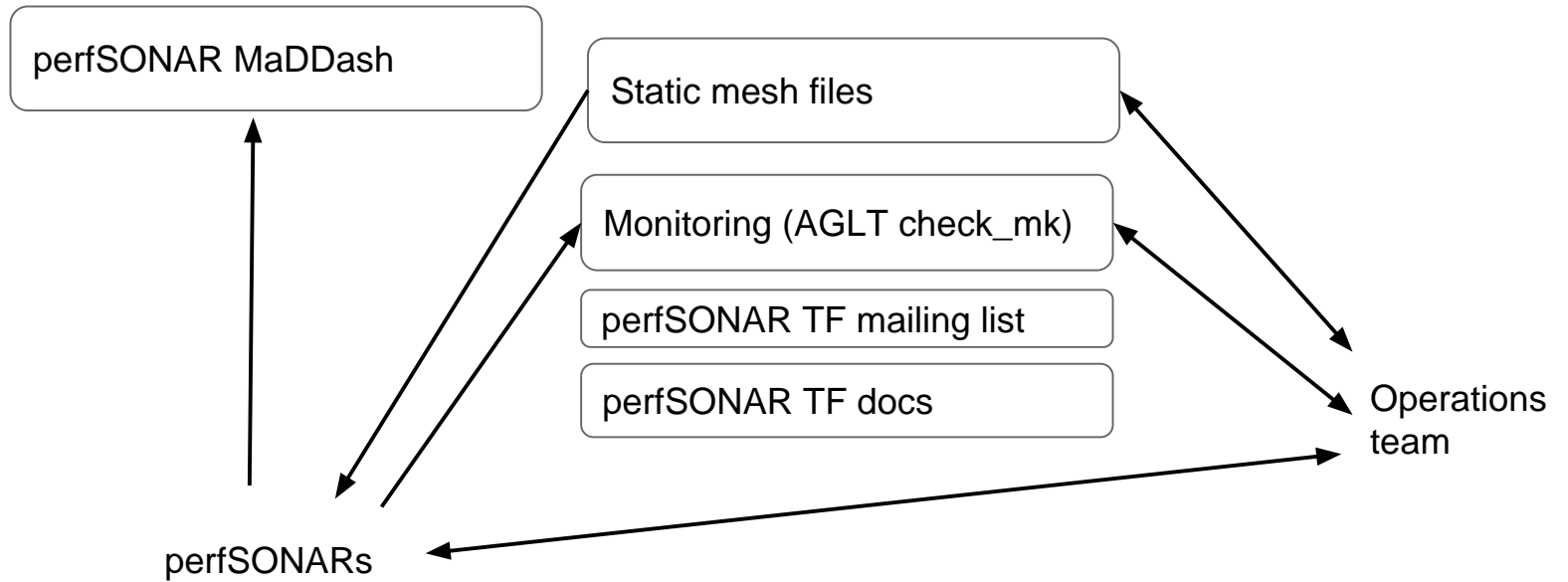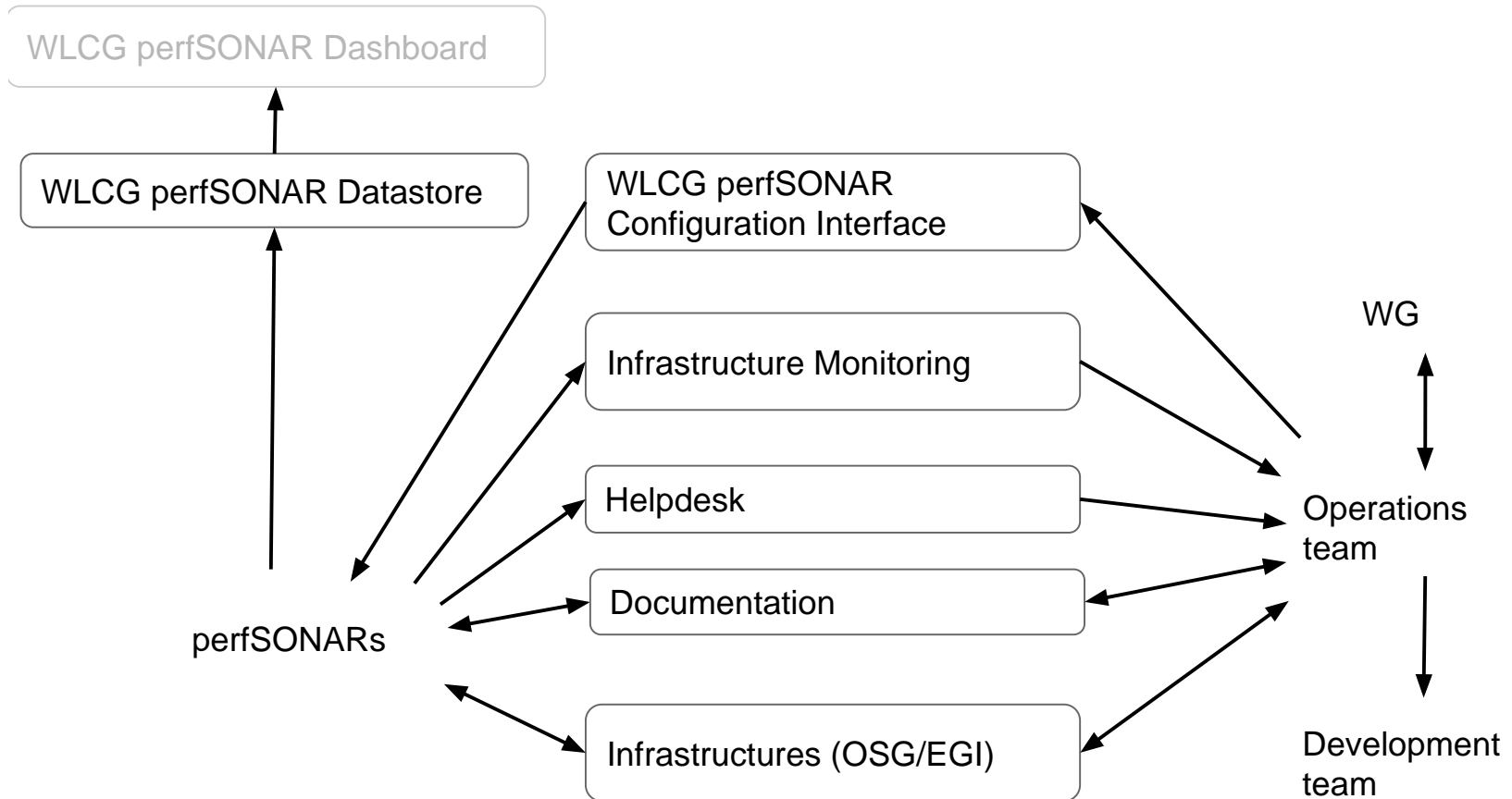# perfSONAR operations meeting

3rd October 2014

Agenda

- Propose changes to the current operations of perfSONAR

- Discuss current and future deployment model

- Discuss and agree on the steps to take in the different areas of the perfSONAR operations

- Discuss coming release of perfSONAR (3.4) and its impact

- Discuss Shell Shock vulnerability

- Identify early-adopters for the testing of the new mesh configuration interface

perfSONAR deployment (present)

perfSONAR MaDDash

Static mesh files

Monitoring (AGLT check_mk)

perfSONAR TF mailing list

perfSONAR TF docs

Operations team

perfSONARs

perfSONAR deployment (future)

WLCG perfSONAR Dashboard

WLCG perfSONAR Datastore

WLCG perfSONAR Configuration Interface

Infrastructure Monitoring

Helpdesk

Documentation

Infrastructures (OSG/EGI)

perfSONARs

WG

Operations team

Development team

For WLCG data store plan see [2]

perfSONARs

- Metrics to gather
  - **Bandwidth**
    - For each cloud mesh, a 30 sec test using Iperf every 6 hours between all members in mesh
    - Additionally have a 30 sec test once per week between ALL WLCG perfSONAR bandwidth hosts
  - **Latency/Packet-loss (10 Hz of packets for EACH test)**
    - OWAMP (one-way delay) tests between all mesh members; summarized every minute (600 packets)
    - OWAMP tests between mesh members and all Tier-1 instances
  - **Traceroute**
    - Traceroute run every hour between ALL WLCG perfSONAR latency hosts

Operations Team

- **Mesh Leaders** (https://twiki.cern.ch/twiki/bin/view/LCG/MeshLeaders)
  - Participate in the activities and meetings of the WLCG Network and Transfer Metrics WG
  - Serve as the primary contact for their mesh
  - Monitor tests within their mesh regularly (1/week) identifying any problems
  - Work with sites within their mesh to fix identified problems including failing tests, out-of-date software and mis-configuration

Helpdesk/Documentation

- Operations team mailing list wlcg-perfsonar-support@cern.ch
- Proposing to establish GGUS SU and link it to the mailing list
  - 3rd level experts SU (WLCG perfSONAR support)
- Complete rewrite of the current documentation is needed
  - https://twiki.cern.ch/twiki/bin/view/LCG/PerfsonarDeployment
  - Integration (new sites) – requirements, procedure
  - Installation/upgrade guide
  - Troubleshooting/FAQ
  - Guide for experiments (storage APIs, dashboard, etc.)

Infrastructure Monitoring

- Functional/Availability testing
  - https://maddash.aglt2.org/WLCGperfSONAR/check_mk/
    - User: WLCGps, pw during meeting
  - Common tests:
    - perfSONAR-BUOY Measurment Archive
    - perfSONAR-PS Administration Details
    - perfSONAR-PS Latitude/Longitude Configured
    - perfSONAR-PS Toolkit Version
    - PS-Homepage
    - PS-Homepage-No-Cert
  - Bandwidth node specific tests:
    - Bandwidth Test Controller
    - NDT (drop ?)
    - NPAD (drop ?)
  - Latency node specific tests:
    - One-way Ping Service OWAMP
    - Traceroute Measurement Archive
- Based on web scraping, but in 3.4 we do have an API
- Accessibility (current solution sub-optimal)
- Missing metrics ?

Infrastructure Monitoring (2)

- Dashboard with integrated information (in SSB)
  - Temporary solution proposed is perfsonar report – offeres aggregated information and can be a good guide for mesh leaders
    - http://grid-monitoring.cern.ch/perfsonar_report.txt (updated daily)

WLCG perfSONAR service status report on 2014-10-03 04:03:29.161704 =======

perfSONAR instances monitored: 214
perfSONAR-PS versions deployed:
  3.3.1 : 2
  3.3.2 : 95
  Unknown: 113
GOCDB registered total: 173
OIM registered total: 55
Unreachable instances (not monitored): 91
Incorrectly configured (failing >4 metrics): 112

perfSONAR instances registered but not monitored (not included in any mesh)
perfSONAR instances monitored, but not registered in GOCDB/OIM
perfSONAR instances with incorrect versions
perfSONAR instances with unknown versions:
Unreachable instances
Incorrectly configured (failing >4 metrics)

WLCG Mesh Configuration

- New web-based mesh configuration is now available (developed and deployed by OSG)
- perfSONAR instances and details retrieved from GOCDB/OIM
  - Instances can be grouped into *Host Groups*
  - Metrics to be measured by sonars configured via *Parameter Sets*
  - *Meshes (tests)* defined by binding *Host Groups* with *Parameter Sets*
- Auto-configuration URL to be available – based on source hostname all meshes where host participates will be provided
- Volunteers are needed to test and validate this (if you are interested email Shawn smckee 'at' umich.edu)

Infrastructures

- OSG/EGI
- Very important to engage them in our operations
  - Having sonars registered in GOCDB/OIM essential
  - Proposing to offer some of our infrastructure metrics (toolkit-versions) to be also monitored by their tools
  - Clarify communication channels with the infrastructure security teams

Shell Shock Vulnerability

- As reported yesterday at WLCG ops coordination:

- Details on the shell shock vulnerabilites and its impact on perfSONAR available at https://twiki.cern.ch/twiki/bin/view/LCG/ShellShockperfSONAR

- We recommend ALL sites that didn't patch bash before Friday Sep 26 to terminate their instances and wait until perfSONAR 3.4 is released.

Remediation plan

- perfSONAR 3.4 to be released on Mon Oct 6
- Focus on having just one campaign to reinstall, upgrade to 3.4 and move to new mesh configurations
- Proposed timeline
  - Review current configuration wrt. firewall rules [1]
  - Offer new auto-configuration URL (will redirect to CERN for now, but can be changed to WLCG mesh configuration)
  - Write new installation guide for 3.4
  - Test and validate this works as expected
- Send WLCG and EGI broadcast with the (re)installation instructions to ALL sites
  - Updated WLCG Deployment page will outline details[4]
- Set and announce deadline for ALL sites to update to 3.4

AOB

- GDB WG update on Wed 8th OCT
- CHEP2015 abstract by 15th OCT (first draft ready)
- Coming meetings:
  - perfSONAR operations
    - 20 Oct - 24 Oct http://doodle.com/qydib32fkv48er2r
  - Metrics area
    - 13-17th October http://doodle.com/xvwdvysdrdzap8wh
- Please check our Twiki and send me your comments (https://twiki.cern.ch/twiki/bin/view/LCG/NetworkTransferMetrics)

Refs

[1] Firewall configuration for perfSONAR 3.4 (note this is work in progress, link will change)

http://perfsonar-dev.es.net/perfsonar-docs/manage_security.html

[2] OSG data store plan

https://twiki.opensciencegrid.org/bin/view/Production/OSGNetworkDatastorePlan

[3] WLCG mesh configuration

http://myosg.grid.iu.edu/pfmesh

[4] WLCG perfSONAR deployment page

https://twiki.cern.ch/twiki/bin/view/LCG/PerfsonarDeployment