TNE30019/TNE80014 – Unix for Telecommunications

Multi-platform printing with CUPS

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Outline

Windows – Installing CUPS Printer (Manual)

- Create network printer
  - Port: `http://server.name:631/printers/printer_name`
  - Which driver?
- CUPS printers can print any PostScript file
  - Any PostScript driver will do
  - If PostScript printer – get the correct PPD file
  - Windows will create PostScript output to send to CUPS server for printing

This is complicated!!

- Windows printing has automatic driver installation
- Can we do something similar?

Windows – Installing CUPS Printer (Automated)

Use Samba

- Configure Samba `[printers]` share
- Configure Samba to send jobs to CUPS
- Windows shares printer drivers in hidden share `[print$]`
- Need to create specific directory structure in `[print$]` (newer Samba versions will create it on the fly)
- Need to deposit driver in `[print$]` and configure database so Samba *"knows"* about printer and corresponding driver

In Windows double-click on Samba printer share

- Connection established to `[print$]` share
- Driver downloaded and installed

Samba – Installing Windows Printer Driver (Manual)

Installing printer driver on Samba

- Typically installed from Windows computer over network
- Install default options
- Printer now available for other users

Things to be aware of

- More difficult than PhD (see http://www.samba.org)
- Setting up default options is difficult
- Setting up permissions is hard
- Partially configured printer will be available during install

Samba – Installing Windows Printer Driver (Automated)

Install CUPS Windows Driver Package

- Port: `/usr/ports/print/cups-samba`
- Free Windows PostScript driver – installed to Unix server

Run program `cupsaddsmb`

- Connects to Samba server
- Copies PostScript driver to `[print$]` share
- Copies PPD file from CUPS server to `[print$]` share
- Updates Samba printer database

End Result – Anatomy of Windows Print Job

Printer Install – DejaVu

- Connection is established with `[print$]` share
- CUPS PostScript driver downloaded and installed
- Printer-specific CUPS PPD downloaded and installed

Printing Process

- Driver+PPD used to generate printer-specific PostScript file
- Print file sent to Samba print queue
- Samba forwards job to CUPS print queue for printing

Advantages of Using Samba/CUPS

- All Windows hosts have only one printer driver (PostScript)
- All printers become PostScript printers
  - Printout looks exactly the same on all printers
- CUPS/Samba does complete page accounting
- Access control can be centralised
- One print server for Unix(CUPS) and Windows hosts
- What about Mac OSX?