

# **WELCOME TO GLIF Technical Working Group Summer 2016 meeting**



**MIAMI, USA  
29-30 September 2016**

# You Are Here

- Hosted by Internet2
  - 16th Annual Global LambdaGrid Workshop
  - Thanks to Internet2 for hosting us
  - Thanks to all of you for participating
- Meeting schedule:
  - End of summer (annual LambdaGrid workshop)
  - BOFs at major conferes
  - TECH / TF meetings in parallel w/ conferences
- GLIF TECH is about
  - Community reflection, discussion, alignment
  - Taskforces – and the GLIF Tech meeting serves as the F2F gathering of task forces
  - Discussion of new ideas
  - Participation



- Your co-chairs:
  - Lars Fischer (NORDUnet)
  - Eric Boyd (Internet2 / University of Michigan)
- Secretarial support:
  - GLIF Secretariat by GÉANT Association
  - Secretary: Kevin Meynell / Peter Szegedi
- Mailing list:
  - < tech at glif . is >
  - + task force lists



# GLIF Tech taskforces

- Dynamic GOLE Services
  - Gerben van Malenstein
- NSI Implementation
  - John MacAuley
- GOLE Operations
  - Dale Finkelson, Gerben van Malenstein
- Performance Verification Architectures
  - Steve Wolf, Jerry Sobieski
- Inter-Domain SDN
  - Eric Boyd, Steven Wolf
- [www.glif.is/working-groups/tech/](http://www.glif.is/working-groups/tech/)



# GLIF Resources

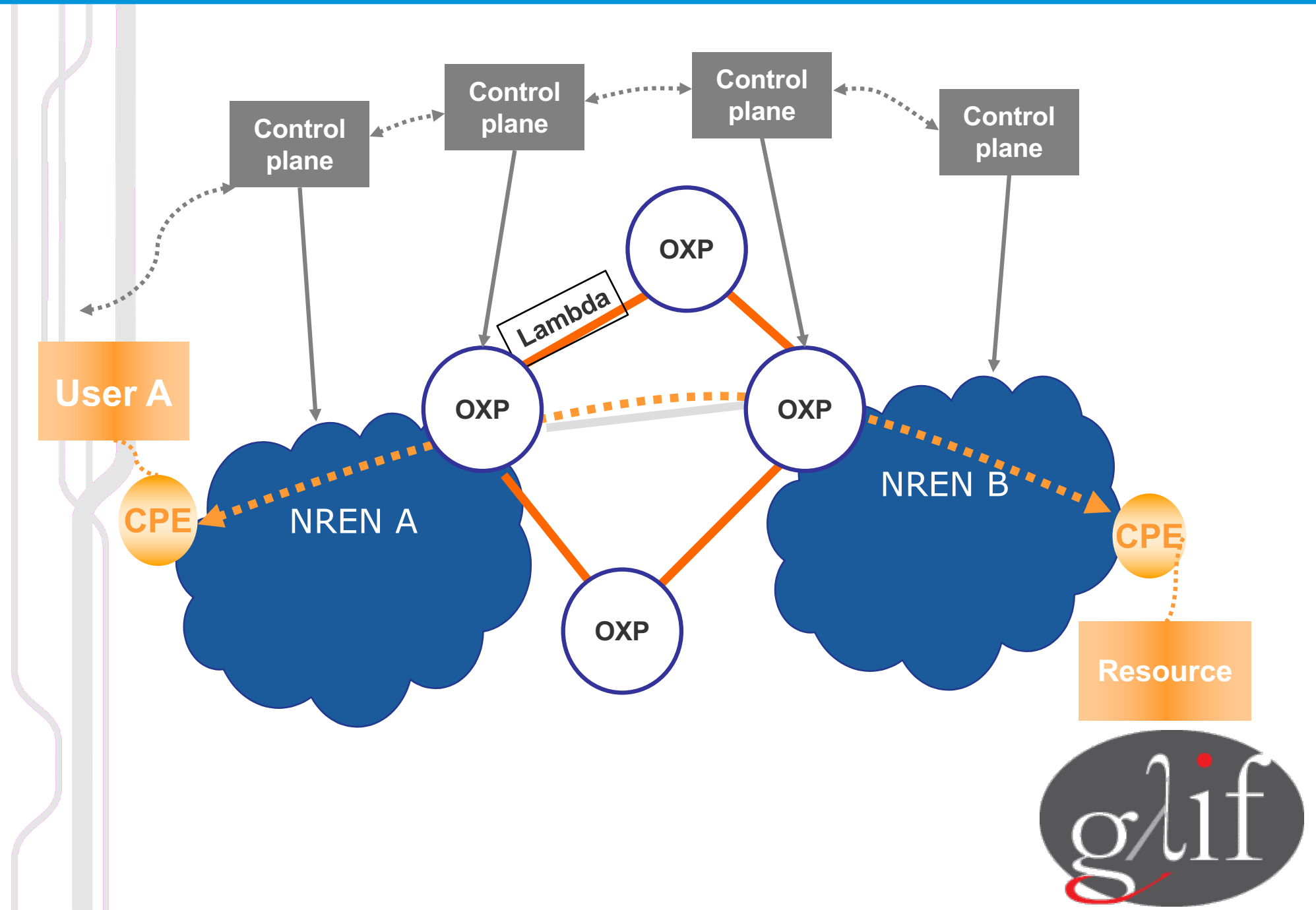
## GLIF Infrastructures

- **Lambdas shared by GLIF participants**
- **GOLEs (GLIF Open Lightpath Exchanges)**
- **And of course: Hybrid, lightpath capable networks run by the GLIF Participants**

**AMPATH - Miami**  
**CERNLight - Geneva**  
**CzechLight – Prague**  
**GÉANT Open - London**  
**HKOEP - Hong Kong**  
**KRLight - Daejoen**  
**MAN LAN - New York**  
**MoscowLight - Moscow**  
**NetherLight - Amsterdam**  
**NGIX-East - Washington D.C.**  
**NorthernLight - Copenhagen**  
**Pacific Wave - Los Angeles**  
**Pacific Wave - Seattle**  
**Pacific Wave – Sunnyvale**  
**SingLight - Singapore**  
**SouthernLight - São Paulo**  
**StarLight - Chicago**  
**T-LEX - Tokyo**  
**TaiwanLight - Taipei**



## OSP-centric networking

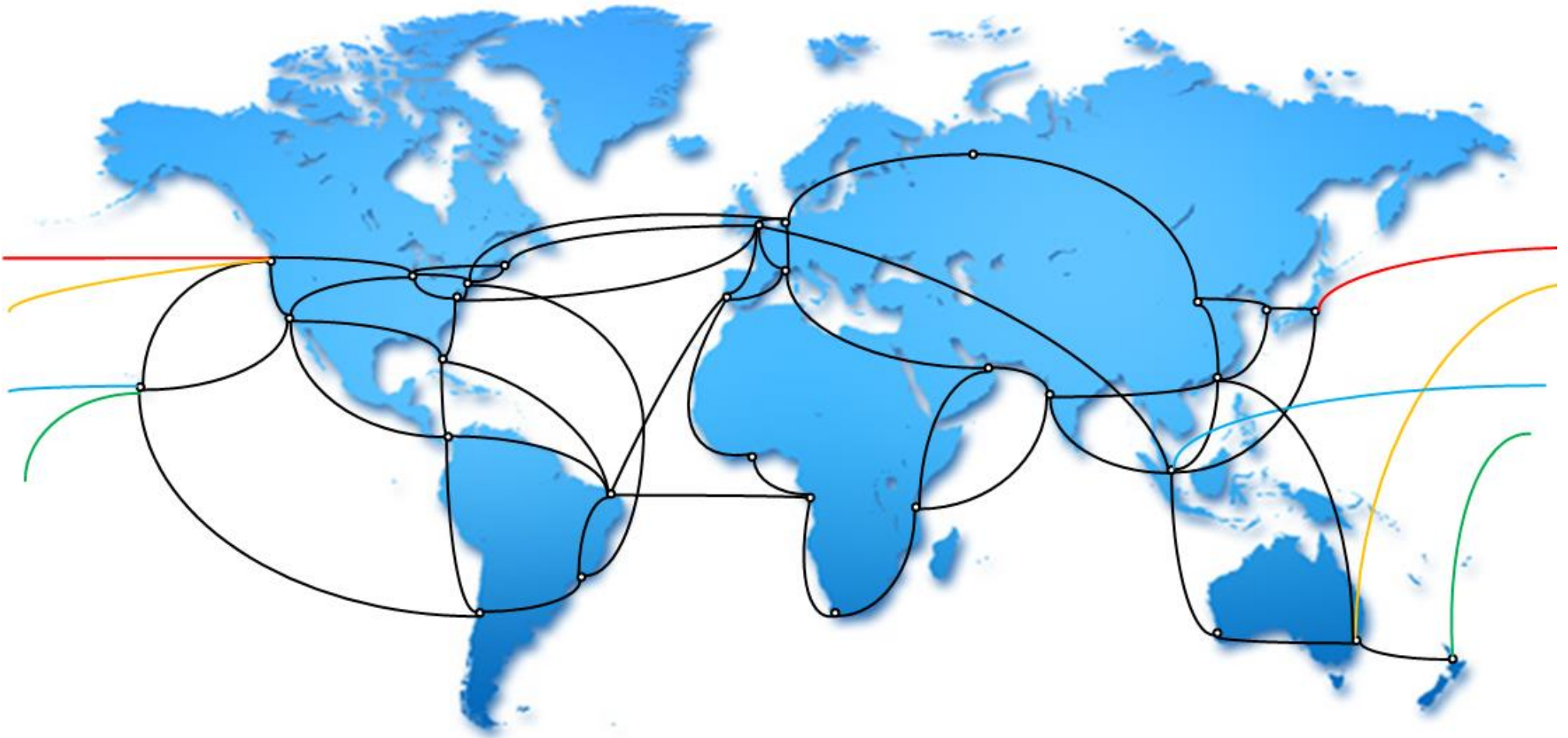


# NSI Framework

- OGF NSI working group
- AutoGOLE TF
- NSI Imp TF



# Global Network Architecture



# Year of Experimentation

- BOFs at Global Summit, TNC
- Some taskforce meetings at conferences
  - Not as many as we should have had
  - Mainly AutoGOLE group
- No “Winter TECH”
- Conclusions?
  - We have the wrong format?
  - We don't have the TFs you want?
  - You do the work elsewhere?
- To be discussed later today



# GLIF TECH and the GNA (1)

- GNA group is producing blueprints
  - References documents for architectures
  - Expression of *objectives*
- Local implementations
  - Pathfinders
  - Sustainable platforms in operations
  - *Technical solutions* to objectives
  - Putting *money* towards objectives
  - Many built by GLIF TECH participants



## GLIF TECH and the GNA (2)

- Sharing projects, implementations, ideas
  - Community learning
  - Consensus, building best practice
  - Detailed technical discussion
  - Not suitable for a high-level architecture forum
- GLIF TECH is
  - A forum for reflection & discussion
  - A forum for presentation of technologies, experiments, ideas



# Challenges

- Consider
  - Transport ✓
  - Cross-connect ✓
  - Topology Exchange (✓)
  - Performance Verification for end-to-end
  - Service Level management
  - Link Policy management
  - Identity Management
  - Virtualization
  - OXP service architecture
  - Security
- We have work to do!



# Agenda Day 1

Time	Subject
13:30 – 13:40	Welcome, admin – <i>Lars Fischer &amp; Eric Boyd</i>
13.40 – 14:40	GOLE Updates
14:40 – 15:00	Best Practice for R&E Cloud Provider Connectivity
15:00 – 15:30	<b>Coffee</b>
15:30 – 16:00	Gole Operators Task Force - <i>Dale Finkleson, Lars Fischer</i>
16:00 – 16:45	Overview of GLIF TECH taskforces – David Wilde



# Agenda Day 2

Time	Subject
9:00 – 10:30	GLIF Governance Meeting
10.30 – 11:00	<b>Coffee</b>
11:00 – 11:45	AutoGOLE Task Force <i>John Hess, CENIC &amp; Jim Hao Chen, iCAIR</i>
11:45 – 12:15	GLIF resources for the Commons - <i>Dale Finkelson, Internet2</i>
12:15 – 12:30	Wrap-up, next steps – Eric Boyd, Lars Fischer
12:30 – 13:30	<b>Lunch</b>





# **Thank You**

**Lars Fischer**

**[lars@nordu.net](mailto:lars@nordu.net)**

**<http://www.glif.is>**