



GOLE Updates: AMPATH

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AMPATH



AMPATH (ASN 20080) is a high-performance Internet exchange point in Miami, Florida, which facilitates peering and network research between U.S. and international research and education networks.

Serves as the premiere interconnection point for network-enabled U.S.- Latin America and Caribbean science research and education.

Through its exchange point facilities, high-bandwidth network services are available for U.S. and international research and education networks to extend participation to underrepresented groups in Latin America and the Caribbean.

AMPATH works as a major research facility recognized by the U.S. National Science Foundation, supporting international e-science.

Housed at the NAP of the Americas, the mission of AMPATH is to serve as the pathway for Research and Education Networking in the Americas and to the World and to be the International Exchange Point for Latin America and the Caribbean R&E networks.



AMPATH



- Production SDN exchange point since Aug-2014
- GLIF GOLE and GNA OXP
- Connects to SouthernLight and AndesLight via 2x 10G and 2x100G links
- Supports L2VPN, Dynamic Provisioning, IP/IPv6 w/ Multicast
- Control Plane: OpenFlow 1.0 and OpenFlow 1.3
- Network Programmability/Slicing: OESS/NOX, ONOS, Kytos and Ryu
- NSI-enabled with OpenNSA (oess backend)
- Part of the GLIF AutoGOLE WG
- Runs ONSA-LG to provide NSI/provisioning feedback
- Currently, operating with more than a 1000 flow entries

Automated GOLE Fabric



Updates



- AMPATH Academic Exchange Fabric will be expanded to Boca Raton (60 miles north):
 - With the Monet submarine system, spectrum (6 x 37.5GHz) will connect AMPATH to SouthernLight
- A second 100G connection to Internet2 is planned for 2017
 - Total uplink will be 220Gbps
- Corsa + Dell switches are being evaluated to replace current Brocade MLXes
 - OpenFlow 1.3 + Virtualization + multiple 100G ports
- SDX: AMPATH is part of the AtlanticWave-SDX with NSI (experimental-) support
- ONOS/CasTOR + Corsa running in production to replace the current Juniper MX480 routers
- Both SouthernLight and AMPATH engineering teams are now AmLight engineering team.