OSG – Steering Board

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Focus on three Issues today

- G7.5 “Define a replacement path and schedule for gridFTP and GSI
  - Joint milestone with DOMA
- G7.9 “Complete the OSG Operations transition … and update OSG SLAs”
- G7.13 “Evaluate use of data federation software and configuration by US ATLAS and US CMS”

Globus "Migration" Strategy and Schedule

- A detailed plan has been sent to the OSG-Council for comment, and will be presented to WLCG in a couple weeks.
  - The US LHC Ops Programs have received that plan via the Council. Same for the Tier-1s in the US.
  - This was also shared with ESnet, Internet2, and several of the NSF program managers related to OSG.
- We will go through the most important aspects in the next few slides.
  - If you want the full PDF of the plan as send to the council, I see no reason not to send it here too.
  - Or you can wait for the update at the WLCG meeting in a couple weeks?

Overview of Strategy (I)

GridFTP Protocol Transition Timeline

There are between 50-100 active GridFTP services according to topology in three different configurations: standalone GridFTP, GridFTP installed on a CE[4], and load-balanced GridFTP[5]. Before eliminating these installations, VOs will need to transition their usage of GridFTP to an agreed upon replacement.

Replacement

XRootD configured with HTTP/S and XRootD protocol support. It can be installed standalone or as a storage-element to load-balance requests and storage. In addition to the HTTP/S support, we plan to ship XRootD with at least the following plug-ins by default to satisfy data transfer requirements from US LHC:

- **Authorization**: LCMAPS (maintained by OSG for GSI; allows use of HTTPS but does not switch from X509), Macaroons (built-in to XRootD; enables SE-issued tokens), and SciTokens (shipped separately, enables VO-issued tokens. Mechanism to support WLCG tokens)
- **Third-party copy**: Built-in to XRootD.
- **CMSTFC**: (CMS-specific name translations for HTTPS or Xrootd protocol)
- **Rucio**: (ATLAS-specific name translations for HTTPS or Xrootd protocol)

These plugins work seamlessly with POSIX (using the multiuser plugin as necessary) or HDFS (a separate plugin).

Overview of Strategy (II)

HTCondor-CE

Incoming jobs submitted to HTCondor-CE and pilots running at the site report back to the site's HTCondor-CE collector are all authenticated via GSI and VOMS. These use cases are good candidates for SciTokens, which is supported in HTCondor 8.9.3.

Additionally, active HTCondor-CE's in the OSG report to the central collector using GSI authentication. For this use case, we will continue to make use of X.509 certificates with SSL-authentication available in HTCondor 8.9.2.

XRootD

XRootD standalone, storage element, and cache installations all use GSI to authenticate client reads/writes. The OSG Yum repositories currently ship an XRootD plugin that adds SciTokens support, which should be sufficient for client requests.

Additionally, data federation caches in the OSG report to the central collector using GSI authentication via HTCondor Python bindings. For this use case, we will continue to make use of X.509 certificates with SSL-authentication available in HTCondor 8.9.2.

High Level Schedule

- **August 22**: The first revision of this document is shared with the OSG Council.
- **August 31**: Incorporating feedback, a second revision of this document is sent to the OSG Council
- **August 31**: Beginning of OSG 3.5 release series (last release series depending on GCT).
- **August 31**: Including HTCondor 8.9.2 in the 'upcoming' repository (first HTCondor version with SciTokens support).
- **September 12**: Disseminate plan outline at the WLCG GDB & IRIS-HEP retreat.
- **October 2019**: OSG no longer carries OSG-specific patches for the GCT.[3] All patches are upstreamed or retired.
- **January 2020**: "GSI free" site demo. Show, at proof-of-concept / prototype level, all components without use of GCT.
- **July 2020**: All GCT-free components are in OSG-Upcoming.
- **January 2021**: OSG series 3.6, without GCT dependencies, is released.
- **January 2022**: End of support for OSG 3.5.

OSG SLAs for LHC

- We wrote one general SLA that applies to all services, and then provide for each service type a short document that spells out specifics to that service.
  - Software Repository
  - Topology (Registration authority and bookkeeping)
  - GRACC (Accounting and reporting to WLCG)
  - Message Broker
  - OASIS
  - PerfSonar
  - Web Pages with documentation etc.
  - CE Collector

Main Concern about SLAs

- Have we missed something that both experiments depend upon?
  - We will complete this for all services, including those only relevant to one or none of the LHC experiments, but priority goes to finishing SLAs for services both experiments use.
  - Especially, where are we going with XRootD?
    - We have an 18month milestone to evaluate common operations. We'd like to start that discussion now.

Evaluate Differences in XCache configurations between US ATLAS, US CMS, and OSG

- This is a 12 month milestone, and was accomplished a week ago.
- It provides a high level possible path towards a shared infrastructure common to ATLAS, CMS, and OSG.
- It is followed by another milestone 6 months from now to evaluate common operations.
- It is unclear to me that the experiments even want that !!!

Questions about XCache

- Are the experiments interested in receiving their XCache software from OSG?
  - As RPM or Container ?
  - With or without configuration ?
- Are the experiments interested in a common configuration such that an XCache instance could support more than one experiment?
- Are the experiments interested in a common operations team?

I am worried we are marching in a direction nobody wants !!!