

perfSONAR

perfSONAR roadmap update

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perfSONAR

- The perfSONAR Collaboration
- Roadmap
 - Strategy
 - Annual Survey Results
 - What's coming in the next release

The perfSONAR Collaboration

- Open Source project lead by ESnet, GÉANT, Indiana University, and Internet2
 - Each organisation has committed 1.5 FTE effort to the project
 - Additional help from many in the community (OSG, RNP, SLAC and more ...)
- The perfSONAR roadmap is influenced by
 - requests on the project issue tracker
 - annual user surveys
 - meetings with VOs such as WLCG, OSG
 - discussions at various perfSONAR related workshops
- Based on the above, every 6-12 months the perfSONAR Steering Group meets to prioritise features

perfSONAR Vision

- Grow perfSONAR to be the ubiquitous, indispensable performance monitoring framework for R&E network customers that meets their needs in the long-term, supported in a self-sustaining way so as to enable friction-free science

Who is running perfSONAR

- ~2000 publicly registered servers

The screenshot shows the 'perfSONAR Lookup Service Directory' interface. It features a search bar at the top left, a 'Browse' section with a list of service types (e.g., SWIFTL Server, CWAMP Server, NDT Server, MPXO Server, Ping Responder, Traceroute Responder, MA, SWIFTL MP, CWAMP MP, Swift10g), and a 'Communities' section with 'Developer' selected. On the right, there are two tables: 'Service Information' with columns for Service Name, Address, Geographic Location, Communities, Version, and Custom; and 'Host Information' with columns for Host Name, Hardware, System Info, Toolkit Version, and Communities. Below these tables is a 'Service Map' showing a world map with numerous red dots representing server locations across all continents.

<http://stats.es.net/ServicesDirectory/>

perfSONAR

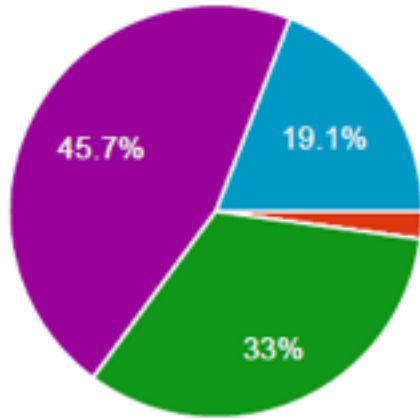
perfSONAR: What's next in the roadmap

Roadmap Strategy

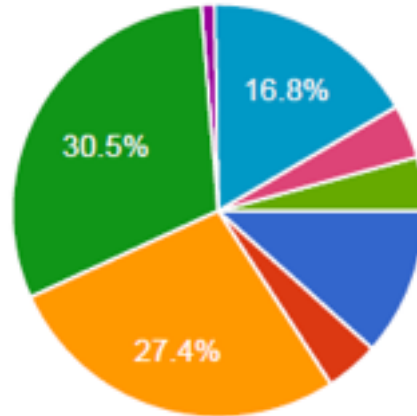
- 2 releases per year
 - 1 major, 1 minor
- Exploratory tasks in parallel during each release schedule
 - Ideas from user groups, results of annual survey, developers
 - Results and CBA-based analysis to decide if it makes it into the next version as a feature

Annual Survey Results

- Conducted in January 2016



CIO	0	0%
Laboratory Director	2	2.1%
VP R&D	0	0%
Network Manager / Architect	31	33%
Network Engineer	43	45.7%
Other	18	19.1%



Enhanced scalability	11	11.6%
Enhanced access control	4	4.2%
Enhanced performance debugging	26	27.4%
Automation of test configuration	29	30.5%
Enhanced security	1	1.1%
Enhanced integration with external systems	16	16.8%
Enhanced reliability	4	4.2%
Other	4	4.2%

- Satisfaction
 - 71% - satisfied/highly satisfied
 - 26% neutral, 2% dissatisfied
- Technical trends
 - Need for Debian 8 and CentOS 7 support
 - Enhanced performance debugging
 - Integration with other tools...

Upcoming Release: perfSONAR v4.0

- Themes
 - Control
 - Better control over tests (authorisation, schedule management)
 - Scalability
 - Robustness to scale deployment per campus to 100 nodes
- Was expected to be released in late September/October, got pushed to December

perfSONAR v4.0 - Features

- New and improved test scheduler: pScheduler
 - For fine-grained, better control (authorisation, schedule management)
 - Shared awareness of resource usage by other tests
- Web interface for test meshes
- Easier selection of endpoints, based on
 - geographic location
 - accessibility
 - custom searches
- Increased support on Debian 8, CentOS 7



debian



CentOS

Post 4.0

- Roadmap still in discussion, 4 tracks:
 - Operations Efficiency
 - Automation of Configuration, Execution and Analysis
 - Performance of the Cloud
 - Care and Feeding
- Both Research and Development tasks
- 4.0.1 Early 2017
- 4.1 September 2017 (I2 TechEX)