



# GNA-G GREN Engineering Advancement

## FACILITATORS

Nicholas Buraglio, ESnet, [buraglio@es.net](mailto:buraglio@es.net)

( ...transitioning to Dale Carder, ESnet, [dwcarder@es.net](mailto:dwcarder@es.net) )

Marijke Kaat, SURF, [marijke.kaat@surf.nl](mailto:marijke.kaat@surf.nl)

Pieter de Boer, SURF, [pieter.deboer@surf.nl](mailto:pieter.deboer@surf.nl)

( ...now Chris Wilkinson, Internet2, [cwilkinson@internet2.edu](mailto:cwilkinson@internet2.edu) )



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GENESIS

Historic challenges with:

- Capacity Management

  - Links

  - Exchange Points

  - Connections Between Exchange Points

- Backup Arrangements / Redundancy

  - “VLANs”

- Instrument and Experimental Transport (example SKA)

- NOC Coordination

- Support for emerging technologies

- Integration/interoperation of different systems (LHC, ANA, NA-REX, APOnet, etc)



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## WHAT IT IS NOT

Solving active performance problems between endpoints

Defining policy, routing security requirements

Defining appropriate use



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LONG TERM POTENTIAL

Build **Interpersonal Relationships** between Packet-Layer Engineers

Develop **Reference Architectures** (including Hardware, Software, and Operations) for the FOUNDATIONAL ELEMENTS of transport infrastructure

Work with community to **build Testbeds** or **telegraph results** of Testbeds

**Explore and Disseminate information** on New/Developing Technologies in Hardware and Software Orchestration

**Support Technology Education** on topics like BGP, operations  
(may overlap with emerging Routing Intentions/Security WG)



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## PROPOSED 2024 SUBGROUP ACTIVITIES

<p>Active Testbed Activity</p>	<p>Builds on the active effort lead by Marijke Kaat and the team at the University of Amsterdam. Over time, potentially expands to new use cases and/or engagement with other testbed development teams globally.</p>
<p>Rapid Architecture Development</p>	<p><u>Joint effort</u> of “ANA 2.0” Engineering Subgroup and GNA-G focused on the rapid development of requirements, infrastructure, and operational paradigms with initial basis on the Atlantic Consortium</p>