

PTTMetro

The Brazilian IXP Project

<http://ptt.br/>

NANOG 51

01 Feb 2011

Eduardo Ascenço Reis <eascenco@nic.br>

CGI.br

The Brazilian Internet Steering Committee (CGI.br) purpose is for coordinating and integrating all Internet service initiatives in Brazil, as well as promoting technical quality, innovation and the dissemination of the services available.

NIC.br

The Brazilian Network Information Center (NIC.br) is a non-profit civil entity that implements the decisions and projects designed by CGI.br.

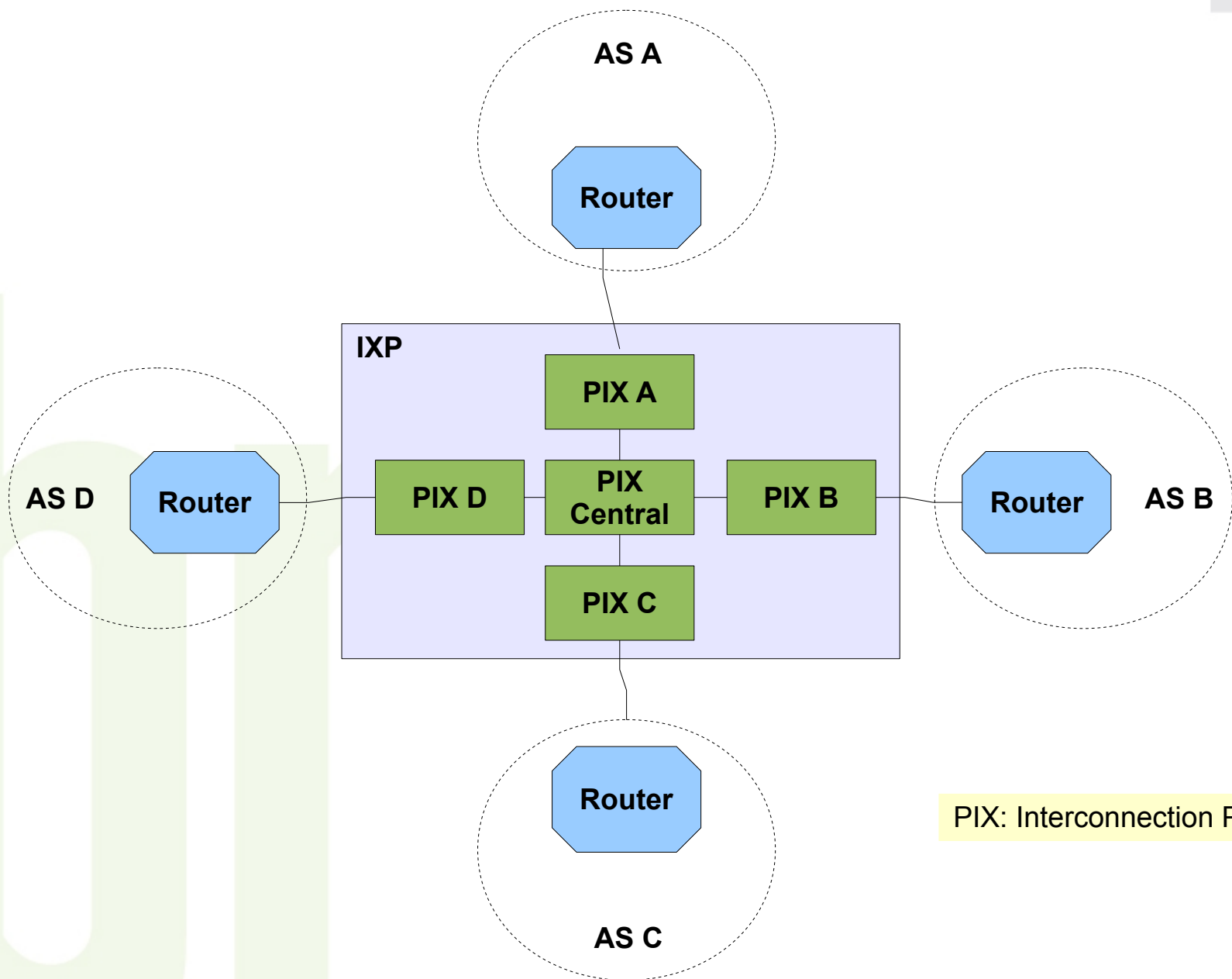
PTT.br

PTTMetro is the CGI.br project that deploys and maintain Internet Exchange Points (IXP) in Brazil. All PTTMetro costs are sustained by CGI.br, despite Autonomous Systems (AS) participants needs for ports (number and capacity).

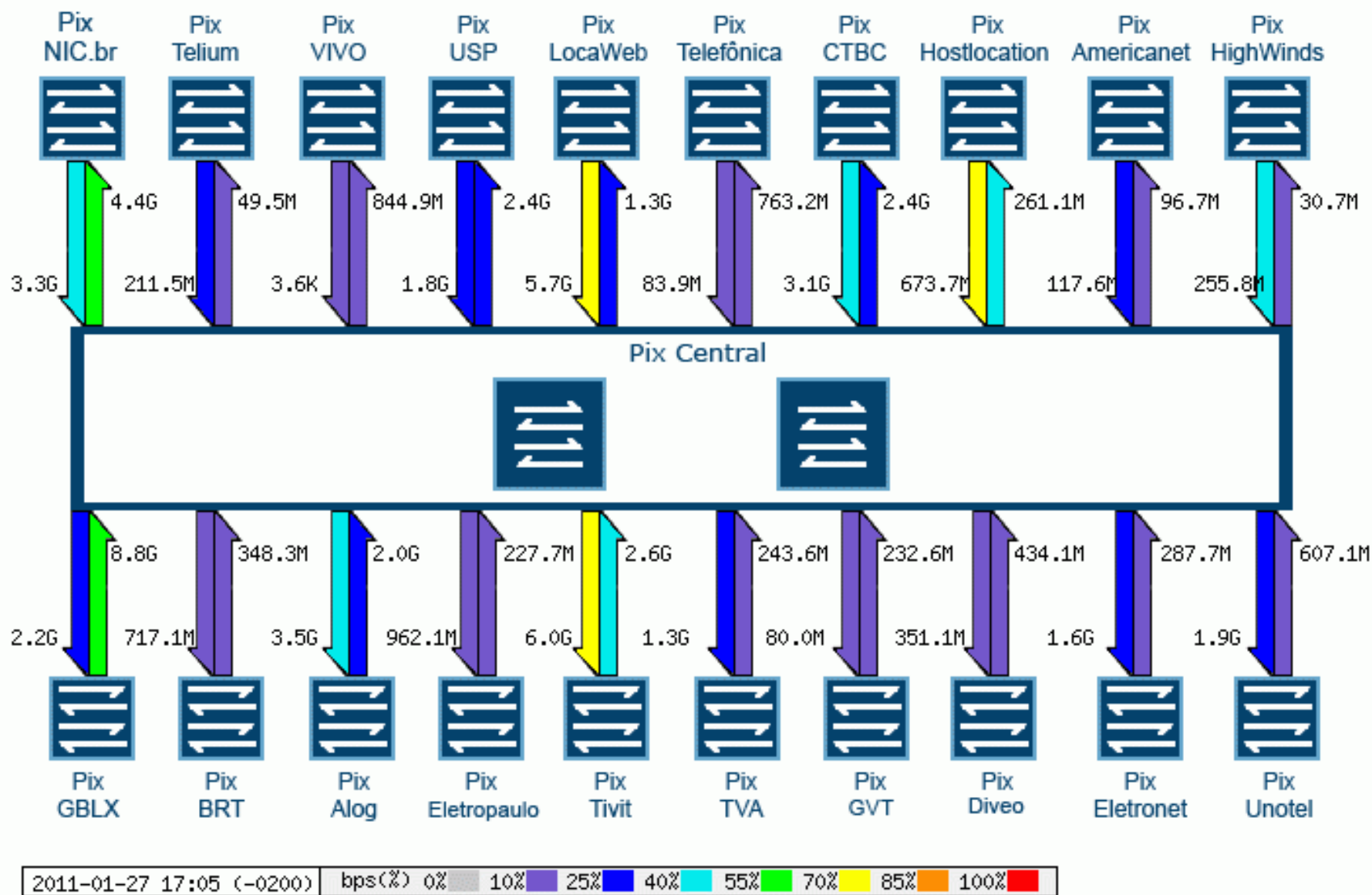
Each participant AS has only costs to reach one or more Interconnection Points (PIX) of a specific PTTMetro location.

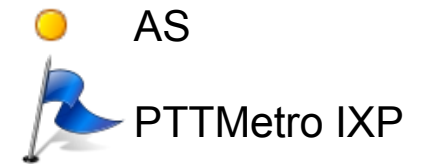
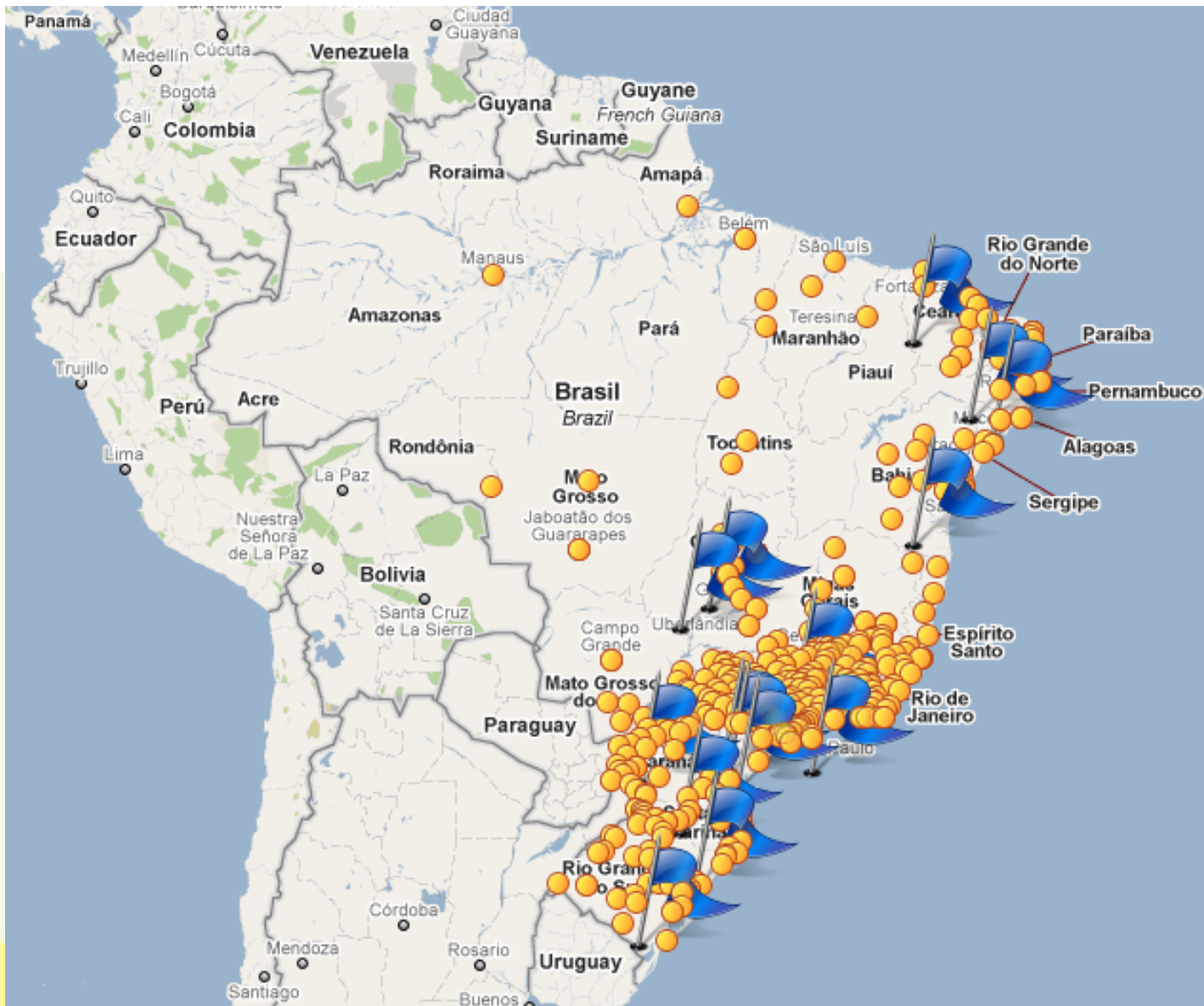
IXP - Internet eXchange Point

PTT – Ponto de Troca de Tráfego



PIX: Interconnection Point





1. Americana
2. Belo Horizonte
3. Brasília
4. Campina Grande
5. Campinas
6. Curitiba
7. Florianópolis
8. Fortaleza
9. Goiânia
10. Londrina
11. Porto Alegre
12. Recife
13. Rio de Janeiro
14. Salvador
15. São Paulo

All PTTMetro Locations are Isolated

The main purpose for PTTMetro locations is to allow the local traffic to stay on the location.

The Brazilian Internet Steering Committee do not intend to interconnect PTTMetro Locations and compete with telecommunications companies.

PTTMetro project stimulates and support inter locations transport services done by participants companies.

(PTTMetro define some transport modes in order to optimize common resources and reduce costs)

Locations	ASNs	Traffic Peak (day)
Americana	3	12 Mbps
Campina Grande	3	43 Mbps
Recife	6	72 Mbps
Londrina	11	133 Mbps
Florianópolis	9	165 Mbps
Belo Horizonte	7	214 Mbps
Salvador	13	362 Mbps
Rio de Janeiro	19	496 Mbps
Fortaleza	9	540 Mbps
Brasilia	10	865 Mbps
Campinas	18	886 Mbps
Porto Alegre	29	1.81 Gbps
Curitiba	19	1.95 Gbps
São Paulo	165	35.75 Gbps

Values from Jan 2001

2688	AT&T
3549	Global Crossing
3856	PCH
11271	BT Latam
12654	RIPE NCC RIS Project
12956	TIWS
12989	Highwinds
13353	Telmex
13495	NTT
14551	Verizon
15169	Google
20144	L-Root
28001	LACNIC
28122	Yahoo
31529	DENIC

Multi-Lateral Peering Agreements (MLPA)

IP (v4/v6) traffic exchange between all participants.
BGP sessions established between participants and IXP route servers.
Different MLPA VLANs for IPv4 and IPv6.

Bilateral Peering Agreements (BPA)

Shared VLAN Mode

IP traffic exchange only between participants.
Use the same MLPA VLANs.

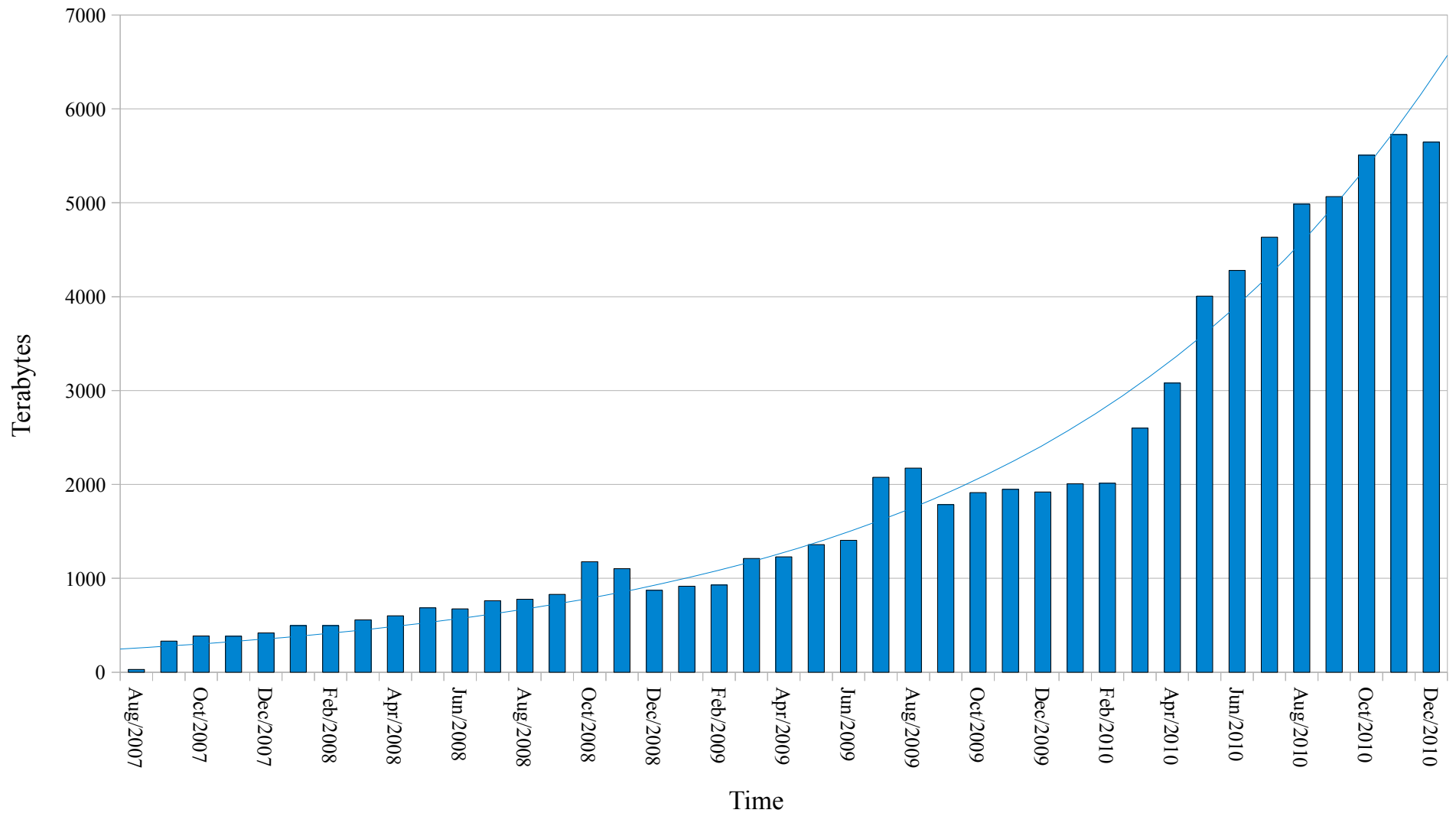
Dedicated VLAN Mode

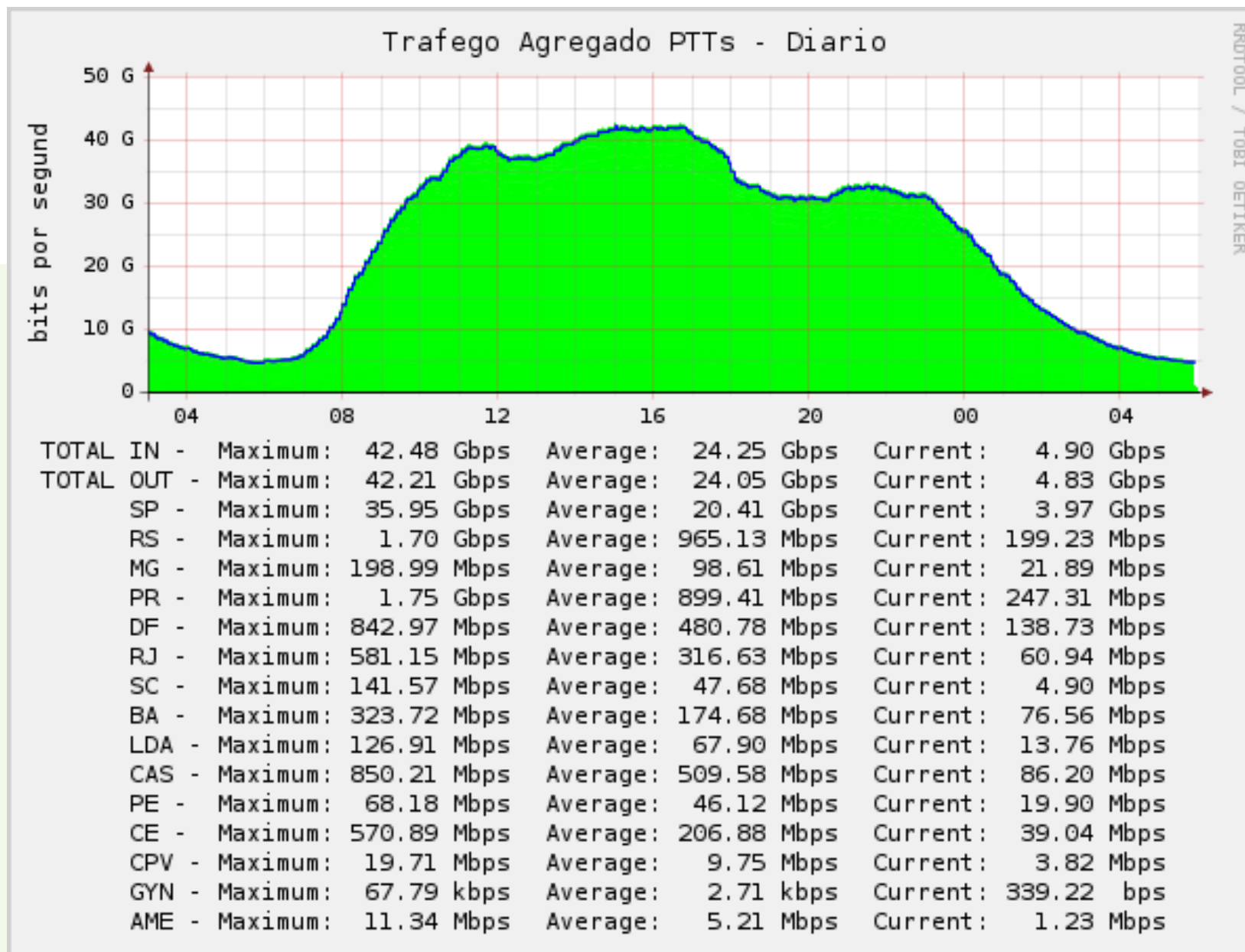
IP traffic exchange only between participants (e.g. Internet Transit).
Use a dedicate VLAN for each peering agreement.

PTTMetro - Economically Interests for Telecommunication Companies

- Reduction of Transit and Interconnection Costs
- Last/First Mile Provisioning
- IP Services Interconnection
Using dedicated VLANs to provide L2 logical isolation for:
Internet Transit (IPv4 and IPv6), Backup, Storage, VoIP, etc
- Inter Locations Transport
- Interconnection Points (PIX) Hosting
- Neutral Facilities for the Brazilian Telecommunications Agency Regulated Interconnections

PTTMetro – All Locations Aggregated Exchanged Traffic Growth





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eng@ptt.br