

WLCG Service Incident Report – Cooling Failure at PIC 14 May 2009

Problem description

On the 14th May 2009, around 15h, there was an emergency at the PIC machine room because the cooling equipment stopped working due to a power cut. At that time we didn't have any information about the root cause of that electrical incident, so we took the decision to stop the whole PIC site in order to avoid an ungracefull poweroff on our equipment.

One hour and a half later, about 16:30, the electrical maintenance supervisor validated the power estability on the building infrastructure equipment, so we proceed to start PIC site. About 19:00 all PIC services where up again.

The cause of this electrical incident was due to an error in the instalation which supply power to the building infrastructure. This problem was permanenetly solved on friday (15h May)

Time line of the incident

- 14:50 - The cooling equipment stopped
- 15:10 - We begin to shut down manually the main PIC services
- 15:20 - MoD sends an e-mail to pic-users notifying that all of the services at PIC have stopped due to an emergency.
- 15:20 - MoD sets an unsheduled downtime for PIC at the GOCDB
- 15:40 - PIC site is completely stopped
- 16:30 - Power estability on the cooling system is confirmed and we proceed to start PIC.

Detailed start up:

Most of the services could be restarted normally however some issues were found:

- Oracle: databases were stopped gracefully but the cabin poweroff was not clean. Because of that, we had to configure a raw device manually for FTS database before starting that service.
- Storage: Some problems to start Enstore service because tapeservers where started back before our IBM robot was completely up. It was necessary to reboot both services.
- Computing: 16 workernodes from the same HP c7000 Blades, initiated a reinstalacion when started due an human error. On two of them, the instalation

finished unsuccessfully and acted as black holes causing errors in SAMtest until 2:00.

- Bacula backups: Some manual intervencion was requiered because the storage daemon couldn't dismount a tape before the poweroff.

Follow-up

- Accelerate the deployment of a tool to stop PIC services as fast as possible in a gracefull way (ticket 5634).
- MoD laptop didn't have good coverage to connect to UAB wifi. We should ensure that the actual provider has coverage in our offices in order to send the broadcast as soon as possible.
- Collect information about the UPS in order to distinguish if an electric incident has any impact on the machines room or in the cooling system.
- Review if it's possible to trigger an alarm when there are workernodes acting as black holes.