OASIS Workplan

# Summary

This document outlines the work needed for an initial version of the OASIS service, effort estimates for each work item, and a proposed timeline.

This is based on the OASIS design document <http://www.usatlas.bnl.gov/~caballer/files/oasis/oasis.pdf> and the proposed hardware deployment document.

Effort estimates are personnel time (1 day = amount of time to complete task, assuming employee works for entire time period without interruption), not calendar time.

We define three milestones:

1. **Beta release**: A limited set of users can login to the interactive nodes. They can write into OASIS, and their software is exported through CVMFS through a web endpoint. The web endpoint is subject to change, the authorizations are manually maintained, and the publishing process is cron-based. Backups and mirrors are not functional. No quality or performance guarantees are made. Install and configuration process is not automated. Available to testers and NOVA. Deployed at a limited number of “partner sites”.
2. **Initial release**: All the items listed in the “major tasks for initial release” section are completed. We guarantee the endpoint will not change so general OSG sites can deploy. No SLA is in place. Open for VOs upon request. Start requesting OSG sites to deploy client.
3. **Second release**: Deploy additional monitoring and performance enhancements in the form of squid caches. Put SLA in place. Remote submission interface is enabled. Deploy fixes for issues found in the initial release. Widely advertised to VOs and sites.

# Major Tasks for Beta Release

Note: Estimates done by Brian Bockelman and have not been reviewed by corresponding area coordinators.

1. Procure OASIS hardware. During this time ITB instances can be made to work through installation issues. Operations will order and rack one high quality server (to act as interactive and and Tier-0 VMs) one storage device (to act as storage targets). (1 month).
   1. While we are waiting for new equipment it is suggested ITB instances be brought online to work though installation and setup issues.
2. Deploy OASIS hardware. Skipping the mirror, we need two OS instances and three storage targets. (1 week GOC)
3. Deploy GSISSH service with hand-maintained grid-mapfile. (1 day GOC)
   1. Provide sudo access to OSG Technology staff so they can help debug.
4. Configure rsync daemon. Configure rsync to sync from interactive to master. Verify pubkey and host-based security. Verify minimal set of directories are exported. (1 day GOC)
5. Setup cron-based CVMFS publishing. Install CVMFS server software. Every two hours, run the CVMFS publishing script to regenerate the web directories (3 day GOC).
6. Deploy configurations at HCC’s Tusker resource. (1 day OSG-Technology)
7. Verify end-to-end functionality. (3 days, OSG-Technology)
8. Debug any issues (1 week OSG-Technology).

# Major Tasks for Initial Release

Note: Estimates done by Brian Bockelman and have not been reviewed by corresponding area coordinators.

1. Deploy OASIS hardware. One additional OS instance and storage target compared to the beta. (3 days GOC)
2. Extend OIM to manage the user authorization for OASIS login. (2 weeks GOC)
   1. Includes maintaining the list of authorized VOs.
   2. Includes “pushing” changes to the login node. Script will need to update grid-mapfile and create necessary directories in /cvmfs/oasis.opensciencegrid.org.
   3. Verify on ITB
3. Package and verify the OASIS daemon.
   1. Packaging into RPM for release via OSG Software (3 days OSG Technology / BNL; 1 day OSG Software).
   2. Externally verify configuration and installation of daemon (1 day GOC).
   3. Extra effort to fix issues (1 week OSG Tech/BNL, 1 day GOC).
4. Configure Condor. Configure a Condor install on master instance. Should work with Condor-cron for publishing.
   1. Write Condor configuration and initial rsync script. (1 day GOC, 2 days OSG Technology / BNL).
   2. Have Condor expert verify security of deploy (1 day OSG Technology)
5. Configure rsync daemons. Configure rsync to sync from web to mirror targets. Verify pubkey and host-based security. Verify minimal set of directories are exported. (1 day GOC)
6. OASIS Health Monitoring. (1 week GOC)
   1. Existence of oasisd, Condor, gsisshd, and rsyncd daemons.
   2. Primary and mirror HTTP servers are externally accessible.
   3. Disk space available is above threshold (100GB?).
   4. Publishing has completed in the last 6 hours.
   5. Rsyncs (interactive to master; web to mirror) have completed in the last 6 hours.
7. OASIS Service Monitoring. Basic Cacti/Munin/Ganglia-type monitoring of the hosts. Daily summaries of usage of HTTP services based on client domain. (1 week GOC)
8. Record configurations in puppet / GOC deployment. All host configuration information is to be handled by the puppet daemon. (1 week GOC)
   1. Includes writing the necessary GOC-internal documentation about deployment.
9. Configure and verify backup process of the master target. ???
10. Release OASIS client to OSG. Provide an RPM containing CVMFS configuration files and OSG public key. (1 week OSG Software).
    1. Includes adding OASIS client as a dependency for the osg-client and osg-wn-client packages.
    2. Includes online documentation for sysadmins.
11. Change OSG-CE to export the $OASIS environment variable. Software installed by $VO should be exported at $OASIS/$VO. (1 day OSG software)

# Second Release

Note: No effort estimates yet given – let’s focus on the initial release.

1. Enable remote job submission (GRAM or Condor-CE based).
2. Deploy squid forward proxies for service.
3. Evaluate and possibly deploy Frontier-based squid monitoring.
4. Perform “fire drill” –rebuild each service from scratch.
5. Fixes based on issues found in initial release.
6. Write SLA.

# Timeline

This section will be filled in after others are able to review the work plans and effort estimates. However, we have the following targets:

* Beta release to be available first week of December.
* Target initial release during the last week of January?
* Target second release for the OSG AHM 2013.