The RouteViews Project: Update

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Christchurch, New Zealand

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Background

- **RouteViews was first started in 1995**
- Now a growing network of 40+ collectors positioned strategically at Internet Exchange Points around the world
- RouteViews collaborates with the Center for Applied Internet Data Analysis (CAIDA) working with NSF grants that support Designing a Global Measurement Infrastructure to Improve Internet Security, GMI3S (OAC-2131987), and an Integrated Library for Advancing Network Data Science, ILANDS (CNS-2120399).
- RouteViews is supported with financial and in-kind donations by multiple organizations

- **RouteViews is based at the University of Oregon and operated by NSRC**
- NSRC supports the growth of global Internet infrastructure by providing engineering assistance, collaborative technical workshops, training, and other resources to university, research & education networks worldwide.
- NSRC is partially funded by the IRNC program of the NSF (OAC-2029309) and Google with other contributions from public and private organizations.
- The University of Oregon is a public research institution in Eugene, Oregon, USA founded in 1876.

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RouteViews Team Members

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ROUTE VIEWS 6447

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What is RouteViews

- A tool that allows Internet network operators to look at the BGP table from different backbones and locations around the world to troubleshoot and to assess:
  - Reachability, hijacks, bugs, peer visibility, mass withdrawals, RPKI status,…
- Operators who find it a valuable tool also peer to contribute to the value
- RouteViews operates collectors strategically positioned at IXPs around the world.
  - It also hosts a few multi-hop collectors at UO for those operators who are not present at IXPs.

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What is RouteViews

- Many free and commercial tools used by network engineers every day include data from RouteViews
  - CAIDA ASRANK
  - CAIDA BGP Reader
  - HE BGP Tools
  - Kentik Market Intelligence
  - Kentik BGP monitoring
  - Catchpoint
  - BGPMon
  - And many more

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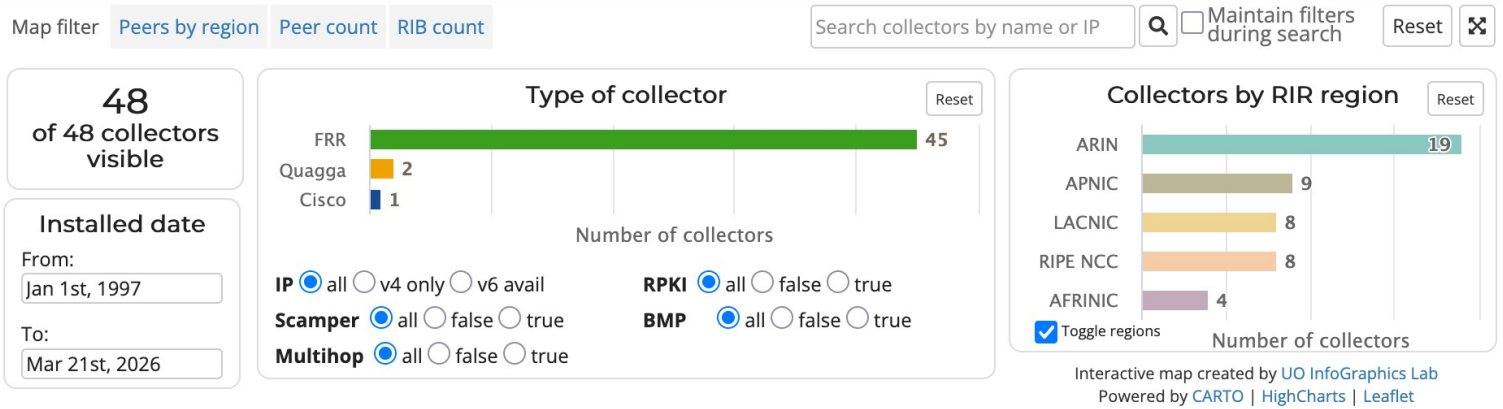
RouteViews Collector Map

https://www.routeviews.org/routeviews/map/

Note: Outdated map – modernised version will be released soon

Currently 55 collectors

Map doesn't show locix.fra, crix.sjo, decix.fra, getafix.mnl, netnod.mmx, interlan.otp, hkix.hkg, iix.cgk, ixpn.los



What's happening at RouteViews

ROUTEVIEWS NEWS

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RouteViews News

- Collectors:
  - All software collectors use FRR[1] (version 10.5.1 where possible)
  - One Cisco ASR1004 (as a tribute to the original!)
  - Moving collectors from metal to VMs (easier deployment & management)
- Location update:
  - Most recent additions include Jakarta (IIX), San Jose (CRIX), Lagos (IXPN), Hong Kong (HKIX) and Frankfurt (DE-CIX & LOCIX)

[1]FRRouting Project: https://frrouting.org/

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RouteViews Development Projects: API

- API allows programmatic access to live RouteViews data
  - (our collectors currently allow telnet access, which 1000s of automated scripts hammer daily)
- Two access levels:
  - Unauthenticated for casual (infrequent queries)
  - Authenticated access (using verified PeeringDB users) for more serious research
- API currently supports ten collectors
  - More will be added as resources become available
- Please consult the docs on how to use the API
  - https://api.routeviews.org/docs/

Exchange	collector
AMS-IX Amsterdam, Netherlands	route-views.amsix.routeviews.org
LINX, London, United Kingdom	route-views.linx.routeviews.org
NAPAfrica, Johannesburg, South Africa	route-views.napafrica.routeviews.org
Equinix SG1, Singapore, Singapore	route-views.sg.routeviews.org
Equinix SYD1, Sydney, Australia	route-views.sydney.routeviews.org
SAOPAULO (PTT Metro, NIC.br), Sao Paulo, Brazil	route-views2.saopaulo.routeviews.org
Multi-hop at U of Oregon	route-views3.routeviews.org
Multi-hop at U of Oregon	route-views4.routeviews.org
Multi-hop at U of Oregon	route-views5.routeviews.org
Multi-hop at U of Oregon	route-views6.routeviews.org

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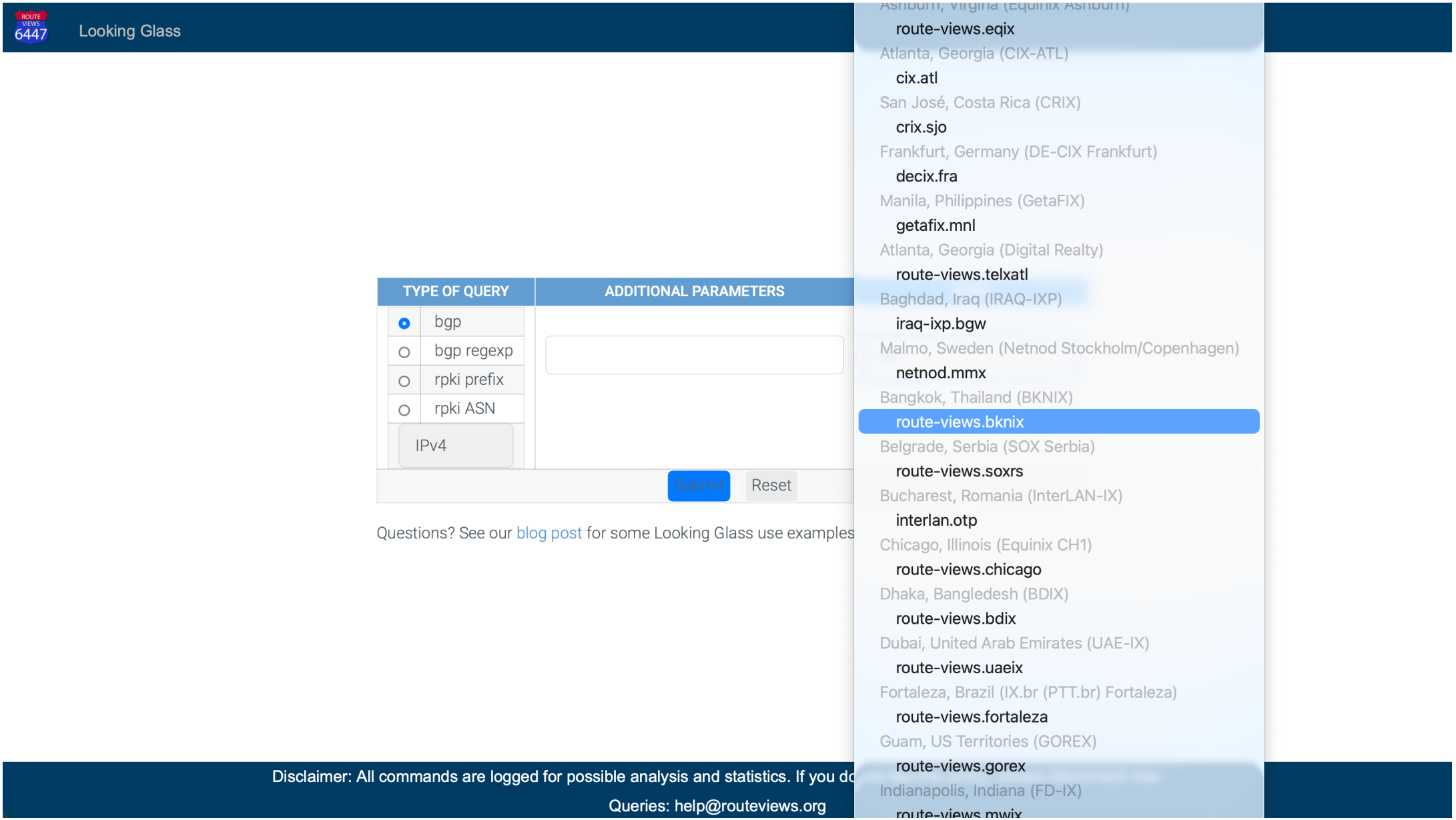
RouteViews Development Projects: LG

- telnet access is unsustainable
  - Gives open access to the collector command line interface to run “show” commands
- Looking Glass will soon become the default access for each collector
  - Permits the most commonly used BGP diagnostic commands
  - telnet remains available on route-views.routeviews.org (the Cisco ASR1004) for legacy access
- Looking Glass can be found on https://lg.routeviews.org/lg/
  - telnet access will be removed after due notice to the community


ROUTE VIEWS 6447
Looking Glass
TYPE OF QUERY
ADDITIONAL PARAMETERS
bgp
bgp regexp
rpki prefix
rpki ASN
IPv4
Submit
Reset
Questions? See our blog post for some Looking Glass use examples
Ashburn, Virginia (Equinix Ashburn)
route-views.eqix
Atlanta, Georgia (CIX-ATL)
cix.atl
San José, Costa Rica (CRIX)
crix.sjo
Frankfurt, Germany (DE-CIX Frankfurt)
decix.fra
Manila, Philippines (GetaFIX)
getafix.mnl
Atlanta, Georgia (Digital Realty)
route-views.telxatl
Baghdad, Iraq (IRAQ-IXP)
iraq-ixp.bgw
Malmo, Sweden (Netnod Stockholm/Copenhagen)
netnod.mmx
Bangkok, Thailand (BKNIX)
route-views.bknix
Belgrade, Serbia (SOX Serbia)
route-views.soxrs
Bucharest, Romania (InterLAN-IX)
interlan.otp
Chicago, Illinois (Equinix CH1)
route-views.chicago
Dhaka, Bangledesh (BDIX)
route-views.bdix
Dubai, United Arab Emirates (UAE-IX)
route-views.uaeix
Fortaleza, Brazil (IX.br (PTT.br) Fortaleza)
route-views.fortaleza
Guam, US Territories (GOREX)
route-views.gorex
Indianapolis, Indiana (FD-IX)
route-views.mwix
Disclaimer: All commands are logged for possible analysis and statistics. If you do
Queries: help@routeviews.org

Looking Glass

```
Type of Query    : BGP
Address family   : IPv4
Router           : frr
Query parameters: 27.252.232.19
Timestamp        : 2026-03-22T00:34:49Z
Command          : show bgp ipv4 unicast 27.252.232.19
```

```
frr.routeviews.org> show bgp ipv4 unicast 27.252.232.19
BGP routing table entry for 27.252.128.0/17, version 420762484
Paths: (2 available, best #1, table default)
  Not advertised to any peer
  3582 3701 6939 9500, (aggregated by 9500 10.123.82.8)
    128.223.253.9 from 128.223.253.9 (128.223.253.9)
      Origin IGP, valid, external, atomic-aggregate, multipath, best (Older Path), rpki validation-state: valid
      Community: 0:12989 0:13335 0:15169 0:16276 0:20940 0:22822 0:48641 0:49029 3701:10200 3701:10203 3701:30027 3701:40000
      Last update: Thu Mar 19 07:29:04 2026
  3582 3701 6939 9500, (aggregated by 9500 10.123.82.8)
    128.223.253.10 from 128.223.253.10 (128.223.253.10)
      Origin IGP, valid, external, atomic-aggregate, multipath, rpki validation-state: valid
      Community: 0:12989 0:13335 0:15169 0:16276 0:20940 0:22822 0:48641 0:49029 3701:10200 3701:10203 3701:30027 3701:40000
      Last update: Thu Mar 19 07:29:04 2026
```

ROUTE VIEWS 6447 Looking Glass

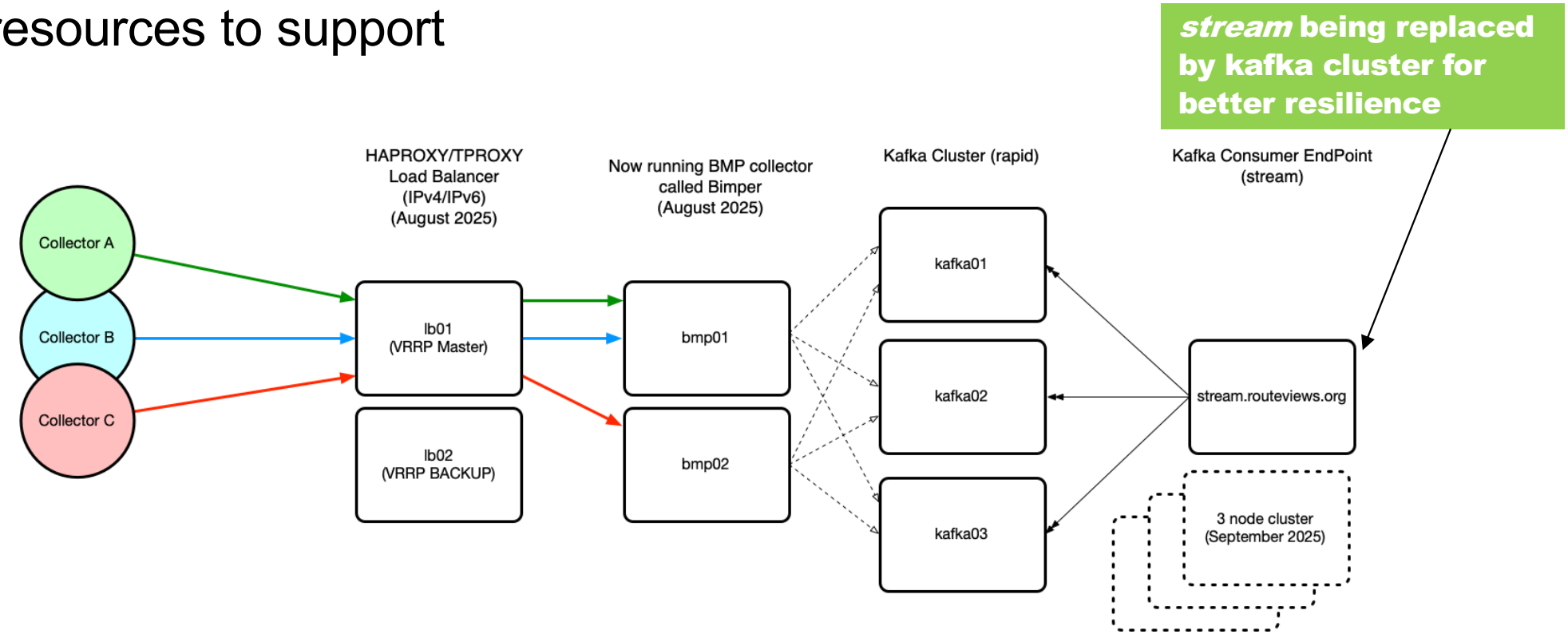
Type of Query : BGP
Address family : IPv4
Router : frr
Query parameters: 59.167.0.0/16 longer-prefixes
Timestamp : 2026-03-22T00:37:48Z
Command : show bgp ipv4 unicast 59.167.0.0/16 longer-prefixes

```
frr.routeviews.org> show bgp ipv4 unicast 59.167.0.0/16 longer-prefixes
BGP table version is 423410869, local router ID is 128.223.51.23, vrf id 0
Default local pref 100, local AS 65123
Status codes:  s suppressed, d damped, h history, u unsorted, * valid, > best, = multipath,
               i internal, r RIB-failure, S Stale, R Removed
Nexthop codes: @NNN nexthop's vrf id, < announce-nh-self
Origin codes:  i - IGP, e - EGP, ? - incomplete
RPKI validation codes: V valid, I invalid, N Not found

     Network          Next Hop            Metric LocPrf Weight Path
N*>  59.167.0.0/16    128.223.253.9                        0 3582 3701 174 7545 4739 i
N*=                   128.223.253.10                       0 3582 3701 174 7545 4739 i
N*>  59.167.0.0/17    128.223.253.9                        0 3582 3701 174 7545 4739 i
N*=                   128.223.253.10                       0 3582 3701 174 7545 4739 i
N*>  59.167.0.0/21    128.223.253.9                        0 3582 3701 174 7545 4739 i
N*=                   128.223.253.10                       0 3582 3701 174 7545 4739 i
N*>  59.167.8.0/21    128.223.253.9                        0 3582 3701 174 7545 4739 i
N*=                   128.223.253.10                       0 3582 3701 174 7545 4739 i
N*>  59.167.104.0/21  128.223.253.9                        0 3582 3701 174 7545 4739 i
N*=                   128.223.253.10                       0 3582 3701 174 7545 4739 i
N*>  59.167.160.0/20  128.223.253.9                        0 3582 3701 174 7545 4739 i
N*=                   128.223.253.10                       0 3582 3701 174 7545 4739 i
```

RouteViews Development Projects: BMP

- Live feed from collectors for BGP data consumers
- Challenge is to make this scale and provide the infrastructure resources to support



RouteViews Development Projects: Bimper

- *Bimper* is a specialised high-performance BGP Monitoring Protocol (BMP) message processor that receives BGP routing data from network routers and forwards it to Kafka for downstream analysis and storage. It provides real-time monitoring of BGP routing events with Prometheus metrics integration for operational visibility.
- The system includes *bimperctl*, a control utility for managing and monitoring *bimper* instances, allowing administrators to interact with the service and view connection status information, and manage router connections
- *Bimper* replaces OpenBMP and *Bimper* messages are compatible with OpenBMP's raw bmp

RouteViews Behind the Scenes Projects

- Upgrading archive infrastructure and storage
  - RouteViews stores BGP data from 1997 – around 50 TBytes (compressed)
    - https://archive.routeviews.org/ and https://archive2.routeviews.org/
- Tooling
  - Automation tools for managing the whole infrastructure and deploying new peers
- Collector OS (from CentOS to Ubuntu)
  - CentOS end-of-life – a few collectors still running CentOS
- FRR performance
  - Tuning Linux TCP parameters to improve BGP peer performance
    - https://fasterdata.es.net/host-tuning/linux/
  - “Badly behaving peers” (*aka* slow and/or noisy peers)

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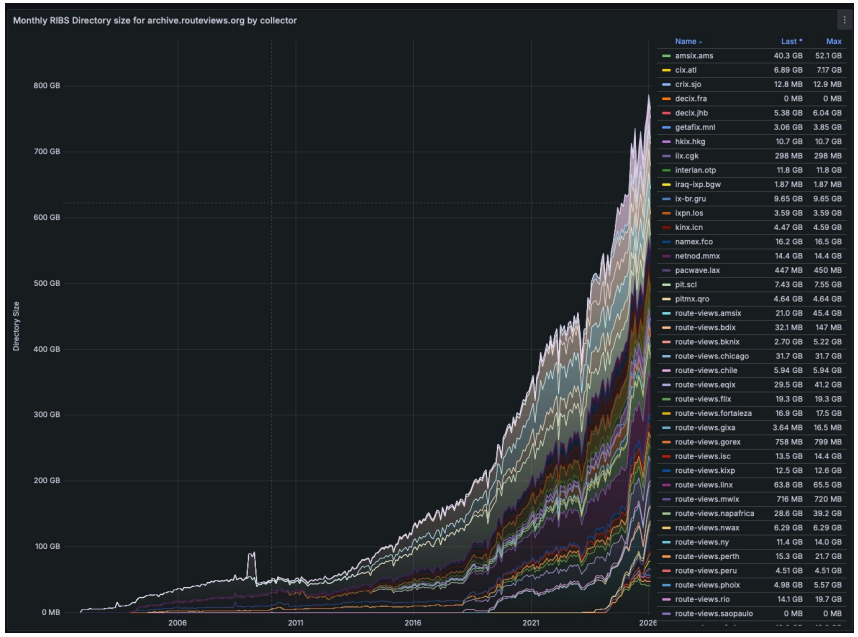
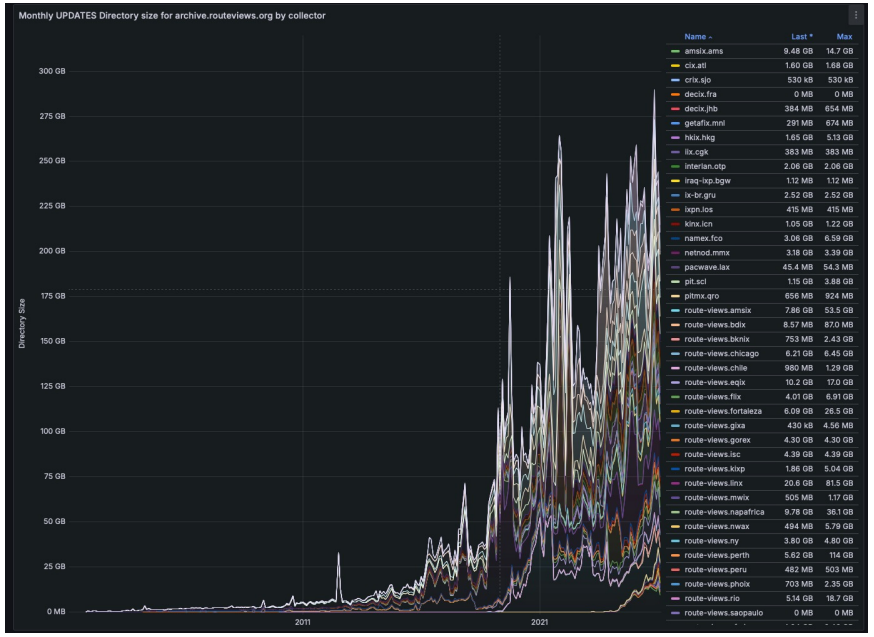
Slow and noisy peers

- *Bimper* enables us to monitor BGP and BMP more closely
- Much time was spent chasing stalled BGP and BMP sessions
- Upgrade to FRR 10.5.1 greatly improved queueing and processing of updates
  - means the live stream platform is much more stable now

Noisy Peer Identification

We've been slowly getting better at Noisy Peer Identification, which helps reduce the noise in our archive





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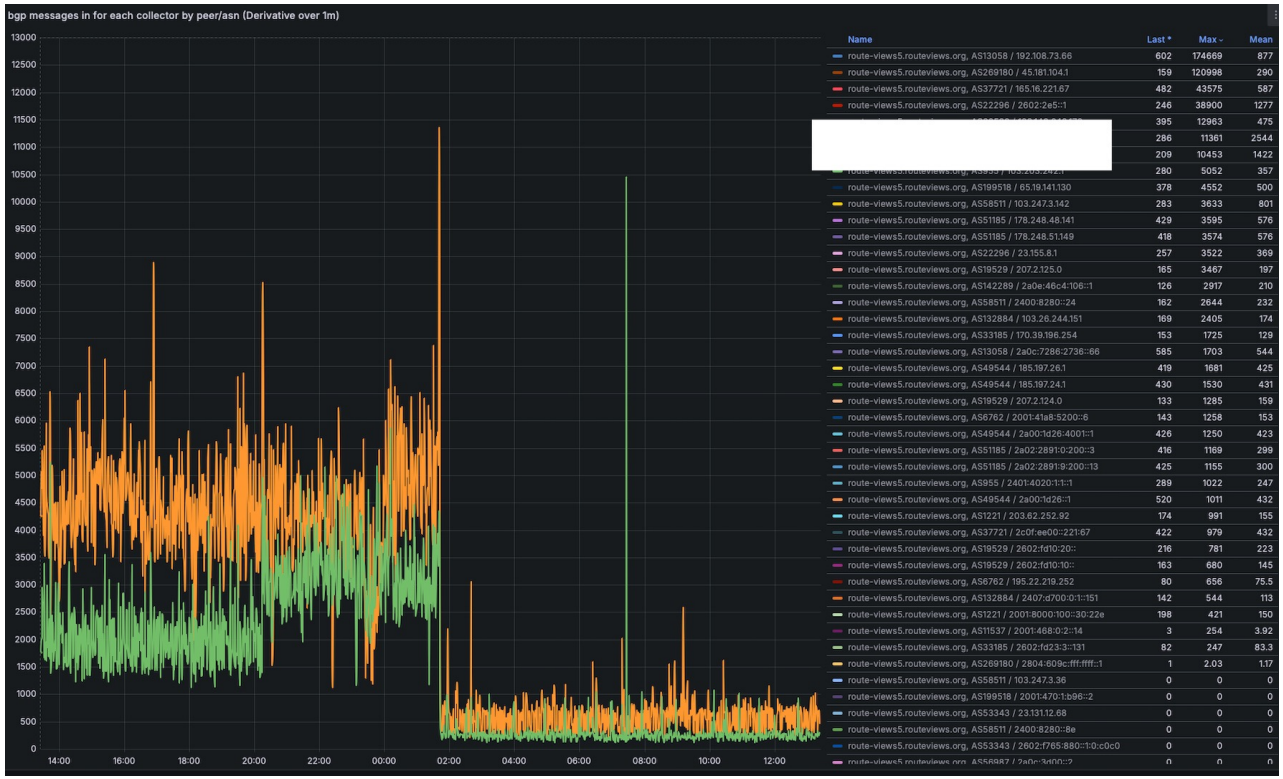
Noisy Peer Identification

- We've built a relatively simple system which is currently called 'Stampede'
- Uses our live streaming service (Kafka RAW BMP)
- Does minute by minute analysis of 40 of our collectors
- Finds Noisiest (per minute):
  - Collectors
  - Peers
  - Prefixes (Announcements / Withdrawals)
  - Single ASN in any ASPATH
  - ASPATH ngrams
  - Communities

Noisy Peer Identification

- This and our existing monitoring helps us find noisy peers and work with them to understand what is happening and we've seen real reductions in some cases.



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RouteViews Future Planning

- Collectors & hosts in new locations outside North America
  - Large IXPs with dense interconnection
  - Unique or specialist environments (e.g. R&E exchanges)
- Scalable and diverse archiving
- RouteViews Peering Portal
- Improved community support
  - Running this infrastructure costs money!
  - We hugely appreciate our generous supporters
    - https://www.routeviews.org/routeviews/index.php/supporters/
- Your recommendations are welcome! 🙏

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For network operators & researchers

USING ROUTEVIEWS

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Using RouteViews

- Network Operators use the live data to analyse how their routes appear on the Global Routing System
- Researchers use the 29-year-old data archive to study trends, route hijacks, and changes such as:
  - Origin change
  - Next-hop change
  - New prefix / more specifics
  - New neighbours
  - Operator ASN appearing in a new transit path
  - Bogons

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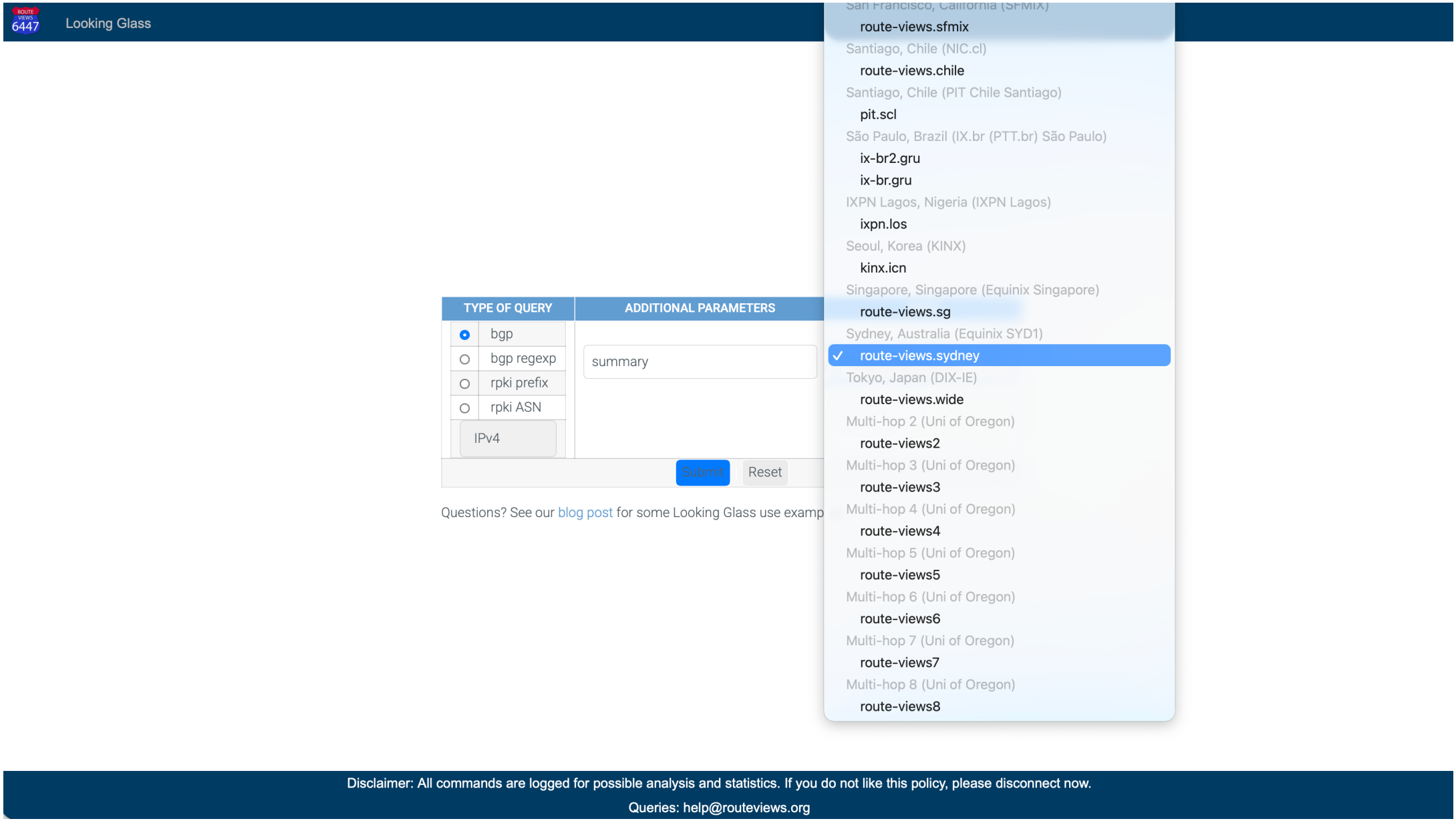

6447
Looking Glass
TYPE OF QUERY
ADDITIONAL PARAMETERS
bgp
bgp regexp
rpki prefix
rpki ASN
IPv4
summary
Submit
Reset
Questions? See our blog post for some Looking Glass use examp
San Francisco, California (SFMIX)
route-views.sfmix
Santiago, Chile (NIC.cl)
route-views.chile
Santiago, Chile (PIT Chile Santiago)
pit.scl
São Paulo, Brazil (IX.br (PTT.br) São Paulo)
ix-br2.gru
ix-br.gru
IXPN Lagos, Nigeria (IXPN Lagos)
ixpn.los
Seoul, Korea (KINX)
kinx.icn
Singapore, Singapore (Equinix Singapore)
route-views.sg
Sydney, Australia (Equinix SYD1)
route-views.sydney
Tokyo, Japan (DIX-IE)
route-views.wide
Multi-hop 2 (Uni of Oregon)
route-views2
Multi-hop 3 (Uni of Oregon)
route-views3
Multi-hop 4 (Uni of Oregon)
route-views4
Multi-hop 5 (Uni of Oregon)
route-views5
Multi-hop 6 (Uni of Oregon)
route-views6
Multi-hop 7 (Uni of Oregon)
route-views7
Multi-hop 8 (Uni of Oregon)
route-views8
Disclaimer: All commands are logged for possible analysis and statistics. If you do not like this policy, please disconnect now.
Queries: help@routeviews.org

Looking Glass

Type of Query : BGP
Address family : IPv4
Router : route-views.sydney
Query parameters: summary
Timestamp : 2026-03-25T20:17:53Z
Command : show bgp ipv4 unicast summary

30 peers

```
route-views.sydney> show bgp ipv4 unicast summary
BGP router identifier 45.127.172.100, local AS number 6447 VRF default vrf-id 0
BGP table version 77837266
RIB entries 1957896, using 239 MiB of memory
Peers 30, using 705 KiB of memory

Neighbor        V         AS   MsgRcvd   MsgSent   TblVer  InQ OutQ  Up/Down State/PfxRcd   PfxSnt Desc
45.127.172.2    4      63956    420619     16835 77837266    0    0 5d20h16m       188904        0 5G Networks
45.127.172.36   4       8075     17203     16835 77837266    0    0 5d20h16m         1098        0 Microsoft
45.127.172.38   4       9266    287781     16835 77837266    0    0 5d20h16m       227736        0 Fiveways
45.127.172.39   4      32934     17123     16835 77837266    0    0 5d20h16m            8        0 Meta
45.127.172.46   4       7575         0         0        0    0    0    never Idle (Admin)        0 AARNet
45.127.172.67   4     148968   1041597      8419 77837266    0    0 5d20h16m      1058764        0 Falcore Australia
45.127.172.74   4       4826   1501042      8419 77837266    0    0 5d20h16m      1053847        0 Vocus
45.127.172.78   4     199524   3348831      8419 77837266    0    0 5d20h16m      1043076        0 G-Core Labs
45.127.172.80   4       3491      8419      8419 77837266    0    0 5d20h16m            0        0 PCCW Global
45.127.172.89   4      38195     51725     50499 77837266    0    0 5d20h16m         2586        0 Superloop
45.127.172.102  4      20940     17331     16835 77837266    0    0 5d20h16m          104        0 Akamai
45.127.172.122  4      24115    294817      8567 77837266    0    0 5d20h16m       156923        0 Equinix IX MPLE RS1
45.127.172.123  4      24115    296696      8567 77837266    0    0 5d20h16m       156918        0 Equinix IX MPLE RS2
45.127.172.131  4      16509     20800     16835 77837266    0    0 5d20h16m          913        0 Amazon.com
45.127.172.149  4      58511         0         0        0    0    0    never Idle (Admin)        0 Anycast Global
45.127.172.150  4      17766     50533     50499 77837266    0    0 5d20h16m           76        0 NEXON ASIA PACIFIC
45.127.172.152  4     132847  15093831     16835 77837266    0    0 5d20h16m      1033703        0 Network Solutions
45.127.172.154  4      13335     20451     16835 77837266    0    0 5d20h16m         7831        0 Cloudflare
45.127.172.185  4      32590         0         0        0    0    0    never Idle (Admin)        0 Valve Corporation
45.127.172.196  4      24516   2908993     16835 77837266    0    0 5d20h16m      1036572        0 Virtutel
```

Many full tables

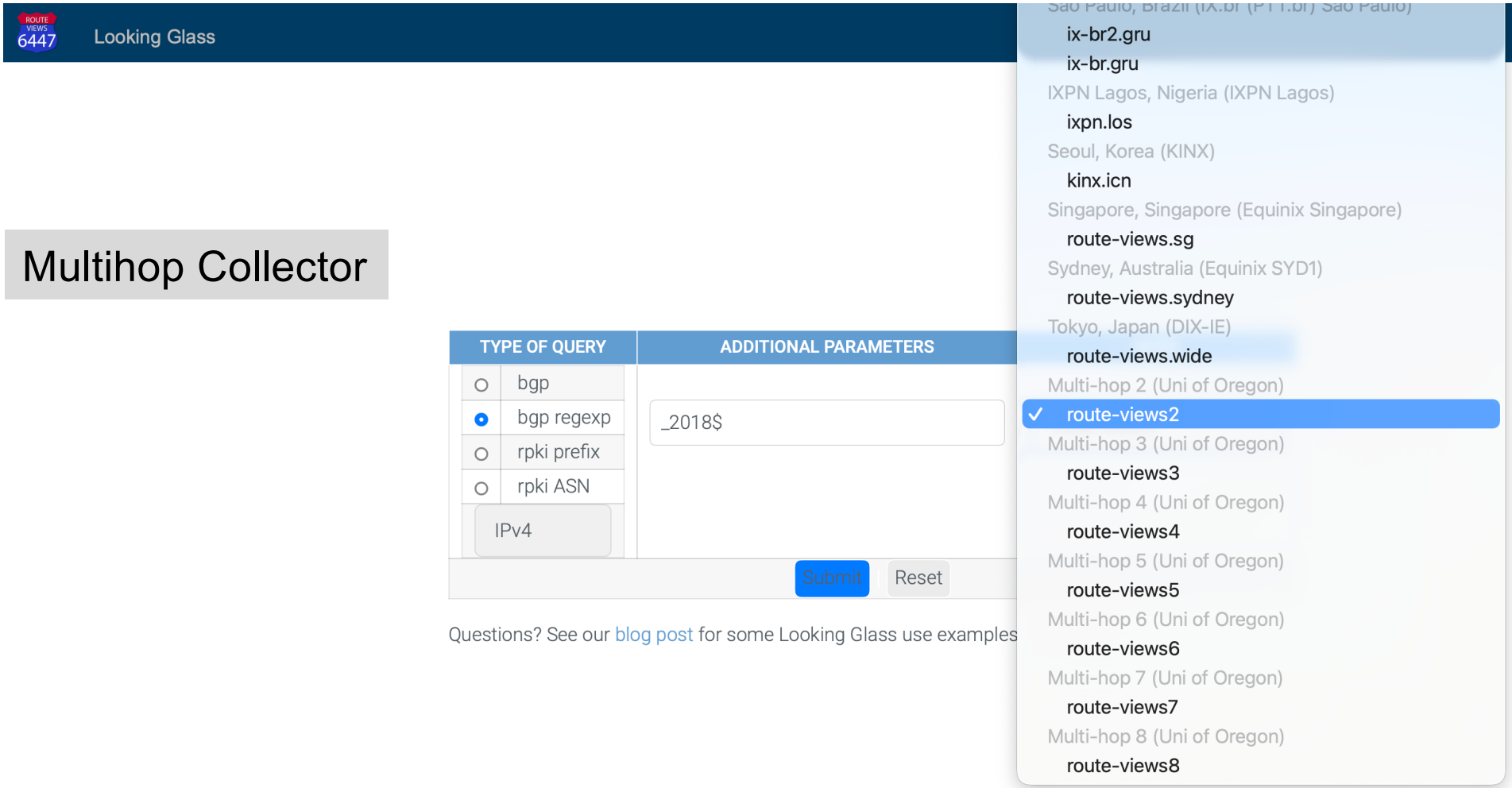
IX Route Servers

RouteViews Use Cases: Peering Negotiation

- Understanding your prospects connectivity can be key to a good negotiation
  - Who are the upstreams?
  - Who are the peers?
  - Who are the customers?

- Let's have a look at AS2018 as an example

Multihop Collector



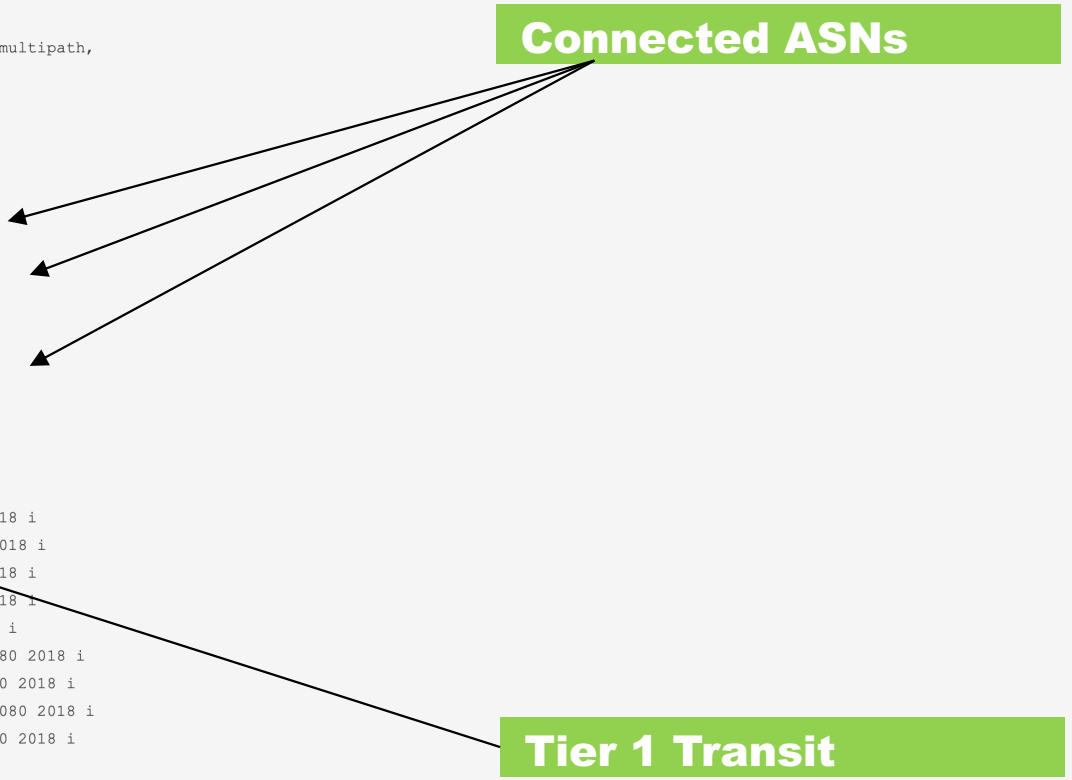
Looking Glass

```
Type of Query    : BGP REGEXP
Address family   : IPv4
Router           : route-views2
Query parameters: _2018$
Timestamp        : 2026-03-22T07:36:39Z
Command          : show bgp ipv4 unicast regexp _2018$
```

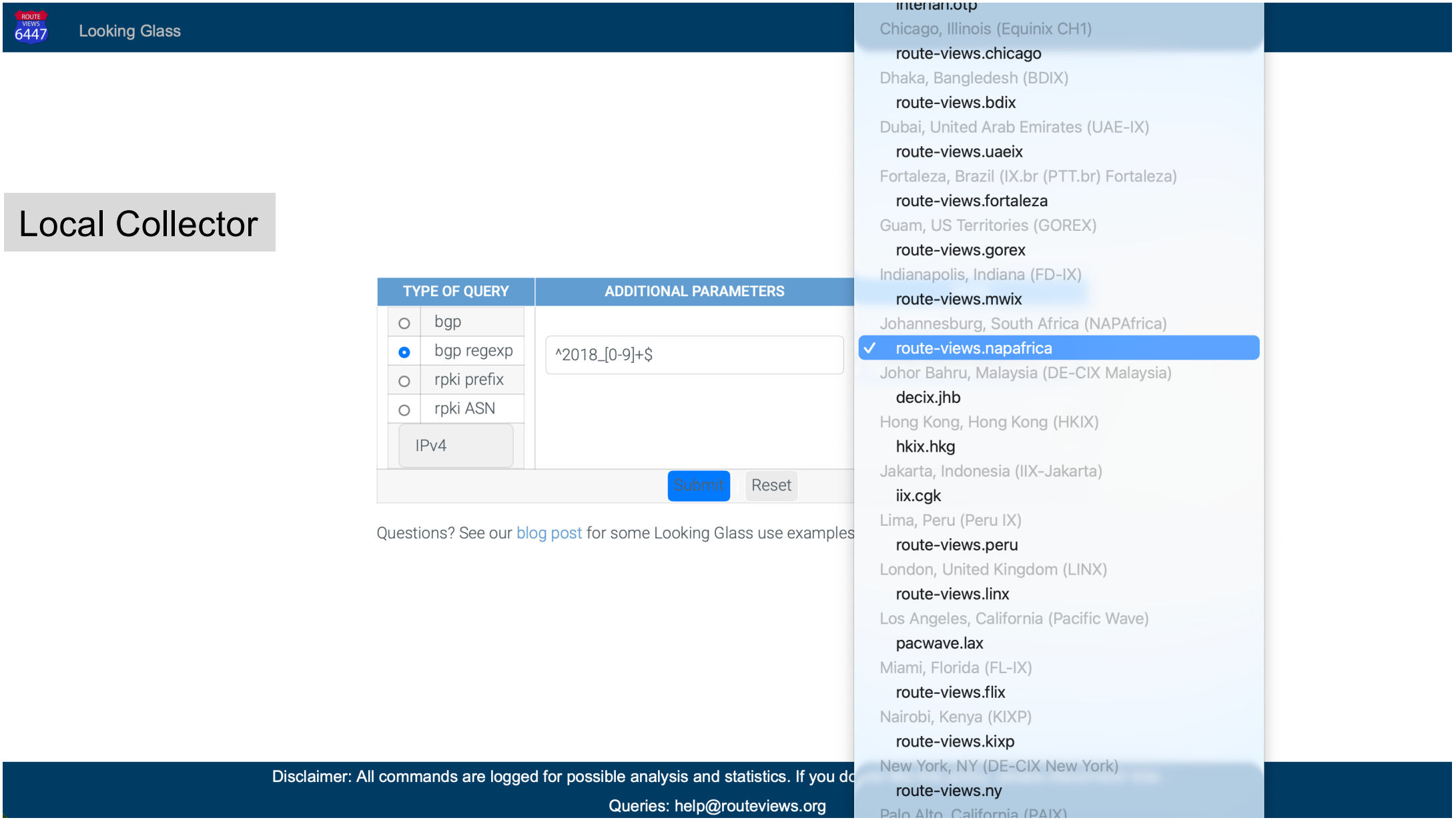
```
route-views2> show bgp ipv4 unicast regexp _2018$

BGP table version is 74952570, local router ID is 128.223.51.102, vrf id 0
Default local pref 100, local AS 6447
Status codes:  s suppressed, d damped, h history, u unsorted, * valid, > best, = multipath,
               i internal, r RIB-failure, S Stale, R Removed
Nexthop codes: @NNN nexthop's vrf id, < announce-nh-self
Origin codes:  i - IGP, e - EGP, ? - incomplete
RPKI validation codes: V valid, I invalid, N Not found

     Network          Next Hop            Metric LocPrf Weight Path
N*>  137.214.0.0/16   105.16.0.247                           0 37100 2018 i
N*                    198.129.33.85            9000          0 293 2018 i
N*                    217.192.89.50                          0 3303 2018 i
N*                    163.253.3.14                           0 11537 2018 i
N*                    168.209.255.56                         0 3741 2018 i
N*                    64.71.137.241                          0 6939 2018 i
N*                    91.218.184.60                          0 49788 12552 2018 i
N*                    129.250.1.71            29073          0 2914 20080 2018 i
N*                    140.192.8.16                           0 20130 6939 2018 i
N*                    203.181.248.195                        0 7660 11537 2018 i
N*                    12.0.1.63                              0 7018 2914 20080 2018 i
N*                    37.139.139.17               0          0 57866 2914 20080 2018 i
N*                    202.232.0.3                            0 2497 2914 20080 2018 i
N*                    137.164.16.84                          0 2152 2153 11537 2018 i
N*                    89.149.178.10              10          0 3257 174 2018 2018 i
N*                    208.51.134.255              0          0 3549 3356 2914 20080 2018 i
N*                    147.28.7.2                  0          0 3130 174 2914 20080 2018 i
N*                    45.61.0.85                             0 22652 1299 2914 20080 2018 i
N*                    198.58.198.252                         0 1403 577 2914 20080 2018 i
N*>  137.214.0.0/17   105.16.0.247                           0 37100 2018 i
N*                    198.129.33.85            9000          0 293 2018 i
N*                    217.192.89.50                          0 3303 2018 i
```



Local Collector

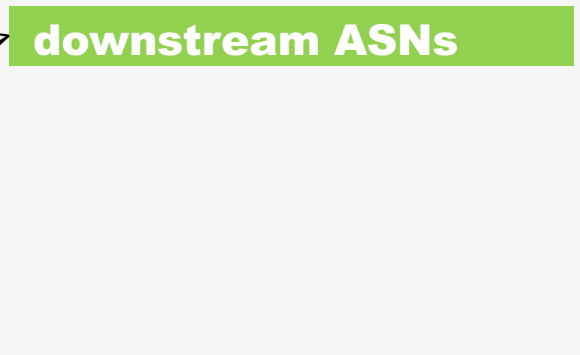


ROUTE VIEWS 6447 Looking Glass

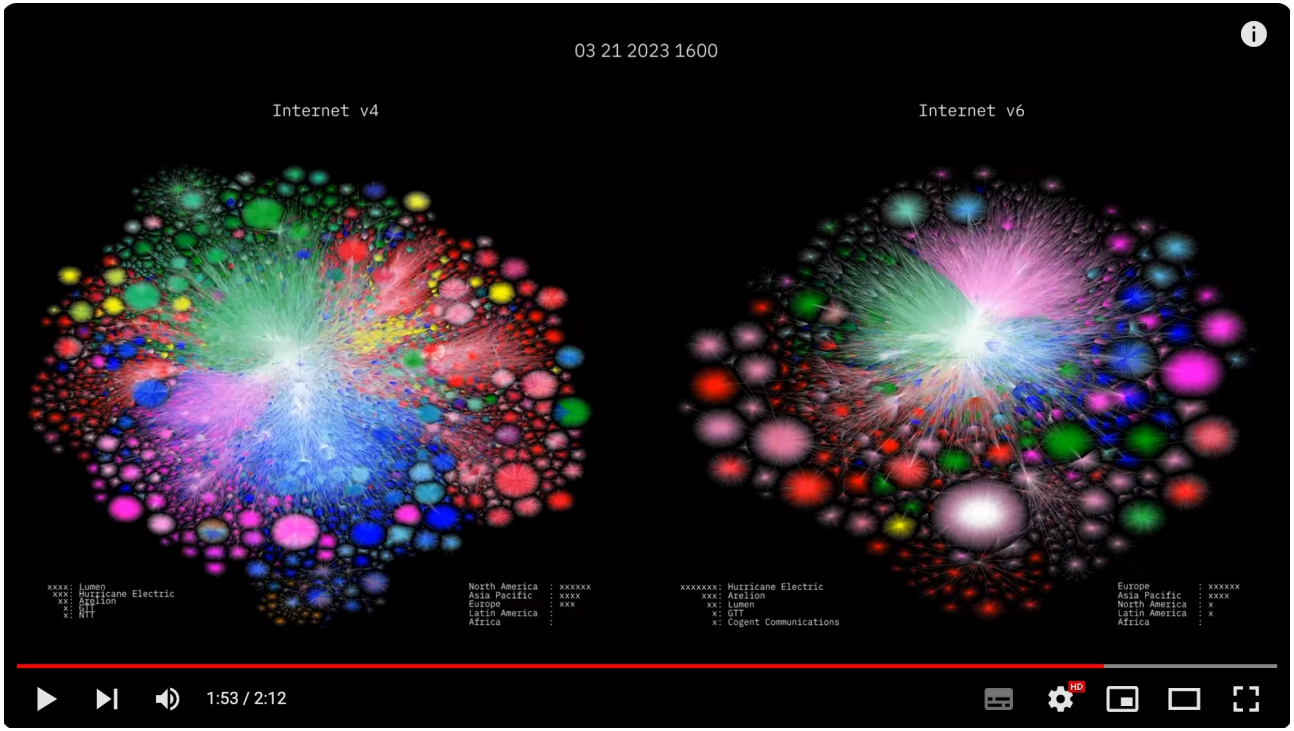
```
Type of Query    : BGP REGEXP
Address family   : IPv4
Router           : route-views.napafrica
Query parameters: ^2018_[0-9]+$
Timestamp        : 2026-03-22T07:41:37Z
Command          : show bgp ipv4 unicast regexp ^2018_[0-9]+$
```

```
route-views.napafrica> show bgp ipv4 unicast regexp ^2018_[0-9]+$
BGP table version is 582655864, local router ID is 196.60.9.68, vrf id 0
Default local pref 100, local AS 6447
Status codes:  s suppressed, d damped, h history, u unsorted, * valid, > best, = multipath,
               i internal, r RIB-failure, S Stale, R Removed
Nexthop codes: @NNN nexthop's vrf id, < announce-nh-self
Origin codes:  i - IGP, e - EGP, ? - incomplete
RPKI validation codes: V valid, I invalid, N Not found

     Network          Next Hop            Metric LocPrf Weight Path
V*>  41.74.144.0/23   196.60.8.216                           0 2018 329522 i
V*                    196.60.8.216                           0 2018 329522 i
V*                    196.60.8.216                           0 2018 329522 i
V*>  41.74.146.0/23   196.60.8.216                           0 2018 329522 i
V*                    196.60.8.216                           0 2018 329522 i
V*                    196.60.8.216                           0 2018 329522 i
V*>  41.74.156.0/23   196.60.8.216                           0 2018 329522 i
V*                    196.60.8.216                           0 2018 329522 i
V*                    196.60.8.216                           0 2018 329522 i
V*>  41.74.158.0/23   196.60.8.216                           0 2018 329522 i
V*                    196.60.8.216                           0 2018 329522 i
V*                    196.60.8.216                           0 2018 329522 i
N*>  137.158.0.0/16   196.60.8.216                           0 2018 36982 i
N*                    196.60.8.216                           0 2018 36982 i
N*                    196.60.8.216                           0 2018 36982 i
N*>  143.160.0.0/24   196.60.8.216                           0 2018 8094 i
```



RouteViews Impact



Barrett Lyon: https://www.youtube.com/watch?v=vo5glK9czIE

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ROUTE VIEWS 6447

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Consumers of RouteViews data

If you use RouteViews data for your products or services:

- Please acknowledge the source!
  - Your product or service likely would not work without our data!
- Please do *NOT* send your customers of your products or services to us for technical support:
  - We simply collect what is seen in the global routing table
  - We cannot fix mistakes made by network operators
  - We cannot fix bugs in BGP implementations
  - We cannot remove BGP announcements we receive
  - We cannot change what is seen in the global routing table

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For Peering Coordinators

PEERING WITH ROUTEVIEWS

Peering with RouteViews

- RouteViews has a Selective peering policy
  - PeeringDB: https://www.peeringdb.com/asn/6447
- We require all peers to have a PeeringDB entry
  - Our tools build peering options (for IXP based collectors) and configurations from PeeringDB
- Peering:
  - Over IPv4 (for IPv4 prefixes) and IPv6 (for IPv6 prefixes)
  - We want to receive the entire BGP table (if operationally possible)
  - We do not send you any prefixes (please don't ask)

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Peering with RouteViews: General Requirements

- Peer must operate stable equipment
  - RouteViews will shutdown BGP sessions that impact the stability of the RouteViews platform
- Peer must have a public routable ASN
- Peer must not be a hobby network
- Peer's full view of the global routing table is preferred
- Routes should be aggregated as much as possible
  - (no longer than /24 for IPv4 and /48 for IPv6)
- Peer must have up-to-date information in PeeringDB, including the NOC email address
- Peer must filter RFC6890 space and must not send default routes
- RouteViews does not accept addpath-RX or TX

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Peering with RouteViews: IXP & Multihop

IXP Peering

- We happily accept everyone's routes from the route servers.
- We will set up bilateral sessions with anyone who meets the general requirements and will send us their full table.
- We will peer at all mutual exchanges if requested.

Multihop Peering

- We will accept multihop peers who are not on any mutual IXPs.
- Peers must provide their full view of the Internet as they see it.
- We accept two sessions for redundancy; more than two sessions can be set up if the feeds are sufficiently different.

Why a Selective Peering policy?

- Balancing operational overhead, scale and information from the data
- Hobby Networks
- Full View of the Internet
- What makes a peering interesting?
  - Networks in regions where we have limited visibility
  - Networks demonstrating new interconnection patterns
  - Networks using innovative routing practices
  - Networks that help us understand emerging market dynamics
  - Or maybe something we haven't thought about yet

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For potential hosts of collectors

HOSTING ROUTEVIEWS

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Hosting RouteViews

- RouteViews is interested in new locations
  - Especially in regions or economies we have no collector
  - Where there are IXPs with large numbers of peers (>100)
- Hosting a RouteViews collector
  - Hosts can be IXPs themselves
  - Hosts can be members of IXPs
  - Hosts sponsor the IXP port and the (~10Mbps) transit required
  - Hosts sponsor the VM needed for the collector
    - Physical hardware is less preferred due to being harder to manage
    - VMs sometimes may not be possible due to operational requirements

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Collector Specifications

- Virtual Machine:
  - 16GB RAM min (prefer 32GB)
  - 50GB disk for OS, 100GB disk for storage
  - 4 vCPUs
  - 1 transit interface (management and public CLI access, low traffic)
  - 1 peering interface on the IX
- Physical Hardware:
  - 32GB – 64GB RAM
  - 400GB – 1TB SSD
  - 4+ CPUs
  - Ethernet port for transit interface (1Gbps is enough)
  - Ethernet port for IX peering (10Gbps is the standard now)

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Collector Software

- Ubuntu 24.04 is RouteViews standard OS
  - We require a minimal Ubuntu Server install
  - Our deployment scripts do the rest

- Routing daemon we install is FRR
  - MRT[1] used for BGP RIBs (archived every 2 hours) and BGP updates (archived every 15 minutes)

[1] Multi-Threaded Routing Toolkit: https://datatracker.ietf.org/doc/html/rfc6396

Collector Host

- Acknowledged on RouteViews website as a sponsor
- Contact details kept up to date with RouteViews team
  - An up-to-date PeeringDB entry helps 😀

How you can help

SUPPORTING ROUTEVIEWS

Supporting RouteViews

- The project was started in 1995 because network operators wished to see what their BGP announcements looked like from an external viewpoint
  - Thousands of network operators & researchers all around the world now rely on RouteViews
  - Many everyday tools we all rely on use RouteViews data
  - Many commercial products and services rely on RouteViews data

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Supporting RouteViews

Please consider supporting RouteViews:

- By peering with one of our collectors
- By publicly acknowledging the value of the information we have collected
  - For citations, our DOI is *10.7264/1y7v-2d90*
- If your product or service is commercially successful, we look forward to receiving your support to keep your product or service that way!
- In any other way that helps keep this community service going

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Thank you!