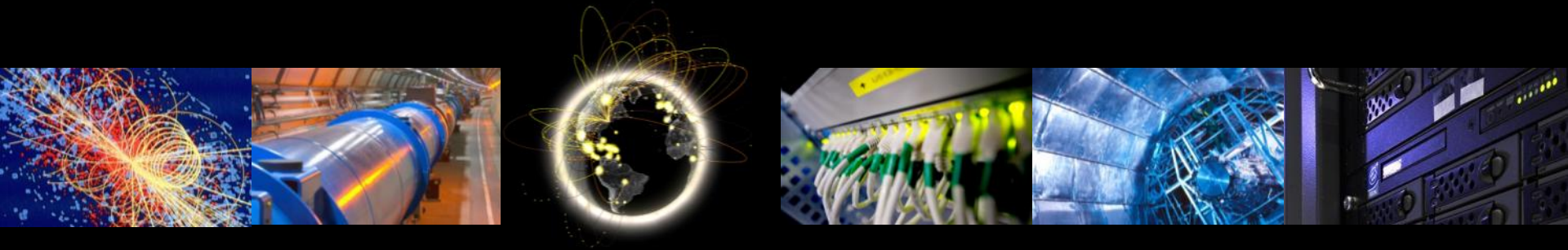


# Network and Transfer Metrics WG Meeting

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perfSONAR Operations Sub-group  
22<sup>nd</sup> October 2014



# Agenda

- See Indico meeting page  
<https://indico.cern.ch/event/347735/>
- Review actions from last meeting and discuss progress so far
- Documentation and testing of the perfSONAR 3.4 WLCG/OSG instructions (install/update, firewall, mesh configuration)
- IPv6 dual-stack configuration
- Discuss integration of Tier-3 sites
- CHEP2015 submission
- AOB and next meeting

# Recent Meetings Review

- Last report at GDB October 8<sup>th</sup>
  - See <https://indico.cern.ch/event/272778/>
- 3<sup>rd</sup> Oct: perfSONAR operations
  - Minutes at <https://indico.cern.ch/event/342995/material/minutes/minutes.html>
- Main action items status:
  - JIRA project (<https://its.cern.ch/jira/browse/METRICS-5>)
  - Security mailing list (created)
  - New GGUS SU request in place...Nov 5 operational
  - New docs in draft form (later in presentation)
  - Infrastructure monitoring – reports, migration to 3.4
  - Still need monitoring setup to use DN instead of PW
  - WLCG mesh configuration ‘migrated’ to OSG and v3.4 (<https://its.cern.ch/jira/browse/METRICS-7>)

# Draft Documentation for 3.4

- We have created a set of documentation to guide the 3.4 upgrade/reinstall process
  - See <https://twiki.opensciencegrid.org/bin/view/Documentation/DeployperfSONAR>
- **We need feedback on the contents.**
  - The troubleshooting and Experiment/API sections are not yet fleshed out
- Let's have a tour of what is there now...

# Testing Volunteers

- We will need at least two volunteers to test-out the instructions
  - Do they work?
  - Are they clear?
  - What is missing?
  - Anything need correcting?
- It is very important to make sure we provide the right set of instructions to sites
- Volunteers? **Email Shawn if you decide you are willing to try out the instructions**

# Dual Stack Information (IPv6)

- perfSONAR is viewed as an excellent way to begin exploring IPv6 by the experiments
- We are strongly recommending sites that support IPv6 configure their perfSONAR instances in “dual-stack” mode...adding IPv6 addresses
  - Each DNS name should have both an ‘A’ (IPv4) and ‘AAAA’ (IPv6) record
  - Reverse DNS should be configured for both
  - We have already configured all WLCG meshes to use ‘ipv4\_only’
  - Once we have a critical mass of IPv6 addresses in a mesh we can add another ipv6\_only mesh
  - Note tests can specify IP type:  
[http://docs.perfsonar.net/manage\\_regular\\_tests.html#manage-reg-tests-add-ip-type](http://docs.perfsonar.net/manage_regular_tests.html#manage-reg-tests-add-ip-type)

# Supporting Tier-3 Instances

- We have begun getting requests from Tier-3 sites to join the various Tier-1/Tier-2 meshes
  - This won't scale
- Tier-3 perfSONAR instances would benefit from a limited set of tests with sites that they normally interact with
  - A specific Tier-2 they work closely with
  - Other Tier-3s they work with
  - Their campus and regional network perfSONARs
- How should we support Tier-3's?
  - Do we provide Tier-3 meshes?
  - Do we give them the tools to create their own meshes
  - Just use manually configured tests?
  - Other ideas?

# CHEP 2015 Abstract

- The CHEP 2015 abstract was approved by both CERN IT and SDC
- Title: Integrating network and transfer metrics to optimize transfer efficiency and experiment workflows
- Author(s): S. McKee, M. Babik, Members of the Network and Metrics WG (S. Campana, T. Wildish, J. Closier, C. Grigoras, I. Vukotic, M. Salichos, Kaushik De, V. Garonne, J.A.D. Cruz, A. Forti, C. Walker, D. Rand, A. de Salvo, E. Mazzone, I. Gable, F. Chollet, H. Chen, U. Tigerstedt, G. Duckeck, A. Petzold, F. Lopez, J. Felix, J. Shade, M. O'Connor, V. Kotlyar, J. Zurawski)
- Abstract: The Worldwide LHC Computing Grid relies on the network as a critical part of its infrastructure and therefore needs to guarantee effective network usage and prompt detection and resolution of any network issues, including connection failures, congestion, traffic routing, etc. The WLCG Network and Transfer Metrics project aims to integrate and combine all network-related monitoring data collected by the WLCG infrastructure. This includes FTS monitoring information, monitoring data from the XRootD federation, as well as results of the perfSONAR tests. The main challenge consists of further integrating and analyzing this information so that it can be turned into actionable insight for optimization of data transfers and workload management systems of the LHC experiments.

The presentation will include technical description of the WLCG network monitoring infrastructure as well as results of the analysis of the collected data. It will also highlight how results of this analysis can be used in order to improve efficiency of the WLCG computing activities.

- [Comments](#) or suggestions?
- [Plan is to submit later this week.](#)



# Mesh Configuration Items

- With 3.4 we migrated the mesh URLs to OSG
- OSG Operations (Soichi) has developed a mesh-configuration GUI
  - Current OSG URLs redirect to CERN/AFS ones
  - We will need to reproduce the existing meshes in OSG. Each Cloud/VO responsible will need to do this.
  - We can cut-over transparently when ready
- Future mesh URL will look like this:
  - <http://myosg.grid.iu.edu/pfmesh/json/hostname/<FQDN>>
  - Example:  
<http://soichi6.grid.iu.edu/myosg/pfmesh/mine/hostname/psum01.aglt2.org>
  - This will allow automatically finding each instances meshes

# AOB and Next Meeting

- AOB including additional discussion and questions?
- We need to schedule our next meeting. It should be at least a week after we send out the 3.4 upgrade/install instructions.
  - We will circulate a Doodle poll link shortly via email
  - Remember to review draft docs and provide feedback
- Twiki
  - <https://twiki.cern.ch/twiki/bin/view/LCG/NetworkTransferMetrics>
- Contact
  - [wlcg-ops-coord-wg-metrics@cern.ch](mailto:wlcg-ops-coord-wg-metrics@cern.ch)