

AMPATH Status Report

First International AMPATH Conference

Valdivia, Chile

April 12, 2002

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Principal Investigator



Florida International University

AMPATH

What is AMPATH?



- AMPATH is a project led by FIU, with partial support from the US National Science Foundation to interconnect the R&E networks in South and Central America, the Caribbean and Mexico to US and non-US R&E networks via Internet2's Abilene network
- AMPATH began with a generous donation of 10 DS3 circuits for three years from Global Crossing



What is AMPATH?

- AMPATH has access to Global Crossing's terrestrial and submarine optical-fiber networks



What is AMPATH?

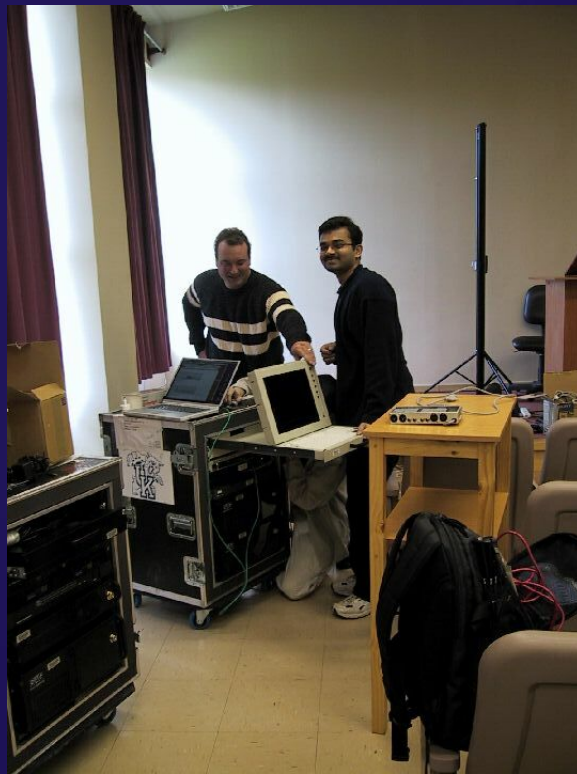


- 10 DS3s from Global Crossing
- Cisco GSR 12012
- Lucent CBX 500 ATM switch
- Juniper M10 router
- Collocation in the Terremark Worldwide , Inc, NAP of the Americas
- Connectivity to Abilene and StarLight



AMPATH is about Collaboration

- FIU Network Engineers
- Global NOC



noc@ampath.net

Florida International University

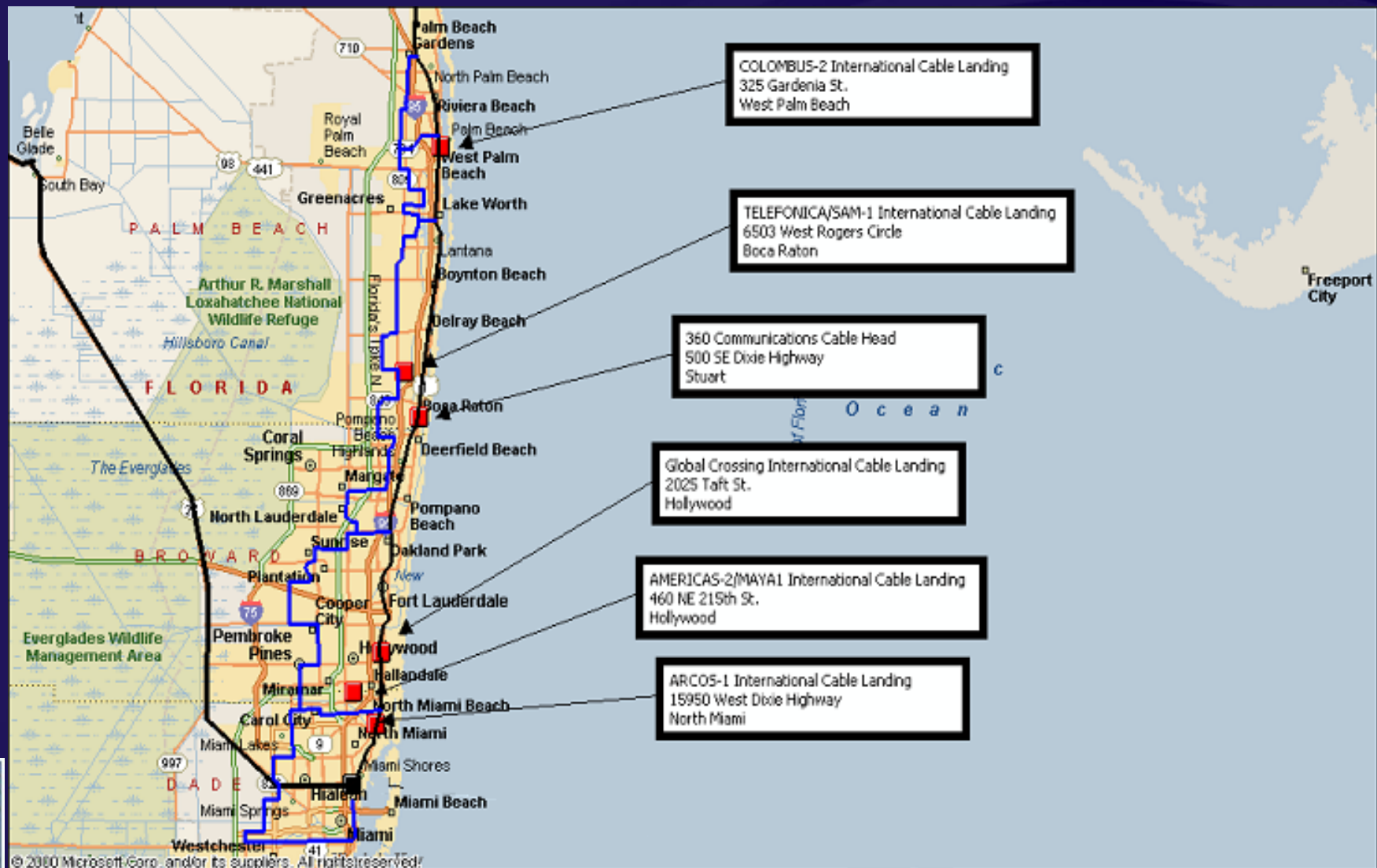
AMPATH



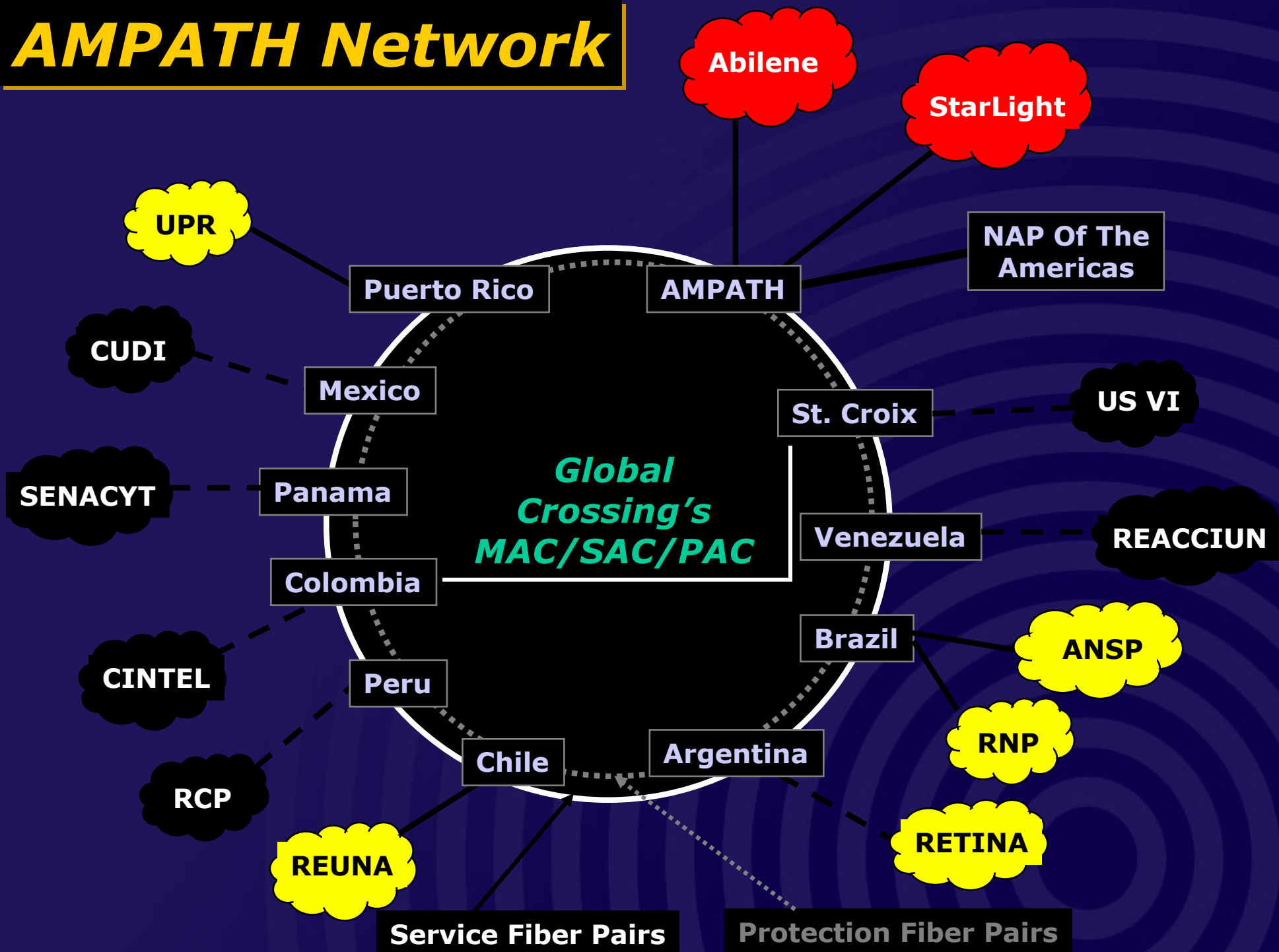
- **Fifth Tier-1 NAP**
- **Strategically located to serve Latin America, the Caribbean, Southern Europe and Africa**
- **Close to major carrier POPs and 7 worldwide undersea cable landings**



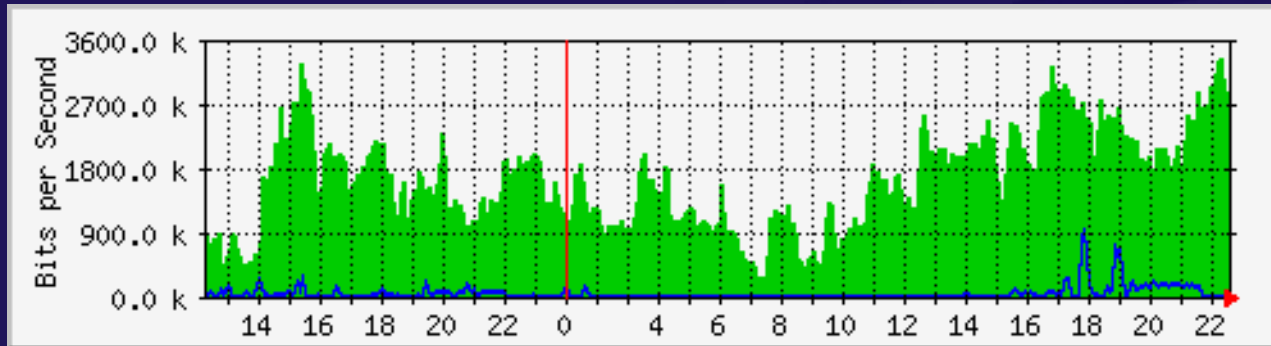
International Cable Landings



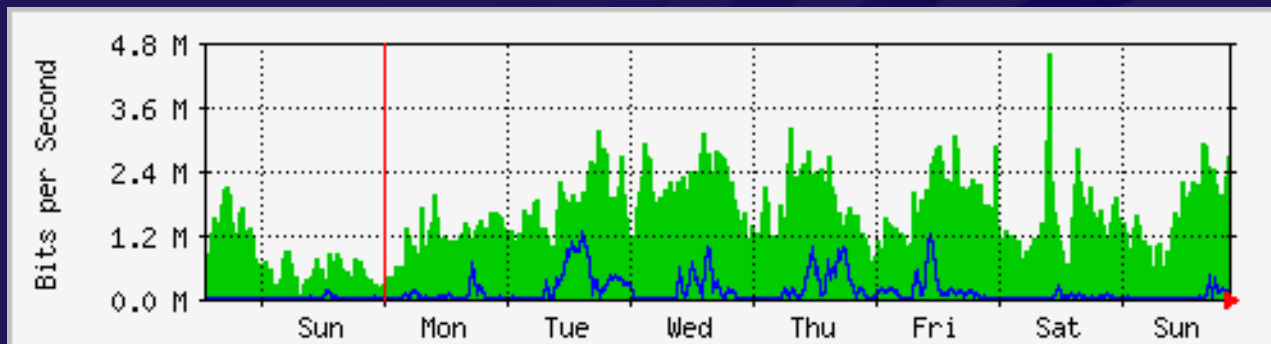
AMPATH Network



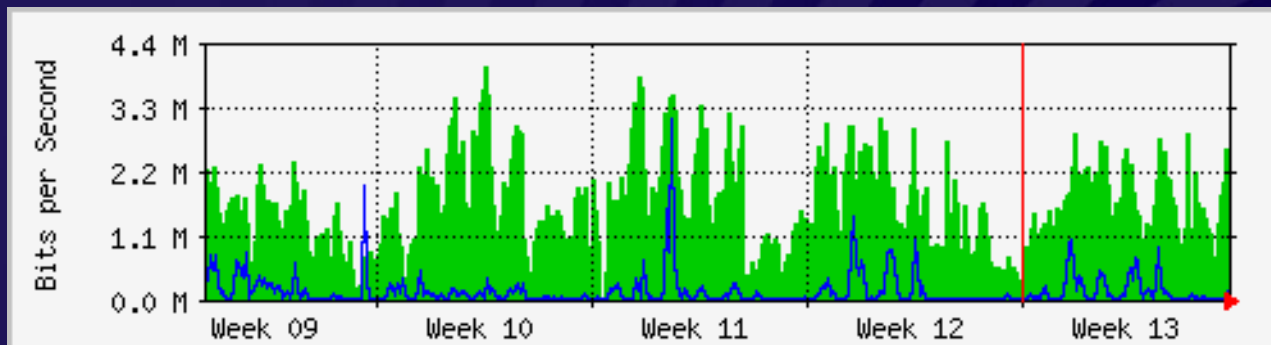
Chile - REUNA



1 Day



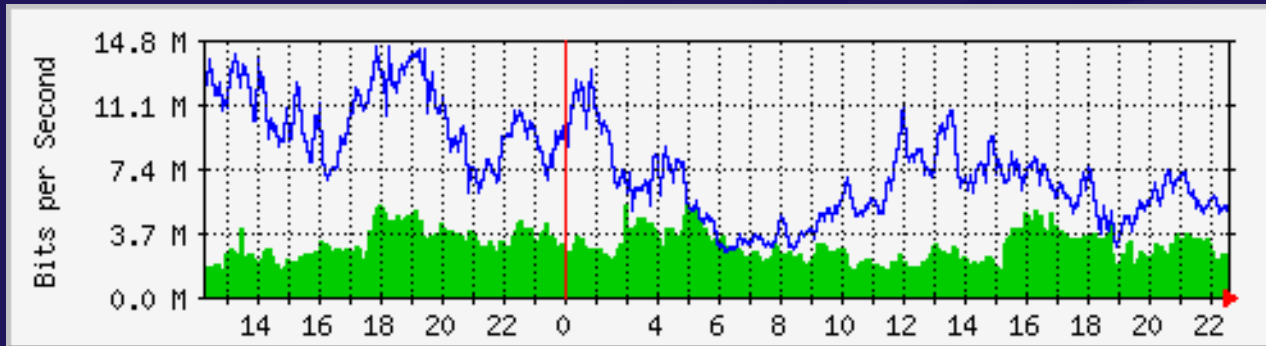
1 Week



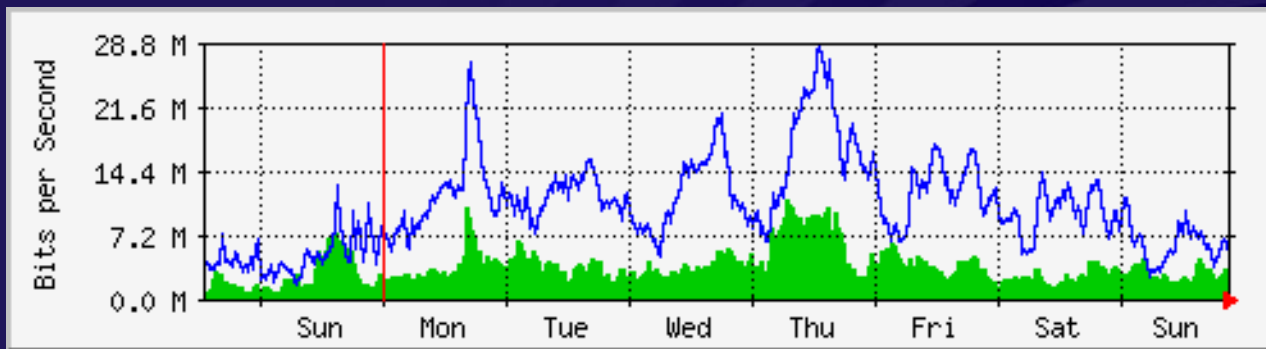
1 Month



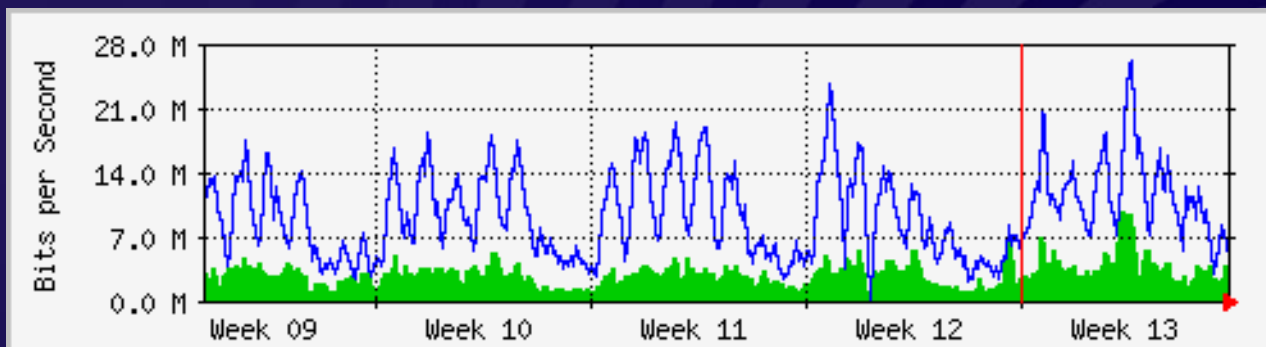
Brazil – RNP



1 Day



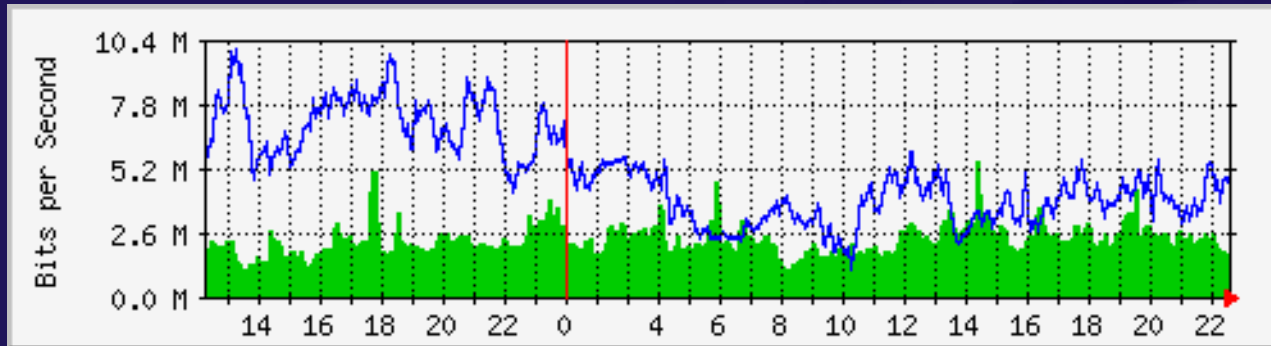
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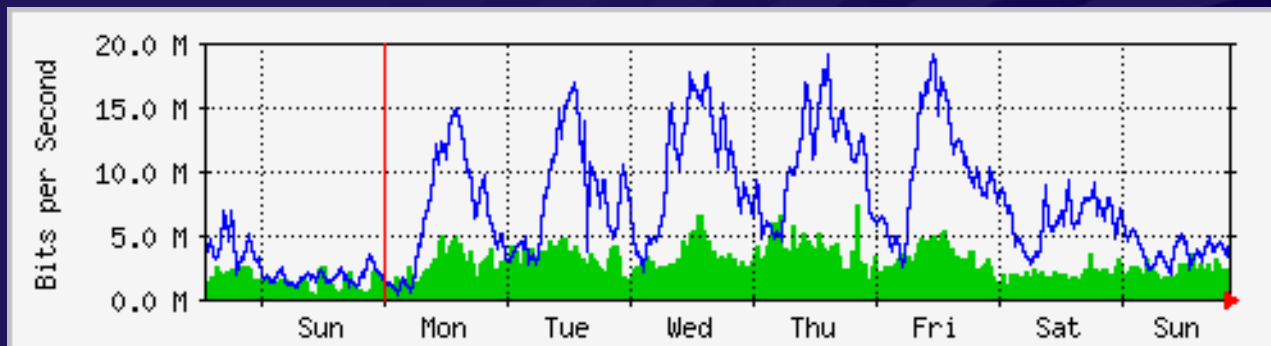
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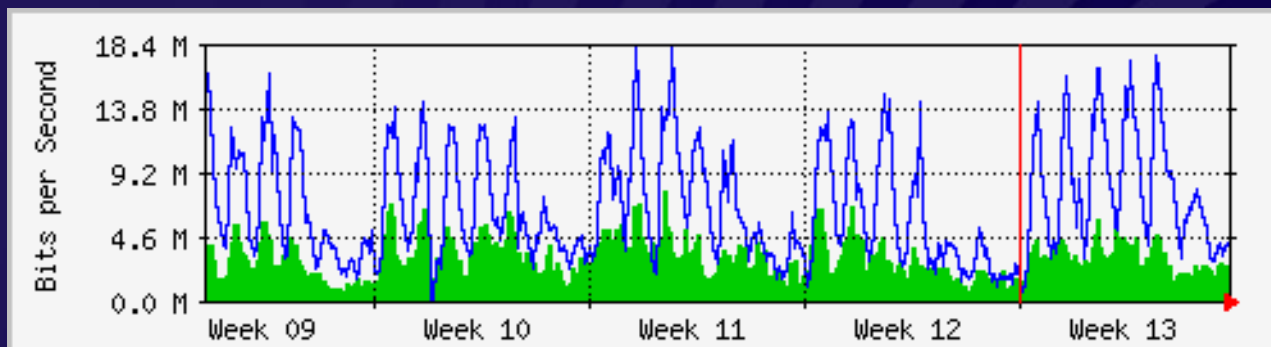
Brazil - ANSP



1 Day



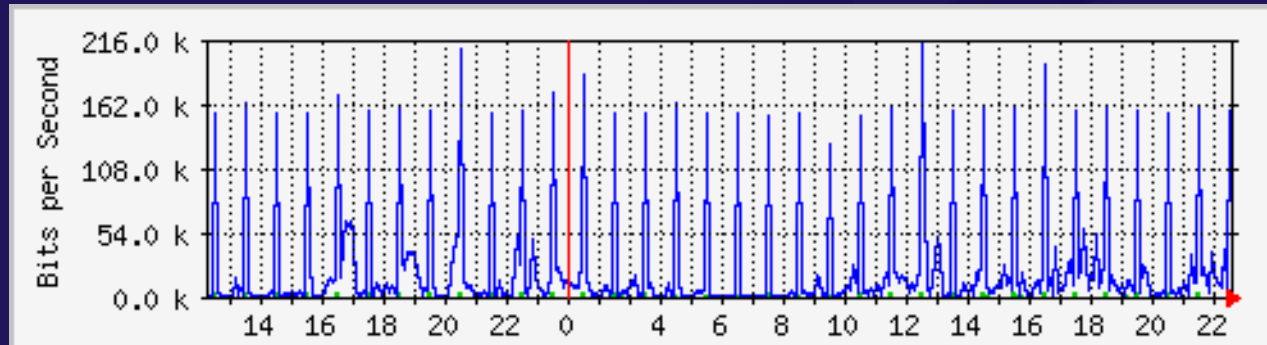
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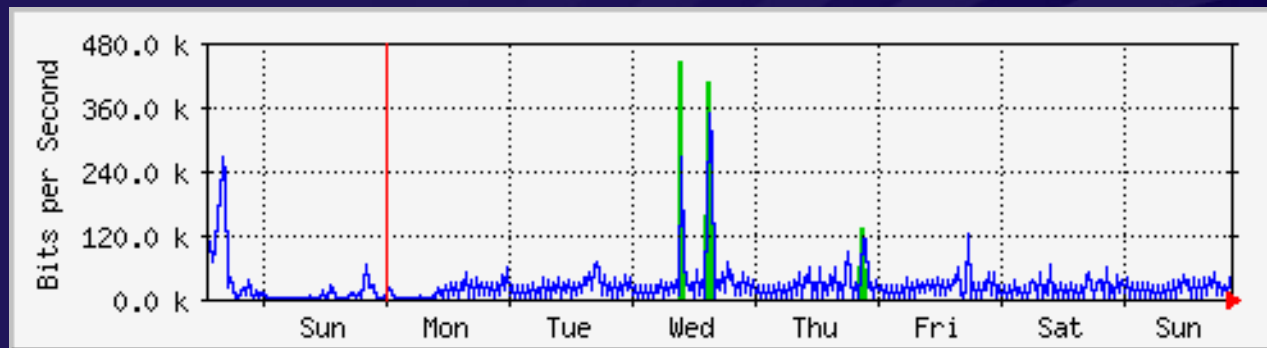
1 Month



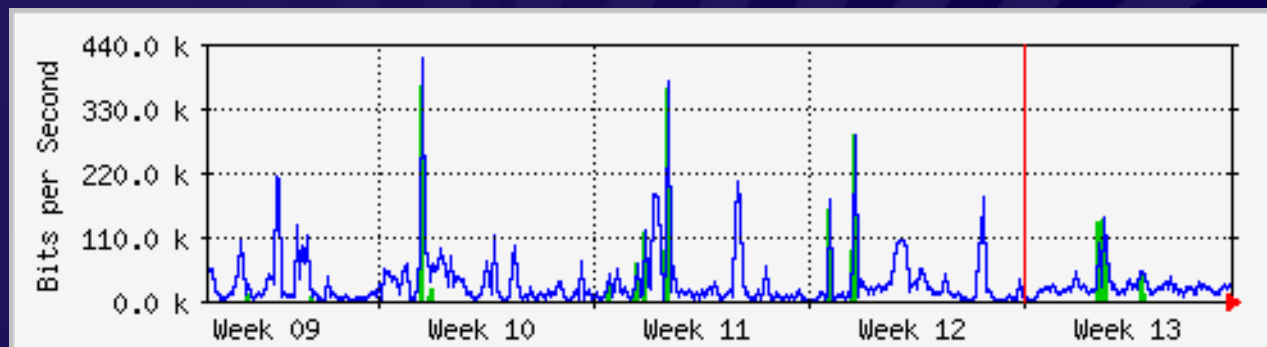
Argentina - RETINA



1 Day



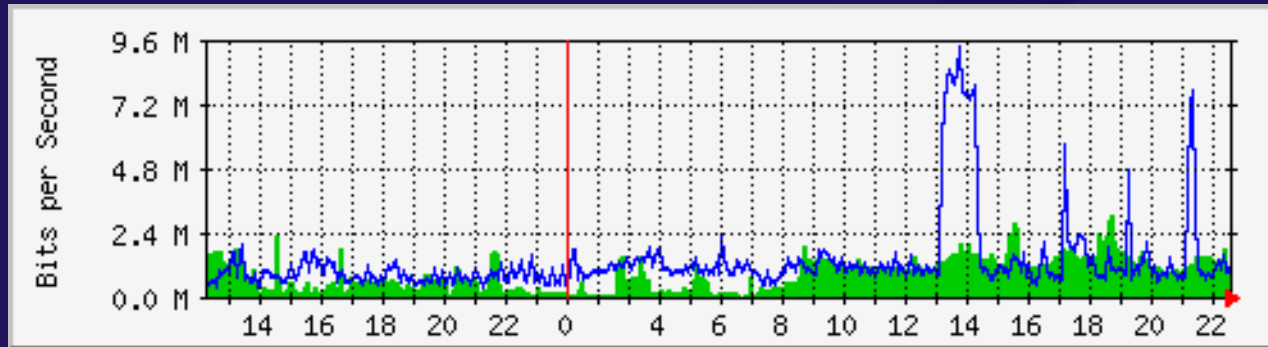
1 Week



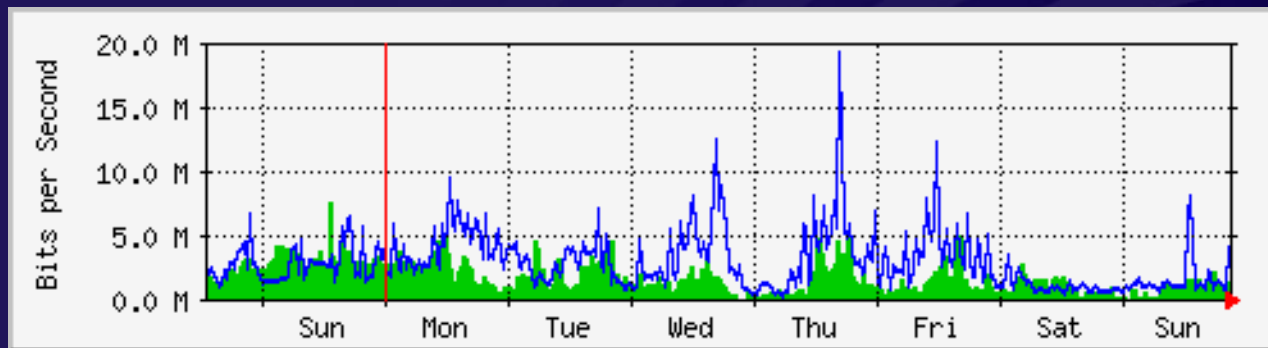
1 Month



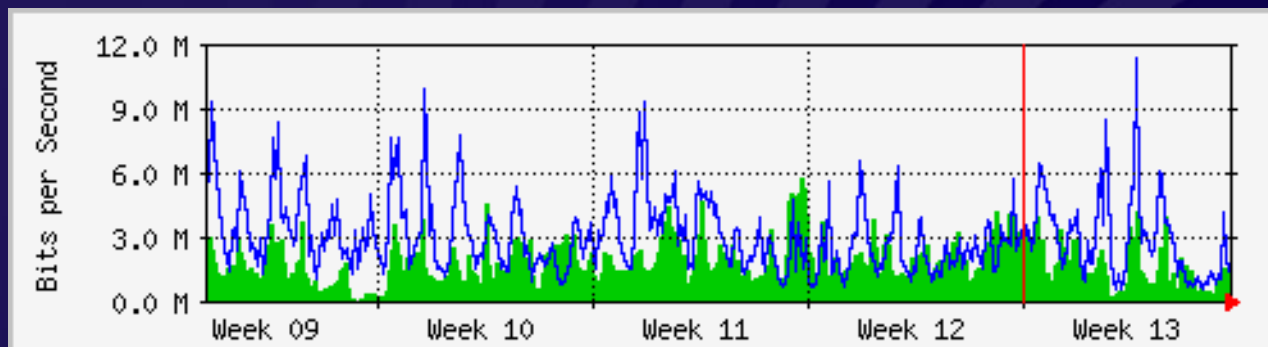
University of Puerto Rico



1 Day



1 Week

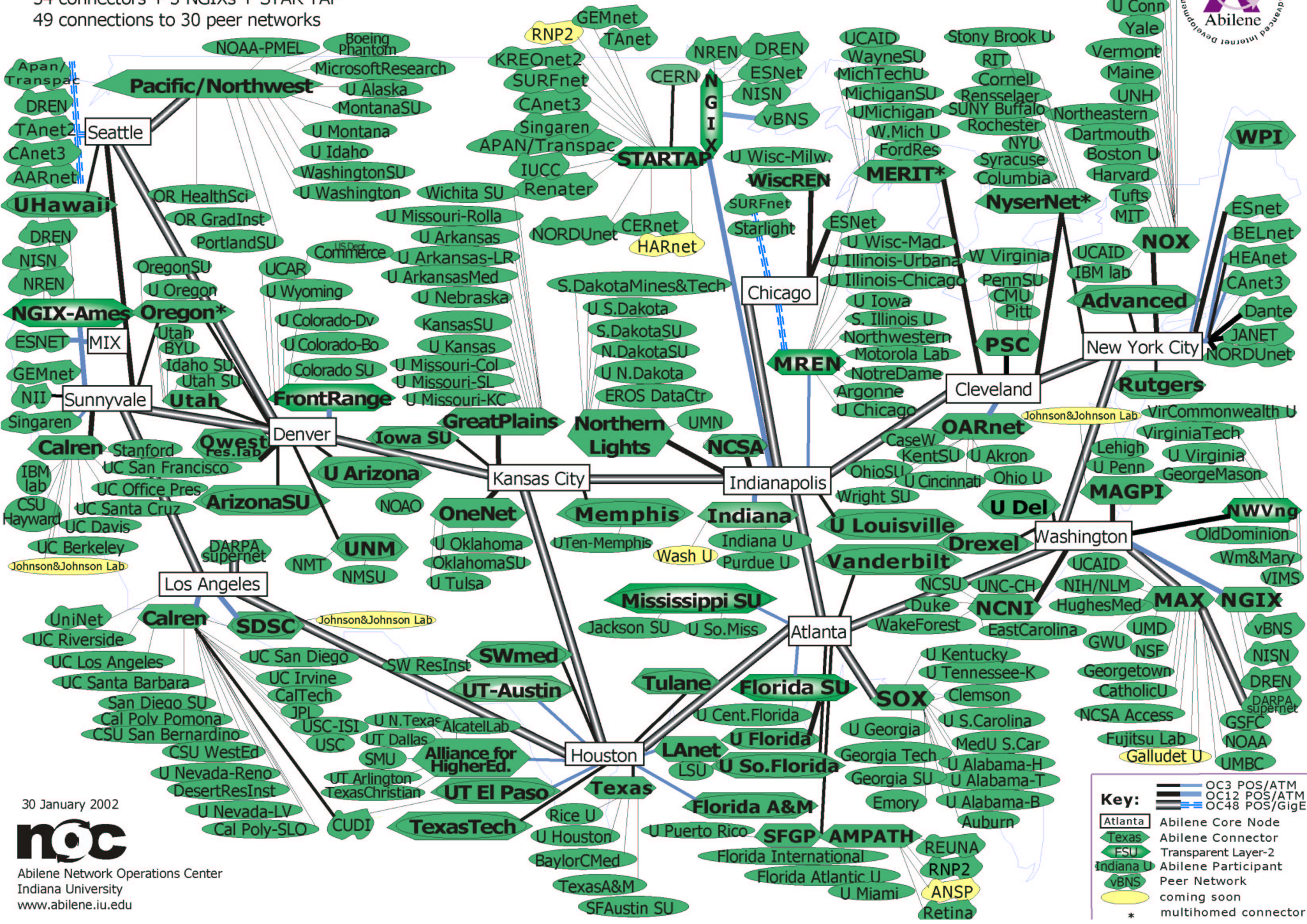


1 Month



The Abilene Network

completed connections:
 214 participants
 54 connectors + 3 NGIXs + STAR TAP
 49 connections to 30 peer networks



Key:

- OC3 POS/ATM
- OC12 POS/ATM
- OC48 POS/GigE
- Atlanta: Abilene Core Node
- Texas: Abilene Connector
- FSU: Transparent Layer-2
- Indiana U: Abilene Participant
- VBNS: Peer Network
- coming soon
- * multihomed connector

First Year Accomplishments



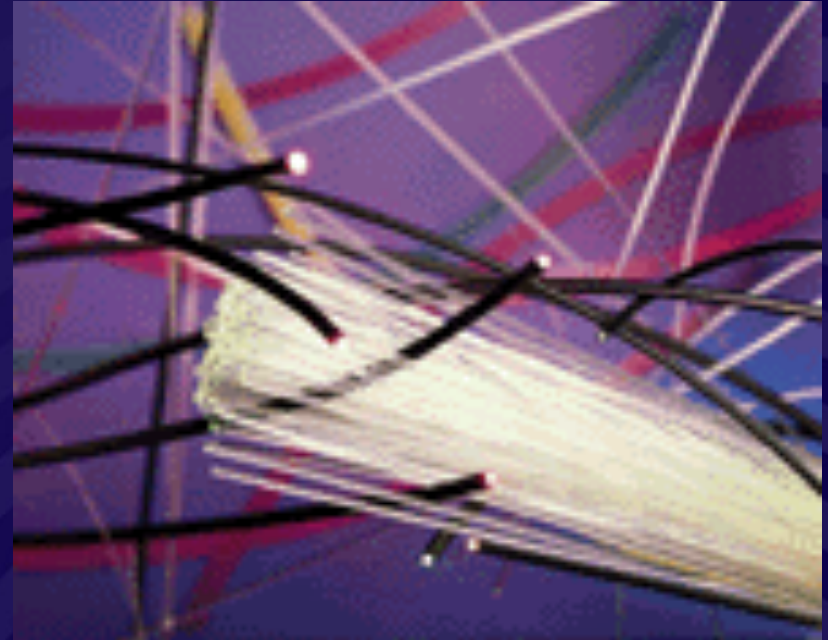
- Connected at least four countries in the Service Area:
 - Argentina
 - Brazil
 - Brazil (Sao Paolo)
 - Chile
- Connected University of Puerto Rico and Arecibo observatory
- Completed report to the NSF from the first AMPATH workshop
- Connected to StarLight
- Connecting Gemini South (coming soon)
- Established AMPATH as the effective international peering and interconnection point for Research and Education networks for South and Central America, Mexico and the Caribbean



Goals



- Fully utilize the capacity of the donated DS3s:
 - Science and education applications
 - Partnerships
- Activities
 - Optical wavelengths
 - Optical routing
 - IPv6
 - Multicast
 - QoS
 - Access Grid
 - MPLS tunnels
 - Wireless to wired networks



Goals

- Continue aggressive pursuit of grants, as well as, organizational and industry partnerships
- Access to the US Federal Research and Education Networks
 - Participating in the Joint Engineering Team (JET)
 - Establish an NGI-X in Miami
- Facilitate connectivity to AMPATH
 - International connections
 - Regional Aggregation
 - In-Country Aggregation



Goals

- Position AMPATH as a future lambda connect point directly linking optical networks in the AMPATH Service Area to StarLight
- Provide an connectivity and application registry for AMPATH service area institutions
- Collaborate with service area researchers on grant proposals
- Help potential service area connectors identify and provision cost-effective circuits



Project Time Line

Dec 2001

StarLight Trial Connection

Feb 2002

LISHEP Grid Workshop, Rio de Janeiro

April 2002

First AMPATH International Conference, Valdivia

July 2002

Move AMPATH to NAP Of The Americas;
Connect Peru and Venezuela;
Connect Panama, Mexico, USVI, Colombia

Sept 2002

Participate in iGrid 2002, Amsterdam
Connect remaining countries in the AMPATH Service Area

Dec 2002

Continue working with the project members to connect the universities
and research organizations in the Service Area



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Internet2 Members Meeting



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Activities



- 24-26
September, 2002
- Amsterdam, The Netherlands

iGrid 2002 provides an international testbed for participants to collaborate on a global scale to advance the state of the art in high-performance computing and communications.

What can you do with a 10Gbps Network?



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Thank you! Gracias!



www.ampath.fiu.edu

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