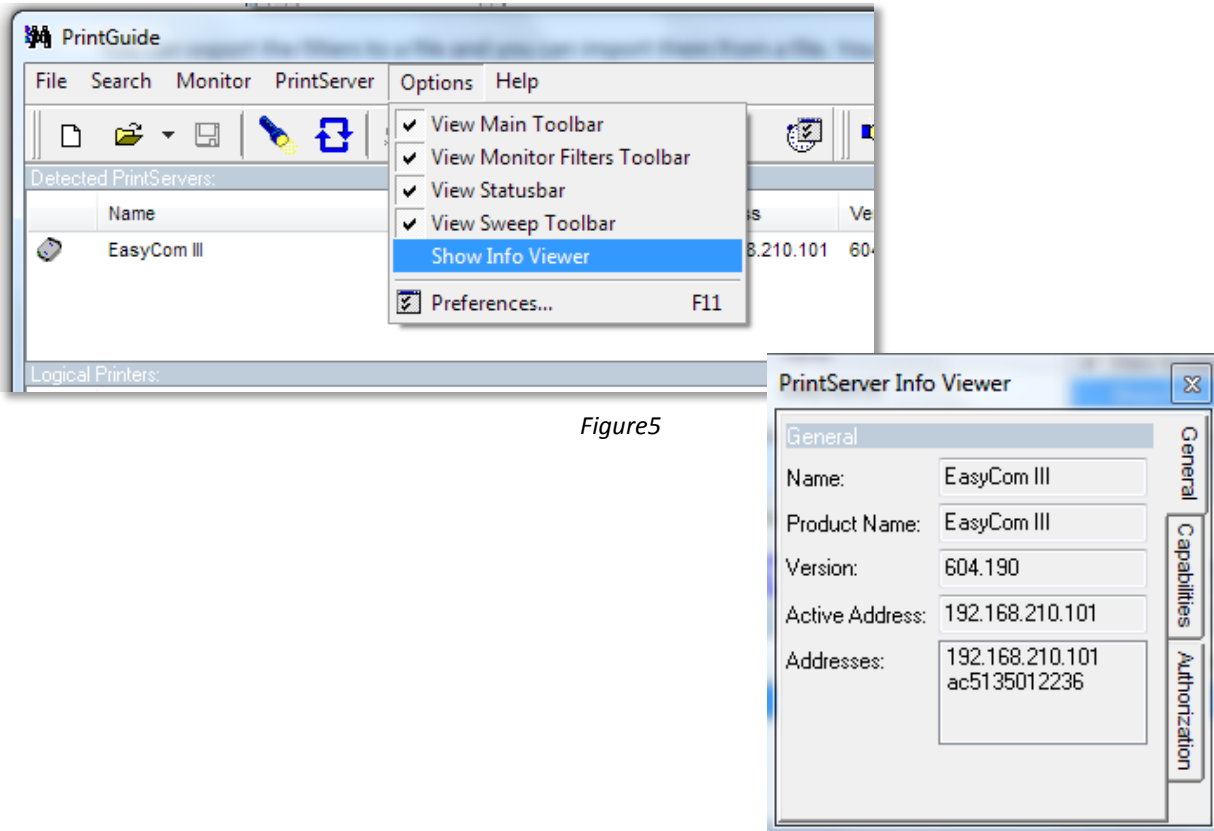


Figure5

1.1.5 Discovery Preferences

If *PrintGuide™* is unable to discover a Print Server and the Print Server is otherwise running (powered on), it may be because the discovery preferences need to be changed.

1. On the Options menu, click Preferences.
2. Click the Network tab (See Figure 6).
3. Enable DLC and/or TCP/IP protocol.
4. Edit the corresponding protocol settings, as your require.

Note: The DLC protocol is supported with Windows versions 2000 and older.

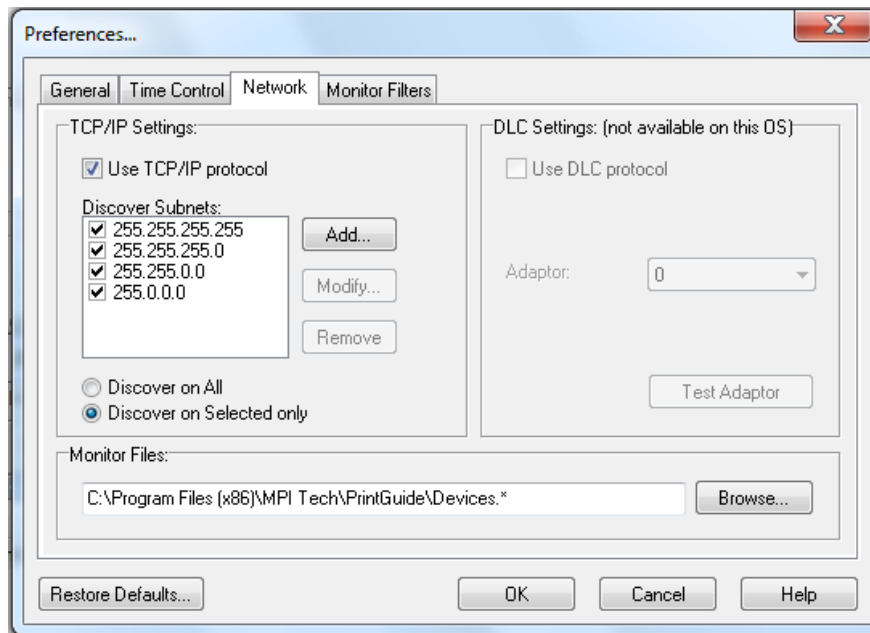
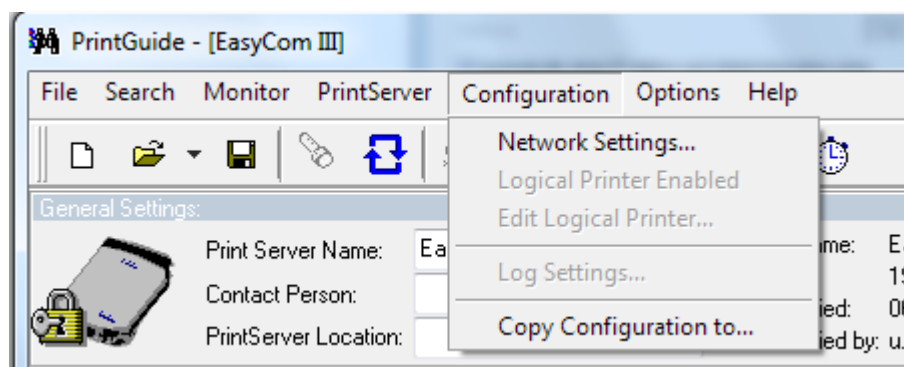


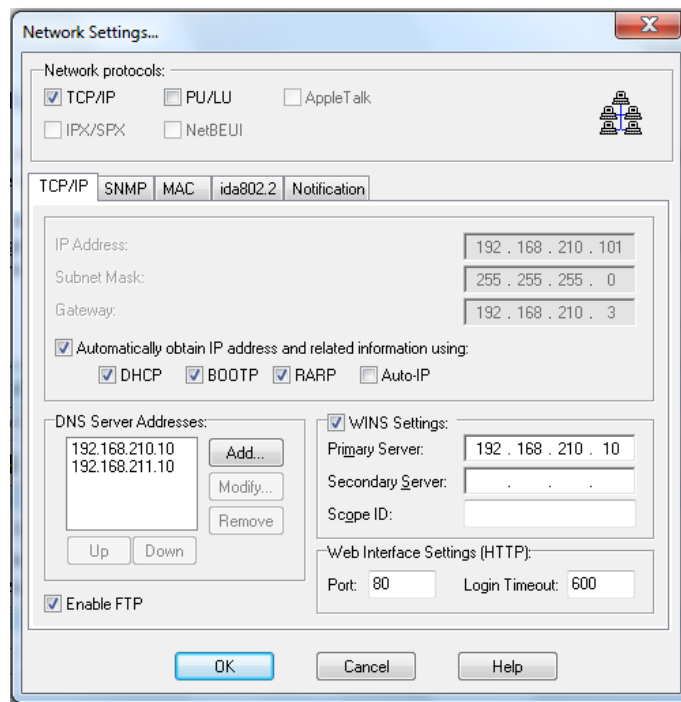
Figure6

1.1.6 Network settings

Open the dialog Network Setting by right-click the mouse on the highlighted Print Server in the menu item Configuration.

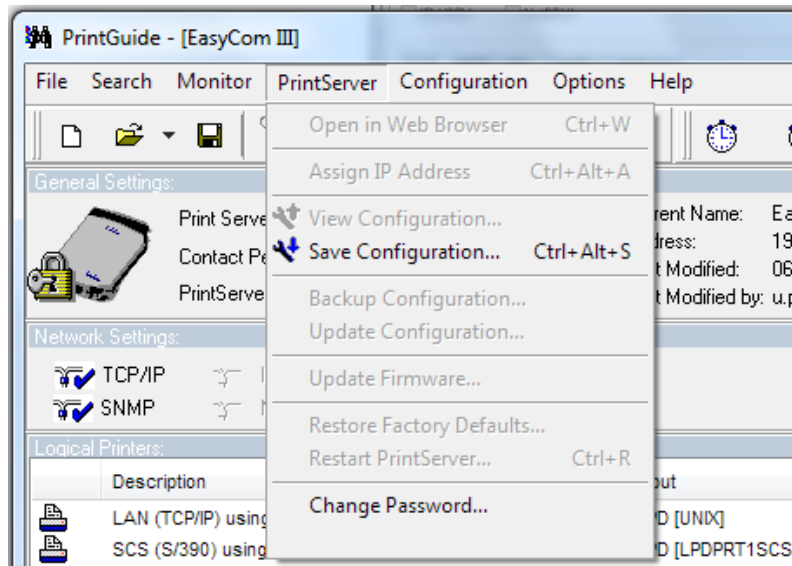


If DHCP is on you see the Network Settings of the Print Server. If not enter the Network communication Data to responding fields.

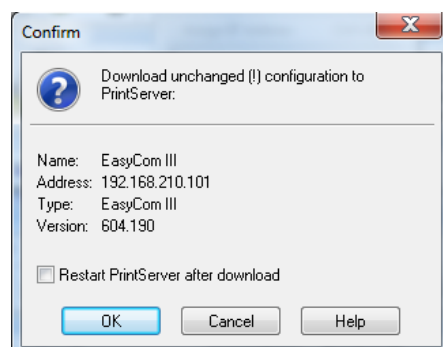


1.1.7 Save Configuration

In order to save Configuration, Open the dialog Save Configuration by right-click the mouse on the highlighted Print Server in the menu item Print Server.















Confirm with ok:



1.2 Configuring the Print Server via PrintGuide

Now that the Print Server is installed and discovered, only two conditions remain to be fulfilled before the Print Server can be used for printing:

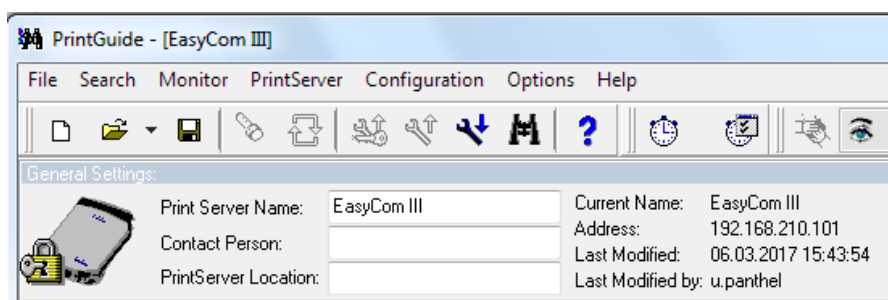
1. One or more logical printers must be enabled and configured.
2. The logical printer's corresponding network protocol must be enabled and configured (refer to 1.1.5, Network settings)
3. right-click the mouse on the highlighted Print Server to open the Protocol list or press the button 

	Description	Input	Transfo...	Output	ID
	AFP/ICDS (ida PSS) using TCP/IP	PPD [5005]	PSS	Printer	5
	AFP/IPDS (PSF) using TCP/IP	PPD [5001]	IPDS	Printer	27
	DCA using TN5250e	Telnet	DCA	Printer	20
	FTP printer	FTP		Printer	22
	IPP 1.0 printer using HTTP	IPP [/ippserver/printer1]		Printer	21
	LAN (TCP/IP) using LPD	LPD [LPDPRT1]		Printer	24
	LAN (TCP/IP) using LPD	LPD [POSTSCRIPT]		Printer	26
	LAN (TCP/IP) using LPD (Unix)	LPD [UNIX]		Printer	25
	SCS (S/390) using TCP/IP	LPD [LPDPRT1SCS]	SCS	Printer	18
	SCS using TN3270e	Telnet	SCS	Printer	19
	TCP/IP port 9100 printer	TCP/IP [9100]		Printer	28

1.2.1 Configuring a logical printer in a Print Server




Locate a Print Server on the list of Detected Devices (Figure 7) and double-click it. The Print Server is identified by its Address and Name.

- Type a Print Server Name, Contact Person, and Print Server Location. This information is optional, but it will help you identify the Print Server in the future.

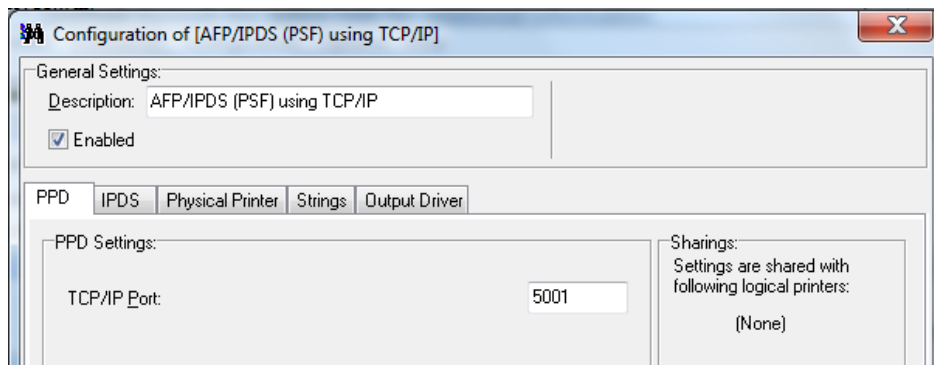


Note: The information in the remaining dialogs depends on the Print Server and the logical printer selected. Consult the online help for additional information.

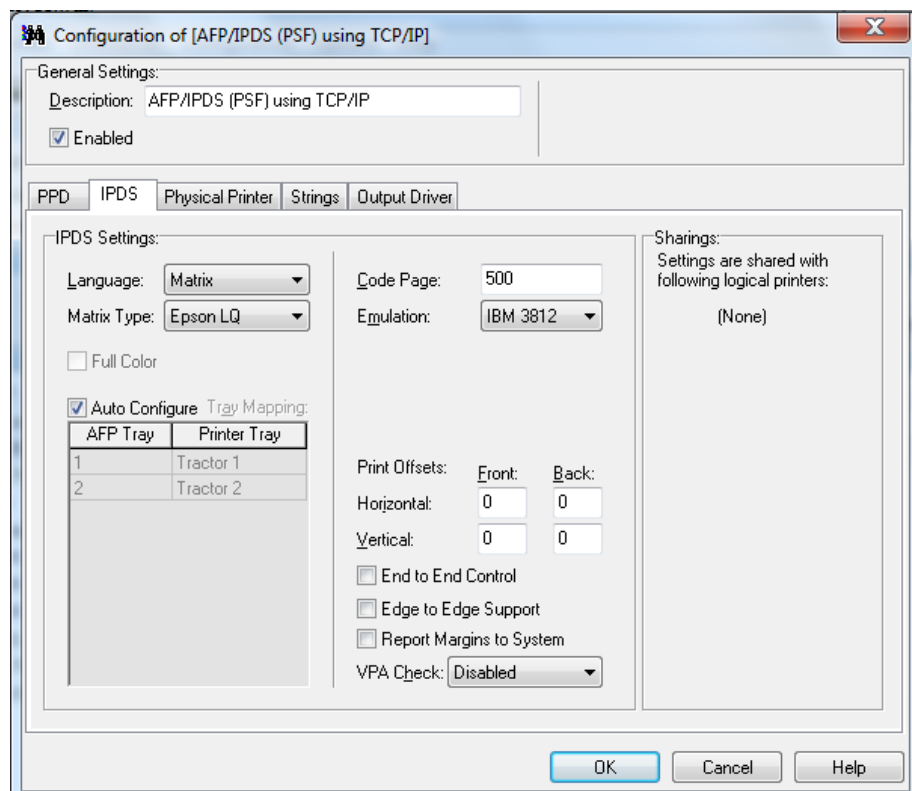
1. Locate a **Logical Printer** that matches your requirements and double-click it.

Logical Printers:					Count: 11
	Description	Input	Transfo...	Output	ID
	AFP/CDS (ida PSS) using TCP/IP	PPD [5005]	PSS	Printer	5
	AFP/IPDS (PSF) using TCP/IP	PPD [5001]	IPDS	Printer	27
	DCA using TN5250e	Telnet	DCA	Printer	20

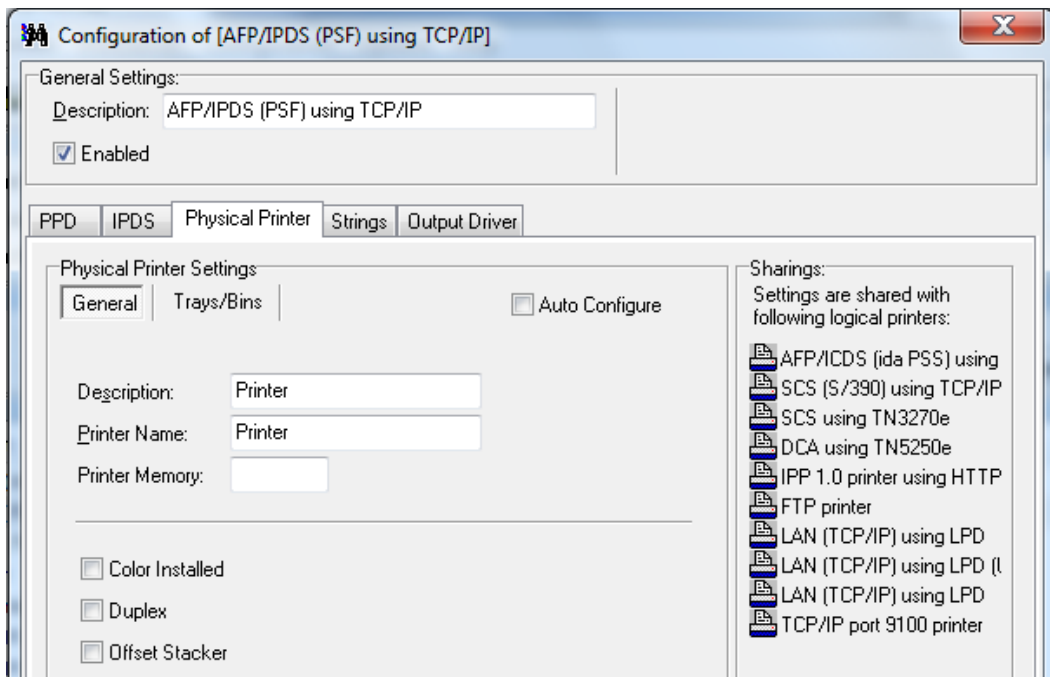
2. Adjust the settings to match your requirements. Select the Enabled check box to enable the printer.



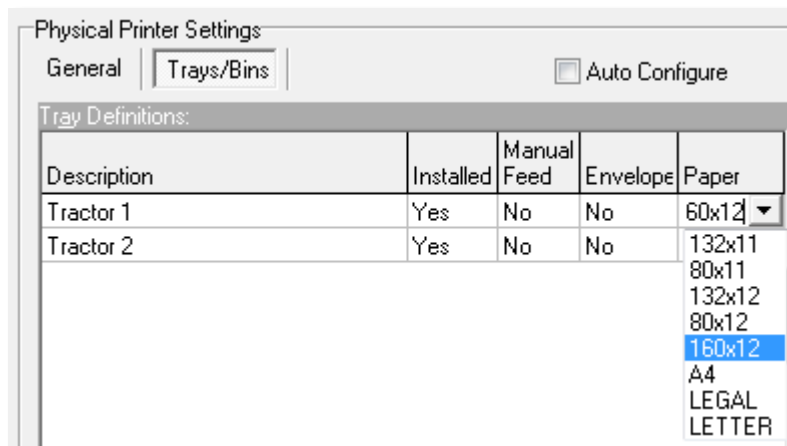
3. Click to the IPDS tab, and adjust the settings to match your requirements. Important for the IBM 4247 Installation is:
 - Language **Matrix**
 - Matrix Type **Epson LQ**
 - Emulation **3812**



- Click to the Physical Printer tab, and type the Description and Printer Name this optional.

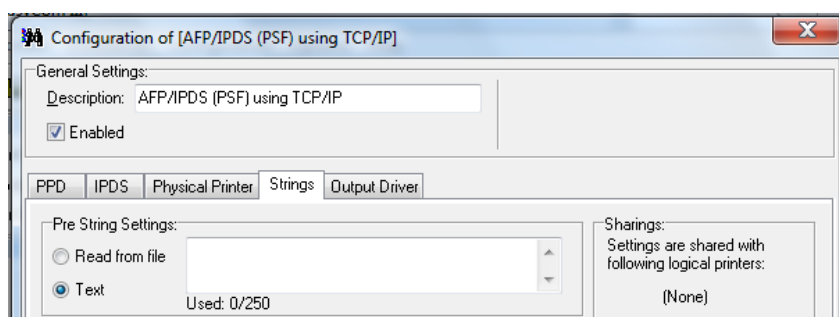


- Click to the Trays/Bins to assign the paper sizes of the paper trays:
 - 160 x 12 means 160 characters width to 12 inch page length

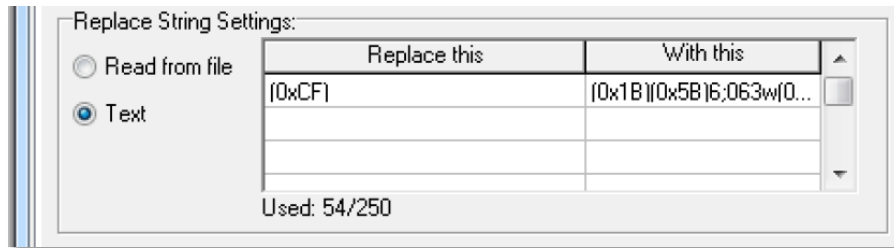


1.2.2 String Change

- In case of necessary String Substitution click to Strings tab, and type the Description and Printer Name this optional.



Example: change character ■ (0xCF) in CP 850 to € (0xD5) Sign. of CP 858



Replace this (0xCF)

With this (0x1B)(0x5B)6;063w(0xd5)(0x1B)(0x5B)2;063w

Info:

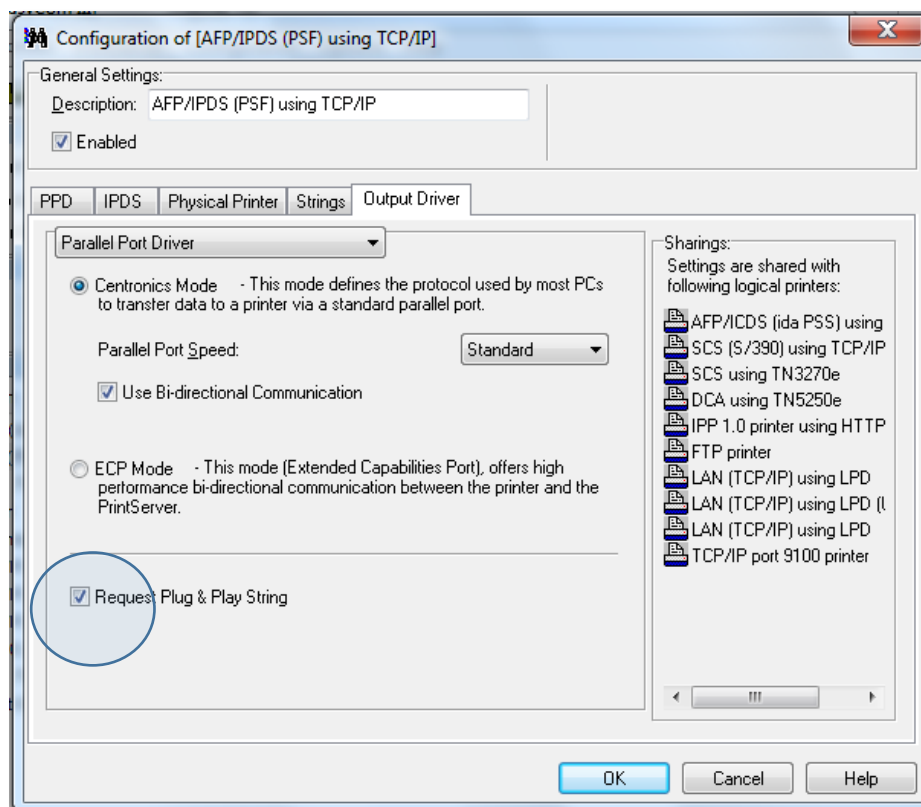
Character (0xCF) = IBM Code Page 850 = ■

Character (0xD5) = IBM Code Page 858 = €

Code (0x1B)(0x5B)6;063w = Select Code Page 858

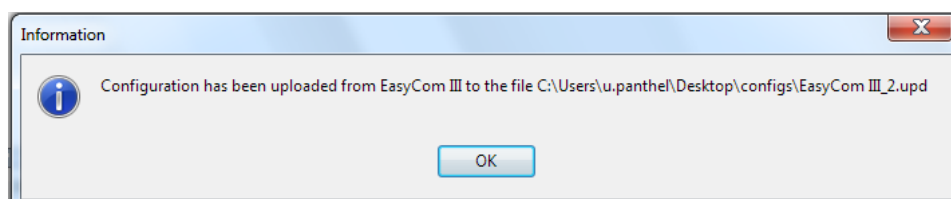
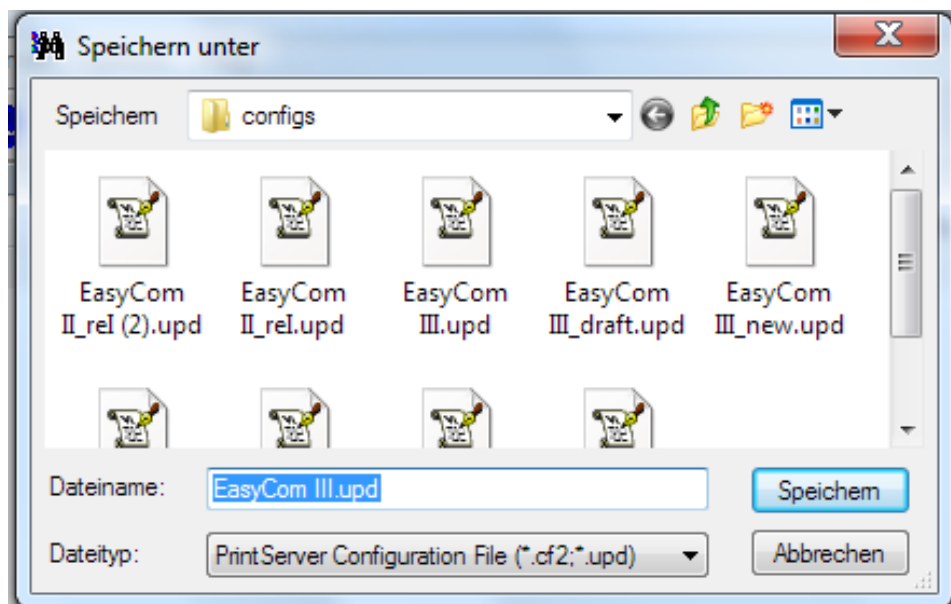
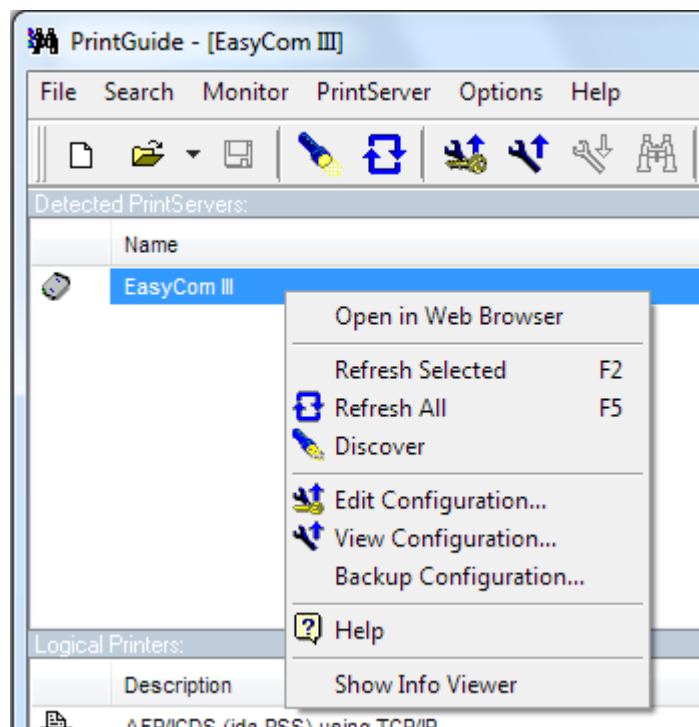
Code (0x1B)(0x5B)2;063w = Select Code Page 850

- In order for the String Change to become active in the corresponding logical printer, the Requested plug and play must be checked in the Output Device folder.



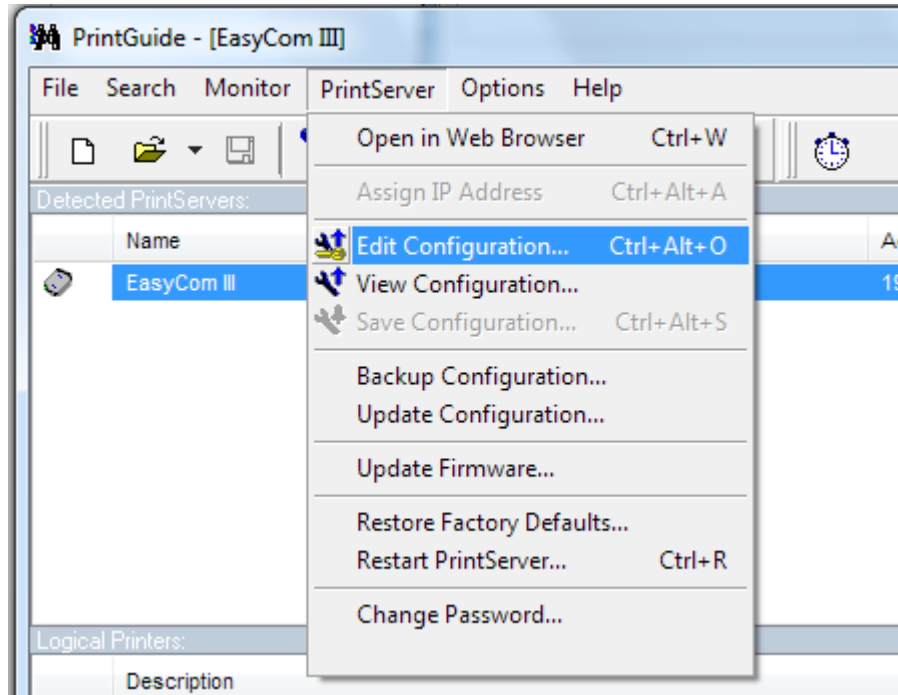
1.2.3 Saving a Configuration File

In Monitor view, select the appropriate print server. Use the right mouse button to select Backup Configuration from the Print Server menu. Save File to folder. A backup configuration should always have a file ending ".upd" and press enter / start



1.2.4 Reading a configuration file

In Monitor view, select the appropriate print server. Use the right mouse button to select Backup Configuration from the Print Server menu. Note: The entire configuration is saved. A backup configuration should always have a file ending ".upd"



1.2.5 Edit a configuration file

Example: Define PSI paper path in an IPDS interface

The paper feed paths can be defined in the configuration file of an IPDS interface. For this purpose, the configuration file of the current IPDS printer has to be read out.

```
&&??##N1,0#
;*****
; This is a PrintGuide generated ITDS configuration header
;*****
;
;<PS-INFO>
; PS-NAME: EasyCom III
; PS-ADDR: 192.168.210.118
; PS-MAC: ac5135012236
; PS-VERS: 604.190
; PS-TYPE: 71 (EasyCom III)
;
;<PSETUP-INFO>
; VERS: 3.68.0.90
; USER: u.panthel
; TIME: 28.02.2017 14:56:41
;
;*****
;
```


- Locate the entry "BEGIN_CONFIGURATION PRINTER 1" in the file

The point: `LANGUAGE_DEF MATRIX` Describes the definition of the paper path. The control command for the paper path (`TRAY_DEF`) can be entered here. The syntax is Hex "0x" or directly ASCII.

For PSi Matrix printer the commands are the following

Lower Traktor = „0x1B0x5B0x370x73" (1b 5b 7 s)

Upper Traktor = „0x1B0x5B0x360x73" (1b 5b 6 s)

- Do this changes in the `LANGUAGE_DEF MATRIX`

PRESENT YES

TRAY_DEF 1

SELECTION "0x1B0x5B0x370x73"

END_SET

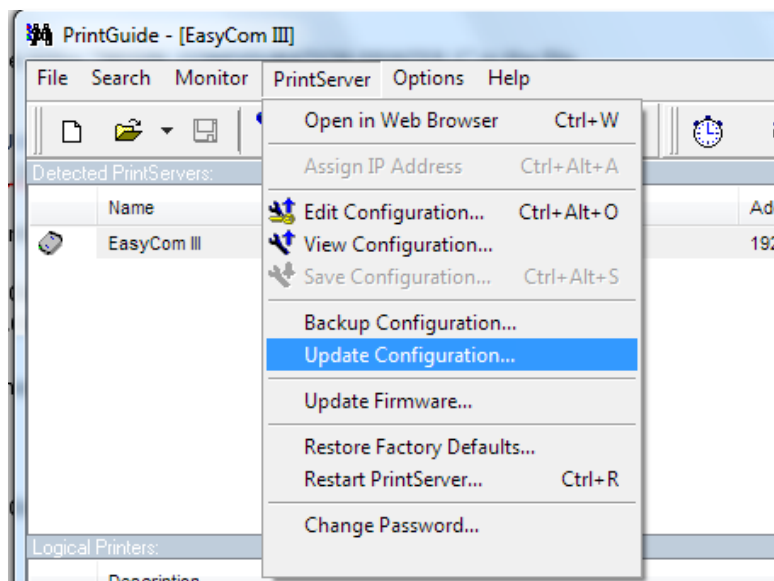
TRAY_DEF 2

SELECTION "0x1B0x5B0x360x73"

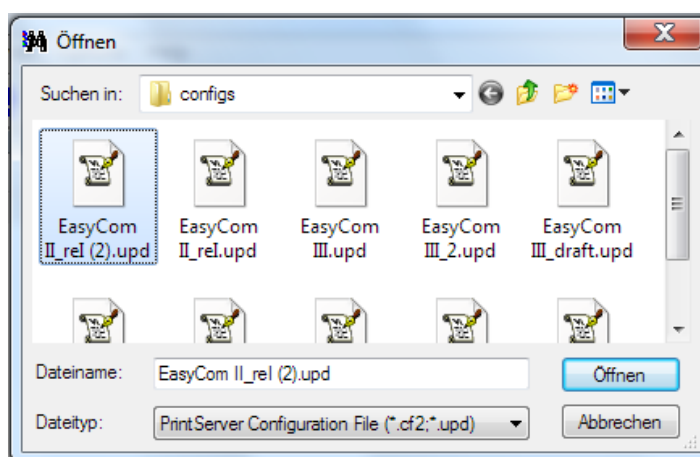
END_SET

If ready the configuration file must be downloaded by update to the Print Server.

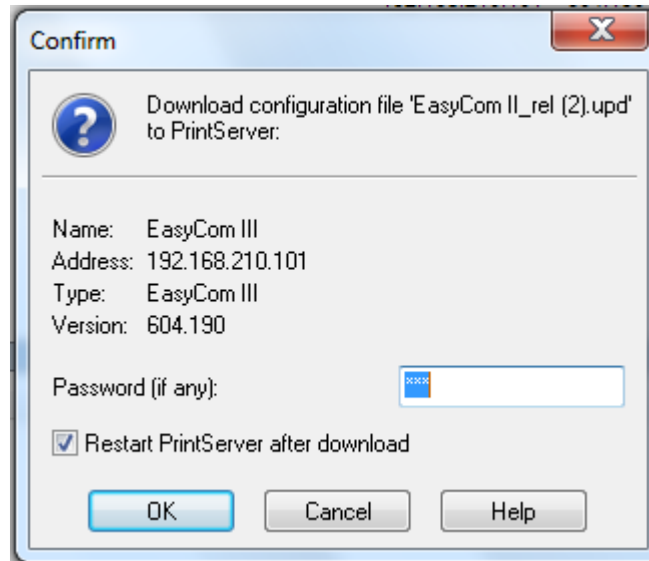
1.2.6 Update a configuration file to Print Server



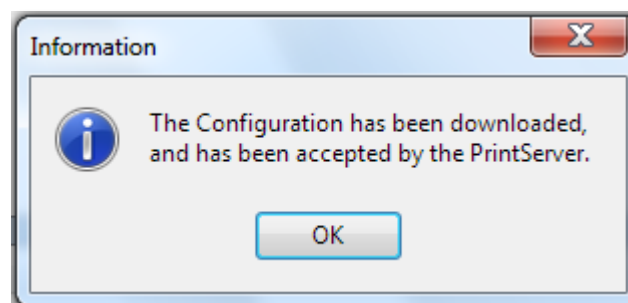
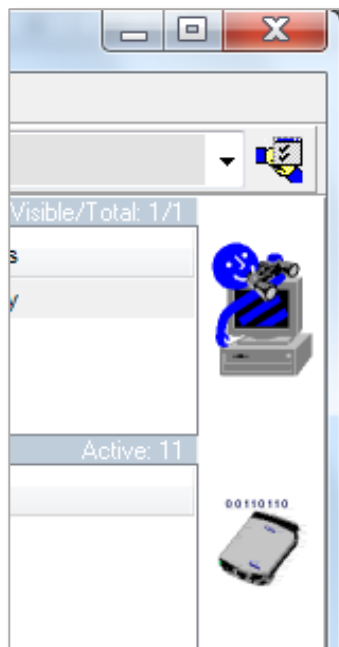
- Open a store configuration file `.upd`.



- Confirm download to Print Server.



- The download starts



1.3 Configuring the Print Server via Web-Browser

Open the Print Server in a WEB-Browser by typing the IP-address.

1.3.1 Getting Started

Getting Started

Welcome to EasyCom III, the LAN PrintServer from MPI Tech. The EasyCom III includes a built-in Web-Server, the server that you are addressing just now with your browser. The right side of this window, contains information and current status of your EasyCom.

Follow the 3 steps below, and the EasyCom will be ready for printing in a short time.

- 1 Guided Configuration
- 2 Server Configuration
- 3 Client Configuration

Summary

PrintServer
Name: EasyCom III
Contact:
Location:
Main Firmware: S80 604.190
Boot Firmware: S40 604.210

Ethernet
MAC Address: AC5135012236
IP Address: 192.168.210.101

Last Job Status
Printer 1: OK.

1 Guided Configuration:

Guided Configuration ?

Please proceed the configuration by following these 3 steps.

- 1 **Personalize EasyCom**
Location and Contact person
- 2 **Configure protocols**
Note: Your PrintServer has already an IP Address. To change your TCP/IP setting use 'Advanced Configuration'
- 3 **Restart EasyCom to activate settings**
Restart EasyCom

Personalize EasyCom Location and Contact Person:

- If necessary fill in the information of your requirements and save it.

Identification ?

Specify where the EasyCom is located, and who is responsible for it.

PrintServer Name

Location

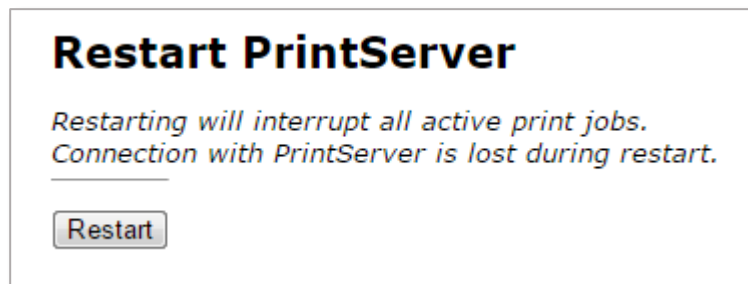
Contact Person

Configure Protocols:

This is already done by installation!

Restart EasyCom to activate settings

This will restart the Print Server to activate changed settings. Press Restart.



2 Server Configuration: is a folder with How to documentations about Server Configuration

For the info, select the corresponding menu item.

Server Configuration

To set up the printer connected to the EasyCom PrintServer, click on your network operating system below.

Windows

- Windows NT4/2000/2003 server printing
- Windows 9x is covered in Client Configuration.

Other

- AS/400 host printing
- **Novell NetWare server printing**
- UNIX / Linux - **BSD LPD, IBM AIX, SUN SOLARIS, UNIX/Linux - HP-UX/System V LP**
- **OS/2 server printing**

| [Getting Started](#) | [Client Configuration](#) |

3 Client Configuration: is a folder with How to documentations about Client Configuration

For the info, select the corresponding menu item.

Client Configuration

After setting up the shared printer on your server, this section explains how to connect and print from a client.

Windows

- **Windows 9x/NT4/2000/XP client printing**
- Peer-to-peer printing by:
 - NetBIOS/NetBEUI; **directly** or via a **queue**.
 - **lpd/lpr**

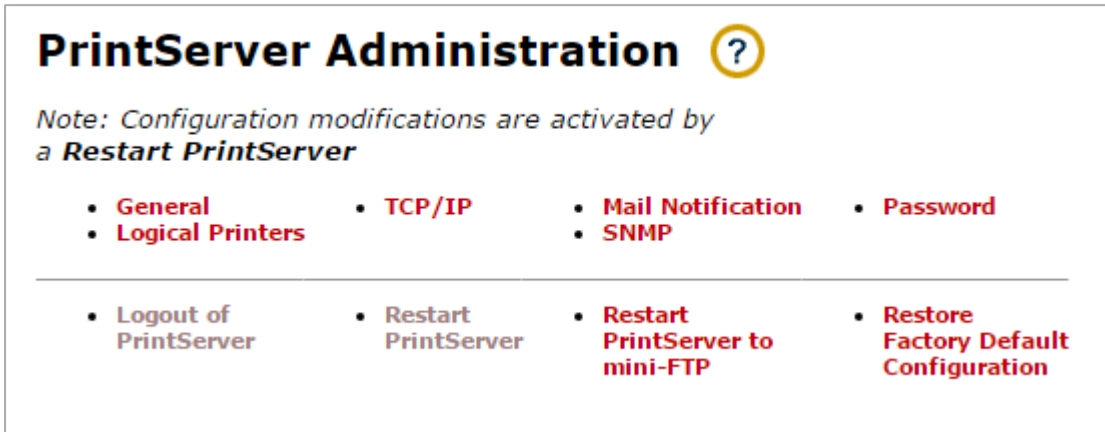
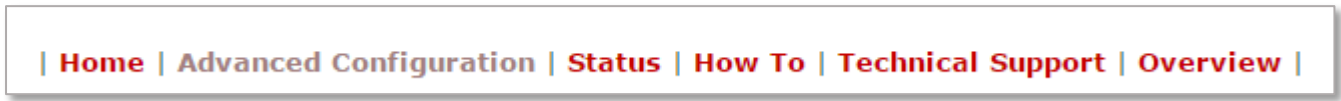
Other

- Microsoft NetWare client printing
- **Novell NetWare client printing**
- **OS/2 peer-to-peer printing**

| [Getting Started](#) | [Server Configuration](#) |

1.3.2 Print Server Administration

To open the Print Server Administration, go to the bottom of the WEB page and select Advanced Configuration



For administration, select the corresponding menu item.

1.3.2.1 General

General Settings

*To record changes, click **Save & Continue** at the **bottom** of the page.*

Identification ?

PrintServer Name

Location

Contact Person

MAC Address ?

Used MAC

Universal MAC

Local MAC

LAN Speed ?

LAN Speed

Timeout ?

Share IRQ Hold (seconds)

PrintServer Administration

Identification

Print Server Name

- An administratively-assigned name for this Print Server. This is the Print Server's fully-qualified domain name. Maximum length is 255 characters. *Example: easycom_2*

Location

- The physical location of this Print Server, such as building, floor and room. This information is used by SNMP traps. Maximum length is 255 characters. *Example: Building A, Room 123*

Contact Person

- The textual identification of the contact person for the Print Server, together with information on how to contact this person. This information is used by SNMP traps. Maximum length is 255 characters. *Example: John Doe (ext.: 198)*

MAC Address

Used MAC

- Choose if your installation uses local or global administered MAC addresses. *Range:* LOCAL, UNIVERSAL.

Local MAC

- The local used MAC address, if used. The MAC (Medium Access Control) address is also referred to as Hardware or Network address. The address is a hexadecimal representation. *Range:* 0200 0000 0000 - FEFF FFFF FFFF.

Timeout

Share

- Time interval (in seconds), to wait for more data before data from another source will be processed. *Range:* 0 - 9999, default is 20.

IRQ

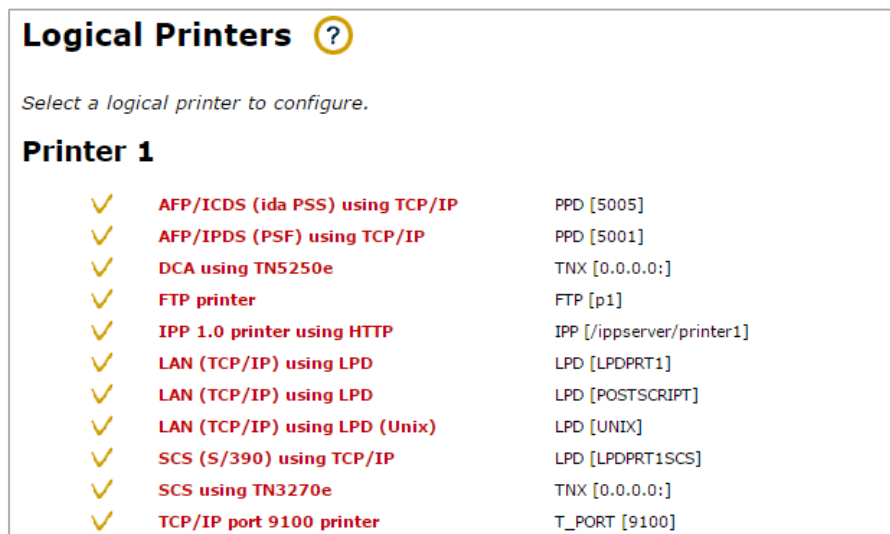
- Time interval (in seconds), to wait before an intervention required (IRQ) message is forwarded to the host system. Intervention required is initiated by paper out / paper error conditions. *Range:* 0 - 9999, default is 60.

Hold

- Time interval (in seconds), to postpone messages relating to an offline condition. *Range:* 0 - 9999, default is 600.

1.3.2.2 Logical Printer

See also chapter: [1.2 Configuring the Print Server via PrintGuide](#)



Check mark

- A checked session means that the session is enabled.

Description

- A short description of the logical printer.

Queue

- The rightmost column gives information about the input queue.

1.3.2.3 TCP/IP Settings

TCP/IP Settings ?

*To record changes, click **Save & Continue** at the **bottom** of the page.*

General

Enable TCP/IP Enable FTP

Host Name

Gateway

HTTP Port

IP Lookup Method

Automatic - Obtain IP address and related information using the selected protocols:

Protocols DHCP BOOTP RARP AUTOIP

Manual - Use the manually entered and permanent IP address, subnet mask, etc:

IP Address

Subnet Mask

WINS

Enable WINS

Primary WINS Server

Secondary WINS Server

Scope ID

DNS

DNS Servers

Write one IP address per line.
Example: 192.134.56.67

PrintServer Administration

Enable TCP/IP

- Select this if you want to use the TCP/IP protocol.
- Caution:** If you disable TCP/IP, you will not be able to configure the Print Server through a Web Browser.

HTTP Port

- You can select the port that the Web Browser should use to access the Print Server Web pages
Note If you change the Default port (80) you must use the following notation in the Web Browser Address line to access the Print Server Web Pages:
Example: 172.16.14.108:82.
Caution: Some ports are reserved for other purposes.

Enable FTP

- Select this if you want to use the FTP protocol for configuration or printing
Caution: If you disable FTP you will not be able to make FTP print

IP Lookup Method

- The EasyCom can obtain its IP address and related information automatically from a DHCP, BOOTP, or RARP server in the network. If none of these servers are available on your network the Print Server can obtain an IP address using its Auto IP algorithm. This IP address will be in the range 169.254.xxx.xxx. You can also choose to use the manually specified IP address.

WINS

- If Windows Internet Name Service (WINS) is enabled then the EasyCom will register its IP address, NetBIOS name, and Work Group name with a WINS server.

DNS

- The EasyCom uses the listed Domain Name System (DNS) servers to resolve hostnames and IP addresses. A maximum of 14 DNS servers can be specified.

1.3.2.4 Mail Notification Settings

Server

- IP address of the SMTP server used for sending notification mail. *Example: 172.16.100.2*

Reply

- The sender of the notification mail. Please note that some SMTP servers may only work if this field contains a '@'. *Example: easycom@domain.com*

Service recipient

- The user who will receive the notification mails enabled for the service user. *Example: service@domain.com*

Key-user recipient

- The user who will receive the notification mails enabled for the key-user. *Example: key-user@domain.com*

Need paper

- If enabled, notification will be sent to the user, if the printer runs out of paper.

Paper jam

Notification will be sent to the user, if a paper jam occurs in the printer.

Cover open

If enabled, notification will be sent to the user, if the cover of the printer is open.

Offline

If enabled, notification will be sent to the user, if the printer goes offline.

Intervention required

- If enabled, notification will be sent to the user, if the printer reports any other intervention required.

Online

- If enabled, notification will be sent to the user, when the printer comes online after having been in an error state. Online events will only be sent to the user, if the user also subscribes to the event that caused the printer to leave its online state. Note that "toner low" is never followed by an online notification, as it is not a critical error that causes the printer to go offline.

Send Test Mail

- Send a test mail right after you click **Save & Continue**.

Note: Not all printers support all of the notifications events. Notification will only be sent for events supported by the printer.

1.3.2.5 SMTP Settings

SNMP Settings ?

*To record changes, click **Save & Continue** at the **bottom** of the page.*

Authentication ?

Community Name

IP Network Address

IP Network Mask

Access

Traps ?

Authentication Traps

Destination Host

Community Name

UDP Port #

PrintServer Administration

Community Name

- Enter the community name of the Print Server. The SNMP manager must use the same community name to get access to the SNMP client in the Print Server. *Default: public*

IP Network Address

- Enter the IP network address that may have access to the SNMP client. The IP address of the SNMP manager is *logically ended* with the **IP Network Mask** and compared to the **IP Network Address**. *Example: The IP Network Address is set to '192.16.100.0' and the IP Network Mask is set to '255.255.255.0'. This will only give access to all SNMP agents on the '192.16.100' segment.*

IP Network Mask

- Enter the network mask used together with the **IP Network Address**.

Access

- Selects the access level to the SNMP client. *Range: R (Read only access), R/W (Read and Write access)*

Traps

Authentication Traps

- Defines whether authentication traps should be reported to the SNMP manager. An authentication trap may e.g. occur if an SNMP manager try to set an OID (Object Identifier) and only have read access. *Range: ENABLED, DISABLED.*

Destination Host

- Enter the SNMP manager which should get the SNMP traps.

Community Name

- Enter a trap community name. This string may be used to tell the SNMP manager where the trap came from. *Example: Trap on EasyCom in building A room 123.*

UDP Port

- Enter the trap port used by the SNMP Manager. *Default: 162*

1.3.2.6 Password

Password ?

*Type password(s) below and click **Save & Continue.***
You are prompted for the password the first time you access a secure page.

Administrator Password

Old Password

New Password

Verify Password

Note: The password can be max. 8 characters long.

- **Login TimeOut**

- **PrintServer Administration**

- Administrator password provides access to Print Server/Printer password protected configuration.
- Login timeOut sets the time for reenter the password after closing connection

Closed Connection Timer.

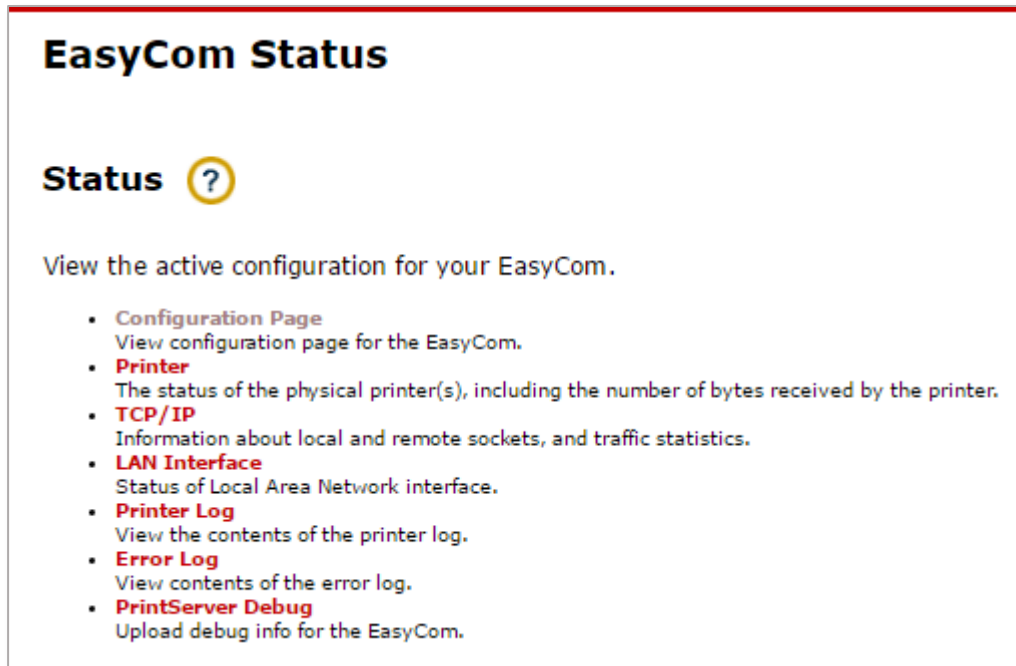
Password Valid after Closed Connection(in seconds)

- **PrintServer Administration**

1.3.3 Status:

To open the Status, go to the bottom of the WEB page and select Status

| [Home](#) | [Advanced Configuration](#) | [Status](#) | [How To](#) | [Technical Support](#) | [Overview](#) |



Info: Status is updated every 10 seconds.

Printer

- The status of the physical printer(s), including the number of bytes received by the printer.

TCP/IP

- Information about local and remote sockets, and traffic statistics.

NetBEUI

- *Microsoft Windows* protocol status.

IPX/SPX

- *Novell NetWare* protocol status.

LAN Interface

- Status of Local Area Network interface.

SNMP Agent

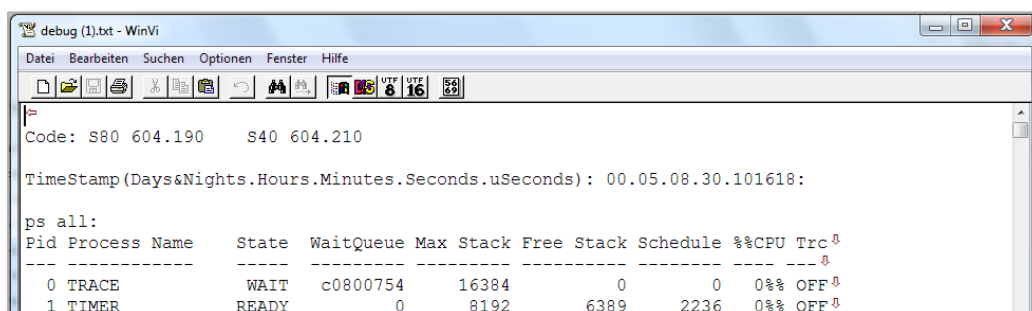
- Status of the SNMP Agent.

Error Log

- See the contents of the error log.

Print Server Debug

- Upload debug info file of the Print Server.



1.3.4 How to

To open the How to, go to the bottom of the WEB page and select How To

| [Home](#) | [Advanced Configuration](#) | [Status](#) | [How To](#) | [Technical Support](#) | [Overview](#) |

- How to documentations
- For the info, select the corresponding menu item.

How to

List of How to documents.

Get started with your PrintServer

- [get started with your PrintServer](#)
- [find the PrintServer on the network](#)
- [print the PrintServer's test page](#)

Network Protocols

- [configure network protocol in the PrintServer](#)
- [set the PrintServer's IP address automatically](#)
- [set the PrintServer's IP address manually](#)
- [connect the PrintServer on a different IP segment](#)
- [edit TCP/IP settings](#)
- [edit IPP settings](#)
- [edit IPX/SPX settings](#)

Configure PrintServer

- [configure the PrintServer using FTP](#)
- [configure via Web JetAdmin](#)
- [configure the PrintServer's network identification](#)
- [edit the PrintServer's mail notification settings](#)
- [edit the PrintServer's SNMP settings](#)

1.3.5 Technical Support

To open the How to, go to the bottom of the WEB page and select How To

| [Home](#) | [Advanced Configuration](#) | [Status](#) | [How To](#) | [Technical Support](#) | [Overview](#) |

Technical Support

[Frequently Asked Questions](#)

[Reporting Problems](#)

[Firmware Updates](#)

[Product and Support Information](#)

[How To](#)

1.3.5.1 Frequently Asked Questions

The FAQ's are listed below. You may visit the most recent Print Server FAQ pages on MPI Tech's home page on the Internet to get the most updated ones. If you do not find the answer to your question, please send your question directly to our support by mail to support@mpitech.com. When sending support problems, please let the Print Server print a test-page, add the information on the test page, such as MAC address, IP address etc, together with a description of the problem on the Error Report Form. This will be helpful to the support people, and will ensure a fast response to your question.

How do I print a test page?

Connect the Print Server to the printer. Wait until the Print Server has finished booting, then a short press of the test button will print the test page. Do not hold the button down for long time. Note that the booting process might take up to 15 seconds in a non DHCP/BOOTP environment, and about 10-12 seconds in a DHCP/BOOTP environment

What is the FTP/WEB username and password?

Default username for the web server and the ftp server: adm Default password for the web server: blank (no password) Default password for the FTP server: adm

I can not use arp/ping to set the IP address?

Check that the TCP/IP protocol is installed and you are logged on as an administrator. To set the IP address with the arp and ping command, the IP address on the status page must be 0.0.0.0. Print out a status page by a short press on the test button. On the test page you can see the IP address. If it is not 0.0.0.0, the Print Server may already have an IP address from a DHCP/BOOTP server.

When the Print Server is correctly connected to the network, and powered on, it will send a broadcast, or a DHCPDISCOVER broadcast packet to see if there are any DHCP/BOOTP servers on the network that can give it an IP address. If a router is present, the router may forward the DHCPDISCOVER broadcast. And if there is a DHCP server on the other side of the router, the DHCP server will try to send back a reply with a DHCPOFFER, offering an IP address. When this DHCP process has started, the Print Server will eventually get a DHCPACK, an acknowledgement for the requested IP address. And the IP address will now be set.

This is a problem because you can't set the IP address with arp/ping when the Print Server already has an IP address. This can be prevented by configuring the router so that the DHCP request does not get passed through. Or you can reach the Print Server at the address it has got by adding a route entry in your routing table for that address. Get the TCP/IP address from your PC, and issue the route command. If your Print Server has got the IP address 10.0.0.1, and the TCP/IP address of your machine is 172.16.100.120, type the following, `route add 10.0.0.1 172.168.100.120`. Then go to your browser, access the Print Server and change the IP address.

Am I on the same network segment as the Print Server?

You can check it by comparing your own IP address with the one to be assigned to your Print Server. You can use different utilities to see your own IP address.: Win 9x: WINIPCFG Win NT/2000/2003/XP: IPCONFIG (run from a command prompt) Unix : `ping `hostname`` If your subnet mask is 255.255.255.0 and your IP address is 172.16.1.100 then your segment(net id) is 172.16.1, all IP addresses that starts with 172.16.1.x resides on the same segment. Note that the subnet mask must be the same.

I get BAD ARGUMENT!

when I issue the arp command. This means that you did not type the arp command correctly. The format of arp is: "arp -s ", Type arp at the command prompt for a list on how to use the arp command.

NOTE: If you have a DHCP/BOOTP server in your environment we advise you to set the IP address in the DHCP Scope, and add a reservation for the Print Server. When the Print Server is installed on the network, it will get the IP address you reserved for it. See the How to section on how to setup DHCP scopes and reservations

How to Reset the Print Server to factory defaults.

Hold down the test button for about 8 seconds. Power cycle the Print Server to make the reset take effect.

Warning: Resetting the Print Server to factory defaults will delete all settings.

Press the test button, and check on the technical status page to see if the Print Server has been reset. If the settings are not deleted, you did not reset it correctly.

1.3.5.2 Reporting Problems

Please go through the Frequently Asked Questions before reporting a problem. If the FAQ does not solve your problem, see below on how to report the problem.

Please have the following information at hand:

- Printed settings page (press the test button on the print server)
- Description of your environment and operating system (type, version, installed protocols etc.)
- Description of your printing protocol
- Description of your network (routers, bridges etc.)
- A complete description of your problem (printing problem, firmware upgrade etc)

Note: You will be asked for this information when you call support for help.

When you have the required information at hand, contact your local distributor or point of purchase to report the error.

1.3.5.3 Firmware update

How to update the firmware

This describes the different ways in which you can update the firmware.

1. Direct your web browser to the Technical Support page at our website
2. Select the product
3. Download the latest firmware version to your hard disk, following the instructions shown on the screen
Note: When the **File Download** dialog is displayed, select **Save this program to disk**
4. Run the downloaded file to extract the firmware file
5. Download the firmware file to the Print Server using one of the following methods:
 - PrintGuide™
 - FTP

PrintGuide™

This firmware update method preserves the current settings.

1. Start the **PrintGuide™** program.
2. Locate the Print Server on the list of **Detected Devices** and click on it.
3. On the **Print Server** menu, click **Update Firmware**.
4. Click **Files of type**, and select **Base Code (*.b80)**. Double-click the firmware file. A confirmation dialog is displayed.
5. Click **OK** to download the firmware to the Print Server. The firmware is updated. The Print Server restarts automatically. Do not interfere with the Print Server until it has restarted and its status says "Ready".

FTP

This firmware update method preserves the current settings.

1. From the command prompt window, issue the **ftp** command. Type: `ftp <IP address>`
The Print Server prompts you for a username and a password. Both are **adm** by default.
2. Put the Print Server into firmware update mode by downloading the firmware file into the `/codes` directory. Type: `cd /codes put <firmware file>.b80`
The command prompt window displays the text "Restarting ... Login again to update the firmware".
3. Logout of the ftp session. Type: `quit`
4. Start a new ftp session and login. Type: `ftp <IP address>`
The command prompt window displays the text "Logged in for firmware update".
5. Set the binary transfer type and download (**put**) the firmware file. Type: `binary hash put <firmware file>.b80`
The firmware is updated. The Print Server automatically restarts after a successful update and CRC check. Do not interfere with the Print Server until it has restarted.
6. Logout of the ftp session. Type: `Quit`

1.3.5.4 Product and Service Information

Support Information

EasyCom III version 604.190

Contact

MPI Tech
 E-mail: support@mpitech.com
 WWW: <http://www.mpitech.com/support>

1.4 Configuration via Telnet

Note: Requires that the TCP/IP protocol is configured and that an IP Address has been assigned.

1.4.1 Syntax

telnet <IP Address>

1.4.2 A Telnet session

1. From the command prompt issue the **telnet** command. Example: telnet 194.192.134.86
2. The Print Server will prompt for user id and password. The factory default is **adm** for both.
3. Navigate the menus by use of keys and make your modifications as required. The configuration modifications are activated by a Save Configuration and Restart Print Server.

1.4.3 Navigation keys:

Key	Action
A, B, ...	Select menu and field.
X	Return to previous menu or Logout.
Z	Return to previous menu without saving.
ENTER	Select value.
SPACE	Toggle options.

1.4.4 Navigation chart

Depending on the capabilities of your Print Server, you may find that one or more of the entries below are not available, when you login to your Print Server.

- A) **Configure Print Server**
- A) Configure general parameters
- A) Configure Print Server Parameters
- Here you enable/disable the protocols.*
- B) Configure TCP/IP
- C) Configure IPX/SPX
- D) Configure ida802.2
- E) Configure PU/LU
- F) Configure NetBIOS
- G) Configure SNMP agent
- B) Configure sessions
- D) Delete
- E) Edit
- S) Status
- T) Trace
- U) Untrace (delete trace)
- C) **Save Configuration**
- D) Restore Configuration
- E) Restore Factory Defaults
- F) Change Password
- R) **Restart Print Server**
- T) Trace Destination
- A) FTP host name
- B) User name
- C) Password
- D) File name
- S) Start trace
- T) Stop trace
- Trace status (on/off) is shown on menu*
- B) **Status Print Server**
- A) Status LAN Interface

- B) Status TCP/IP
- C) Status IPX/SPX
- D) Status PU/LU Print
- E) Status NetBIOS
- F) Status Printer
- G) Status SNMP Agent
- L) List Last Error Log
- C) **Product information**
- X) **Logout**

1.5 Configuration via ARP / PING

The **arp** command must be set on the same network segment as the MPI Tech device. (If your PC or host has an IP address of 194.192.134.90 and you are using a subnet mask of 255.255.255.0 the MPI Tech device must have an IP address of 194.192.134.x, where x is a number between 1 and 254).

An IP address is a unique address for a host in a TCP/IP network. It is therefore IMPORTANT for you to have a valid IP address at hand, which is not used by anyone else on the network, before issuing this command.

1. Log on as an administrator and issue the **arp** command from the command prompt.

Syntax:

arp -s <IP Address> <MAC Address>

The MAC address can be found on the rear side of the MPI Tech device. If you want to use the IP address: 194.192.134.86 for the MPI Tech device and the MAC address is 00036e00483a. Type:
From DOS Command Prompt:

```
arp -s 194.192.134.86 00-03-6E-00-48-3A
```

From UNIX:

```
arp -s 194.192.134.86 00:03:6E:00:48:3A
```

2. Now you have added an entry in the arp table for the MPI Tech device. Use the **ping** command to give the MPI Tech device it's new IP address. Issue the **ping** command from the command prompt, the format is:

Syntax:

ping <IP Address>

For example if you want to use the IP address: 194.192.134.86 for the Print Server, Type:

```
ping 194.192.134.86
```

1.6 Configuration via a BOOTP server

1.6.1 How BOOTP works

- At power on the MPI Tech device broadcasts its **MAC address**.
- The broadcast is received by the BOOTP Server. The BOOTP server starts to search its database for an entry that matches the MAC address of the MPI Tech device.
- In case of a match the BOOTP Server returns the following to the MPI Tech device:
 - **IP address**
 - **Subnet mask**
 - **Gateway address**

Note: If the BOOTP server and the MPI Tech device are on different LAN environments the involved IP routers must allow the bootp request / reply to pass.

1.6.2 Add an entry to BOOTP server database

The Print Server device must have its own special entry in the BOOTP server's database. The BOOTP server's database is a simple text file (BOOTPTAB) with the format shown below. The location of the BOOTPTAB file is system dependent. Refer to your BOOTPD (BOOTP Daemon) documentation.

```
# BOOTPTAB - Database for BOOTP Server.
# -----
# Legend:
#   -- Devicename (Must be the first field)
#   bf -- Bootfile
#   gw -- Gateways
#   ha -- Hardware Address (MAC address)
#   ht -- Hardware Type (Must precede ha.
#       Can be Ethernet or Token Ring)
#   ip -- IP Address
#   sm -- Subnet Mask
#
# Special Characters:
# '#' Lines beginning with the number sign and
#   empty lines are ignored.
# ':' Colon is used to separate fields.
# '\' Backward slash means line continuation.
# '/' Forward slash indicates directory path.
#
# Syntax:
# <devicename>: \
# sm=<subnet mask>: \
# gw=<gateway>: \
# ht=<hardware type>: \
# bf=<bootfile path>: \
# ha=<hardware (mac) address>: \
# ip=<ip address>:
#
# Example Entry in BOOTPTAB file:
#
idata.tcp.network3.eth: \
```

```
sm=255.255.0.0: \
gw=129.1.71.0: \
ht=ethernet: \
ha=00036E000a82: \
ip=129.1.71.100:
```

1.6.3 Use of boot file

The advanced user may use the boot file (bf) feature to download data from the BOOTP server to the MPI Tech device. Configuration data for the MPI Tech device can be transferred in this way.

Requirements:

- A TFTP Daemon must be installed.
- The BOOTP database entry for the MPI Tech device must include a boot file definition, that is bf=<bootfile path>.
- Data (files) that are to be transferred in this manner must reside on the same disk partition as the BOOTPTAB file.

1.7 Configuration via a DHCP Server

1.7.1 How DHCP works

- At power on the MPI Tech device broadcasts its **MAC address**.
- The broadcast is received by the DHCP Server. The DHCP Server starts to search its database for an available IP address that can be assigned to the MPI Tech device.
- The DHCP server returns the following to the MPI Tech device:
 - **IP Address**
 - **Subnet Mask**

1.7.2 Install a DHCP server in Windows NT 4.0

1. Open the **Control Panel**, double-click the **Network** icon, and click **Services**.
2. Click **Add** and select **Microsoft DHCP server** and then click **OK**.
3. Specify the path to the Windows NT Server installation files and click **OK**. Follow the instructions on the screen.
4. Once the system has rebooted, you will find a new icon called **DHCP Manager** in the **Administrative Tools** group.

1.7.3 Reserve an IP address

1. Start the **DHCP Manager**.
2. On the **Scope** menu, click **Add Reservation**.
3. Type the **IP Address**, **Unique Identifier** (MAC Address), **Client Name** (NetBIOS Name) and a **Client Comment** (optional text that you enter to describe the MPI Tech device).
4. Click **Add** to add the reservation to the DHCP database. Click **Close** when you are finished.

Note: The MPI Tech device must be restarted before it will start to use the new IP address. Use the ping command to verify that the device is using the right IP address.

2. How to do:

2.1. How to configure an IBM RS/6000 / pSeries AIX host environment for printing

This describes how to set up lpd/lpr printing in an IBM RS/6000 / pSeries AIX system.

Note: You need superuser (root) access to your UNIX system for this procedure

2.1.1 Set up the local host file.

If you enter the IP address as the host name when you set up the print queue on your system, you do not need to configure the /etc/hosts files. Configure the /etc/hosts file on each UNIX host that is able to print to the Print Server. Use an editor to edit the host file. Hosts file syntax: IP address hostname/nodename. For example, if your IP address for the Print Server is 172.16.100.10 and the host name is PrintServer1, the settings in your host file must be:

```
172.16.100.10    PrintServer1
```

2.1.2 Set up the local print queue on AIX 4.3 or 5.1.

The IBM RS/6000 AIX uses the **Smit** program to set up the remote printer:

1. Select **Print Spooling**
2. Select **Add a print queue**
3. Select Printer Type **Remote**
4. Select Type of processing **Standard processing**
5. Select a queue name - eg. **printer1**
6. Enter the Destination IP address or host name (Specified in the /etc/hosts file)
7. In the **Name of queue on remote printer** field enter **LPDPRT1**
8. Set the **Remote system type** item to **BSD**
9. Set the **Send Control file first** item to **YES**

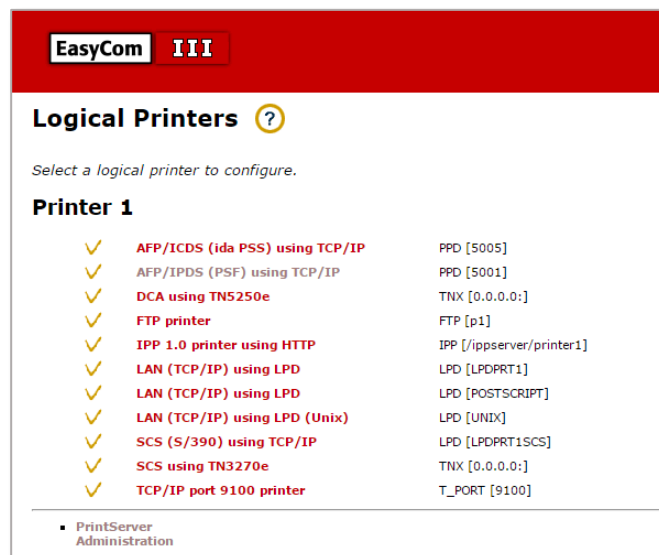
2.2. How to view the status of the Print Server's logical printers

1. Display the Print Server's **Advanced Configuration** web page.
2. Click **Logical Printers**.

The **Logical Printers** web page is displayed.

For each physical printer attached to the Print Server (shown as **Printers 1-3**), there are a number of logical printers listed. For each logical printer, the following data is displayed:

- Whether it is enabled/disabled. This is denoted by a checkmark/no checkmark.
- The current descriptive name.
- Further identifying, technical details.



2.3. How to upload the Print Server's configuration file

The file can be requested by MPI Tech to recreate, investigate, reconfigure or solve a specific customer problem. The file can also be used as a backup of the Print Server's configuration.

- Do the following:
 1. Start PrintGuide.
 2. In Monitor View, locate and highlight the Print Server in the list.
 3. Select **Print Server, Backup Configuration**. When you select **Backup Configuration**, a **Save As** dialog is displayed, prompting for the name and location of the file to which the configuration is to be saved.
 4. Click **Save** to accept the file name and location.
 5. Wait for the upload to complete and click **OK** to complete the procedure.

The uploaded file (*.upd) is named according to the name of the Print Server and is placed in (default location): '[Drive]:\Program Files\MPI Tech\PrintGuide*.upd'

2.4. How to set up the PrintServer (UNIX host) for use with MultiView DeskTop LPR

2.4.1 SCO UNIX OPENSERVR 5

1. Add a local printer
 - Run "scoadmin" on host; then select the following:
 - Printer Manager -----> Add local
 - You will be presented with the following printer configuration menu:
 - Printer name [printer1]
 - Description [printer1 is a printer to be accessed remotely]
 - Model [standard] or [dumb]
 - Device name [enter the port, such as /dev/lp0]
 - (make sure you can redirect data through the port you selected)
 - You may wish to make printer1 the default printer by selecting the default option on this menu.
 - Enable the printer -- tell it to accept requests and start the scheduler. Following are options on the sysadmsh menu:
 - Printer ---> Schedule ---> Enable
 - Printer ---> Schedule ---> Accept
 - Printer ---> Schedule ---> Begin
 - Test printer1 to ensure that it works properly. Type the following at the prompt:
 - lp /etc/motd
 - If printer1 is not the default printer, enter:
 - lp -dprinter1 /etc/motd

2. Installing rlp

- Enter System Maintenance mode and run the following command to install remote line printing:
- `mkdev rlp`
 - You will see the following menu:
 - Remote printing configuration
 - Do you want to install or delete remote printing (i/d/q)?
- Select "i" to install.
- **Do not install remote printing twice. If you wish to run `mkdev rlp` twice, you must first select "d" to delete your previous configuration before reinstalling.**
- If you choose to install rlp, you will see the following messages:
- Installing remote line printing
- Creating directories `/usr/lpd/remote` and `/usr/spool/lpd` and file `/etc/printcap`.
- Saving `lp`, `cancel` and `lpstart` commands to `/usr/lpd/remote`.
- Installing remote `lp`, `cancel` and `lpstat` commands in `/usr/bin`
- Do you want to change the remote printer description file `/etc/printcap` (y/n)?
- Select "y".
- You will see output similar to the following:
- Remote Printing Configuration
- Enter information for remote printers or local printers accepting print jobs.
- Please enter the printer name (q to quit): `printer1`
- Enter `printer1` since `printer1` is the local printer that is configured.
- Is `printer1` a remote printer or local printer (r/l)? l
- Select "l"; `printer1` is a local printer on your UNIX host.
- Please enter the name of the device for `printer1`: `/dev/lp0`
- You must specify the same device name used to set up `printer1`.
- Printer `printer1` users device `/dev/lp0`
- Is this correct(y/n) y
- Putting `printer1` in printer description file and creating spool directory...done.
- You will see the following prompt if the directories that rlp needs to install already exist:
- Remote line printing working directory already exists.
- Do you wish to continue installing the remote line printing system (y/n)?
- Enter "y" to continue the installation.
- Next you will see:
- Setting up rc scripts.
- Finally, you are asked to start `lpd`.
- Do you want to start remote daemon now (y/n)?
- Select "y".

3. Making sure lpd is running

- Boot the system and enter multi user mode. To check that there is an `lpd` process running, type:
- `ps -ef | grep lpd`
- To start `lpd`, type:
- `lpd start`
- To stop `lpd`, type:
- `lpd stop`

4. Check /etc/printcap

- You should check /etc/printcap to make sure it is properly created. /etc/printcap on the UNIX host will look similar to the following:
- printer1:\ :lp=/dev/lp0:sd=/usr/spool/lpd/printer1:
- where:
 - Printer1 is the name to be used on the print server when referring to this printer.
 - lp= is defined on the second field. It specifies the device name for the local printer.
 - sd= is the third field. It is the name of the spooling directory on the print server.

5. Check /etc/hosts

Make sure the hostname and the IP address of the client is specified correctly in /etc/hosts file. This should be the names used for the PC which will print to this host. (PC host names are defined in the TCP/IP stack host file on the PC)

6. Check /usr/spool/lp/admins/lp/printers/printer1/configuration

Make sure the configuration file in host looks similar to the following:

- Banner:on:Always
- Device:/dev/lp0
- interface:/usr/spool/lp/model/standard
- printer type: unknown

7. Grant the client (PC) access to PrintServer (UNIX host)

List all of the clients that are to have access to the print server in either the /etc/hosts.equiv or the /etc/hosts.lpd as shown below:

```
vi /etc/hosts.lpd
host1
```

For security reasons, we recommend adding the client in /etc/hosts.lpd. This grants only remote printer access.

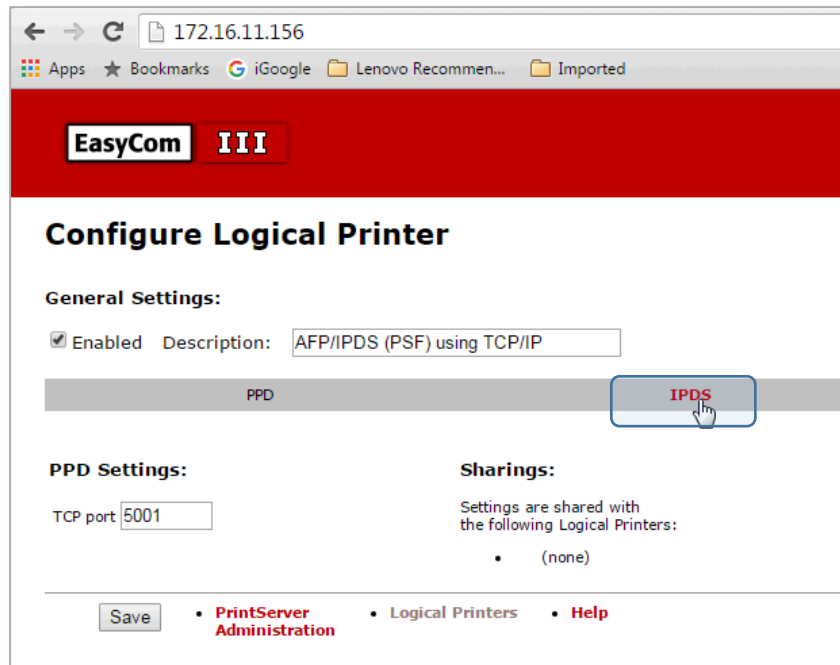
8. Adding additional remote access to local printers on the UNIX host

Once rlp has been set up use the rlpconf program to add additional printer support. First follow the steps as described in (A) to set up a new printer spooler queue.

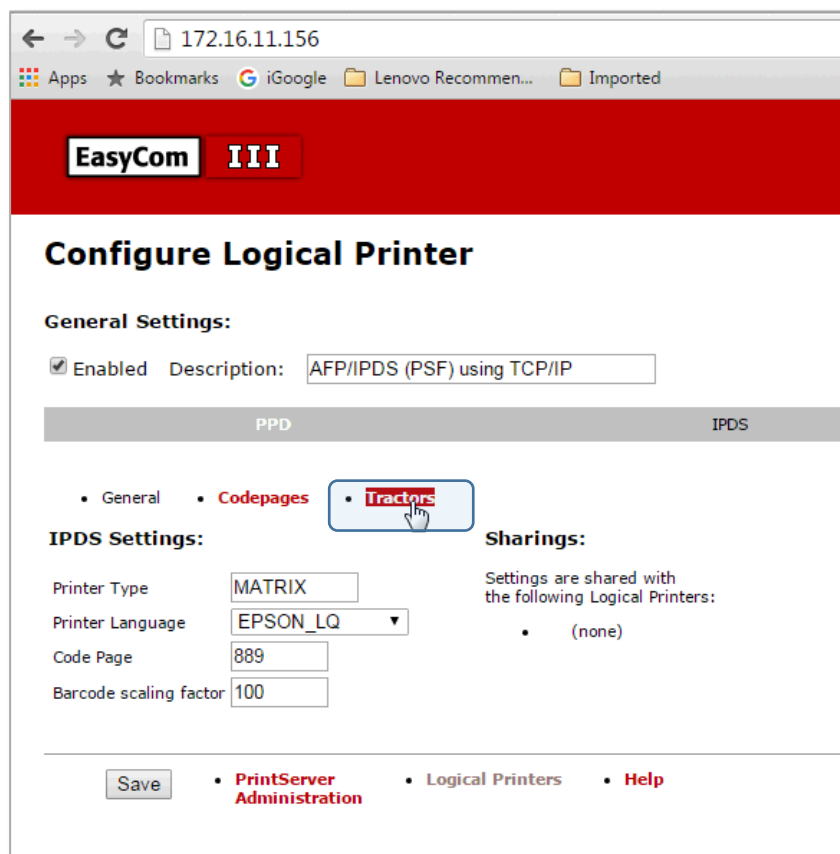
- Run the rlpconf program by entering:
- rlpconf
- You will see output similar to the following:
- Remote Printing Configuration
- Enter information for remote printers or local printers accepting print jobs.
- Please enter the printer name (q to quit): printer3
- Enter the name of the local printer that was configured in step 1.
- Is printer3 a remote printer or local printer (r/l)? l
- Select "l"; printer3 is a local printer on your UNIX host.
- Please enter the name of the device for printer3:/dev/lp1
- You must specify the same device name used to set up printer3.
- Printer printer3 users device /dev/lp1
- Is this correct(y/n) y
- Putting printer1 in printer description file and
- creating spool directory...done.
- Repeat steps 4 and 6 for the new printer.

2.5. How can I define a paper source selection und IPDS Interface

1. Open the EasyCom device in a Web-Browser:
 Select "Advanced Configuration"
 Select "Logical Printers"
 Select "AFP/IPDS (PSF) using TCP/IP"
 Select "IPDS"



2. Then select "Tractors"



3. In the Tractor selection strings you can then insert the requested strings. But they have to comply with the syntax. The syntax is to either represent the string as `0x1B0x5B0x370x73` or `0x1B[7s`. So either write the full hex string or write the first part of the hex string followed by a `[` followed by the ESC sequence. In the below I have shown how Tractor 1 string can be written using the full string, and in Tractor 2 string is shown as the shortest possible string.

Tractor	Tractor selection string	Paper size
Tractor 1	0x1B0x5B0x370x73	160x12
Tractor 2	0x1B0x5B0x360x73	160x12

Add paper size

Save • PrintServer Administration • Logical Printers • Help

Tractor 1 (Tractor lower) = ESC [7s = 0x1B0x5B0x370x73

- 0x1B = ESC
- 0x5B = [
- 0x37 = 7
- 0x73 = s

Tractor 2 (Tractor upper) = ESC [6s = 0x1B0x5B0x360x73

- 0x1B = ESC
- 0x5B = [
- 0x36 = 6
- 0x73 = s