



RIPE NCC

RIPE NETWORK COORDINATION CENTRE

RIPE NCC RIS

Routing Information Service

Michela Galante | 02-05-2022 | LAC Peering Forum

What is RIS?

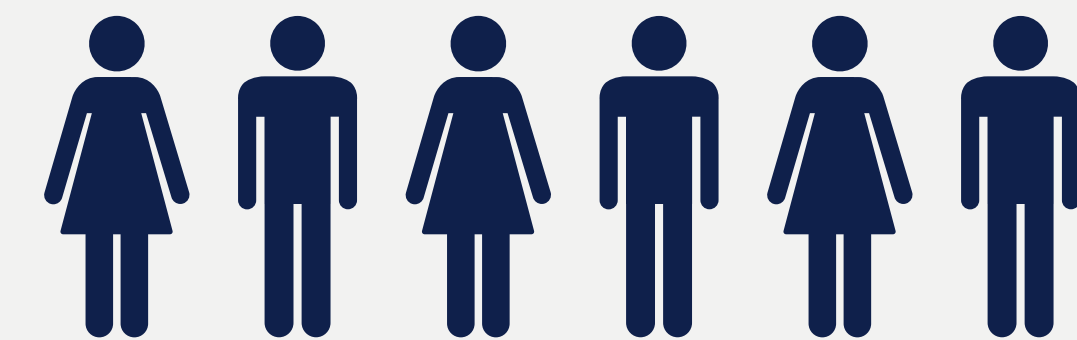


- RIS is a routing data collection platform
- Collecting BGP data since 1999
- Up-to-date routing information, as opposed to information in databases and routing registries, such as:
 - What is being announced
 - Which prefixes are seen and where
 - Which ones are not seen

THANK YOU TO OUR COMMUNITY



23 collectors



1377 global peers

RIS Collectors



Collector	Location	IXP	Deployed	Removed	Collector	Location	IXP	Deployed	
RRC00	Amsterdam	Multi-hop	1999		RRC13	Moscow	MSK-IX	2005	
RRC01	London	LINX	2000		RRC14	Palo Alto	PAIX	2005	
RRC02	Paris	SFINX	2001	2008	RRC15	Sao Paulo	PTT-Metro SP	2006	
RRC03	Amsterdam	AMS-IX	2001		RRC16	Miami	NOTA	2008	
RRC04	Geneva	CIXP	2001		RRC18	Barcelona	CATNIX	2015	
RRC05	Vienna	VIX	2001		RRC19	Johannesburg	NAPAfrica JB	2016	
RRC06	Tokyo	DIX-IE	2001		RRC20	Zurich	SwissIX	2015	
RRC07	Stockholm	Netnod	2002		RRC21	Paris	FranceIX	2015	
RRC08	San Jose	MAE-West	2002	2004	RRC22	Bucharest	InterLAN	2017	
RRC09	Zurich	TIX	2003	2004	RRC23	Singapore	Equinix SG	2017	
RRC10	Milan	MIX	2003		RRC24	Montevideo	LACNIC multi-hop	2019	
RRC11	New York	NYIIX	2004		RRC25	Amsterdam	RIPE multi-hop	2021	
RRC12	Frankfurt	DE-CIX	2004		RRC26	Dubai	UAE-IX	2021	

Why collect BGP data?



- The Internet routing system doesn't have in-built security mechanisms
- Better visibility = greater security = lower risk of a BGP hijack

Who is RIS for?




- Network operators, policy makers
 - To check specific routing incidents
 - To troubleshoot Internet routing
 - To develop future plans based on routing trends
- Researchers
 - To investigate notable events occurring in the Internet (i.e. network disruptions in specific countries, Facebook outage, etc)

Interconexión en BGP en la región de América Latina y el Caribe



- <https://imasd.lacnic.net/es/interconexion/interconexion-bgp-en-lac>

CO	Colombia	
Total prefijos anunciados 8.449	Prefijos IPv4 anunciados 8.042	Prefijos IPv6 anunciados 407
Porcentaje de prefijos IPv6 anunciados		
		
4,82%		
Longitud promedio prefijos IPv4 22,79	Longitud promedio prefijos IPv6 48,69	
AS de origen 177	AS de tránsito 23	AS <i>upstream</i> 78
Longitud AS <i>path</i> promedio 5,78	Total de IXP 2	

How can you use RIS?



- Available as:
 - Raw data
 - Live stream (RIS Live)
 - Whois query interface (RISwhois)
- Visualisations available in Infoledes/Enrutamiento

More tools to use RIS

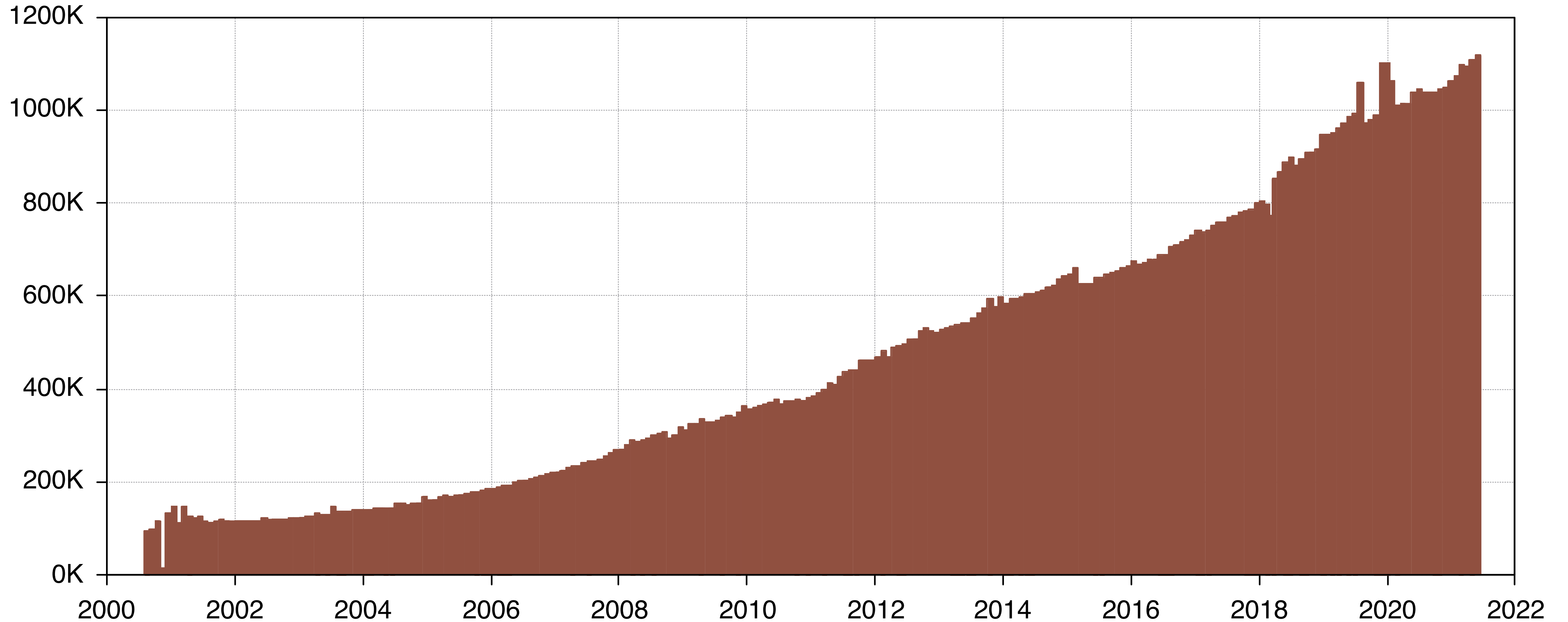


- Others have developed tools based on RIS data
- [bgp.he.net](#) / [bgp.tools](#)
 - These services use RIS data and provide a dashboard with various aspects of the Internet routing system.
- [BGPalerter](#)
 - This software monitors RIS data in near real-time to detect route hijacks and other incidents.
- [Internet Health Report](#) and [IODA caida](#)
 - These research projects uses RIS data to build experimental views using Internet routing data.

BGP Growth – Number of Prefixes



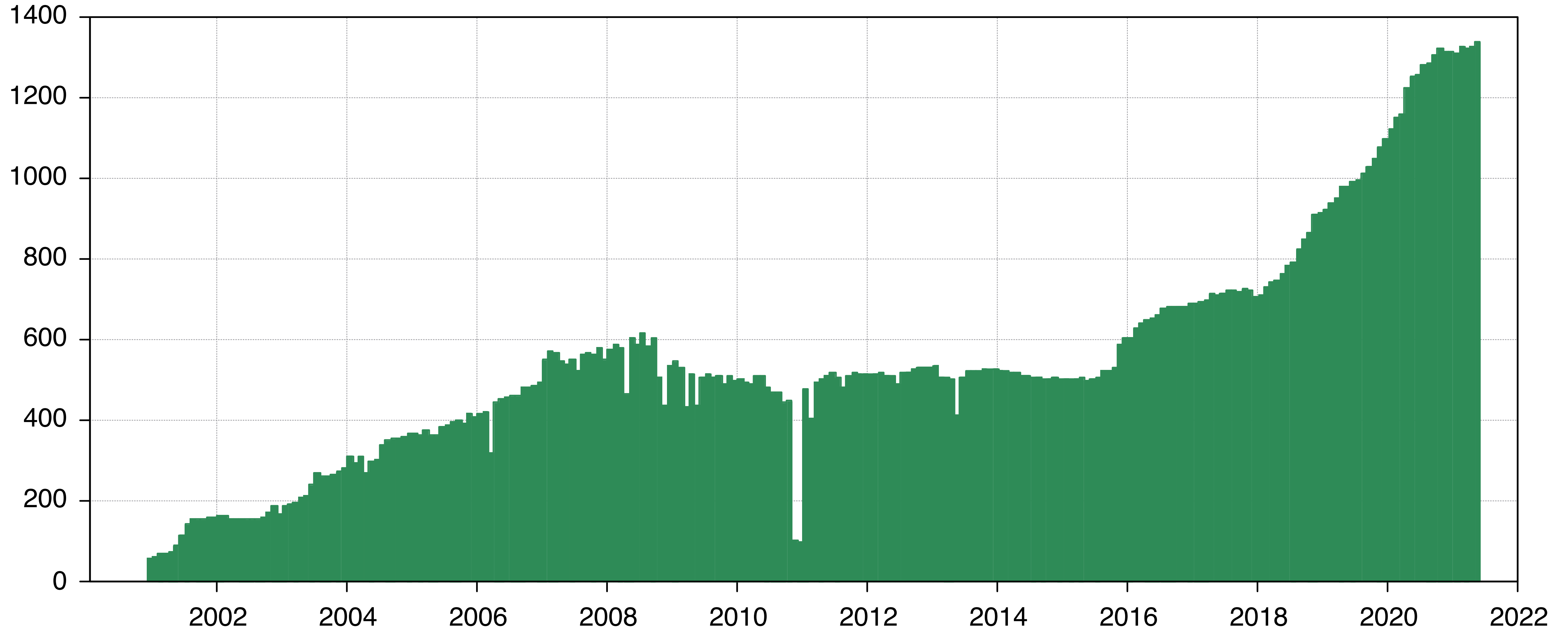
Number of prefixes seen in RIS



RIS Growth – Number of Peers



Number of RIS peers



Negative Effects of Growth



- More data does not bring more diversity in routes
- More peers bring more noise in the data
- More input data causes bigger delays for output data



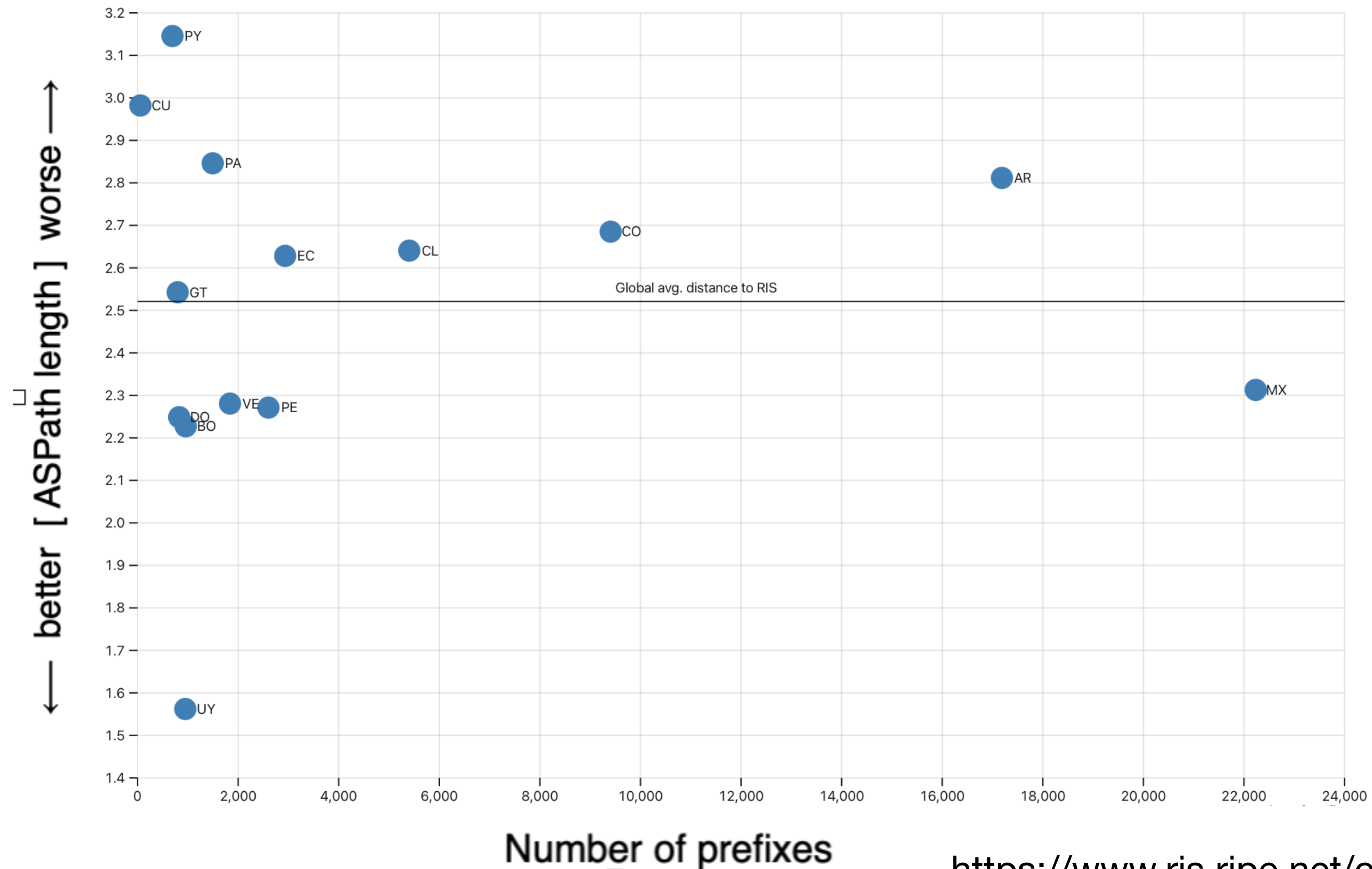
Planned Improvements

- Pipeline improvements (shorter delays for output)
- Peering coordination:
 - Diversity encouraged
 - Increasing coverage in RIPE NCC region and others where visibility is low
- Higher multi-hop capacity
- Metadata for our multi-hops collectors

Distance from LAC Countries



Average ASPath length in RIS to country's prefixes



<https://www.ris.ripe.net/cgi-bin/peerreg.cgi>

Come peer with us!



- We are inviting **representative networks** in the LAC region to peer with RIS!
- CO, CL, AR, PY, EC, PA, CU, GT
 - Send us a peering request
 - Provide full feed when possible
- Goals
 - Better routing visibility and more security for
 - Your network
 - Your country
 - The Internet



ASN	12654
Traffic profile	mostly balanced
Traffic Volume	0-20Mbps
Peering Policy	Selective
Peering Locations (IX or POP)	<ul style="list-style-type: none">• RRCs at 23 locations globally: https://www.ripe.net/analyse/internet-measurements/routing-information-service-ris/ris-peering-policy• RRC24 - LACNIC, Montevideo (UY) - Multihop• RRC15 - PTT-Metro SP, Sao Paulo (BR)
PeeringDB entry	as12654.peeringdb.com
Contact information	ris-peering@ripe.net Michela Galante: mgalante@ripe.net Marco Giuliani: mgiuliani@ripe.net



Questions



ris@ripe.net

ris-peering@ripe.net

<https://ris.ripe.net>