

## Step-by-Step IPP based Print Server using CUPS

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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:

1. IPP Server Setup
2. Installation/Configuration of printer drivers
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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 - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://localhost:631/printers

CentOS Support

ESP Administration Classes Help Jobs Printers Software

## Printer

Default Destination: [hplj1020](#)

**hplj1020** HP LaserJet 1020 Foomatic/foo2zjs (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

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Done

### Step #6 - Run the steps described in æIPP\_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?
```

Solution: 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 be 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 -O 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 xzf 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
```

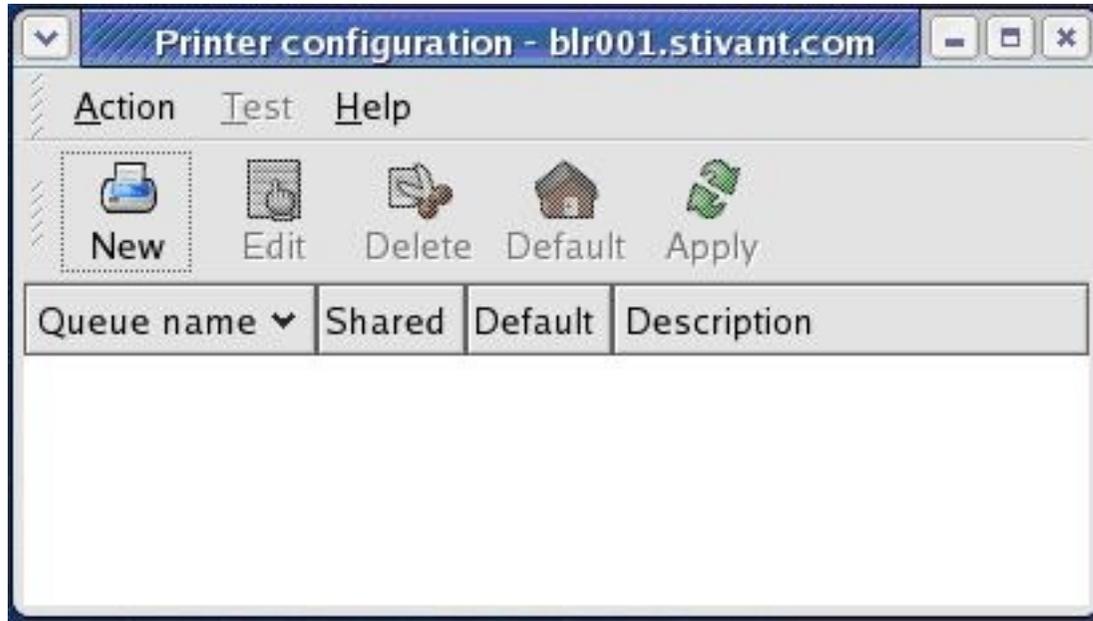
## Step #10 - Configuration of printer using GUI Interface (Preferred)

```
# printconf-gui
```

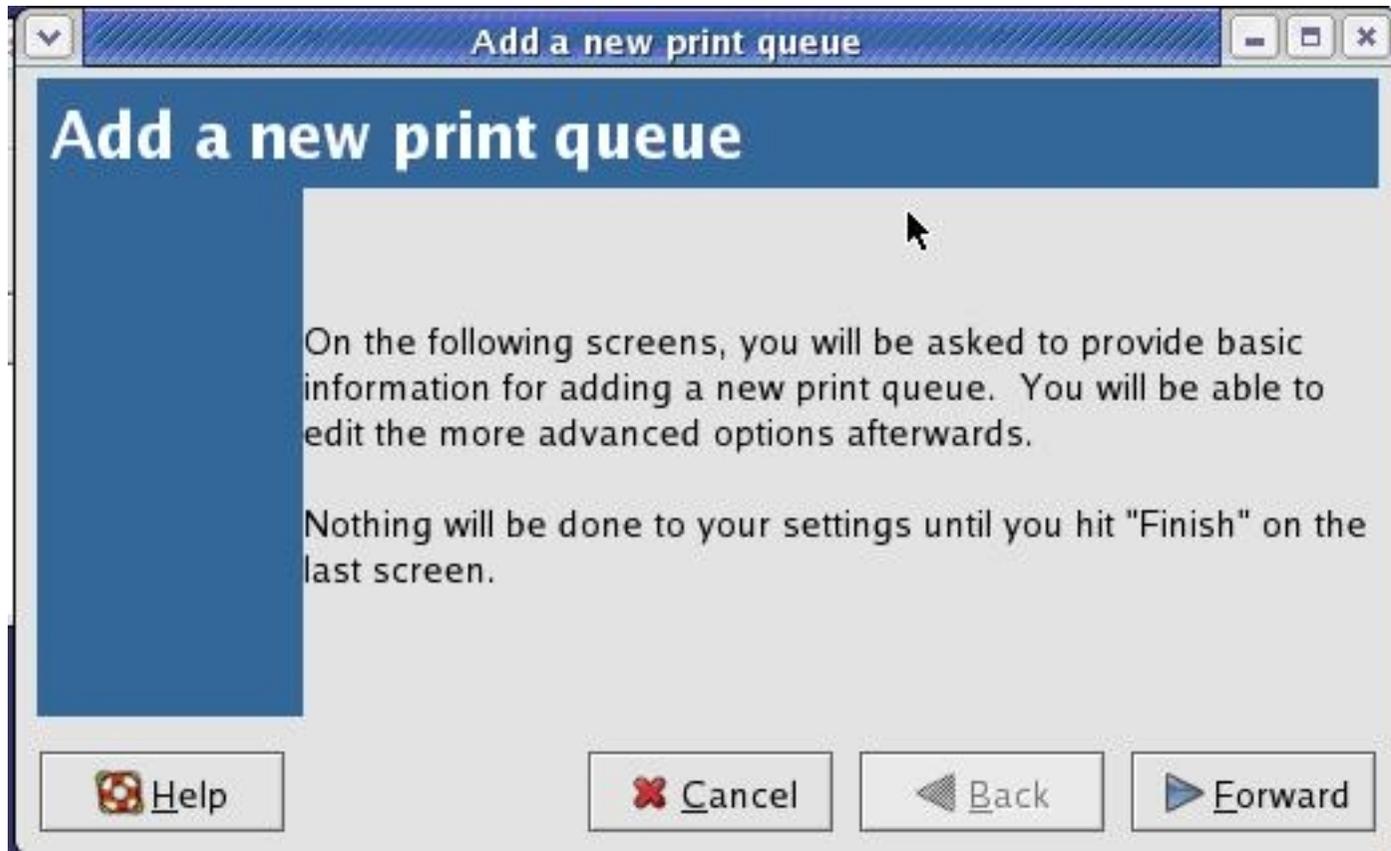
- The above command displays the GUI Interface.

Or we can choose it from

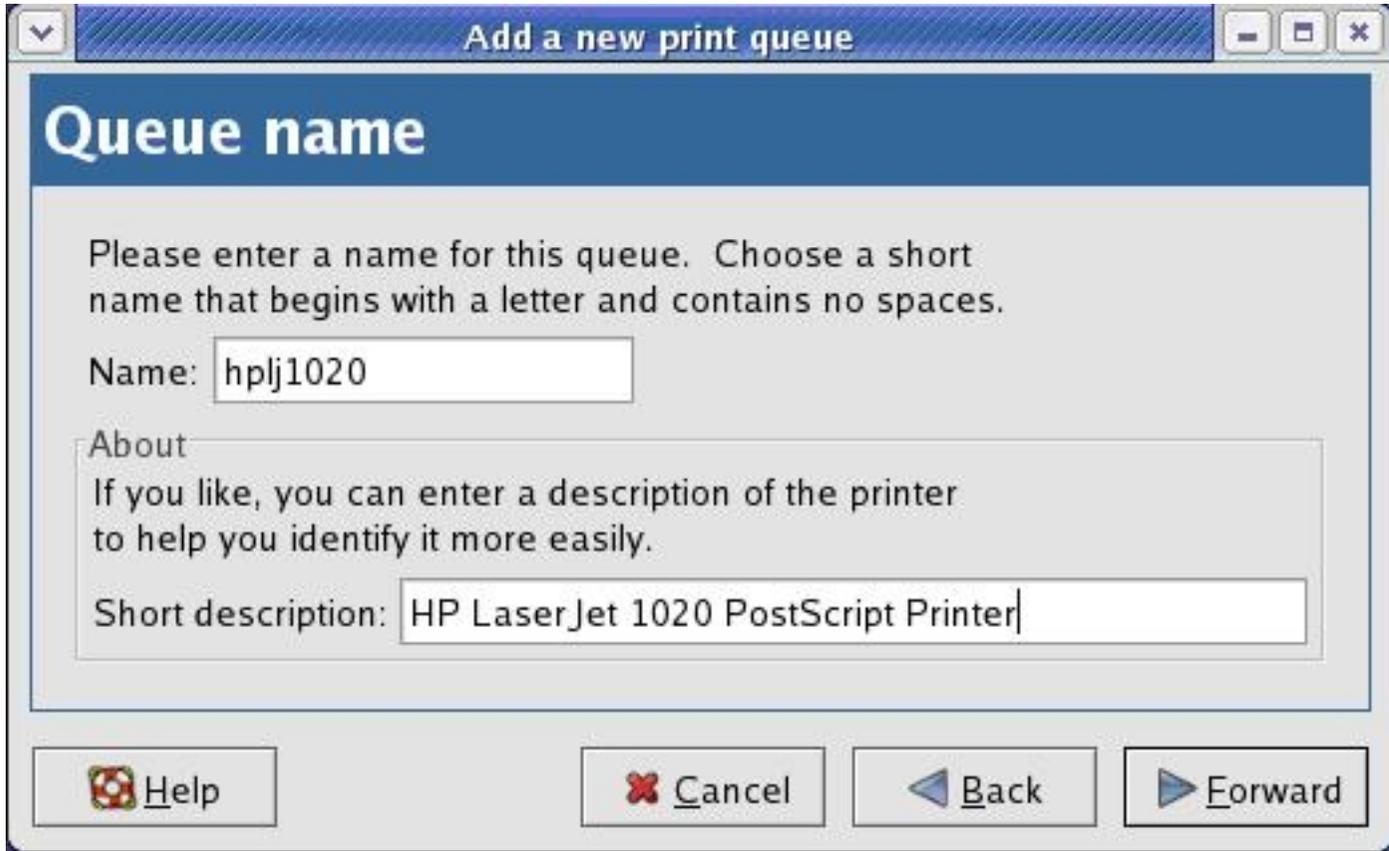
(GNOME)-> Applications -> System Settings -> Printing



- Click Button *New* .



-> Click Button *aForward* .



**Add a new print queue**

## Queue name

Please enter a name for this queue. Choose a short name that begins with a letter and contains no spaces.

Name:

About

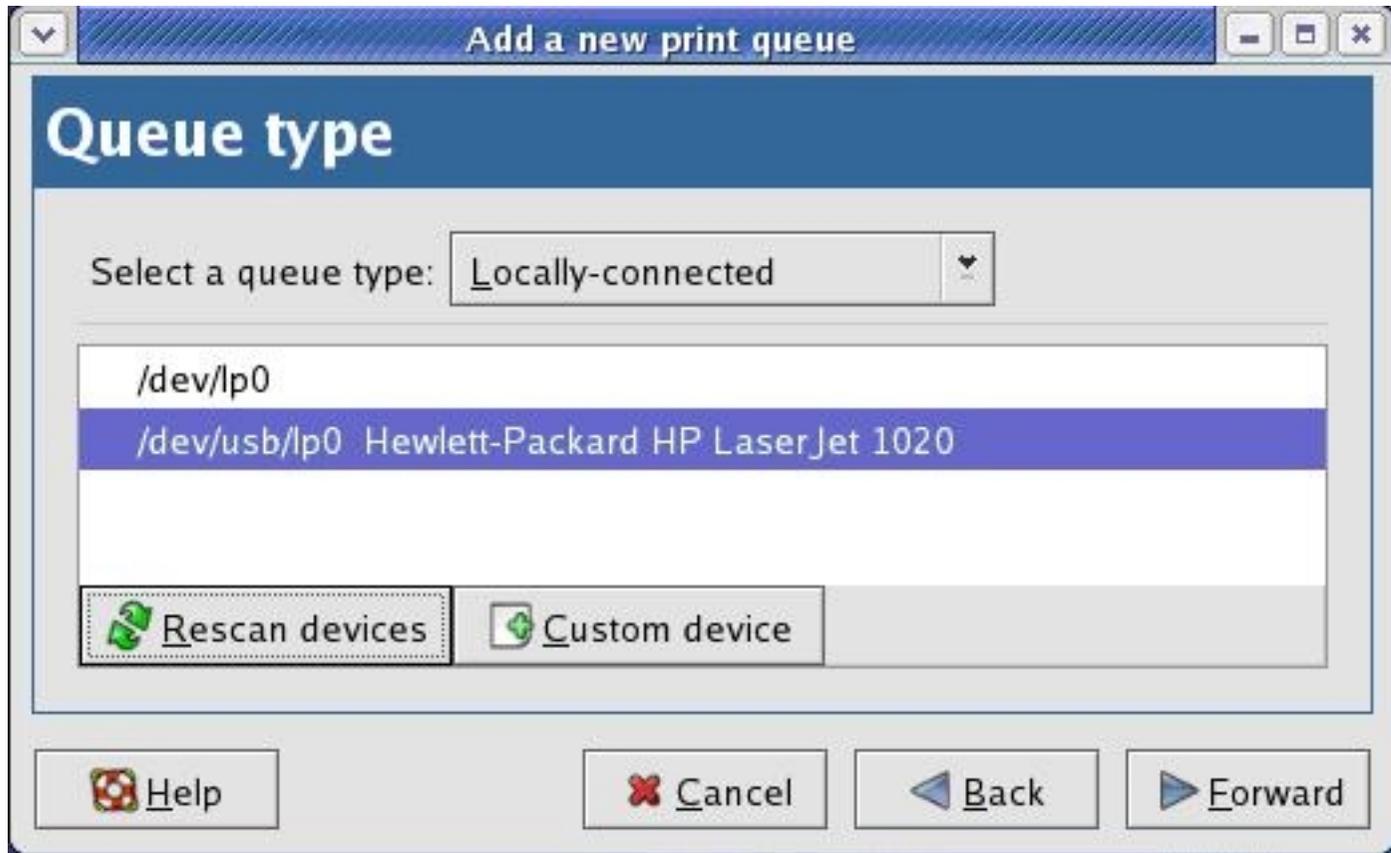
If you like, you can enter a description of the printer to help you identify it more easily.

Short description:

 **Help**       **Cancel**       **Back**       **Forward**

- Name = *hplj1020* (choose your own)

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

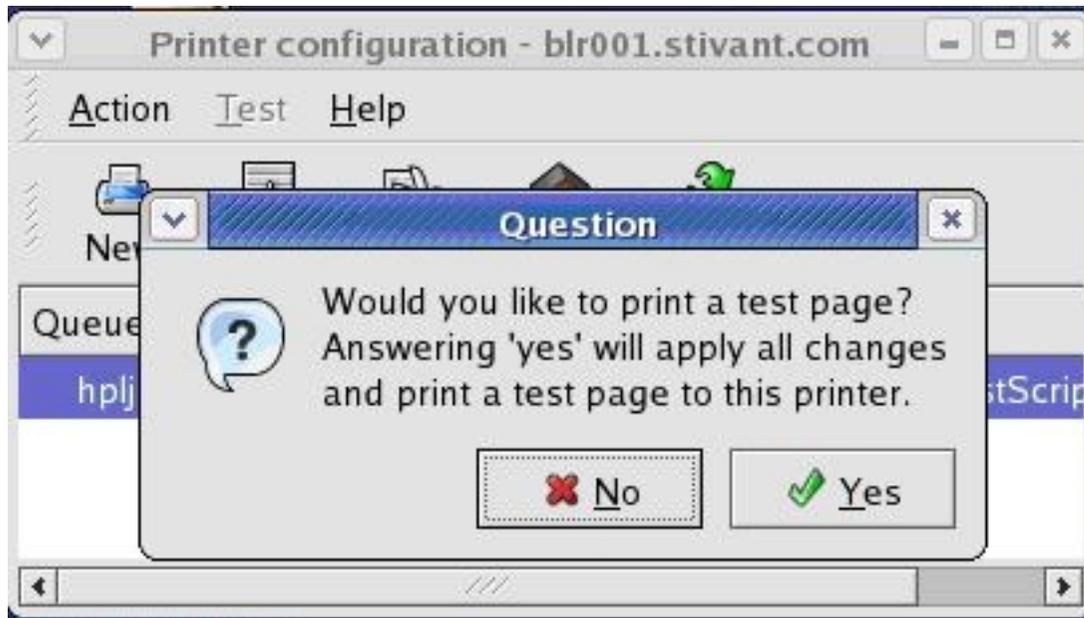


Select the printer.

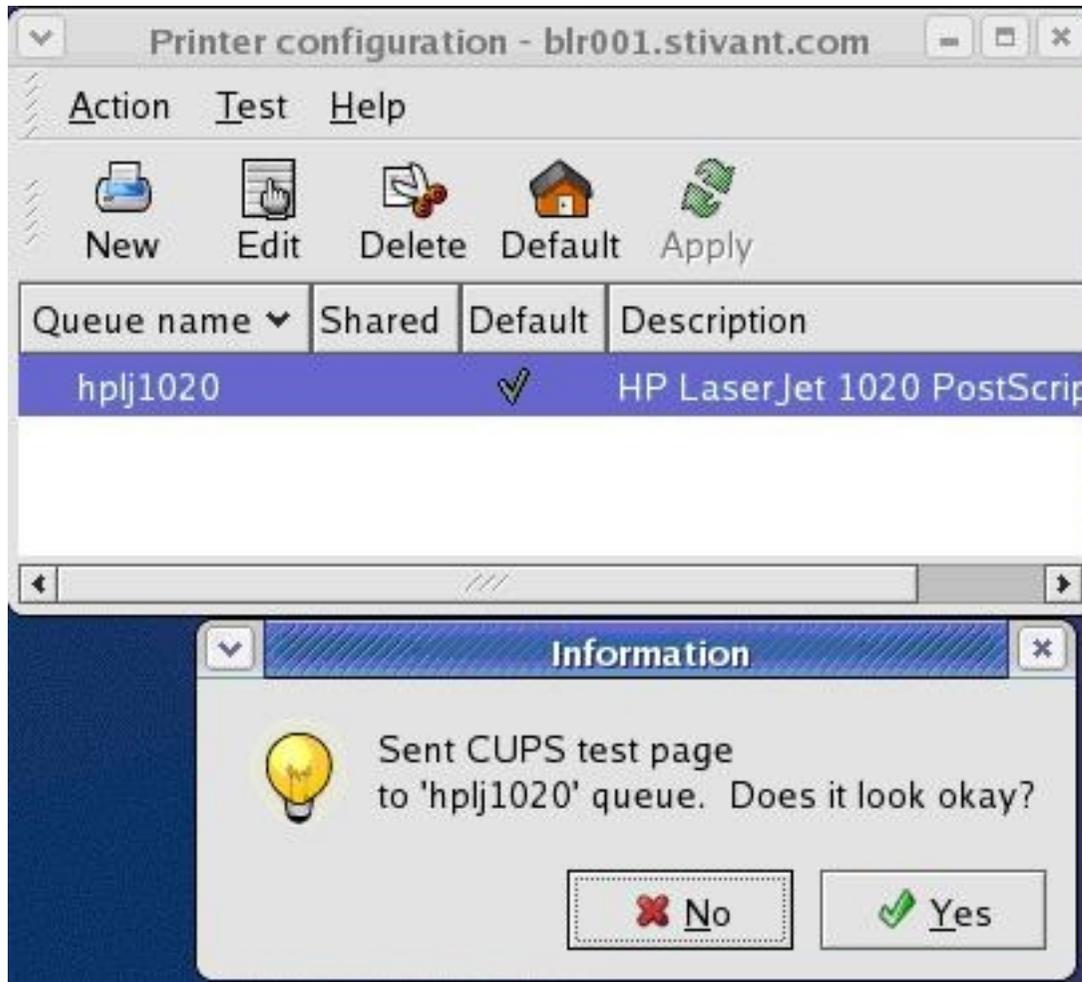
Note: If the printer is just connected, use button *Rescan devices* to list the printer.



Select the Manufacturer and Model of the printer.



Click the Button *Yes* (for test page).



If the test print is ok Click button *Yes*.

### 3. IPP Client Setup

Client OS: Windows XP/2000

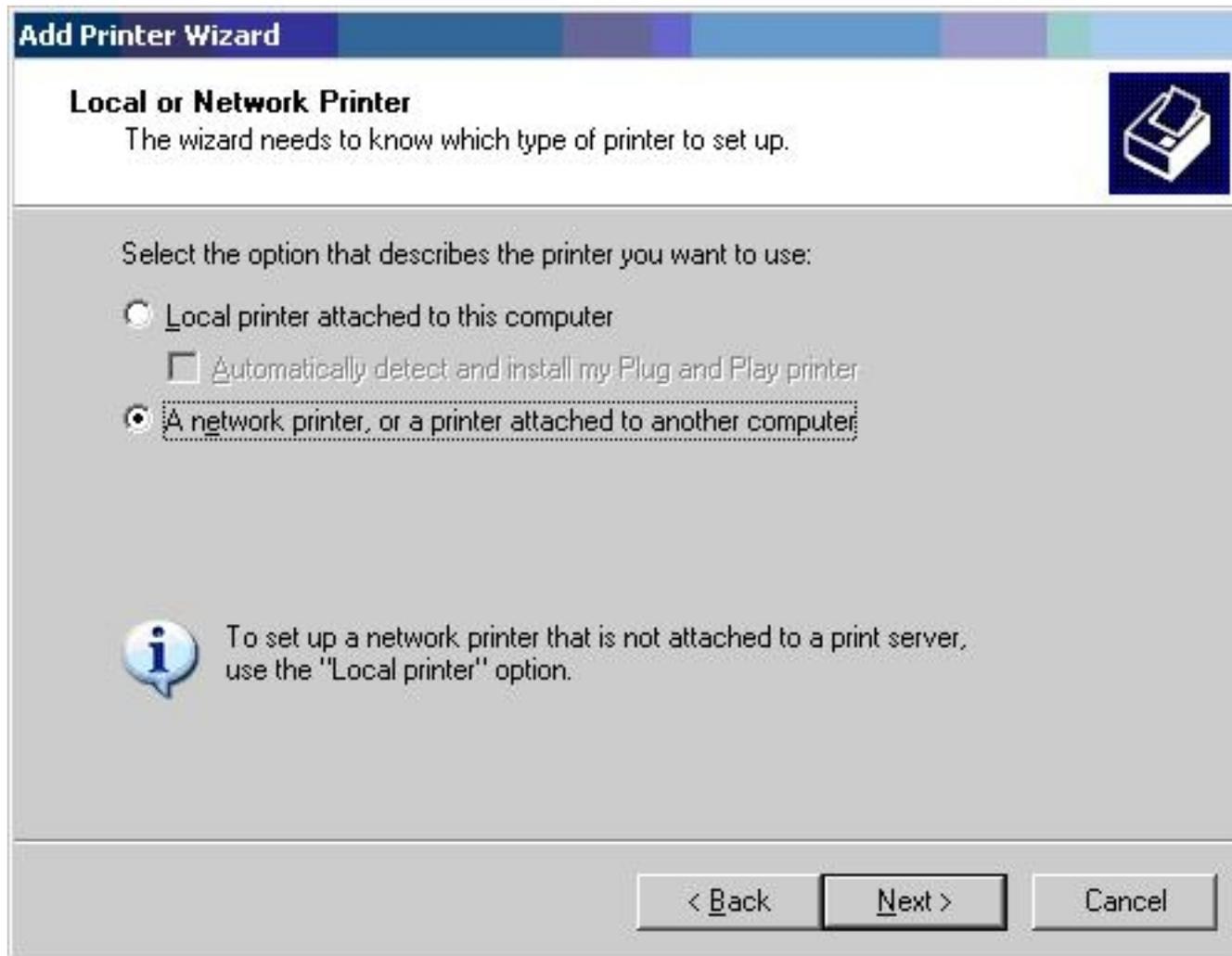
Start ->Settings -> Printers and Faxes



Click on *Add a printer*.

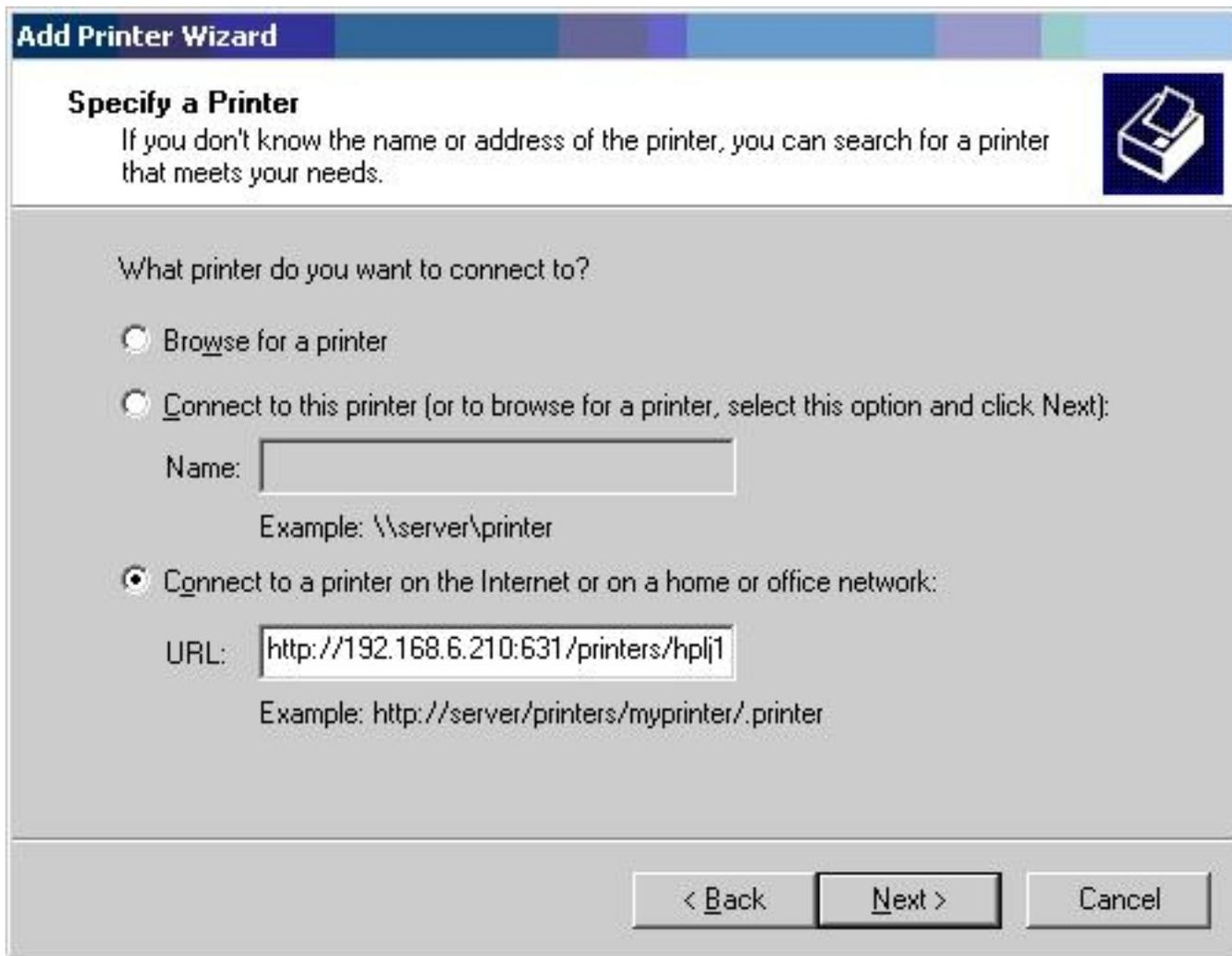


Click on **Next**.



Select option *"A network printer, or a printer attached to another computer"*.

Click on *Next*.



**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?

Browse 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:

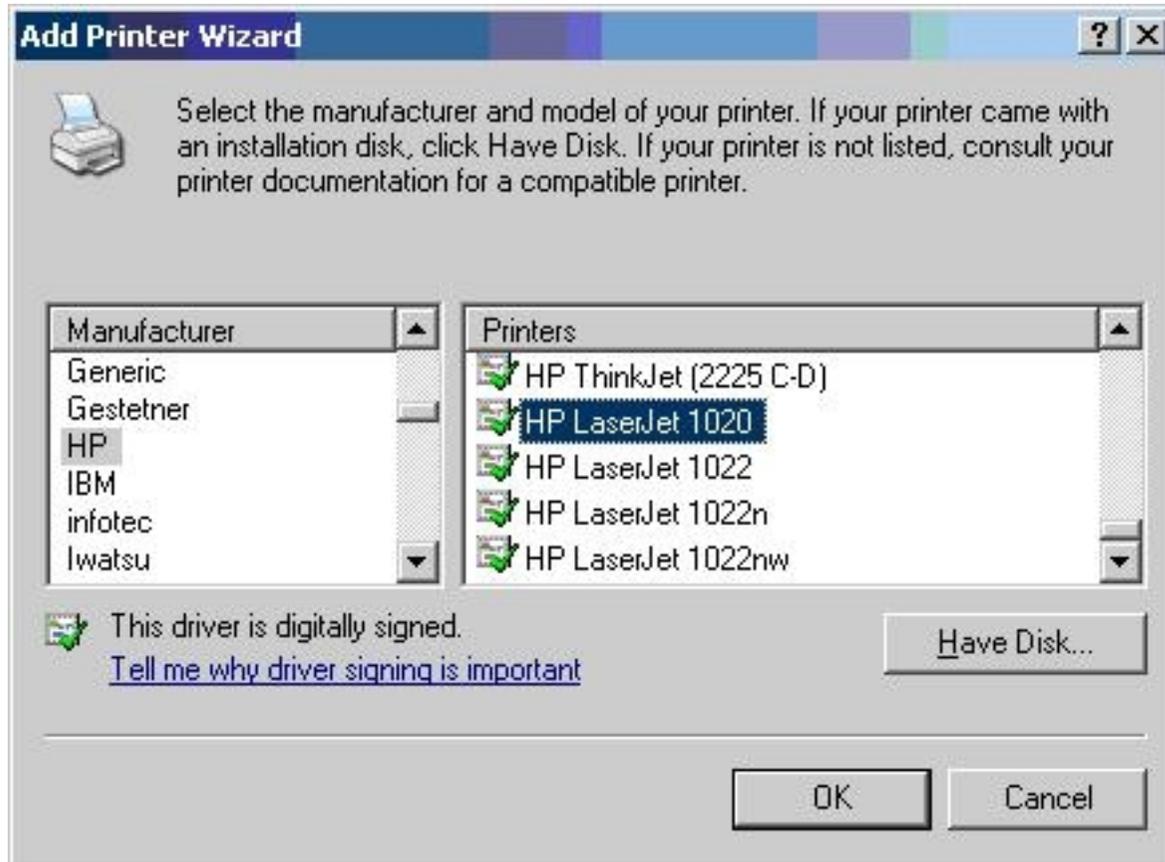
Example: http://server/printers/myprinter/.printer

< Back   Next >   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.

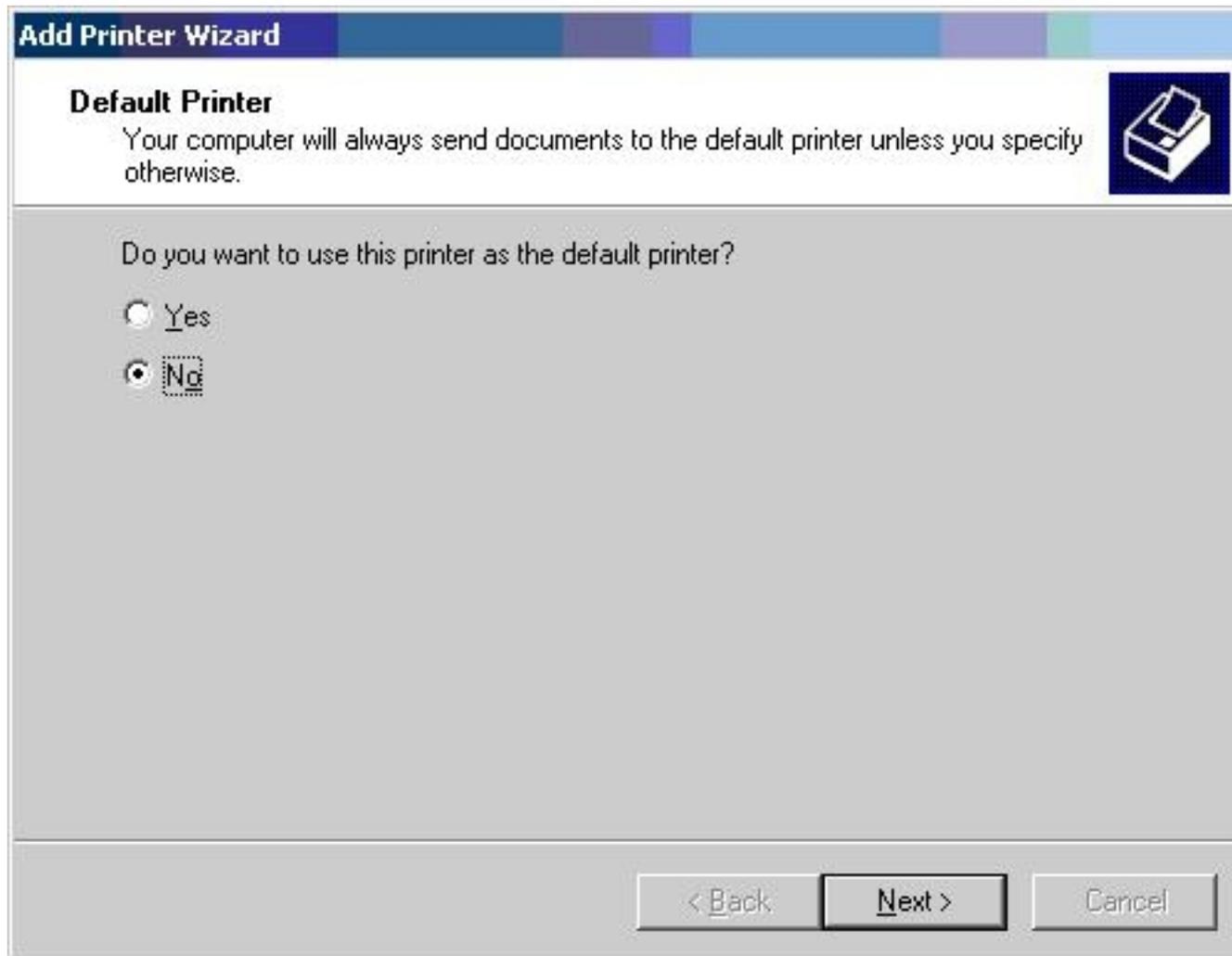


Choose the correct Driver for the printer

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*.



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

Click on *Next*.



Click on *Finish* to complete the task.

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

**- Appreciate your comments.**