OSG Area Coordinators

Network Monitoring Update: **April 22, 2015**

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Key Initiatives in Network Area

- Improving perfSONAR-PS toolkit for OSG
  - perfSONAR 3.4.2 widely deployed (180 out of 233 on 3.4.2)
  - Track details at http://grid-monitoring.cern.ch/perfsonar_coverage.txt
- OSG modular dashboard service / OSG network service
  - "Datastore" in pilot state.   Debugging RSV probes/datastore
- Documentation updates: network tools & troubleshooting
  - Clarified install details. Updated OSG command line tools page
- Outreach and community interaction
  - Participated in WLCG and CHEP meetings. Presented on perfSONAR at both meetings last week.
  - Co-chairing WLCG Network and Transfer Metrics WG
    - Last meeting April 8 next meeting May 6
  - Ongoing meetings/interactions with perfSONAR developers
  - PuNDIT (OSG satellite) working with perfSONAR testbed in OSG. Testing Pythia (problem ID'ing) next week.

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Recent Accomplishments

- Version 3.4.2 of perfSONAR out and auto-updated at most sites
  - All known issues addressed; some sites still need to clean remnants of excessive logging
- Progress on datastore; production datastore hardware defined; getting pricing
- Code to publish network metrics to a message bus exists and being tested.
  - Proposed as a quick way to help debugging and allow easy access
- Numerous issues fixed/addressed for specific instances
  - Mis-configured; bad hardware; residual problems from 3.4.1; firewalls
- New effort from WLCG to follow-up with problematic perfSONAR instances started this week (6 month qualification task for ATLAS at 0.5 FTE)
- Updating of bandwidth and traceroute tests underway
  - Tested/debugged new metrics on OSG perfSONAR testbed last 2 weeks
  - Switching from Iperf to Iperf3; traceroute to tracepath
  - Transition this week; benefit is more information (MTU) and better metrics for BW
- New metrics on data-freshness implemented
- LHCONE point-to-point test-bed previewing "network control". Have Caltech, Michigan and Vanderbilt working with circuits via Internet2/Esnet. Adding UTA and Florida.

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Known Issues

- MaDDash using the datastore has filter issue (cells are not properly split top/bot)
- Esmond issues
  - Correct ways to query uncertain
  - Load issues being investigated
- Some perfSONAR instances "clogged" with remnants from 3.4.1 or before
- No easy way to configure meshes for non WLCG sites
- Underpowered perfSONAR instances (<4GB ram) having problems in some cases
- Some perfSONAR instances not auto-updating or not exposing all needed info.
- No way defined (yet) to migrate datastore (Esmond) to new hardware or to archive old data to different locations

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Top Concerns

- OSG Network Datastore is primary focus
  - Weekly meetings of a subgroup: target production by July
  - **Plan is in place to get to release**
  - Definition of hardware complete; awaiting details
  - Debugging of coverage and validity ongoing.
    - Intermittent BW data multiplication (x2 or x3) still occurring
    - Data matching between central datastore and remote has issues
    - Possible problems in time intervals in queries being explored…
  - **Proposal to update RSV pilots to publish to message bus at CERN. Would aid in debugging**
  - Have an extended group: (Edgar/OSG, Jorge/ANSE, Marian/WLCG, Henryk/WLCG/LHCb) investigating datastore loading, publishing, accessing issues.
- Still 41 instances with multiple problems or offline.
  - Follow-up started via ATLAS qualification task
- No easy way to get non-WLCG sites in meshes.
  - Would like to automate finding test-points by site
  - Need standalone mesh-config-util to allows sites control

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Questions or Comments?

Thanks!

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URLs of Relevance

- Network Documentation https://www.opensciencegrid.org/bin/view/Documentation/NetworkingInOSG

- Networking CLI tools: https://twiki.grid.iu.edu/bin/view/Documentation/Release3/NetworkPerformanceToolkit

- New Deployment documentation for both OSG and WLCG hosted in OSG (migrated from CERN)
  https://twiki.opensciencegrid.org/bin/view/Documentation/DeployperfSONAR

- 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

- Esmond install info http://antg-dev.es.net/esmond-docs/rpm_install.html

- Mesh-config in OSG https://oim.grid.iu.edu/oim/meshconfig

- perfSONAR homepage: http://www.perfsonar.net/

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