



common Network Information System

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Introduction

- Several GN2 activities required network information
 - AMPS, perfSONAR, AutoBAHN, e2eMon
 - Each collecting and storing network data
 - Effort duplication, replication of data and inconsistency
- common Network Information System (cNIS)
 - Unified repository of relevant network information
- Information about a single domain only
- One self-managed instance of cNIS per domain



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Requirements

- Evolving requirements
 - Topology at different layers (physical and abstract)
 - Time dimension
 - Co-relation between layers
 - Static and Dynamic data
 - Path finding
- Input to NML-WG interface



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Schema

- cNIS schema is a RDBMS schema not XML
- Technology agnostic
- Plug in architecture for specific technologies
 - IP, Ethernet, SDH, OTN
- cNIS interface versus reference implementation
- Multiple client interfaces (historic reasons)
 - Moving towards unified interface (NML-WG?)



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Current Status

- cNIS use cases and requirements – a live document
- cNIS v1 released in Sep 2007
 - Next release Q3 2008
- Automated network discovery (IP only)
- Management interface
- AMPS, perfSONAR (NMWG) interface implemented
- Tested on GÉANT2 network
- Pilot starting with several NRENs



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Future Plans

- Finalise MPLS, Ethernet, SDH, OTN schema
- Automated discovery for Ethernet and SDH
- Automated discovery of dynamic data
- Advanced visualisation of database contents
- Integrate with eduGAIN (GIdP), Lookup and WS Monitoring
- Contribute to NML-WG
 - Use NML-WG as the preferred data exchange interface
 - Continue to support legacy interface



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cNISv2 ?

- Activity review identified a gap for multi-domain processes
 - Multi-domain circuit provisioning, Scheduled Maintenance, Trouble ticket exchange ...
- New activity proposed to tackle multi-domain issues
- GN2 SA3 Work Item 16
 - NOT a logical extension of cNIS v1
 - New proposed name: I-Share
 - Currently investigating use cases and processes
 - Goal is to define interfaces for information sharing across network domains



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Summary

- cNIS a unified repository of network information
- Evolving requirements can feed into NML-WG
- RDBMS schema being refined
- cNIS v1 released, next release Q3, 2008
- Addresses single domain issues; multi-domain issues to be handled by I-Share

- Contribute to NML-WG and adopt it as standard interface



Thank You

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Any further Questions, Comments, Feedback or Suggestions

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