OSG Area Coordinators

Network Monitoring Update: **August 27, 2014**

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Key Initiatives in Network Area

- OSG modular dashboard service / OSG network service
  - MaDDash (metrics GUI) and OMD (service checks) in place on OSG VM. (details later)
  - "Datastore" testing underway on OSG VM (details later)
  - Mesh-creation automation close to ready
- Improving perfSONAR-PS toolkit for OSG
  - perfSONAR 3.4rc3 out soon…release mid Sep-Oct 1
- Documentation updates: network tools & troubleshooting
  - Documentation on vulnerabilities and fixes added
- Outreach and community interaction
  - Kick-off meeting for "Networking and Transfer Metrics WG" set for Sept 8
  - Attended APAN meeting with two full-day sessions: perfSONAR and LHCONE. Strong interest in perfSONAR.
  - LHCONE using OSG MaDDash+OMD.

Top Concerns

- OSG Network Service into "production" and fully functional
  - Testing on OSG VM ongoing. Concern is we lost load tester.
  - Discussions ongoing between Brian, Soichi, Marian, Andy and Shawn
  - **Bottom line: Need a way to store and serve the data.**
- Automate creation of the mesh-config from OIM/GOCDB
  - Almost ready. Tweaking details but already have GOCDB+OIM info and JSON output
  - Shouldn't be a concern in a couple weeks ☺
- Getting clients for our OSG network service data
  - As soon as we have a datastore in OSG we need to begin providing user access to the data. Will need iteration to get this right. WLCG, ANSE and PuNDIT obvious users

Recent Accomplishments(1/2)

- Working with OSG Technology (Brian) on Datastore:
  - Brian created RSV probe that iterates through a mesh configuration, creating one "uploader" probe per pS host.
  - The uploader probe looks at the latest data in osgnetds.grid.iu.edu and queries the pS host for all metric data defined in the mesh. (Inserts into Esmond?)
  - Needs a small patch to RSV that isn't committed yet as well as verification to make sure all the data is there.
  - We don't have is a mechanism for doing planned scale tests; with Igor moving to industry, no one is assigned to this right now.
- Working with OSG Operations (Soichi) on Mesh-config+Monitoring
  - Soichi has implemented a cron script to download WLCG sites / endpoints from GOCDB and ingest to OIM's wlcg tables (upsert/remove).
  - Implemented mesh config administration GUI prototype on OIM.
  - Mesh-config is functional and can generate JSON information based upon GOCDB and OIM information. Needs further testing and tweaking but is close to ready
  - Have functional MaDDash and OMD test instances (perfsonar-itb.grid.iu.edu
  - GOC has installed a test Esmond (osgnetds) to assist datatstore work led by Brian.

Recent Accomplishments(2/2)

- In spring 2014 Michigan and Georgia Tech submitted a proposal to NSFs SSE program call PuNDIT.
  - "In this project we propose to leverage the ever-increasing amount of perfSONAR data being gathered worldwide to quickly identify network issues and, more importantly, localize them to the extent possible. Our initial target community is High Energy Physics which has been a leader in adopting and deploying perfSONAR for its needs. The PuNDIT project (Pythia Network Diagnosis InfrasTructure) will integrate and enhance several software tools needed by the High Energy Physics (HEP) community to provide an infrastructure for identifying, diagnosing and localizing network problems. In particular, the core of PuNDIT is the Pythia tool that uses perfSONAR data to detect, identify and locate network performance problems. The Pythia algorithms, originally based on one-way latency and packet loss, will be re-implemented incorporating the lessons learned from its first release and augmenting those algorithms with additional metrics from perfSONAR throughput and traceroute measurements."
- OSG provided a letter of Collaboration
- **It was funded and starts September 1!**

Near/Mid term items

- Working Network Datastore using Esmond
  - Still have target of LHCOPN meeting Sept 15-16 Ann Arbor
  - Need to figure out how to complete our plan…
- Automated creation of "mesh-configs" into production
  - Finish testing and verification.
  - Plan "cut-over" from existing mesh URLs to OSG
- As soon as v3.4 is released, UPGRADE all sites

==========Mid Term==========

- Identify and lobby non WLCG OSG sites to install PS
- Coordinate activities with PuNDIT and WLCG WG
- Using and improving the OSG network service
  - As sites upgrade and use the mesh, verify data, displays
  - Begin testing "clients" of OSG network metrics
    - Will require some API changes to get certain typical queries
- Continued documentation updates and additions
  - Maintain/update documented procedures

URLs of Relevance

- Network Documentation https://www.opensciencegrid.org/bin/view/Documentation/NetworkingInOSG
- perfSONAR-PS OSG Installation Instructions
  https://twiki.opensciencegrid.org/bin/view/Documentation/PerfSONARToolKit
- New 3.4 MA guide https://code.google.com/p/perfsonar-ps/wiki/MeasurementArchiveClientGuide
- Modular Dashboard Replacement Prototypes
  - http://maddash.aglt2.org/maddash-webui
    https://maddash.aglt2.org/WLCGperfSONAR/check_mk
- perfSONAR-PS Installation Motivation:
  https://twiki.grid.iu.edu/bin/view/Networking/WhyPerfSNOAR
- Initial OSG mesh details http://confluence.grid.iu.edu/display/CENTRAL/Perfsonar+Mesh+Configs
- Esmond install info http://antg-dev.es.net/esmond-docs/rpm_install.html
- Mesh-config in OSG https://oim-itb.grid.iu.edu/oim/meshconfig

Questions or Comments?

Thanks!