

ControlPlane Meeting 17 Sep Prague

Introduction and Welcome

Gigi welcome the participants and bashed the agenda. Further she reviewed the issues and challenges related to the interoperability of controlplanes software.

Gigi pointed out that the focus of the WG should be on be on interfaces, rather than on protocols. Main objective of the WG is inter-operability.

Advanced reservation should also be taken into account to cover the Grid case.

Gigi summarized the architecture (in particular the components) presented during the last ControlPlane meeting in Minneapolis, focusing on the possible models how the resource managers and the interfaces can work. For more details on the architecture please see also [Gigi's slides](#).

GMPLS token mechanisms - Leon Gommans

Leon presented his work on using token-based access control, which becomes particularly important if network resources are offered as public service. Tokens allow decoupling authentication from authorization. A token can be considered as a network resources provision systems (NRPS), or IDC or IDM. The token idea was tested during SC06.

Leon explained how the tokens can be used in the various phases of:

- Path requesting- by user / grid middleware / application etc.
- Topology exchange
- Path Scheduling and negotiation
- Signaling and path provisioning

In a multi-domain case, the way the tokens are generated using a tree model (where the key generation takes place within each domain) and chain model (where the key generation takes place in the last domain) becomes interesting.

International High Performance Digital Media With Dynamic Optical Multicast - Joe Mambretti

Joe reported on the testbed in which international high performance digital media were combined with dynamic optical multicast. Most of the work was about setting up point-2-point lightpaths (which are not optimized). UCLPv2 was used.

Phosphorus and DICE IDC – Inder Monga and Braam Peeters

Inder and Braam presented the multi-domain work done in Phosphorus and DICE.

Phosporus and DICE were discussed and compared according to different things, such as the architecture, topology exchange, path computation and signaling.

Discussion took place to understand how GLIF would benefit from this work.

It was suggested to apply multi-domain topology abstraction concepts to the GOLE and to agree on topology exchange, reserve messages and path compute model. Also failure models and restoration should be handled.

Glamba architecture - Tomuho Kudoh

Tomuho reported on the work done in Glamba. The presentation focused mainly on the functionality of the GNS-WSI web-service interface. The reservation takes place in two phases, which allows for flexibility for booking multiple resources.

The GNS-WSI follows a per-request hierarchical architecture, which can support chain model.

Internet2 Dynamic Circuit Services (DCS): Architecture and User Services - Tom Lehman

Tom Lehman presented the interface used to provide dynamic circuit services within Internet2 network. A discussion followed on how the controlplane WG could re-use some of the concepts to create a global interface.

Lots of discussions followed to try and understand the set of parameters that should be exchanged to have interoperability.

There are different things that were discussed and it was agreed to try and focus on some topics such as: topology, reservation requests, monitoring, fault management.

Conclusions

It was agreed to share existing interfaces from several global projects to define specification for a GNI API.

- John Vollbrecht provided a document based on OSCARS-DRAGON implementation
- Victor Reijs shared the document from the AutoBAHN initiative from GN2: http://www.geant2.net/upload/pdf/GN2-07-066v5-DJ3-5-3-Report_on_Testing_of_Technology_Stitching.pdf
- Tomohiro Kudoh shared the GNS-WSI interface currently used for Glamba (Enlightened also adapted and interoperates)
- Phosphorus will provide early API work including UCLP

The aim would be to have a challenge for the next GLIF meeting for some sort of demonstration of interface interoperability.

In the coming months work should be done to decide on the model to follow, chain vs. tree vs. hybrid.

It was also suggested to work with Tech group on VLAN-based lightpaths.