Management of Dynamic Lightpaths

Ronald van der Pol

rvdp@sara.nl

GLIF Winter Meeting

19-20 January 2008, Honolulu

Outline

this talk is intended to start a discussion

- Operational issues
  - Alarms during setup and re-routing
  - Identifiers
  - Monitoring
  - Ticketing
- Discussion

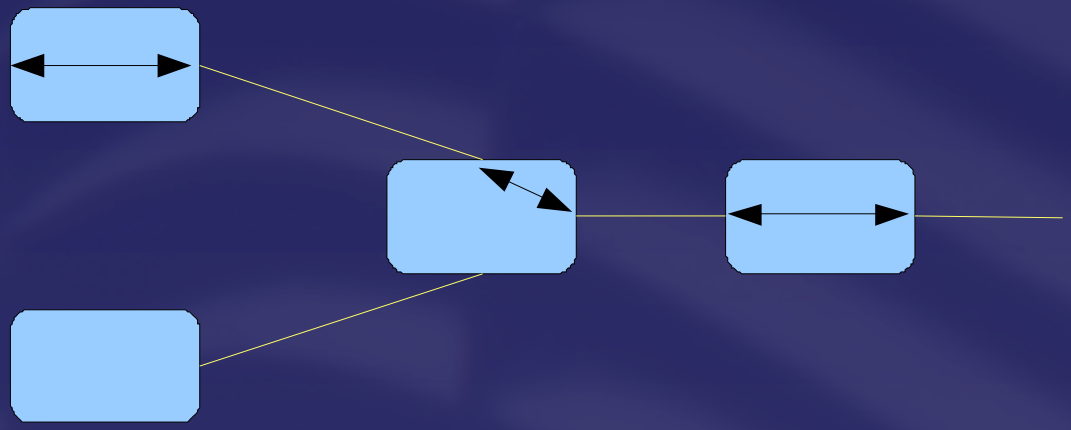
Alarms

- Dynamic lightpaths setup by
  - DRAC, UCLP, DRAGON, etc
- Provisioning phase causes alarms
  - unequipped
  - link down

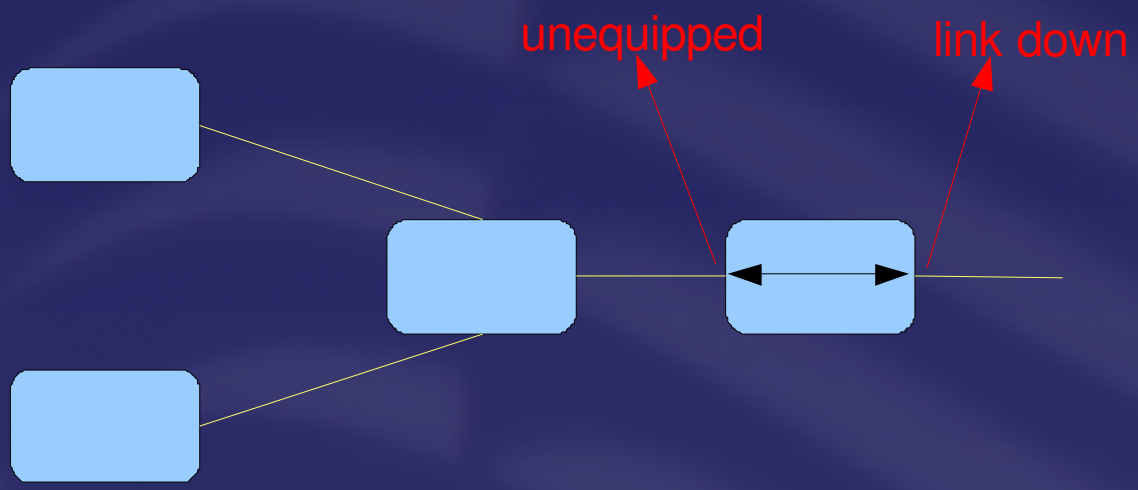
Reason for Alarms

- Unequipped alarms
  - raised when circuit is not completely provisioned end-to-end
- Link Down
  - raised on GE ports when there is an outage on the circuit or the circuit is not completely provisioned end-to-end

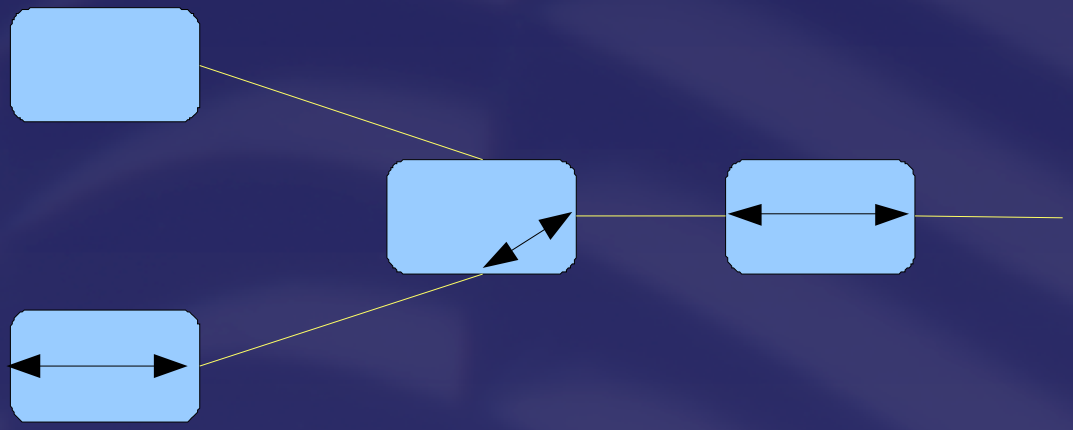
Example



Example



Example



Solutions?

- Ignore *unequipped* alarms?
  - run scripts to find crossconnects that are not part of a lightpath
- Ignore *link down* alarms on end ports?
  - react only to *link down* alarms on backbone links?

Globally Unique Identifiers

- DRAC, UCLP, DRAGON, etc must generate an Identifier for each lightpath they setup
- We need Identifiers that can be generated by programs without human intervention

Globally Unique Identifiers

- How will the Identifier be communicated to the Network Operator?
  - configured in the equipment by dynamic lightpath setup software?
    - not all equipment can handle descriptions
  - suggestions?

Monitoring

- How do we monitor dynamic lightpaths end-to-end?
- Share status and configuration data between domains
  - which data?
  - how?

Ticketing

- Who is the point of contact for each dynamic lightpath?
  - who to contact in case of planned work or outages?
- How long can we go on with the broadcasting of tickets like we do today?

Thank You

Ronald van der Pol

rvdp@sara.nl

http://nrg.sara.nl/