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Step-by-Step IPP based Print Server using CUPS

This tutorial describes how to install a Linux print server with CUPS. It also covers the installation and configuration of printer drivers on the print server as well as the printer setup on a Windows 2000 client.

Contents:

IPP Server Setup
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1. IPP Server Setup

Step #1 - Installing CUPS Service

su root
yum install cups*

Step #2 - Configuring CUPS

vi /etc/cups/cupsd.conf

The default CUPS configuration limits administration to the local machine. To open up access, edit the /etc/cups/cupsd.conf and comment out the lines reading:

The Below lines restricts web administration access to localhost

Comment lines 842, 843, 844 so it should look like this

Order deny,allow Deny from all

Allow from 127.0.0.1

To disable password authentication you need to edit the /etc/cups/cupsd.conf file and comment out the lines reading:

The Below lines restricts the printer access to system users

Comment lines 838, 839 so the user can print without authentication

AuthType Basic AuthClass System

Step #3 - Restart the CUPS server

service cups restart

Step #4 - Run the steps described in "IPP_PrintDrivers_Setup" document

Step #5 - Restart the CUPS Service

service cups restart

Step #6 - If required the CUPS can be managed with

http://localhost:631 - on local system

or

http://192.168.6.210:631 - on remote system (Replace the IP)

Note: Here IP: 192.168.6.210 is for the example use your own

Printer on localhost - CUPS v1.1.22rc1 - Marilla Firefox					
<u>F</u> ile <u>E</u> dit <u>V</u> iew <u>G</u> o <u>B</u> ookmarks <u>T</u> ools <u>H</u> elp					
CentOS Cupport					
ESP Administration Classes Help Jobs Printers Software					
Printer					
Default Destination: hplj1020					
Intil 1020 HP Laser let 1020 Foomatic/foo2zis (recommended)					
Use system-config-printer to edit this!					
Location: HP LaserJet 1020 PostScript Printer					
Printer State: idle, accepting jobs.					
Device URI: usb:/dev/usb/lp0					
Print Test Page Stop Printer Reject Jobs Modify Printer Configure Printer Delete Printer Set As Default					
Add Printer					
Copyright 1993-2004 by Easy Software Products, All Rights Reserved. The Common UNIX Printing System, CUPS, and the CUPS logo are the trademark					
property of Easy Software Products. All other trademarks are the property of their respective owners.					
Done					

Step #6 - Run the steps described in @IPP_Client_Setup• document

Step #7 - Trouble shooting CUPS

If you find the error message in the log file /var/log/cups/error_log:

print_job: Unsupported format 'application/octet-stream'!
Hint: Do you have the raw file printing rules enabled?

Soluation: uncomment the line in the /etc/cups/mime.types file:

application/octet-stream

and in the /etc/cups/mime.convs file:

application/octet-stream application/vnd.cups-raw

If the CUPS is installed with public IP, port 631 should be enabled on proxy/squid/router level

If the CUPS is installed with a private IP and wants to print from anywhere, we need to configure port forwarding at router end and router should configured with a public ip so that the print service can be used with http://publicIP:631/printers/printername and router will forward packets to localip:631.

2. Installation/Configuration of printer drivers

Print Driver Installation for PostScript Printer on linux.

Printer Model: HP LaserJet 1020 Operating System: CentOS 4.4

Step #1

cd /tmp

Step #2 - Download print driver for HPLJ1020

wget -0 foo2zjs.tar.gz http://foo2zjs.rkkda.com/foo2zjs.tar.gz

Please go through the reference: http://foo2zjs.rkkda.com/ for more information on different type of printers.

Step #3 - De-compress the file

tar zxf foo2zjs.tar.gz

Step #4 - Compile it

cd foo2zjs
make

Step #6 - Get the driver info for HP LaserJet 1020

./getweb 1020

Step #7 - **Installation of driver**

make install

Step #8 - Enable it for USB hot plugging feature

make install-hotplug

Step #9 - Configure HPLJ1020 drivers to cups

make cups

Step #10 - Configuration of printer using Command Line Interface

lpadmin -p hplj1020 -E -v /dev/usb/lp0 -m /backup/downloads/foo2zjs/PPD/HP-LaserJet_1020.ppd
- Set it as default (if require)
/usr/sbin/lpadmin -d hplj1020
- Start printer services
/usr/bin/enable hplj1020
- Accept printing
/usr/sbin/accept hplj1020

Step #10 - Configuration of printer using GUI Interface (Preffered)

printconf-gui

- The above command displays the GUI Interface.

Or we can choose it from

(GNOME)-> Applications -> System Settings -> Printing

e 1	Action	∐est	<u>H</u> elp		
	실 New	Edit	Delet	e Defau	lt Apply
Qu	eue na	me 😽	Shared	Default	Description

- Click Button @New • .



-> Click Button *@Forward•*.

Please name t	enter a na hat begins	me for this queue. Choose a short with a letter and contains no spaces.
Name:	hplj1020	
About If you I to help	ike, you ca you identif	n enter a description of the printer fy it more easily.
Short o	lescription:	HP Laser Jet 1020 PostScript Printer

- Name = *hplj1020* (choose your own)
- Short description = HP LaserJet 1020 PostScript Printer(choose your own)

	Add a new print queu	e	
Queue type			
Select a queue type:	Locally-connected	¥	
/dev/lp0			
/dev/usb/lp0 Hewl	ett-Packard HP LaserJe	et 1020	
<i>8</i> <u>R</u> escan devices	<u>Custom device</u>		

Select the printer.

Note: If the printer is just connected, use button *@Rescandevices* • to list the printer.



Select the Manufacturer and Model of the printer.



Click the Button *œYes* • (for test page).

~	Pri	inter co	onfigurat	ion - blr0	01.stivant	.com	
1	<u>A</u> ction	<u>T</u> est	<u>H</u> elp				
1111	🔄 New	<u>Б</u> Edit	Delete	e Defau	lt Apply		
Q	ueue na	ime 🛩	Shared	Default	Descriptio	n	
	hplj102	0		V	HP Laser	et 1020	PostScrip
•				///]	Þ
			<u> Malan</u> a	Info	ormation		<u> </u>
		<mark>e</mark>	Sent to 'h;	CUPS te olj1020' d	est page queue. Doe X <u>N</u>o	es it look	okay? <u>Y</u> es

If the test print is ok Click button @Yes.

3. IPP Client Setup

Client OS: Windows XP/2000

Start ->Settings -> Printers and Faxes



Click on *œAdd* a printer.

Add Printer Wizard



Welcome to the Add Printer Wizard

This wizard helps you install a printer or make printer connections.



If you have a Plug and Play printer that connects through a USB port (or any other hot pluggable port, such as IEEE 1394, infrared, and so on), you do not need to use this wizard. Click Cancel to close the wizard, and then plug the printer's cable into your computer or point the printer toward your computer's infrared port, and turn the printer on. Windows will automatically install the printer for you.

To continue, click Next.



Click on@Next.



Selectoption @A network printer, or a printer attached to another computer.

Click on *œNext*.

Add Printer Wizard
Specify a Printer If you don't know the name or address of the printer, you can search for a printer that meets your needs.
What printer do you want to connect to?
Strowse for a printer
 Connect to this printer (or to browse for a printer, select this option and click Next): Name: Example: \\server\printer Connect to a printer on the Internet or on a home or office network: URL: http://192.168.6.210:631/printers/hplj1 Example: http://server/printers/myprinter/.printer
< <u>B</u> ack <u>N</u> ext > Cancel

Select third option @Connect to a printer on the Internet or on a home or officenetwork:• URL: http://192.168.6.210:631/printers/hplj1020 Note: Specify the URL provided by the administrator.

Add Printer Wizard



Select the manufacturer and model of your printer. If your printer came with an installation disk, click Have Disk. If your printer is not listed, consult your printer documentation for a compatible printer.

Manufacturer	•	Printers	
Generic Gestetner HP IBM infotec Iwatsu		HP ThinkJet (2225 C-D) HP LaserJet 1020 HP LaserJet 1022 HP LaserJet 1022n HP LaserJet 1022n HP LaserJet 1022nw	•
This driver is digit	ally signed r signing i	l. <u>s important</u>	<u>H</u> ave Disk
		0	K Cancel

Choose the correct Driver for the printer

Forexample: HP LaserJet 1020 Manufacturer: HP Printer Model: HP LaserJet 1020

Note: If printer model is not found, install the printer drivers first then start from the beginning.

Click on $@Ok \bullet$.

? X

Add Printer Wizard	
Default Printer Your computer will always send documents to the default printer unless you specify otherwise.	Ø
Do you want to use this printer as the default printer?	
⊙ <u>Y</u> es	
< <u>B</u> ack <u>N</u> ext > Ca	ncel

Select *@Yes*• (If you want to run this printer as default).

Click on *œNext*.

Compl Wizard	eting the Add Printer d
You have s You specific	uccessfully completed the Add Printer Wizard. ed the following printer settings:
Name: Default: Location:	hplj1020 on http://192.168.6.210:631 No
Comment.	
To close thi	is wizard, click Finish.
	< <u>B</u> ack Finish Cancel

Click on*œFinish*• to complete the task.

So, you can print your hard copies to the printer which is connected to server somewhere in the world.

http://www.howtoforge.com/

- Apreciate your comments.