



RIPE NCC
RIPE NETWORK COORDINATION CENTRE

RIPE NCC::Educa Routing Security

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Overview



- RIPEstat
- RIS: Routing Information System
- Routing Insights Via RIPEstat
- Examples



- What is RIPEstat?

- “RIPEstat is a large-scale information service and the Open Data platform of the RIPE NCC.”
- One-stop-shop to 20+ backends

The screenshot shows the RIPE NCC website with the RIPEstat service highlighted. A callout bubble points from the text "Follow examples on <https://stat.ripe.net>" to the RIPEstat search bar.

Follow examples on <https://stat.ripe.net>

RIPE NCC
RIPE NETWORK COORDINATION CENTRE

RIPE Database (Whois) Website

Search IP Address or ASN

Manage IPs and ASNs > Analyse > Participate > Get Support > Publications > About

You are here: Home > Analyse > Statistics > RIPEstat

RIPEstat

Enter an IP address/prefix, ASN, country code or hostname

Your network: AS3333, 193.0.20.0/23 Try one of these: IPv4 prefix, IPv4 range, IPv6, ASN

Twitter Feed RIPE Labs Feed RIPEstat Links

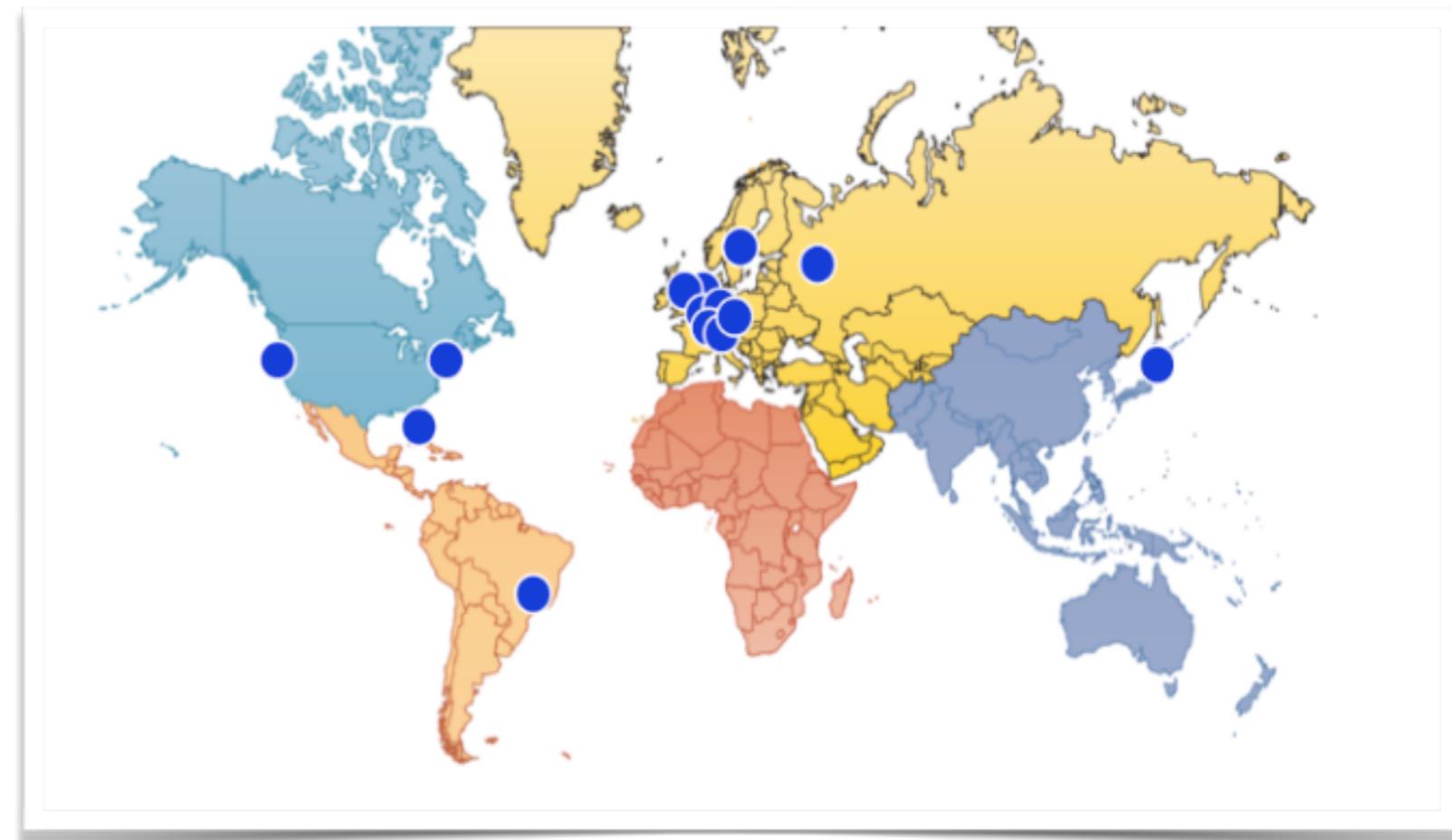
#RIPEstat Historical Whois About RIPEstat

Routing Information System (RIS)



- RIS

- The RIPE NCC has been collecting BGP data since 1999
- 19 collectors and growing
- 160+ full-feed peers
- <http://ris.ripe.net>



Routing Insights Via RIPEstat



- Routing data on RIPEstat

The screenshot shows the RIPEstat interface for the prefix 193.0.20.0/23. The main content area displays the "Routing Status" for this prefix at 2018-04-08 08:00:00 UTC. It indicates that the prefix was 100% visible by 166 of 166 RIS full peers. Other details include its first announcement by AS3333 on 2008-03-27 00:00:00 UTC, its origin AS3333, and the fact that it originated from a valid route object in RIPE. A note states that results exclude routes with very low visibility (less than 3 RIS full-feed peers seeing). Below the main content are links for "source data", "embed code", "permalink", and "info". The left sidebar lists categories such as "At a Glance", "Routing" (selected), "DNS", "Anti Abuse", "Database", "Geographic", "Activity", and "Suggestions". The top navigation bar includes links for "Manage IPs and ASNs", "Analyse" (selected), "Participate", "Get Support", "Publications", and "About Us". The top right features a "Login" link and a search bar.

Routing Insights Via RIPEstat



- 20+ widgets related to routing data

The screenshot shows the RIPEstat interface with several data visualization components:

- Announced Prefixes:** A bar chart showing the number of announced prefixes by prefix length.
- Prefix Size Distribution:** A histogram showing the distribution of announced prefixes across different size ranges.
- AS Path Length:** A chart showing the distribution of AS path lengths for routes containing the prefix 193.0.20.0/23.
- BGPlay:** A chart showing the number of BGP updates for the prefix 193.0.20.0/23 over time.
- BGP Update Activity:** A chart showing the number of BGP updates for the prefix 193.0.20.0/23 over time.
- Country Routing Statistics:** A chart showing the number of routes per country for the prefix 193.0.20.0/23.
- Looking Glass:** A chart showing the number of Looking Glass sites for the prefix 193.0.20.0/23.
- Related Prefixes:** A chart showing the number of related prefixes for the prefix 193.0.20.0/23.
- Routing History:** A timeline showing the history of routes for the prefix 193.0.20.0/23.
- Routing Status:** A chart showing the status of routes for the prefix 193.0.20.0/23.
- Routing Visibility:** A chart showing the visibility of routes for the prefix 193.0.20.0/23.
- etc.**

Routing Insights Via RIPEstat



- 20+ widgets related to routing data

The screenshot shows the RIPEstat interface with several widgets:

- Announced Prefixes**: A list of announced prefixes, with "193.0.20.0/23" highlighted.
- AS Path Length**: A histogram showing the distribution of AS path lengths.
- BGPlay**: A section for BGP route announcements, showing a recent announcement for 193.0.20.0/23.
- BGP Update Activity**: A timeline of BGP update events for the prefix 193.0.20.0/23.
- Country Routing Statistics**: A map showing routing statistics by country.
- Looking Glass**: A section for network status monitoring.
- Related Prefixes**: A list of related prefixes.
- Prefix Size Distribution**: A chart showing the size distribution of announced prefixes.
- Routing History**: A timeline of the prefix's history.
- Routing Status**: A summary of the prefix's status at a specific time (2018-04-08 08:00 UTC).
- Routing Visibility**: A chart showing the visibility of the prefix across RIS full-feed peers.
- etc.**: A placeholder for other routing-related data.

Routing Insights Via RIPEstat



- Looking Glass
 - Based on view from RIS peers
 - Announcing AS
 - AS paths to peers
 - Close to real-time
- Example:
 - <https://stat.ripe.net/widget/looking-glass#w.resource=193.0.20.0%2F23>

Routing Insights Via RIPEstat



• Looking Glass

BGP Looking Glass (193.0.20.0/23)

Advanced Settings [EXPAND EVERYTHING]

► RRC11 in New York City, New York, US sees 1 ASN orginating 193.0.20.0/23. (AS3333)

▼ RRC03 in Amsterdam, Netherlands sees 1 ASN orginating 193.0.20.0/23. (AS3333)

 ▼ AS3333 is seen as the origin by 10 peers.

 ▼ 80.249.208.34 is announcing route AS1103 AS3333.

 Origin: IGP
 Next Hop: 80.249.208.68
 Peer: 80.249.208.34
 Community: 1103:101
 AS Path: 1103 3333
 Last Updated: 2018-04-03T05:30:18

► RRC10 in Milan, Italy sees 1 ASN orginating 193.0.20.0/23. (AS3333)

► RRC23 in Singapore, Singapore sees 1 ASN orginating 193.0.20.0/23. (AS3333)

► RRC20 in Zurich, Switzerland sees 1 ASN orginating 193.0.20.0/23. (AS3333)

► RRC12 in Frankfurt, Germany sees 1 ASN orginating 193.0.20.0/23. (AS3333)

► RRC21 in Paris, France sees 1 ASN orginating 193.0.20.0/23. (AS3333)

► RRC15 in Sao Paulo, Brazil sees 1 ASN orginating 193.0.20.0/23. (AS3333)

► RRC14 in Palo Alto, California, US sees 1 ASN orginating 193.0.20.0/23. (AS3333)

Showing results for 193.0.20.0/23 as of 2018-04-09 05:14:00 UTC

source data embed code permalink Info

Routing Insights Via RIPEstat

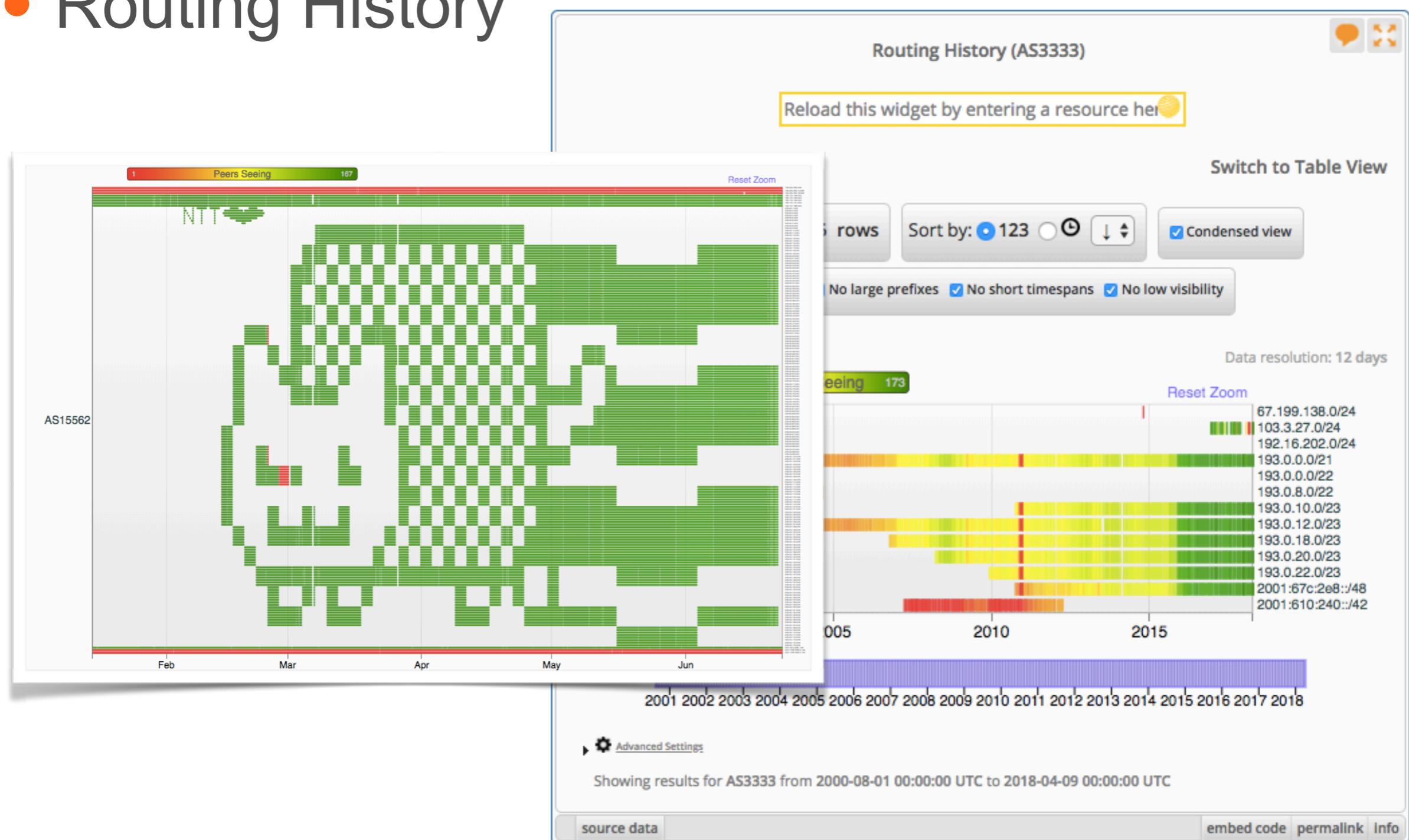


- Routing History
 - Announced prefix by AS
 - Visibility = number of peers seeing prefix/AS combination
 - Historical information
- Example:
 - <https://stat.ripe.net/widget/routing-history#w.resource=AS3333>

Routing Insights Via RIPEstat



- Routing History



Routing Insights Via RIPEstat

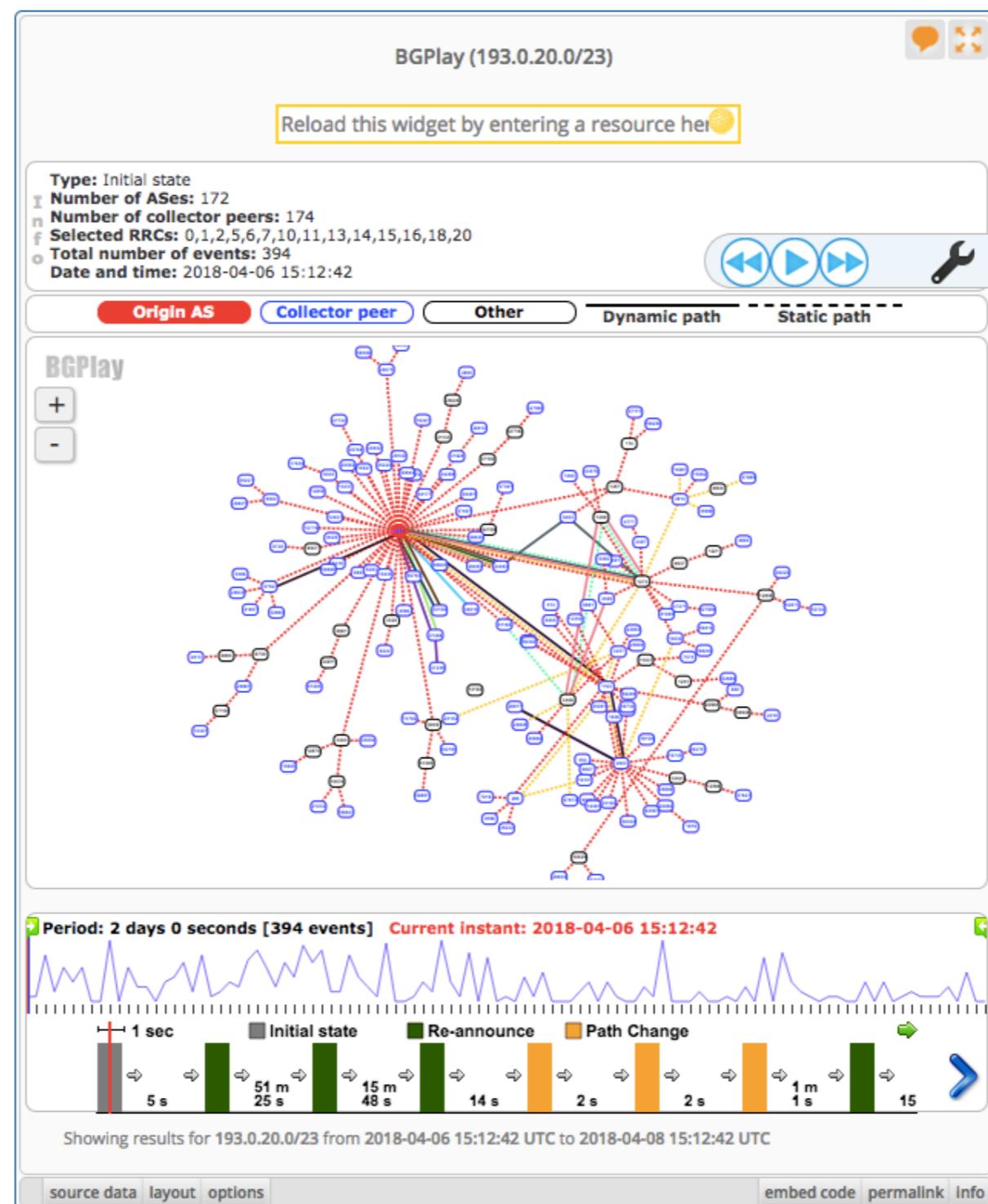


- BGPlay
 - Visual representation of routing status
 - Snapshot view of one point in time
 - Move back and forth in time
- Example
 - <https://stat.ripe.net/widget/bgplay#w.resource=193.0.20.0%2F23>

Routing Insights Via RIPEstat



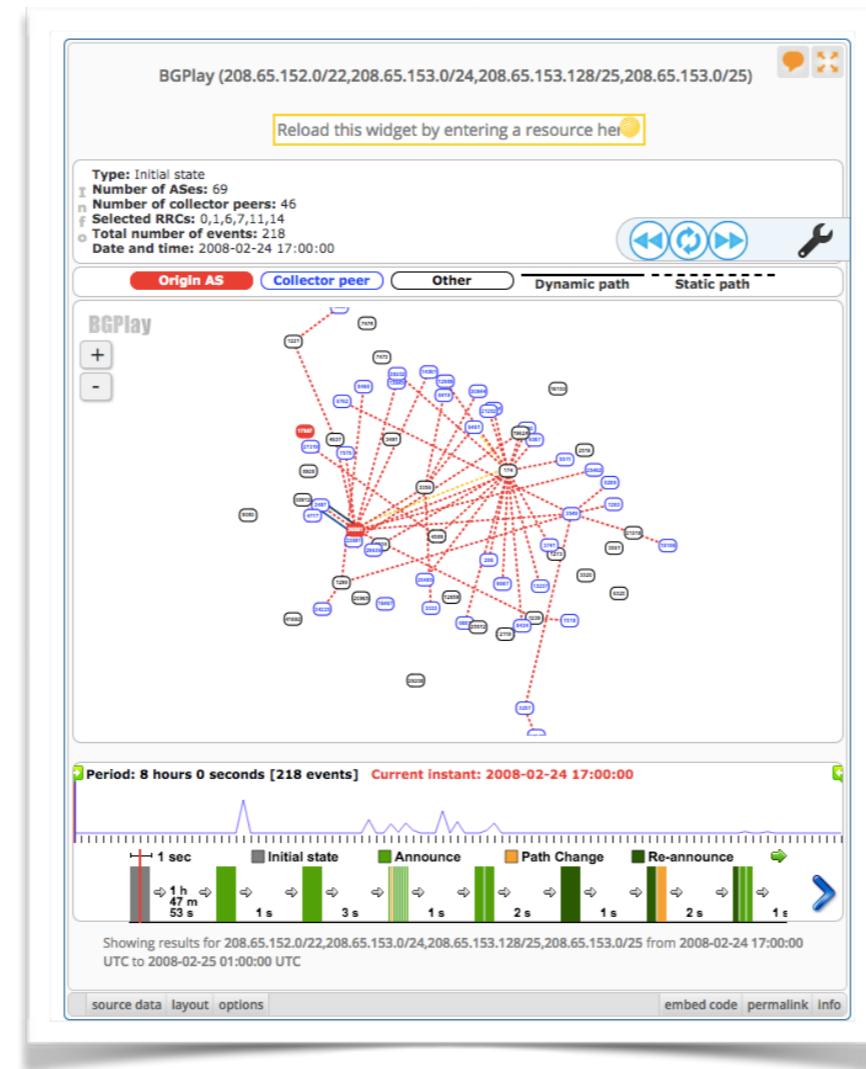
- BGPlay



Examples in RIPEstat



- Youtube Hijack in February 2008

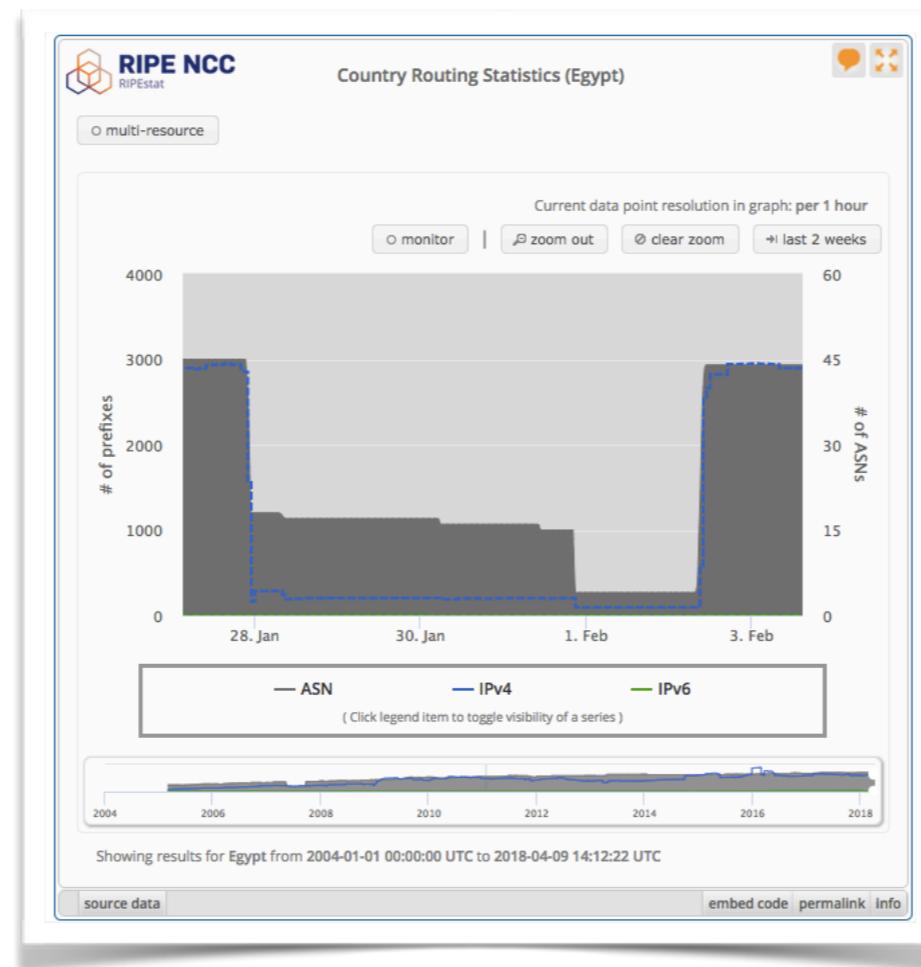


[Go to example on RIPEstat](#)

Example in RIPEstat



- Internet Outage 2012 in Egypt



[Go to example on RIPEstat](#)

RIPEstat - Three Interfaces



- APIs:
 - RIPEstat webpage
 - RIPEstat widget API
 - RIPEstat data API
- <https://stat.ripe.net>

The screenshot shows the RIPEstat Analyse page. The URL is https://stat.ripe.net/statistics/RIPEstat. The page has a header with "Manage IPs and ASNs", "Analyste" (highlighted in yellow), "Participate", "Get Support", "Publications", and "About Us". Below the header is a breadcrumb trail: "You are here: Home > Analyse > Statistics > RIPEstat". The main content area has a search bar with placeholder text "Enter an IP address/prefix, ASN, country code or hostname" and a "Go" button. Below the search bar is a message "Your network: AS3333, 2001:67c2:e8::/48". To the right of the search bar is a link "Try one of these: IPv4 prefix, IPv4 range, IPv6, ASN". At the bottom of the page are three links: "Twitter Feed", "RIPE Labs Feed", and "RIPEstat Links".

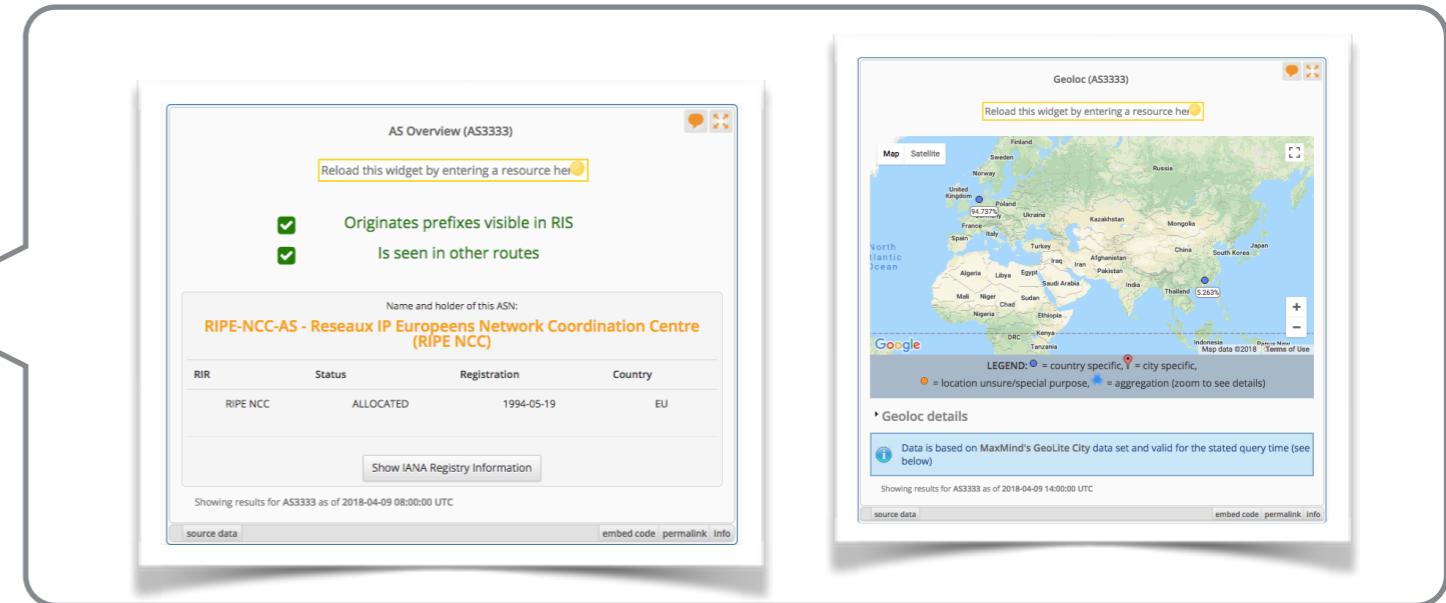


RIPEstat - Three Interfaces



- APIs:

- RIPEstat webpage
- RIPEstat widget API
- RIPEstat data API



- <https://stat.ripe.net>



RIPEstat - Three Interfaces



- APIs:
 - RIPEstat webpage
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- <https://stat.ripe.net>

```
time: "2018-04-09T14:35:37.098959",
messages: [ ],
data_call_status: "supported - based on 2.1",
process_time: 4,
build_version: "2018.4.6.318",
query_id: "20180409143537-3be598bc-ed43-45cb-a643-894335f051ac",
data: {
  resource: "3333",
  holder: "RIPE-NCC-AS - Reseaux IP Europeens Network Coordination Centre (RIPE NCC)",
  query_starttime: "2018-04-09T08:00:00",
  announced: true,
  ...
  announced_endtime: "2018-04-09T08:00:00"
}
```





- <https://stat.ripe.net/index/about-ripestat>
- https://stat.ripe.net/docs/data_api
- https://stat.ripe.net/docs/widget_api
- For updates on RIPEstat follow
@NCC_RIPEstat





Questions

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