

What's new in perfSONAR Toolkit v3.3, and what's on the roadmap for the next year

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perfSONAR-PS Toolkit 3.3-rc3



- perfSONAR-PS Toolkit 3.3-rc3 just released
- **New Features in 3.3**
 - CentOS 6 (32-bit and 64 bit support)
 - LiveUSB distribution in addition to NetInstall and LiveCD
 - Completely rewritten and re-designed lookup service
 - Centralized mesh configuration management software
 - Integration with MaDDash performance monitoring dashboard
 - Numerous other bug fixes and enhancements
 - Traceroute visualization developed by University of Wisconsin

Final 3.3 release coming very soon!





ESnet's perfSONAR Involvement

Currently ~1.5 developer FTEs working on perfSONAR-PS

- Work closely with Internet2 to manage releases, address bugs, and set roadmap
- Weekly collaboration meetings Monday's at 2:30pm ET

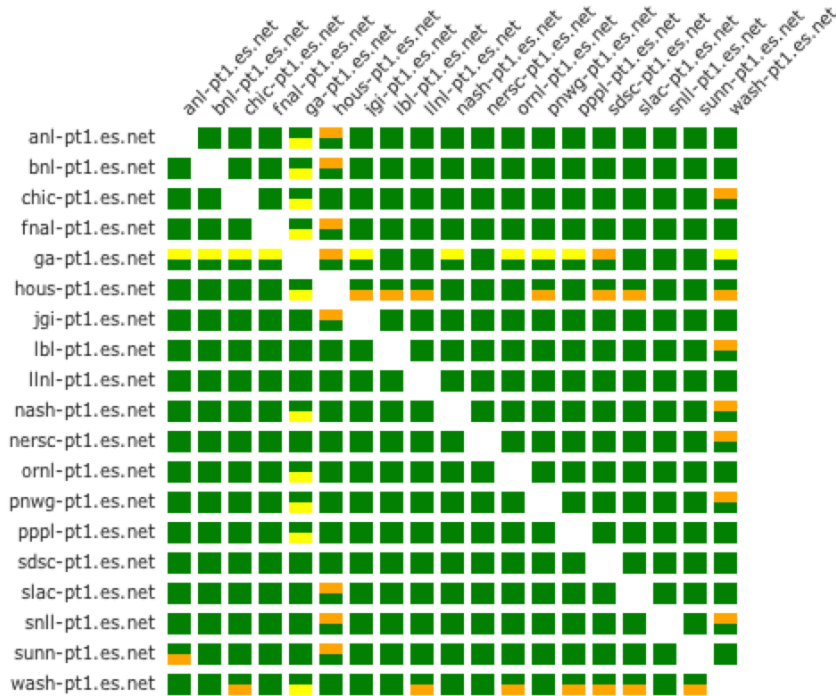
Deployment of 86 perfSONAR hosts on network

- 36 throughput nodes
- 34 latency nodes
- 10 combined nodes
- 6 additional host for lookup, topology and SNMP MA services

perfSONAR Dashboard: e.g.: ps-dashboard.es.net



ESnet Hub to Large DOE Site Border Throughput Testing



New Lookup Service: the sLS (Simple Lookup Service)



- Had performance and reliability problems with the old lookup service
- sLS Design Goals
 - scalable and high performance
 - simple to use REST-based API
 - general purpose: not just for perfSONAR
 - Security support
- Lead developer: Sowmya Balasubramanian, ESnet (sowmya@es.net), with lots of design help from Eric Pouyoul (lomax@es.net)
 - Design inspired/influence by discussions with Ahmed El-Hassany and Martin Swamy at IU.
- Requirements and Design Documentation at:
 - <http://code.google.com/p/perfsonar-ps/wiki/NewLSprojectPlan>

sLS Design



- REST/JSON API
- Backend: MongoDB
- Data is stored as “record”
 - A “record” is a list of key-value pairs

Example:

```
{  
  service-type: "bwctl",  
  domain: "ESnet",  
  accesspoint: http://someaccesspoint/  
}
```

sLS (cont)



New sLS **100x faster** than old LS for the same queries

Try it out!

<http://ps4.es.net:9095/lookup/records/?service-type=bwctl>



Current Priorities

Replacing SOAP APIs with REST APIs

Enhanced owamp MA

- REST/JSON-based owamp MA, that supports rrd-like summarization
- Considering basing this on ESmond (Jon Dugan's new SNMP DB based on Cassandra)

web10G Integration

iperf3/bwctl integration (<http://code.google.com/p/iperf/>)

Roadmap, Next 6 months



In addition to topics on the previous slide:

- RPM bundles for "level 1" and "level 2" installs
 - <http://fasterdata.es.net/performance-testing/perfsonar/ps-howto/>
- Improved documentation, new website
- Added functionality for LS:
 - pub/sub capability, so can deploy custom caches
 - easy to use client API
- Better LS GUI that provides cut/paste bwctl and owping commands, and better "community" support
- Finish/polish Maddash/Mesh config integration, including Mesh config GUI
- Pythia Integration





Roadmap, remainder of the year

- LS security
- Email alerts from Maddash
- Traceroute visualization integrated with owamp/bwctl data
- REST/JSON APIs for all remaining services (Topology Service, SNMP MA, etc)
- Ability to do on-demand bwctl/owamp testing via the toolkit GUI

Looking for Help on



- Release Testing
- Better Visualization / Analysis tools



Links:

perfSONAR Toolkit: <http://psps.perfsonar.net/>

New Release: <http://software.internet2.edu/pSPT3.3-rc3/>

Dashboard:

- <https://code.google.com/p/esnet-perfsonar/wiki/MaDDashInstall>

sLS: <http://code.google.com/p/perfsonar-ps/wiki/NewLSprojectPlan>