System Hardware Setup

This document will outline the steps taken to configure the HP Proliant DL685c G7.

OS Installation

OS Installation is documented in the *SupportingFiless\Introduction\SWSetup\OSSetup.*

IO Card Installation

Only one card was installed in the server, the QLogic QMH2562 8Gb FC HBA for HP BladeSystem c-class. The board was installed on the mainboard in the slot labeled “MEZZ 01”.

When the blade enclosure is brought up, the ports on this Qlogic card will map to port 1 of both of the SAN switches in the blade interconnect bays, as shown here with screenshots from the Onboard Administrator interface of the blade enclosure:

Port Mapping - Interconnect Bay 3

Interconnect Bay Port	Port Status	Device Bay	Server Mezzanine Slot	Server Mezzanine Port	Device ID
1	OK (connected)	Bay 1	Slot 1	Port 1	50:01:43:80:06:2f:ca:50
2	No connection				
3	No connection				
4	No connection				
5	No connection				
6	No connection				
7	No connection				
8	No connection				
9	No connection				
10	No connection				
11	No connection				
12	No connection				
13	No connection				
14	No connection				
15	No connection				
16	No connection				

Port Mapping - Interconnect Bay 4

HP B-series 8/12c SAN Switch
BladeSystem c-Class

Interconnect Bay Port	Port Status	Device Bay	Server Mezzanine Slot	Server Mezzanine Port	Device ID
1	OK (connected)	Bay 1	Slot 1	Port 2	50:01:43:80:06:2f:ca:52
2	No connection				
3	No connection				
4	No connection				
5	No connection				
6	No connection				
7	No connection				
8	No connection				
9	No connection				
10	No connection				
11	No connection				
12	No connection				
13	No connection				
14	No connection				
15	No connection				
16	No connection				

Physical Disk Connections

The server itself has only two disks, forming a RAID1 pair through the onboard SmartArray P410i.

NIC Connections

The Onboard 10g FlexFabric NICs mapped to ports 1 and 9 in the onboard BbE2c Layer 2/3 Ethernet Blade switches. The diagrams below also show the mapping for the 4 middle tier clients. Two of the onboard 10g Nics were configured with private network subnet addresses that were used solely for data base traffic. The other two were left to default for admin access and for monitoring during the runs.

NIC properties for the ports used for admin access were left to the defaults. For the DB traffic nics, the following was modified in the NIC Properties:

Interrupt Moderation – 6 Adaptive Lowest Int/sec

TCP Offload Optimization – Optimize Latency

All other properties were left to the defaults.

Port Mapping - Interconnect Bay 1

GbE2c Layer 2/3 Ethernet Blade Switch

Interconnect Bay Port	Port Status	Device Bay	Server Mezzanine Slot	Server Mezzanine Port	Device ID
1	OK (connected)	Bay 1	Embedded	Ethernet MAC Port 3-a iSCSI/FCoE MAC Port 3-b FCoE WWN Port 3-b	18:A9:05:5D:C4:E2 18:A9:05:5D:C4:E3 10:00:18:A9:05:5D:C4:E3
2	No connection				
3	No connection				
4	No connection				
5	No connection				
6	No connection				
7	No connection				
8	No connection				
9	OK (connected)	Bay 1	Embedded	Ethernet MAC Port 1-a iSCSI/FCoE MAC Port 1-b FCoE WWN Port 1-b	18:A9:05:5D:C4:DA 18:A9:05:5D:C4:DB 10:00:18:A9:05:5D:C4:DB
10	No connection				
11	OK (connected)	Bay 11	Embedded	Port 1	00:26:55:83:B9:D8
12	OK (connected)	Bay 12	Embedded	Port 1	00:26:55:83:3A:00
13	OK (connected)	Bay 13	Embedded	Port 1	00:26:55:7D:2C:28
14	OK (connected)	Bay 14	Embedded	Port 1	00:26:55:83:D9:B8
15	No connection				
16	No connection				

Port Mapping - Interconnect Bay 2

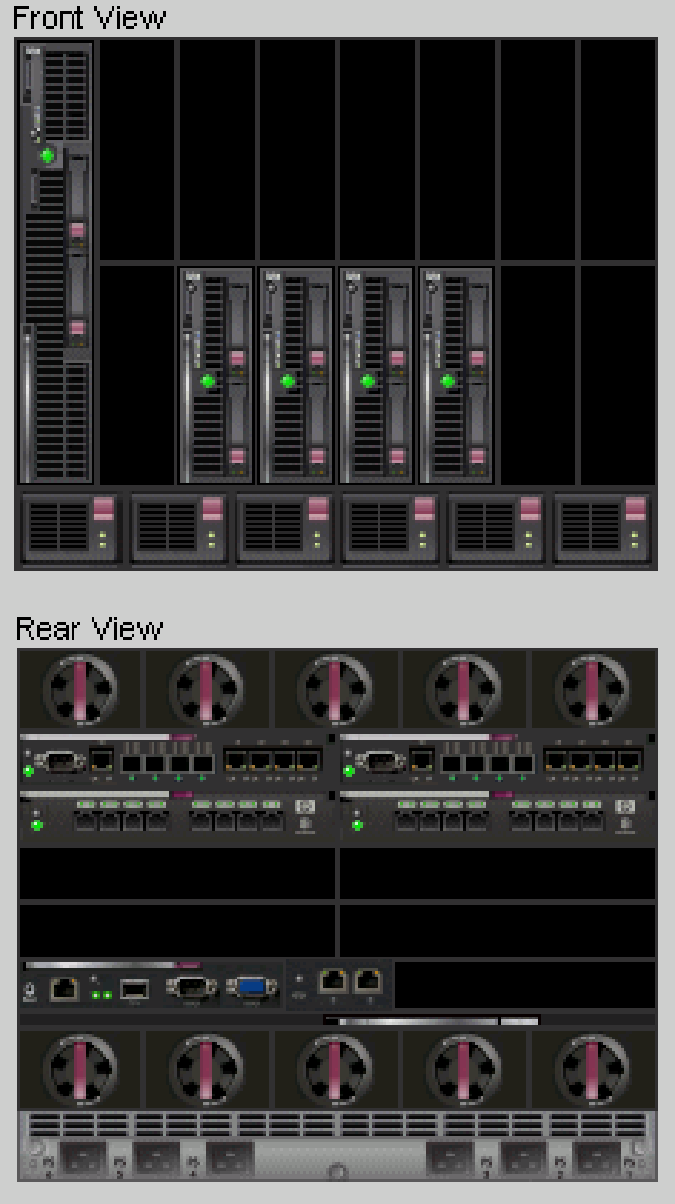
GbE2c Layer 2/3 Ethernet Blade Switch

Interconnect Bay Port	Port Status	Device Bay	Server Mezzanine Slot	Server Mezzanine Port	Device ID
1	OK (connected)	Bay 1	Embedded	Ethernet MAC Port 4-a iSCSI/FCoE MAC Port 4-b FCoE WWN Port 4-b	18:A9:05:5D:C4:E6 18:A9:05:5D:C4:E7 10:00:18:A9:05:5D:C4:E7
2	No connection				
3	No connection				
4	No connection				
5	No connection				
6	No connection				
7	No connection				
8	No connection				
9	OK (connected)	Bay 1	Embedded	Ethernet MAC Port 2-a iSCSI/FCoE MAC Port 2-b FCoE WWN Port 2-b	18:A9:05:5D:C4:DE 18:A9:05:5D:C4:DF 10:00:18:A9:05:5D:C4:DF
10	No connection				
11	OK (connected)	Bay 11	Embedded	Port 2	00:26:55:83:B9:DC
12	OK (connected)	Bay 12	Embedded	Port 2	00:26:55:83:3A:04
13	OK (connected)	Bay 13	Embedded	Port 2	00:26:55:7D:2C:2C
14	OK (connected)	Bay 14	Embedded	Port 2	00:26:55:83:D9:BC
15	No connection				
16	No connection				

Client Hardware Setup

The 4 Clients required no special hardware setup. They were delivered with 2 4-core processors, 8 gb of memory, an onboard P410i SmartArray, 2 73GB SAS drives for boot, and 2 integrated 1 Gbps NICS.

A clean install of Windows Server 2008 R2 Standard Edition was done on each system from CD. After bring-up and renaming of the server, the NICS were configured. Both were present on the onboard GbE2c Layer 2/3 Ethernet Blade Switches. See above diagrams for the mapping, which is the default. One NIC was configured with a private network address for DB traffic as noted in the server above, and the other was left to default for admin access. Other than IP address, no other changes were done to the client onboard NICS.

Overall System Picture

The following is a diagram of the front and back of the blade enclosure as tested. The top picture shows the Server blade on the far left and the 4 client blades, and the bottom shows the interconnect bays on the back. From the top you see fans, the Ethernet switches, the 8gb fiber switches, 2 blank rows (unused) the video interface and nic interface for the Onboard Administrator, more fans/power supplies, and plugs