PXE Booting HP SmartStart or Firmware Update CDs

For the purposes of this HowTo, we assume that we are working on a server with IP address 192.168.0.100. Substitute address in examples as needed.

1. Set up NFS, TFTP and DHCP servers.

Create the following directory structure:

```
/
├ ...
├nfsroot
│       ├fwupdate
│       └smartstart
├ ...
├tftproot
│       ├fwupdate
│       └smartstart
└ ...
```

Install TFTP server (e.g. tftpd-hpa), configure /tftproot as the root directory.

Install NFS server, add this line:

```
/nfsroot        192.168.0.0/255.255.255.0(ro,no_root_squash,async)
```

to /etc/exports. Change permissions as needed, read NFS documentation for more info.

Configure your DHCP server to pass appropriate options for PXE booting and configure the PXE menus as needed.

2. Make contents of the CDs available on the server

Either mount the SmartStart CD itself or copy and mount the ISO:

```
mount /dev/cdrom /mnt/cdrom
```

or

```
mount -o loop SS792.2008_0124.1.iso /mnt/cdrom
```

Copy the contents of the CD to the NFS server directory:

```
rsync -av /mnt/cdrom/ /nfsroot/smartstart
```

(use rsync to make sure all file permissions remain correct)

```
umount /mnt/cdrom
```

Copy initrd image & kernel to TFTP directory:

```
cp /nfsroot/smartstart/system/initrd.img /tftproot/smartstart/
cp /nfsroot/smartstart/system/vmlinuz /tftproot/smartstart
```

Repeat the same process for the Firmware Update CD

3. Set up PXE boot options

Add the appropriate menu items to /tftproot/pxelinux.cfg/default or a submenu of your choice.

```
LABEL smartstart
MENU LABEL ^SmartStart 7.92
KERNEL smartstart/vmlinuz
APPEND initrd=smartstart/initrd.img media=network rw root=/dev/ram0
ramdisk_size=91776 init=/bin/init loglevel=3 ide=nodma ide=noraid
pnpbios=off splash=0 debug console=ttyS0,115200n8 console=tty0
showopts iso1=nfs://192.168.0.100/nfsroot/smartstart/

LABEL fwupdate
MENU LABEL ^Firmware Update 8.00
KERNEL fwupdate/vmlinuz
APPEND initrd= fwupdate/initrd.img media=network rw root=/dev/ram0
ramdisk_size=127464 init=/bin/init loglevel=3 ide=nodma ide=noraid
pnpbios=off splash=0 debug console=ttyS0,115200n8 console=tty0
showopts iso1=nfs://192.168.0.100/nfsroot/fwupdate/
```

4. Update the bootrun script

The bootrun script on the Firmware Update CD does not function correctly when system is booted from network. You need to replace the /nfsroot/fwupdate/_autorun/bootrun script with the following:

```
#!/bin/bash

CDVOLNAME="HPFWUP"
CDTITLE="HPFWUP"

LCLSHELL="/bin/bash"

echo "/mnt/bootdevice" > /tmp/autorun_mtab

/bin/cat /tmp/autorun_mtab | while read MNTPT ; do
    MNTDEV=`df -k $MNTPT | grep $MNTPT | cut -d \  -f 1`
    echo "var cdrom = \"${MNTPT}/\";" > /tmp/cdrom.js
    echo "${MNTDEV}     ${MNTPT}" > /tmp/autorun_mtab2
  break
done

MNTDEV=`cat /tmp/autorun_mtab2 2>/dev/null | cut -f 1`
MNTPT=`cat /tmp/autorun_mtab2 2>/dev/null | cut -f 2`
CDLABEL=`cat $MNTPT/usb/sdgconfig 2>/dev/null | cut -f 1`

SS_CD_MOUNTPOINT=$MNTPT
HDU_BOOTENV_SMPJTB="yes"

export MNTPT MNTDEV CDLABEL SS_CD_MOUNTPOINT HDU_BOOTENV_SMPJTB

# Create script to unmount and eject CD
echo "umount -l $MNTPT" >> /tmp/cdrom_eject.sh
echo "reboot" >> /tmp/cdrom_eject.sh
chmod 777 /tmp/cdrom_eject.sh

cd ${MNTPT}/_autorun/
./bootar

exit 0
```