Printing via Wifi at home on an old non-wifi Printer

Imagine that you have an old non-Wifi (and non Etherned capable) printer, and you want to print to that printer via Wifi. You can do so, with GNU/Linux, if you have a wifi network (ADSL with Wifi) at home and several computers using the wifi network from different places at home.

1.1. Computer1 as Printing Server

You need to attach the printer by cable (LPT1, serial) or USB, etc, to one computer, that will act as printing server. In our case, Coprinus laptop with Ubuntu 14.04 GNU/Linux as Operating System.

You have to do two things to set up the system the first time:

1. Select the printer as shared:

"Admin > System > Printers"

Click with the right-click button on the printer icon, and select "Shared"



2. Indicate that the printer shows as shared when someone looks for a printer connected to this computer:

"Admin > System > Printers", then select int he window top menu "Server > Configuration":



And toggle the checkbox saying "Publish the shared printers connected to this system"

😣 Preferències del servidor
Configuració bàsica del servidor
Problemes?
Publica les impressores compartides connectades a aquest sistema
Permet la impressió des d'Internet
🗌 Permet l'administració remota
Permet que els usuaris cancel·lin qualsevol treball (no només la seva)
🗌 Desa la informació de depuració per a la resolució de problemes
▶ Configuració avançada del servidor
Cancel·la D'acord
Click to expand

Last, you need to know which local IP is using this computer in your local wifi network at home. In order to know that number, open a terminal window and type:



This will tell us some long descritpion of technical details of the internet connection, and from there we will have to find out the IP given to our computer from the Wifi ADSL Router. In our case: **192.168.1.129**, and we will use this number in the configuration at the client computers that are willing to print to this printer connected to this computer.

Example from our case as user xavi on computer Coprinus:

В

```
xavi@coprinus:~$ ifconfig
eth0 Link encap:Ethernet direcciónHW 08:2e:5f:7d:51:67
ACTIVO DIFUSIÓN MULTICAST MTU:1500 Métrica:1
Paquetes RX:0 errores:0 perdidos:0 overruns:0 frame:0
Paquetes TX:0 errores:0 perdidos:0 overruns:0 carrier:0
```

	colisiones:0 long.colaTX:1000
	Bytes RX:0 (0.0 B) TX bytes:0 (0.0 B)
lo	Link encap:Bucle local
	Direc. inet:127.0.0.1 Másc:255.0.0.0
	Dirección inet6: ::1/128 Alcance:Anfitrión
	ACTIVO BUCLE FUNCIONANDO MTU:65536 Métrica:1
	<pre>Paquetes RX:3682672 errores:0 perdidos:0 overruns:0 frame:0</pre>
	<pre>Paquetes TX:3682672 errores:0 perdidos:0 overruns:0 carrier:0</pre>
	colisiones:0 long.colaTX:0
	Bytes RX:427010375 (427.0 MB) TX bytes:427010375 (427.0 MB)
wlan0	Link encap:Ethernet direcciónHW ac:72:89:f7:4e:0a
	Direc. inet:192.168.1.129 Difus.:192.168.1.255 Másc:255.255.255.0
	Dirección inet6: fe80::ae72:89ff:fef7:4e0a/64 Alcance:Enlace
	ACTIVO DIFUSIÓN FUNCIONANDO MULTICAST MTU:1500 Métrica:1
	Paquetes RX:760575 errores:0 perdidos:1 overruns:0 frame:0
	Paquetes TX:918504 errores:0 perdidos:0 overruns:0 carrier:0
	colisiones:0 long colaTX:1000
	B_{V} to B_{V} : 320035760 (320 0 MR) TX by to 1105070012 (1 1 GR)
	DAGE2 10220322103 (25023 LUD) IV DAGE221102010315 (111 QD)
vovieco	pripue, ¢
Xav1@C0	pr mus :~\$

You can check that everything is right by means of visiting the Common Unified Printing System (CUPS) interface in your computer acting as printing server, through the web interface that it provides at port 631. This will also show the exact name that the printing queue has in our case. Therefore, let's open an internet browser in this computer and type: http://localhost:631/printers/

There go to the tab "Printers":

9	Inici Admin	istració Classes	Ajuda en línia	a Tasques Impressores	Q Search Help
	Cere	ca a les impressores: 🔍		Cerca Neteja]
		Es m	iostren 3 de 3 ir	npressores.	
	▼ Nom ▼	Descripció	Ubicació	Marca i model	Estat
	Dell-Dell-2350d- Laser-Printer	Dell Dell 2350d Laser Printer Duplex	coprinus- lpt1-usb	Dell 2350d Laser Printer	Prepara
	Generic-CUPS-PDF- Printer	Generic CUPS-PDF Printer		Generic CUPS-PDF Printer	Prepara
	MC2200 series	Canon MG3200 series	coprinus	Canon MG3200 series -	Prepara

Click to expand

Select the one you have set up in the previous steps "Dell-Dell-2350d-Laser-Printer", where you can see that it says that it's shared ("Compartida"), etc:

	Administració	Classes	Ajuda en línia	Tasques	Impressores	Q Search Help
Dell-Dell	-2350d-Lase	er-Printer	(Inactiva, Ac	cepta tase	ques, Comp	oartida,
Servidor	per defecte	e)	. ,	•	• • •	
Manteniment		Administració				
mancalment	Descripció: Del	I Dell 2350d Las	er Printer Duplex	1		
	Ubicació: cop	rinus-lpt1-usb				
	Controlador: Del	l 2350d Laser Pr	rinter (color, impress	ió a doble cara)	
	Connexió: usb	://Dell/2350d%2	0Laser%20Printer			
Configuració	per defecte: Full	s de tasques=no	one, none safata=iso	_a4_210x297r	nm cares=two-sid	ed-long-edge
Configuració	per defecte: Full	s de tasques=no	one, none safata=iso	o_a4_210x297r	nm cares=two-sid	ed-long-edge
Configuració Tasques	per defecte: Full	s de tasques=no	one, none safata=iso	o_a4_210x297r	nm cares=two-sid	ed-long-edge
Configuració Tasques Cere	per defecte: Full	s de tasques=no 2350d-Laser-Pi	none safata=iso rinter: ♀	o_a4_210x297r	nm cares=two-sid	ed-long-edge
Configuració Tasques Cere	per defecte: Full	is de tasques=no 2350d-Laser-Pr	none safata=iso rinter: <mark>Q</mark>	o_a4_210x297r	nm cares=two-sid	ed-long-edge
Configuració Tasques Cere Mostra les tasq	per defecte: Full ca a les Dell-Dell- ues completades	is de tasques=no 2350d-Laser-Pr Aostra totes les tasc	rinter: Q	o_a4_210x297r	nm cares=two-sid	ed-long-edge

Click to expand

In order to allow connections from other computers in the same wifi network, you need to add the ip address to the **Listen** directive in this file:

В

/etc/cups/cupsd.conf

"

Listen: By default on Ubuntu, the CUPS server installation listens only on the loopback interface at IP address 127.0.0.1. In order to instruct the CUPS server to listen on an actual network adapter's IP address, you must specify either a hostname, the IP address, or optionally, an IP address/port pairing via the addition of a Listen directive. For example, if your CUPS server resides on a local network at the IP address 192.168.10.250 and you'd like to make it accessible to the other systems on this subnetwork, you would edit the /etc/cups/cupsd.conf and add a Listen directive, as such:

• 🖪

```
Listen 127.0.0.1:631 # existing loopback Listen
Listen /var/run/cups/cups.sock # existing socket Listen
Listen 192.168.1.129:631 # Listen on the LAN interface, Port 631 (IPP)
```

Then you have to restart CUPS for the change to take effect, and you will be done with this part:

Command to Execute in a Terminal window

В

sudo service cups restart

1.2. Computer 2 to print from

At the client computer (the other one, where we want to print from), you have to go to add a new printer.

And indicate that you will print through "ipp" to the server, to the IP that we found out in the previous step: 192.168.1.129

In order to know the exact name that the printing queue has in our case, we can browse from the client computer to the server at the usual port that the printing system CUPS takes (631):

В

```
http://192.168.1.129:631/printers/
```

This will show us the list of printers shared at the computer that works as printer server. In our case, we take the one related to the Dell 2350D Printer that we recently bought as second hand cheap 2-sided laser printer:

http://192.168.1.129:631/printers/Dell-Dell-2350d-Laser-Printer

Therefore, we go to "Admin > System > Printers > Add > Network printer > Internet Printing Protocol (IPP)"

Network: 192.168.1.129:631

Queue: /printers/Dell-Dell-2350d-Laser-Printer

This makes that you have shown underneath this: uri: ipp://192.168.1.129:631/printers/Dell-Dell-2350d-Laser-Printer

You check whether that works, and you are done! Enjoy! FLOSS^[1] rocks!

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<sup>[1]</sup> http://sustainability.seeds4c.org/Session+16
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