



Addressing End-To-End issues with perfSONAR

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Connect. Communicate. Collaborate

Agenda

- Introduction
- perfSONAR web-services and visualisations
- Multi-Domain Monitoring Service

Why is E2E network monitoring?



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- Projects sites connected through multiple networks
- New applications, new transport protocols, new networks
 - Nobody wants to waste time on problem which are not their responsibility
- Networks want to act before the application are being hit
- Performance Enhancement and Response Team
 - <http://www.geant2.net/server/show/conWebDoc.1309>



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What to monitor?

- It depends!
- L2 status information
- L3 Link utilisation, link capacity, input errors, output drops
- One Way Delay or Round Trip Time, Traceroute
- Bandwidth Tests



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What to monitor? [2]

- From where to monitor?
 - On backbones and on Local networks
 - Active Measurement from as close of the project computers as possible
 - Firewall, etc
- Visualisation
- Alarms



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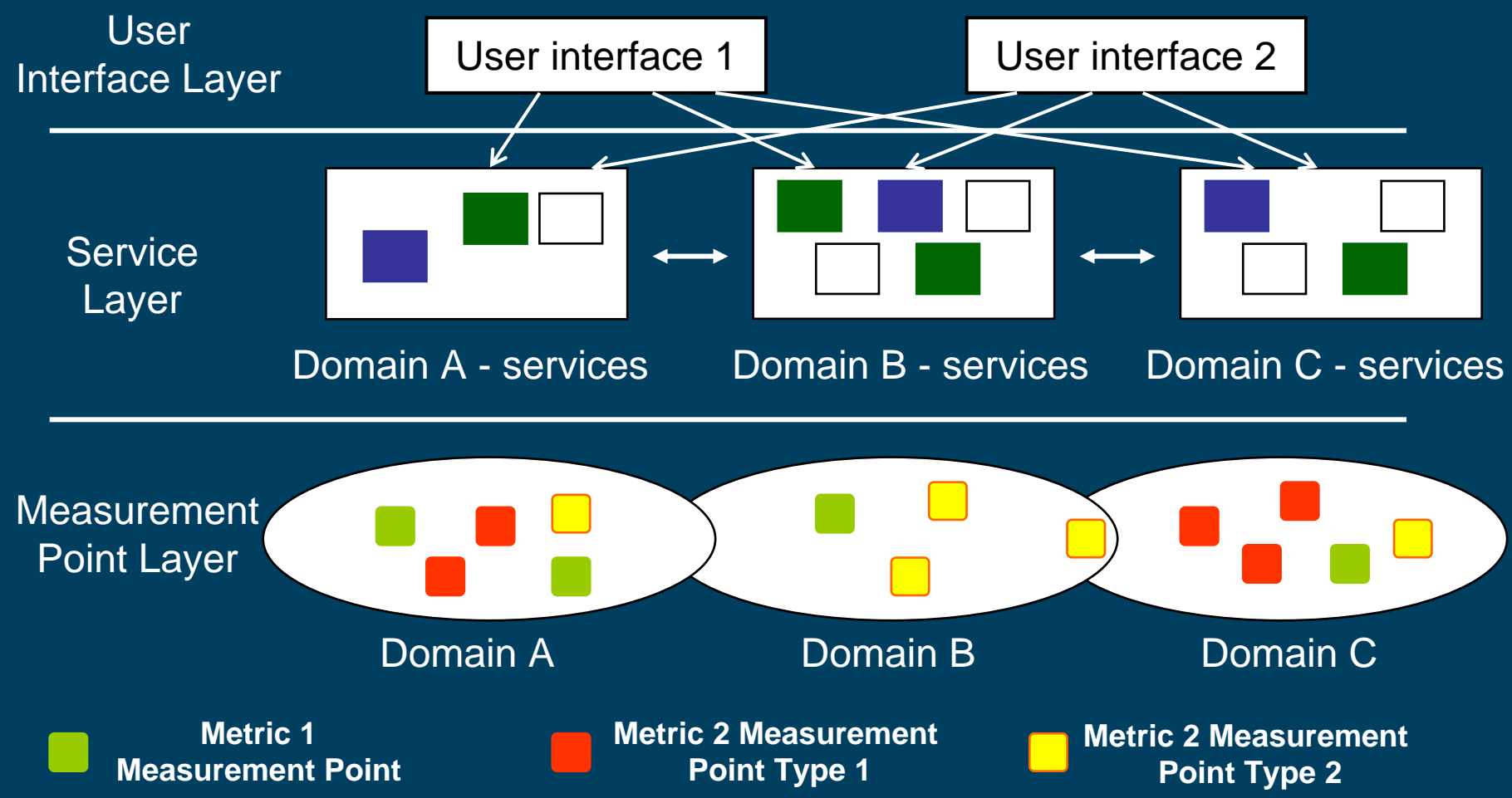
Project Initial Observations

- Each domain
 - monitors the same set of metrics
 - knows what happens in its own domain
 - stores the data in their own DBs
- Networks not keen on providing external access to their equipment
- Different utilisation of the data
- No end-to-end view



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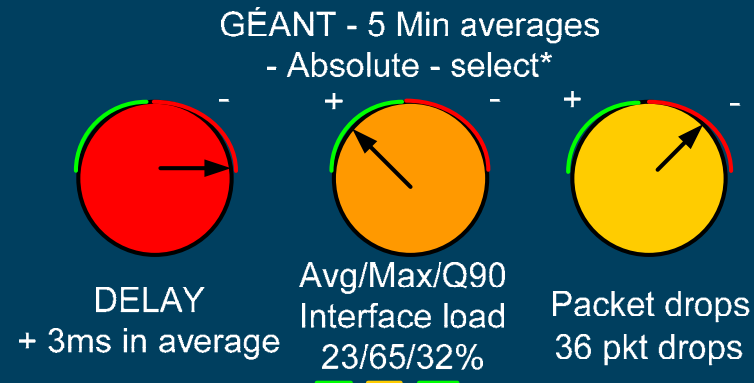
perfSONAR layers





Under developments

- Hades boxes: OWD and BWCTL throughput
 - Dedicated server
- Authentication Service
- Netflow
- Passive
- DashBoards
- Installation and performances





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Deployment Status

- Varies from network to network
- European NREN Community is working on a Multi-Domain Monitoring Service Pilot
- Projects can be drivers for services deployments



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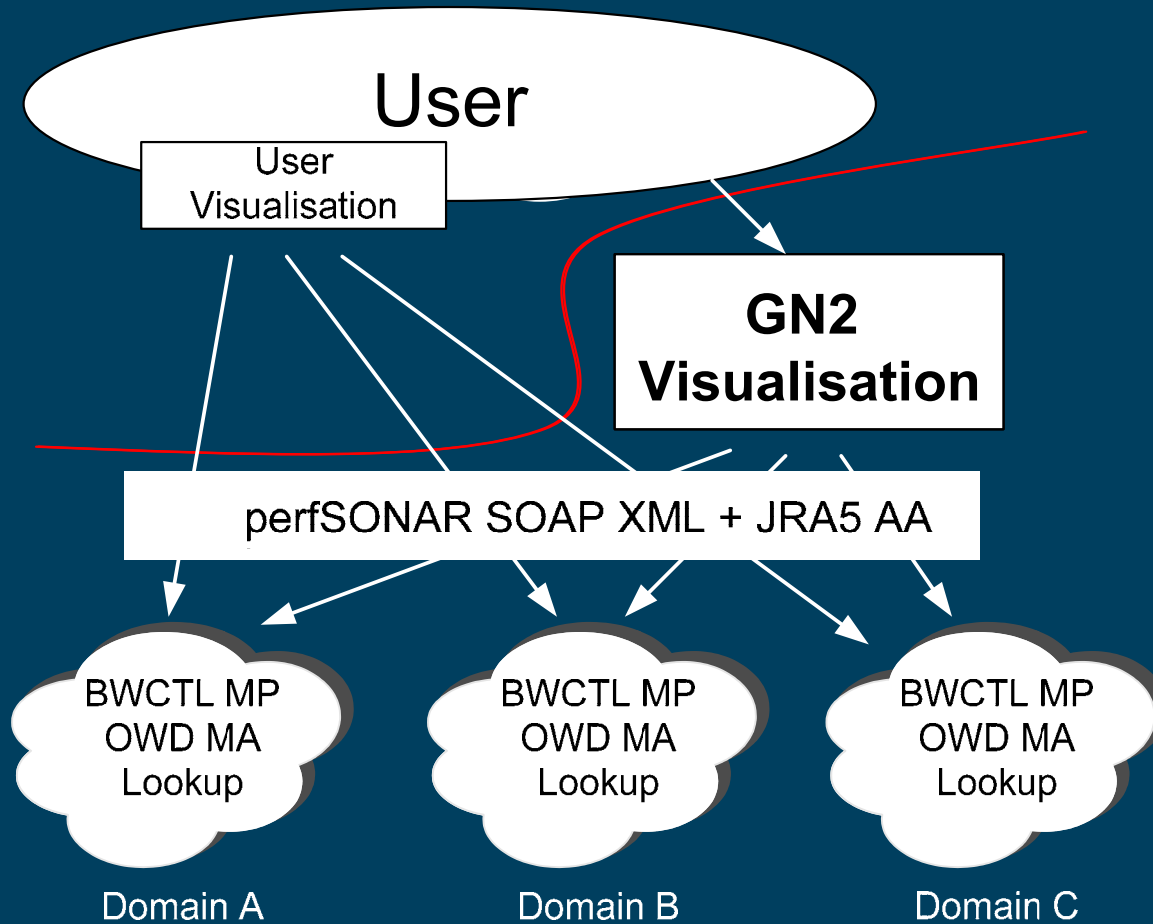
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Multi-Domain Monitoring Service



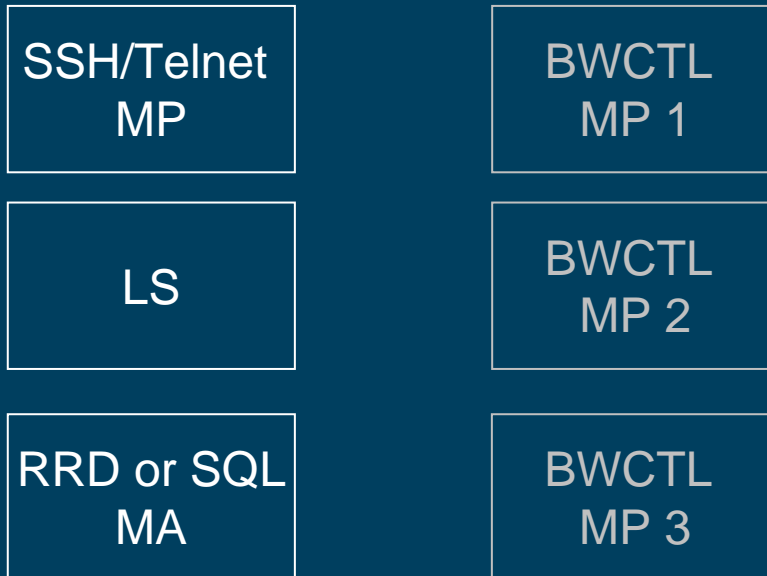
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MDM Services deployed

- Each network Deploys





Services Support offers

- Support for the installation, utilisation and configuration of

SSH/Telnet MP	SQL MA	LS	RRD MA	BWCTL MP
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- A managed service for

Hades MA	 CNM	BWCTL MP	SQL MA	LS
			RRD MA	SSH/Telnet MP

- Support for the utilisation

 pSUI	 Looking glass
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Conclusion

- The perfSONAR web-services and visualisations are there to answer E2E monitoring problem.
- The MDM is moving ahead, keep an eye on it.
- Provide feedback and orient our work!
- Let's perfSONAR !



Questions?

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