



Enhancements at AMPATH and AMLIGHT



**GLIF 11th Annual Global
LambdaGrid Workshop
September 13, 2011**

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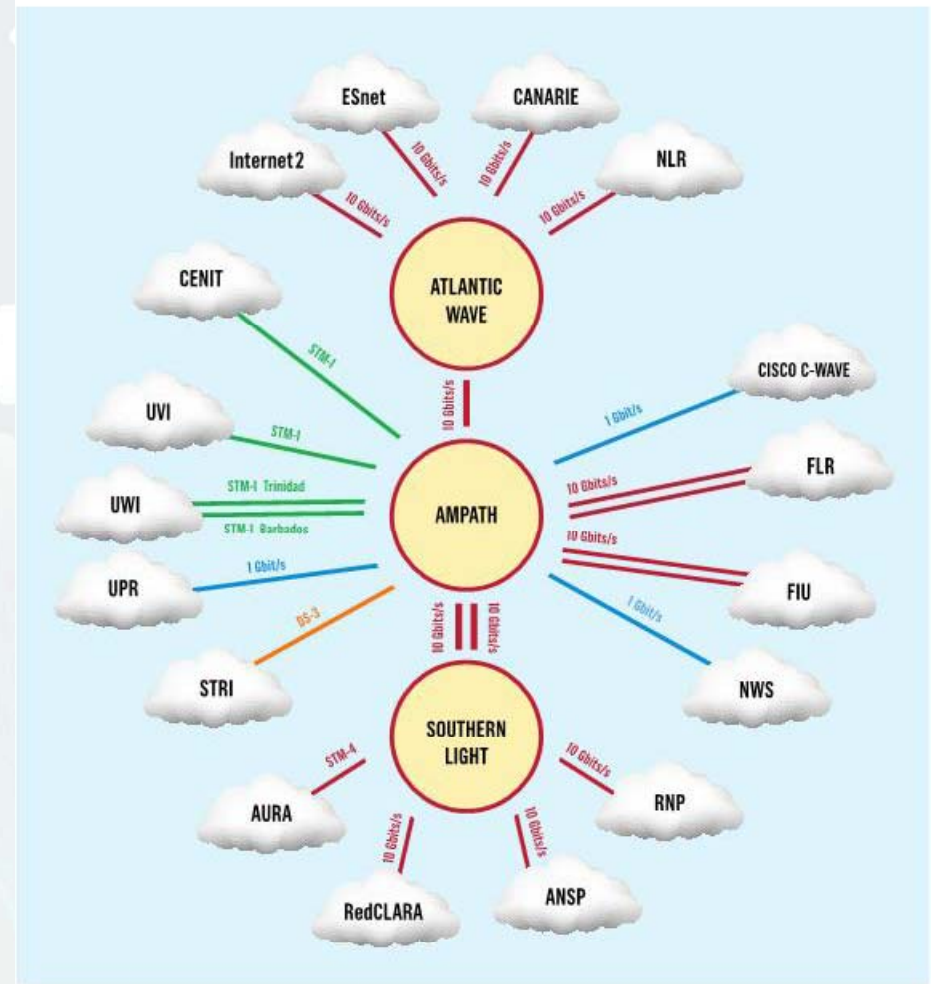
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Outline

- About AMPATH and AMLIGHT
- Hybrid Networking Services
- AMLIGHT Project Outlook

AMPATH International Exchange Point

- Location: NAP of the Americas, Miami, FL
- Connectivity:
 - 1G, 10G Ethernet
 - SDH/SONET
- Services:
 - Routed IP
 - Distributed Peering Fabric
 - AtlanticWave
 - SouthernLight
 - Persistent VLANs
 - Static and Dynamic
 - perfSONAR



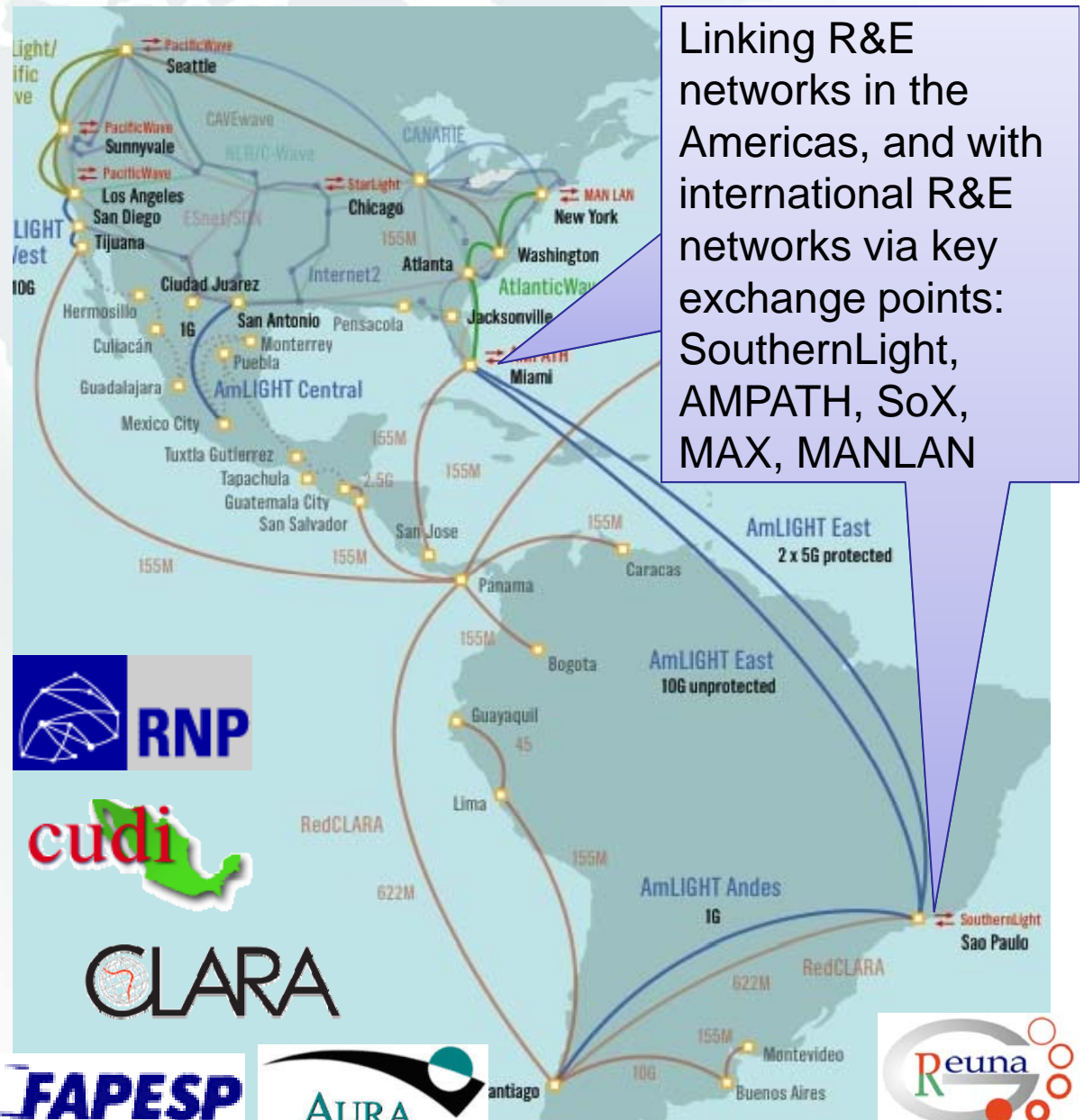
<http://www.ampath.net/>



AMLIGHT: Linking the Americas and Beyond



- 5-year NSF Cooperative Agreement; FAPESP and RNP co-funding
- AmLight East:
 - Miami-Sao Paulo
 - 10G: 2 x 5G protected
 - 10G: 10 unprotected
- AmLight West:
 - Tijuana-Los Angeles
 - 2x1G waves, increasing to 12G
- AmLight Andes:
 - Sao Paulo-Santiago:
 - 1G wave
- AmLight Central:
 - Mex. City-San Antonio:



AMPATH and AMLIGHT Updates

- Hybrid Networking Services
 - OSCARS IDC implemented at AMPATH
 - Collaboration with DYNES and DyGIR projects, RNP, FLR and Internet2
 - Dynamic circuit provisioning established between RNP, AMPATH and Internet2 ION
 - Demonstration later today
- Deploying OpenFlow/SDN
 - Collaboration with Internet2 & RNP for NDDI
 - Connection to GENI OpenFlow backbone, Brazil & Latin America
- Traffic Monitoring & Reporting System
 - Adapting CAIDA Coral Reef system for hybrid networking, including OpenFlow/SDN
- Open Science Data Cloud (OSDC) at AMPATH
 - Cloud system deployment for participation in OSDC
 - Providing data cloud services for OSDC NSF PIRE project, with collaboration with U. Chicago. UFF and UNESP are participating.

AMLIGHT Project Outlook

- Increase support for hybrid network capabilities, both production and experimental testbeds
- Explore interoperation of hybrid networking and SDN in IRNC projects
- Continue developing an advanced monitoring and reporting system for hybrid network services
- Continue rational growth with at least one 10G circuit between AMPATH and SouthernLight
- Develop AtlanticWave 5-year plan, including plan for additional capacity, support for hybrid network services and performance monitoring

Thank You!

- AMLIGHT, AMPATH, AtlanticWave infrastructure, science application support, education, outreach and community building efforts are made possible by funding and support from:
 - National Science Foundation (NSF) awards OCI-0963053, OISE-1129076, OCI-0441095, MPS-0312038, OISE-0549456, OCI-0537464, OCI-0636031, IIS-0646144, OISE-0715489, OCI-0734173, OISE-0742675
 - FAPESP, ANSP – grant no. 2003/13708-0
 - Rede Nacional de Ensino e Pesquisa (RNP)
 - Florida International University
 - Latin American Research and Education community
 - The many national and international collaborators who support our efforts