TOP-IX

www.top-ix.org

Who we are and what we do

TOP-IX: TOrino Piemonte Internet eXchange

No-profit consortium founded in 2002

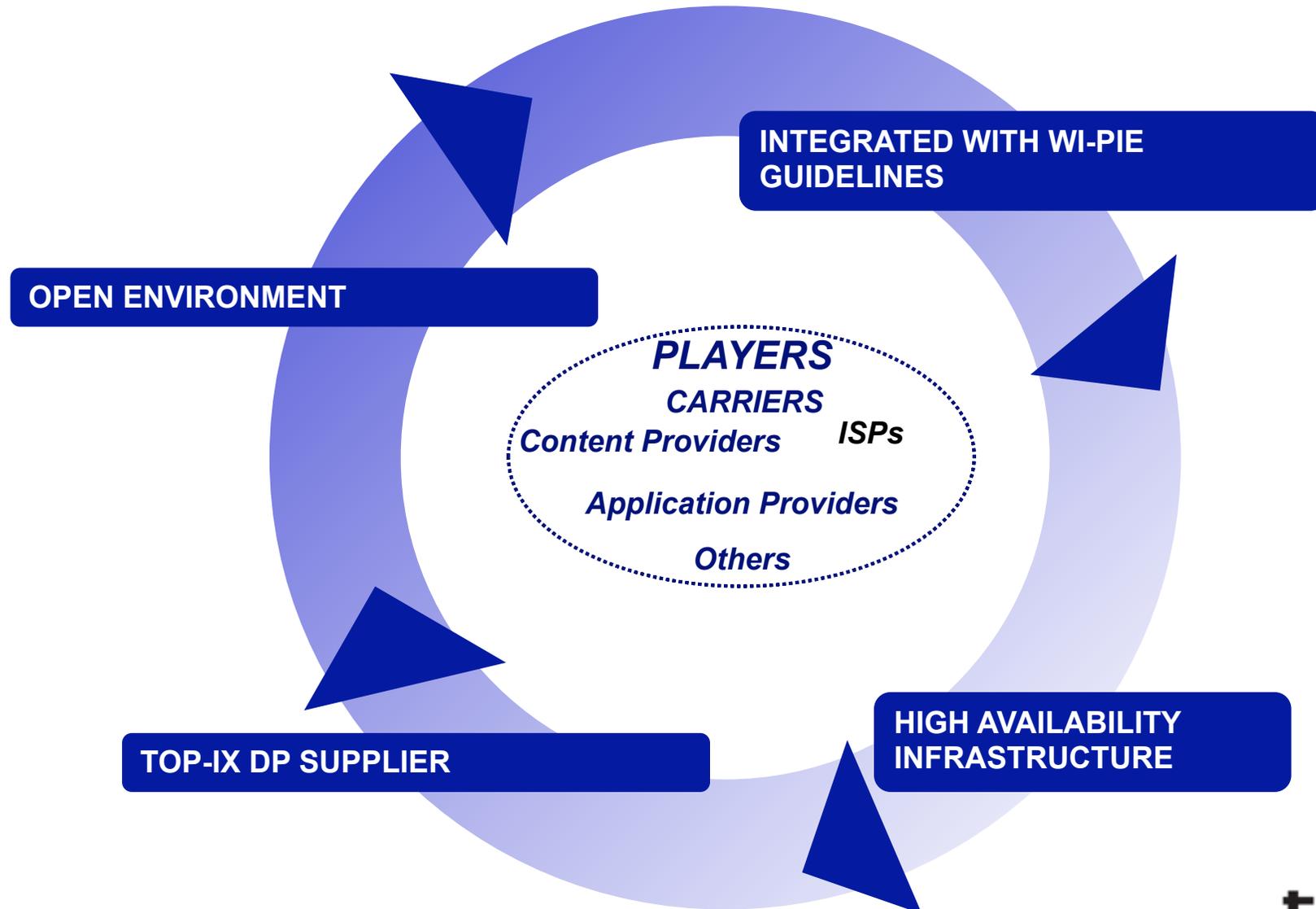Geographically Distributed IXP for North West Italy

Internet eXchange (IX)

Develop and manage the network infrastructure to provide IXP services to ISPs, Carriers, Content Providers and anyone that has an ASN.
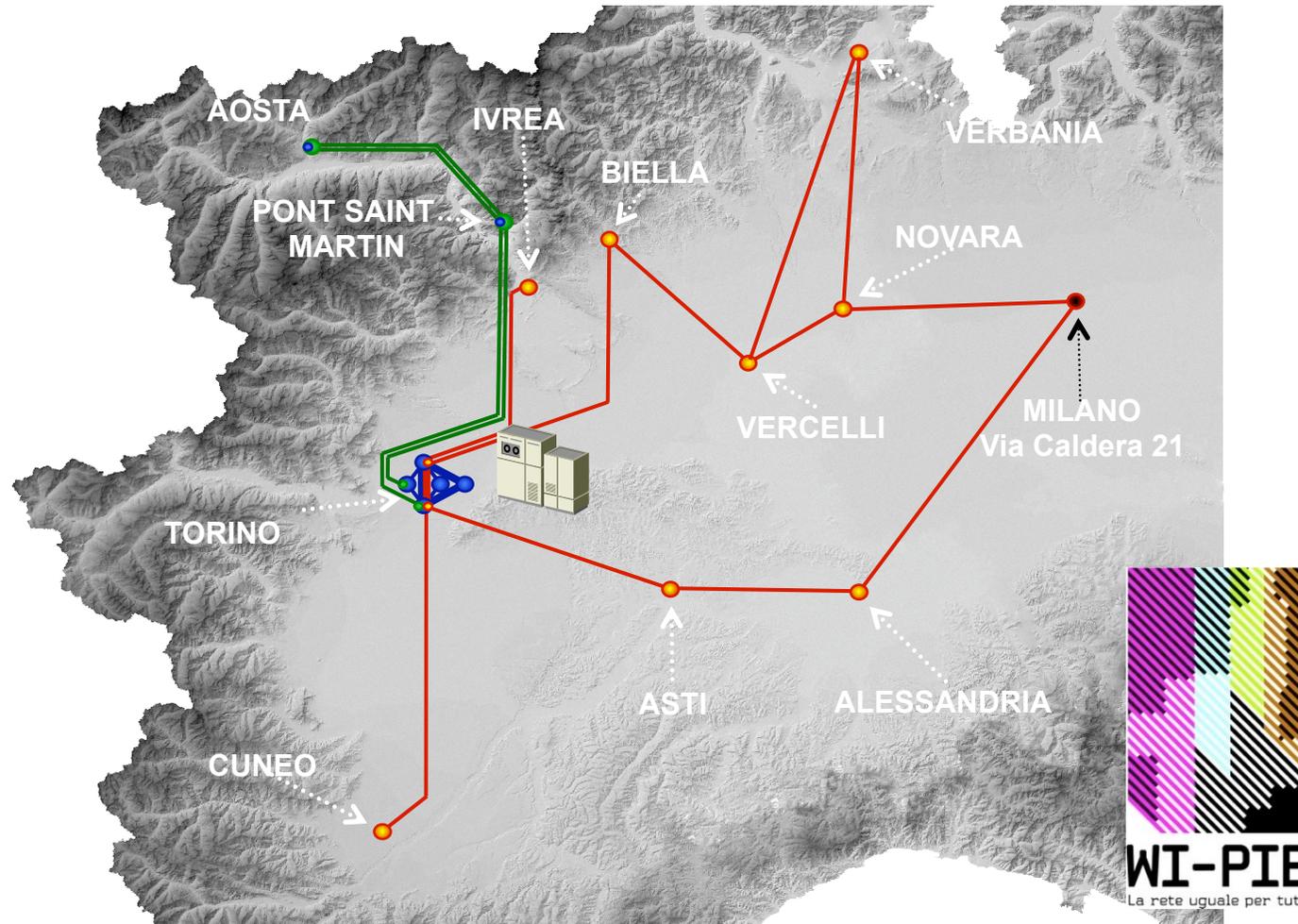
Development Program (DP)

Make available an open innovation environment to foster new business creation by providing infrastructural support to Internet ventures

IX model

INTEGRATED WITH WI-PIE GUIDELINES

OPEN ENVIRONMENT

PLAYERS
CARRIERS
Content Providers *ISPs*
Application Providers
Others

TOP-IX DP SUPPLIER

HIGH AVAILABILITY INFRASTRUCTURE

3

top ix torino piemonte internet exchange

IX - Backbone

http://www.top-ix.org/nodemap

Access & Housing

- ACCESS: 10 Mbps to 10 Gbps Ethernet
  - Your own infrastructure (Fiber)
  - Leased Connectivity from carriers
    - National: Telecom Italia, Fastweb, Wind,……
    - International: Level3, Interoute, Colt
  - Wireless (Hyperlan, WI-MAX): PoPs prepared for antennas and cabling available

- HOUSING available on each PoP

top ix torino piemonte internet exchange
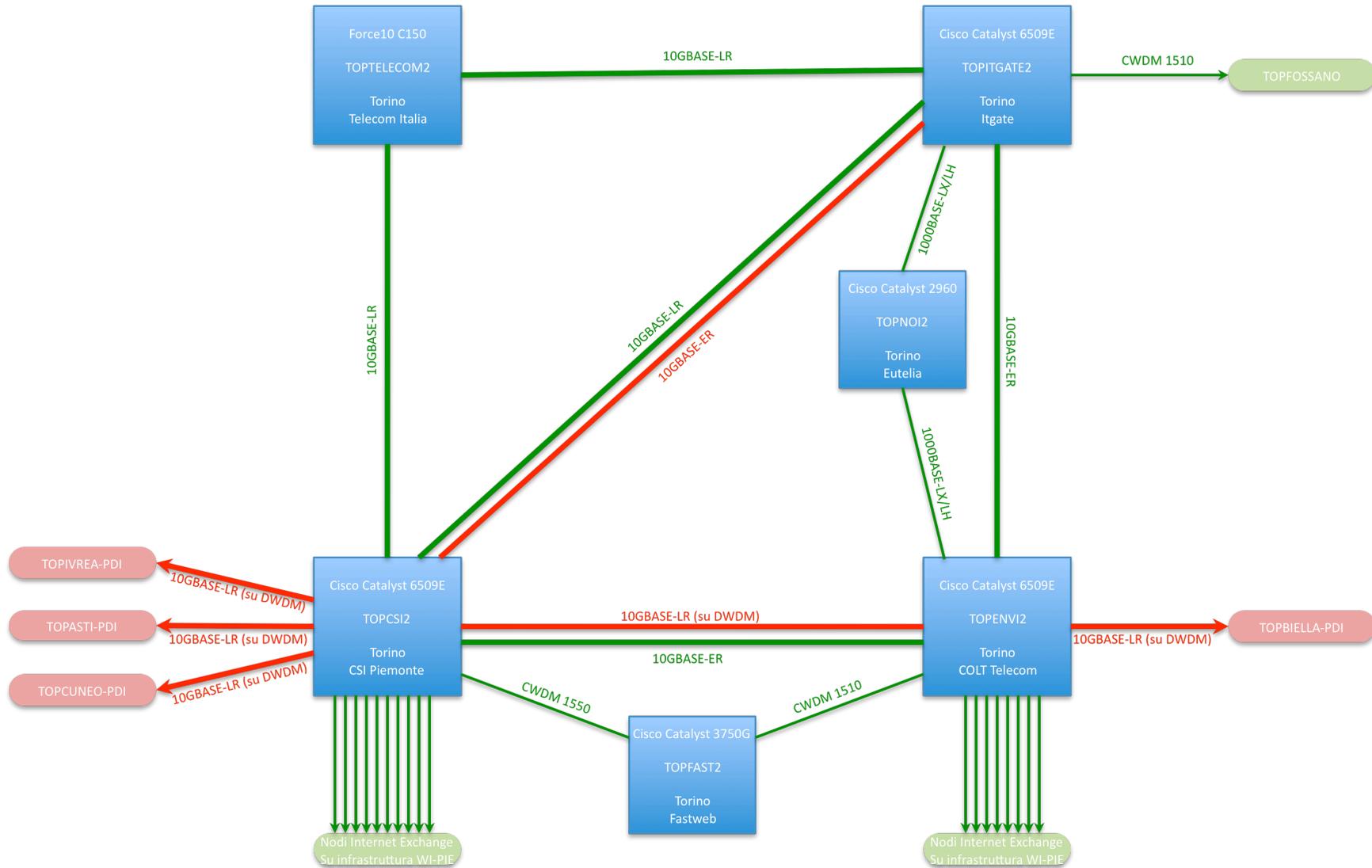
TOP-IX & Lyonix interconnection
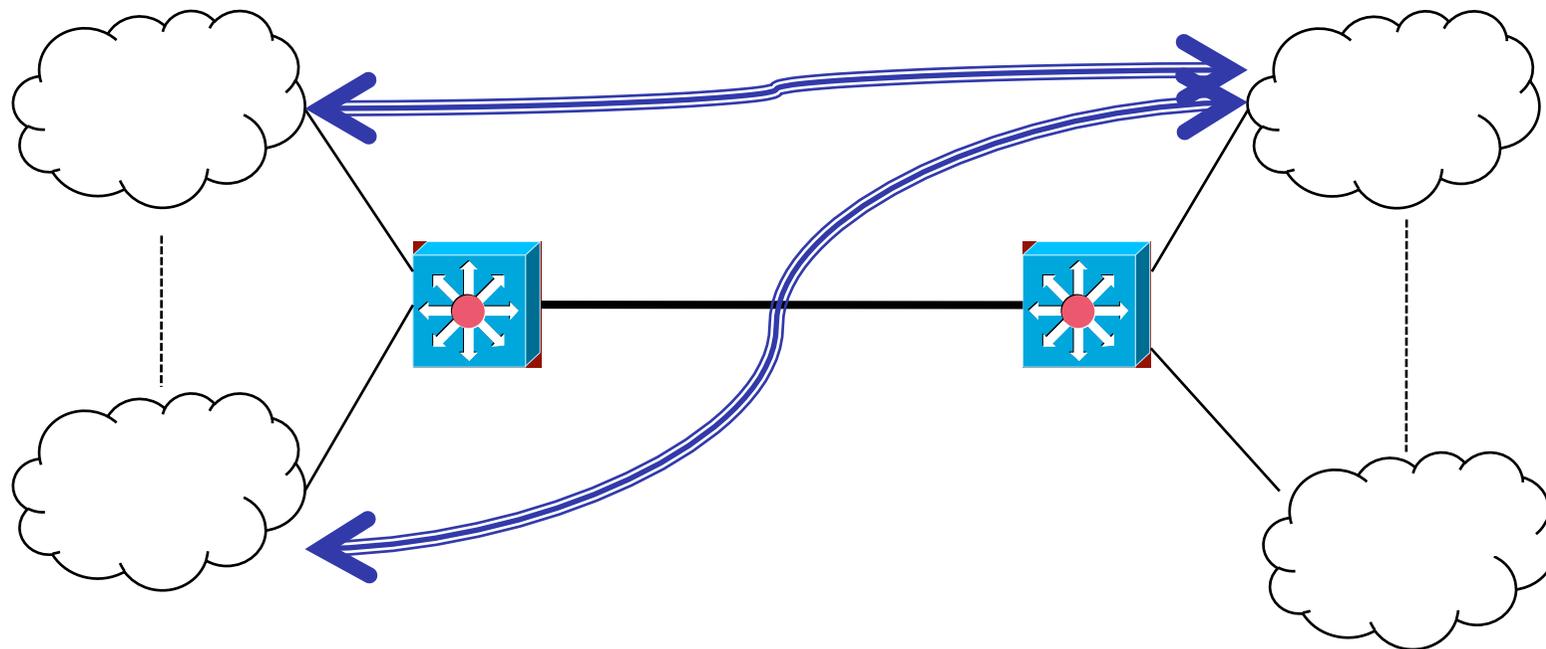
- One hop connection
- Each IXP mantains its independance
- Peering available within members on both sides
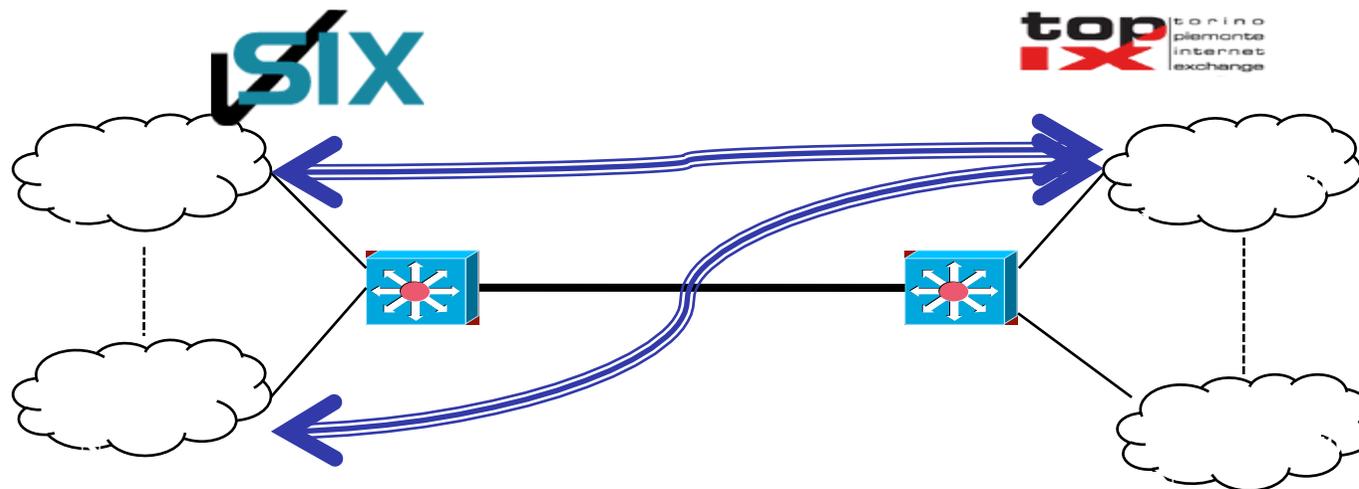
IX –Key Datas

- Up to 15 Gbps peak traffic (IPv6 < 1%)
- 40 ASN connected (+7 from Lyonix)
- Mixed Platform (Cisco & Force10)
  - CORE: Cisco 6509 & Force10 C150
  - EDGE: Cisco 3750
- Multicast and IPv6 enabled
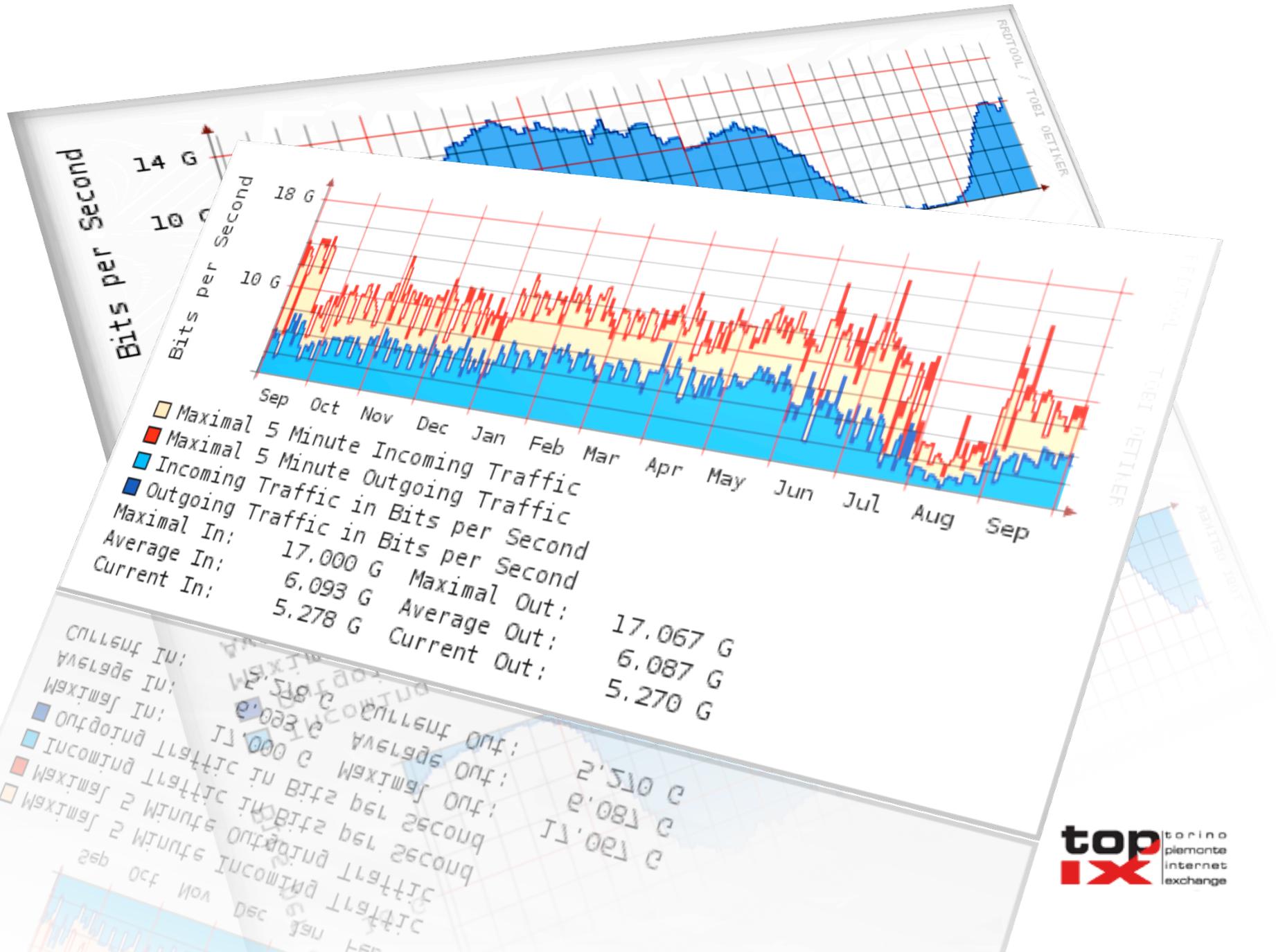- F-Root and J-Root Servers

Core Architecture

What's NEW

- QUAGGA Route Server NOW working

- NOC DB Tool for L2/3 network configuration & management L2/3

- TOP-IX & VS-IX (Padua) interconnection

- One hop connection

- Each IXP mantains its independance

- Peering available within members on both sides

Traffic

Bits per Second

14 G
10 G

18 G
10 G

Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep

☐ Maximal 5 Minute Incoming Traffic
🟥 Maximal 5 Minute Outgoing Traffic
🟦 Incoming Traffic in Bits per Second
🟦 Outgoing Traffic in Bits per Second

Maximal In: 17.000 G   Maximal Out: 17.067 G
Average In: 6.093 G   Average Out: 6.087 G
Current In: 5.278 G   Current Out: 5.270 G

top
ix | torino
piemonte
internet
exchange

From DP to IX

CANDIDATES →

DEVELOPMENT PROGRAM

BUSINESS $$$

← INVESTORS

Internet Exchange

New member connected to the IX

↓

Directly improves TOP-IX revenues

Hosted by one of TOP-IX members

↓

Indirectly improves TOP-IX revenues

top ix
torino piemonte internet exchange

Questions?

Mail   luca.cicchelli@top-ix.org

Skype   lucacicchelli

Gtalk   luca.cicchelli@gmail.com

Linkedin