

Building BL35 or BL30 P class blades

The blades are HP Proliant BL35p models, but the process works the same for BL30ps and has been tested for both platforms using Windows 2003 standard edition, Altiris 6.1/6.5 as the deployment tool with SQL 2000 database back end.

The document is written on the basis that you have an image of windows 2003 standard edition already.

Before you begin – and what you will need

- 1 laptop – network settings set to
 - IP Address 192.168.1.2 / Sub Net Mask: 255.255.255.0
- Blade connector cable
- Cross over cable
- Network settings upon which you will configure the chassis/blade rack

How the build process is supposed to work

Leave all but the first blade unplugged from the chassis – this is important as this will prevent the Altiris database having duplicate/false entries in it.

The process works in the following way.

The blade chassis is given a range of fixed ip addresses for the rib board for each blade, with the actual blade network connection being provided by dhcp. The chassis is configured to hold up to sixteen blades using the standard blade configuration (BL30/BL35).

Blade	IP Address for RILO (examples)
One	192.168.0.10
Two	192.168.0.11
Three	192.168.0.12
Four	192.168.0.13
Five	192.168.0.14
Six	192.168.0.15
Seven	192.168.0.16
Eight	192.168.0.17
Nine	192.168.0.18
Ten	192.168.0.19
Eleven	192.168.0.20
Twelve	192.168.0.21
Thirteen	192.168.0.22
Fourteen	192.168.0.23
Fifteen	192.168.0.24
Sixteen	192.168.0.25

You configure the blade chassis so that it knows the blades and their rib cards, so that each blade is pre-configured for you to remotely connect to it during the build process (this is necessary)

Within the blade chassis you set the chassis and enclosure name, so that when you power them up and get them into altiris, they have logical names.

For example NY01 – Enclosure A, so that in altiris the blades will appear as NY01EnclosureA-01, the first blade in enclosure A in cabinet NY01.

(I always operated on A being the top enclosure in the cabinet, decide what way you want and stick to it, you don't want to pull out the wrong blade by accident)

You then start the build process. The build process is automatic as much as it can be, there is however manual intervention required in order to complete some tasks.

The build process

Insert blade 1 and connect to it with your laptop directly to the rib card, using the address 192.168.1.1, log in using the Administrator account and the rib card password which is on the back of the blade.

A wizard will appear, now you follow this process:

Stage 1	Connect to the rib board using your blade connector cable using 192.168.1.1 with the username and password supplied with the rib board. Welcome to blade set up Click next	Stage 1
Stage 2	ILO configuration set password to "mypassword" Enable DHCP no Enable static ip bay configuration yes Click next	Stage 2
Stage3	Static IP Bay Configuration Set the network details including beginning ip address ip address: 192.168.0.10 subnet: 255.255.255.0 default gateway: 192.168.0.25 Click apply – at this point the rib board will reset itself and log you out	Stage 3
Stage 4	Configure your blade RAID This might not apply if using the IDE drives Click cancel	Stage 4
Stage 5	Select BLP Class tab on the rib screen this is for the final configuration of the blade chassis and rack we now name the blades	Stage 5
Stage 6	Select rack view – clicking details on the cabinet enclosure Name cabinet name – set this to the cabinet name for example NY01 Enclosure Name – set this to the enclosure name and cabinet for example NY01 - Enclosure A Press apply to apply settings	Stage 6

Your rack is now configured. Power on the blade, and make sure it boots into Altiris, once it has within a few minutes it should appear below the new computers part labelled as NY01

Deploying the build image

Now plug in up to four of the blades. Once they appear in Altiris, move them to the temp build group. Now select the relevant job to install windows. (windows image for example)
The blade now speaks to Altiris and says any jobs for me; Altiris responds with yes and allocates it a drop image job. The blade effectively maps a network drive and images itself.

The blade images itself, syspreps and reboots.

Renaming the blade(s)

The blade has two names:

- The name it exists in altiris (for your database) this can be synchronized with windows name and is in the tools options menu.
- The windows name – the actual name you want it to be called.

Right click the temp build group:

- Select configure
- Select Microsoft networking
- Select name tab
- Type in the first name, leaving off the number of digits from the end of the name for the number of blades, for example: Blade001103001 was set to Blade011030 with the first name being 01.
- Now manually associate the names with the blades to ensure the correct names are assigned to the correct blade.

This will create an Altiris job like job45, and then rename the server and reboot it.

Joining the domain

The servers at this point are not a member of the domain. The build scripts do not join the domain automatically. Ensure there is a computer account for each blade to be joined to the domain.

Right click the temp build group and select configure:

- Select Microsoft networking tab
- Change tmpworgroup to domain
- Enter martins.network.win
 - Altiris is running under the account which has rights to join computers to the domain

This will create an Altiris job like 46 and then reboot the server.

Complete any additional common jobs

Completing the post build process

The blade image is windows 2003 base build with the layered components; you now need to configure it for Application specific jobs

Now drop the relevant configuration job on to the temp build group. This will configure the blade and reboot – Altiris will tell you when it's complete.

Cleaning up

The blades are now built as required; now the next batch has to be built.

Before you continue, create a group in Altiris for the cabinet you're configuring. For example NY01 – Enclosure A, and drag the blades you have just built into this group.

That way you can have folders like:

NY01

- NY01-Enclosure A
- NY01-Enclosure B
- NY01-Enclosure C

NY02

- NY02-Enclosure A
- NY02-Enclosure B
- NY02-Enclosure C

Appendix

Troubleshooting

Blade does not appear to have the correct name and is referred to as it's serial name or a strange number.

Power down the blade and remove it for a few minutes, then plug the blade back in – this may force the blade to accept the name from the chassis – if this doesn't work confirm chassis configuration

Blade doesn't work with Altiris anymore

Log on to the blade using the rib board and check that the blade has an ip address – there have been problems with the build 'grab; job, where a new blade is imaged for deployment, and Altiris unsuccessfully ghosts the image with old ip address values.

I want to rebuild the blade but it keeps booting into windows

Power down the blade and make sure you press F12 at the right moment; this will force it to do an Altiris/PXE/network boot. Else F9 options and reset both the NVRAM and the disks,

Oracle/Ingres ODBC or other error

Log on to blade manually and run the msi package from the blade itself – sometimes the package needs reinstalled.

Red light on backplane

Please note there is an element of risk with the following activity, thus do not attempt on production or business impacting systems without testing beforehand:

If there is a red light on the back of the enclosure try the following:

1. Shut down all blades
2. Remove all power supplies – just unplug them so there are no power lights
3. Reconnect them
4. Now check the rear of the enclosure

If the red light persists try:

There is a burgundy screw in the middle of the backplane which is removable and is basically as I understand it, the ILO bit, unplug it, and plug it back in, it kind of half comes off, this may reset the fault light.

The red light is still there – time to call HP.