

CVMFS Scalable Software Distribution - Extending beyond WLCG

Thursday, 11 April 2013 16:30 (30 minutes)

Impact

CVMFS has the potential to simplify software distribution beyond the existing grid. In particular, it can solve the problem of frequently updating VM images in clouds. If software is stored in and distributed by CVMFS then VM images need only be updated for major new functionality and security issues.

Summary

CernVM-FS (CVMFS) has hugely simplified the distribution of experiment software across the Worldwide Large Hadron Collider Grid. CVMFS is starting to be used by non-LHC VOs on the WLCG grid. The same model could be used across a wider range of computing resources - perhaps most usefully for the range of cloud platforms being developed and used. This session will discuss what would be required both by users and resource providers.

Description

CernVM-FS (CVMFS) has hugely simplified the distribution of experiment software across the Worldwide Large Hadron Collider Grid. Based on standard technologies, fuse and https with using squid proxies to provide resilience & scalability, it has proved itself to be scalable and more manageable than installing software on local software servers at all sites. The RAL Tier 1 is not providing a Stratum 0 (root repository) for non LHC VOs. The same infrastructure could be extended to support use across a wider range of computing resources - perhaps most usefully for the range of cloud platforms being developed and used. This session will discuss what would be required both by users and resource providers.

The experience in WLCG is that updates to experiment software are available across the grid much more quickly, and at many sites performance has improved as the bottlenecks on overloaded software servers have been removed.

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