Evolving the Global Network Architecture (GNA)

2015 Global Summit

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Topics to be covered

1. GNA background
2. GNA activities since last Global Summit
3. GNA next steps
GNA background

GNA Technical Group (3 subgroups; Ops, Services, Tech/Topo)
GNA Executive Action Team

“Evolving the Global Network Architecture”
Details at http://dx.doi.org/10.7125/apan.38.13

GNA Goal: Work with ALL stakeholders to EVOLVE the global R/E network
GNA Ops

• Continuing work on the Ops+Security main document

• Work with Topology/Technology on Link Usage document

• Work with Services on Exchange Point Requirements document
GNA Network Services

• Current work:
  ◆ Defining Network Services, current thinking:
    ● Deterministic
    ● Dynamic bandwidth
    ● Best effort
    ● Special use

• Work in progress:
  ◆ Work on Open Exchange Points requirements
  ◆ Defining work on IP peering coordination (not a network service, but a coordination effort)
GNA Technology and Topology WG

Current work:
- GNA Link Policy Document
- Exchange Points Technical Functionality Requirements Document

Work in progress:
- Prototype Global Network Topology
- Aims and Objectives of Prototype
- Key Success Criteria of Prototype
ANA-200GB: a pathfinder for the GNA

• The Advanced North Atlantic (ANA) collaboration has been identified as an important model for defining and testing the GNA framework.

• ANA faces many of the same issues, on a smaller organizational scale as the GNA.

• These issues are both technical and policy related.

• GNA group is learning and adapting from ANA’s challenges.

• What works for the ANA might work for the GNA. What does not work for the ANA seems unlikely to work in the more complex GNA environment.
ANA-100G Production Network: A 100 Gbit/s production quality ring across the North Atlantic for Research and Education. Collaborators: Internet2, NORDUnet, CANARIE and SURFnet.
GNA Tech Activities for 2015

• Accelerated and intensified work on GNA prototype

• Building off of the ANA work, continuing work on blueprint for federated operations, topology, technology, and network services, adding a focus on IP peering

• Continuing to define the framework documents and milestones based on community input, the ANA-200GB experience, but also....

• Exploring opportunities to expand the path-finding/prototype efforts:
  • IRNC activities
  • North America to South America
  • Europe to the Middle East (AGE-OX)
  • Middle East to Asia
  • Asia to North America
GNA EAT Activities for 2015

• Actively seeking to build consortia (similar to ANA) and creative partnerships to explore co-investment opportunities

• Enhancing conversations with government science agencies, global science projects, global content providers, and global telecommunications and fiber providers

• Development of the GNA architecture will require input and participation from the full R&E community over the next 12 months.

• Web site (developed by AARNET) for GNA document repository and communications – coming soon!
Soon is now!!!

www.gna-re.net
Why your input and participation is important…
...for us and for you….

This is the part of the presentation where we both talk…

The GNA is developing an architecture for a global network. The critical question is: Does the GNA as described on the web site, address the needs (current and future) of your users.
Questions/comments ???

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