Global Network Architecture
Vision & Ambition – A Status Update

Budapest, HU – 3-4 October 2017
Quick History of GNA

2012
• Q3: NREN CEO Retreat – Global network interconnect is one of four major challenges

2013
• Q2: White Paper by Lambert & Wu

2014
• Q1: GNA Technical WG started

2015
• Q2: Community support harvesting @ I2GS
• Q2: GNA Technical WG fully open

2017
• Q1: Reference Architecture v1 published: Links, GXPs, Ops
• Q3: Policy & Strategy WG started
Dimensions of GNA

- GNA Vision
- Funding
- Policies and principles
- Organizational framework
- Technical Architecture Planning
The GNA Vision:
“Globally Connecting Science, Research & Education”

Goal: BW & Services between continents on par with within continents

The GNA Mission:
- Inclusive “architecture”
- Increase collaboration and resource sharing
- Maximizing utilization of funds
- Aligning investments in intercontinental circuits
The GNA Framework – Open Forum

1. GNA Technical Working Group
   • Technical Reference Standards
   • Operational Paradigms
   • Provisioning structure

2. GNA Strategy & Policy Working Group
   • Strategy & Vision
   • Funding
   • Policies
   • Procedures
   • Behaviour
Dimensions of GNA

- GNA Vision
- Funding
- Policies and principles
- Organizational framework
- Technical Architecture Planning

Policy & Strategy WG

Technical WG
The Policies & Principles of GNA

- **Participation:**
  - Contribute Resources
  - Contribute to and comply with GNA Architecture
  - Adhere to Policies & Practices

- **Restrictions**
  - State your limitations – AUP

- **Fair use**
  - Usage and contributions reflects a fair and equal use principle
  - Common endeavour
  - Contribute resources benefitting common good

- **Behaviour**
  - Based on trust and open discussion between partners
  - Working towards common goal
  - All strengthen national, regional and international reach
• The GNA concept has achieved near-universal buy-in
• The ‘Proof of Concept’ project (ANA) has proved successful and stable
• Consortia are developing (similar to ANA) in other regions
• The number of Global Exchange Points continues to grow:
  • Montreal, Canada
  • Cape Town, South Africa
• Formal announcement of the GNA Phase One implementation @ I2 Global Summit 2017
The GNA work – Phase 1 GXPs & Links

LINKS IN THE GNA PHASE I

APAC
- AARNet
- SingaREN

EMEA:
- GÉANT
- NORDUnet
- SANReN (and TENET)
- SURFnet

AMERICAS
- Internet2
- ESNet
- CENIC/PacWave
- AMPATH/AmLight
- NEAR
- TransPac
• Policy & Strategy WG working on first tasks
• Phase I consolidation happening
• GNA v2.0 architecture: Strawman’s proposal
Thank You. Questions?

GNA website:
https://gna-re.net/

GNA video:
https://video.nordu.net/media/GNA+Whiteboard+Video+%28Final%2C+2017%29/0_nrqtsc5w