
bgp.he.net

May 2025 – BKNIX
Bangkok, Thailand

Walt Wollny, Director Interconnection Strategy
Hurricane Electric AS6939

Who is Walt Wollny?

Hurricane Electric AS6939 – 11 years

Director Interconnection Strategy – supporting the network to reach to over 58 countries and over 320 Internet Exchanges. Focus on Global connectivity.

Amazon AS16509 – 4 years

Developed IP Transit and Peering on five continents.

Primary focus on Japan, Singapore, Hong Kong, India, Taiwan, Philippines, Australia.

Over 62 new CDN sites.

Microsoft AS8075 – 13 years

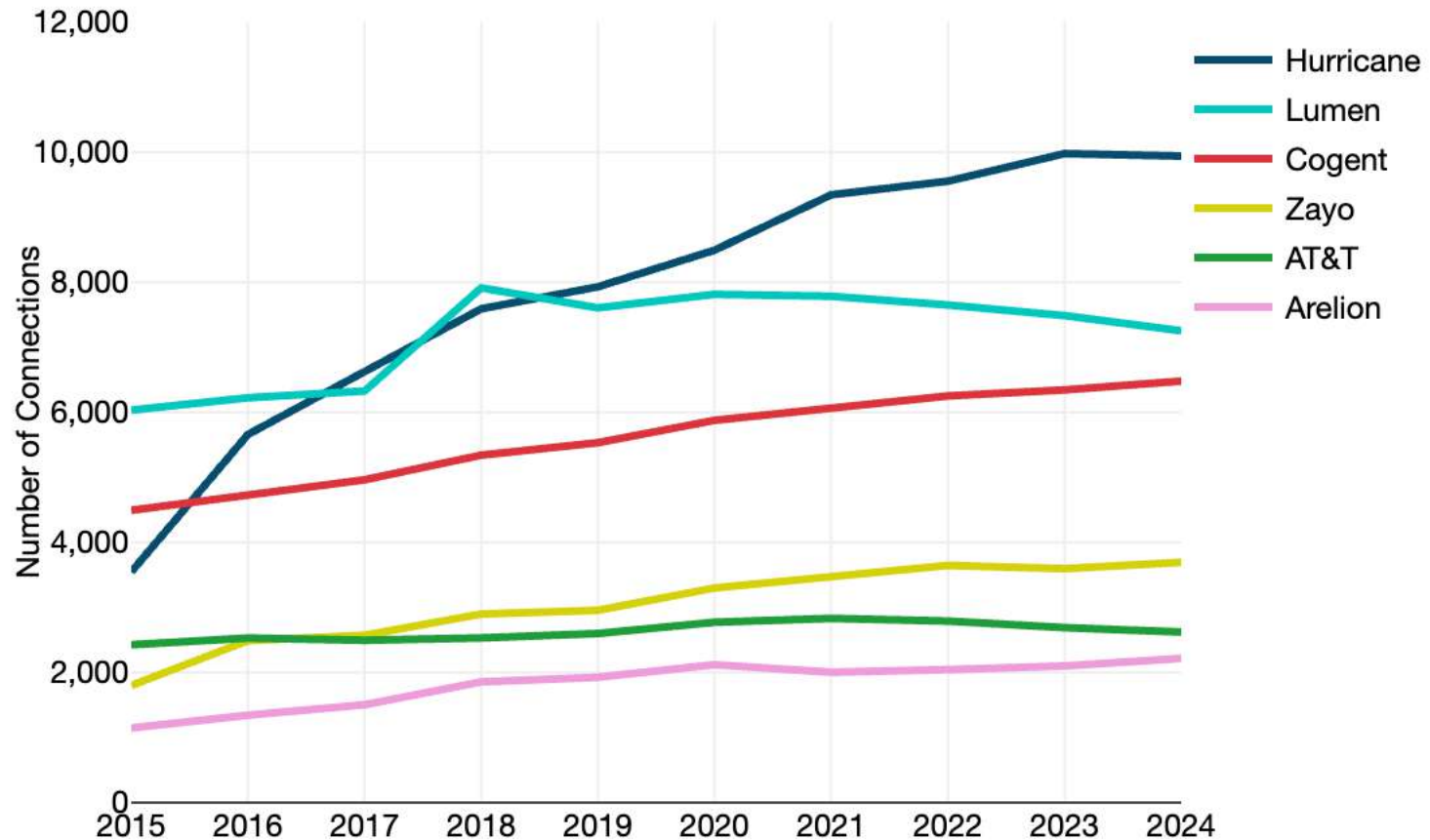
Developed IP Transit and Peering on four continents.

Primary focus on US, UE and South America.

28 years of Internet exchange experience

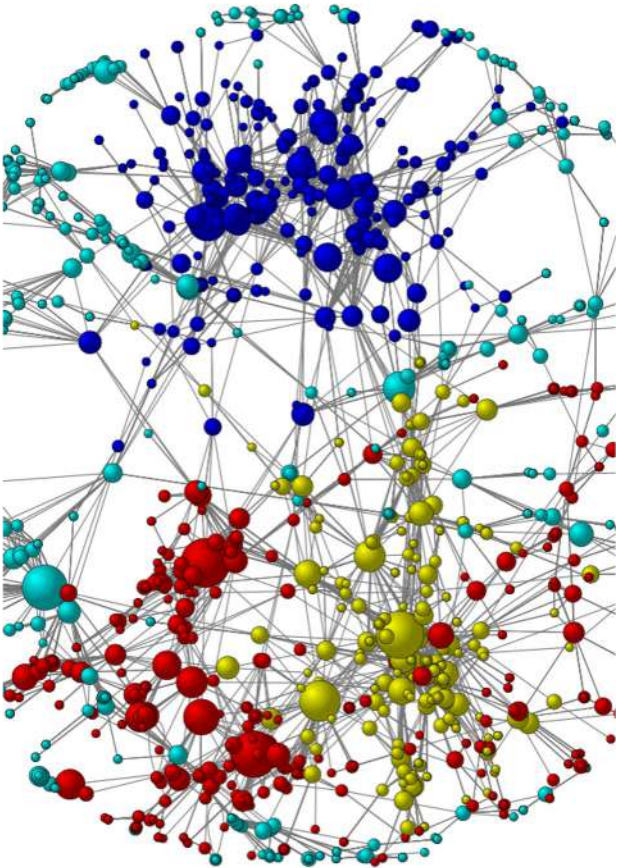


Number of Connections for ISP 2024



<https://blog.telegeography.com/the-2024-internet-provider-connectivity-rankings-are-in>

INTERNET



A network of “networks”
(where “networks = ASNs”)

Key points before we begin

- Network ASN must be visible
 - If it is not visible there will be no routing data
 - Participate with public collectors via route-views, RIS etc
 - BGP is the key so best path selection is used
 - Data is independent of HE's production network
 - Data is updated within few mins
-
- If you manage network that is not adequately represented, contact us and we will work with you to get your data incorporated. support@he.net

Home Page



HURRICANE ELECTRIC
INTERNET SERVICES

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Home

Welcome to the Hurricane Electric BGP Toolkit.

You are visiting from **220.86.114.11**



Announced as **220.80.0.0/13**



Your ISP is **AS4766** (Korea Telecom)



Updated 16 Mar 2017 14:01 PST © 2017 Hurricane Electric



What's new in bgp.he.net?

Super Looking Glass

- Capability to look for routes within last 5 mins
- Routes fed by hundreds of public route collectors like RIPE RIS, Oregon Rviews etc with 3500+ neighbors, 1000+ unique ASNs
- Ability to include or exclude routes with a ASN in the path
- Ability to look at routes from specific neighbor of a public collector
- Also, Includes bgp communities if available in the public collector

Super Looking Glass

Super Looking Glass Terminal	
78.16.0.0/14	
<div>Perform Query! <input checked="" type="checkbox"/> Exact Match <input type="checkbox"/> Show <input type="checkbox"/> Large <input type="checkbox"/> Small <input type="checkbox"/> Test <input type="checkbox"/> Exclude <input type="text" value="All ASNs"/> <input type="button" value="Select a neighbor to query directly"/></div>	
615 Paths observed BGP data is delayed up to 5 minutes	
Neighbor	64.71.137.241 (AS6939) <small>Learned from: route-view3</small>
Prefix	78.16.0.0/14
AS Path	6939 2110
Origin	IGP
RPKI validation	VALID <small>At least one VRF Matches the Route Prefix</small>
Last Updated	1/24/2025, 12:51:21 PM (7w04d05h)
Neighbor	89.21.210.85 (AS39120) <small>Learned from: route-view3</small>
Prefix	78.16.0.0/14
AS Path	39120 2110
Origin	IGP
RPKI validation	VALID <small>At least one VRF Matches the Route Prefix</small>
Large Communities	39120:43760:1
Last Updated	2/20/2025, 9:57:41 PM (3w04d20h)
Neighbor	89.21.210.86 (AS39120) <small>Learned from: route-view3</small>
Prefix	78.16.0.0/14
AS Path	39120 2110
Origin	IGP
RPKI validation	VALID <small>At least one VRF Matches the Route Prefix</small>
Large Communities	39120:43760:1
Last Updated	1/20/2025, 11:25:23 PM (8w00d18h)
Neighbor	94.101.60.146 (AS39120) <small>Learned from: route-view3</small>
Prefix	78.16.0.0/14
AS Path	39120 2110
Origin	IGP
RPKI validation	VALID <small>At least one VRF Matches the Route Prefix</small>
Large Communities	39120:43760:1
Last Updated	1/20/2025, 11:25:24 PM (8w00d18h)



78.16.0.0/14 - with AS6939 in path + text output

Super Looking Glass Terminal

78.16.0.0/14

Perform Query! ☒ Exact Match ☐ Shorter ☐ Longer ☐ Brief ☒ Text ☐ Exclude 6939 Select a neighbor to query directly ▼

60 Paths observed BGP data is delayed up to 5 minutes

- Prefix: 78.16.0.0/14
NEXT_HOP: 64.71.137.241, Learned from Peer: 64.71.137.241 (6939 - Hurricane Electric LLC)
PATH_ORIGIN: IGP, RPKI: **VALID**
AS_PATH: 6939 2110
6939 - HURRICANE, US
2110 - AS-BTIRE BT Ireland was previously known as Esat Net, EUnet
Source: route-views
Last Updated: 3/8/2025, 4:06:53 PM (1w03d02h)
- Prefix: 78.16.0.0/14
NEXT_HOP: 172.18.14.1, Learned from Peer: 172.18.14.1 (6939 - Hurricane Electric LLC)
PATH_ORIGIN: IGP, RPKI: **VALID**
AS_PATH: 6939 2110
6939 - HURRICANE, US
2110 - AS-BTIRE BT Ireland was previously known as Esat Net, EUnet
Source: collector14.bgp.he.net
Last Updated: 3/16/2025, 6:13:12 PM (0w02d00h)
- Prefix: 78.16.0.0/14
NEXT_HOP: 172.18.14.2, Learned from Peer: 172.18.14.2 (6939 - Hurricane Electric LLC)
PATH_ORIGIN: IGP, RPKI: **VALID**
AS_PATH: 6939 2110
6939 - HURRICANE, US
2110 - AS-BTIRE BT Ireland was previously known as Esat Net, EUnet
Source: collector14.bgp.he.net
Last Updated: 3/4/2025, 8:25:32 AM (2w00d09h)
- Prefix: 78.16.0.0/14
NEXT_HOP: 195.66.224.21, Learned from Peer: 195.66.224.21 (6939 - Hurricane Electric LLC)
PATH_ORIGIN: IGP, RPKI: **VALID**
AS_PATH: 6939 2110
6939 - HURRICANE, US
2110 - AS-BTIRE BT Ireland was previously known as Esat Net, EUnet
Source: route-views.linx
Last Updated: 2/14/2025, 6:09:32 AM (4w04d12h)
- Prefix: 78.16.0.0/14
NEXT_HOP: 196.223.21.74, Learned from Peer: 196.223.21.74 (6939 - Hurricane Electric LLC)
PATH_ORIGIN: IGP, RPKI: **VALID**
AS_PATH: 6939 2110
6939 - HURRICANE, US
2110 - AS-BTIRE BT Ireland was previously known as Esat Net, EUnet
Source: route-views.kixp
Last Updated: 2/27/2025, 5:06:10 AM (2w05d13h)

Super Traceroute

- Capability to trace from thousand of RIPE Atlas probes, perfSONAR etc
- Trace source can be selected based on city, country or ASN.
- Supports both IPv4 and IPv6 lookups (IPv6 where probe is on a IPv6 network)

Super Traceroute

Traceroute

Specify a target ip or domain name in the box below.

Select Target

he.net

v4 v6

Select Probe

dublin

Perform Query!

Platform	IP	ASN	City	State	Country
PERFSONAR	63.33.90.46	16509	Dublin	Europe	IE
RIPE	134.226.81.15	1213	Dublin	Leinster	IE
RIPE	160.6.130.245	1213	Dublin	Leinster	IE
RIPE	86.40.1.113	5466	Dublin	Leinster	IE
RIPE	86.45.254.121	5466	Dublin	Leinster	IE
RIPE	95.44.44.235	5466	Dublin	Leinster	IE
RIPE	109.255.62.156	6830	Dublin	Leinster	IE
RIPE	20.238.82.3	8075	Dublin	Leinster	IE
RIPE	74.234.28.19	8075	Dublin	Leinster	IE
RIPE	34.245.11.208	16509	Dublin	Leinster	IE

Showing 1 to 10 of 12 entries

Previous12Next

Results will appear below

Traceroute from 109.255.62.156 to he.net
Using RTT, Probe 54352

RESOLVED he.net TO 216.218.236.2
STARTED QUERY AT 2025/03/18 12:53:18 UTC

Fetching Measurement: 92312062

Traceroute from 192.168.0.100 to 216.218.236.2 (216.218.236.2):

1 192.168.0.1 3.00ms 2.915ms 2.527ms

2 109.255.62.1 16.42ms 11.59ms 12.872ms

3 109.255.255.1 11.457ms 10.631ms 11.066ms

4 ie-dub01a-rc1-ae-41-0.aorta.net (84.116.238.118) 14.584ms 13.017ms 13.575ms

5 ie-dub01a-r11-ae-63-0.aorta.net (84.116.134.174) 11.676ms 11.768ms 13.826ms

6 port-channel19.core2.dub1.he.net (184.184.177.126) 12.646ms 13.849ms 11.365ms

7 100ge0-44.core2.nyc3.he.net (184.185.65.245) 71.897ms 73.72ms 73.508ms

8 * part-channel13.core3.nyc4.he.net (184.105.64.143) 72.764ms *

9 port-channel9.core3.sjc2.he.net (184.104.199.21) 132.751ms *

10 * part-channel7.core2.pao1.he.net (184.104.190.254) 135.827ms *

11 port-channel4.core1.fas11.he.net (172.32.92.66) 132.547ms 134.356ms 138.633ms

12 he.net (216.218.236.2) 132.11ms 132.4ms 129.025ms

Completed in 32.58s



Real time updates on IRR, RPKI & propagation graphs

- bgp.he.net Prefix v4 and Prefix v6 page does real time check of IRR route objects and RPKI ROA check
- Check happens with seconds after the page loads
- Green tick (✓) when route object is valid, red tick (✗) when there is mismatch between origin in route object Vs origin as visible in the BGP table
- Green key (🔑) when RPKI ROA check is valid, red key when there is a mismatch in origin AS or prefix length in ROA Vs the BGP table
- Per prefix propagation graphs are available and close to real time

Real time updates on IRR, RPKI & propagation graphs

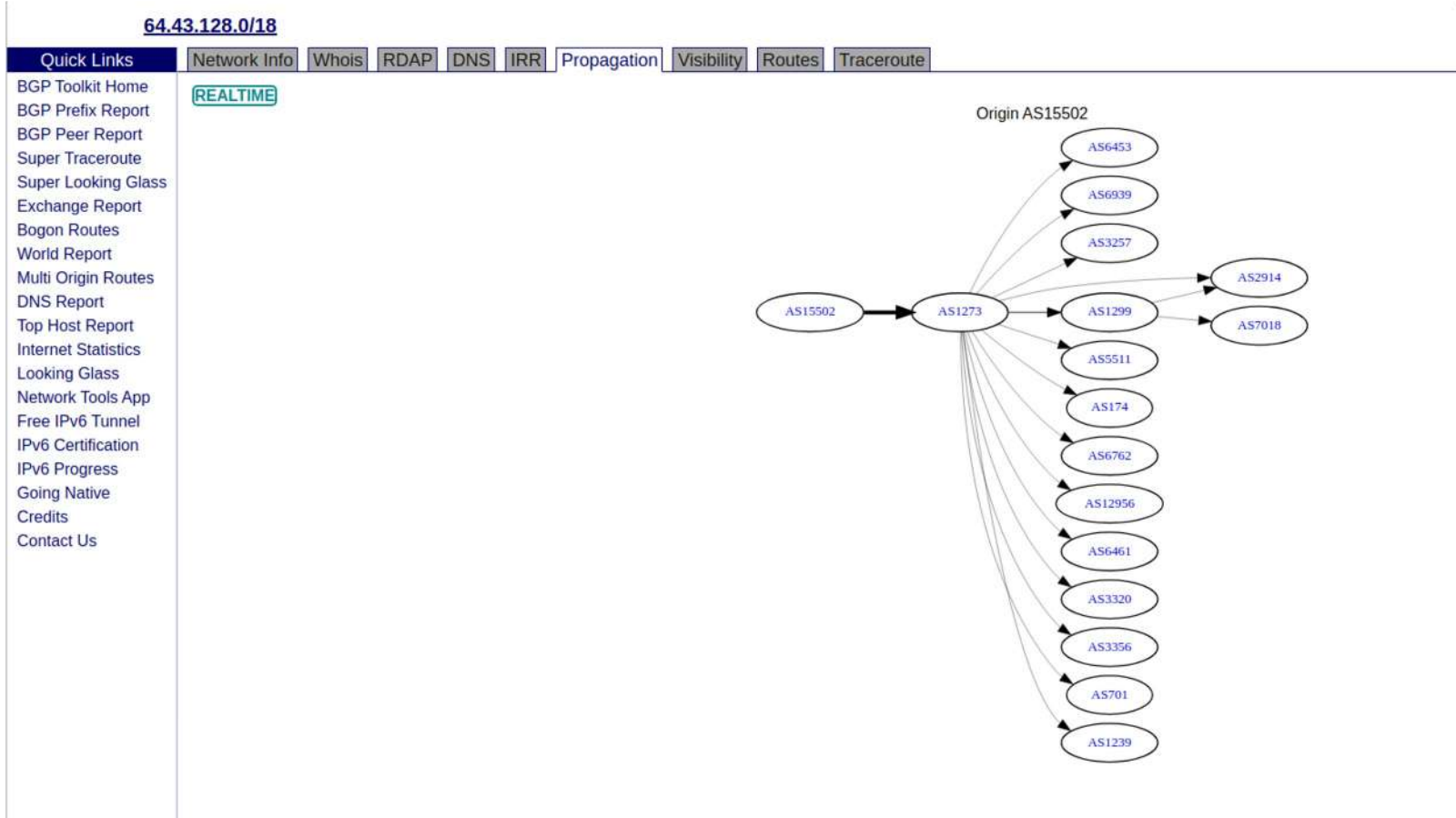
AS135343 Magic Particle Limited

Quick Links	AS Info	Graph v4	Graph v6	Prefixes v4	Prefixes v6	Peers v4	Peers v6	Whois	RDAP	IRR	Traceroute
BGP Toolkit Home											
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Free IPv6 Tunnel											
IPv6 Certification											
IPv6 Progress											
Going Native											
Credits											
Contact Us											
Prefix											
Description											
Visibility											
45.141.118.0/24								SugarHosts		99%	632/637
45.141.119.0/24								SugarHosts		99%	632/637
103.214.192.0/24								Magic Particle Limited		100%	636/637
103.214.193.0/24								Magic Particle Limited		100%	636/637
103.214.194.0/24								Magic Particle Limited		100%	636/637
103.214.195.0/24								Magic Particle Limited		99%	633/637
144.48.140.0/24								Magic Particle Limited		100%	636/637
144.48.141.0/24								Magic Particle Limited		100%	636/637
144.48.141.9/32										1%	5/637
144.48.141.79/32										1%	5/637
144.48.141.95/32										1%	5/637
144.48.141.119/32										1%	5/637
144.48.142.0/24								Magic Particle Limited		100%	636/637
144.48.143.0/24								Magic Particle Limited		100%	636/637

Showing 1-14 of 14



Real time updates on IRR, RPKI & propagation graphs



New metric: Visibility

- Visibility check for each prefix across 600+ full route data
- Marks down routes which have low global visibility
- Could be result of IRR/RPKI mismatch or intentional limiting of announcement






































































New metric: Visibility

AS15502 Vodafone Ireland Limited

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AS Info Graph v4 Prefixes v4 Peers v4 Whois RDAP IRR IX Traceroute

Prefix		Description	Visibility
5.253.124.0/22	 	Vodafone Ireland Limited	 100% 637/637
37.110.216.0/21	 	Vodafone Ireland Limited	 100% 637/637
51.37.0.0/16	 	Vodafone Ireland Limited	 100% 637/637
51.37.0.0/17	 	Vodafone Ireland Limited	 100% 637/637
51.37.128.0/17	 	Vodafone Ireland Limited	 100% 637/637
64.43.0.0/18	 	RIPE Network Coordination Centre	 100% 637/637
64.43.0.0/20	 	RIPE Network Coordination Centre	 8% 52/637
64.43.0.0/21	 	Vodafone Ireland	 100% 637/637
64.43.0.0/22	 	Vodafone Ireland	 8% 52/637
64.43.4.0/22	 	EIRCELL-ASNMNT	 8% 52/637
64.43.8.0/21	 	Vodafone Ireland	 100% 637/637
64.43.8.0/22	 	EIRCELL-ASNMNT	 8% 52/637
64.43.12.0/22	 	EIRCELL-ASNMNT	 8% 52/637
64.43.16.0/20	 	Vodafone Ireland	 100% 637/637
64.43.16.0/21	 	RIPE Network Coordination Centre	 8% 52/637
64.43.24.0/22	 	EIRCELL-ASNMNT	 8% 52/637
64.43.28.0/22	 	EIRCELL-ASNMNT	 8% 52/637
64.43.32.0/20	 	Vodafone Ireland	 100% 637/637
64.43.32.0/21	 	Vodafone Ireland Limited	 8% 52/637
64.43.40.0/22	 	Vodafone Ireland	 8% 52/637
64.43.44.0/22	 	Vodafone Ireland	 8% 52/637
64.43.48.0/20	 	Infra	 8% 52/637
64.43.49.0/24	 		 100% 636/637

Lookup for 64.43.0.0/20

- 64.43.0.0/20 - visible only in 52 out of 637 known full routes
- Prefix -> Propagation shows “*The prefix 64.43.0.0/20 is not visible to any of the major Internet backbones.*”
- Visibility tab shows route is visible only by certain ASNs in certain collectors

Lookup for 64.43.0.0/20

64.43.0.0/20

Quick Links:	Network Info	Whois	RDPAT	DNS	IHR	Propagation	Visibility	Routes	Traceroute
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The prefix 64.43.0.0/20 is not visible to any of the major Internet backbones.

REALTIME

64.43.0.0/32

Quick Links

Toolset Home

BGP Prefix Report

BGP Prefix Report

BGP Peer Report

Super Traceroute

Super Looking Glass

Exchange Report

Bogon Router

World Map

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DNS Report

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Looking Glass

Network Tools App

Free IPv6 Tunnel

IPv6 Certification

FIVE Progress

Gang Nighth

Credits

Contact Us

BETA/TRUE

Network Info

Typhoz

IPSCAN

IPSEC

IPRR

Propagation

Visibility

Routes

Peers

Visibility 8% (52 out of 637) Full View

Collector	Peer IP	Peer ASN	Hus Profit	Origin ASN
route-views.chicago	200.115.137.47	390405		n/a
route-views.chicago	200.115.137.100	14030		n/a
route-views.chicago	200.115.137.200	14030		n/a
route-views.chicago	200.115.137.69	13952		n/a
route-views.chicago	200.115.136.1	17290		n/a
route-views.chicago	200.115.136.47	852		n/a
route-views.chicago	200.115.136.200	53828		n/a
route-views.chicago	200.115.137.216	20523		n/a
route-views.chicago	200.115.137.50	49644		n/a
route-views.chicago	200.115.136.42	199624		n/a
route-views.chicago	200.115.136.95	17660		n/a
route-views.chicago	200.115.136.133	32953		n/a
route-views.chicago	200.115.136.19	13651		n/a
route-views.chicago	200.115.136.58	291		n/a
route-views.chicago	200.115.137.35	8230		n/a
collector24.tpg.hk.net	172.18.14.2	9039		n/a
collector24.tpg.hk.net	172.18.14.1	8509		n/a
route-views.napartica	190.60.8.146	11845		n/a
route-views.napartica	190.60.10.62	19652		n/a
route-views.napartica	190.60.10.28	17105		n/a
route-views.napartica	190.60.8.139	32953		n/a
route-views.napartica	190.60.8.178	17271		n/a
route-views.napartica	190.60.8.185	17487		n/a
route-views.napartica	190.60.8.215	10844		n/a
route-views.napartica	190.60.8.9	49644		n/a
route-views.napartica	190.60.8.142	17271		n/a
route-views.napartica	190.60.8.178	17013		n/a
route-views.napartica	190.60.8.80	57468		n/a
route-views.napartica	190.60.8.214	11845		n/a
route-views.napartica	190.60.8.113	329512		n/a
route-views.napartica	190.60.8.152	5401		n/a
route-views.napartica	190.60.10.195	120964		n/a
route-views.napartica	190.60.10.232	529964		n/a
route-views.napartica	190.60.9.186	199224		n/a
route-views.napartica	190.60.9.139	32953		n/a
route-views2.scoptabo	187.16.220.229	49644		n/a
route-views2.scoptabo	187.16.222.16	199624		n/a
route-views2.scoptabo	187.16.222.221	240208		n/a
route-views2.scoptabo	187.16.217.27	26129		n/a
route-views2.scoptabo	187.16.218.138	268976		n/a
route-views2.scoptabo	187.16.220.216	52873		n/a
route-views2.scoptabo	187.16.221.183	17488		n/a
route-views2.scoptabo	187.16.222.229	199524		n/a
route-views2.scoptabo	187.16.218.247	268541		n/a
route-views2.scoptabo	187.16.215.43	264409		n/a
route-views2.scoptabo	187.16.219.29	16652		n/a
route-views2.scoptabo	187.16.216.232	28229		n/a
route-views2.scoptabo	187.16.222.150	264479		n/a
route-views2.scoptabo	187.16.222.160	262793		n/a
route-views2.scoptabo	187.16.219.10	61832		n/a
rs02.spe.net	195.96.225.30	6009		n/a
rs02.spe.net	195.96.325.81	1808	x	15902
rs02.spe.net	195.96.226.97	39122		n/a
rs02.spe.net	195.96.231.56	271253		n/a
rs02.spe.net	195.96.227.163	1299		n/a
rs02.spe.net	195.96.225.48	62167	x	15902
rs02.spe.net	195.96.324.167	5401		n/a
rs02.spe.net	195.96.227.149	14030		n/a
rs01.spe.net	4.67.80.716	8218		n/a



Lookup for 64.43.0.0/20

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64.43.0.0/20	
Perform Query: <input checked="" type="checkbox"/> Exact match <input type="checkbox"/> Starts <input type="checkbox"/> Longer <input type="checkbox"/> Best <input checked="" type="checkbox"/> Prefix <input type="checkbox"/> Exclude <input type="checkbox"/> All RRRs <input type="text" value="Select a neighbor to query directly"/>	
52 Paths observed BGP World observed 0/0 routes	
<pre>1 Prefix: 64.43.0.0/20 NEXT_HOP: 89.21.210.85, Learned from Peer: 89.21.210.85 (39120 - ISP services in Italy) PATH_ORIGIN: ISP, RPKI: VALID AS_PATH: 39120 15502 39120 - CONVERGENCE-AS ISP services in Italy, IT 15502 - VODAFONE-IRELAND-ASN, IE COMMUNITIES: 0:714 0:1213 0:6939 0:8075 0:9802 0:13237 0:13335 0:34245 0:41073 0:41678 0:714 - No export for AS2714 0:1213 - No export for AS1213 0:6939 - No export for AS6939 0:8075 - No export for AS8075 0:9802 - No export for AS9802 0:13237 - No export for AS13237 0:13335 - No export for AS13335 0:34245 - No export for AS34245 0:41073 - No export for AS41073 0:41678 - No export for AS41678 LARGE_COMMUNITIES: 39120:43768:1 Source: route-vviews3 Last Updated: 2/20/2025, 9:57:40 PM (3w8d021h)</pre>	
<pre>2 Prefix: 64.43.0.0/20 NEXT_HOP: 89.21.210.85, Learned from Peer: 89.21.210.85 (39120 - ISP services in Italy) PATH_ORIGIN: ISP, RPKI: VALID AS_PATH: 39120 15502 39120 - CONVERGENCE-AS ISP services in Italy, IT 15502 - VODAFONE-IRELAND-ASN, IE COMMUNITIES: 0:714 0:1213 0:6939 0:8075 0:9802 0:13237 0:13335 0:34245 0:41073 0:41678 0:714 - No export for AS2714 0:1213 - No export for AS1213 0:6939 - No export for AS6939 0:8075 - No export for AS8075 0:9802 - No export for AS9802 0:13237 - No export for AS13237 0:13335 - No export for AS13335 0:34245 - No export for AS34245 0:41073 - No export for AS41073 0:41678 - No export for AS41678 LARGE_COMMUNITIES: 39120:43768:1 Source: route-vviews3 Last Updated: 2/20/2025, 11:25:23 PM (8w8d020h)</pre>	
<pre>3 Prefix: 64.43.0.0/20 NEXT_HOP: 94.101.60.146, Learned from Peer: 94.101.60.146 (39120 - ISP services in Italy) PATH_ORIGIN: ISP, RPKI: VALID AS_PATH: 39120 15502 39120 - CONVERGENCE-AS ISP services in Italy, IT 15502 - VODAFONE-IRELAND-ASN, IE COMMUNITIES: 0:714 0:1213 0:6939 0:8075 0:9802 0:13237 0:13335 0:34245 0:41073 0:41678 0:714 - No export for AS2714 0:1213 - No export for AS1213 0:6939 - No export for AS6939 0:8075 - No export for AS8075 0:9802 - No export for AS9802 0:13237 - No export for AS13237 0:13335 - No export for AS13335 0:34245 - No export for AS34245 0:41073 - No export for AS41073 0:41678 - No export for AS41678 LARGE_COMMUNITIES: 39120:43768:1 Source: route-vviews3 Last Updated: 1/20/2025, 11:25:24 PM (8w8d020h)</pre>	
<pre>4 Prefix: 64.43.0.0/20 NEXT_HOP: 193.293.0.01, Learned from Peer: 193.293.0.01 (13237 - eunetworks GMBH) PATH_ORIGIN: ISP, RPKI: VALID AS_PATH: 13237 15502 13237 - LINDSEYNET-AS European Backbone of AS13237, DE 15502 - VODAFONE-IRELAND-ASN, IE Source: rrc05-115e-net Last Updated: 3/6/2025, 4:21:28 AM (1w6d15h)</pre>	
<pre>5 Prefix: 64.43.0.0/20 NEXT_HOP: 195.66.224.81, Learned from Peer: 195.66.224.81 (1020 - Unitas Global LLC) PATH_ORIGIN: ISP, RPKI: VALID AS_PATH: 1020 15502 1020 - UNITAS, US 15502 - VODAFONE-IRELAND-ASN, IE COMMUNITIES: 1020:20 1020:23302 Source: rrc05-115e-net Last Updated: 1/22/2025, 10:00:55 AM (7w6d09h)</pre>	



http://bgp.he.net/AS12779#_asinfo

[AS Info](#)[Graph v4](#)[Graph v6](#)[Prefixes v4](#)[Prefixes v6](#)[Peers v4](#)[Peers v6](#)[Whois](#)[RDAP](#)[IRR](#)[IX](#)[Traceroute](#)

Company Website:
Company Looking Glass:

<http://www.itgate.it>
<https://lg.itgate.net>

Country of Origin:

[Italy](#)



Internet Exchanges: 10

Prefixes Originated (all): 26
Prefixes Originated (v4): 21
Prefixes Originated (v6): 5

Prefixes Announced (all): 388
Prefixes Announced (v4): 356
Prefixes Announced (v6): 32

RPKI Originated Valid (all): 20
RPKI Originated Valid (v4): 15
RPKI Originated Valid (v6): 5

RPKI Originated Invalid (all): 0
RPKI Originated Invalid (v4): 0
RPKI Originated Invalid (v6): 0

BGP Peers Observed (all): 1,735
BGP Peers Observed (v4): 1,690
BGP Peers Observed (v6): 1,294

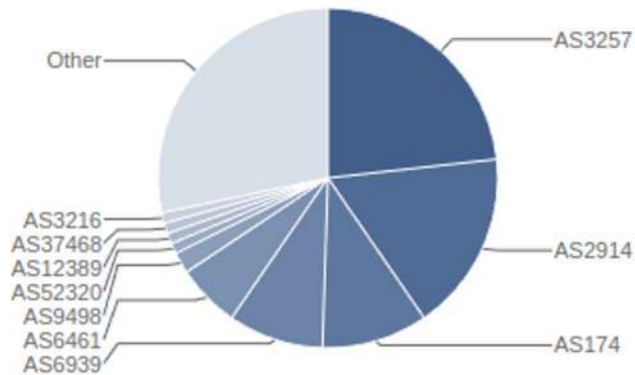
IPs Originated (v4): 45,824
AS Paths Observed (v4): 147,890
AS Paths Observed (v6): 56,588

Average AS Path Length (all): 4.233
Average AS Path Length (v4): 4.239
Average AS Path Length (v6): 4.218

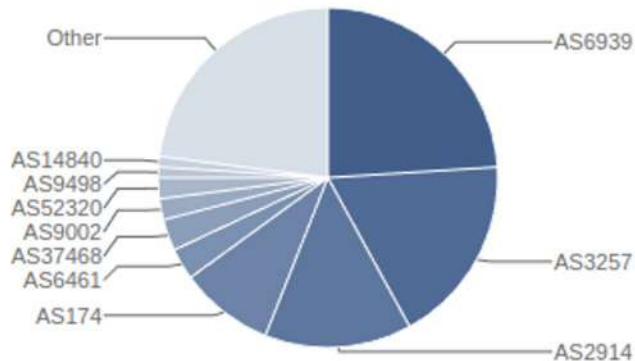


http://bgp.he.net/AS12779#_asinfo

AS12779 IPv4 Peers



AS12779 IPv6 Peers



ASN	Name
AS3257	GTT Communications Inc.
AS2914	NTT America, Inc.
AS174	Cogent Communications
AS6939	Hurricane Electric LLC
AS6461	Zayo Bandwidth
AS9498	Bharti Airtel Limited
AS52320	GlobeNet Cabos Submarinos Colombia, S.A.S.
AS12389	PJSC Rostelecom
AS37468	Angola Cables
AS3216	PJSC "Vimpelcom"

ASN	Name
AS6939	Hurricane Electric LLC
AS3257	GTT Communications Inc.
AS2914	NTT America, Inc.
AS174	Cogent Communications
AS6461	Zayo Bandwidth
AS37468	Angola Cables
AS9002	RETN Limited
AS52320	GlobeNet Cabos Submarinos Colombia, S.A.S.
AS9498	Bharti Airtel Limited
AS14840	BR.Digital Provider

http://bgp.he.net/AS12779#_asinfo



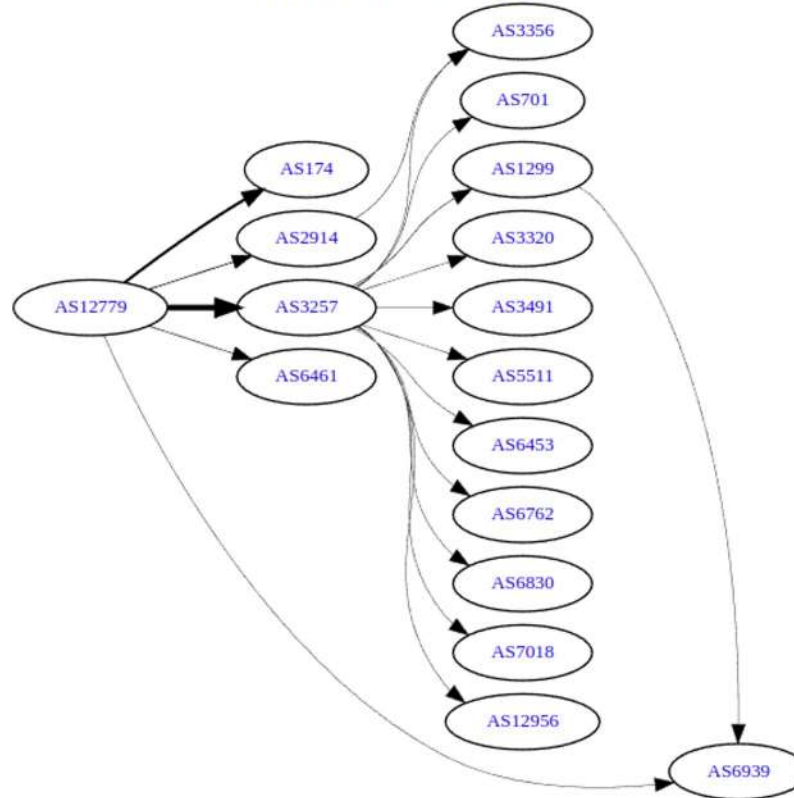
Route propagation is to the following networks:

Company	ASN	Company	ASN
Hurricane Electric	6939	NTT	2914
Arelion	1299	Orange	5511
AT&T	7018	PCCW	3491
Cogent	174	Tata Comm	6453
DTAG	3320	Telecom Italia	6762
GTT	3257	Telxius	12956
Liberty Global	6830	Verizon	701
Lumen	3356	Zayo	6461

http://bgp.he.net/AS12779#_graph4

AS Info Graph v4 Graph v6 Prefixes v4 Prefixes v6 Peers v4 Peers v6 Whois RDAP IRR IX Traceroute

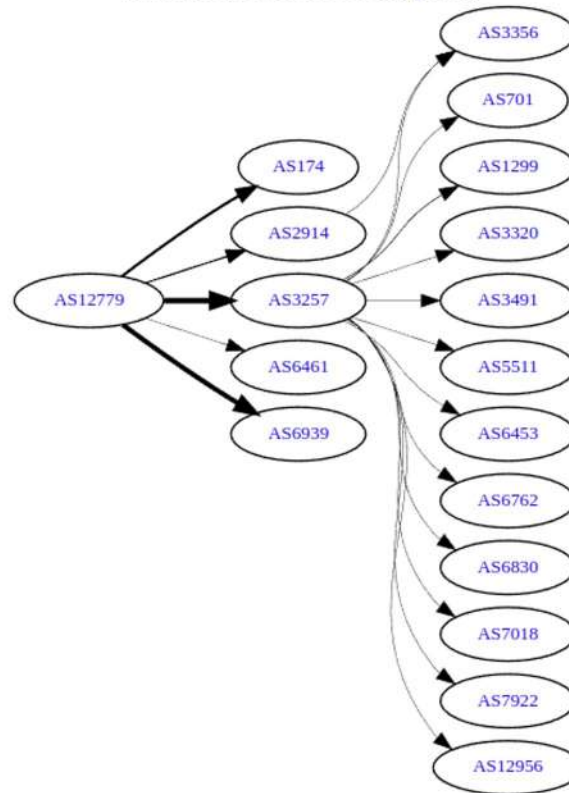
AS12779 IPv4 Route Propagation



http://bgp.he.net/AS12779#_graph6

AS Info Graph v4 Graph v6 Prefixes v4 Prefixes v6 Peers v4 Peers v6 Whois RDAP IRR IX Traceroute

AS12779 IPv6 Route Propagation


















http://bgp.he.net/AS12779#_prefixes

AS Info	Graph v4	Graph v6	Prefixes v4	Prefixes v6	Peers v4	Peers v6	Whois	RDAP	IRR	IX	Traceroute		
Prefix							Description				Visibility		
5.104.26.0/23									ATCALL SRL				100% 643/643
5.104.28.0/23									ATCALL SRL				100% 643/643
5.104.30.0/24									ATCALL SRL				100% 643/643
77.74.16.0/21									MOVIMATICA Srl				100% 643/643
86.105.14.0/24									VHosting Solution srl				100% 643/643
89.31.200.0/21									IT.Gate S.p.A.				100% 643/643
91.245.234.0/24									VHosting Solution srl				100% 643/643
93.191.240.0/21									EUROLOGON-MNT				100% 643/643
176.110.111.0/24									WhiteReady S.r.l. Societa' Benefit				100% 643/643
185.59.80.0/22									IT.Gate S.p.A.				100% 643/643
185.59.80.255/32													0% 0/643
185.97.232.0/22									Eurologon Srl				100% 643/643
185.128.76.0/23									CITTA' STUDI S.P.A.				100% 643/643
185.141.230.0/24									Fida Informatica S.r.l.				100% 643/643
185.141.231.0/24									Fida Informatica S.r.l.				100% 643/643
185.228.205.0/24									Atlante Informatica S.R.L.				100% 643/643
194.28.116.0/22									DOCTYPE SRL				100% 643/643
195.74.81.0/24									En.AIP Piemonte				100% 643/643
195.238.235.0/24									ALFA DI ADB LUPOTTO & ASSOCIATI SOCIETA' DI CONSULENZA FINANZIARIA SPA BREVEMENTE ALFA SCF SPA				100% 643/643
212.110.32.0/19									IT.Gate S.p.A.				100% 643/643
213.212.128.0/18									IT.Gate S.p.A.				100% 643/643
213.254.0.0/19									IT.Gate S.p.A.				100% 642/643
213.254.31.255/32													0% 0/643

Showing 1-23 of 23













http://bgp.he.net/AS12779#_prefixes6

AS Info Graph v4 Graph v6 Prefixes v4 Prefixes v6 Peers v4 Peers v6 Whois RDAP IRR IX Traceroute


























Prefix		Description	Visibility
2001:1418::/29	 	IT.Gate S.p.A.	 100% 626/628
2a02:c480::/32	 	DOMINO S.R.L. SOCIETA' BENEFIT	 100% 628/628
2a0c:79c0:2::/48	 	VHosting Solution srl	 100% 628/628
2a0c:79c0:4::/48	 	VHosting Solution srl	 100% 628/628
2a10:e140::/32	 	WhiteReady S.r.l. Societa' Benefit	 99% 623/628

Showing 1-5 of 5

http://bgp.he.net/AS12779#_peers

Rank	Description		IPv6	Peer
1	GTT Communications Inc.		X	AS3257
2	NTT America, Inc.		X	AS2914
3	Cogent Communications		X	AS174
4	Hurricane Electric LLC		X	AS6939
5	Zayo Bandwidth		X	AS6461
6	Bharti Airtel Limited		X	AS9498
7	GlobeNet Cabos Submarinos Colombia, S.A.S.		X	AS52320
8	PJSC Rostelecom		X	AS12389
9	Angola Cables		X	AS37468
10	PJSC "Vimpelcom"		X	AS3216
11	PJSC MegaFon		X	AS31133
12	COLT Technology Services Group Limited		X	AS8220
13	CJSC RASCOM		X	AS20764
14	BR.Digital Provider		X	AS14840
15	CORE-BACKBONE		X	AS33891
16	Joint Stock Company TransTeleCom		X	AS20485
17	Cloudflare, Inc.		X	AS13335
18	Akamai Technologies, Inc.		X	AS32787
19	China Mobile International Limited		X	AS58453
20	Reliance Jio Infocomm Pte Ltd Singapore		X	AS64049
21	MTS PJSC		X	AS8359
22	INETCOM CARRIER LLC		X	AS35598
23	SEACOM Limited		X	AS37100
24	SG.GS		X	AS24482
25	ELETRONET S.A.		X	AS267613

http://bgp.he.net/AS12779#_peers6

Rank	Description		IPv4	Peer
1	Hurricane Electric LLC		X	AS6939
2	GTT Communications Inc.		X	AS3257
3	NTT America, Inc.		X	AS2914
4	Cogent Communications		X	AS174
5	Zayo Bandwidth		X	AS6461
6	Angola Cables		X	AS37468
7	RETN Limited			AS9002
8	GlobeNet Cabos Submarinos Colombia, S.A.S.		X	AS52320
9	Bharti Airtel Limited		X	AS9498
10	BR.Digital Provider		X	AS14840
11	ELETRONET S.A.		X	AS267613
12	CORE-BACKBONE		X	AS33891
13	COLT Technology Services Group Limited		X	AS8220
14	ch-ifog-1-mnt		X	AS34927
15	GSL Networks Pty LTD		X	AS137409
16	The Constant Company, LLC		X	AS20473
17	Adylnet Telecom		X	AS28283
18	Reliance Jio Infocomm Pte Ltd Singapore		X	AS64049
19	Summit Communications Ltd		X	AS58717
20	IP-ONLY-MNT		X	AS12552
21	CJSC RASCOM		X	AS20764
22	PJSC "Vimpelcom"		X	AS3216
23	PJSC MegaFon		X	AS31133
24	Inter.link GmbH		X	AS5405
25	NORDUnet		X	AS2603

http://bgp.he.net/AS12779#_whois

as-block:	AS12557 - AS13223
descr:	RIPE NCC ASN block
remarks:	These AS Numbers are assigned to network operators in the RIPE NCC service region.
mnt-by:	RIPE-NCC-HM-MNT
created:	2018-11-22T15:27:24Z
last-modified:	2018-11-22T15:27:24Z
source:	RIPE

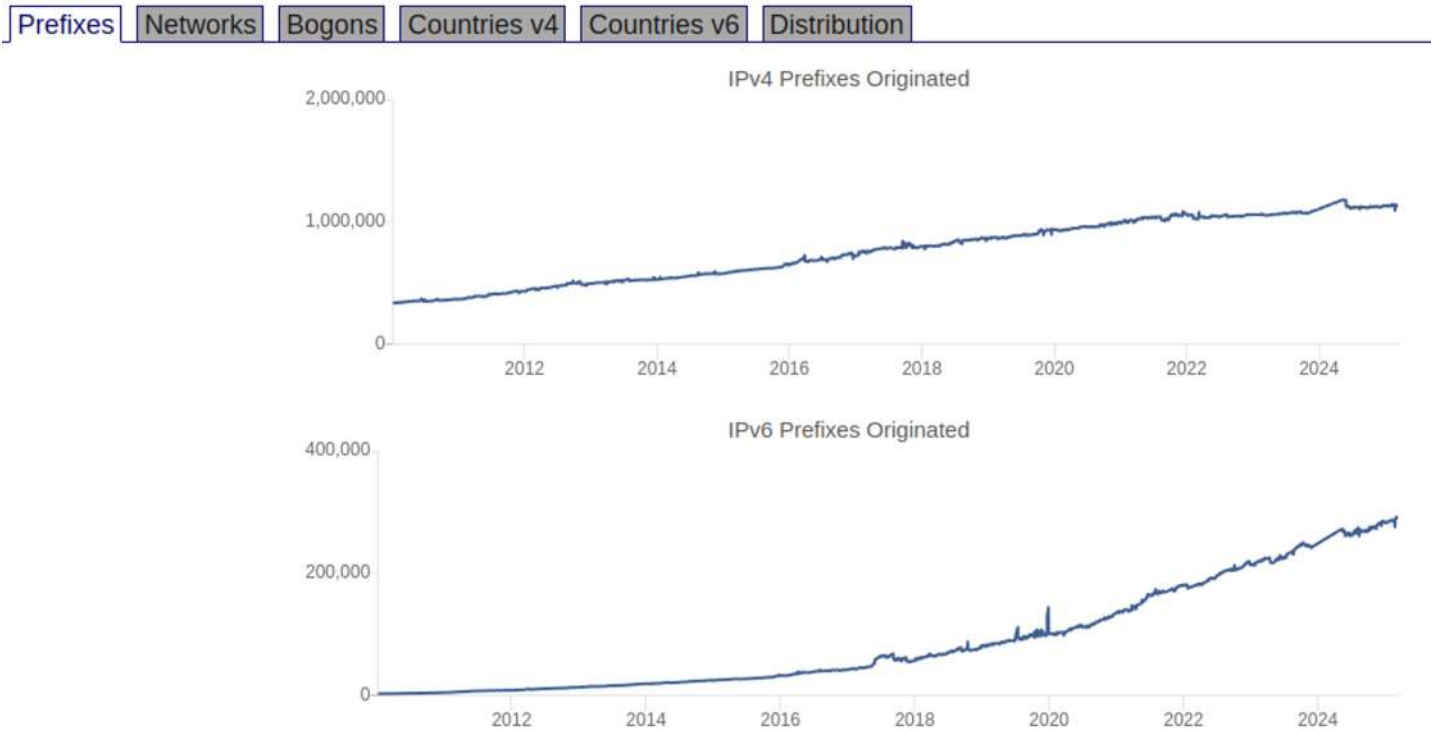
http://bgp.he.net/AS12779#_irr

```
aut-num: AS12779
as-name: ITGATE
remarks: ++++++
remarks: We do not use RPSL to generate routers configurations and our
remarks: complete routing policy would be too much verbose anyway, so
remarks: this object does not precisely reflect the actual policy in
remarks: use in our network.
remarks: The following import and export attributes define only an
remarks: upper bound of what we accept or announce from neighbors and
remarks: should not be interpreted literally.
remarks: We document the ASN and prefixes announced to peers in the
remarks: AS12779:AS-CUSTOMERS and AS12779:AS-CUSTOMERS-V6 as-sets
remarks: and we generate prefix and/or as-path filters for our peers
remarks: and customers using the data published in the RIPE routing
remarks: registry as much as feasible.
remarks: ++++++
import: from AS-ANY accept ANY;
export: { to AS-ANY announce AS12779:AS-CUSTOMERS; } refine { to AS12779:AS-DOWNSTREAMS announce ANY; }
remarks: +
mp-import: afi ipv4.unicast from AS-ANY accept ANY;
mp-export: afi ipv4.unicast { to AS-ANY announce AS12779:AS-CUSTOMERS; } refine { to AS12779:AS-DOWNSTREAMS announce ANY; }
remarks: +
mp-import: afi ipv4.multicast from AS-ANY accept ANY;
mp-export: afi ipv4.multicast { to AS-ANY announce AS12779:AS-CUSTOMERS; } refine { to AS12779:AS-DOWNSTREAMS announce ANY; }
remarks: +
mp-import: afi ipv6.unicast from AS-ANY accept ANY;
mp-export: afi ipv6.unicast { to AS-ANY announce AS12779:AS-CUSTOMERS-V6; } refine { to AS12779:AS-DOWNSTREAMS-V6 announce ANY; }
remarks: +
remarks: +++ Configuration for the AMS-IX route servers ++++++
remarks: +
import-via: AS6777 from AS-ANY EXCEPT AS12779:AS-AMS-IX-FILTER accept ANY
export-via: afi ipv4.unicast AS6777 to AS-ANY EXCEPT AS12779:AS-AMS-IX-FILTER announce AS12779:AS-CUSTOMERS
export-via: afi ipv6.unicast AS6777 to AS-ANY EXCEPT AS12779:AS-AMS-IX-FILTER announce AS12779:AS-CUSTOMERS-V6
remarks: +
remarks: ++++++
remarks: ++++++
org: ORG-INS2-RIPE
admin-c: GDC15-RIPE
tech-c: ITGA1-RIPE
status: ASSIGNED
mnt-by: RIPE-NCC-END-MNT
remarks: ++++++
remarks: contact for operational issues.: noc@ncc.itgate.net
remarks: contact for peering requests...: peering@ncc.itgate.net
remarks: contact for security issues...: abuse@itgate.net
remarks: Peering info: http://as12779.peeringdb.com
remarks: ++++++
mnt-by: ITGATE-NCC
created: 2002-09-17T13:41:17Z
last-modified: 2016-04-14T08:31:51Z
source: RIPE
```

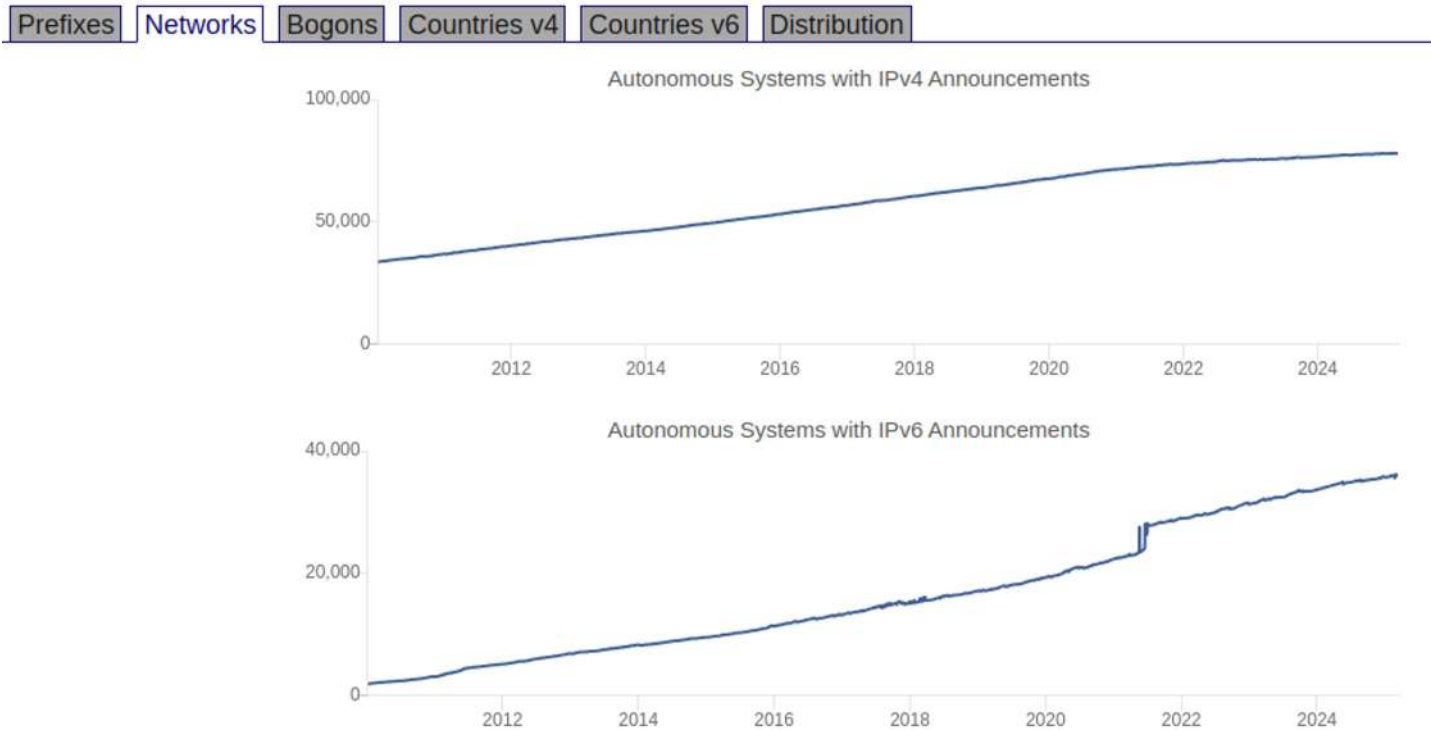

http://bgp.he.net/AS12779#_ix

Exchange		CC	City	IPv4	IPv6
<u>AMS-IX</u>		NL	Amsterdam	80.249.209.17	2001:7f8:1::a501:2779:1
<u>DE-CIX Frankfurt</u>		DE	Frankfurt	80.81.194.186	2001:7f8::31eb:0:1
<u>DE-CIX Marseille</u>		FR	Marseille	185.1.47.78	2001:7f8:36::31eb:0:1
<u>France-IX</u>		FR	Paris	37.49.236.177	2001:7f8:54::177
<u>France-IX AURA</u>		FR	Lyon	77.95.71.201	2001:7f8:47:47::c9
<u>LINX LON1</u>		GB	London	195.66.226.31	2001:7f8:4::31eb:1
<u>MINAP</u>		IT	Milan	185.1.114.12	2001:7f8:c5::a501:2779:1
<u>MIX-IT</u>		IT	Milan	217.29.66.65 217.29.67.194	2001:7f8:b:100:1d1:a5d1:2779:194 2001:7f8:b:100:1d1:a5d1:2779:65
<u>NaMeX</u>		IT	Rome	193.201.28.34	2001:7f8:10::1:2779
<u>TOP-IX</u>		IT	Turin	194.116.96.4	2001:7f8:23:ffff::3

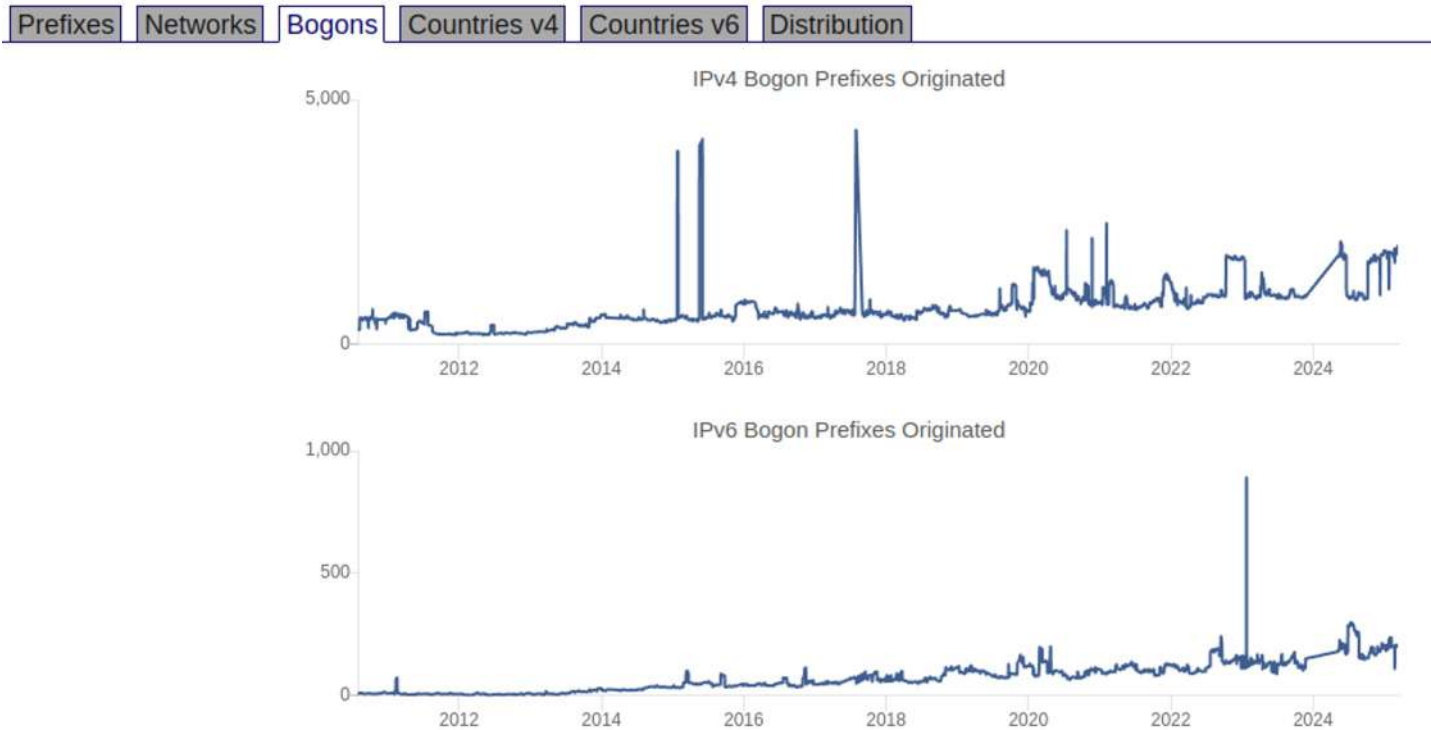
https://bgp.he.net/report/prefixes#_prefixes



https://bgp.he.net/report/prefixes#_networks



https://bgp.he.net/report/prefixes#_bogons



http://bgp.he.net/report/prefixes#_countriesv4

Prefixes Networks Bogons Countries v4 Countries v6 Distribution

IPv4 Announcements by Country

Country		Prefixes	ASNs	Prefixes / ASN
United States		293,516	21,673	13
Brazil		69,766	7,920	8
China		55,677	839	66
India		49,373	2,911	16
Russian Federation		41,076	4,699	8
Germany		33,287	2,729	12
Spain		33,090	1,240	26
Mexico		25,279	456	55
Canada		23,619	1,907	12
Turkey		22,282	768	29
Korea, Republic of		21,346	870	24

http://bgp.he.net/report/prefixes#_countriesv6

Prefixes Networks Bogons Countries v4 Countries v6 Distribution

IPv6 Announcements by Country

Country		Prefixes	ASNs	Prefixes / ASN
United States		52,989	5,398	9
China		42,219	4,900	8
Brazil		32,783	7,256	4
India		20,270	1,072	18
Mexico		8,692	255	34
Viet Nam		8,587	247	34
Japan		7,708	467	16
Germany		6,462	1,738	3
Netherlands		6,218	817	7
United Kingdom		5,634	1,278	4
Bangladesh		4,916	422	11

http://bgp.he.net/report/prefixes#_distribution

Prefixes Networks Bogons Countries v4 Countries v6 Distribution

IPv4 Announced Prefix Count by CIDR and Growth over 5547 Days

CIDR:	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Count:	17	18	43	94	319	600	1,271	2,281	14,668	8,995	15,420	26,813	48,535	59,083	126,087	121,583	705,287
Change:	7	8	18	29	135	214	609	1,038	3,573	3,663	6,257	7,700	24,656	35,313	95,530	91,407	528,775
Percent:	70%	80%	72%	44%	73%	55%	91%	83%	32%	68%	68%	40%	103%	148%	312%	302%	299%

IPv6 Announced Prefix Count by CIDR and Growth over 5547 Days

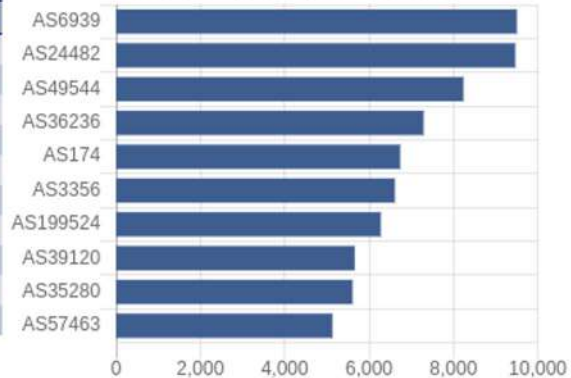
CIDR:	16	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Count:	4	1	13	3	6	9	37	12	20	21	162	5,463	752	357	34,553
Change:	1	0	9	0	3	8	36	11	15	18	155	5,462	750	354	32,958
Percent:	33%	0%	225%	0%	100%	800%	3600%	1100%	300%	600%	2214%	546200%	37500%	11800%	2066%

<http://bgp.he.net/report/peers>

Adjacencies | Agency History | Prefixes | Prefix History | IPv4 Addresses Originated

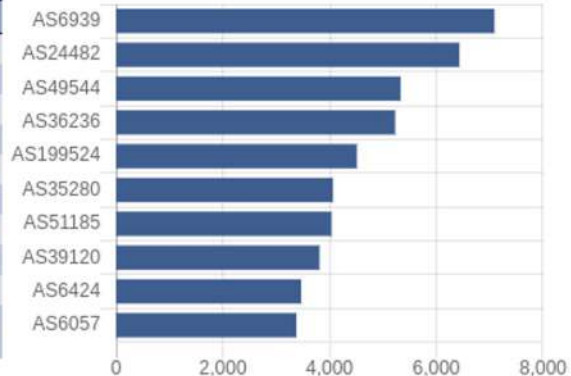
IPv4 Adjacencies		
ASN	Name	Count
AS6939	Hurricane Electric LLC	9,506
AS24482	SG.GS	9,468
AS49544	i3D.net B.V	8,238
AS36236	NetActuate, Inc	7,293
AS174	Cogent Communications	6,738
AS3356	Level 3 Parent, LLC	6,612
AS199524	G-Core Labs S.A.	6,278
AS39120	Convergenze S.p.A.	5,659
AS35280	F5 Networks SARL	5,608
AS57463	NetIX Communications JSC	5,130

AS IPv4 Adjacency Count Chart

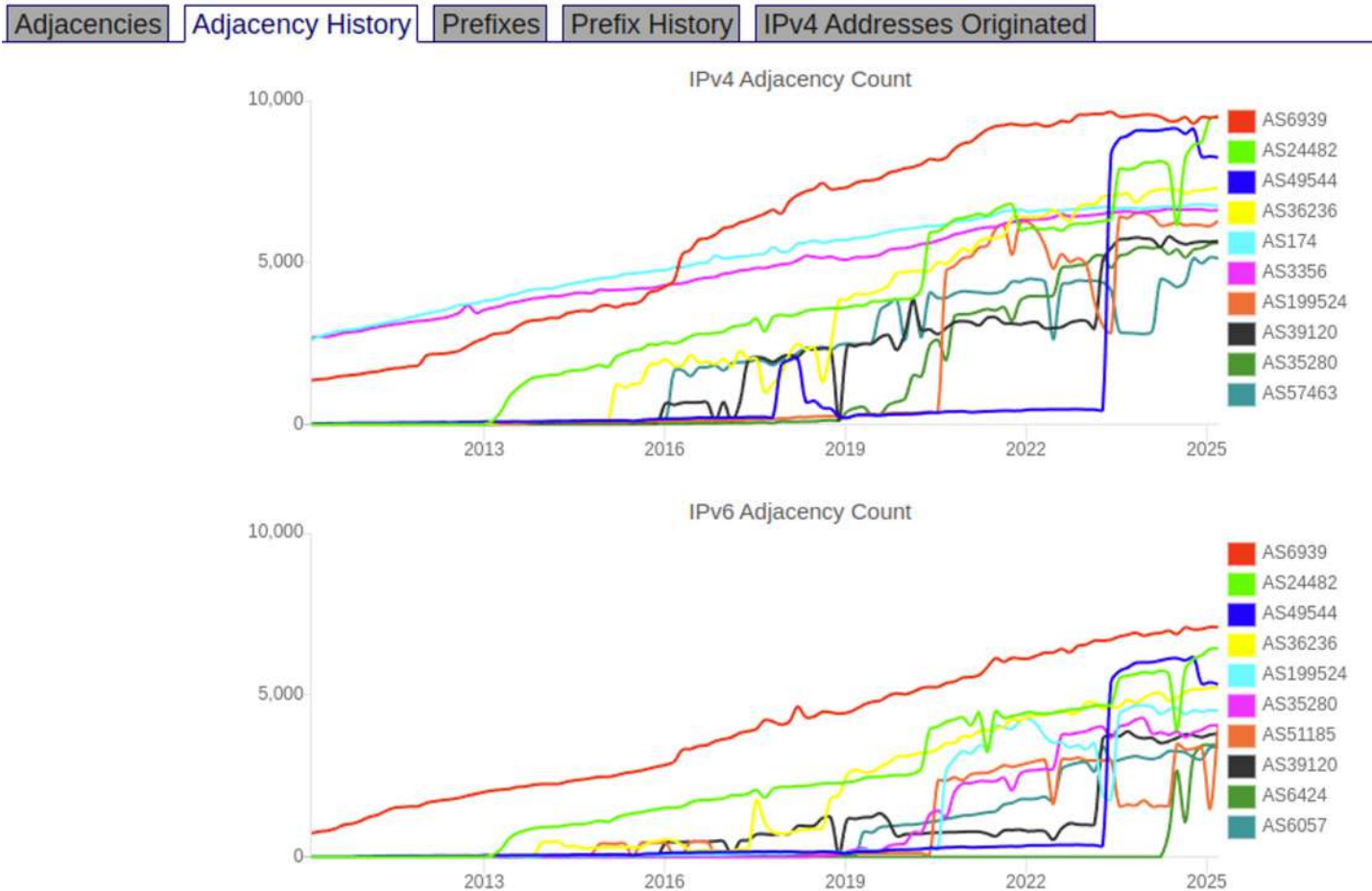


IPv6 Adjacencies		
ASN	Name	Count
AS6939	Hurricane Electric LLC	7,090
AS24482	SG.GS	6,434
AS49544	i3D.net B.V	5,331
AS36236	NetActuate, Inc	5,230
AS199524	G-Core Labs S.A.	4,513
AS35280	F5 Networks SARL	4,064
AS51185	MainStreaming SpA	4,039
AS39120	Convergenze S.p.A.	3,811
AS6424	RIPE Network Coordination Centre	3,467
AS6057	Administración Nacional de Telecomunicaciones	3,378

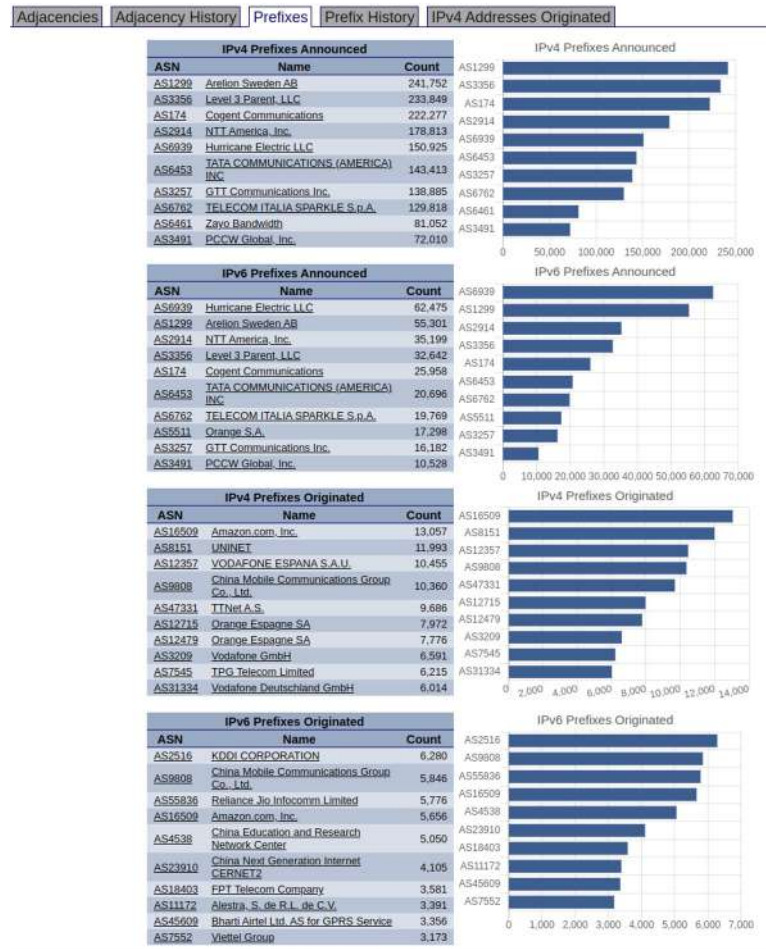
AS IPv6 Adjacency Count Chart



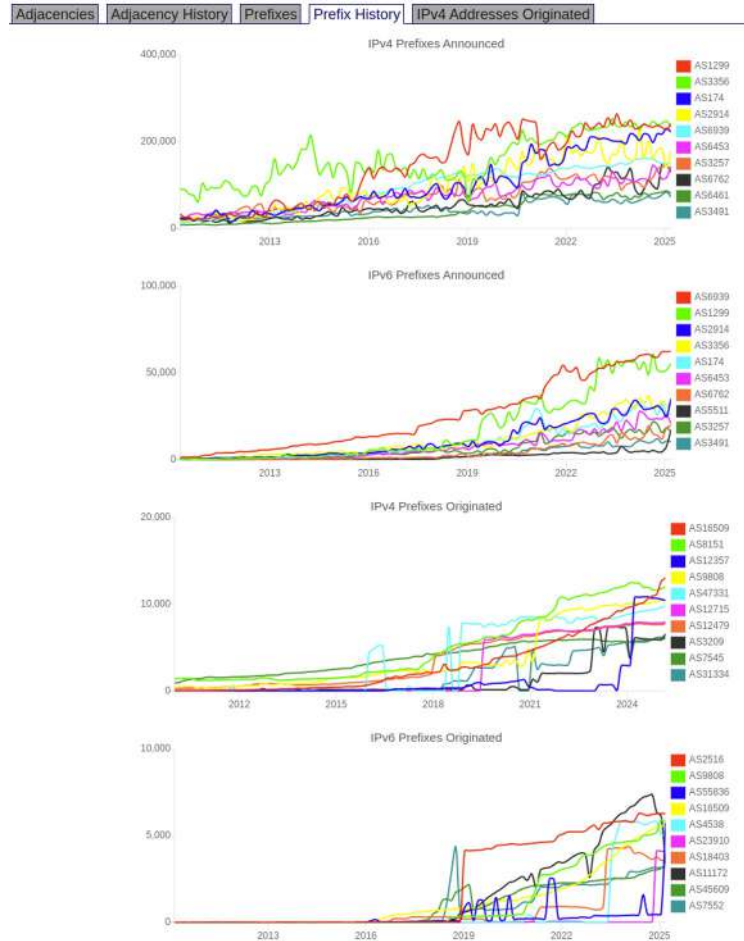
http://bgp.he.net/report/peers#_adjacencyhistory



http://bgp.he.net/report/peers#_prefixes



http://bgp.he.net/report/peers#_prefixhistory



http://bgp.he.net/report/peers#_ipv4addresses

Adjacencies

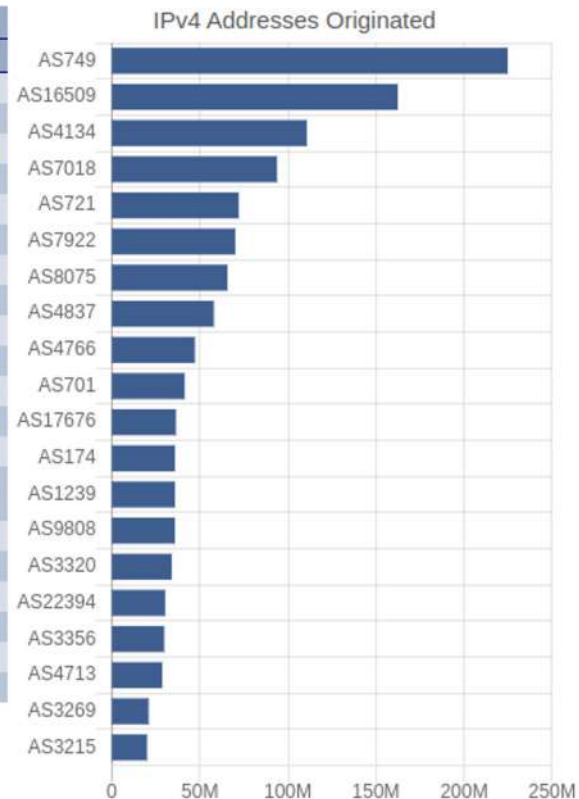
Adjacency History

Prefixes

Prefix History

IPv4 Addresses Originated

IPv4 Addresses Originated		
ASN	Name	Count
AS749	DoD Network Information Center	224.8M
AS16509	Amazon.com, Inc.	162.4M
AS4134	China Telecom Backbone	110.7M
AS7018	AT&T Services, Inc.	93.8M
AS721	DoD Network Information Center	72.1M
AS7922	Comcast Cable Communications, LLC	70.1M
AS8075	Microsoft Corporation	65.7M
AS4837	China Unicom Backbone	58.0M
AS4766	Korea Telecom	47.2M
AS701	Verizon Business/UUnet	41.4M
AS17676	SoftBank Corp.	36.4M
AS174	Cogent Communications	35.9M
AS1239	Sprint	35.9M
AS9808	China Mobile Communications Group Co., Ltd.	35.9M
AS3320	Deutsche Telekom AG	34.1M
AS22394	Verizon Business	30.3M
AS3356	Level 3 Parent, LLC	29.8M
AS4713	NTT Communications Corporation	28.7M
AS3269	Telecom Italia S.p.A.	20.9M
AS3215	Orange S.A.	20.0M



http://bgp.he.net/report/exchanges

Internet Exchanges Exchange Participants

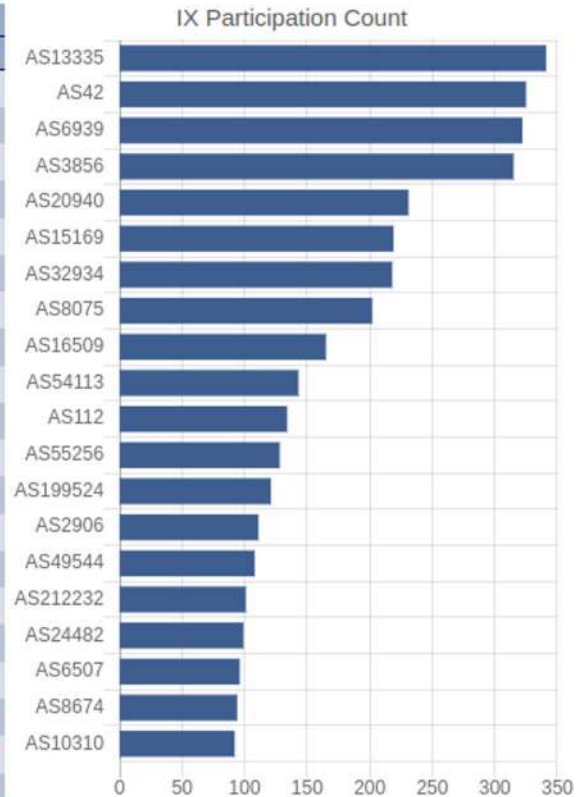
Internet Exchange		Members	Data	CC	City	Website
PTT São Paulo		2,820	✖	BR	São Paulo	ix.br
DE-CIX Frankfurt		1,102	✔	DE	Frankfurt	www.de-cix.net
PTT Fortaleza		1,043	✖	BR	Fortaleza	ix.br
LINX LON1		932	⚠	GB	London	www.linx.net
4b42 Internet Exchange Point		916	✔	CH	Zurich	www.4ixp.com
AMS-IX		873	✔	NL	Amsterdam	www.ams-ix.net
PTT Rio de Janeiro		787	✖	BR	Rio de Janeiro	ix.br
IIX		679	✖	ID	Jakarta	iix.net.id
GNM-IX		669	✖	NL	Amsterdam	gnm-ix.net
NL-IX		663	✔	NL	Amsterdam	www.nl-ix.net

http://bgp.he.net/report/exchanges#_participants

Internet Exchanges

Exchange Participants

IX Participation Count		
ASN	Name	IXes
AS13335	Cloudflare, Inc.	341
AS42	WoodyNet, Inc.	325
AS6939	Hurricane Electric LLC	322
AS3856	Packet Clearing House, Inc.	315
AS20940	Akamai International B.V.	231
AS15169	Google LLC	219
AS32934	Facebook, Inc.	218
AS8075	Microsoft Corporation	202
AS16509	Amazon.com, Inc.	165
AS54113	Fastly, Inc.	143
AS112	DNS-OARC	134
AS55256	Netskope Inc	128
AS199524	G-Core Labs S.A.	121
AS2906	Netflix Streaming Services Inc.	111
AS49544	i3D.net B.V	108
AS212232	Port 179 LTD	101
AS24482	SG.GS	99
AS6507	Riot Games, Inc	96
AS8674	Netnod AB	94
AS10310	Oath Holdings Inc.	92



http://bgp.he.net/report/bogons#_bogons

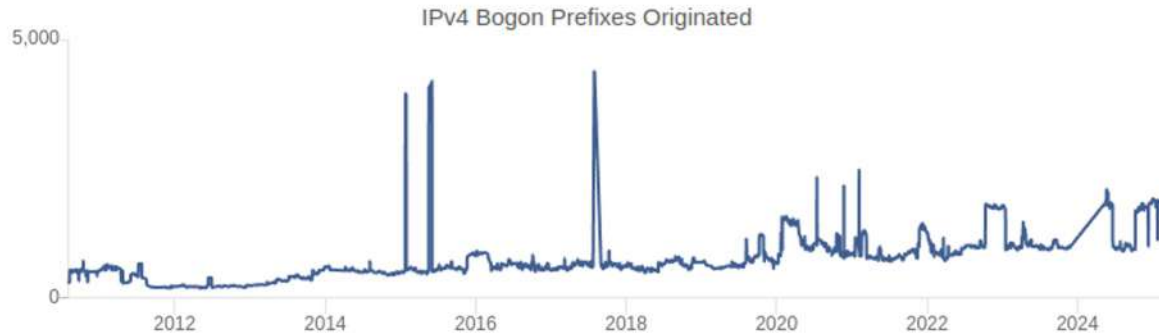
Bogons

IPv4 by Origin

IPv6 by Origin

IPv4 by Prefix

IPv6 by Prefix



http://bgp.he.net/report/bogons#_bogonsv4asn

Bogons	IPv4 by Origin	IPv6 by Origin	IPv4 by Prefix	IPv6 by Prefix
ASN	Name		Prefixes	
AS51	Headquarters, USAISC		103.218.227.0/24 -> unallocated	
AS174	Cogent Communications		23.159.56.0/24 -> unallocated 169.128.236.0/23 -> unallocated	
AS702	Verizon Business/UUnet Europe		193.96.0.0/13 -> unallocated 194.139.0.0/16 -> unallocated 194.172.0.0/14 -> unallocated	
AS721	DoD Network Information Center		198.97.240.0/20 -> unallocated 199.123.16.0/20 -> unallocated	
AS812	Rogers Communications Canada Inc.		216.176.216.0/21 -> unallocated	
AS906	DMIT Cloud Services		100.69.1.0/24 -> RFC6598 100.70.0.0/16 -> RFC6598	
AS999	CORIX NETWORKS		172.17.100.0/24 -> RFC1918	
AS1221	Telstra Limited		203.28.190.0/24 -> unallocated 203.28.228.0/24 -> unallocated	
AS1239	Sprint		23.159.56.0/24 -> unallocated 169.128.236.0/23 -> unallocated	
AS1277			74.116.52.0/24 -> unallocated	
AS1851	The University of Adelaide		203.9.156.0/24 -> unallocated	

https://bgp.he.net/AS1851

AS Info Graph v4 Graph v6 Prefixes v4 Prefixes v6 Peers v4 Peers v6 Whois RDAP IRR Traceroute

AS1851 announces bogons.

Country of Origin:

Australia



Prefixes Originated (all): 10
Prefixes Originated (v4): 9
Prefixes Originated (v6): 1

Prefixes Announced (all): 10
Prefixes Announced (v4): 9
Prefixes Announced (v6): 1

RPKI Originated Valid (all): 8
RPKI Originated Valid (v4): 7
RPKI Originated Valid (v6): 1

RPKI Originated Invalid (all): 1
RPKI Originated Invalid (v4): 1
RPKI Originated Invalid (v6): 0

BGP Peers Observed (all): 2
BGP Peers Observed (v4): 1
BGP Peers Observed (v6): 2

IPs Originated (v4): 69,888
AS Paths Observed (v4): 587
AS Paths Observed (v6): 447

Average AS Path Length (all): 4.246
Average AS Path Length (v4): 4.414
Average AS Path Length (v6): 4.025

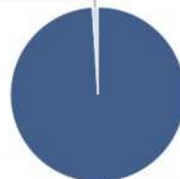
AS1851 IPv4 Peers



AS7575

AS1851 IPv6 Peers

AS7474



AS7575

ASN	Name
AS7575	Australian Academic and Research Network

ASN	Name
AS7575	Australian Academic and Research Network
AS7474	SingTel Optus Pty Ltd

http://bgp.he.net/report/world

Countries

Countries with ASNs: 241

Description		CC	ASNs	Report
United States		US	32,192	Report
Brazil		BR	10,464	Report
China		CN	6,857	Report
Russian Federation		RU	6,671	Report
India		IN	6,017	Report
United Kingdom		GB	3,904	Report
Indonesia		ID	3,589	Report
Germany		DE	3,562	Report
Australia		AU	3,136	Report
Poland		PL	2,772	Report
Canada		CA	2,514	Report
Ukraine		UA	2,356	Report
France		FR	2,270	Report
Bangladesh		BD	1,927	Report
Netherlands		NL	1,784	Report

<http://bgp.he.net/country/PH>

Country Info

Networks: Philippines 

ASN	Name	Adjacencies v4	Routes v4	Adjacencies v6	Routes v6
AS17639	Converge ICT Solutions Inc.	1,760	842	1,519	56
AS142271	EWS DS Networks Inc	1,121	4	512	2
AS150000	Data-Beam Business Solution	1,021	9	1,135	1
AS140984	WTW HIGHTECH COMPANY INC	542	2	617	1
AS4775	Globe Telecoms	419	1,419	233	341
AS18187	Source Telecoms Inc.	409	22	58	2
AS135607	Infinivan Incorporated	375	596	187	59
AS9299	Philippine Long Distance Telephone Company	257	771	75	12
AS9658	Eastern Telecoms Phils., Inc.	228	580	49	2
AS55821	RADIUS TELECOMS, INC.	96	137	51	27

<https://bgp.he.net/report/multioriginroutes>

74.200.186.0/24	LEARN	AS13359 , AS14085 , AS16905 , AS22645
80.66.127.0/24	LYNTIA NETWORKS SA NOC & CUSTOMERS	AS8903 , AS12541 , AS202349 , AS202766
80.81.192.0/21	DE-CIX Management GmbH	AS6730 , AS12969 , AS36994 , AS37497
80.249.208.0/21	Amsterdam Internet Exchange B.V.	AS7713 , AS12969 , AS13194 , AS37497
103.181.150.0/24	VEDIMANTRA LIFECARE PRIVATE LIMITED	AS54339 , AS133296 , AS133661 , AS151106
185.238.172.0/24	DIDWW Ireland Limited	AS51865 , AS199170 , AS207319 , AS212893
193.239.116.0/22	Broadband Hosting B.V.	AS7713 , AS9498 , AS13194 , AS204092
196.60.96.0/23	JINX Peering	AS11845 , AS37053 , AS37497 , AS58453 , AS328206
196.223.22.0/23	ISPA SA	AS11845 , AS36994 , AS37053 , AS37497
196.223.30.0/23		AS11845 , AS36994 , AS37497 , AS327782
204.225.142.0/24	Disney Worldwide Services, Inc.	AS25932 , AS29736 , AS30311 , AS40051
206.72.210.0/23	CoreSite	AS7029 , AS7713 , AS9009 , AS25892
2.59.118.0/24	BELERAFON, razvoj in programiranje, d.o.o.	AS41436 , AS204548 , AS210329
5.180.140.0/22	Dustin NL B.V.	AS50319 , AS204922 , AS205198
23.19.196.0/24	LeaseWeb Global Services BV (C07344729)	AS7203 , AS28753 , AS30633 , AS59253 , AS60781
23.19.197.0/24	LeaseWeb Global Services BV (C07344730)	AS7203 , AS28753 , AS30633 , AS59253 , AS60781

Key closing points

- Your view depends on where you stand
- Routers propagate the best path only
- It is important to understand the full view thus you must understand the reverse path.
- Participate with public collectors via route-views to help improve our data

Thanks!

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