

NOC Tools Overview

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SARA

SURFnet6 NOC

- SURFnet6 NOC is operated by the NOC Alliance:
SARA (NL) and Telindus ISC (BE)
- Telindus ISC
 - 1st and 2nd line support
 - reporting
 - RoN security
- SARA
 - 3rd line support
 - configuration changes (new customers, etc)
 - RoN NOC tools

SARA Network Research Group

- New activity within SARA's High Performance Network Group
- Group started on July 1st 2005
- Coordinator: Ronald van der Pol (full-time) (employed since April 1st 2005)
- Members:
 - Andree Toonk (2 days/week)
 - Pieter de Boer (1.5 days/week)
 - Marco Davids (1 day/week)
 - Hanno Pet (0.5 day/week)

RoN NOC Tools

- Part of SURFnet6 NOC contract
- Legal start on July 1st
- Activity plan approved on August 16th
- Actual work just started
- No deliverables finished yet
- Andree's talk: NOC Tools first results

NOC Tools activities

- TL-1 Toolkit
- Light Path Monitoring
- Multicast
- Proactive Management
- Tool Integration

TL-1 Toolkit

- Nortel equipment has several management interfaces
 - GUI (Site Manager, Preside, etc)
 - CLI (TL-1, etc)
 - SNMP
- GUI great for alarm monitoring and network health,
BUT
 - limited to what the buttons allow you to do
- TL-1 interface needed for scripting like:
 - automating (repetitive) tasks
 - allow scripts to get information out of the equipment

TL-1 Toolkit (cont'd)

- TL-1 is extremely user unfriendly
- Easy to use API for scripting needed
- Perl is a widely used scripting language in the ISP world
- TL-1 Toolkit is a Perl module
 - hides TL-1 syntax
 - provides easy to use API for frequently used commands
 - interface to TL-1 syntax for rare commands

Light Path Monitoring

- NOC needs tools to manage light paths
 - where do the light paths go?
 - which light paths does a customer have?
 - how do you identify light paths?
 - what metric do we use for light path usage reporting?

Multicast

- SURFnet6 will support both IPv4 and IPv6 multicast
- NOC needs tools to manage multicast
 - trouble shooting
 - traffic use (weathermap)

Proactive Management

- goal is to detect problems before data traffic is effected
- example:
 - transmission lasers use certain power level (bias current)
 - bias current slowly increases over time
 - laser needs replacement when bias current exceeds threshold
- useful to have a graph of the bias current over time

Tool Integration

- SURFnet6 will have many management tools
 - optical layer
 - light paths
 - Ethernet layer
 - IP layer
- Engineers need easy access to all tools

Questions?

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