Hi all,

Something I’ve been tinkering with for a while as we and nearby schools I help out now have many school owned non CUA laptops along with some older unsupported PCs. I finally got a few scripts and xml’s together on a USB that do the following reliably:

1. An optional extractdrivers.ps1 script which will fish out all of the drivers from a pre-setup PC that has every device driver already present and pops them in the “Drivers” subfolder on the USB for imaging lots of each model. This needs to be done once per model of PC. Windows setup then looks in this folder to setup drivers for any devices when it loads using the unattended answer file “autounattend.xml” – see next step.

2. Two “autounattend.xml’s” which answer all the usual questions for a windows installs, adds drivers (if you’ve done step 1) from the USB subfolder and then autologins at the end and renames the device to the DoE standard using MS“MAC Address”. It uses the WiFi mac if it finds one and if not uses the ethernet MAC. It restarts then logs on one last time to the desktop and waits for you. 3. Run the Post\_Setup\_Script (run as administrator) that installs any other software you wish (a few examples on the script already but the source files from the install folder have been removed to save space – as a minimum I’d do McAfee and Office - both can be downloaded through the SSS links) and then joins the domain. If it finds an existing domain account for the computer, it re-joins to the same OU no choices given. If one does not exist it pops up a GUI to choose the OU of your choice (this is not my script but is very cool) then restarts. A “SSS” authenticating domain account required for the last 2 steps.

Gotchas:

The extractdrivers.ps1 extracts all the drivers it finds but places the ones not allocated to the device in a separate folder that you can delete to save space – browse through the “Drivers” subfolder on the USB after running this to find the unallocated folder and remove it.

To find a wired ethernet MAC it needs to be plugged in and live. This is because windows sets up lots of virtual ethernet connections (which are not the ones we want) and we want the real live one so my script looks for one with an IP set. For wireless devices this is not needed during windows setup.

If you don’t have a wired ethernet connection, then a USB to ethernet dongle is needed for the domain join bit right at the end of the post setup script (not needed after a few restarts and GPO has been deployed). It pauses here to ask if you wish to join the domain so you can connect it here only

I’ve scrubbed our encrypted passwords on the autounattend.xml files and just used a non-encrypted one “Password1”. Feel free to rectify this.

The 2 x domainjoin powershell scripts have a sitecode variable embedded in them. You will need to change this to your sitecode (currently it says 9999) right near the bottom – line 1505. The domain join and OU selection (if required) will need your credentials in the form “domaincolour\E-Number” as it extracts the domain details and auto-creates the OU structure from this. It will ask a second time for your password only if you need to choose an OU. No error checking here so try to type your creds correctly.

If the device to be imaged has more than 3 internal HDDs (or 2 HDDs and a DVDROM) then the driver setup and rename scripts may fail as it tries D drive then E drive then F drive only to read the USB as part of windows setup. You could probably insert a cool function that finds out its drive letter association on the fly. Oh well…

Your device may need to have secure boot disabled in BIOS to read the usb (still working on a fix for this). This can be renabled after setup. You hit F12 on startup (or whatever depending on the model) to choose the usb as the boot device as a one off boot (may also show up as a hard drive or older models) . I also have 2 x versions of the xml autounattend as pre 2011 PCs don’t have UEFI and need MBR to use HDDs. One xml works for UEFI and one for older MBR boots. MBR also needs the USB to be bootable as MBR while EUFI needs the usb to be bootable as GPT as well as setting up different partions on the PCs HDD depending on the age. I almost didn’t bother with really old PCs but wack an SSD in an old PC and with Windows 10 they still work great as student workstations that just do browsing and word editing and a school near me has loads of these. You will need to rename one of these to “autounattend.xml (as there are two I have suffixed one with UEFI for new devices and the other with MBR for older PCs).

So, get a copy of the win10 1803.iso from ‘SSS – External Links – Education Content’ along McAfee and Office 2016 (32 bit is the current DoE deployed version)

Use RUFUS (google this free download) to make a bootable USB with this image (USB needs to be 16GB or bigger and manually changed to MBR for older PCs pre 2011 or left at GPT for new ones)

Copy all the contents of the attached zip folder into the root folder of this USB and edit where required

Effectively you can now in just a few restarts from one USB:

1. Extract the drivers for each model you need (from one with ‘good to go’ drivers) in 10 minutes as a one off per model.
2. Load up windows from a bootable USB with drivers and auto-rename the PC (10 minutes)
3. Add software and join domain (5 minutes if I add McAfee and Office as a minimum). At the end of this step it offers to join the domain.
4. Wait 10 minutes for AD to push out all the GPOs. Restart again to get the last few bits of DoE GPO (such as the machine account wireless creds). This bit can take a few restarts and wait time if the network is busy.