

perfs-SONAR

perfSONAR – psUI in a federated environment

WACREN Conference
17-18 March 2016

Antoine Delvaux – PSNC/GÉANT adelvaux@man.poznan.pl
GÉANT perfSONAR Service Manager – perfSONAR Developer



What is perfSONAR?

- Network measurements toolkit
 - active measurements: latency (owd + rtt), throughput, loss, traceroute
 - measurements on links or on full paths
 - runs on CentOS and Debian
 - CLI tools and web interface
- Single domain or across domains measurements (multi-domains)

Who makes perfSONAR?

- Open Source Project
 - <http://github.com/perfsonar>
- International Collaboration
 - ESnet
 - GÉANT
 - Indiana University
 - Internet 2
- Open to new partners and external contributions

perfSONAR parts

- Measurement Point (MP)
 - Also called testpoint
 - Can be source or target of measurements
- perfSONAR Toolkit
 - MP + Measurement Archive (MA)
 - web interface for configuration
- MaDDash and measurement mesh
 - Central MA and visualisation dashboard
 - Central mesh configuration tools
- psUI (perfSONAR web UI)
 - federated visualisation GUI
 - on demand measurements

Multi-domain monitoring and measurements

- Help to establish end-to-end usage expectations
- 1000s of perfSONAR instances deployed world wide
 - many are open for measuring network performance
- Help to identify and isolate performance problems as they happen
 - on local switches
 - firewalls bottlenecks
 - packet loss on links
 - the longer the path, the more dropped packets affect performance
- Useful for NOC and PERT engineers, network researchers, students, ...

psUI: a truly multi-domain tool

- Centralised visualisation system for perfSONAR
 - Visualise archived measurements from public Measurement Archives (MA)
 - Trigger on demand measurements from and to all public Measurement Points (MP)
 - Data from your own domain and any other domain making their data public
- Discovery of pS nodes using the Lookup Service
- Can help analyse network performance on a whole path, crossing domains

perfSONAR UI Authentication Sources

- SAML based
 - Single Identity Providers (IdPs)
 - Federations of IdPs
- Local XML file and local database
- Roles to give access to different part of the UI
 - query archives
 - make on demand measurements
 - configure the MP and MA sources
 - configure the users

How to prevent abuse?

- Federated access, you don't know all your users
 - Use roles in the psUI
- Configure your MP to limit measurements: bwctl.limits file
 - restriction based on source IP
 - max throughput limit
 - measurement duration limit
 - protocol (UDP/TCP)

Examples and demo

- GÉANT federated psUI demo instance
 - <http://psui.geant.net>
- WACREN new psUI deployment
 - <http://psui.wacren.net>
- ACE monitoring
 - MaDDash screen shot
- developers' test mesh
 - MaDDash screen shot

MaDDash dev testbed



perfs--NAR

<http://www.perfsonar.net>
[http://github.com/perfsonar/
perfsonar-user@lists.internet2.edu](http://github.com/perfsonar/perfsonar-user@lists.internet2.edu)

WACREN Conference
17-18 March 2016

Antoine Delvaux — PSNC/GÉANT — adelvaux@man.poznan.pl
GÉANT perfSONAR Service Manager — perfSONAR Developer

