

# PTT-RS: Crescimento e Novas Perspectivas

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V Workshop do PoP-RS/RNP e Reunião da Rede Tchê

Outubro de 2014

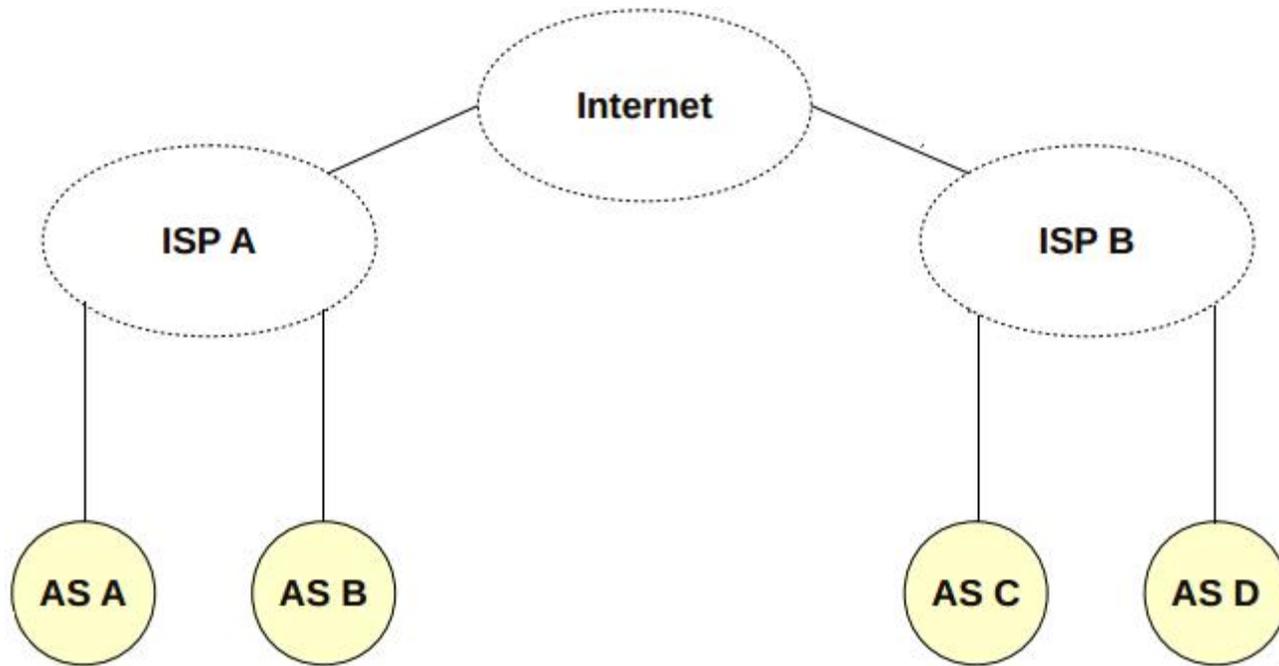


# Sumário

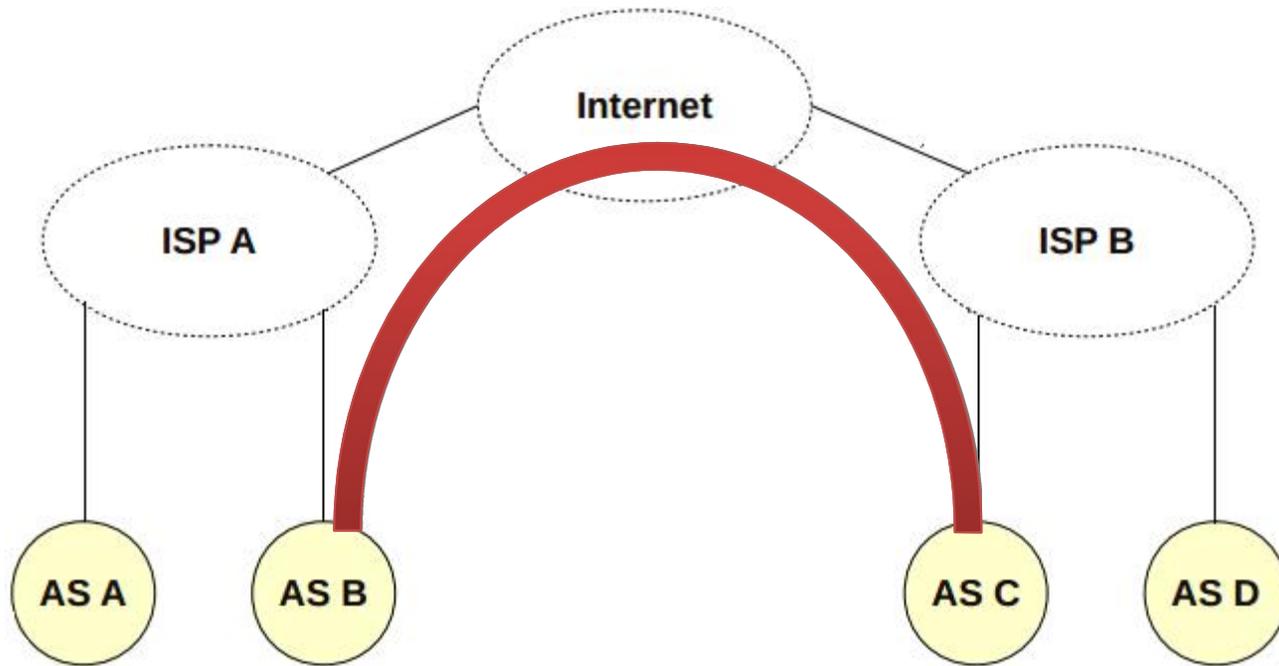
- O que são PTTs?
- Histórico do PTT-RS (RSiX)
- Alguns dados do PTT-RS
- Iniciativas no Interior



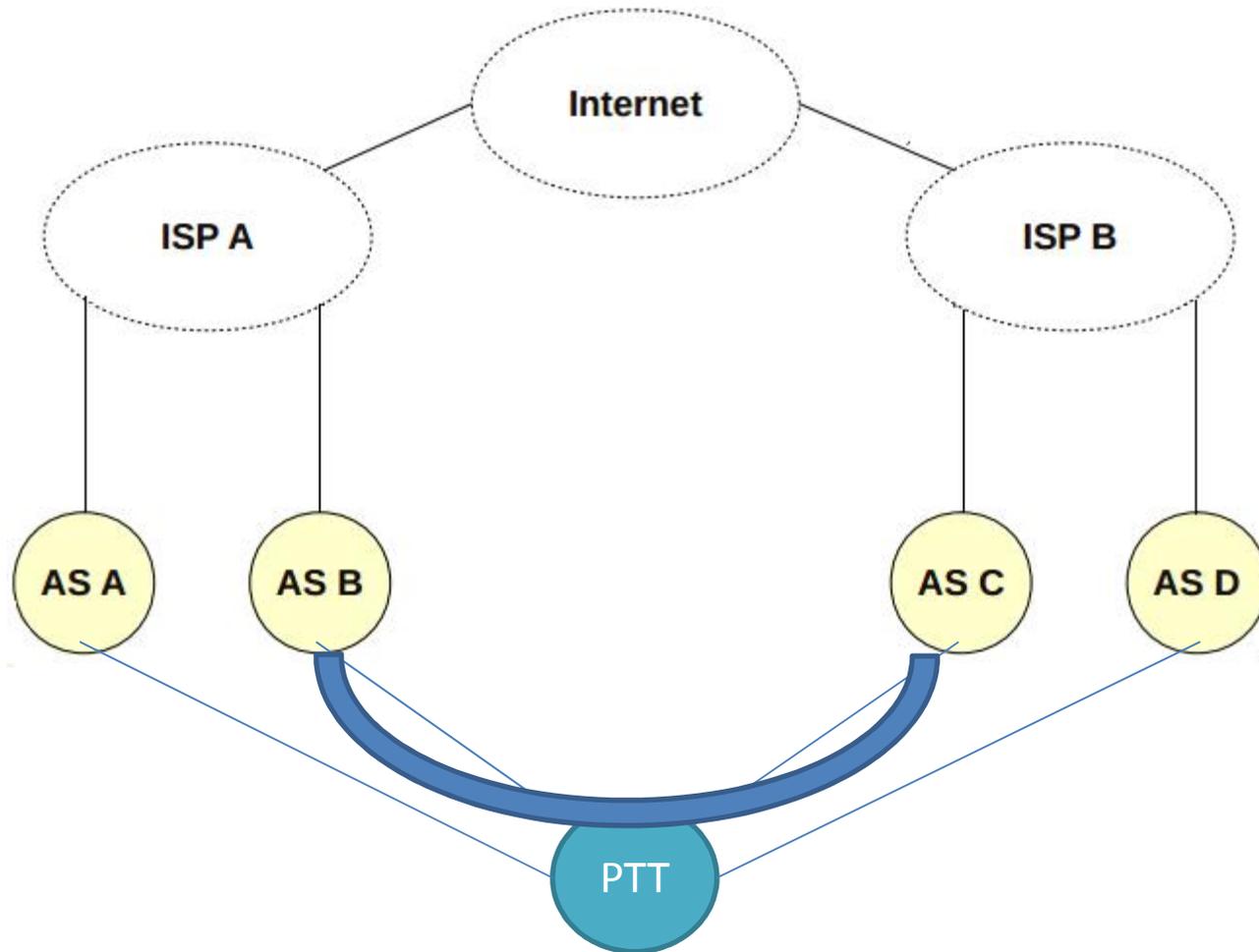
# O que é um PTT?



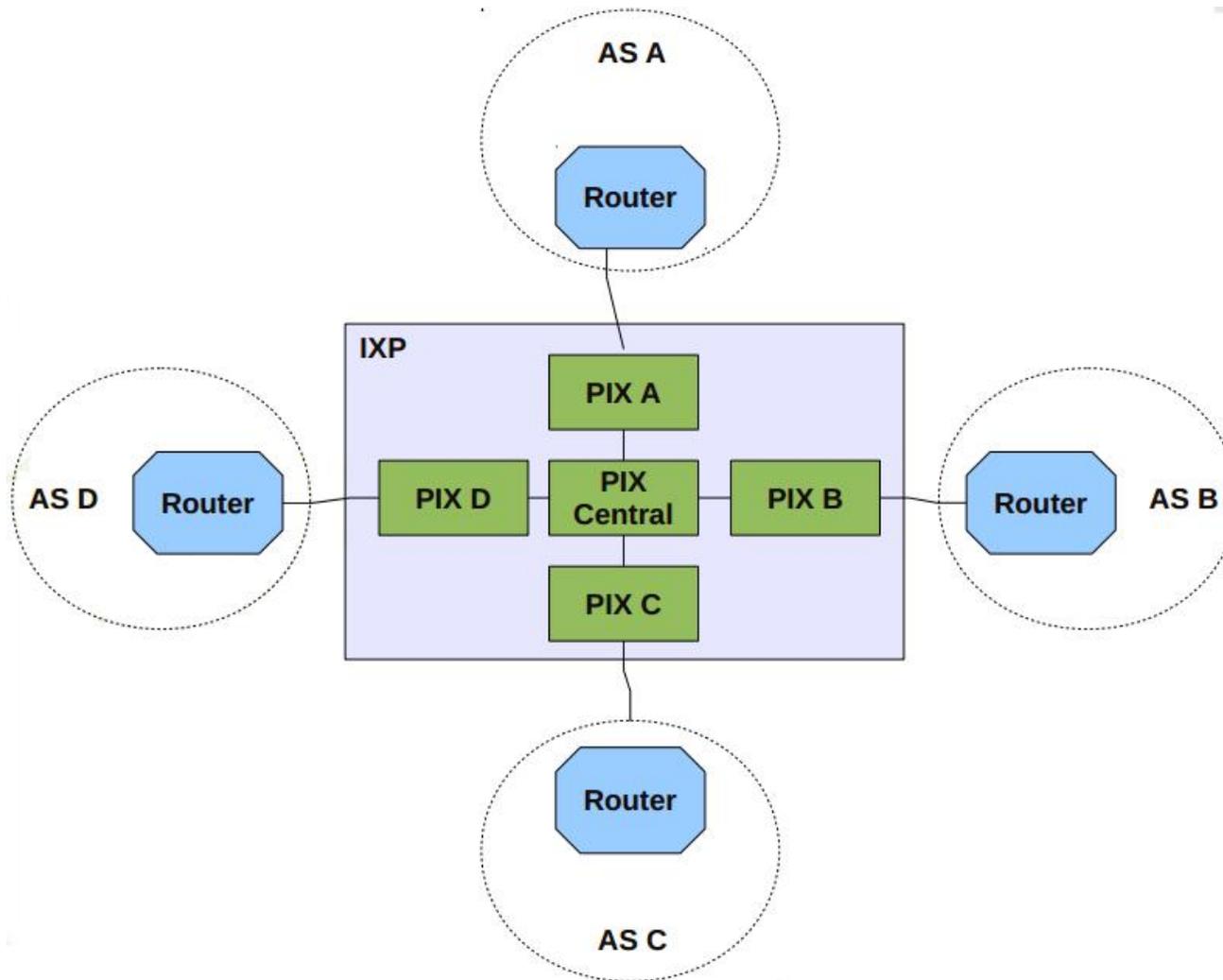
# O que é um PTT?



# O que é um PTT?



# O que é um PTT?



# Porque existem Pontos de Troca de Tráfego?

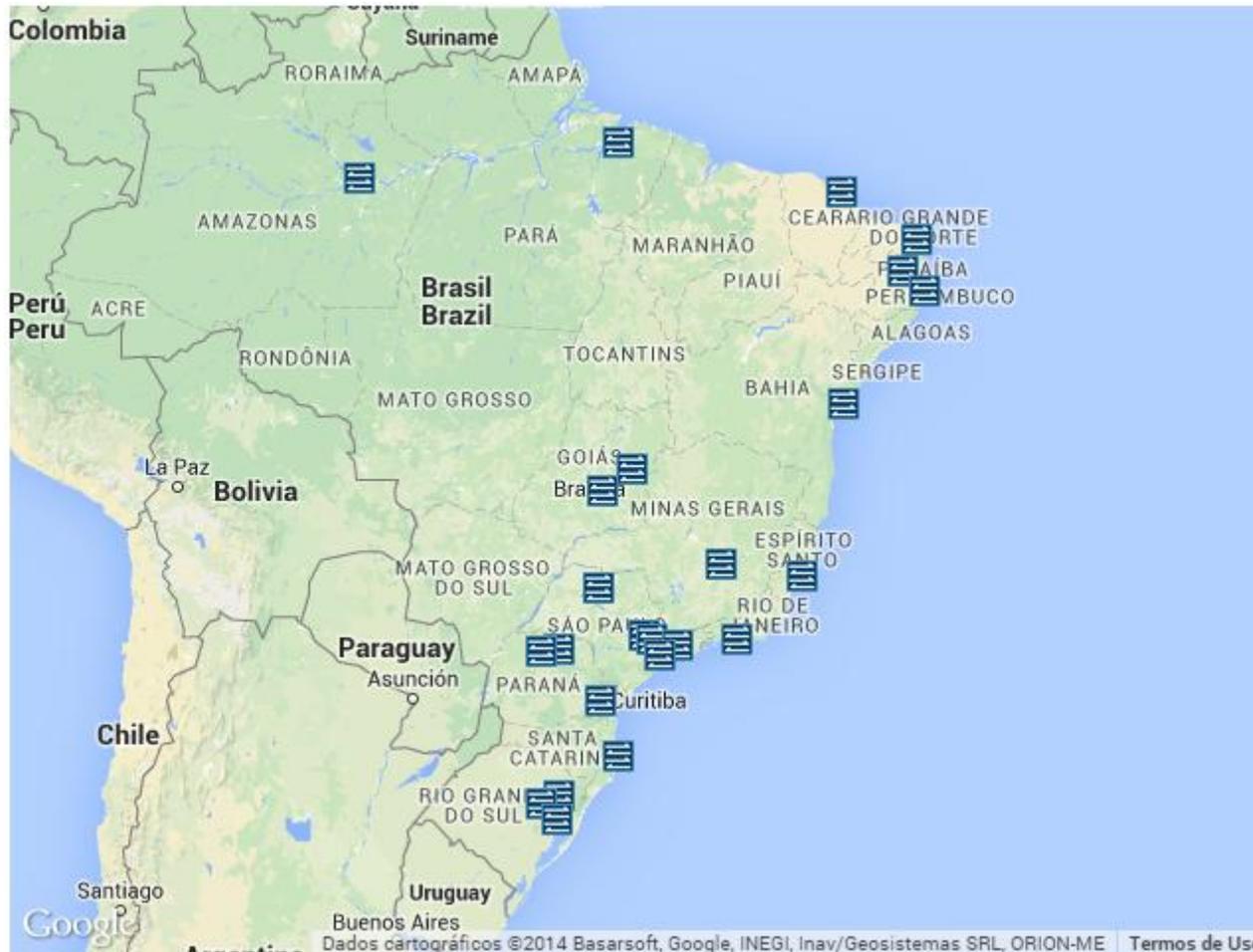
- **Custo!!!**
  - O uso pode aumentar a um custo praticamente fixo!
- **Melhora a qualidade no acesso entre participantes**
  - Banda “virtualmente infinita” sem custo adicional
  - Menor latência
  - Pode sustentar facilmente os “picos” de tráfego

# Serviços

- Compra de Trânsito/Serviços
  - Vlan Bilateral Dedicada
- UPF
  - Transporte pela Adylnet via PTT
- O Atual circuito de contingência de 1G utiliza esta infraestrutura
  - PoP-RS -> PTT-SP ->PoP-SP

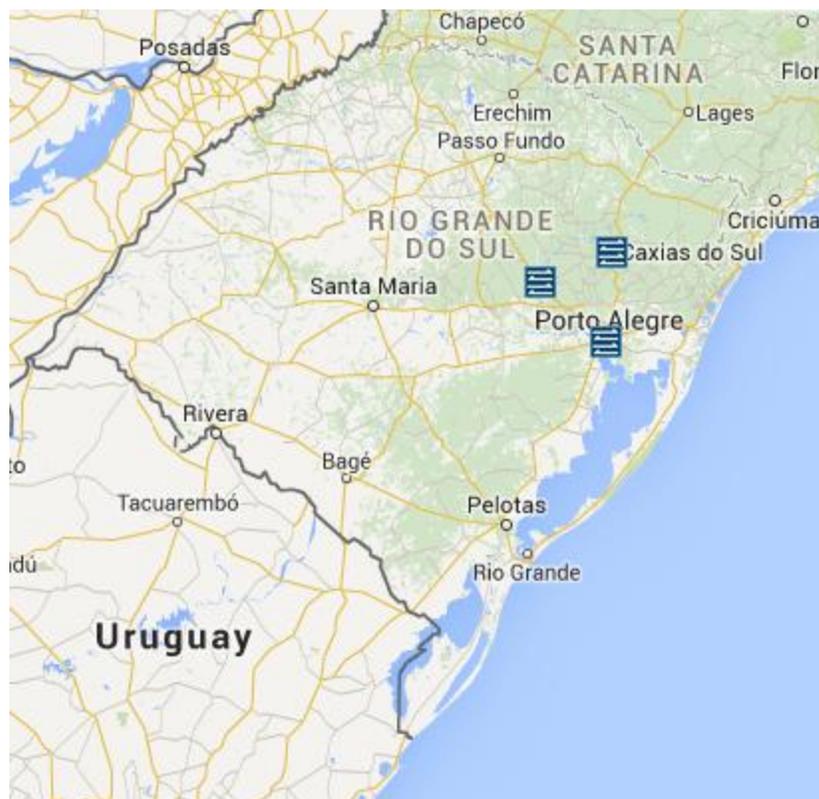


# Pontos de Troca de Tráfego no Brasil (26)



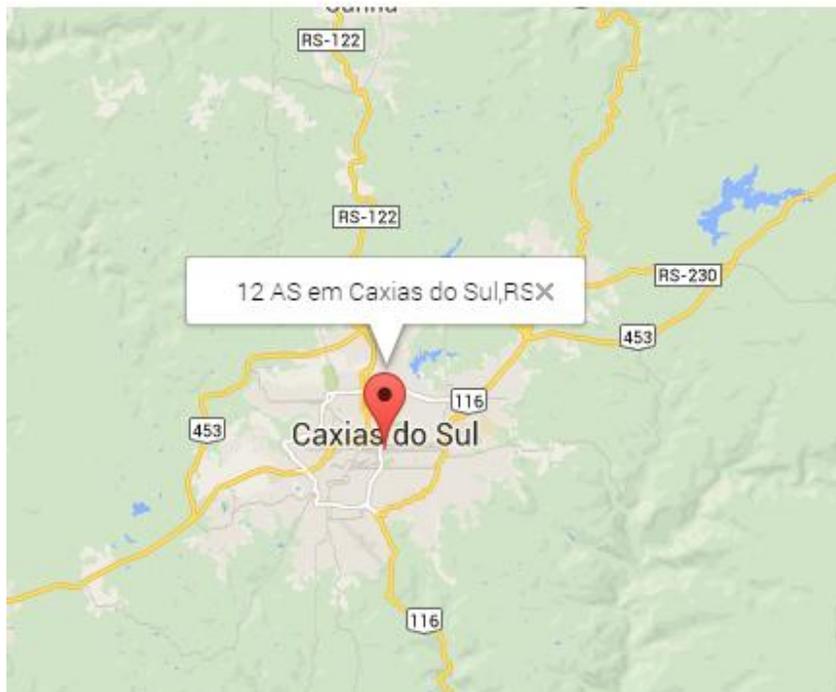
- Americana
- Belém
- Belo Horizonte
- Brasília
- Campina Grande
- Campinas
- Cuiabá
- Caxias do Sul
- Curitiba
- Florianópolis
- Fortaleza
- Goiânia
- Lajeado
- Londrina
- Manaus
- Maringá
- Natal
- Porto Alegre
- Recife
- Rio de Janeiro
- Salvador
- Paulista Central (São Carlos)
- São José dos Campos
- São José do Rio Preto
- São Paulo
- Vitória

# Pontos de Troca de Tráfego em RS

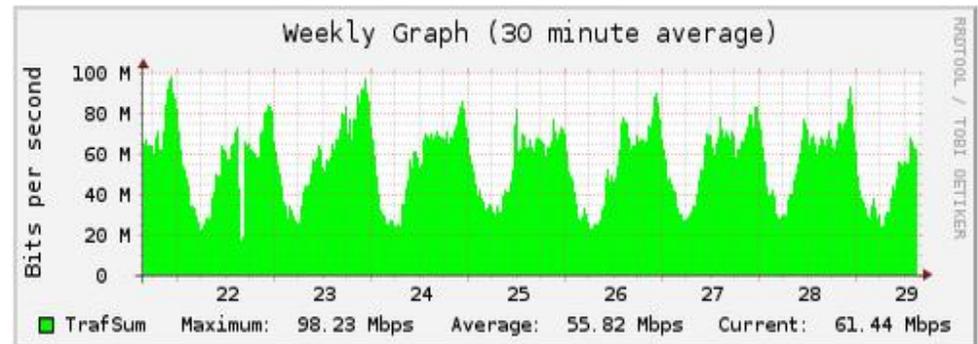


# Iniciativas no interior

Caxias do Sul (ativo desde 02/12)

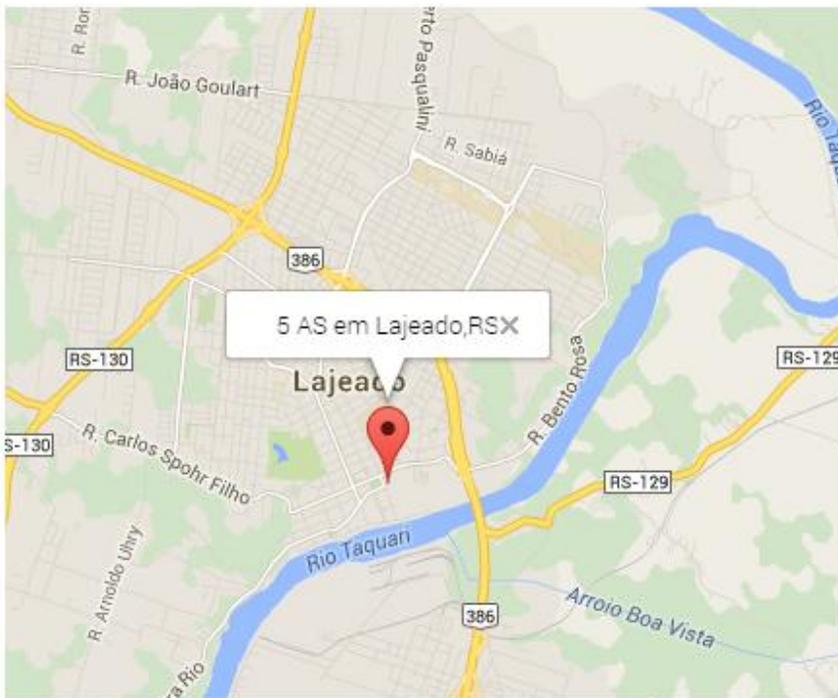


PTT - cxj								
ASN	NOME	ATM		LG		TRÁNSITO		IPV6
		V4	V6	V4	V6	V4	V6	
14026	Simet	✓	✓	✓	✓			✓
14840	CommCorp	✓	✓	✓	✓	✓	✓	✓
18881	GVT	✓	✓			✓	✓	✓
22177	Transit	✓	✓	✓	✓	✓	✓	✓
28169	Visao	✓	✓	✓	✓			✓

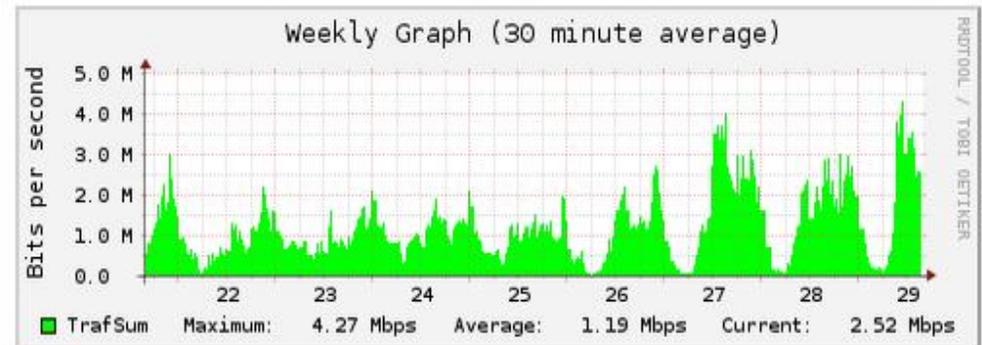


# Iniciativas no interior

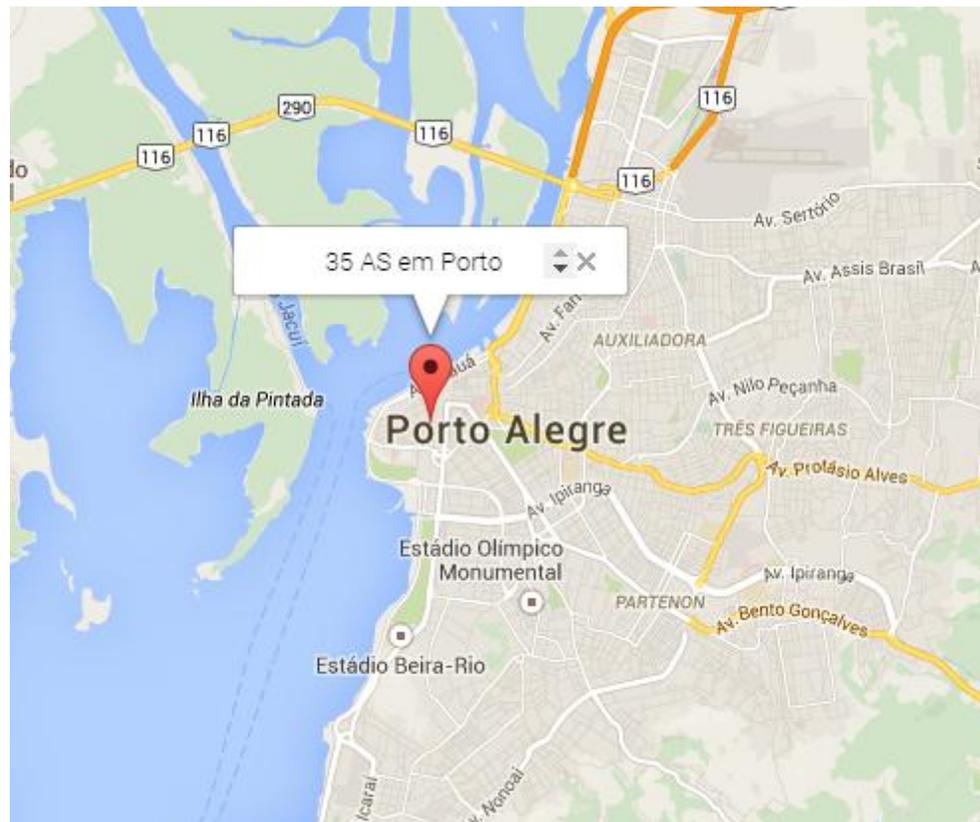
Lajeado (ativo desde 10/13)



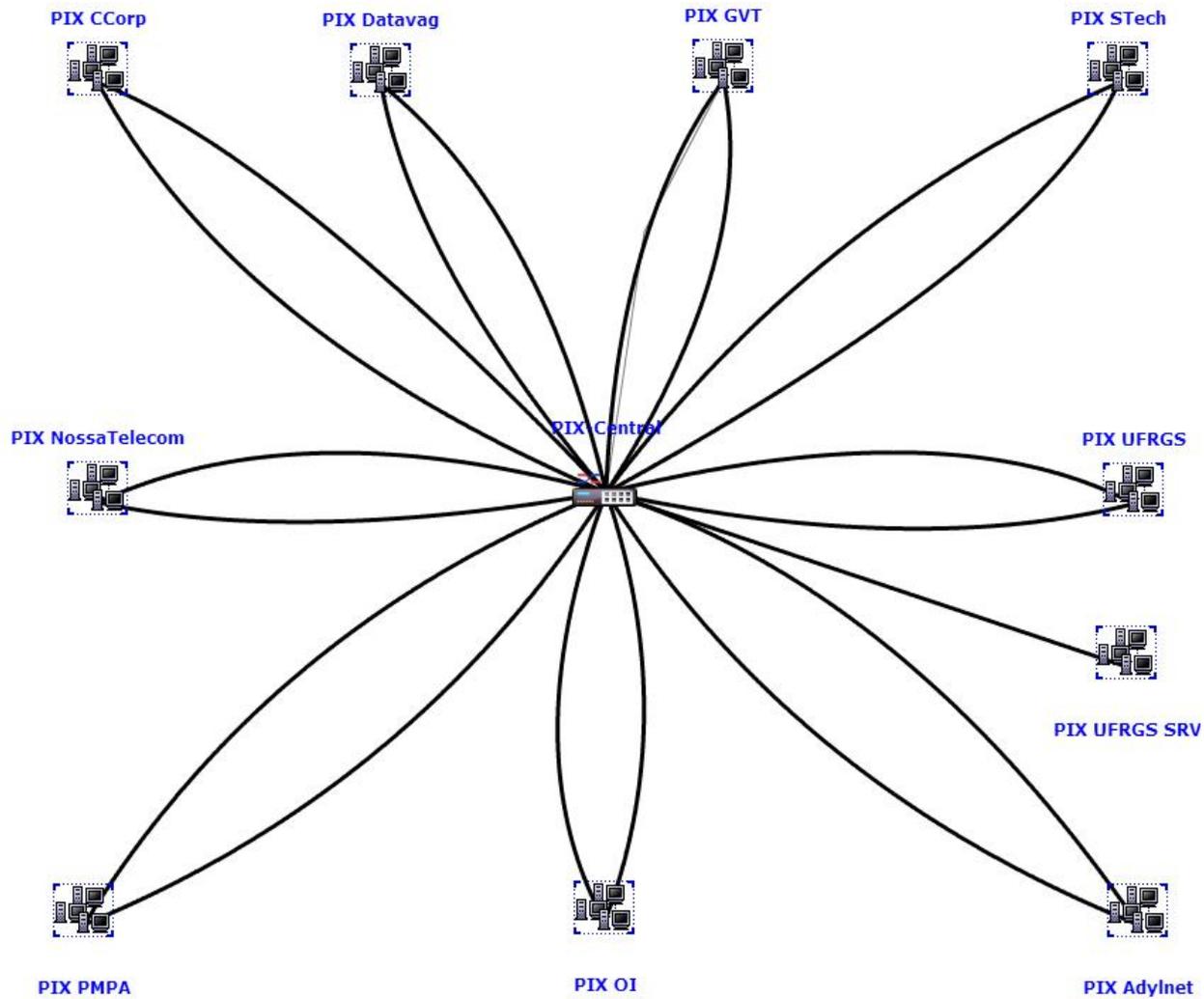
PTT - laj								
ASN	NOME	ATM		LG		TRÁNSITO		IPV6
		V4	V6	V4	V6	V4	V6	
25933	SouthTech	✓	✓	✓	✓	✓	✓	✓
28134	TKNET	✓		✓				
28259	CertelNET	✓	✓	✓	✓	✓	✓	✓
52751	BrasRede	✓		✓				
262441	Univates	✓	✓	✓	✓			✓
262464	Trip Tecnologia	✓				✓		
262591	Fbnet	✓	✓	✓	✓			✓



# PTT-RS



# PTT-RS



# Alguns participantes

- Operadoras
  - Oi/Brasil Telecom
  - GVT
  - Net Virtua
- Provedores
  - Eletrosul
  - Southtech
  - CommCorp
  - Procempa
- Provedores de Conteúdo
  - Terra
  - RBS
  - Banrisul
  - Sicredi
  - Kinghost
  - Netflix (Futuro)



# Serviços do PTT

- Root-Servers de DNS Globais
  - I.ROOT-SERVERS
  - L.ROOT-SERVERS
- Root-servers de DNS .BR
  - B.DNS.BR
  - D.DNS.BR

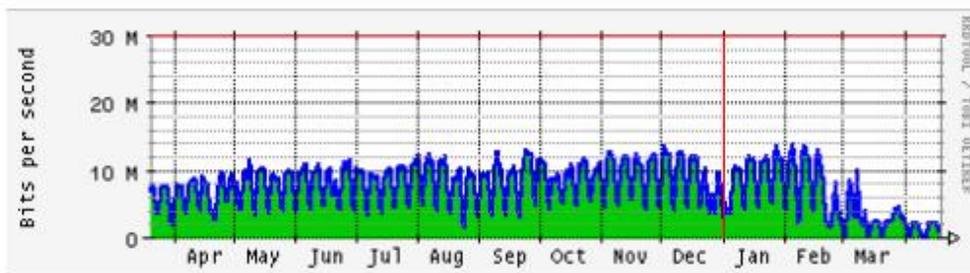
- 96 participantes ativos
- 7 em processo de ativação
- ~ 8 Gbps de tráfego
- 10-15% do tráfego total do PoP-RS/Rede Tchê

PTT - Porto Alegre								
ASN	NOME	ATM		LG		TRANSITO		IPV6
		V4	V6	V4	V6	V4	V6	
1916	RNP	✓	✓	✓	✓			✓
2716	TCHE	✓	✓	✓	✓			✓
2906*	Netflix	✓	✓					✓
3549	Global Crossing			✓		✓		
7465	PROCERGS	✓	✓	✓	✓		✓	✓
8167	Brasil Telecom					✓		
8674	Autonomica	✓		✓				
10906	b.dns.br anycast - Nic.br	✓						
11644	d.dns.br anycast - Nic.br	✓						
11706	TERRA	✓	✓	✓	✓			✓
11835	SullInternet	✓	✓	✓	✓	✓	✓	✓
14026	Simet	✓	✓	✓	✓			✓
14840	COMMCORP	✓		✓				
18881	GVT	✓	✓	✓	✓	✓	✓	✓
19200	UFRGS	✓	✓	✓	✓			✓
19611	UNISINOS			✓				
20144	L-Root - ICANN	✓						
22177	Transit	✓	✓	✓	✓	✓	✓	✓
22819	UCS	✓		✓				
25933	SOUTHTECH	✓	✓	✓	✓	✓	✓	✓
26606	PROCEMPA	✓		✓		✓		
28132	Tri Telecom	✓	✓	✓	✓	✓	✓	✓
28134	TKNET	✓		✓				✓
28135*	ANID	✓		✓		✓		
28141	Datavag	✓	✓	✓	✓			✓
28148	Safeweb	✓	✓	✓	✓			✓
28155	Viavale	✓	✓	✓	✓			✓
28166	Tesa	✓	✓	✓	✓	✓		✓
28259*	Certelnet	✓	✓	✓	✓	✓	✓	✓
28283	ADYLNETH	✓	✓	✓	✓	✓		✓
28299	IPV6 INTERNET	✓	✓	✓	✓			✓
28303	OptiTel	✓	✓			✓	✓	
28329*	G8	✓	✓	✓	✓	✓	✓	✓
28357	RBS	✓		✓				✓
28573	NET	✓		✓				
28599	Italnet	✓		✓		✓		
28605	Defferrari	✓		✓				✓
28623	PUCRS	✓		✓				
28631	BANRISUL	✓		✓				
28639	LocalNet Pelotas	✓	✓	✓	✓	✓	✓	✓
28646	SICREDI	✓	✓	✓	✓			✓
52600*	DIGITOTAL	✓	✓	✓	✓	✓	✓	✓
52610	Giga Internet	✓	✓	✓	✓			✓
52681	Pbinet	✓	✓	✓	✓			✓
52685	ConectNet	✓		✓				✓
52694	Global Sul	✓	✓	✓	✓	✓	✓	✓
52734	Multiacess	✓		✓				
52751	BrasRede	✓		✓				
52752	VTC TELECOM	✓	✓	✓	✓	✓	✓	✓

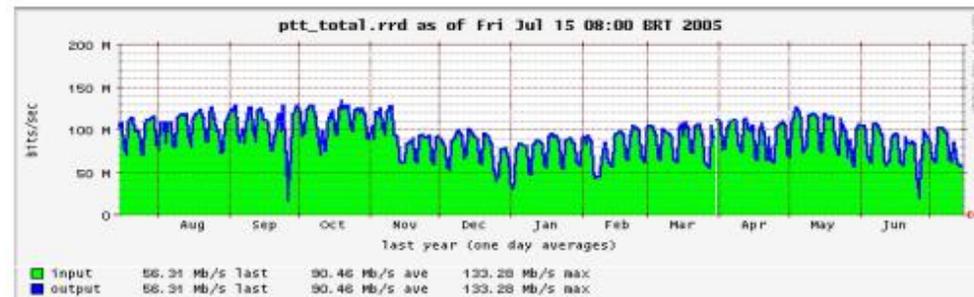
52770	Revo	✓	✓	✓	✓	✓	✓	✓
52799	Adentro	✓		✓		✓		✓
52828	Netpal Telecom	✓		✓		✓		✓
52841	Aprimorar	✓	✓	✓	✓	✓	✓	✓
52851	WebSul	✓	✓	✓	✓	✓	✓	✓
52869	Webmax	✓		✓				
52920	Ivocs	✓	✓	✓	✓	✓	✓	✓
52968	Tecmidiaweb	✓	✓	✓	✓	✓	✓	✓
53053	Bomtempo	✓	✓	✓	✓	✓	✓	✓
53061	G2NET	✓	✓	✓	✓			✓
53062	G G NET	✓		✓				
53112	Sulnet	✓		✓		✓	✓	✓
53145	Redesul	✓	✓	✓	✓	✓	✓	✓
53165	GuaibaTelecom	✓	✓	✓		✓	✓	
53167	Serrana Telecom	✓		✓				
53168*	CEEE	✓	✓	✓				
53169	Tche Turbo	✓		✓		✓		
53184	INB Informatica	✓	✓	✓	✓	✓	✓	✓
53197	Meta	✓		✓		✓	✓	✓
53223	Masternet	✓		✓				
53230	Clean Net	✓		✓		✓		
53235	Eletrosul	✓		✓				
53237	Telebras	✓	✓	✓	✓	✓	✓	✓
53240	Net11	✓	✓	✓	✓	✓	✓	✓
61747	SAN Internet	✓	✓	✓	✓	✓	✓	✓
61950	Nossa Telecom	✓	✓	✓	✓	✓	✓	✓
262308	Nexus	✓	✓	✓	✓	✓	✓	✓
262458	Tec System	✓	✓	✓	✓	✓	✓	✓
262464	Trip Tecnologia	✓	✓	✓	✓	✓	✓	✓
262583	UPF	✓	✓	✓	✓	✓	✓	✓
262591	Fbnet	✓	✓	✓	✓	✓	✓	✓
262605	Leovin	✓		✓		✓		
262695	Tecwave Telecom	✓	✓			✓		✓
262715	Caiweb	✓		✓				
262732	Assisnet	✓				✓		✓
262741	Conectsul	✓		✓		✓		
262794	GTC Telecom	✓	✓	✓	✓			✓
262802	Flybyte	✓	✓	✓	✓			
262848	Naja Telecom	✓	✓	✓	✓	✓	✓	✓
262879	Hifive	✓		✓				
262903	Tubaron	✓	✓	✓	✓	✓	✓	✓
262907	Avato	✓		✓		✓		✓
262965*	Teevo SA	✓	✓	✓	✓	✓	✓	✓
262985	GLOBALNET	✓	✓	✓	✓	✓	✓	✓
263003	VIPNET	✓	✓	✓	✓	✓	✓	✓
263113*	Visao Informatica	✓	✓	✓	✓	✓	✓	✓
263263*	GW Telecom	✓	✓	✓	✓	✓	✓	✓
263384*	WordNet	✓		✓				
263442	NovaNET	✓	✓	✓	✓	✓	✓	✓
263543	CLICKNETRS	✓	✓	✓	✓	✓	✓	✓
263597	SpeedNet	✓	✓	✓	✓	✓	✓	✓
263604	HICBE	✓	✓	✓	✓	✓	✓	✓



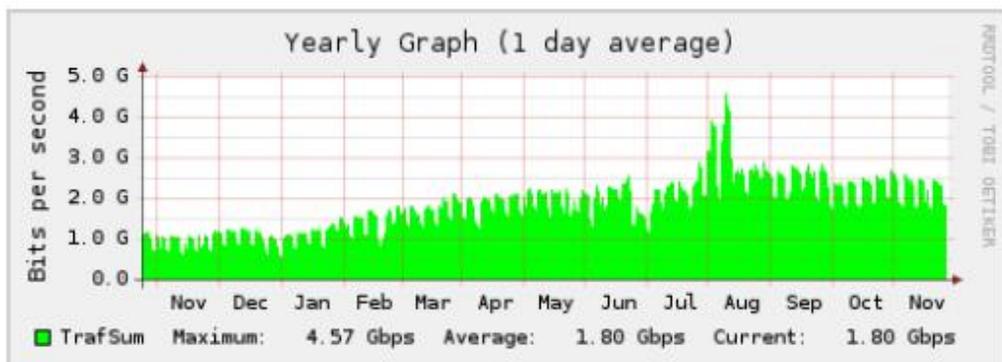
# Evolução do PTT-RS



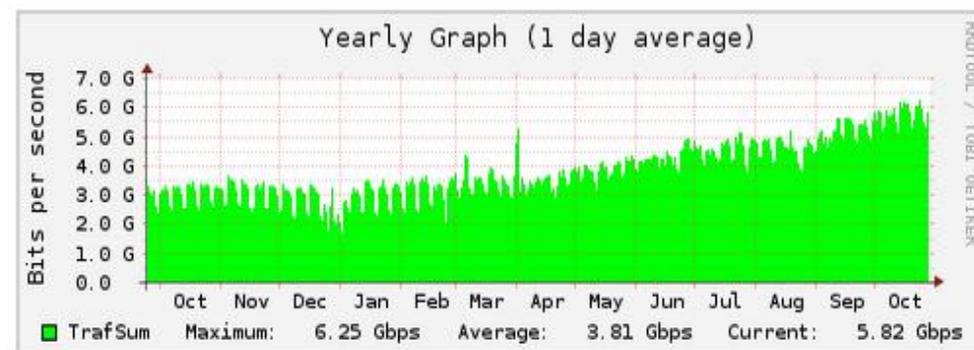
2001



2005



2012



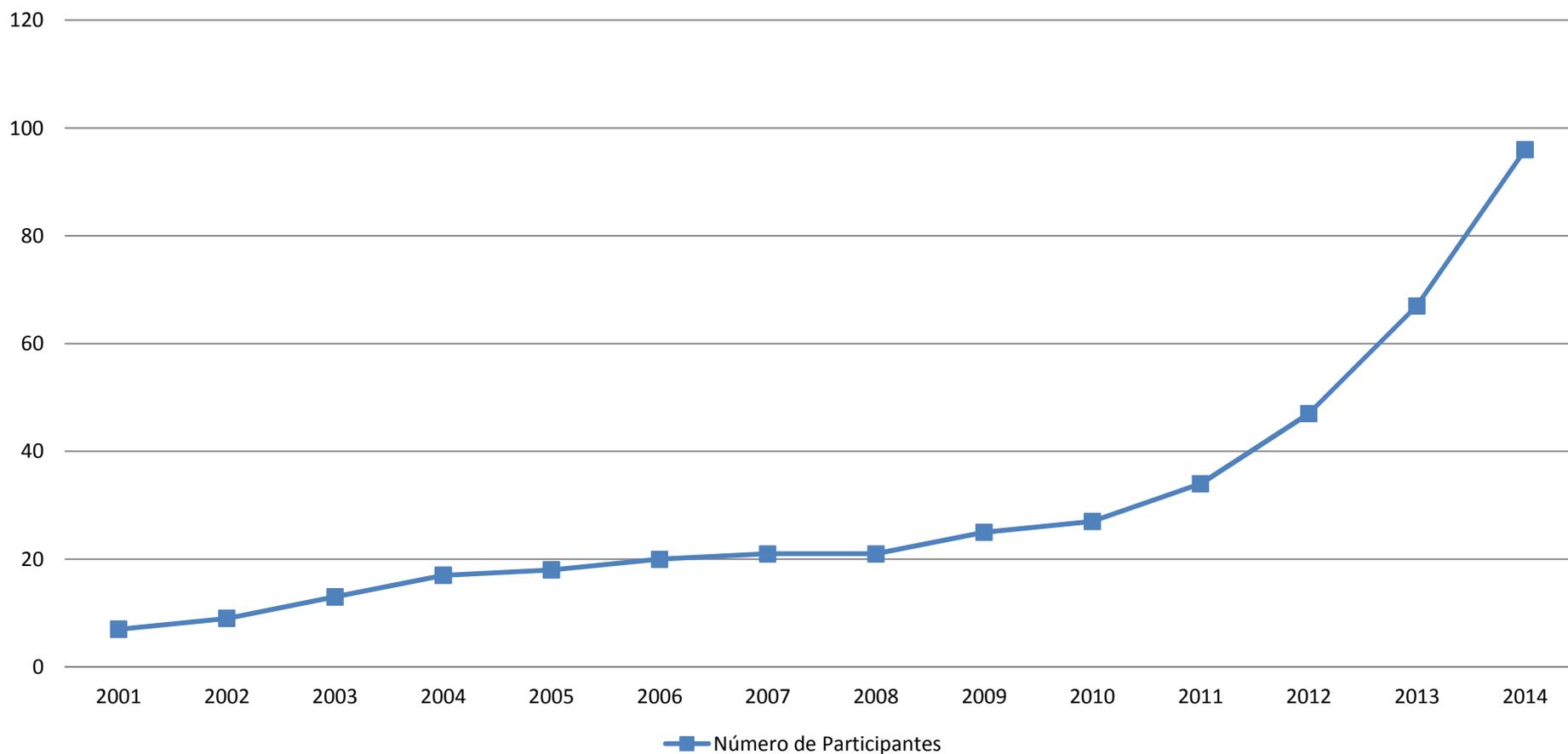
2014



# Evolução do PTT-RS

## PTT-RS

Histórico de participantes



# Previsões

- 103 participantes até Dez/2014
- Netflix (PIX-Commcorp)
  - Novembro/2014
  - 40 Gb (previsão)
- Embratel
  - Dezembro/2014
  - 20 Gb (Previsão)
- Globo.com
  - Em 2015
  - Melhorias para Olimpíadas em 2016



# Conclusões

- As universidades tem perfil também de provedor de conteúdo regionais!
- Aumento na resiliência em falhas



# Dúvidas?

