# BGP Tutorial (bgp.tools)

Ben Cartwright-Cox - RIPE 90 (2025)

bgp.tools

# Quick overview of bgp.tools

bgp.tools

Login

## Browse the Internet ecosystem

Search by ASN (AS13335), Prefix (8.8.8.0/24), DNS (bgp.tools), or MAC Address (3c:ec:ef:6f:8d:75)

Start here...

**Jump to Looking Glass**

### You are connecting from

- IPv6: 2a0b:f4c2:3::85
- Stiftung Erneuerbare Freiheit (AS60729)
- 2a0b:f4c2::/40
- IPv4: 185.220.101.85
- Stiftung Erneuerbare Freiheit (AS60729)
- 185.220.101.0/24
- DNS: 217.197.80.4
- DNS: 2001:67c:1400:1010::4

### Latency to bgp.tools

- IPv4 End To End: 191.8ms
- IPv4 TCP Stack: 20.9ms [+/- 13.7ms]
- IPv4 TCP MSS: 1460b

- IPv6 End To End: 176ms
- IPv6 TCP Stack: 21.6ms [+/- 0.1ms]

### Example Pages

- Cloudflare (AS13335)
- LINX LON1
- Google DNS Prefix

### Recent Updates

- March 2025 Changelog
- February 2025 Changelog
- December 2024 Changelog
- October 2024 Changelog
- September 2024 Changelog

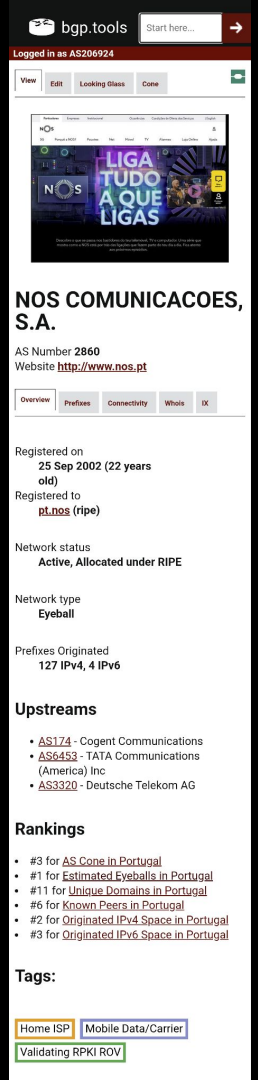
### Why use BGP.Tools?

**We offer for free:**

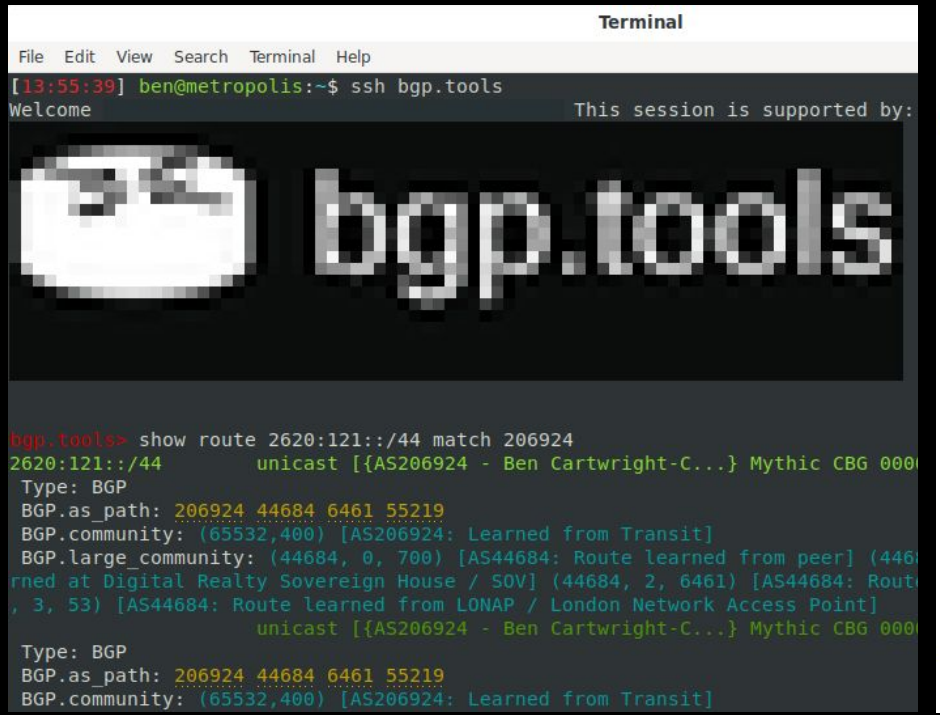
- Near Realtime BGP Data
- User Friendly interfaces
- Frequently updated external data

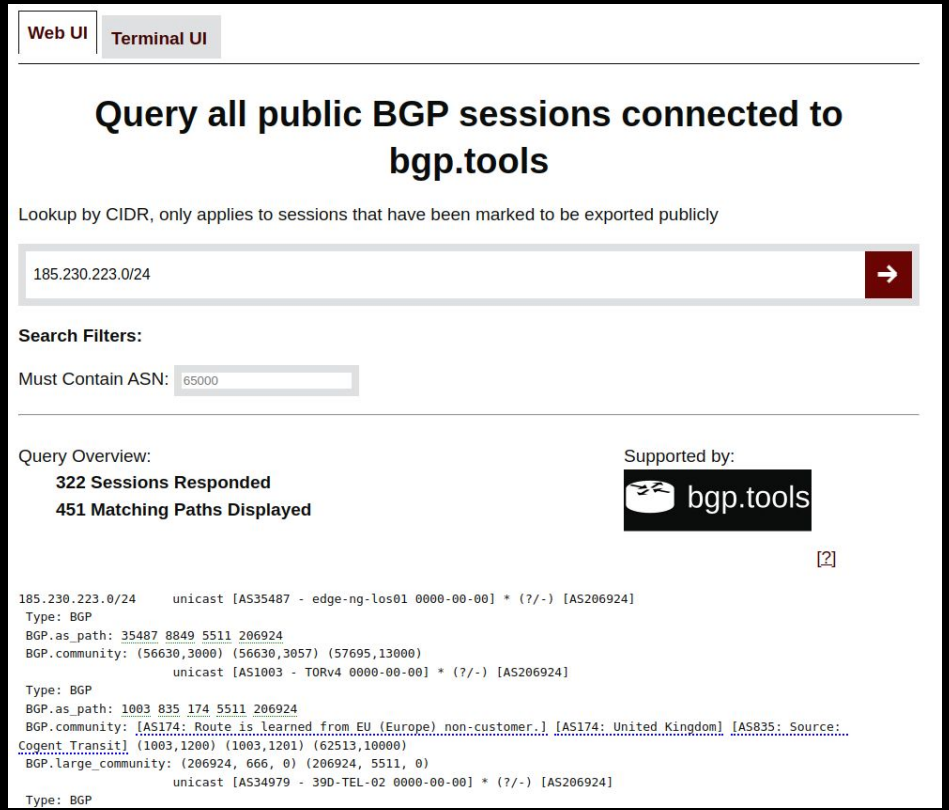
**We offer for paid users:**

- BGP Network Monitoring
- IRR Database Monitoring



# Global Looking Glass

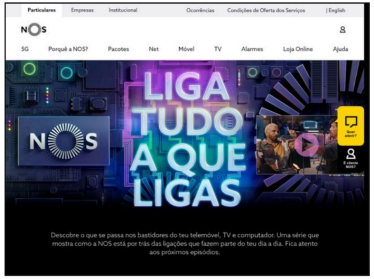



$ ssh anyuser@bgp.tools

https://bgp.tools/super-lg

# ASN Info




## NOS COMUNICACOES, S.A.

AS Number **2860**
Website **http://www.nos.pt**

Overview | Prefixes | Connectivity | Whois | IX

Peers
**90**

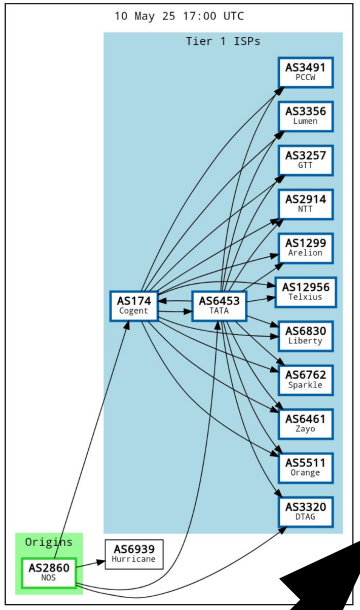
Upstreams
**3**

Downstreams
**42 (Cone: 44)**

## Network Policy

Click here to learn more about what this graph means and what makes up a network policy

**Global Aggregation**




▶ Chart Display Options

How are upstreams and downstreams calculated?

## Upstreams

| ASN | Description | IPv4 | IPv6 |
|---|---|---|---|
| AS174 | Cogent Communications | ✔ | ✔ |
| AS6453 | TATA Communications (America) Inc | ✔ | ✔ |
| AS3320 | Deutsche Telekom AG | ✔ | ✔ |

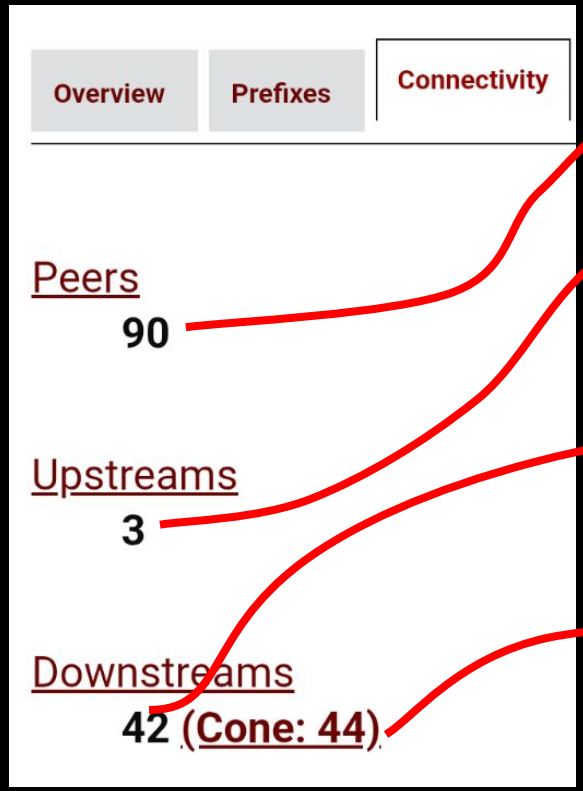
## Peers

| ASN | Description | IPv4 | IPv6 |
|---|---|---|---|
| AS174 | Cogent Communications | ✔ | ✔ |
| AS6453 | TATA Communications (America) Inc | ✔ | ✔ |

## Downstreams

| ASN | Description | IPv4 | IPv6 |
|---|---|---|---|
| AS59787 | WebSP - Comercio e Prestacao de Servicos Informaticos, Lda | ✔ | ✔ |
| AS15457 | NOS Madeira Comunicacoes, S.A. | ✔ | ✔ |
| AS25060 | Instituto Nacional de Estatistica, I.P. | ✔ | ✘ |
| AS1897 | NOS COMUNICACOES, S.A. | ✔ | ✘ |
| AS201523 | EDP S.A | ✔ | ✘ |

# ASN Info




- How many unique AS'es have been seen "next" to the ASN in question
- How many unique AS'es appear to be providing wider internet connectivity  to this ASN
- How many unique AS'es appear to be getting connectivity directly ***from*** this ASN
- How many unique AS'es appear to be getting connectivity directly ***via*** this ASN

# How does that even work???

- bgp.tools at its core is a very large collector of BGP data
- bgp.tools sees 2500~ views of the internet (2.5 Billion routes~)
- Using parts of logic we can turn BGP paths like this into educated guesses:

```
165.204.156.0/23   unicast [AS37721 - ACC1-4 0000-00-00]
 Type: BGP
 BGP.as_path: 37721 13335 33619
                   unicast [AS26073 - r2-ewr01 0000-00-00]
 Type: BGP
 BGP.as_path: 26073 174 13335 33619
                   unicast [AS206236 - r01 0000-00-00]
 Type: BGP
 BGP.as_path: 206236 9136 13335 33619
```

```
165.204.156.0/23    unicast [AS37721 - ACC1-4 0000-00-00]
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                    unicast [AS206236 - r01 0000-00-00]
 Type: BGP
 BGP.as_path: 206236 9136 13335 33619
```

- What can we learn from these routes?

```
165.204.156.0/23  unicast [AS37721 - ACC1-4 0000-00-00]
 Type: BGP
 BGP.as_path: 37721 13335 33619
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 Type: BGP
 BGP.as_path: 26073 174 13335 33619
                 unicast [AS206236 - r01 0000-00-00]
 Type: BGP
 BGP.as_path: 206236 9136 13335 33619
```

- Every ASN interaction is a peer
  - 37721<->13335
  - 13335<->33619
  - 26073<->174
  - 174<->13335
  - 206236<->9136
  - 9136<->13335

```
165.204.156.0/23  unicast [AS37721 - ACC1-4 0000-00-00]
 Type: BGP
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 Type: BGP
 BGP.as_path: 26073 174 13335 33619
                 unicast [AS206236 - r01 0000-00-00]
 Type: BGP
 BGP.as_path: 206236 9136 13335 33619
```

- Paths that go via a ""tier 1"" network are likely upstream relationships
  - 174 <- 13335
  - 174 is Cogent, a Tier 1
  - 13335 is Cloudflare
  - Cloudflare is likely paying Cogent to carry traffic for them
  - 174 <- 13335 <- 33619
  - 33619 is AMD, AMD is likely paying cloudflare to carry traffic, because cloudflare is giving AMD routes via them, to cogent

```
165.204.156.0/23  unicast [AS37721 - ACC1-4 0000-00-00]
 Type: BGP
 BGP.as_path: 37721 13335 33619
                 unicast [AS26073 - r2-ewr01 0000-00-00]
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 BGP.as_path: 26073 174 13335 33619
                 unicast [AS206236 - r01 0000-00-00]
 Type: BGP
 BGP.as_path: 206236 9136 13335 33619
```
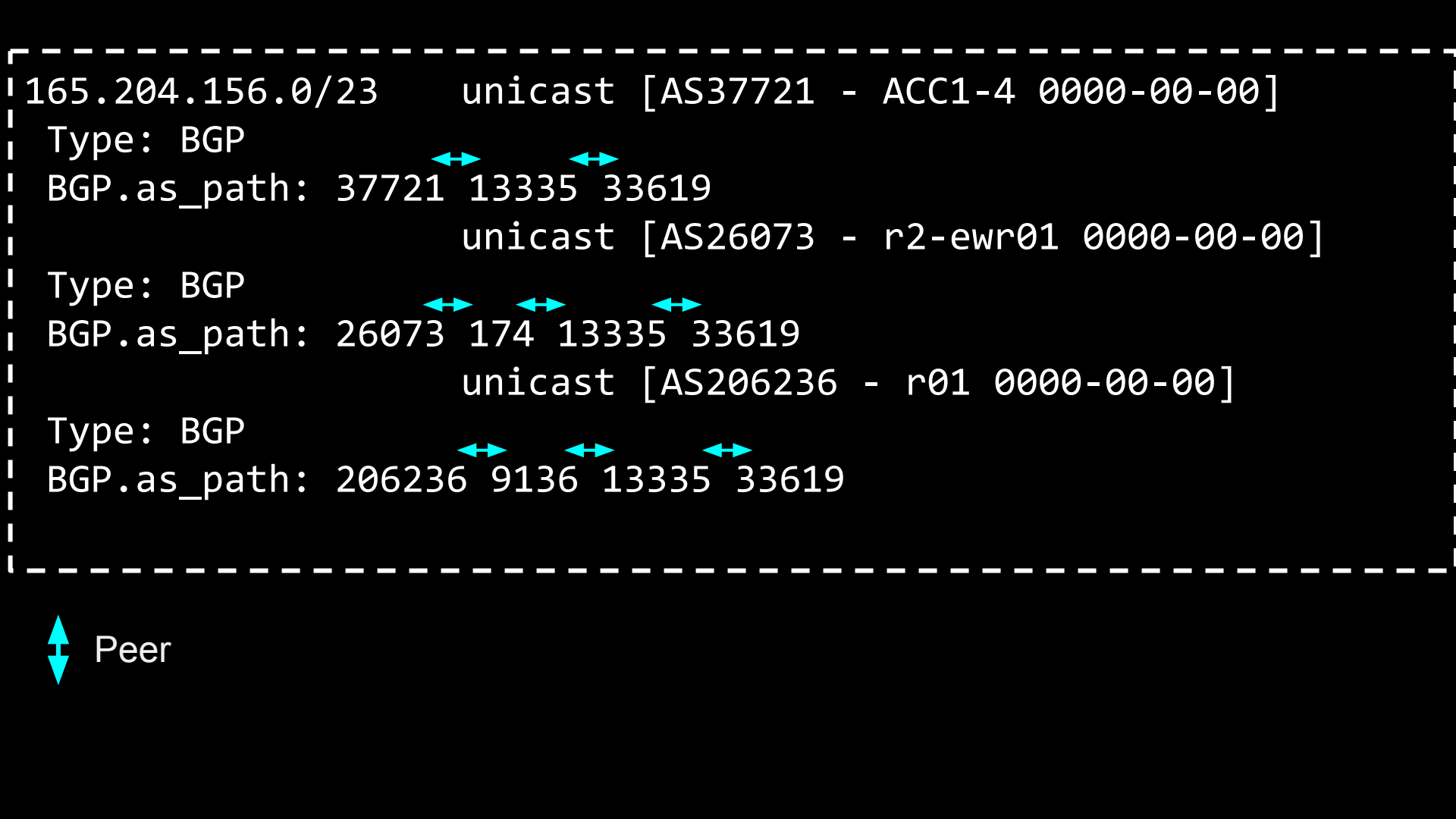

- Inverse upstream logic happens for downstream
  - 174 <- 13335 <- 33619
  - 33619 is AMD, AMD is likely paying cloudflare to carry traffic, because cloudflare is giving AMD routes via them, to cogent
  - So 33619 is a downstream of 13335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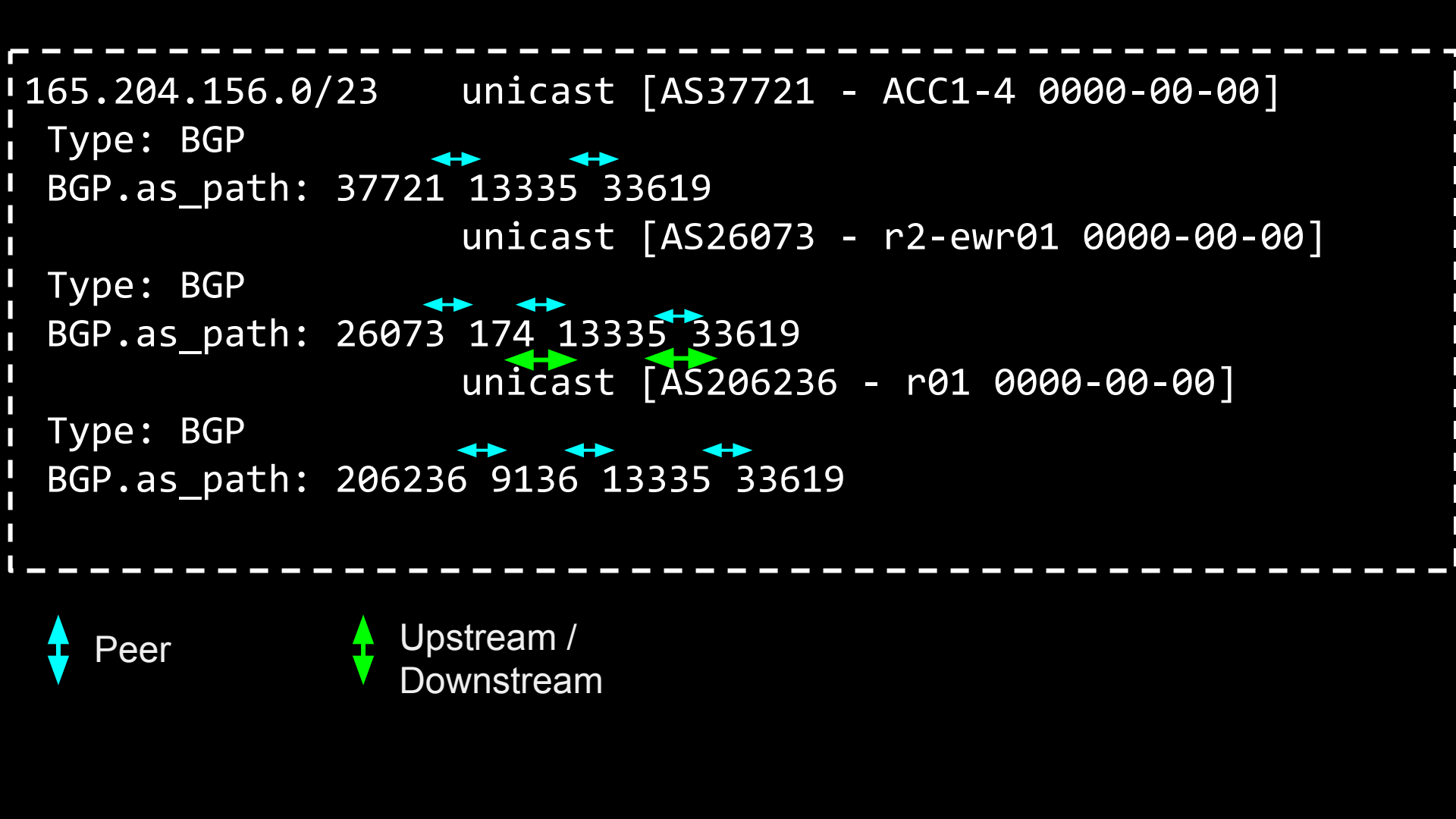
Peer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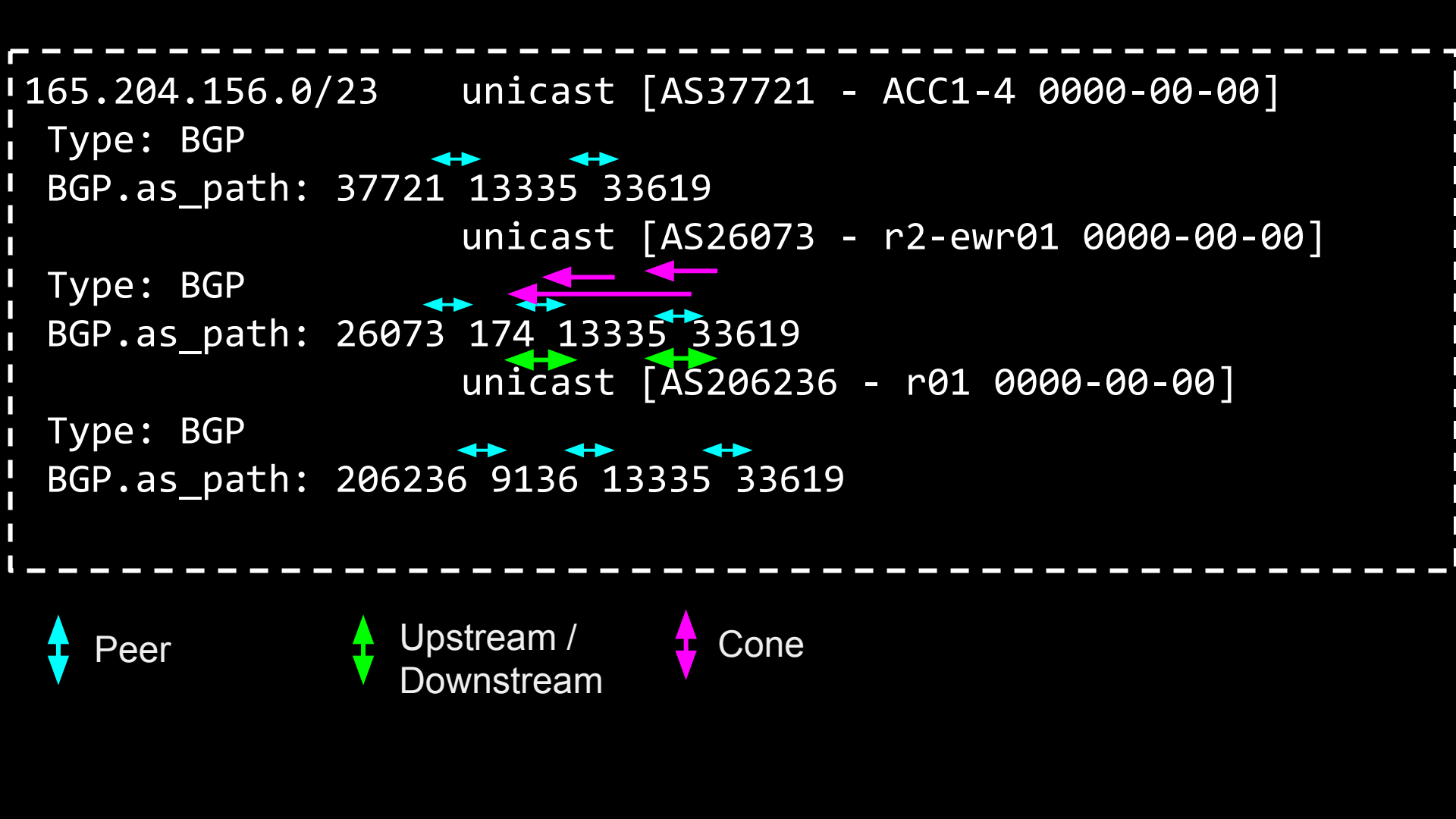
Upstream / Downstream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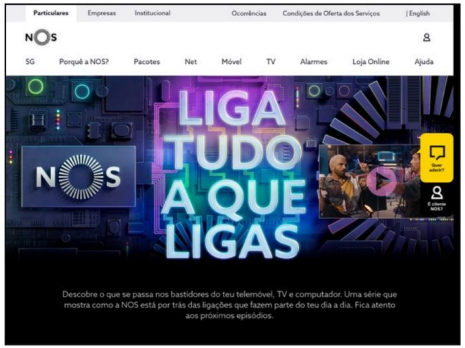
Upstream / Downstream
Cone

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Upstreams
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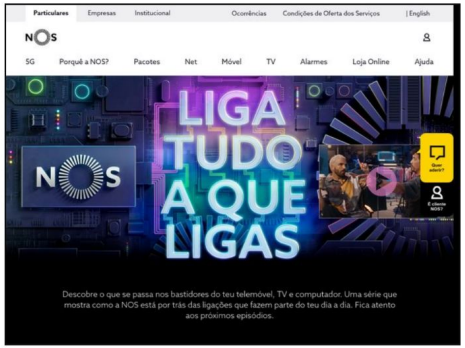
**42 (Cone: 44)**

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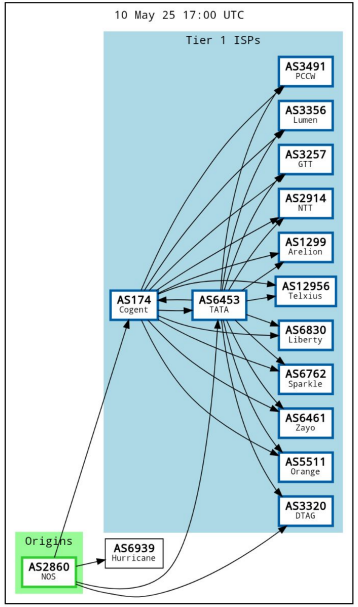
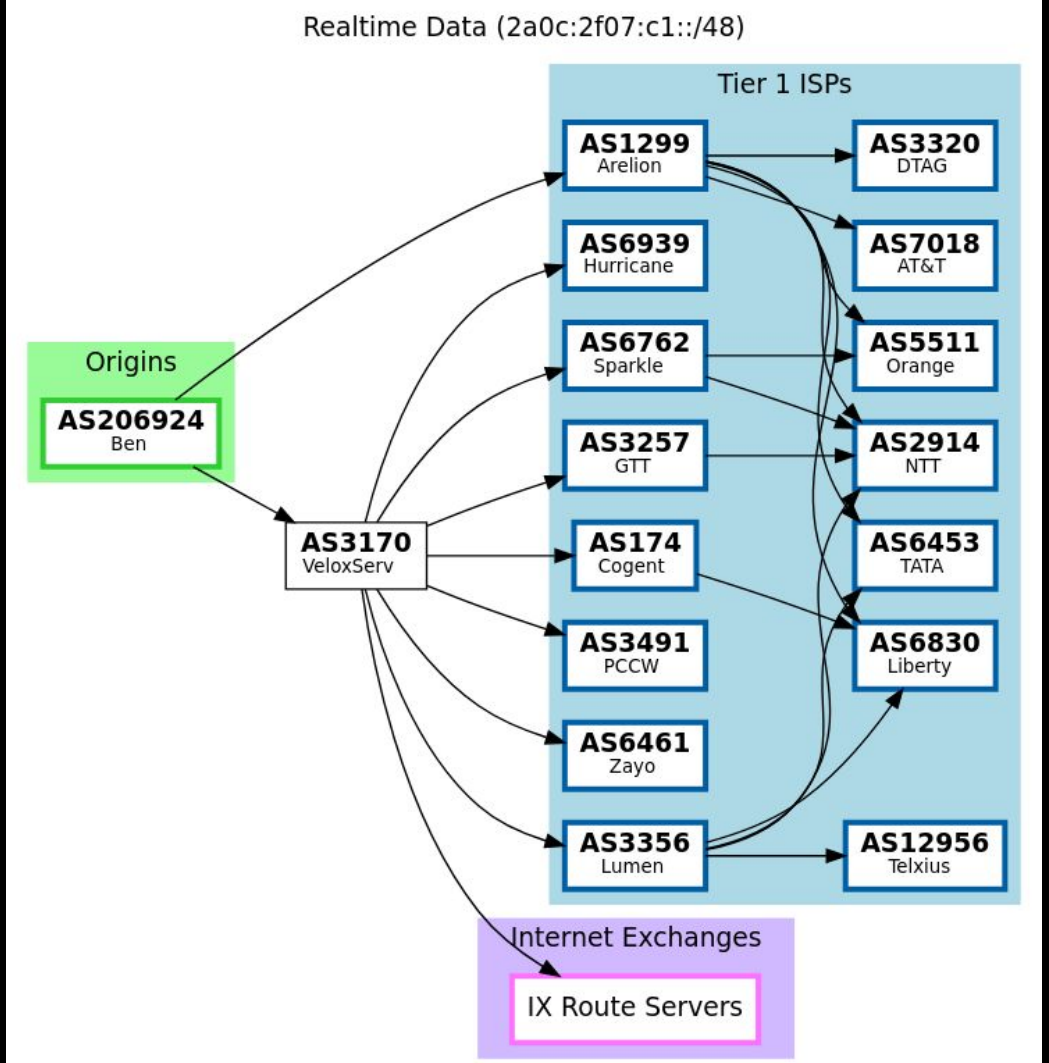



▶ Chart Display Options

How are upstreams and downstreams calculated?




BGP Routes flow this way

Traffic flows this way (To the AS)

# Why is this data processing useful?

- bgp.tools calculates Upstream/Downstreams continuously (and in near real time), This is useful for
  - Validating your config changes
    - For example, After disabling a customer/provider link, when should you shut the link?
  - Detecting unintended routing
    - For example, Someone upstreams you without your consent (Route Leaks/Hijacks)
  - Keeping an eye on what your customers or competitors are doing
    - Have they added new customers?
    - Are your customers adding new upstreams?
- While you can see ***your*** own view of the internet on your own network, bgp.tools can show you how the internet ***sees your network***

# Example Situation: Route Leak

## DIGI ROMANIA S.A.

AS Number **8708**
Website **https://www.digi.ro**


Overview | **Prefixes** | Connectivity | Whois | IX

Prefixes Originated
**132 IPv4, 6 IPv6**
Show Low Visibility Prefixes

Addresses Originated
**7491 /24's of IPv4**
**1114112 /48's of IPv6**

| Prefix | Description |
|---|---|
| 2.17.116.0/22 | Akamai International B.V. |
| 5.2.128.0/17 | DIGI ROMANIA S.A. |
| 5.12.0.0/14 | DIGI ROMANIA S.A. |
| 45.67.37.0/24 | INSX CLOUD SRL |
| 46.102.175.0/24 | IPv4 Management SRL |
| 62.231.64.0/18 | DIGI ROMANIA S.A. |

Examp

Overview | Prefixes | Connectivity | Whois | IX

| Peers | Upstreams | Downstreams |
|---|---|---|
| 1386 | 7 | 101 (Cone: 179) |

How are upstreams and downstreams calculated?

## Upstreams

| | ASN | Description | IPv4 | IPv6 |
|---|---|---|---|---|
| | AS1299 | Arelion (fka. Telia Carrier) | ✔ | ✔ |
| | AS6762 | Telecom Italia Sparkle (Seabone) | ✔ | ✔ |
| | AS9002 | RETN Limited | ✔ | ✔ |
| | AS5511 | Orange S.A. | ✔ | ✔ |
| | AS41494 | Asociația InterLAN | ✔ | ✘ |
| | AS5606 | GTS Telecom SRL | ✔ | ✘ |
| | AS201387 | Luxoft Professional Romania S.R.L. | ✔ | ✘ |

Examp

Overview | Prefixes | Connectivity | Whois | IX

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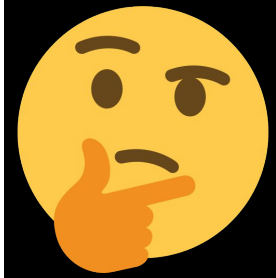
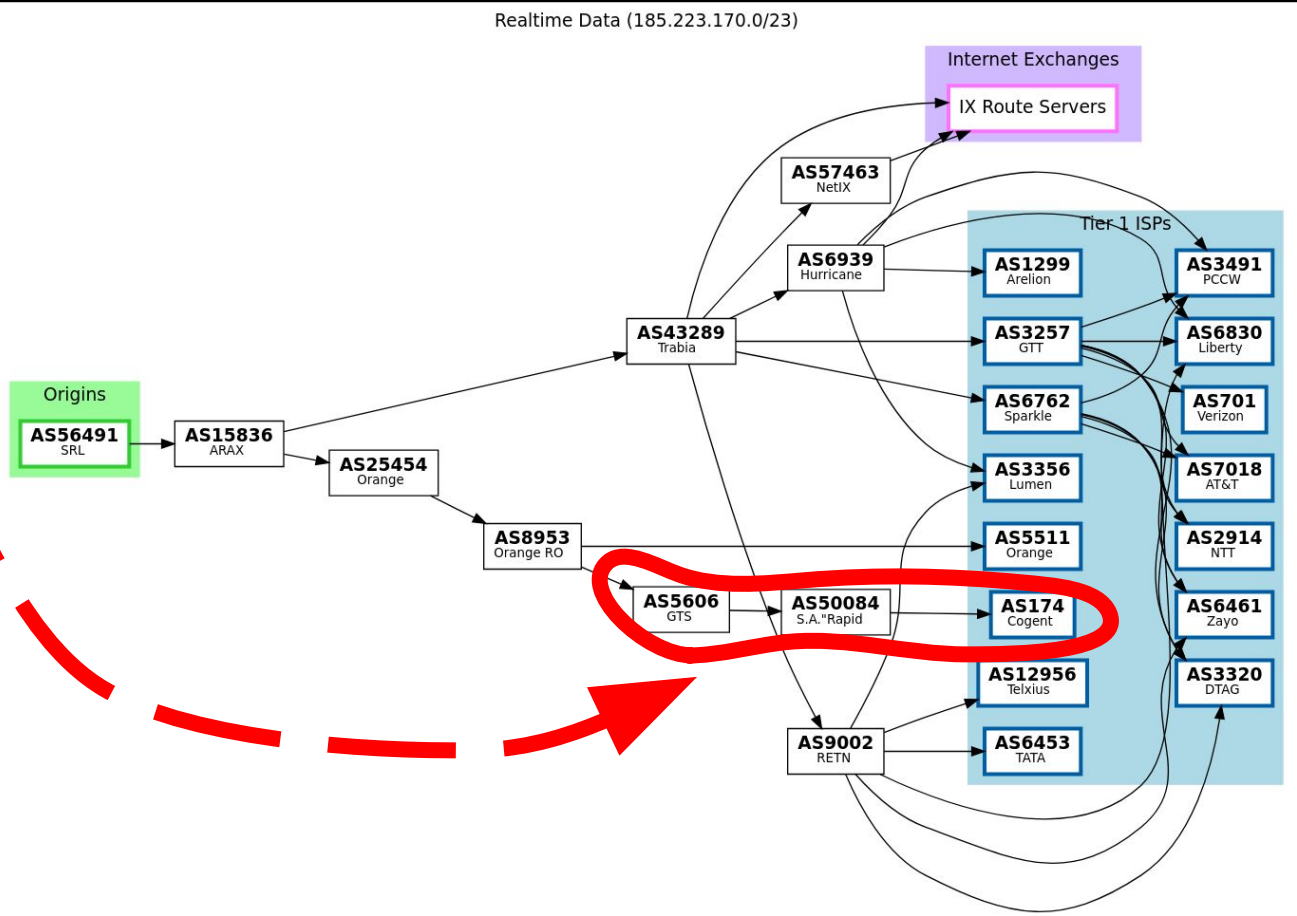


# Example Situation: Route Leak

- Looks like a route leak!
- This looks (to me) unintentional




View

This page shows *some* of the BGP AS paths (and their prefix) that bgp.tools uses to learn that AS5606 (GTS Telecom SRL) is a upstream of AS8953 (Orange Romania S.A.).

This list is not exhaustive, and some paths might have been hidden due to the data feeds being non-exportable.

| Prefix | BGP Path |
|---|---|
| 45.67.116.0/24 | AS329095 AS174 AS50084 AS5606 AS8953 AS25454 AS43818 AS43818 AS43818 AS43818 AS43818 AS43818 AS43818 AS43818 |
| 185.223.170.0/23 | AS52025 AS174 AS50084 AS5606 AS8953 AS25454 AS15836 AS15836 AS15836 AS15836 AS56491 |
| 185.223.168.0/23 | AS40092 AS174 AS50084 AS5606 AS8953 AS25454 AS15836 AS15836 AS15836 AS15836 AS56491 AS56491 AS56491 AS56491 |
| 45.67.116.0/24 | AS201217 AS131657 AS174 AS50084 AS5606 AS8953 AS25454 AS43818 AS43818 AS43818 AS43818 AS43818 AS43818 AS43818 AS43818 |
| 45.67.116.0/24 | AS51095 AS174 AS50084 AS5606 AS8953 AS25454 AS43818 AS43818 AS43818 AS43818 AS43818 AS43818 AS43818 AS43818 |
| | AS57225 AS174 AS50084 AS5606 AS8953 AS25454 AS43818 AS43818 |

# Route Leaks in this context are

- A peer learning your route from somewhere (or directly from you peering session) and exporting that as if you are a customer of them (aka, they send it to all or some of their upstreams/peers)
- While this sounds good (woo! Free Bandwidth!!) there are a few issues
  - The data path may not actually work
  - The upstreams/peers they may be leaking you to maybe be in very suboptimal places
  - The leak is attracting so much traffic it is making your customers performance very bad
- You typically do not want to ignore route leaks, even if it might mean "free" bandwidth

# Route Leaks are often caused by static prefix lists

- A common (but dangerous) way to configure your export BGP filters is:
  - "Well I know all of my customer prefixes"
  - "So If I see one of those prefixes, we will export them to transit/peers"

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- What if?
  - You don't update this list (or your automation breaks to update this list)

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  - You learn your (now) ex-customer prefix from your competitor via peering

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  - "Well I know all of my customer prefixes"
  - "So If I see one of those prefixes, we will export them to transit/peers"
- No! Bad!!!
- What if?
  - You don't update this list (or your automation breaks to update this list)
  - Your customer leaves you
  - You learn your (now) ex-customer prefix from your competitor via peering
  - You are going to give your competitor free transit via peering
  - Also you are likely going to upset both your competitor and ex-customer even more

# Non ASN level tooling

# Prefix Data (+DNS)

Overview | Connectivity | Whois | DNS | Validation

**Show Forward DNS**

| A | DNS |
|---|---|
| 198.148.78.23 | avapdproxy-01prd.vrt.sourcefire.com |
| 198.148.78.82 | confluence.vrt.sourcefire.com |
| 198.148.78.217 | avavpn02.vrt.sourcefire.com, avavpn.vrt.sourcefire.com ( 3 total...) |
| 198.148.79.54 | clamav.net |
| 198.148.79.55 | updates.vrt.sourcefire.com |
| 198.148.79.58 | intelligence.sourcefire.com |
| 198.148.79.63 | jira.talos.cisco.com, jira.vrt.sourcefire.com |
| 198.148.79.67 | snapshot.clamav.net, www.snapshot.clamav.net |

## 2620:121::/44

Originated by **AS55219**
AS Name: **Cisco Systems, Inc.**

Overview | Connectivity | Whois | DNS | Validation

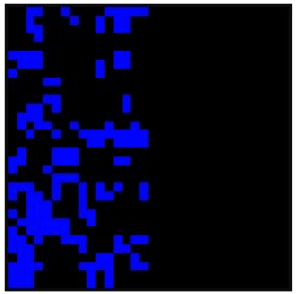
| | AAAA | DNS |
|---|---|---|
| | 2620:121:0:23::77 | regsvc.sco.cisco.com |
| | 2620:121:0:500::217 | scavpn.vrt.sourcefire.com, v |
| vm | 2620:121:1:59:250:56ff:fe96:bb7a | stage.regsvc.sco.cisco.com |
| | 2620:121:1:500::225 | cilvpn.vrt.sourcefire.com |
| | 2620:121:4:500::217 | dtxvpn.vrt.sourcefire.com |

Last Update: 2023-08-31T08:25:15Z UTC

bgp.tools Start here...

**Logged in as AS206924**

View | Super LG



## 198.148.78.0/23

Originated by **AS55219**
AS Name: **Cisco Systems, Inc.**

Overview | Connectivity | Whois | DNS | Validation

Registered on
**9 May 2013 (10 years old)**

Registered to
**ARIN-CS-985 (ARIN)**

# Prefix Data (+DNS)

Overview | Connectivity | Whois | DNS | Validation

**Show Forward DNS**

| A | DNS |
|---|---|
| 198.148.78.23 | avapdproxy-01prd.vrt.sourcefire.com |
| 198.148.78.82 | confluence.vrt.sourcefire.com |
| 198.148.78.217 | avavpn02.vrt.sourcefire.com, avavpn.vrt.sourcefire.com ( 3 total... ) |
| 198.148.79.54 | clamav.net |
| 198.148.79.55 | updates.vrt.sourcefire.com |
| 198.148.79.58 | intelligence.sourcefire.com |
| 198.148.79.63 | jira.talos.cisco.com, jira.vrt.sourcefire.com |
| 198.148.79.67 | snapshot.clamav.net, www.snapshot.clamav.net |

Useful for:

- Figuring out what a IP address might contain
- Investigating/Due-Diligence potential customers

## 2620:121::/44

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AS Name: **Cisco Systems, Inc.**

Overview | Connectivity | Whois | DNS | Validation

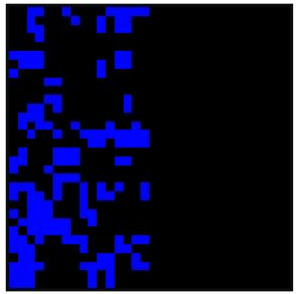
| | AAAA | DNS |
|---|---|---|
| | 2620:121:0:23::77 | regsvc.sco.cisco.com |
| | 2620:121:0:500::217 | scavpn.vrt.sourcefire.com, v |
| vm | 2620:121:1:59:250:56ff:fe96:bb7a | stage.regsvc.sco.cisco.com |
| | 2620:121:1:500::225 | cilvpn.vrt.sourcefire.com |
| | 2620:121:4:500::217 | dtxvpn.vrt.sourcefire.com |

Last Update: 2023-08-31T08:25:15Z UTC

bgp.tools Start here...

Logged in as AS206924

View | Super LG



## 198.148.78.0/23

Originated by **AS55219**
AS Name: **Cisco Systems, Inc.**

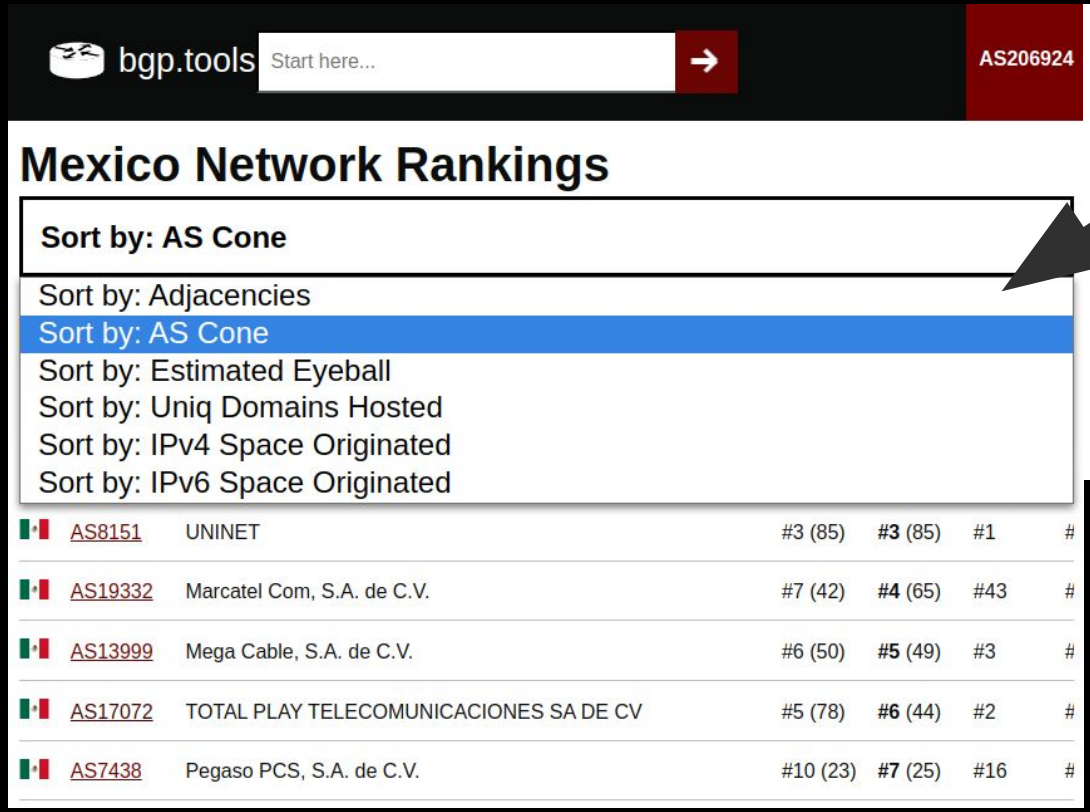
Overview | Connectivity | Whois | DNS | Validation

Registered on
**9 May 2013 (10 years old)**

Registered to
**ARIN-CS-985 (ARIN)**

# Network Ranking

https://bgp.tools/rankings/MX?sort=cone

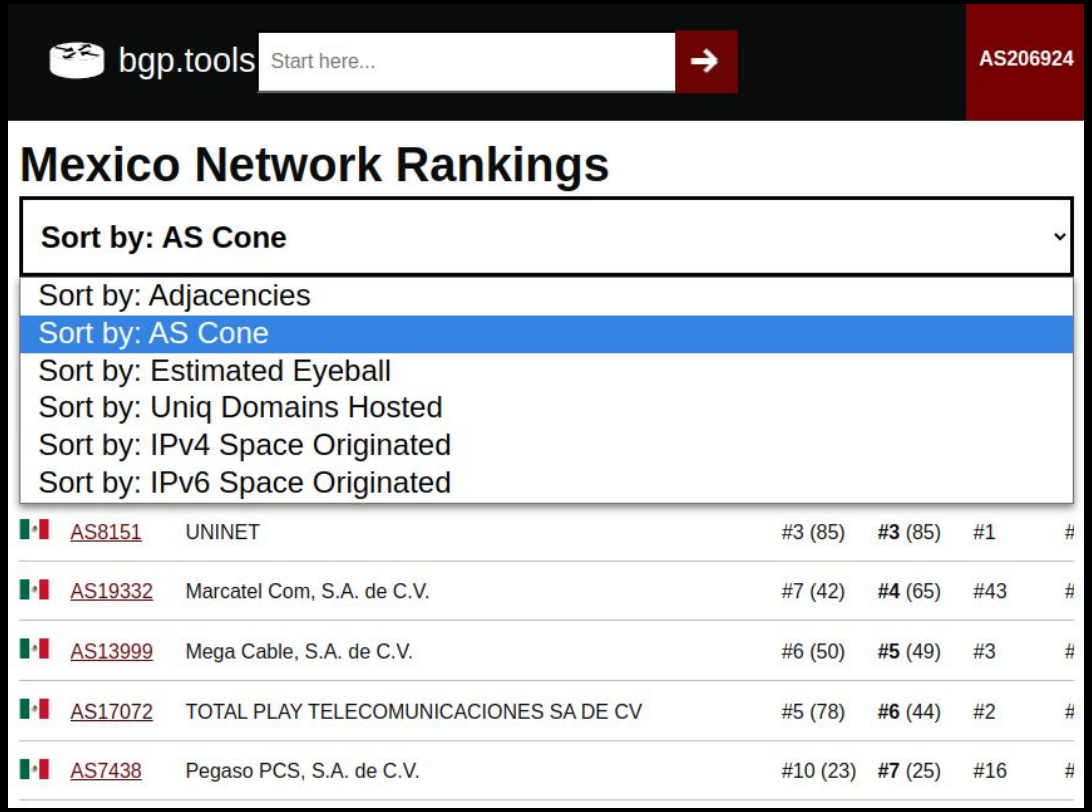



## Rankings

- #2 for AS Cone in Mexico
- #15 for Estimated Eyeballs in Mexico
- #5 for Unique Domains in Mexico
- #3 for Known Peers in Mexico
- #4 for Originated IPv4 Space in Mexico
- #3 for Originated IPv6 Space in Mexico

# Network Ranking

https://bgp.tools/rankings/MX?sort=cone




Can be ranked by Global or ASN Country using:

- Peer Count (*)
- AS Cone
- Eyeball Population
- Domain Records
- IPv4/IPv6 space originated

* is improved by feeding bgp.tools BGP data

# IXP Info Pages

## NYIIX New York

Go to PeeringDB page

Go to IXP-DB page

### Data Feeds Available:

RS Feed, Ping, MAC Address

Do you run this IX and want to help with feeds? Contact Us!

List of members (236 routers over 211 ASNs):

| | ASN | Description | IPv4 | IPv6 |
|---|---|---|---|---|
| | AS45437 | Real World - The Core | 198.32.161.115 | 2001:504:1::a504 |
| | AS52772 | SJNET TELECOMUNICACOES - EIRELI | 198.32.161.89 | 2001:504:1::a526 |
| | AS53180 | INFORTEL COMUNICACOES LTDA | 198.32.161.51 | 2001:504:1::a505 |
| | AS41327 | Fiber Telecom S.p.A. | 198.32.161.50 | 2001:504:1::a504 |
| | AS53667 | FranTech Solutions | 198.32.161.45 | 2001:504:1::a505 |
| | AS1031 | Peer 1 Internet Service LLC | 198.32.161.44 | 2001:504:1::a500 |
| | AS271253 | LINK BRASIL TELECOMUNICACOES LTDA | 198.32.161.43 | 2001:504:1::a527 |
| | AS2734 | CoreSite | 198.32.161.41 | 2001:504:1::a500 |

## PIT-IX

Go to PeeringDB page

Go to IXP-DB page

Route Server ASN: AS30365

### Data Feeds Available:

RS Feed, Ping, MAC Address

### Top Vendors

| Vendor | % |
|---|---|
| Cisco Systems, Inc | 28% |
| Juniper Networks | 15% |
| Arista Networks | 12% |
| Edgecore Networks Corporation | 5% |
| Other | 15% |

List of members (39 routers over 31 ASNs):

| | ASN | Description | IPv4 | IPv6 | Speed |
|---|---|---|---|---|---|
| RS | AS400798 | Pittsburgh Internet Exchange | 206.71.141.6 | 2001:504:77::6 | 100 gbps |
| | AS400798 | Pittsburgh Internet Exchange | 206.71.141.7 | 2001:504:77::7 | 100 gbps |
| | AS212232 | bgp.tools Route Collector | 206.71.141.9 | 2001:504:77::9 | 10 gbps |
| RS | AS20326 | TeraSwitch Networks Inc. | 206.71.141.10 | 2001:504:77::10 | 100 gbps |
| RS | AS13335 | Cloudflare, Inc. | 206.71.141.11 | 2001:504:77::11 | 10 gbps |

# IXP Info Pages

## NYIIX New York

Go to PeeringDB page

Go to IXP-DB page

### Data Feeds Available:

RS Feed, Ping, MAC Address

Do you run this IX and want to help with feeds? Contact Us!

List of members (236 routers over 211 ASNs):

| ASN | Description | IPv4 | IPv6 |
|---|---|---|---|
| AS45437 | Real World - The Core | 198.32.161.115 | 2001:504:1::a504 |
| AS52772 | SJNET TELECOMUNICACOES - EIRELI | 198.32.161.89 | 2001:504:1::a526 |
| AS53180 | INFORTEL COMUNICACOES LTDA | 198.32.161.51 | 2001:504:1::a505 |
| AS41327 | Fiber Telecom S.p.A. | 198.32.161.50 | 2001:504:1::a504 |
| AS53667 | FranTech Solutions | 198.32.161.45 | 2001:504:1::a505 |
| AS1031 | Peer 1 Internet Service LLC | 198.32.161.44 | 2001:504:1::a500 |
| AS271253 | LINK BRASIL TELECOMUNICACOES LTDA | 198.32.161.43 | 2001:504:1::a527 |
| AS2734 | CoreSite | 198.32.161.41 | 2001:504:1::a500 |

## PIT-IX

Go to PeeringDB page

Go to IXP-DB page

Route Server ASN: AS30365

### Data Feeds Available:

RS Feed, Ping, MAC Address

### Top Vendors

| Vendor | |
|---|---|
| Cisco Systems, Inc | |
| Juniper Networks | |
| Arista Networks | |
| Edgecore Networks Corporation | 5% |
| Other | 15% |

List of members (39 routers over 31 ASNs):

| ASN | Description | IPv4 | IPv6 | Speed |
|---|---|---|---|---|
| AS400798 | Pittsburgh Internet Exchange | 206.71.141.6 | 2001:504:77::6 | 100 gbps |
| AS400798 | Pittsburgh Internet Exchange | 206.71.141.7 | 2001:504:77::7 | 100 gbps |
| AS212232 | bgp.tools Route Collector | 206.71.141.9 | 2001:504:77::9 | 10 gbps |
| AS20326 | TeraSwitch Networks Inc. | 206.71.141.10 | 2001:504:77::10 | 100 gbps |
| AS13335 | Cloudflare, Inc. | 206.71.141.11 | 2001:504:77::11 | 10 gbps |

**View**

Showing routes on "PIT-IX" route servers that point to the next hop of 206.71.141.6, 2001:504:77::6.

| Session | Prefix | BGP Path |
|---|---|---|
| PIT-IX-RS1-4 | 23.143.152.0/24 | AS30365 AS400798 |
| PIT-IX-RS1-6 | 2602:faaa::/36 | AS30365 AS400798 |
| PIT-IX-RS2-4 | 23.143.152.0/24 | AS30365 AS400798 |
| PIT-IX-RS2-6 | 2602:faaa::/36 | AS30365 AS400798 |

Click here to go back

View | Edit | Looking Glass | Communities | Cone

# Deutsche Telekom AG

AS Number **3320**

BGP | RIPE Atlas

There are 392 RIPE Atlas Probes on this ASN.

**Select up to 10 probes at random**

Traceroute to:

**185.230.223.150**

-

Request Traceroute

Measurement running, waiting for results...

## Request Traceroute

```
RIPE Atlas Link: https://atlas.ripe.net/measurements/102650027/#general
Start: 2025-05-10T20:01:31Z (Probe: 53254)
HOST: 93.234.20.167                                Loss%   Last
  1. AS???    192.168.200.1                         0.0%    3.3
  2. AS3320   p3e9bf765.dip0.t-ipconnect.de.        0.0%    2.4
  3. AS3320   62.154.4.230                          0.0%   10.3
  4. AS3320   62.157.250.38                         0.0%    9.9
  5. AS6762   195.22.209.198                        0.0%   22.6
  6. AS6762   seabone-core1-thn.lon.as3170.n        0.0%   25.8
  7. AS3170   et-0-0-2.core1-thn.lon.as3170.       0.0%   25.8
  8. AS3170   et-0-0-1.core2-ixn.lon.as3170.       0.0%   25.4
  9. AS???    ???                                   100%      0
 10. AS206924 2com8.b621.net.                       0.0%   24.4
 11. AS206924 bgp.tools.                            0.0%   25.4
```

View | Edit | Looking Glass | Communities | Cone

# Deutsche Telekom AG

AS Number **3320**

BGP | RIPE Atlas

There are 392 RIPE Atlas Probes on this ASN.

**Select up to 10 probes at random**

Traceroute to:

**185.230.223.150**

-

Request Traceroute

Measurement running, waiting for results...

Available on most ASNs with Atlas Probes of BGP sessions

## Request Traceroute

RIPE Atlas Link: https://atlas.ripe.net/measurements/102650027/#general
Start: 2025-05-10T20:01:31Z (Probe: 53254)

| HOST: 93.234.20.167 | | | Loss% | Last |
|---|---|---|---|---|
| 1. | AS??? | 192.168.200.1 | 0.0% | 3.3 |
| 2. | AS3320 | p3e9bf765.dip0.t-ipconnect.de. | 0.0% | 2.4 |
| 3. | AS3320 | 62.154.4.230 | 0.0% | 10.3 |
| 4. | AS3320 | 62.157.250.38 | 0.0% | 9.9 |
| 5. | AS6762 | 195.22.209.198 | 0.0% | 22.6 |
| 6. | AS6762 | seabone-core1-thn.lon.as3170.n | 0.0% | 25.8 |
| 7. | AS3170 | et-0-0-2.core1-thn.lon.as3170. | 0.0% | 25.8 |
| 8. | AS3170 | et-0-0-1.core2-ixn.lon.as3170. | 0.0% | 25.4 |
| 9. | AS??? | ??? | 100% | 0 |
| 10. | AS206924 | 2com8.b621.net. | 0.0% | 24.4 |
| 11. | AS206924 | bgp.tools. | 0.0% | 25.4 |

# AS-SET Views

- Including size estimation in prefixes and ASNs
- Just search for the AS-SET name, or find their PeeringDB one on the "IX" tab

## AS13335:AS-CLOUDFLARE

Database **ARIN**
Full Name **AS13335:AS-CLOUDFLARE**

**Overview** | **Reverse** | **Raw**

Total Size
**1310 ASNs**
**74584 v4 Prefixes**
**46467 v6 Prefixes**

### Members:

| - | Member | ASN Count/Whois Name | v4 Count | v6 Count |
|---|---|---|---|---|
| ARIN | AS13335:AS-CUSTOMERS | 1305 | 71085 | 16271 |
| | AS13335 | Cloudflare, Inc. | 3115 | 30145 |
| | AS132892 | Cloudflare, Inc. | 34 | 20 |
| | AS133877 | Cloudflare, Inc. | 0 | 0 |
| | AS202623 | Cloudflare Inc | 9 | 10 |
| | AS209242 | Cloudflare BYOIP Customers | 483 | 38 |
| | AS394536 | Cloudflare, Inc. | 1 | 2 |

# You may now know how to

- Quickly check what providers are in use (for inbound traffic) for yours and other networks
- Spot route leaks and understand why they sometimes happen
- Browse around for Internet Exchanges and who is on them, what they are advertising to route servers
- Find out what DNS entries are behind a BGP prefix
- What "Upstreams" / "Downstreams" mean in the context of things like bgp.tools, and how they are calculated

# Thank you, Questions?

If you are shy, Don't worry!

I will be here until Friday morning, just find me walking around and I am happy to explain things! You can also email me on

admin@bgp.tools