Linux based PDF distiller server for Microsoft Networks

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Revision History
Initial release

1. Introduction

The Portable Document Format (PDF) is one of the most commonly used file formats for storing, sharing and distributing documents. PDF files will look exactly as intended on any system and printed out to any printer. It is largely spread mainly due to PDF being an open standard. Many free PDF file viewers are available, for a large range of platforms.
But, making PDF versions out of existing documents requires additional software, for example Adobe Acrobat. For those users who
…

1.1. Copyright
1.2. Disclaimer

2. Requirements

A linux box with a properly set up and working LAN network connection. In addition you'll need to have sendmail installed and the newest packages for samba, ghostscript and metamail (you should be able to find these on your linux distro CDs or on the intern as rpm packages).

3. Setting up samba

This is quite straightforward. If you haven't already installed the samba server, do that first (basically, download/copy the RPM, then do rpm --install samba-something.rpm). Continue with creating the necessary shared directories:

md /export
md /export/samba
md /export/samba/printdrivers
md /export/samba/pdf-mail-temp

Now, edit /etc/samba/smb.conf (it might also be /etc/smb.conf). This config file should contain

```
[global]
        guest account = nobody
```

```
        invalid users = root

        # change this to your NT domain user name
        printer admin = myaccount

        writeable = yes
        writable = yes
        load printers = yes
        os level = 34

        # network card(s) that samba should listen on
        interfaces = 127.0.0.1 eth0
        # allowed IP ranges (modify this to reflect your network!)
        hosts allow = 194.157.92. 194.157.93. 127.0.0.1

        encrypt passwords = yes
        security = share
        null passwords = yes
        netbios name = PDFServ

        # change this to your workgroup or domain name
        workgroup = OURDOMAIN


[pdfprint2mail]
        comment = "PDF printer. The finished pdf is sent via email."
        path = /tmp
        printable = yes
        browseable = yes
        writeable = yes
        guest ok = yes
        print command = /usr/bin/printpdf2mail %s %U %m
        lpq command = echo NULL >> /dev/stdout
        lprm command = echo NULL >> /dev/stdout
        public = no

        printer driver = Apple Color LW 12/660 PS
        printer driver location = \\PDFServ\print$


[pdfprint2mail-A3]
        comment = "PDF printer, large paper size, pdf sent via email"
        path = /tmp
        printable = yes
        browseable = yes
        writeable = yes
        guest ok = yes
        print command = /usr/bin/printpdf2mail %s %U %m
        lpq command = echo NULL >> /dev/stdout
        lprm command = echo NULL >> /dev/stdout
        public = no

        printer driver = Scitex Dolev800 PS L2
        printer driver location = \\PDFServ\print$



[print$]
        path = /export/samba/printdrivers
        guest ok = yes
        read only = no
        writeable = yes

        # Change myaccount to your NT domain user name in both
        # lines below. Later, when everything is running ok,
        # you can use the Win2k printer settings dialog to
        # modify/restrict the permissions

        write list = myaccount guest pcguest
```

```
        browseable = yes
        public = yes
        directory mask = 0777
        create mask = 0777
```

[You can add other shares too, but should ensure that allfolder/directory shares are accessible only from your own user account, that is, they should NOT be accessible from the guest account. Also, do NOT use any forceuser=… line anywhere in this config file. There seems to be a problem with this guest access from NT and Win2k machines – if a guest shared folder is opened, NT4 and Win2k will use the guest account (which is set to "nobody" in the above smb.conf file). The problem is that now all successive accesses to any share on the PDF-server will use the account "nobody". This means the created PDF files can't be sent back via email, because the receiver will be nobody@ourdomain.com and not the email address of the print job owner.]

Next, you have to add a local linux user account for printer administration. The account name should be the same as your existing NT account, and the passwords the same too.

adduser myaccount

smbadduser myaccount:myaccount
(this will map the linux account myaccount to the NT account myaccount, and asks for the password)

The new samba account may be disabled by default, so to be on the safe side, you should enable it:

smbpasswd –e myaccount

4. Setting up the PDF printer scripts

This is what the printpdf2mail script looks like. Copy it to /usr/bin/, i.e. cut-and-paste to a new file "/usr/bin/printpdf2mail"

```
#!/bin/sh
# params: $1 file, $2 user, $3 machine

FDATE=$2-$3-`date '+%d_%m_%y-%a-%M-%S'`
OUTDIR='/export/samba/pdf-mail-temp'

echo $1 $2 $OUTDIR/$FDATE.temp >> /usr/pdf-temp/pdfmailer-log.txt
echo Calling ps2pdf13... >> /usr/pdf-temp/pdfmailer-log.txt

ps2pdf13 -dAutoFilterColorImages=false -dColorImageFilter=/FlateEncode \
      $1 $OUTDIR/$FDATE.temp >> /usr/pdf-temp/pdfmailer-log.txt

mv $OUTDIR/$FDATE.temp $OUTDIR/$FDATE.pdf
echo Copied to $OUTDIR/$FDATE.pdf >> /usr/pdf-temp/pdfmailer-log.txt

# Do a sendfilepdf -f -s "subject" -m...
# (change the @ourdomain.com part below!)
echo "Your PDF file is in the attachments" | \
```

```
  /usr/bin/sendfilepdf -s "PDF-tiedosto valmis" -m "application/pdf" \
  $2@ourdomain.com $OUTDIR/$FDATE.pdf \
  >> /usr/pdf-temp/pdfmailer-log.txt

echo Deleting temp file $1 and pdf file $OUTDIR/$FDATE.pdf >> \
          /usr/pdf-temp/pdfmailer-log.txt

rm $1
rm $OUTDIR/$FDATE.pdf
echo  >> /usr/pdf-temp/pdfmailer-log.txt
```

Be sure to change the $2@ourdomain.com in this script (t.ex $2@helsinki.fi). This is the email address of the receiver. $2 will contain the NT user account name, typically seven characters (i.e. it is not the full user name!).

Set the file permissions properly, so that everyone can run this script:

chmod a+rx /usr/bin/printpdf2mail

In order for the log file to work you have to create the directory /usr/pdf-temp and give write permissions to it:

md /usr/pdf-temp
chmod a+rwx /usr/pdf-temp

Done.

5. Setting up the PDF mailer script

Copy the existing /usr/bin/sendfile to /usr/bin/sendfilepdf and set proper permissions.

cp /usr/bin/sendfile /usr/bin/sendfilepdf
chmod a+rx /usr/bin/sendfilepdf

Then open up /usr/bin/sendfilepdf in your text editor, and search at the end of the file for the lines

```
if [ -z "$Recipient" ]
then
    Fatal "please specify a mail recipient"
elif [ -z "$filenames" ]
then
    Fatal "please specify at least one file to send"
fi
```

and delete all the lines *after* this block. Then add

```
: ${Subject:="file(s) sent using $PN"}
: ${Splitsize:=$SPLITSIZE}

# metasend -b -S $Splitsize -s "$Subject" -t "$Recipient" $args

if [ "$Recipient" = "nobody@ourdomain.com" ]
then
   echo ERROR: Recipient is "nobody@ourdomain.com", so no mailing done. \
          >> /usr/pdf-temp/pdfmailer-log.txt
```

```
else
   echo Exec metasend >> /usr/pdf-temp/pdfmailer-log.txt
   echo metasend -b -F "PDFServer@ourdomain.com" -S $Splitsize \
       -s "$Subject" -t "$Recipient" $args >> /usr/pdf-temp/pdfmailer-log.txt

   metasend -b -F "PDFServer@ourdomain.com" -S $Splitsize -s "$Subject" \
          -t "$Recipient" $args >> /usr/pdf-temp/pdfmailer-log.txt
fi
```

Again, replace the four @ourdomain.com occurrences with your correct domain (t.ex. @helsinki.fi).

That's it.

6. Sendmail

Assuming you have sendmail already installed but not configured properly yet, you can follow these quick setup notes for a very simplistic configuration. First change to the correct directory.

cd /etc/mail

Open up or create the file /etc/mail/mailertable and add your domain name and to the right side of it the smtp server to which the mail should be forwarded to. You'll need only two lines, similar to this:

```
ourdomain.com          smtp:mailserver.ourdomain.com
.ourdomain.com         smtp:mailserver.ourdomain.com
```

so, for example,

```
helsinki.fi            smtp:mail.helsinki.fi
.helsinki.fi           smtp:mail.helsinki.fi
```

Save the file, and open up /etc/mail/access and be sure that it contains

```
localhost                 RELAY
mailserver                RELAY
mailserver.ourdomain.com  RELAY
pdfserv                   RELAY
```

Where, once again, you replace `mailserver` and `mailserver.ourdomain.com` with the correct name of the smtp/mail-server on your LAN.

These two files have to be compiled into a database for sendmail use. This is easily done with makemap:

makemap hash mailertable < mailertable
makemap hash access < access

7. Restarting the services

With all of the above things done, everything should be configured correctly. If you'd like to have the pdf distiller server run on a different Windows network name than PDFServ, edit the

```
netbios name = PDFServ
```

line in the smb.conf file (see Part 3) and also change /etc/mail/access (see Part 6) correspondingly.

The last thing left to do (hopefully…) on the linux box is to restart the samba service. This is done with

/etc/rc.d/init.d/smb restart
 or
/etc/init.d/smb restart

If you had to configure sendmail, it might be a good idea to restart this service as well.

/etc/rc.d/init.d/sendmail restart
 or
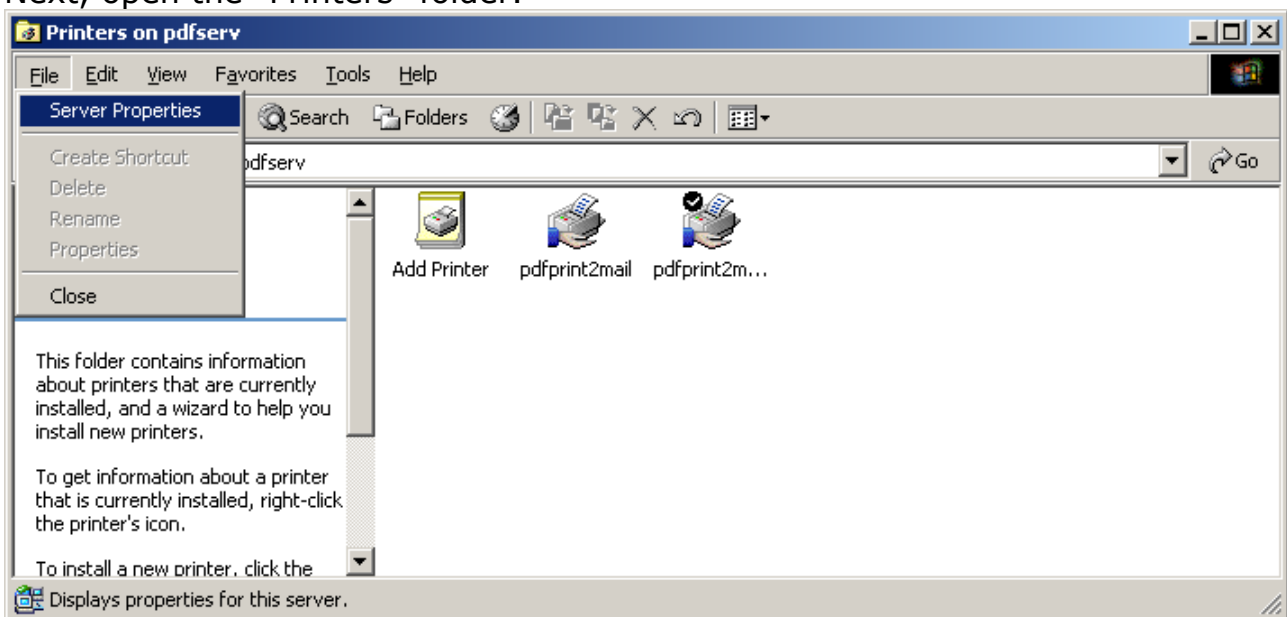/etc/init.d/sendmail restart

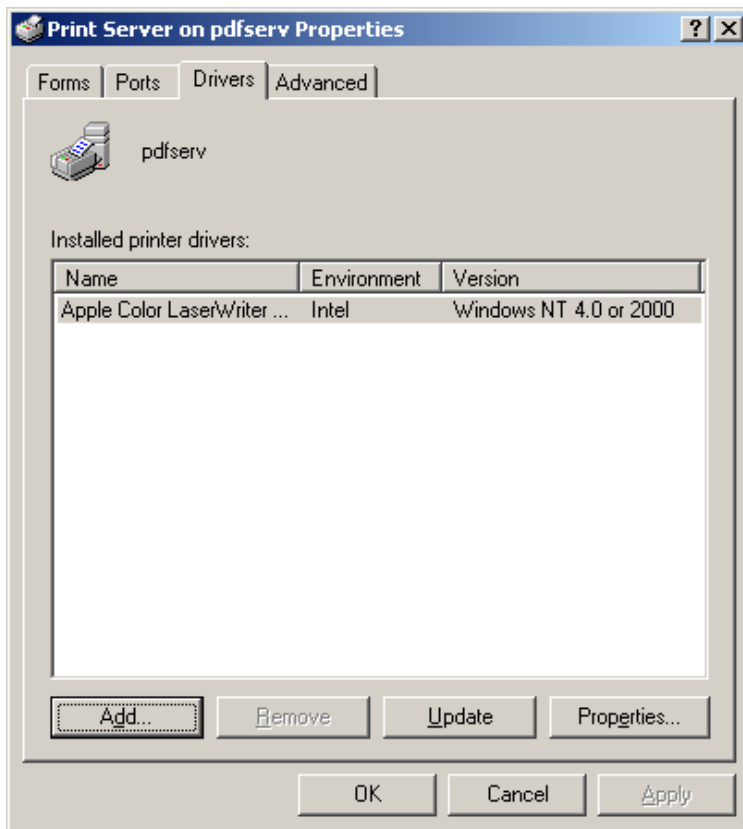## 8. Driver upload from a Windows 2000 machine

Open up the pdf server, for example via the Start menu, Start => Run => specify "\\pdfserv". You should see the shares:
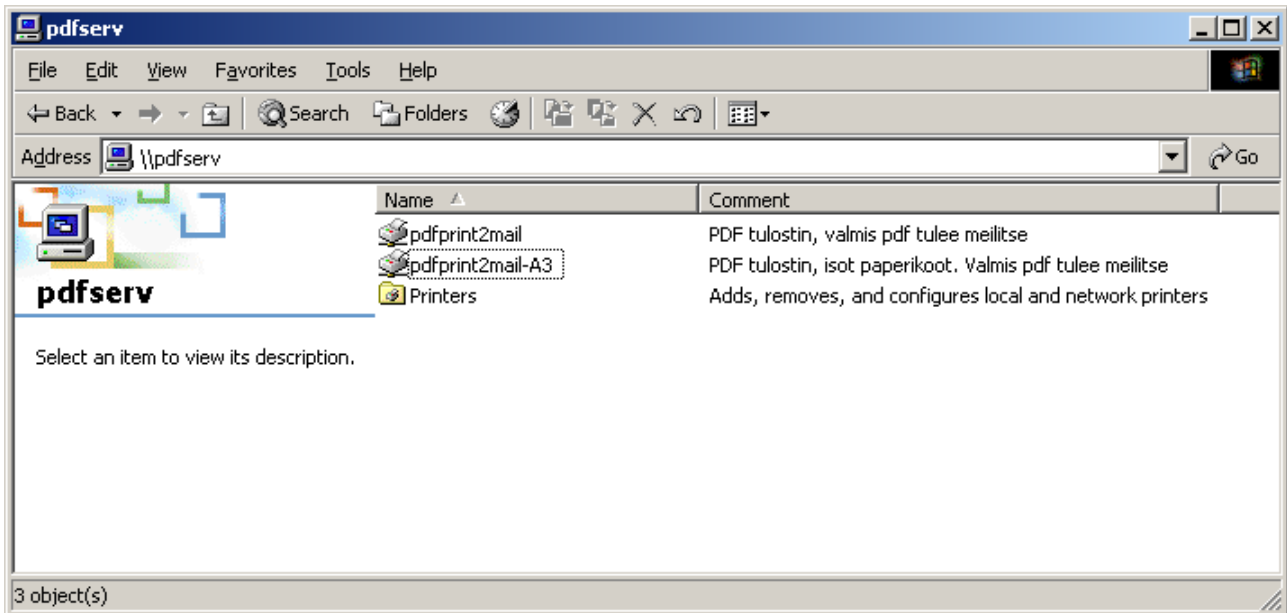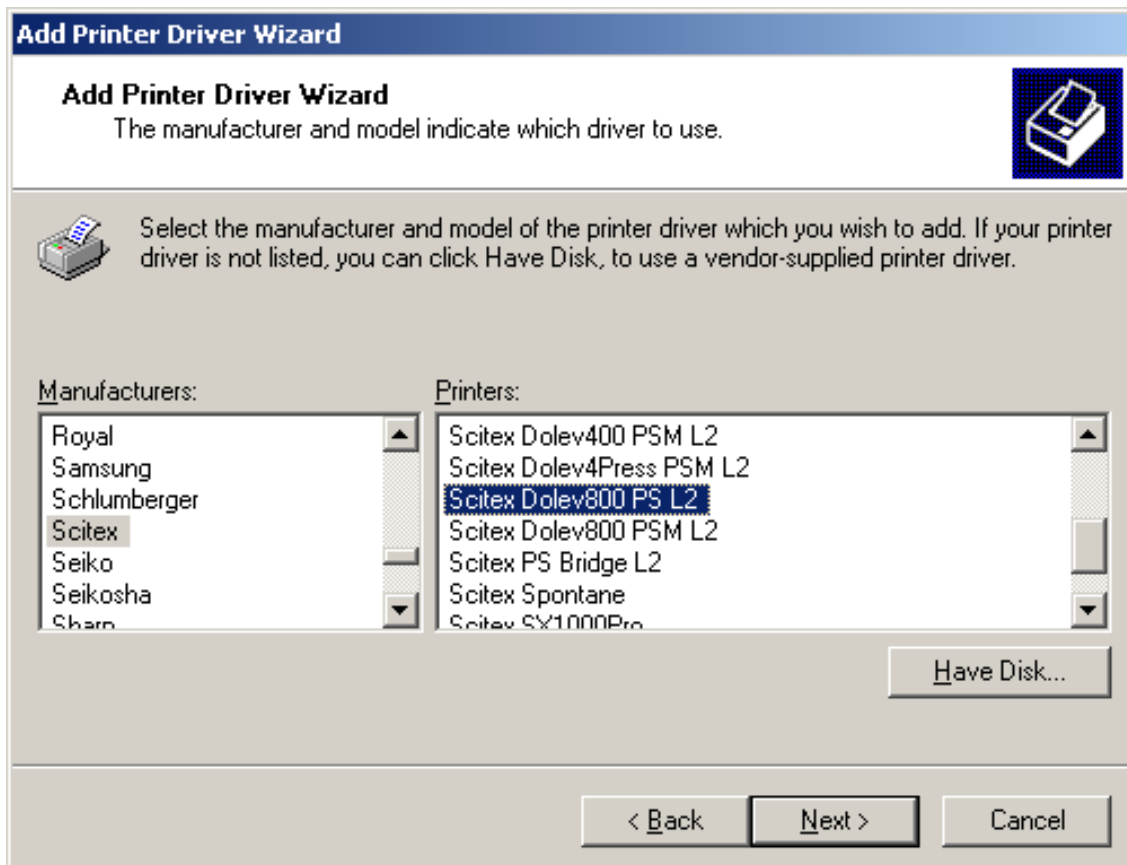

Next, open the "Printers" folder.

From the menu, select File => Server Properties. In the new dialog window, switch to the "Drivers" tab.

This lists the driver files installed on the linux box, and is probably empty first. For our current setup, you'll need to upload the Apple Color LaserWriter 660 PS drivers and Scitex Dolev 800 PS drivers.

Just click on "Add", and select the Scitex drivers, then "Next", and finish the printer driver add wizard. The last printer driver to add, in the same manner, is the Apple one.

If win2k asks for an NT4 server CD, you may specify C:\winnt\inf\ so it installs the win2k drivers only and no CD is required.

Finally, with both drivers uploaded, you can close the "Print Server pdfserv Properties" dialog and then continue next with changing default printer settings. Just right-click each printer and select "Properties".

The changes to make under General => Printing Preferences => Advanced, as well as Advanced => Printing Defaults, are:
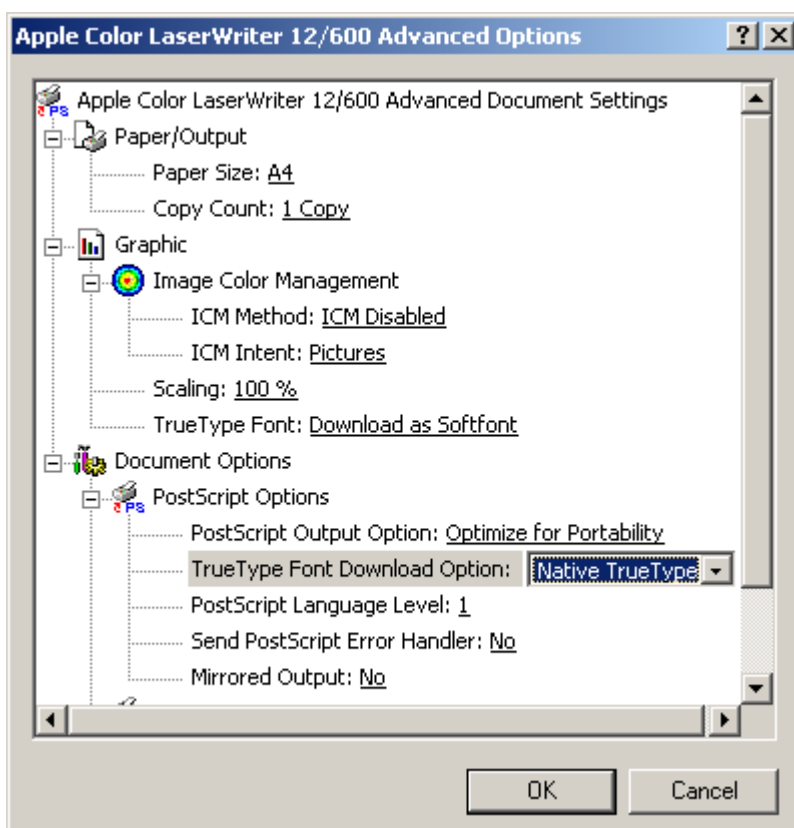
Select "Download as Softfont", "Optimize for Portabilty", and for the PostScript Language Level use "1". For the Apple LaserWriter you can select "Native TrueType" as the Font Download Option to enable PDF font embedding.

Now change the settings for the other printer share too.

To use the printers on a Windows machine, open up \\pdfserv and right-click on the printers and select "Connect". Windows will use the drivers from the pdfserv box, so you don't need the Windows CD or any driver disk.

To check how things work you should do a test printout to one of the printers. Just print out any document – maybe this one. It should arrive as a PDF file in your mailbox after a couple of seconds, maybe 15s or so.

If nothing happens, see the log file

 /usr/pdf-temp/pdfmailer-log.txt

on the linux box. If the last entry is about nobody@ourdomain.com the try logging out from your Windows machine, log in as a different user (maybe Administrator). Then log back in again with your own user account and try to print again.