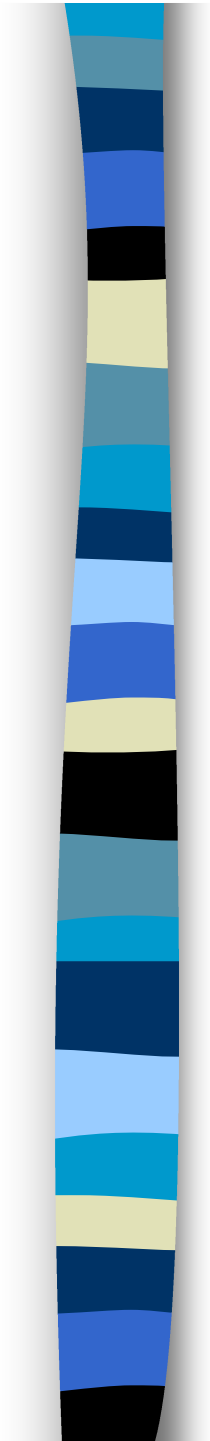


Cluster MUST - juin 2007

- Infrastructure
- Accounting





Infrastructure

- Pool de 9 serveurs IBM (services de grille et de management)
 - Portail de soumission (lappuds1)
- Stockage (SAN)
 - filesystem GPFS 3.1
 - Héberge les home directory



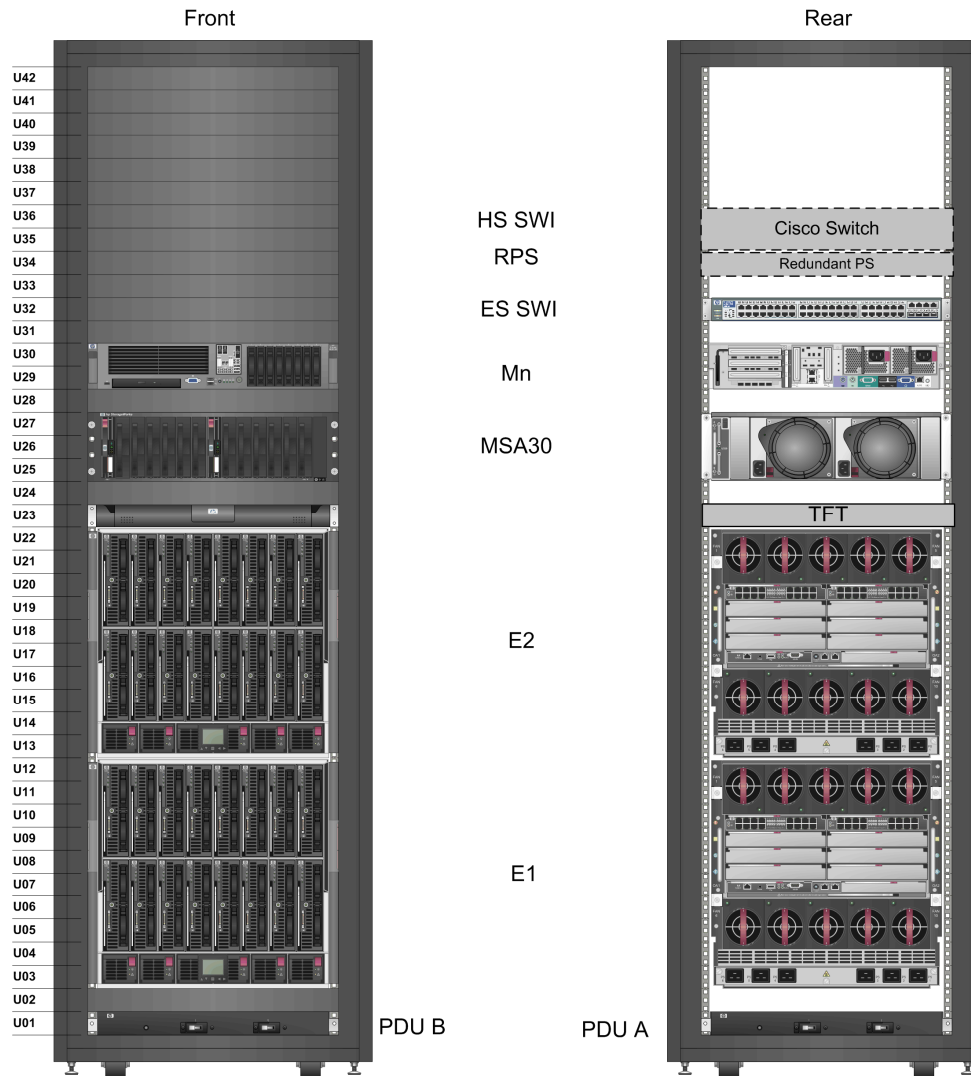
Infrastructure

■ Cluster HP pour le calcul

- Serveur HP DL380 (bi-processeur)
 - Monitoring, accounting, contrôle des machines et services
- Worker nodes (noeuds de calcul)
 - 2 Blades HP de 16 lames BL460c
 - 2 CPU par lames, 2 « cores » par CPU
 - ➔ 128 « cores »
 - 2 Go par « core »
 - 2 DD 70Go SAS par lame
 - Intel Woodcrest (xeon 5150) à 2.66 GHz
 - Deux interconnexions Ethernet 1Gb/s par lame
 - Bon rapport puissance/consommation électrique/encombrement

Rack de serveurs blades HP

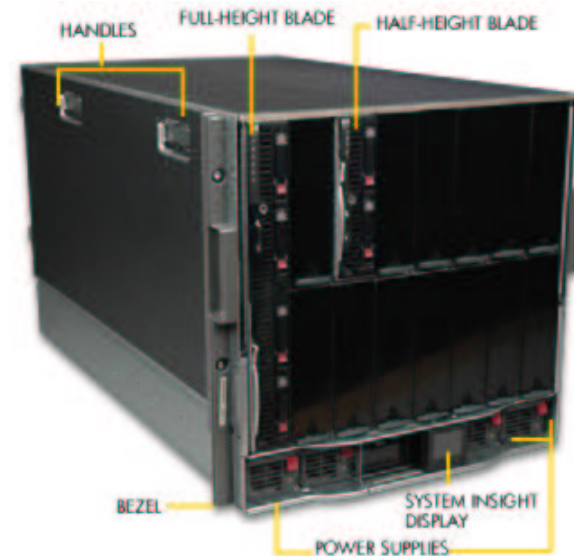
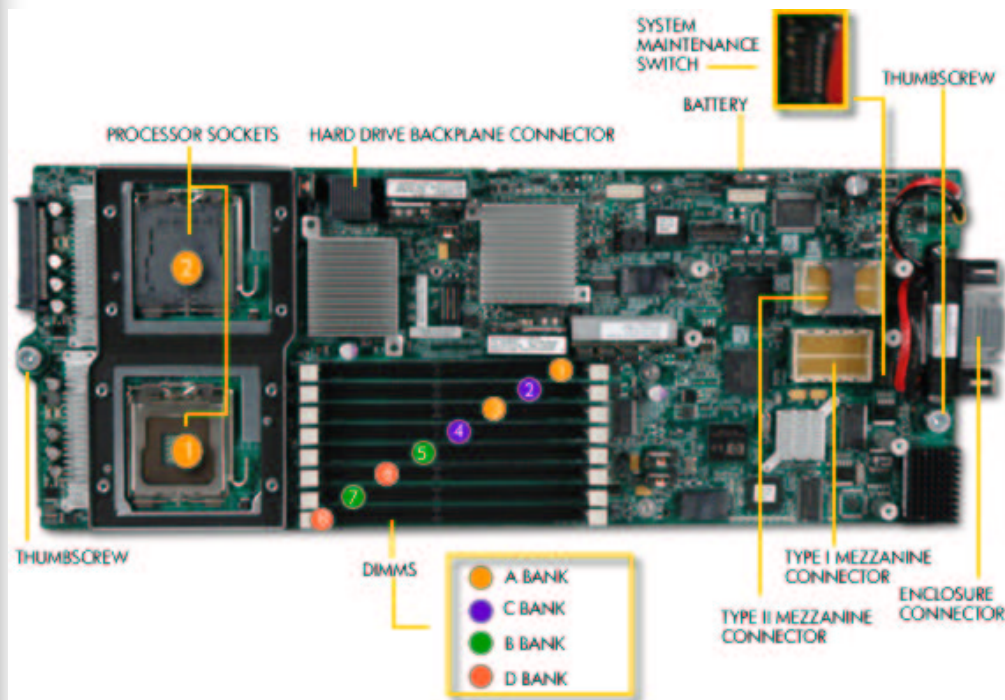
Cab1



☐ ~ 640 Kg

☐ >10000 Watt

Blades Enclosures : C7000 et BL460c



- 10 U enclosure
- 16 half-height blades

Enclosure

Avant

Server Bays



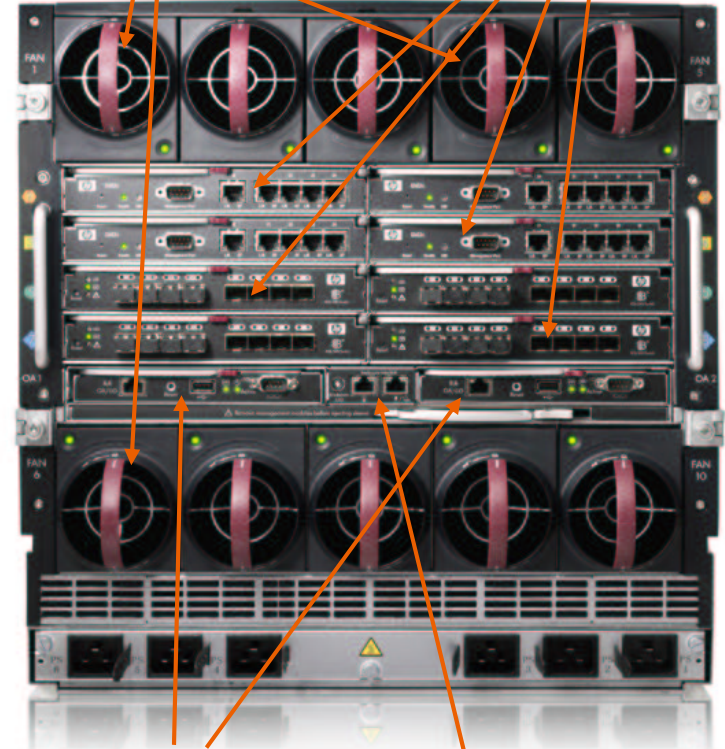
Power Supplies

Insight Display

Arrière

Fans

Interconnect Bays



Onboard Administrators

Enclosure Links



Infrastructure

- Cluster HP pour le calcul
 - Management pour carte BMC (Baseboard Management Control)
 - Via réseau annexe indépendant du réseau «standard».
 - Pilotage de l'espace processeur (on/off).
 - Récupération d'information hardware (température, consommation électrique,...).
 - Management des paramètres de l'enclosure et des lames.

Infrastructure

The screenshot displays the HP Onboard Administrator web interface in a Mozilla Firefox browser window. The browser's address bar shows the URL <https://10.158.103.2/>. The page title is "HP Onboard Administrator".

The interface is divided into several sections:

- System Status:** Located at the top left, it shows a "View Legend ..." link and a "System Status" row with five icons (red X, yellow triangle, blue exclamation mark, blue question mark, and blue circle) and corresponding numerical values (0, 0, 0, 0, 0).
- Systems and Devices:** A sidebar on the left containing a "Rack Overview" section with links for "Encl_Haut" and "Encl_Bas". Below this are two expandable sections: "Enclosure: Encl_Haut" and "Enclosure: Encl_Bas", each with a list of sub-items like "Enclosure Information", "Enclosure Settings", "Active Onboard Administrator", "Device Bays", "Interconnect Bays", "Power and Thermal", "Users/Authentication", and "Insight Display".
- Rack Overview - Rack1:** The main content area, featuring tabs for "Rack Topology" and "Rack Power and Thermal". It displays two enclosure views: "Enclosure: Encl_Haut" and "Enclosure: Encl_Bas". Each enclosure view includes a "Front View" and a "Rear View" image of the server rack. To the right of each view is a metadata table:

| Enclosure Name | Serial Number | Part Number | Asset Tag | UID State |
|----------------|---------------|-------------|-----------|-----------|
| Encl_Haut | GB67044.JVM | 412152-B21 | | Off |
| Encl_Bas | GB67044.JW2 | 412152-B21 | | Off |

Below the metadata, there are status indicators for "Insight Display" (showing a green icon) and "Linked - Logged In" (showing a server rack icon).

The bottom of the browser window shows the Windows taskbar with the "démarrer" button and several open applications, including "Intranet Servi...", "HP Onboard A...", "Courrier entra...", "Cominfo-mai-2...", "comite-pilotag...", "Exceed", "root@lapp00...", and "fede@lapp-qu...". The system clock in the bottom right corner shows "13:54".

Infrastructure

The screenshot displays the HP Onboard Administrator web interface in a Mozilla Firefox browser window. The browser's address bar shows the URL <https://10.158.103.2/>. The interface includes a navigation menu on the left with categories like System Status, Systems and Devices, and Enclosure: Encl_Bas. The main content area is titled "Fan Summary" and contains a "Fan Summary" table, a "Rear View" image of the server's fan array, and a "Refresh" button. The "Fan Summary" table lists 10 fans, all with a status of "OK" and a fan speed of 40% of maximum. The "Rear View" image shows 10 fans arranged in two rows of five. The "System Status" section at the top left shows a "View Legend ..." and "System Status" indicators (0 0 0 0 0 0). The "Enclosure: Encl_Bas" section on the right shows "Front View" and "Rear View" images of the server enclosure.

System Status

View Legend ...

System Status: 0 0 0 0 0 0

Systems and Devices

Rack Overview

- Encl_Haut
- Encl_Bas
 - Active Onboard Administrator
 - Device Bays
 - Interconnect Bays
 - Power and Thermal
 - Power Management
 - Enclosure Power Allocation
 - Power Meter
 - Power Supplies
 - Fans
 - Fan 1
 - Fan 2
 - Fan 3
 - Fan 4
 - Fan 5
 - Fan 6
 - Fan 7
 - Fan 8
 - Fan 9
 - Fan 10
 - Users/Authentication
 - Insight Display

Enclosure: Encl_Bas

- Enclosure Information
- Enclosure Settings
- Active Onboard Administrator
- Device Bays
- Interconnect Bays
- Power and Thermal
- Users/Authentication
- Insight Display

Fan Summary

Thermal Subsystem Status: ✔ OK

Redundancy: Redundant

Fan Location Rule: 10 Fan Rule

Rear View

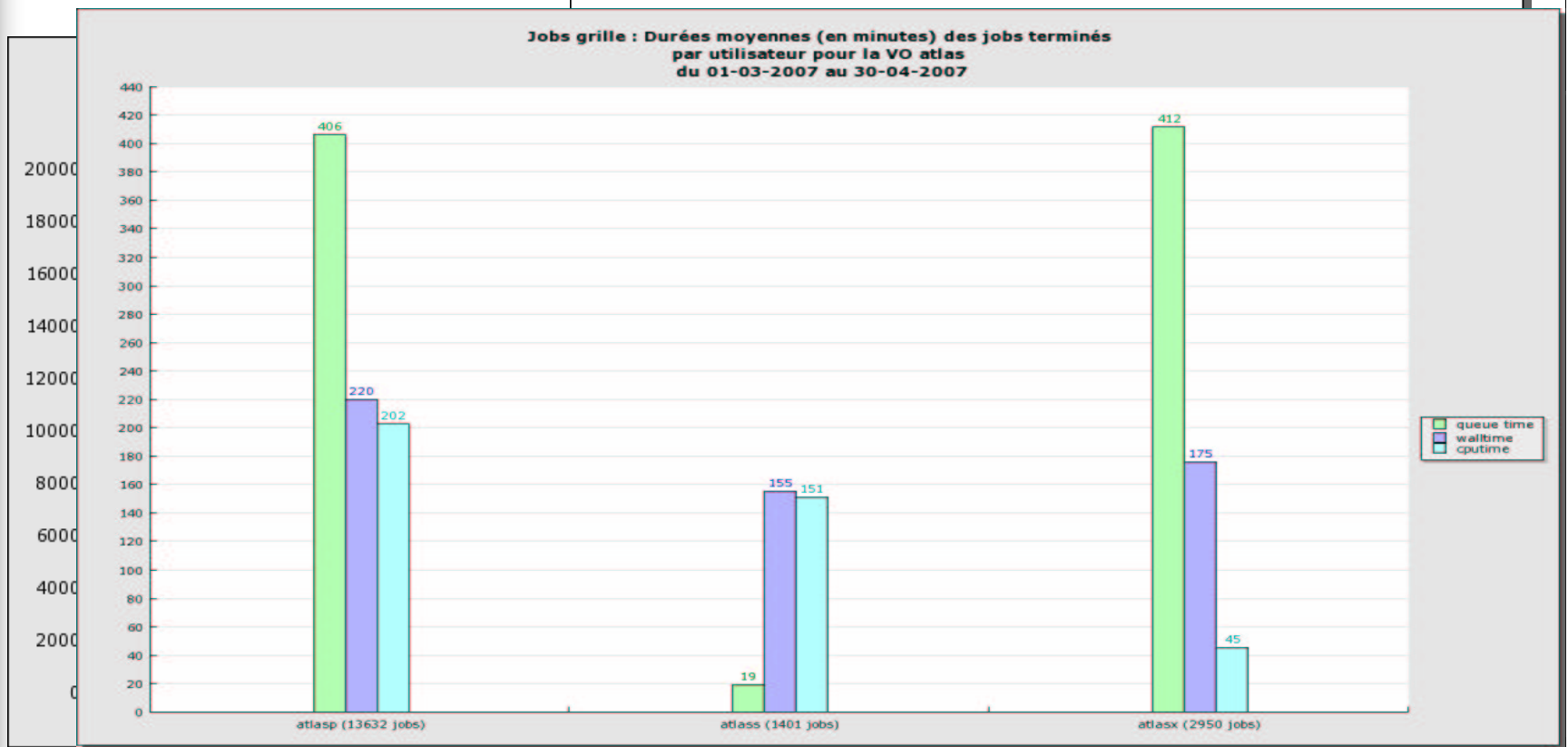
| Fan | Status | Fan Speed (% of max) |
|-----|--------|----------------------|
| 1 | ✔ OK | 40% |
| 2 | ✔ OK | 40% |
| 3 | ✔ OK | 40% |
| 4 | ✔ OK | 40% |
| 5 | ✔ OK | 40% |
| 6 | ✔ OK | 40% |
| 7 | ✔ OK | 40% |
| 8 | ✔ OK | 40% |
| 9 | ✔ OK | 40% |
| 10 | ✔ OK | 40% |

Refresh

Terminé 10.158.103.2

Activité de MUST

Répartition des jobs terminés par groupe du 01-03-2007 au 30-04-2007



L'outil d'accounting est accessible via le lien suivant :

http://lappweb.in2p3.fr/informatique/GRID/accounting_mensuel/