



Contribution ID: 420

Type: oral presentation

Running CE and SE in a Xen-virtualized environment

Thursday, September 6, 2007 5:30 PM (20 minutes)

SFU is responsible for running two different clusters - one is designed for WestGrid internal jobs with its specific software and the other should run Atlas jobs only. In addition to different software configuration the Atlas cluster should have a different networking configuration. We would also like to have a flexibility of running jobs on different hardware. That is why it has been decided to run two clusters in virtualized environments.

Extensive tests of running CE and SE in a Xen-virtualized environment have been performed. The following configuration has been selected for CE. The performance of Xen virtual machines has been found to be excellent.

Each WN is running two virtual machines - one is running internal WestGrid jobs and the other is running Atlas jobs. Moab is scheduling jobs for both clusters. We work closely with Cluster Resources on different moab configurations. We plan to implement memory management when Moab changes the amount of assigned memory between two virtualized WNs running on the same hardware. We plan to create an automated system of Xen images replication from one piece of hardware to another. An optimal Xen and Moab configuration for a heterogeneous clusters should be developed.

Different tests of running dcache SE in Xen environment have been performed.

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Session Classification: Computer facilities, production grids and networking

Track Classification: Computer facilities, production grids and networking