

(Written sometime during 2003 and contributed to ClarkConnect forum.)

LINUX PDF SERVER

This small project adds a pdf server to your ClarkConnect box.

I won't argue with those who say this is not a true "server". Its simply a way to make it real easy for windows users on your ClarkConnect equipped LAN to create pdf files.

This project uses Samba. You must have a properly configured network and Samba server running for this to work. These notes are deliberately pitched at "newbie" level. Its what I can understand.

Apart from these notes, and linking some concepts together, this project is not original work. It has been done many times before by others with more skills than I will ever have.

This project began life on RH 7.3, but is slightly more complicated in CC due to the CC default Samba setting, security = share, (rather than security = user), and the CC omission of smbclient.

Overview.

You install a "pretend" printer on each Windows machine. Its output is redirected to a Samba "pseudo" printer on the CC server. A short script makes the pdf file from the print output, and (optionally) sends a message to the user with the file-location and filename of the new pdf file. Creating pdf files for Windows users becomes as easy as printing to a regular printer, only much faster.

Step 1 - Configure the Samba "pseudo" printer.

This "pseudo" printer gets created on your CC – Samba server.
Add the following lines to the [printers] section of your /etc/samba/smb.conf

```
[pdf-Server]
path = /tmp
printable = yes
print command = /usr/local/bin/printpdf %s %G
guest ok =yes
```

Check smb.conf for errors using
/usr/bin/testparm (See Samba documentation for details).

Restart samba
/etc/rc.d/init.d/smb restart (or click at your GUI interface if you prefer).

The guest ok = yes command overcomes some Samba user authentication and password issues.

Step 2 - Install the bash script

Cut and paste, or type, this brief script into /usr/local/bin/printpdf

```
#!/bin/bash
# /usr/local/bin/printpdf
# written by blueGroper
# Last modified 29/9/03 (d/m/y)
#
# Script to generate pdf files and message windoze user with filename
# Win98 clients MUST have WinPopup loaded.
#
# COUNT = value from /tmp/pdfcount file. Used for filename of output.

SAMBAFILENAME=$1      # (%s from Samba)
USERNAME=$2           # (%G from Samba)
OUTPUTDIR=/samba/pdfs # (mapped in Windoze as K:\pdfs, see MESSAGE
below)

# Write the variables somewhere, handy when its broken
echo "Filename: $1">/tmp/pdfdebug
echo "Username: $2">>/tmp/pdfdebug

# Options are not essential, but useful to control finer features of pdf's
OPTIONS="-dSubsetFonts=true -dEmbedAllFonts=true"

# Counter ensures meaningless but unique filenames
PDFCOUNTFILE=/tmp/"pdfcount"
if [ -f $PDFCOUNTFILE ] ; then
    COUNT=`cat $PDFCOUNTFILE`
else
    COUNT=0
fi
let COUNT=COUNT+1

# write counter to /tmp/pdfcount
echo "$COUNT">$PDFCOUNTFILE

# filename for pdf output
OUTPUTFILENAME=$USERNAME-$COUNT.pdf

# Send the message first to make it seem faster
MESSAGE="K:\134pdfs\134$OUTPUTFILENAME has been created"
echo -e $MESSAGE|smbclient -M $USERNAME -U "SysAdmin" > /dev/null 2>&1

# Make the pdf
ps2pdf13 $OPTIONS /tmp/$SAMBAFILENAME
$OUTPUTDIR/$OUTPUTFILENAME
```

```
# Remove the temporary file written by Samba
rm /tmp/$SAMBAFILENAME
```

```
# End
```

```
Make sure the printpdf script is executable.
chmod 0755 /usr/local/bin/printpdf
```

Step 3 - Install the new printer and drivers on windows boxen.

I've only done this with Win98SE and Win2K Pro.
Other flavours of Windows should be similar.

Start Menu, Settings, Printers, Add Printer, etc
Add a Network printer, and let windows browse for it.
Point to your local network, and the CC server. Click clack to reveal the Samba printer setup in step 1 above.

You must choose a Windows postscript printer driver for your printer. And you have a fair amount of choice. Printer drivers I've tried successfully include HP LaserJet 2100 Series PS, HP Colour LaserJet 8500 PS.

Choice of printer DOES effect your output file.

Monochrome ps drivers create monochrome pdf's. Choose the HP Colour LaserJet PS driver and you should be able to create coloured pdf files.

The size of the pdf's will vary depending upon the ps printer driver chosen. If pdf file size is an issue, then experiment with the options. Colour makes bigger files.

Also need to fiddle with the printer options and preferences, select paper size, etc as required. Suggestion is to accept all defaults and get it working before tweaking.

Step 4 - Add Windows Usernames (optional, but recommended)

Add all the windows network usernames to your CC userlist.
Use the CC admin browser and go to Configuration, System, Users.
Add all your windows usernames. They don't need shell access.

Restart samba
/etc/rc.d/init.d/smb restart (or click at your GUI interface if you prefer).

If you don't do this, all your files will be called "nobody-xx.pdf", which still works, but is hardly elegant.

Step 5 – Messaging (optional – pdf creation works fine without this step)

If you wish to notify your windows users by instant popup message that the file has been created, then you need to use the messaging services provided by smbclient. For security reasons, smbclient is not included in CC 2.0. That's because CC acts as a combined firewall and file server. If (like me) you use a separate box for firewalling, or are not as concerned about security as you should be, just download and install a

later samba package. Try
http://us1.samba.org/samba/ftp/Binary_Packages/RedHat/RPMS/i386/9.0/samba-2.2.8a-2_rh9.i386.rpm

Then just `rpm -Uvh samba-[tabkey]` as usual.

Step 5A - Install WinPopUp for optional messaging (Win98 Only)

Windows 98 needs to have WinPopUp launched in order to receive the smbclient message. If WinPopUp is not running, the message will simply be lost in the datasphere, the pdf file will still be created, but the user will have to navigate manually using the click-clack method to find the file. Best to run WinPopUp automatically at startup and keep it minimised.

Windows 2000 users don't need to bother with this. The messaging routines should already be loaded. At least they are for me. If no messaging in Win2K, check the Control Panel, Administrative tools, Services, Services (Local) Messenger. Make sure the service is started, and set to start automatically.

Presume Win XP will be similar, but will leave for others to test.

Step 6 - Test it.

Sweeten to taste, then test it.

On a Windoze box, Start Menu, Settings, Printers, etc and Print Test Page to your new printer. If all the steps work as planned, you should very quickly receive a message advising the name of your new pdf file. Navigate there, and Open the new pdf file with Acrobat, ghostview, or usual viewer.

Gotchas.

There's quite a lot that can go wrong with this, but most is uncomplicated.

1. Check that Samba is fully functional on your CC server. Can you browse the Samba directory/ies ("shares") from Windoze boxen ? If not, then see usual Samba documentation at www.samba.org as well as CC manual.

2. Permissions, permissions, permissions. The usual 3 linux issues.

Check all permissions:

To access the Samba "pseudo" printer

To write to the /tmp directory

To read/write to the Samba directory where the pdf files will be saved

3. Is `/usr/local/bin/printpdf` executable ?

4. Turn off (temporarily) the (last line) `rm /tmp/$SAMBAFILENAME` in `/usr/local/bin/printpdf`. Do Test Print again. Is Samba creating the ps files in /tmp ? They're the files called `smbprn.000201.GDgd` or similar. If no, then you have a

problem with Samba. If yes, then possible problem with execution of bash script. Are the pdf files being created in your Samba output directory but there's simply a messaging problem.

5. Make sure ps2pdf13 is included on your CC box. It should be.

6. Check the entries in /tmp/pdfdebug file. Do they look right ?

RoadMap

This project is a work in progress. Hopefully with collaboration and input from others it can be improved.

It is possible to install multiple "pseudo" printers, one for colour, one for monochrome, and another for various ps2pdf options, but thats beyond the newbie scope of these notes.

There's lots of options for the ps2pdf13 command line that can be explored.

It may be possible for the windows printer/s to use drivers residing on the CC Samba server, (and "printer driver = " command in /etc/samba/smb.conf), but here individual mileage will vary depending upon local conditions.

Messaging without compromising security ?

Further help.

Please don't post messages simply saying "It doesn't work. What have I done wrong?" There's lots that can go wrong, so go thru it slowly, and think about which steps worked, and which step failed. Then ask questions.

All the linux tools and steps above are relatively easy. Its simply the linking of the pieces together that makes plenty of opportunities for it to break.

Disclaimer

Don't try this at home without adequate adult supervision.

If you loose your job, get chucked out of college, or your house burns down, don't blame me.

Bibliography.

See also

1. Sam's Teach Yourself Samba in 24 Hours, and always use the Troubleshooting steps in the free chapter <http://us1.samba.org/samba/ftp/docs/Samba24Hc13.pdf>
2. For info on ps2pdf options, see <http://stat.tamu.edu/doc/gs/Ps2pdf.htm>

3. Samba psuedo printers. See <http://www.linux-mag.com/cgi-bin/printer.pl?issue=2003-01&article=guru>
4. PDF Service with Samba <http://www.linuxgazette.com/issue72/bright.html>
5. Paul Richardson's notes. See <http://home.att.net/~john.p.richardson/linux/mpdf.pdf>
6. Buchan Milne's notes. See <http://ranger.dnsalias.com/mandrake/samba/samba-print-pdf.html>
7. Tim Wunder's notes. See http://sxs.thexdershome.com/networking/PDF_creation_using_Samba.html