

Route Collecting on LINX with bgp.tools

Ben Cartwright-Cox - LINX 122



Quick overview of bgp.tools



AS206924

Browse the Internet ecosystem

Search by ASN (AS13335), or Prefix (8.8.8.0/24), or DNS (bgp.tools)

Start here...



You are connecting from

- IPv6: 2a0c:2f07:4663:4663:92e2:baff:fe61:c389
- Ben Cartwright-Cox (AS206924)
- 2a0c:2f07:4663::/48
- DNS: 185.230.223.109
- DNS: 2a0c:2f07:4896:666:216:3eff:feff:861f
- DNS: 2a0c:2f07:29:666::5353

Example Pages

- [Cloudflare \(AS13335\)](#)
- [LINX LON1](#)
- [Google DNS Prefix](#)

Recent Updates

- [March 2023 Changelog](#)
- [February 2023 Changelog](#)
- [January 2023 Changelog](#)

Why use BGP.Tools?

We offer for free:

- Near Realtime BGP Data
- User Friendly interfaces
- [Frequently updated external data](#)

We offer for paid users:

- [BGP Network Monitoring](#)
- [IRR Database Monitoring](#)

[Scripting/API](#) [Credits](#) [Pricing](#) [Contact Us](#) [Issue Tracker](#) [Contribute Data](#)

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bgp.tools

bgp.tools/as/202030

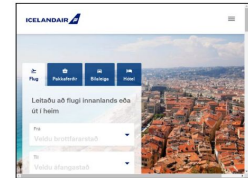
Start here...



Logged in as AS206924

View

Edit



Icelandair ehf

AS Number 202030

Website <http://www.icelandair.is>

Overview

Prefixes

Connectivity

Whois

IX

Registered on
29 Apr 2014 (8
years old)

Network status
Active, Allocated under RIPE

Network type
Unknown

Prefixes Announced
5 IPv4, 0 IPv6

Upstreams

- [AS44735](#) - Nova hf
- [AS30818](#) - Advania Ísland ehf

b38ea124bfb4

Holy See - Vatican City State

AS Number **8978**

Website <http://www.vaticanstate.va>



Overview

Prefixes

Connectivity

Whois

IX

Prefixes Originated

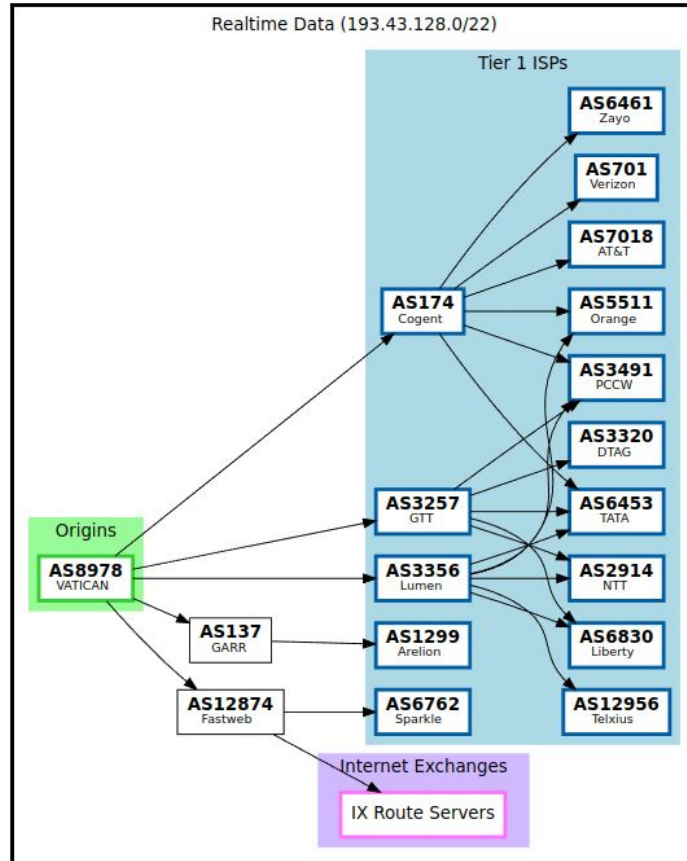
2 IPv4, 1 IPv6

Addresses Originated

36 /24's of IPv4

65536 /48's of IPv6

	Prefix	Description
 	193.43.128.0/22	URBE: Unione Romana Biblioteche Ecclesiastiche
 	212.77.0.0/19	Holy See - Vatican City State
 	2a01:b8::/32	Holy See - Vatican City State



Terminal

File Edit View Search Terminal Help

recording to ~/.ssh/recordings/rec_1715270259001966998

[16:57:39] ben@metropolis:~\$ ssh bgp.tools

Welcome

This session is supported by:

For more information about AS5405, check out <https://bgp.tools/as/5405>

bgp.tools> show bgp 2600::/29 short

```
[[{AS216324 - Hyper Group Netw...} LDR1                ] [216324 6939 1239] {[65535:0
216324:0:10]}
[{AS198468 - Gijsbertus Henri...} apl-rtr-core-1 6] [198468 50673 174 1239] {[]}
[{AS210152 - Jon Arve Vanvik} AMS                      ] [210152 6939 1239] {[210152:3
00:6939]}
[{AS210152 - Jon Arve Vanvik} AMS                      ] [210152 34927 1299 1239] {[12
99:25000 34927:710 34927:761 210152:667:1]}
[{AS51088 - A2B IP B.V.} A2B-AMS-FryIXv6              ] [51088 2914 1239] {[2914:420
2914:1206 2914:2203 2914:3200 51088:2914]}
[{AS8298 - IPng Networks Gm...} ipv6.nlams0          ] [8298 1239] {[8298:1046 65101
```

Core points

- Built out of the frustration I had with other tools, running it is now my job
- 1800~ BGP sessions established
- Practically realtime BGP peer updates
- WHOIS is handled with more care, and in some cases is updated in near real time
- Frequently updated (~14 days):
 - ICMP Ping data scans of IPv4 /0
 - IPv4 and IPv6 reverse DNS data
 - Forward DNS data (Looking what A or AAAA records point to a prefix)
- Peering IXP data is provided (MAC address vendors, ping data etc)



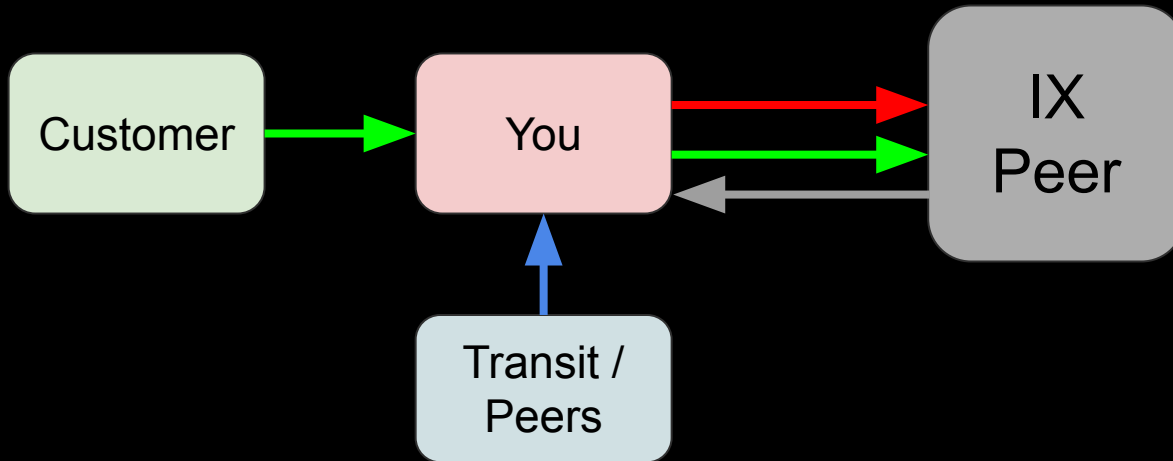
So what is a route collector?

So what is a route collector?

- A BGP peer that has extra software/configuration to record BGP routes send to it
- **They do not use the BGP routes they receive to send traffic to via you**
- They sometimes announce test prefixes (RIPE RIS) to health check if the internet is working correctly

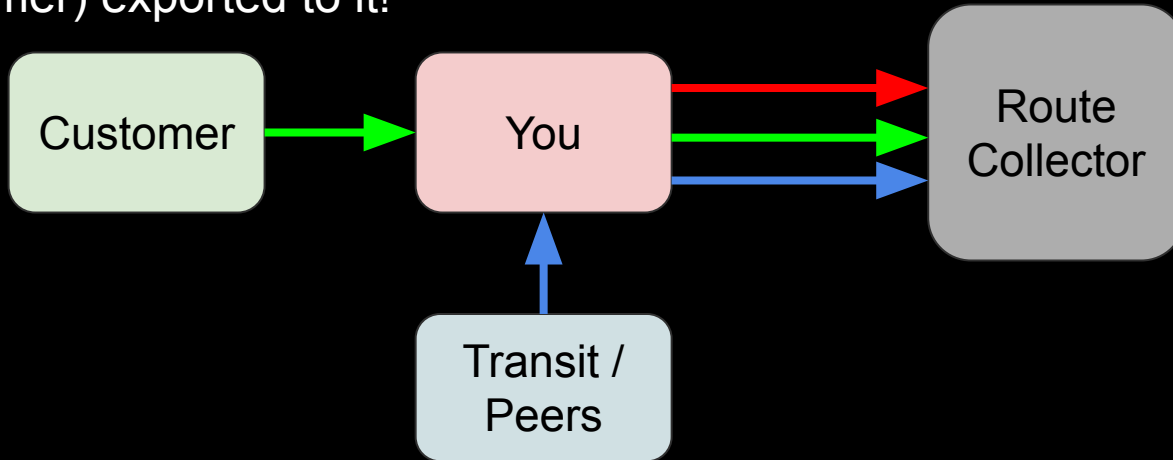
Route collectors are a weird kind of IX peer

- For a typical IX peer, you send your own and your customers routes



Route collectors are a weird kind of IX peer

- Ideally a route collector gets all of your routes (that you would send to a customer) exported to it!



Route Collectors are helpful to the health of the internet

- Because the internet is a network of networks, not everyone has the same view of the internet
- Route collectors fill the role of collecting data for people to use for debugging, research, and incident response

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- Because the internet is a network of networks, not everyone has the same view of the internet
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 - The February 2008 Pakistan youtube hijack incident would not have been as well understood without RIPE RIS and RouteViews, there are countless more modern examples

Feeding bgp.tools data

- Go to <https://bgp.tools/kb/setup-sessions>
- Login with PeeringDB (or register a bgp.tools account)
- Add contact details, so I can tell you if it goes down or isnt sending a full table, etc.
- Fill out the new session form
- **Sessions are instantly approved and provisioned**



bgp.tools

New BGP Session:

Description for Router/Session: (max 16 chars)

LHR01

Select the ASN you would like us to use for you. We will only accept [AS212232 \(bgp.tools\)](#), AS206924 AS212232, and Private ASN ranges

212232

Select the ASN you are going to use with us. We will only accept AS206924 AS212232 and Private ASN ranges

212232

Select the IP you will be connecting from.

192.0.0.1 / 2001:db8::

You will get the remote (bgp.tools side) IP after you create the session.

Please send **Full tables** rather than just your peering routes/customer routes. bgp.tools may automatically switch your sessions to only import your peering routes to save RAM, but allow us to figure that out for future flexibility!

We support (and encourage) BGP AddPath, and MultiProtocol/MultiFamily BGP

If you absolutely need a MD5 Password on the session, please enter the desired MD5 password

Export this data into publicly available MRT files (also enables the public looking glass)

Also allow other commercial products to use those MRT files

Send notifications if session is down for more than 2 hours

Create BGP Session

Feeding bgp.tools data

New BGP Session:

Description for Router/Session: (max 16 chars)

LHR01

- Export this data into publicly available MRT files (also enables the public looking glass)
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Create BGP Session

and provisioned



bgp.tools

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- Send notifications if session is down for more than 2 hours

Create BGP Session

What is in it for you?



Benefits to feeding bgp.tools

- The site can correctly display your peer count! Some customers or prospects consider a higher peer count a attractive thing

Overview

Prefixes

Connectivity

Whois

IX

Peers

162

Upstreams

7

Downstreams

1 (Cone: 2)

Benefits to feeding bgp.tools

- You can opt in to having a looking glass for your ASN on bgp.tools
- This may complement your existing looking glass, or give your customers a change to access a looking glass at all!



Ben Cartwright-Cox

AS Number 206924

Select BGP Session to query:

Velox LCY [IPv6]

Input Prefix:

2600::/29

Query

```
2600::/29 unicast [Velox LCY 0000-00-00] * (?/-) [AS1239]
Type: BGP
BGP.as_path: 206924 5511 1239
BGP.community: [AS5511: United Kingdom] [AS5511: Route received from peering partner]
[AS5511: Route received in Europe from peering] [AS5511: TUNE to Asian domestic peers]
[AS5511: TUNE to Asian domestic peers] (5511,30535) (5511,30594) (5511,40170)
(65532,400)
```

Benefits to feeding bgp.tools

- The In-Country and Global peer rankings that bgp.tools offers will likely improve, since bgp.tools then knows who you are peering with!

Network type
Content

Prefixes Originated
7 IPv4, 2 IPv6

Upstreams

- [AS1299](#) - Arelion (fka. Telia Carrier)
- [AS2914](#) - NTT America, Inc.
- [AS6939](#) - Hurricane Electric LLC

Rankings

- #95 for [Known Peers Globally](#)
- #26 for [AS Cone in United Kingdom](#)
- #48 for [Unique Domains in United Kingdom](#)

Other route collectors are available

- A lot of the BGP route collectors are still underserved in many regions.
- You can help by feeding them wherever possible.
- Here are the links to setup sessions:

Service	Instant Signup	URL
RIPE RIS	No (IXP+Multihop)	Is not accepting new sessions right now
RouteViews	No (IXP+Multihop)	https://www.routeviews.org/routeviews/index.php/peering-request-form/
bgp.tools	Yes (IXP+Multihop)	https://bgp.tools/kb/setup-sessions
Radar	Yes (Multihop)	https://radar.qrator.net/ (Login to account, in settings)

IX Route Collector Availability Breakdown

IXP	RIS	RouteViews	bgp.tools
LINX LON1	Yes	Yes	Yes
DE-CIX	JNB	FRA	All (EU)
AMS-IX	Yes	Yes	Yes
France-IX	Yes	Yes	No
Equinix	Singapore/Miami/ Palo Alto	Singapore, US, Sydney	No
MIX-IT	Yes	Yes	No
IX.BR	Yes	Yes	Yes
ASN:	12654	6447	212232

Questions?

Want to feed bgp.tools?

go to bgp.tools and go to bottom link "Contribute Data"

More complex queries:

IRC: Benjojo-bgptools (terahertz) / benjojo (everything else)

Email: admin@bgp.tools



bgp.tools