Linux printing : The driver push papers !

Version 1.0

Canon

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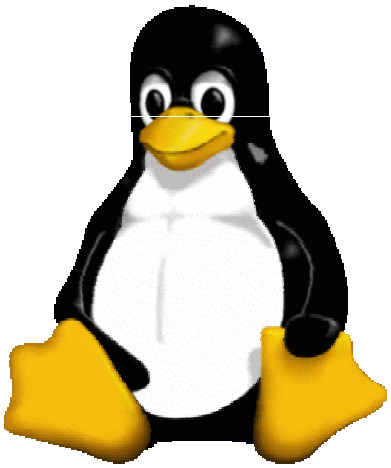

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Chapter 1 : Introduction

Ever thought about pushing your windows 9x or windows ME Canon printer drivers from your linux server to your windows clients ?

Maybe you even tried it a few times ?

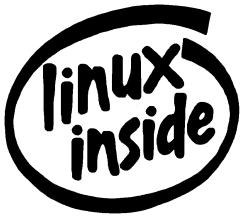
You've got costumers asking you this functionality ?

I've got news for you !

With just a bit linux knowledge and this manual it is possible, and it works great.

After using this manual windows clients can connect to samba-server shared printers and get the correct driver pushed to there workstation. As if they where connecting to a Windows NT server.

– Hey, this would be a big pro on your quest to stealth out those windows servers ! –



So, fire-up your linux server and hang on.

Chapter 2 : Requirements.

What do we need to get it things working ?

- (at least) one linux server. I tested this methode on a Redhat based server with kernel 2.2.x
- Correctly installed printers on your linux server. You should be able to do this with the many HOWTO's floating around the internet. It doesn't mather if you use LPRng, lp, CUPS or every other methode you could think about. As long as you know the correct printername.
- SAMBA services installed.
- A working network connection to your printers.
- A list of used IP nummers ☺
- Your current windows drivers for your canon devices. (I've used v5.10 common core driver pcl5e)
- Time
- A texteditor like VI or notepad
- ROOT access to your linux server

And people, keep in mind :

LINUX IS CASE SENSITIVE !!!!!!!!!!

Chapter 3: pre-configuration actions.

Before we start configuring SAMBA we have to do some fieldwork.

First copy the driver files you need to a linux directory.
I normally use : /opt/driver/WIN9X_ME
If you look at the standard Canon driver files you should find the directory : WIN9X_ME, so simply copy this directory to your /opt/driver/ directory on linux

Now we have to let linux know which printer driver we installed.
Set your directory to : /opt/driver/WIN9X_ME

Root:>/opt/driver/WIN9X_ME>

Type : P59MUKAL.INF "*Canon iR2200-3300 PCL5e*" >> /opt/driver/printers.def

Noticed the italics ?
For all the different canon printer in your network (the ones you want linux to share with windows clients) you have to type this line, but with a different text where the italics are.
Here you see the current list, and use the EXACT names, or else it doesn't work !

List of canon printernames:
(can be found bij opening te P59MUKAL.INF file with VI or notepad)

"Canon iR1600-2000 PCL5e"
"Canon iR1600-2000 PCL5e"
"Canon iR2200-3300 PCL5e"
"Canon iR5000-6000 PCL5e"
"Canon iR5000-6000-L1 PCL5e"
"Canon iR7200 PCL5e"
"Canon iR7200-M1 PCL5e"
"Canon iR8500 PCL5e"
"Canon iR8500-M1 PCL5e"
"Canon iR105 PCL5e"
"Canon iR105-M1 PCL5e"
"Canon GP160 PCL5e"

If you've done a good job then a list of needed files will be printed to your console. Don't bother about it. We've already done that.

Chapter 4: Samba configurations issues.

Oke, now let's start of with some standard SAMBA configuration options.

On most linuxén there's a file called /etc/smb.conf. (this is the one we are editing throughout this manual !) Some versions use a symbolic link on /etc/samba/smb.conf. What we do first is copy this file to a safe place. (I like to use /opt/save for my saved files). If anything goes wrong we can simply copy back the backupped file ☺

Now, let's see if samba is already running, just type:

/etc/init.d/smb status

You should see a response like : smbd services running.
If you don't see it you could try typing:

/etc/init.d/smb start

If this doesn't do the trick try looking in the log files in /var/log/samba/ to get a clue on what went wrong, and fix the problem(s).

If you're reading this line I assume you've got a correct samba services running.
Now we can continue by looking at the /etc/smb.conf file and pointing out some points of interest. These points aren't important to the driver pushing part, but could make your installation a lot less painful.

encrypt passwords = yes

This option should be set to yes on most cases, but if your authentication fails you could try "no"

security = share

This option normally will be "security = user" but changing it to "share" will rule out the need for all users who want to print to have a valid linux account.
You could set it to "security = server" and then in the next line set your server = parameter to the windows server which normally handles your authentication. (But do we want those windows server on our network ?)

This concludes our general samba stuff.

Now we can continue to the real driver push stuff.

Let's look at a normal [printers] label on a standard smb.conf.

```
[printers]
comment = All Printers
path = /var/spool/samba
browseable = yes
guest ok = yes
writable = no
printable = yes
```

This is what you normally need to share your linux printerqueue's into your windows network. But since we don't want the standard stuff we are going to alter it a bit. (you CAN use this section to find out your EXACT shared printernames, this will be explained later on)

Next !
Let's look at the correct smb.conf part for getting the driver push.
You can use this part only if you've got only ONE type of printer to share !

[printers]
comment = All Printers
path = /var/spool/samba
browseable = yes
guest ok = yes
writable = no
printable = yes
printer driver =*Canon iR2200-3300 PCL5e*
printer driver location = **SERVER**\drivers\WIN9X_ME
printer driver file = /opt/driver/printers.def

Noticed the italics again ? Look at the list above to select your printer. ☺
SERVER should be replaced by the samba hostname of your linuxserver.

That's all you have to do if you have only 1 type of printer.

BUT……..
Most organisations have multiple models of printers.
So let's see what we have to do to make different drivers to work together.

First you delete the [printers] sections completely.
Next we are going to make a section for each printer we've got.

Each section should look something like this:

Example 1:

[ir5000]
comment = Large volume printer second floor
path = /var/spool/samba
browseable = yes
guest ok = yes
printable = yes
writable = no
printer driver =*Canon iR5000-6000 PCL5e*
printer driver location = **SERVER**\drivers\WIN9X_ME
printer driver file = /opt/driver/printers.def

Example 2:

[ir2200]
comment = Printer on the first floor
path = /var/spool/samba
browseable = yes
guest ok = yes
printable = yes
writable = no
printer driver =*Canon iR2200-3300 PCL5e*
printer driver location = **SERVER**\drivers\WIN9X_ME
printer driver file = /opt/driver/printers.def

Noticed the italics again ? Look at the list above to select your printer for each section you add. ☺
SERVER should be replaced by the samba hostname of your linuxserver.

[ir5000] [ir2200]
These are your EXACT printernames on your samba/linux server.
If you don't know what they are, then there's a simple trick to check it.
Just use a smb.conf with the [printers] All Printers section in it. Browse to the linux server from your windows machine, and now you see a map called printers, if you open it, you see all the shared printers on the linux machine with there correct names. Use these names in your [….] for each printerdriver section in smb.conf

printer driver =*Canon iR2200-3300 PCL5e*
This is the name of the printerdriver linux will look for in printers.def, edit this line to the correct model you're adding.

printer driver location = **SERVER**\drivers\WIN9X_ME
This is the location of your printerdriver FOR THIS MODEL. If you have different printers, then you edit this line to point to the correct place for the model you are adding.

printer driver file = /opt/driver/printers.def
This is the same for all sections. This file contains the info of the printerdrivers you added.

Next thing we do is restart our samba services:

/etc/inint.d/smb restart

And check if our configuration is accepted:

/etc/init.d/smb status

If samba is still running we can walk up to our first windows 9x or ME station.
Double click your network neighbourhood search for the linux server, select it.
Then select your favourite printer. A message will appear saying something like that it is the first time you use the printer and files have to be installed.
Continue the rest as if it was a normal windows printer installation, you should notice that the driverfiles are pushed automatically. ……..NICE…….. ☺

DONE !

Chapter 4: Last words.

I hope this manual was of use for you, I know I spend a great deal of time finding out how to do the driver pushing trick in linux. Maybe I've saved you some time or even brought an idea to you wich you didn't thought was possible.
I know there are a lot of other things one can do with samba, but I only wanted to write a paper on how to driver push.

I know the SAMBA team is about to alter the methode for driver pushing in its next major samba update. But since many many users will be using old versions (like myself) for a long time, I think the manual will be usefull. When these new methods are released I'll look into it, and at them to the manual in time.

Please write me if you:

- come across errors in this manual
- have some great info to add to the paper
- want me to put more details in
- have any specific issues on your sites from which you think I can help
- are a smashing looking blond female looking for a date ☺