# Reflashing HP switches

Campus network design workshop

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## 1 Connect

Power up the switch.

Connect your USB-serial adaptor to your PC, and use the black null-modem cable to connect to the Console port on the switch. Start your terminal program (e.g. putty for Windows) with a 9600bps serial speed.

> Note: If you are a Linux user, a simple terminal program is picocom:
>
> ```
> # apt-get install picocom
> # picocom /dev/ttyUSB0
> ```
>
> Type ^A ^Q to exit (ctrl-A ctrl-Q).
>
> An alternative is minicom, which has better terminal emulation but requires a bit more configuration.

Press Enter two or three times to enable the switch to detect the serial speed. You should see the following prompt:

```
HP ProCurve Switch 3400cl-24G#
```

These switches have a default configuration which will pick up a management IP address via DHCP.

Connect the switch to the temporary backbone network - any port will do. If several people are reflashing switches at the same time, you can plug one switch into the backbone and the other switches into that one.

Use the following commands to check that the switch has picked up an IP address/default route via DHCP, and to check that the classroom TFTP server is reachable.

```
# show ip
# ping 10.0.0.1
```

## 2 Check firmware

Check which firmware image is currently running, and which two versions (primary and secondary) are available in the device's flash memory:

```
# show ver
# show flash
```

> NOTE: in real life you would read the release notes carefully at this point! They will tell you that if the switch is currently running a version older than M.10.10 then you must *first* install and boot M.10.10, *then* upgrade to the latest version (which at the time of writing was M.10.76)

## 3 Upgrade

Perform the upgrade as follows. Note that the filename is case-sensitive, and it contains a capital `M`.

```
# copy tftp flash 10.0.0.1 M_10_10.swi secondary
The Secondary OS Image will be deleted, continue [y/n]? y
...
Validating and Writing System Software to FLASH...
```

It will wait at this point for several minutes before it returns to the boot prompt. Now reboot into the secondary image (although if someone else is connected via your switch, don't reboot if they're in the middle of a tftp transfer)

```
# boot system flash secondary
Device will be rebooted, do you want to continue [y/n]? y
Rebooting the System
```

Once it has rebooted and you've got the command line back, you can upgrade to the final version. This time we'll install it in the primary image slot.

```
# copy tftp flash 10.0.0.1 M_10_76.swi primary
The Primary OS Image will be deleted, continue [y/n]? y
...
Validating and Writing System Software to FLASH...

# boot system flash primary
Device will be rebooted, do you want to continue [y/n]? y
Rebooting the System
```

Your upgrade is complete, and you can disconnect the switch.

```
# sh flash
Image           Size(Bytes)   Date   Version
-----           ----------  -------- -------
Primary Image   : 3838596   08/26/09 M.10.76
Secondary Image : 3558382   06/26/06 M.10.10
Boot Rom Version: I.08.12
Current Boot    : Primary
```

> Note: The firmware came from the HP website (www.procurve.com). Click on 'Support' then do a search on the product code, in this case `J4905A`.
>
> For the classroom we set up a TFTP server under Ubuntu Linux:
>
> ```
> # sudo apt-get install tftpd-hpa
> ```
>
> and unzipped the firmware file under the `/var/lib/tftpboot` directory. However there are TFTP servers for Windows available too.