

UNI.NET & DATACENTER RASH infrastructure

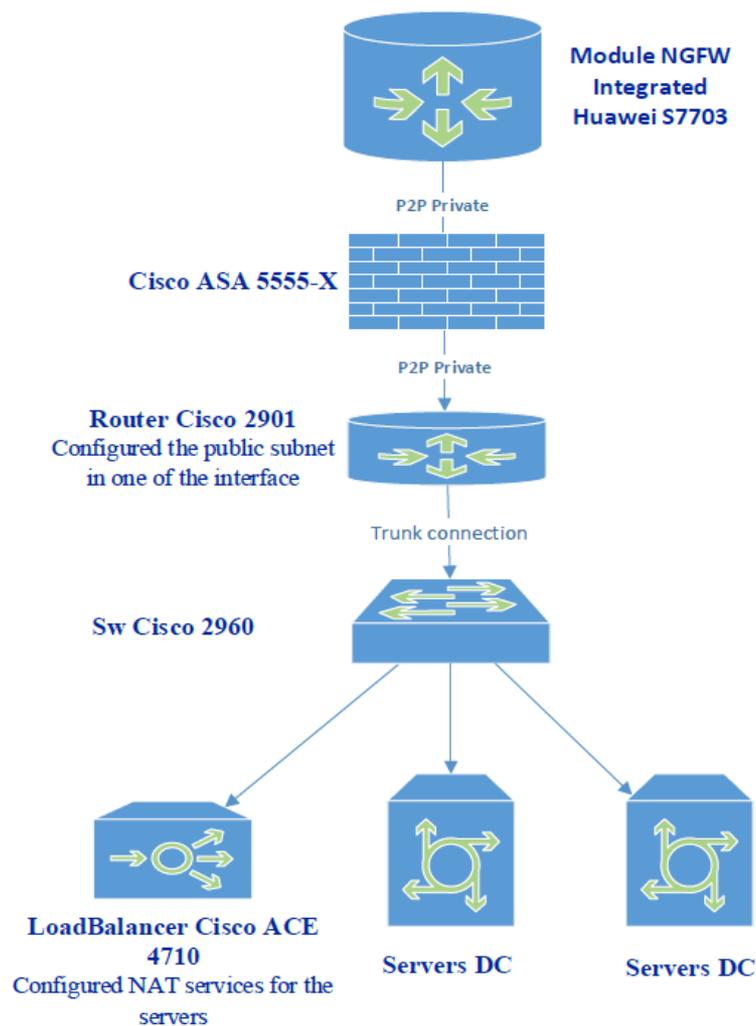
Dr. Arjan Xhelaj
Mariglen Hysko
Andi Malaj

About RASH

- Albanian NREN
- Founded in 2009, active from 2011
- Mission:
 - Connect Albanian public universities in e NREN; interconnect RASH to GEANT network and to the Internet
 - Provide services to universities & Ministry:
 - Software for University management
 - Portals for Ministry of Educations, Sport and Youth
 - Research and education interconnection
 - Datacenter, Hosting infrastructure

RASH Infrastructure

- Own Datacenter from 2016
- Datacenter network topology
- Three separated dedicated spaces:
 1. Server room
 2. Network room
 3. Electrical room
- N+1 UPS and on site generator
- Cooling system
- Antifire system, temperature & humidity sensor



Datacenter

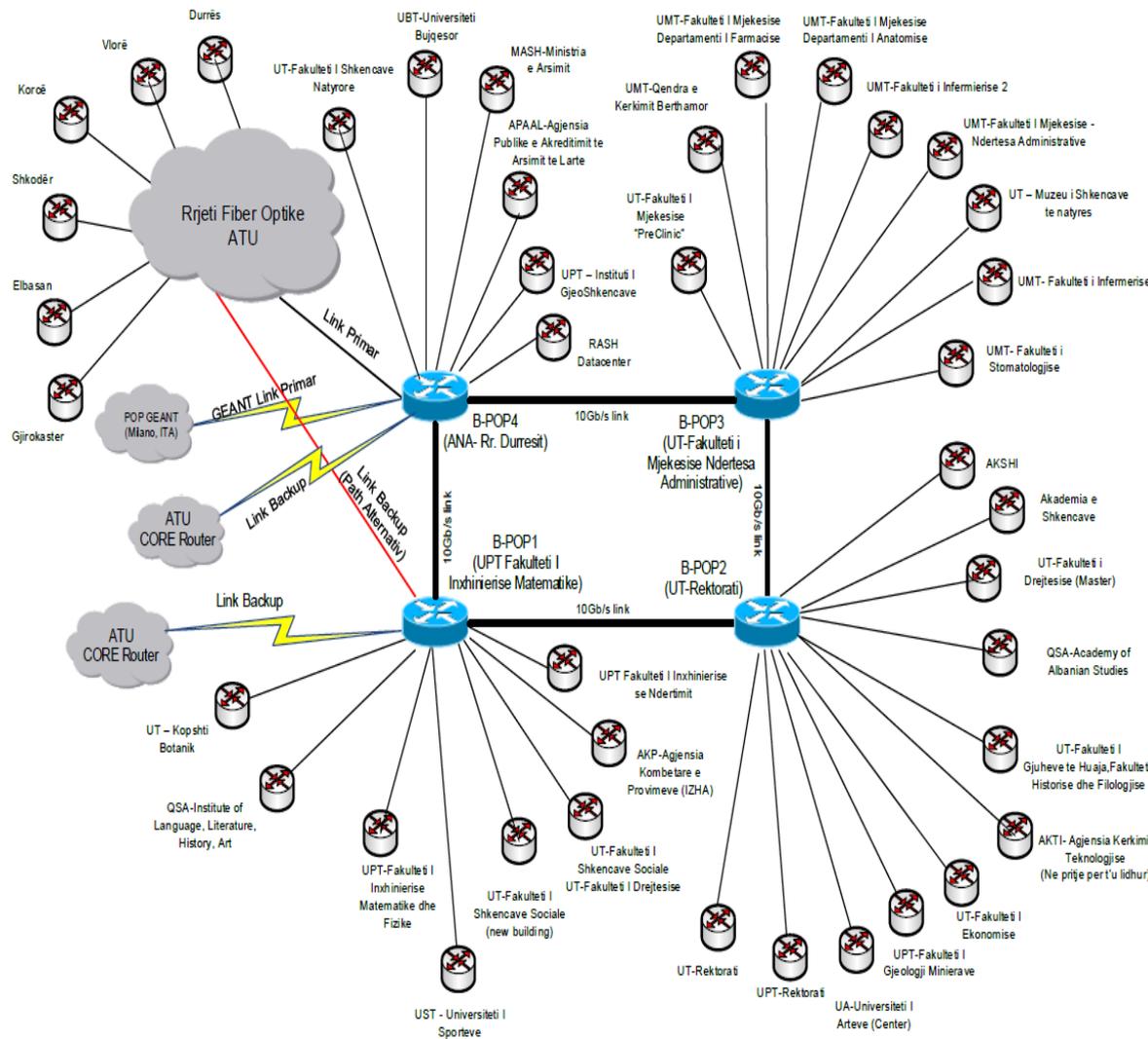
- Hosting services for universities and ministry of education
- Offering different platform:
 - ESSE3 – Manage Alumni Curricula in the University (*)
 - UGOV ERP and Accounting Software – Manage University’s Finance (*)
 - IRIS Research Portal – Manage scientific publications(*)
 - U-albania – university admissions portal(**)
 - M-albania– teachers portal (**)
 - Research Census portal(**)
 - Training portal(**)

(*) Cineca © ; (**) RASH ©

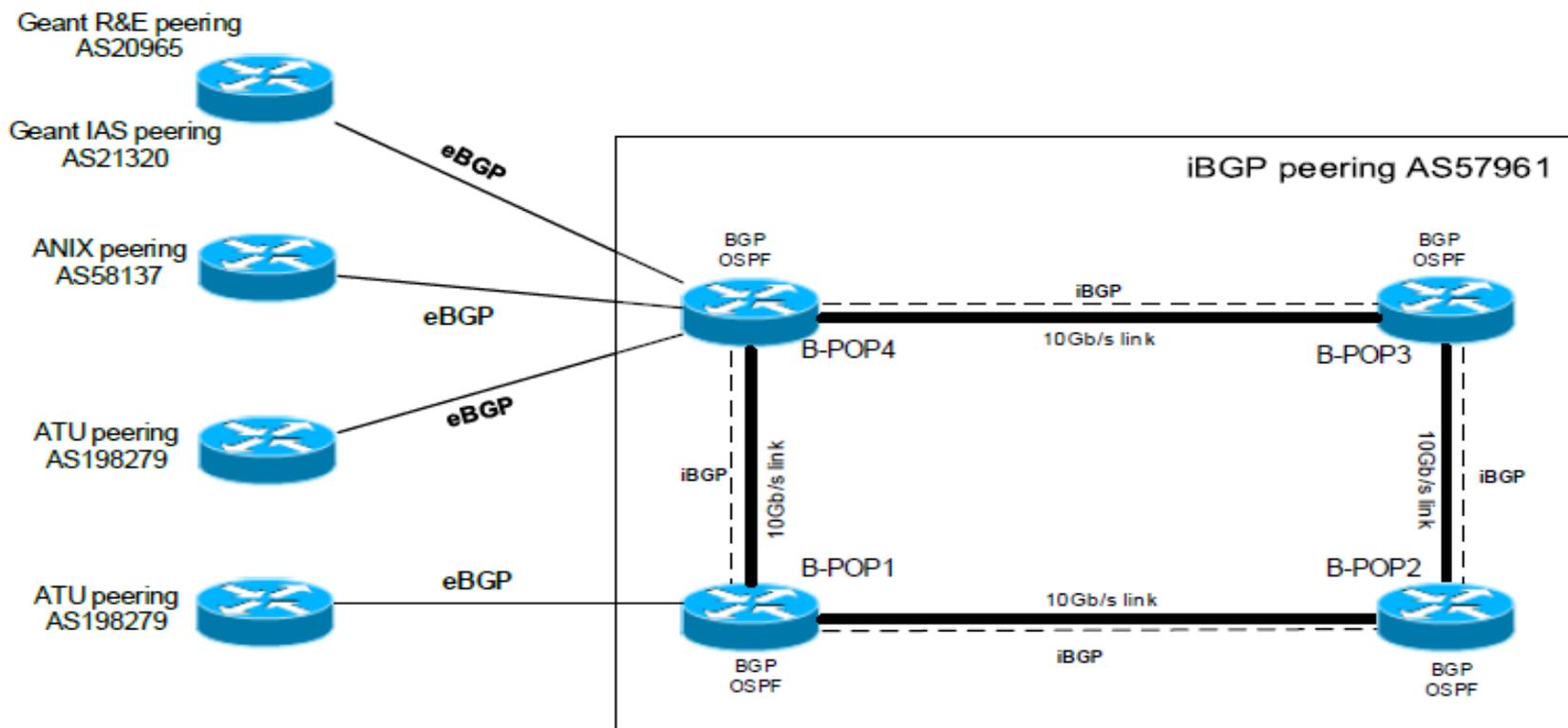


Unet-University Network

- Unet network topology
- Dark fiber network
- 4 Backbone area 10 Gbps
- 54 Point of presence, M-PoP + S-PoP with point-to-point 1Gbps
- MAN of Tirana & Regionals campus network area

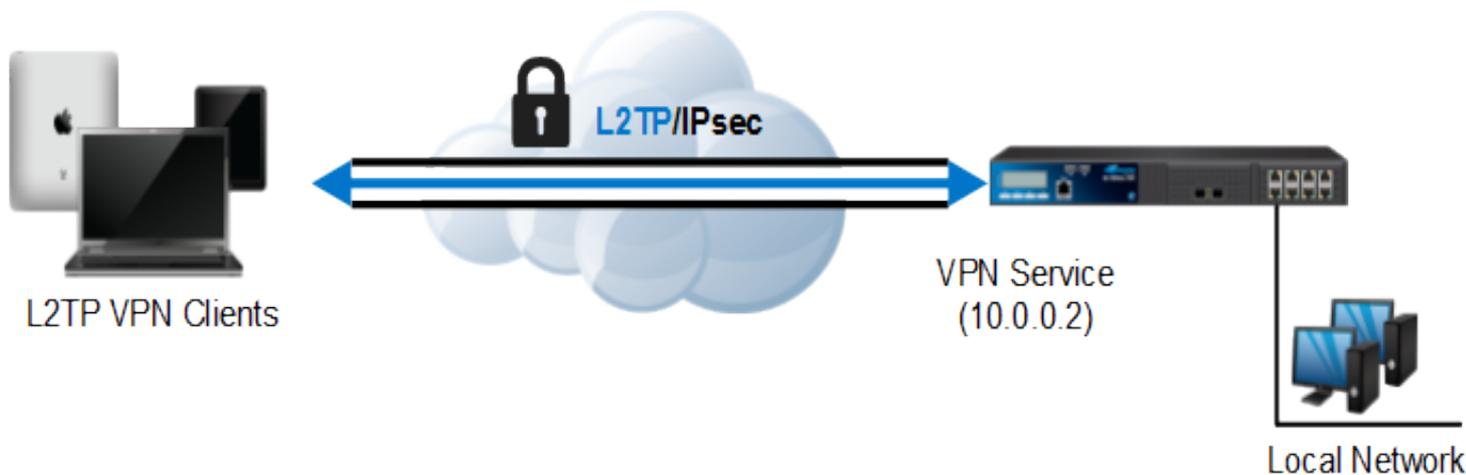


eBGP and iBGP peering



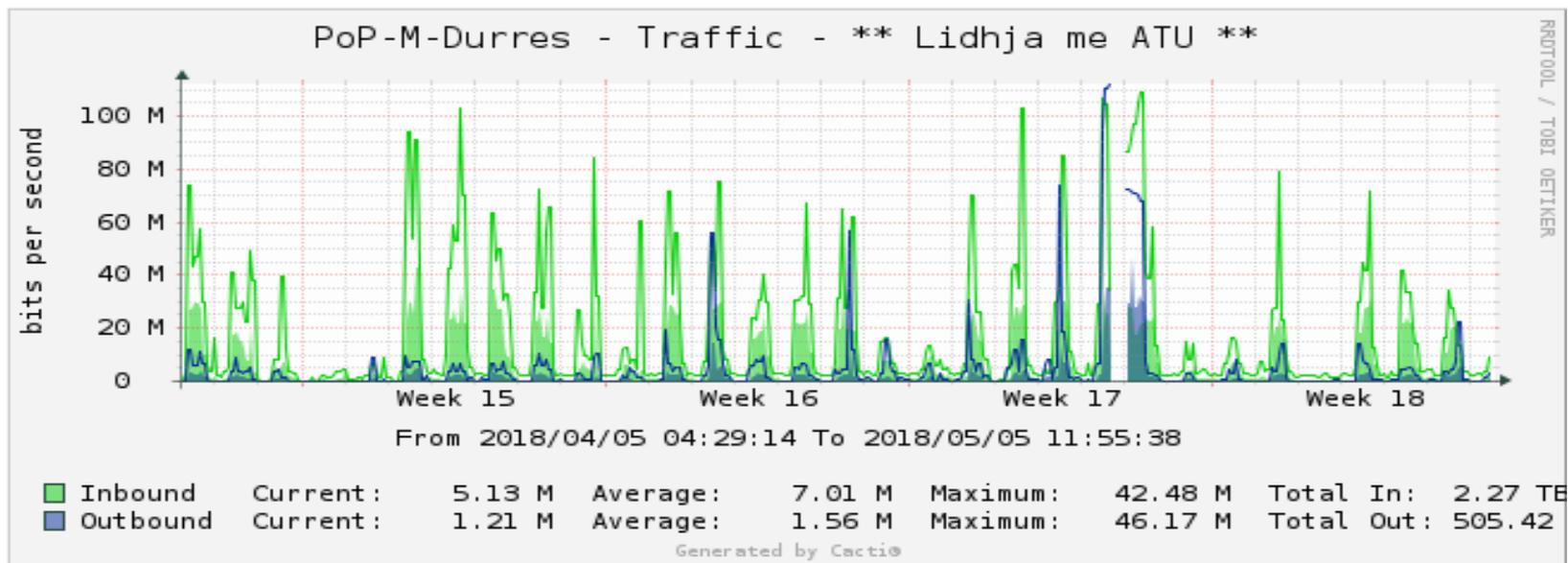
Our services

- Internet and data
- Public IP addresses
- VPN services
- DNS services
- RADIUS Server

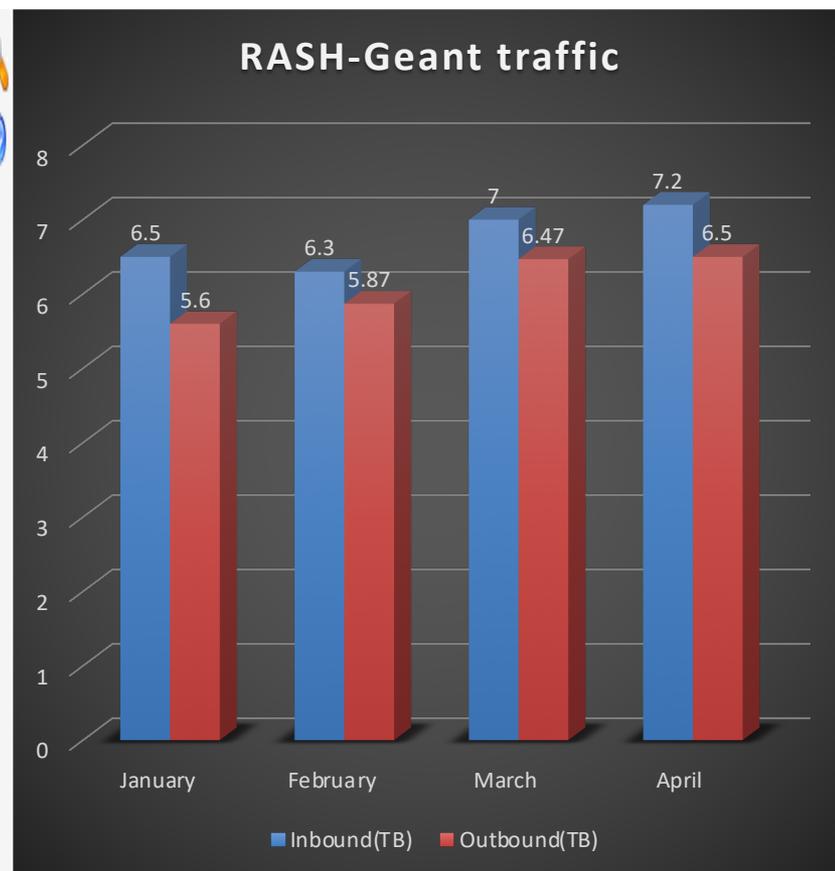
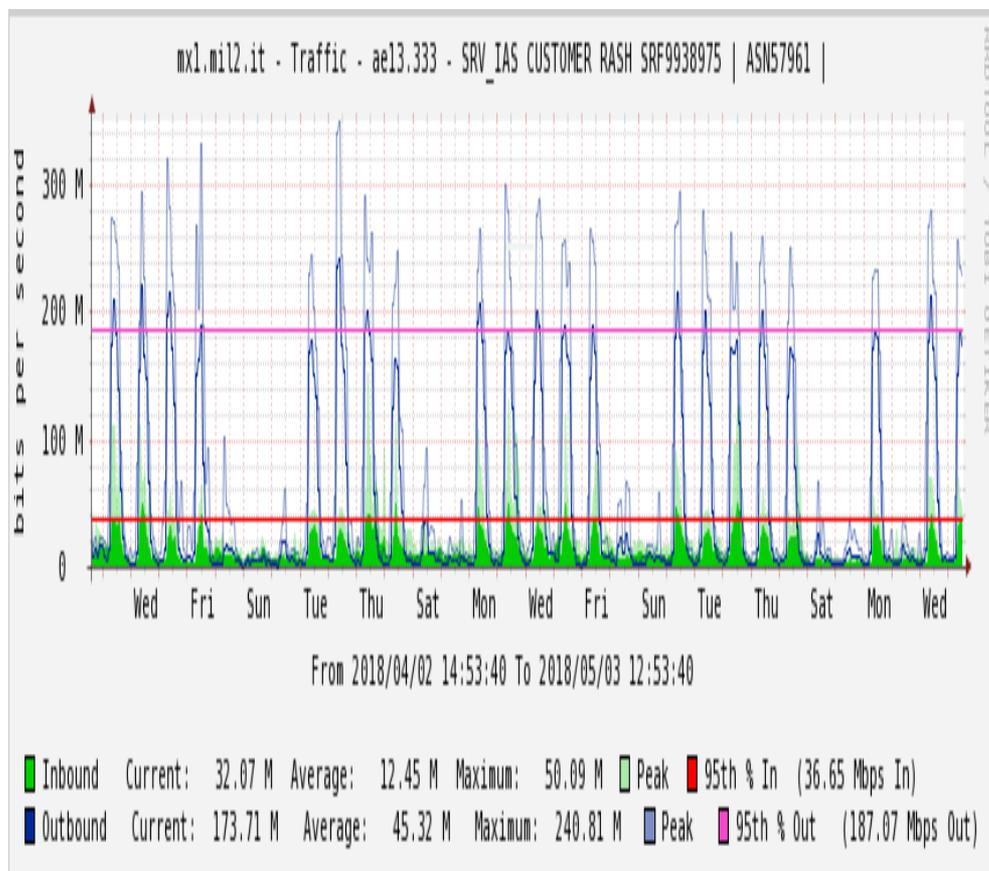


Other monitoring systems

- Cacti server – uptime, bandwidth utilization
- Nagios – uptime, ping, RTA, packet loss, latency, event logs
- RIPE Atlas probes and an anchor



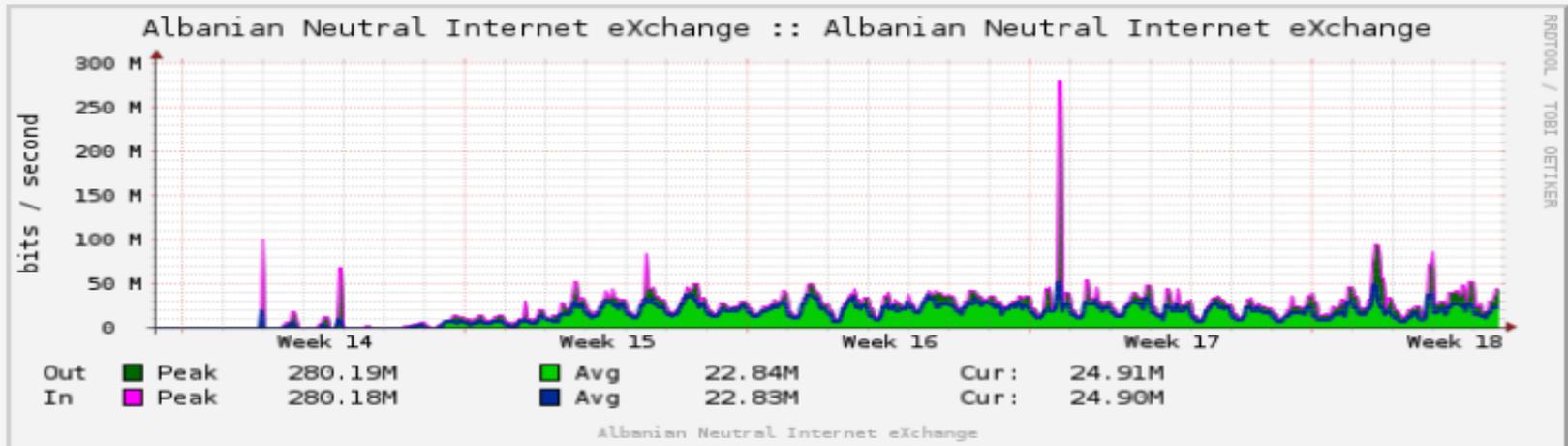
Network traffic



ANIX – Albanian Neutral Internet eXchange

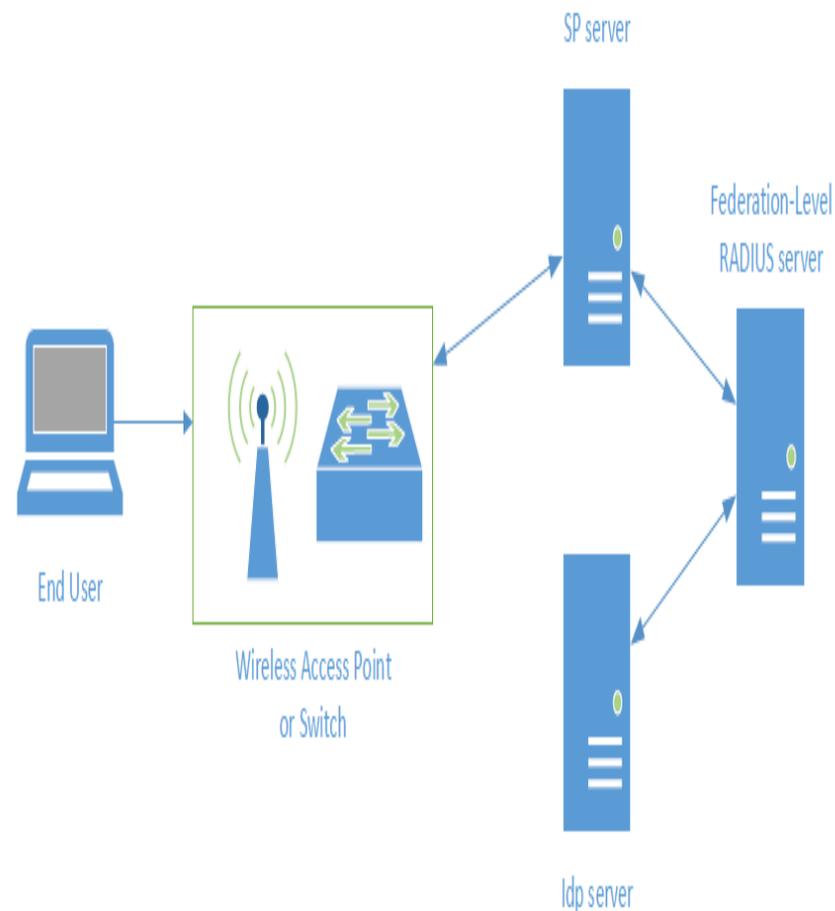
- IX hosted at RASH Datacenter
- 3 ISP connected
- Managed by IXP Manager

Albanian Neutral Internet eXchange Aggregate Traffic



eduroam–education roaming

- eduroam is the secure, world-wide roaming access service developed for the international R&E community
- 3 servers - SP, Idp, Flr
- Freeradius 3.x
- eduroam CAT tool
- F-Ticks system for logging info
- Implementation on RASH office



Next step of eduroam



- Implementing eduroam in universities
- Installing and configuring APs
- Configuring CAT tool for every institution
- Configuring LDAP module for users management
- Data integration of users (students&reserchers) with eduroam and Edugain
- Implementing eduroam in the center of Tirana

Future services

- Software-Defined Networking (SDN)
- PerfSONAR
- Edugain
- EduVPN
- VoIP system
- MPLS
- IPv6

THANK YOU!

Mariglen Hysko - RASH