perfSONAR Task Force wrap up and demo introduction

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Agenda

- Taskforce Past/Present Activities
- Collaborative Demonstration
- perfSONAR-Automated-GOLE Infrastructure
- perfSONAR PingER service and Presentation
- Deployment Issues
- Taskforce Wrap-up

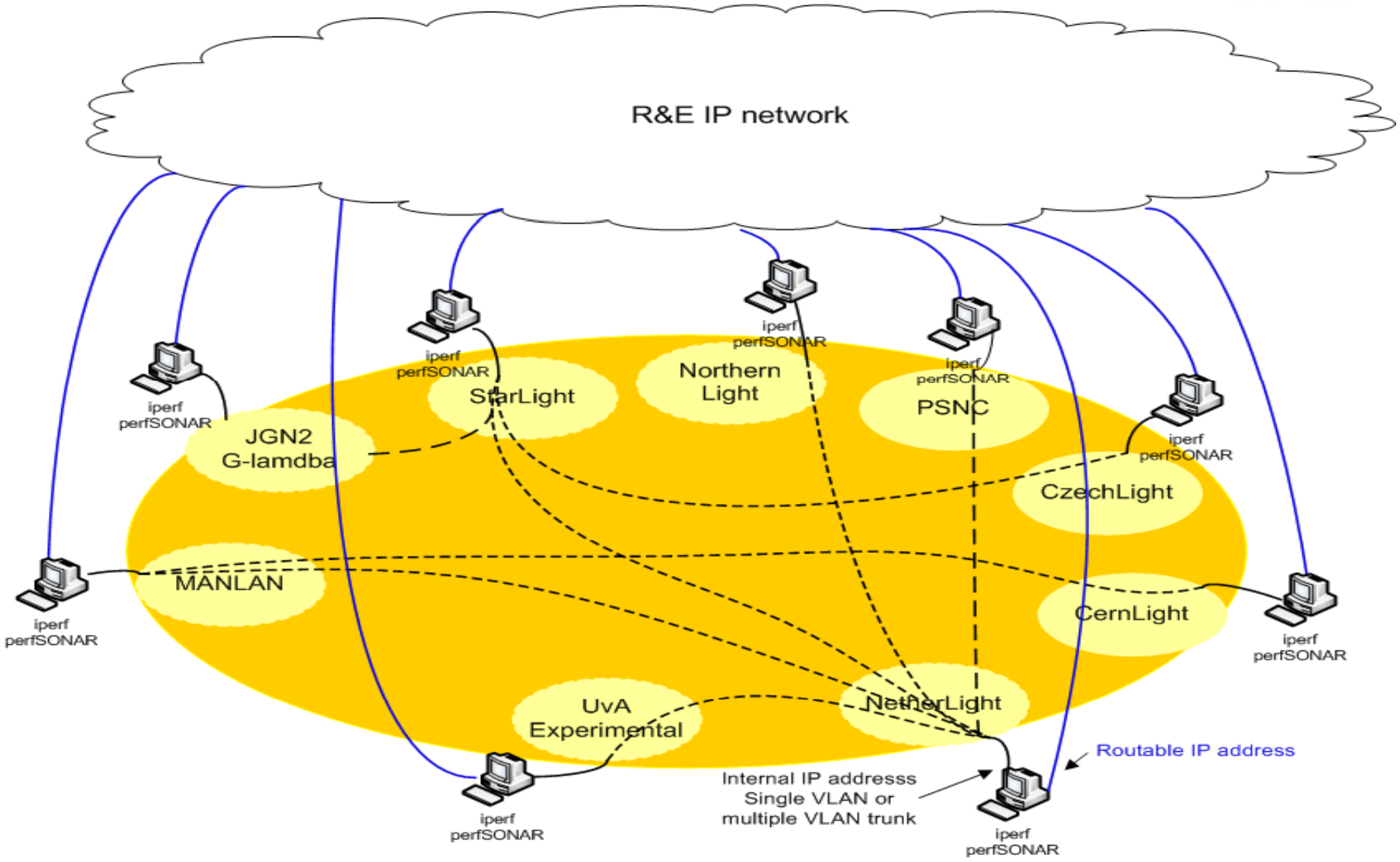
Taskforce Past/Present Activities

- Taskforce formed in 2008 Winter meeting
- First demonstration at the 2008 Lambda workshop
  - Circuit monitoring
- Second demonstration at the 2009 Lambda workshop
  - Circuit Monitoring with additional information
- Third demonstration - collaborative demonstration with other taskforces.

Collaborative Demonstration

- Collaborate with other taskforces
  - Fenius
  - Automated-GOLE
- perfSONAR is being used as measurement platform to perform connectivity and/or performance testing.
- Each GOLE provides and maintains at least one perfSONAR server.

perfSONAR Automated-GOLE infrastructure



PerfSONAR Server Configuration

- Server interface requirement
  - Two interfaces are required.
  - The first one is for a routable IP for accessing perfSONAR web service, and
  - The other interface is used for connecting to the GOLE switch with multiple VLANs configured, each vlan is assigned with a /30 private IP.
- perfSONAR software installation and configuration
  - pS-Performance Toolkit is required.
  - Installation from ISO image or netinstall option is recommended, this would eliminate issues of software dependency.

VLAN assignments

StarLight-NetherLight	1779	.172 /30 (StarLight: .173, NetherLight: .174)
StarLight-(NL)-MANLAN	1780	.176 /30 (StarLight: .177, MANLAN: .178)
StarLight-(NL)-CzechLight	1781	.180 /30 (StarLight: .181, CzechLight: .182)
StarLight-(NL)-NorduNet	1782	.184 /30 (StarLight: .185, NorduNet: .186)
StarLight-(NL)-CERN	1783	.188 /30 (StarLight: .189, CERN: .190)
StarLight-(NL)-UvA	1784	.192 /30 (StarLight: .193, UvA: .194)
NetherLight-MANLAN	1785	.196 /30 (NetherLight: .197, MANLAN: .198)
NetherLight-CzechLight	1786	.200 /30 (NetherLight: .201, CzechLight: .202)
NetherLight-NorduNet	1787	.204 /30 (NetherLight: .205, NorduNet: .206)
NetherLight-CERN	1788	.208 /30 (NetherLight: .209, CERN: .210)
NetherLight-UvA	1789	.212 /30 (NetherLight: .213, UvA: .214)
MANLAN-(NL)-CzechLight	1790	.216 /30 (MANLAN: .217, CzechLight: .218)
MANLAN-(NL)-NorduNet	1791	.220 /30 (MANLAN: .221, NorduNet: .222)
MANLAN-(NL)-CERN	1792	.224 /30 (MANLAN: .225, CERN: .226)
MANLAN-(NL)-UvA	1793	.228 /30 (MANLAN: .229, UvA: .230)
CzechLight-(NL)-NorduNet	1794	.232 /30 (CzechLight: .233, NorduNet: .234)
CzechLight-(NL)-CERN	1795	.236 /30 (CzechLight: .237, CERN: .238)
CzechLight-(NL)-UvA	1796	.240 /30 (CzechLight: .241, UvA: .242)
NorduNet-(NL)-CERN	1797	.244 /30 (NorduNet: .245, CERN: .246)
NorduNet-(NL)-UvA	1798	.248 /30 (NorduNet: .249 UvA: .250)
CERN-(NL)-UvA	1799	.252 /30 (CERN: .253, UvA: .254)

perfSONAR PingER service

- PingER service is being used to perform connectivity testing between GOLEs over a VLAN.
- Ping tests are being performed in regular interval while vlans are being switched with dynamic control software.
- All PingER results can be accessed through PingER MA web service and displayed.
- The refresh rate of displaying PingER results should be as short as possible.

PingER Service Configuration

- Default PingER configuration
  - Time Between tests = 60 second
  - Packets Sent Per Tests = 10 packets
  - Time Between Packets = 1
- Demonstration configuration
  - Time Between tests = 5 second
  - Packets Sent Per Tests = 1 packets
  - Time Between Packets = 1

PingER Service Automated-GOLE GUI

- The existing PingER web GUI presents only the local PingER results.
- All PingER service results are being processed and presented in a single web page with an as-short-as-possible refresh time.
- A polling script polls PingER results from each PingER service in a continuous loop.
- A php script presents the results in a tabular format with a refresh rate of 5 seconds.

Automated-GOLE PingER Service Monitor

Automated-GOLE PingER sevices

PingER results													Last Updated: 13-Oct-10 13:43:49 GMT
GOLEs	StarLight	NetherLight	MANLAN	NorduNet	CERNLight	CzechLight	UvA	PSNC	JGN2 G-Lambda	StarLight USLHCnet	MANLAN USLHCnet	CERNLight USLHCnet	JGN2 G-Lambda USLHCnet
StarLight		OK						OK	OK			OK	
NetherLight	OK												
MANLAN				OK									
NorduNet			OK		OK								
CERNLight				OK						OK			
CzechLight													
UvA	?	?	?	?	?	?		?	?	?	?	?	?
PSNC	OK												
JGN2 G-Lambda	OK												

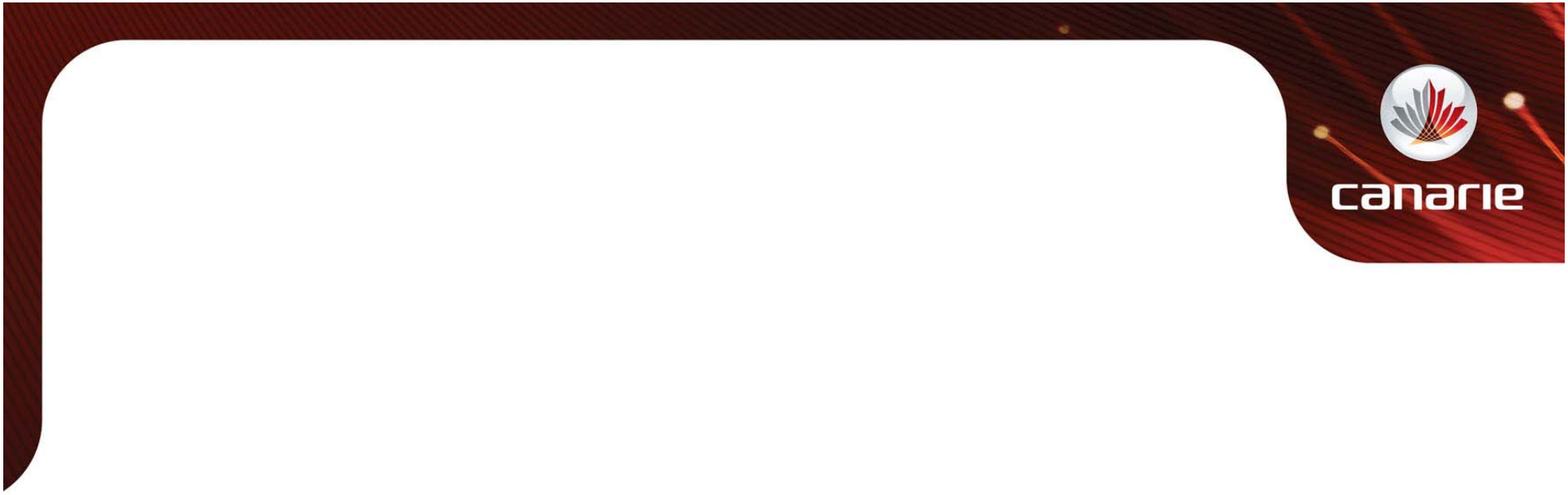
OK Reachable Unreachable ? Not Available

Deployment Issues

- pS-Performance toolkit installation is fairly straightforward. Whatever you can, go with the ISO image installation.
- Individual package installation on some Linux OSes is a bit of a challenge.
  - Software packages dependence.
- A easy-to-follow procedure was provided to configure PingER service.

Taskforce Wrap-up

- This demonstration is the last one that is organized by the perfSONAR taskforce.
- The perfSONAR servers for the automated-GOLE will remain in place for the coming year for on-going testing.
- The PingER GUI is hosted a CANARIE server, could be moved to one of GOLE servers.



Thanks!!!