Manual MCS PC Imaging

The following instructions are for manually (re-)imaging an MCS PC while physically at the workstation. PCs can normally be remotely reimaged (often overnight) by the Desktop Services team (contact service-desk@uis.cam.ac.uk to arrange).

Stage 1 - PXE Boot

After BIOS startup you will see something similar to the following with spinning bar. If this does not appear or you receive a "media disconnected" message then check the PCs networking:

```
CLIENT MAC ADDR: 00 11 22 33 44 55   GUID: 12345678-9ABC-DEF0-1234-56789ABCDEF0
DHCP...
```

If the PC gets its IP address and can download the boot loader then the screen will clear and the following banner will appear:

```
University of Cambridge - Information Services              IP Address
Desktop Services - Managed Cluster Service                 Local Boot
```
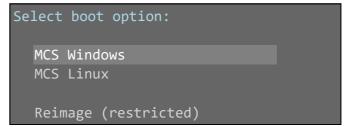
Single Boot PC

If the PC has only one OS available then you will be shown a simple prompt:

```
Starting...
```

At this point press the **G** key, otherwise a local boot will occur after a few seconds.

Dual Boot PC

If the PC has both MCS Windows and MCS Linux available then you will be shown a boot menu:

```
Select boot option:

   MCS Windows
   MCS Linux

   Reimage (restricted)
```

Choose **Reimage (restricted)** from the menu. *As a shortcut you can simply press the **G** key.*

Stage 2 - WinPE Boot

Firstly, you'll see some messages about Encapsulating parts of the boot loader and the WinPE image. This may take several seconds before a **Windows is loading files...** progress bar appears. This bar will complete very quickly and then WinPE will start and attempt to detect the PC's hardware:
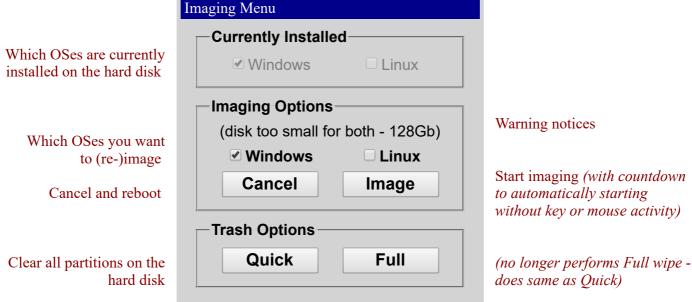
```
PC Imaging Status

   Detecting hardware...  (please wait)      [v3.0.15]
```

After a few seconds this will complete, the details of the PC shown and then you will be prompted to login:

```
Enter Imaging Credentials

   User:     e.g. fjc55
   Password: ********

        Login    Cancel
```

Use your **normal CRSid and Desktop Services password** (usually in sync with your Raven password) to proceed. If nothing is entered, after 5 minutes the PC will reboot.

Stage 3 - Imaging Menu

After examining the hard disk to determine the current installation state, the Imaging Menu will appear:

Which OSes are currently installed on the hard disk

Which OSes you want to (re-)image

Cancel and reboot

Clear all partitions on the hard disk

Imaging Menu

Currently Installed
☑ Windows ☐ Linux

Imaging Options
(disk too small for both - 128Gb)
☑ **Windows**   ☐ **Linux**
[**Cancel**]   [**Image**]

Trash Options
[**Quick**]   [**Full**]

Warning notices

Start imaging *(with countdown to automatically starting without key or mouse activity)*

(no longer performs Full wipe - does same as Quick)

Notes:

- Not all PCs are enabled for MCS Linux, so this option may be disabled
- An unchecked OS in Imaging Options will **not** be removed but simply not re-imaged. Therefore, checking just Windows on a PC with both already installed will just update Windows and leave Linux untouched
- A Quick Trash is only necessary when you wish to remove an OS, or when using a new disk

Stage 4 - MCS Deployment

When the **Image** button is clicked the a process will be followed depending upon the OSes selected and the current state of the disk:

1. **Trash and Reboot**
   If the disk is not already blank and partitions don't match those required, the disk will be wiped and the PC rebooted. On the next boot, the PC will re-enter the imaging system and automatically continue the rest of this process.

2. **Windows Setup**
   If Windows is selected, after preparing and formatting the Windows partition, Windows Setup will launch and show the installation progress. After several minutes, the PC will reboot to continue installation.

3. **Linux Deployment**
   If Linux is selected then the Windows installation will be interrupted at the reboot to install MCS Linux. This may require several reboots to complete before, if started, returning to continue the Windows installation.

4. **Windows Deployment**
   The Windows installation will complete followed by the deployment of applications and configuration that forms MCS Windows. This will take at least an hour and a number of reboots and when complete the Ctrl-Alt-Del prompt displayed.
   It's recommended leaving the PC for a while (e.g an hour) before logging in so that other updates (security, McAfee, Flash, etc) can complete in the background.