Pykota Installation

Installing the base system

- Install base system of Debian Etch (Sarge does not use a new enough version of CUPS, etc. to provide full functionality)

Installing and configuring Samba/Winbind

- Install Samba and Winbind, then configure `/etc/samba/smb.conf` to be similar to below:

```
[global]
        idmap gid = 10000-20000
        obey pam restrictions = yes
        dns proxy = no
        netbios name = <hostname here>
        printing = cups
        invalid users = root
        idmap uid = 10000-20000
        workgroup = <domain here>
        os level = 20
        printcap name = cups
        security = ads
        max log size = 1000
        winbind separator = \
        log file = /var/log/samba/log.%m
        load printers = yes
        socket options = TCP_NODELAY
        wins server = <IP Address of WINS Server>
        encrypt passwords = true
        public = yes
        realm = <FQDN IN CAPS>
        winbind use default domain = yes
        #printer admin = "domain admins"
        wins proxy = no
        server string = Cups Server
        winbind enum users = yes
        password server = *
        winbind gid = 10000-20000
        winbind enum groups = yes
        syslog = 0
        preferred master = no
        panic action = /usr/share/samba/panic-action %d

[printers]
        printable = yes
        writable = no
        path = /var/spool/samba
        comment = All Printers
        public = yes
        create mode = 0700
        printer admin = root

[print$]
       comment = Printer Drivers
       path = /etc/samba/drivers
       browseable = yes
       read only = no
       guest ok = yes
       write list = root, @"domain admins"
```

- Install krb5-config and krb5-user then configure `/etc/krb5.conf` similar to below:

```
[realms]
       <FQDN IN CAPS> = {
                kdc = <PDC IN CAPS>
                kdc = <BDC IN CAPS>
                admin_server = <PDC IN CAPS>
        }
```

- Join server to the domain with:

```
# net ads join -U administrator
```

- The `/etc/nsswitch.conf` file should contain the following lines:

```
passwd:         files winbind
group:          files winbind
shadow:         files winbind
```

- At this point, the configuration can be tested using the command:

```
# wbinfo -u
```

- If Samba and Winbind are working correctly at this point, a list of domain users should be displayed

Installing/configuring CUPS

- Install the CUPS packages (including the Foomatic printer drivers for CUPS – the full package makes life easier when using the web interface)
- Edit the `/etc/cups/cupsd.conf` file to allow remote access to the necessary users
- It should now be possible to add printers to CUPS using the web interface at `http://<cups server>:631`
- Download the CUPS Driver for Windows from http://www.cups.org/windows/index.php
- Extract the following files from the CUPS Driver package to `/usr/share/cups/drivers`:
  - cups6.inf
  - cups6.ini
  - cups6.ppd
  - cupsps6.dll
  - cupsui6.dll
- Copy the following files from a Windows installation to `/usr/share/cups/drivers`:
  - ps5ui.dll
  - pscript.hlp
  - pscript.ntf
  - pscript5.dll
- Ensure all the files within the directory `/usr/share/cups/drivers` have **lower case filenames**
- Run the following command to export the drivers for all the existing printers in CUPS:

```
# cupsaddsmb -U administrator -a
```

- To test that this has worked (assuming that there are no error messages), browse to the CUPS server in Windows and try to connect to a printer

Installing/Configuring Pykota

- Download the Debian Etch package for Pykota
- Install the package using the following command:

```
# dpkg -i <filename>
```

- After resolving any dependency issues, it may be necessary to run the command again
- Run the following command:

```
# pksetup debian
```

- Follow the on-screen instructions to configure Pykota
- At this point, it may be necessary to edit the /etc/pykota/pykota.conf file so that Pykota looks for 127.0.0.1 instead of localhost for the SQL server:

storageserver : 127.0.0.1

- Check that BOTH the symlink in `/usr/lib/cups/backend` AND the origional file `/usr/share/pykota/cupspykopta` have the execute bit set and restart the cupsysd service
- Also check the permissions on the `cupspykota` file

```
# chown root.root /usr/share/pykota/cupspykota
# chmod 700 /usr/share/pykota/cupspykota
```

- Check that the Debian package 'pysnmp2' is NOT installed as this is known not to work with Pykota. A working version should have been installed by pksetup
- Add a printer via the web interface in CUPS – the device type should be of type 'PyKota managed....'
- Add the following lines to `/etc/pykota/pykota.conf` (assuming a HP LaserJet)

```
[CupsPrinterName]
preaccounter : software()
accounter : hardware(pjl)
```

- Add accounting options to the printer using pkprinters – e.g. A cost of 1p per page

```
# pkprinters -a -c 0.01 CupsPrinterName
```

- Add a user to PyKota using the pkusers command – for example Joey who will be charged for printing and given an initial allowance of £2

```
# pkusers -a -l balance -b 2 joey
```

- Print to the published printer (either via Samba or through Linux) as Joey and the job should successfully flow through CUPS
- To check that the accounting is working, first check in the CUPS web interface that the job has logged the number of pages correctly, then run the following commands to display the user's balance and the printer's accounting details

```
# pkusers -L joey
# repykota -P CupsPrinterName
```