

RouteViews Visibility Map

AIMS-KISMET 2020

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Goals

- Facilitate access to RouteViews collectors information
- Facilitate access to historical peering data
- Present data using map and graph formats to stimulate new questions and ideas



RouteViews Collector Map

Map info and instructions + * -

Filter collectors **Collectors graphs** Regional graph

Search collectors by name or IP... Maintain filters during search Reset Save Map

31
visible collectors

Installed date
From:
To:

Collector IP all v4 only v6 available
 BMP all false true
 RPKI all false true

Type of collector Reset

FRR	16
Quagga	14
Cisco	1

Number of collectors

Collectors by RIR region Reset

ARIN	14
APNIC	5
LACNIC	5
AFRINIC	4
RIPE NCC	3

Number of collectors

Toggle regions

Interactive map created by UO InfoGraphics Lab
Powered by CARTO | HighCharts | Leaflet



Collectors map

Color Type
Label Name/host
Search Name or IP (full or partial)

Popup info

- Name/host - link to BGP data page
- Date installed
- Type
- IRIR Region
- Location (country)
- IP V4/V6
- BMP
- RPKI
- IX speed
- Peering request
"mailto" link

Filter by

- Date installed (cal picker): 1997 – today
- Type: all, FFR, Quagga, Cisco
- Collector IP: all, v4 only, v6 available
- BMP: all, false, true
- PKI: all, false, true
- RIR region



Graphs

Collector graphs

- Count of peering connections from installation – Jan 2020
- Sum of all collectors (by IPV)
- Peers per collector (by IPV)

- Use search to find a specific collector
- Adjust visible time period and swipe
- Toggle individual lines on/off
- Download graph as image or raw data

Regional graphs

- Peers per RIR region (by IPV)



Future directions

- What functionality would you use?
- What fundamental data properties inform the EDA
Eg:
 - Spatial or aspatial aggregations?
 - Display rates or counts?
- Just hand over the raw data?



Thank you.

Joanna Merson

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Contributors: Hervey Allen
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Jacob H Maurer
David Teach

Kevin Conte

Network Startup Research Center




Extra slides for
capturing live demo..



RouteViews Collector Map

Map info and instructions + 🏠 -



Host: route-views2.saopaulo
Installed: 2018-04-25
Type: FRR
Region: LACNIC
Country: BR 🇧🇷
Collector:
IPV4: 187.16.219.166
IPV6: 2001:12f8::219:166
BMP: FALSE
RPKI: FALSE
IX Speed: 1000 Mbps
[Send custom peer request](#)

click!

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Cisco	1

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Collectors by RIR region Reset

RIR region	Count
ARIN	14
APNIC	5
LACNIC	5
AFRINIC	4
RIPE NCC	3

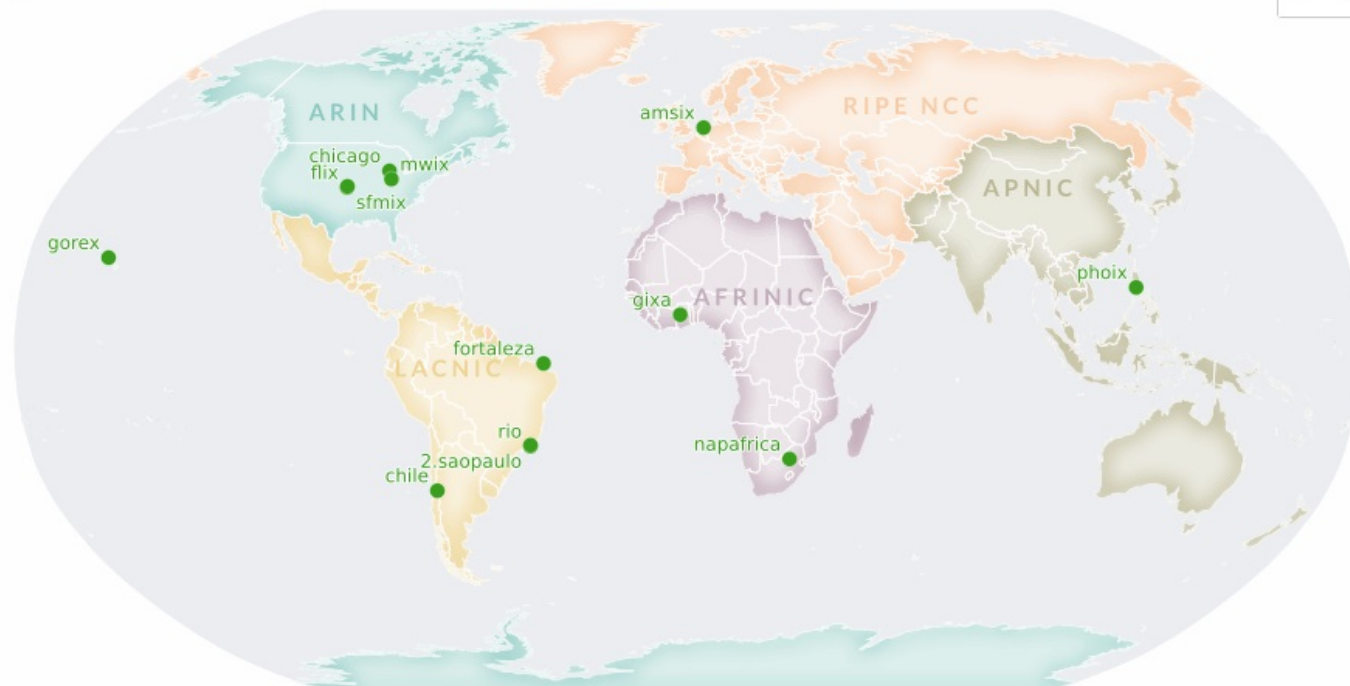
Number of collectors

Toggle regions

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RouteViews Collector Map

Map info and instructions



Filter collectors

Collectors graphs

Regional graph

Search collectors by name or IP...



Maintain filters during search

Reset

Save Map

13
visible collectors

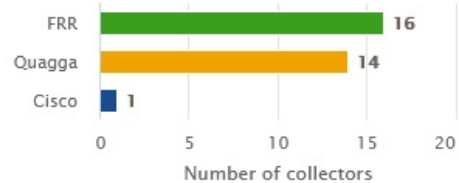
Installed date

From: **January 1st, 2015**

To: February 24th, 2020

Type of collector

Reset



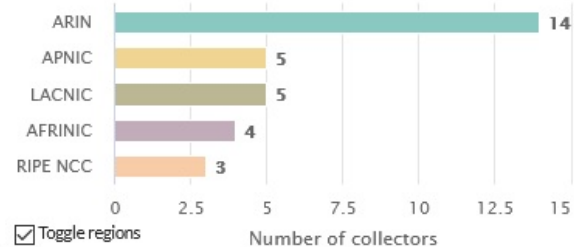
Collector IP all v4 only v6 available

BMP all false true

RPKI all false true

Collectors by RIR region

Reset

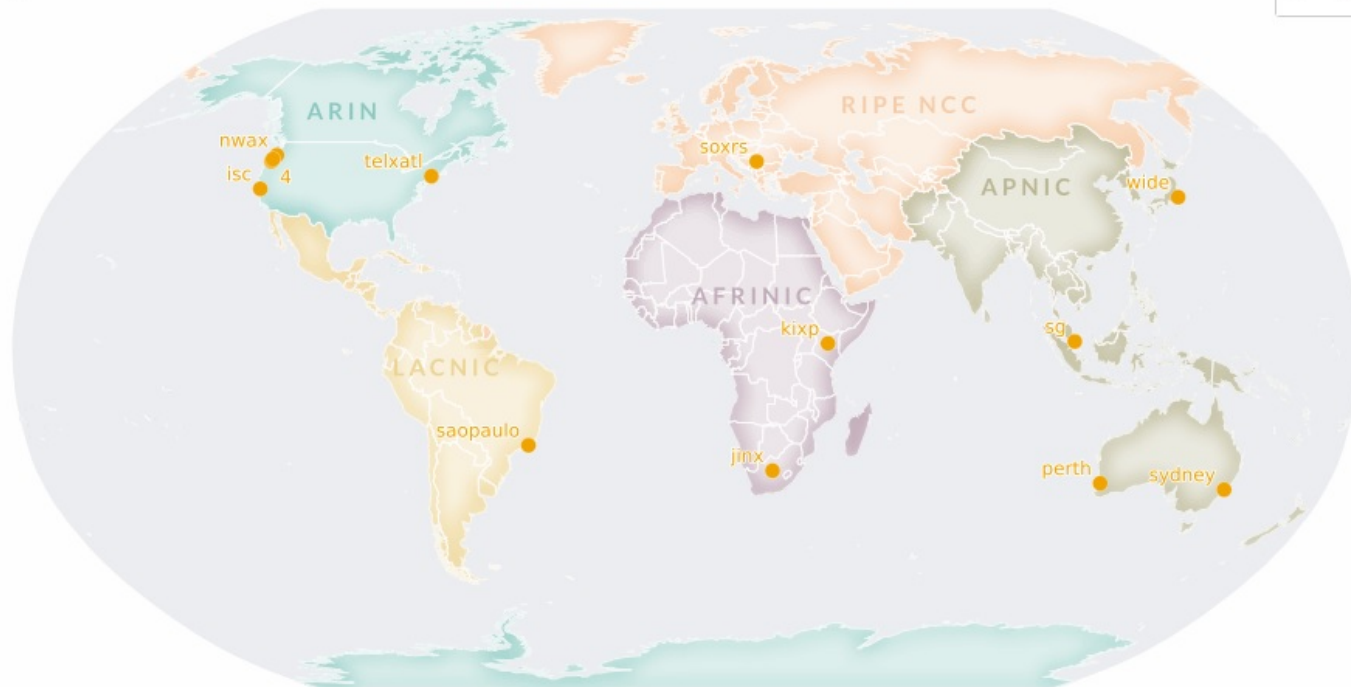


Toggle regions

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RouteViews Collector Map

Map info and instructions



Filter collectors

Collectors graphs

Regional graph

Search collectors by name or IP...



Maintain filters during search

Reset

Save Map

14
visible collectors

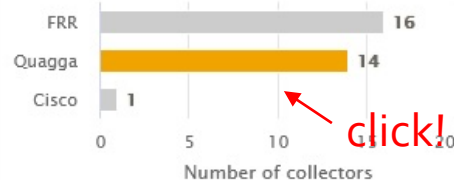
Installed date

From:

To:

Type of collector

Reset



Collector IP all v4 only v6 available

BMP all false true

RPKI all false true

Collectors by RIR region

Reset



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RouteViews Collector Map

Map info and instructions



Filter collectors

Collectors graphs

Regional graph

Search collectors by name or IP...



Maintain filters during search

Reset

Save Map

3
visible collectors

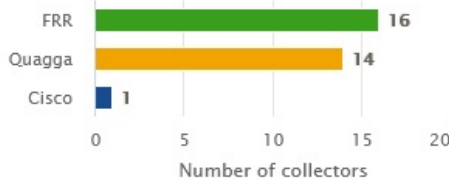
Installed date

From:

To:

Type of collector

Reset



Collector IP all v4 only v6 available

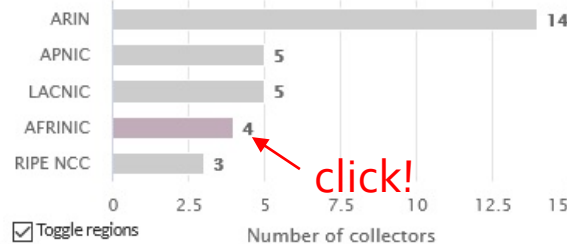
BMP all false true

RPKI all false true

click!

Collectors by RIR region

Reset

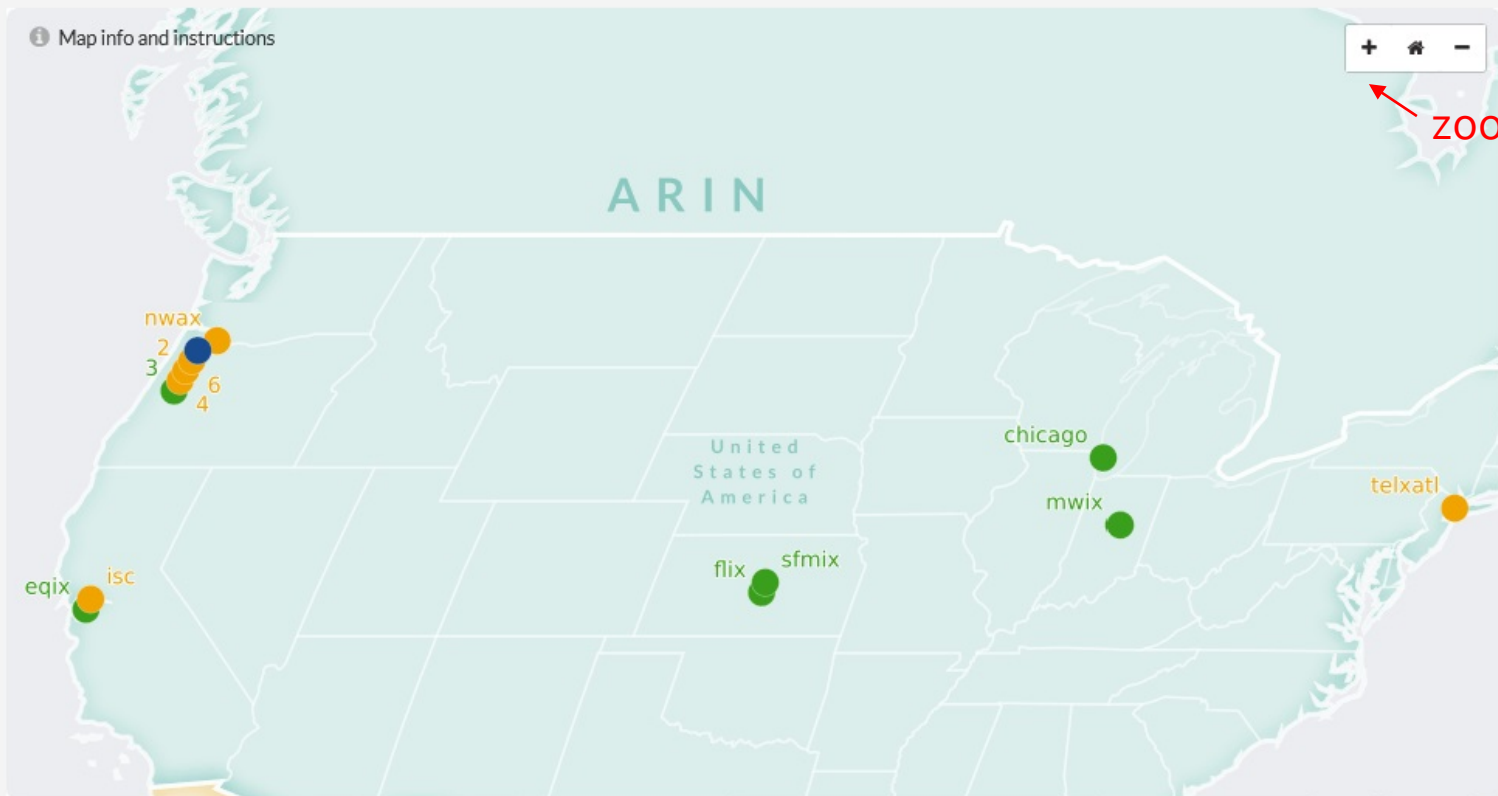


Toggle regions

click!

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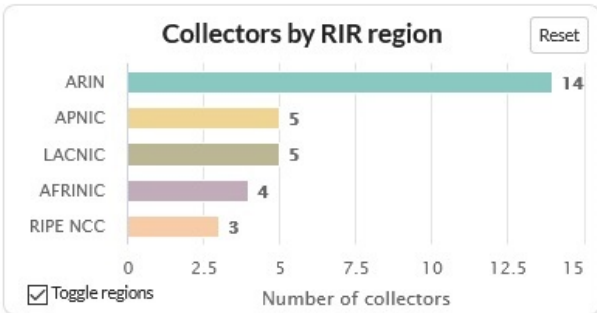
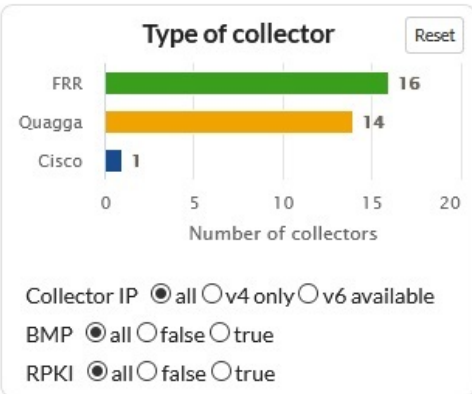
RouteViews Collector Map



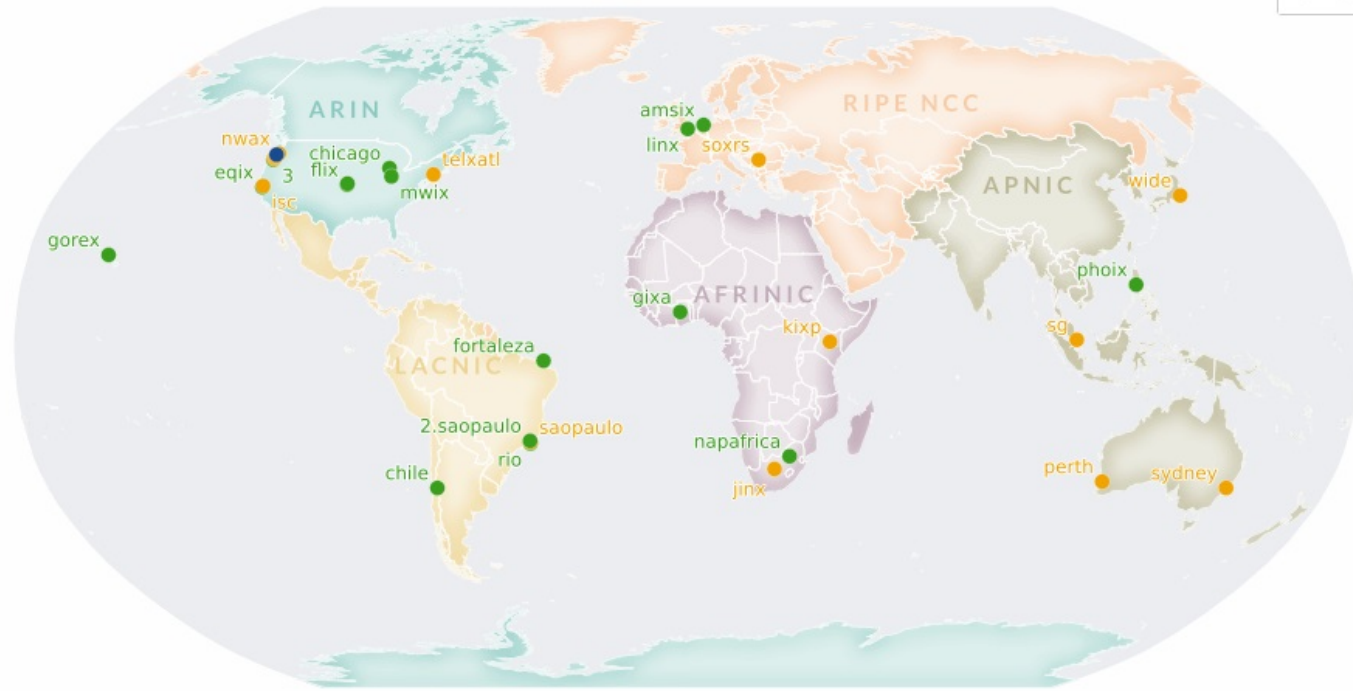
Filter collectors Collectors graphs Regional graph Search collectors by name or IP... Maintain filters during search Reset Save Map

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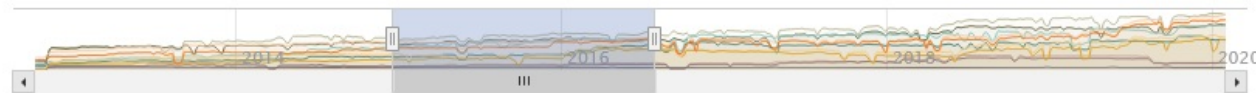
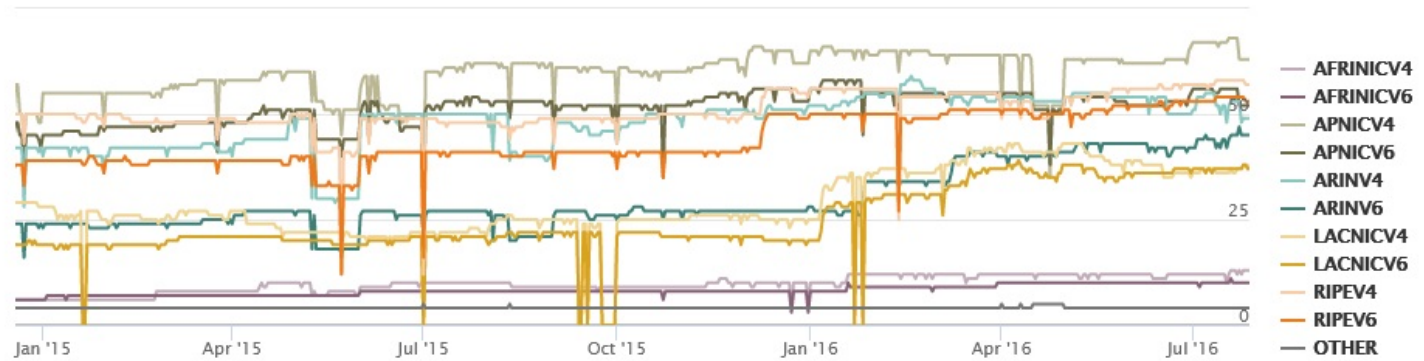


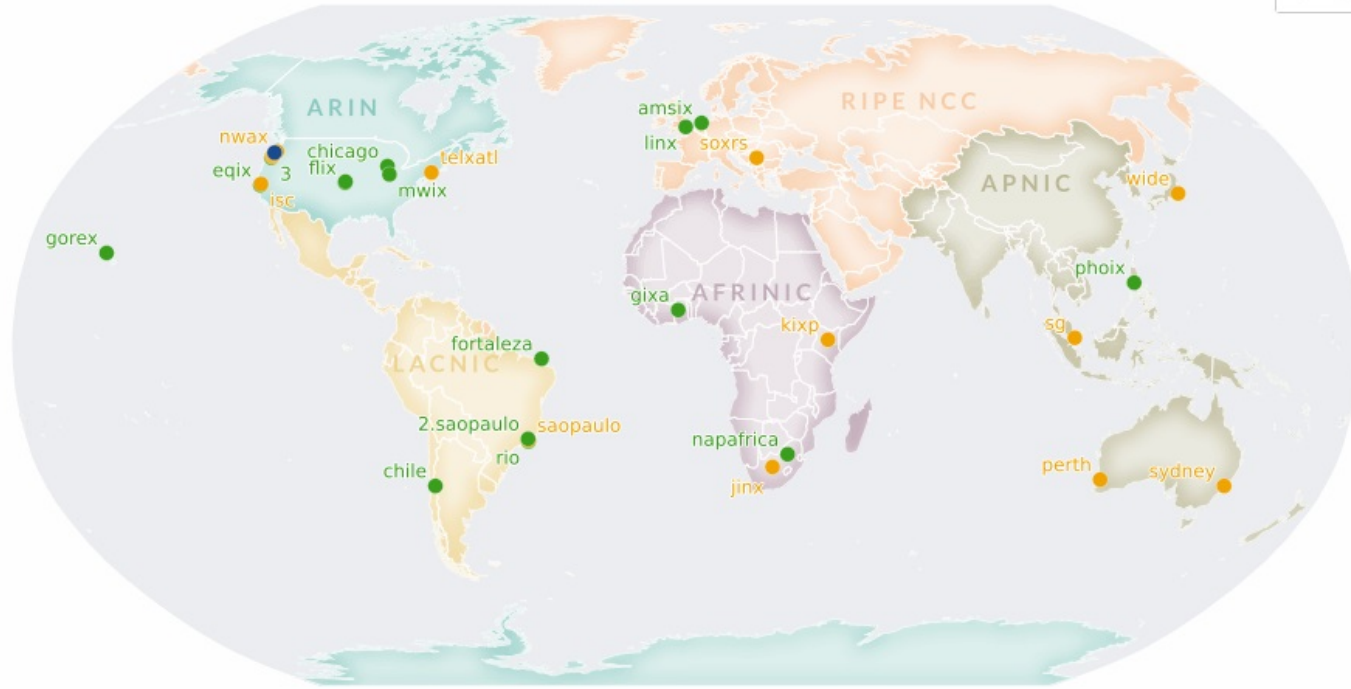
Filter collectors Collectors graphs **Regional graph**

Search collectors by name or IP... Maintain filters during search

Zoom 1m 3m 6m YTD 1y All

From Dec 18, 2014 To Jul 27, 2016





Filter collectors Collectors graphs Regional graph

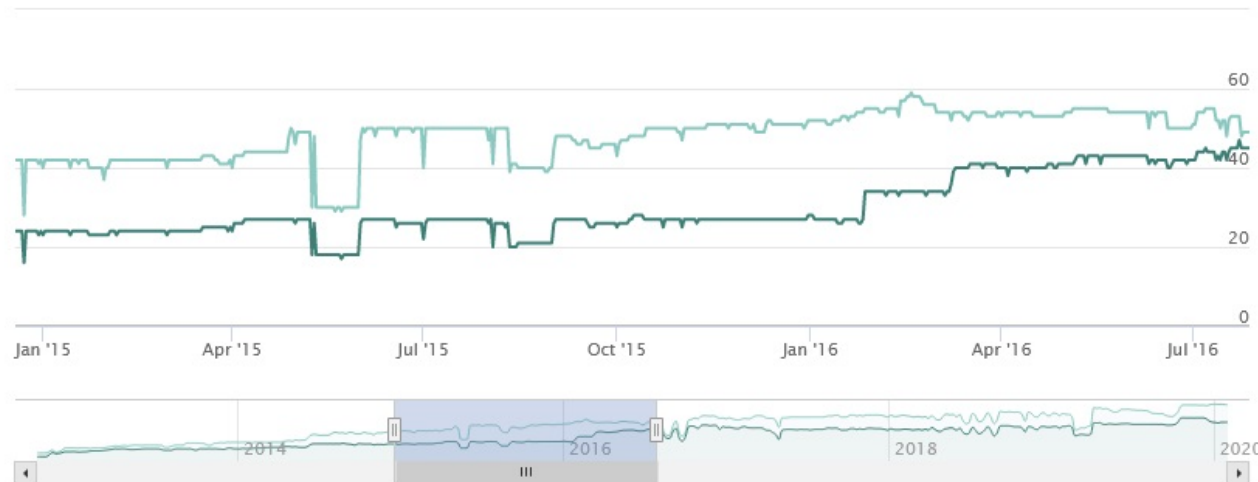
Search collectors by name or IP...

Maintain filters during search

Reset Save Map

Zoom 1m 3m 6m YTD 1y All

From Dec 18, 2014 To Jul 27, 2016



Many clicks!



Filter collectors Collectors graphs Regional graph

Search collectors by name or IP...

Maintain filters during search

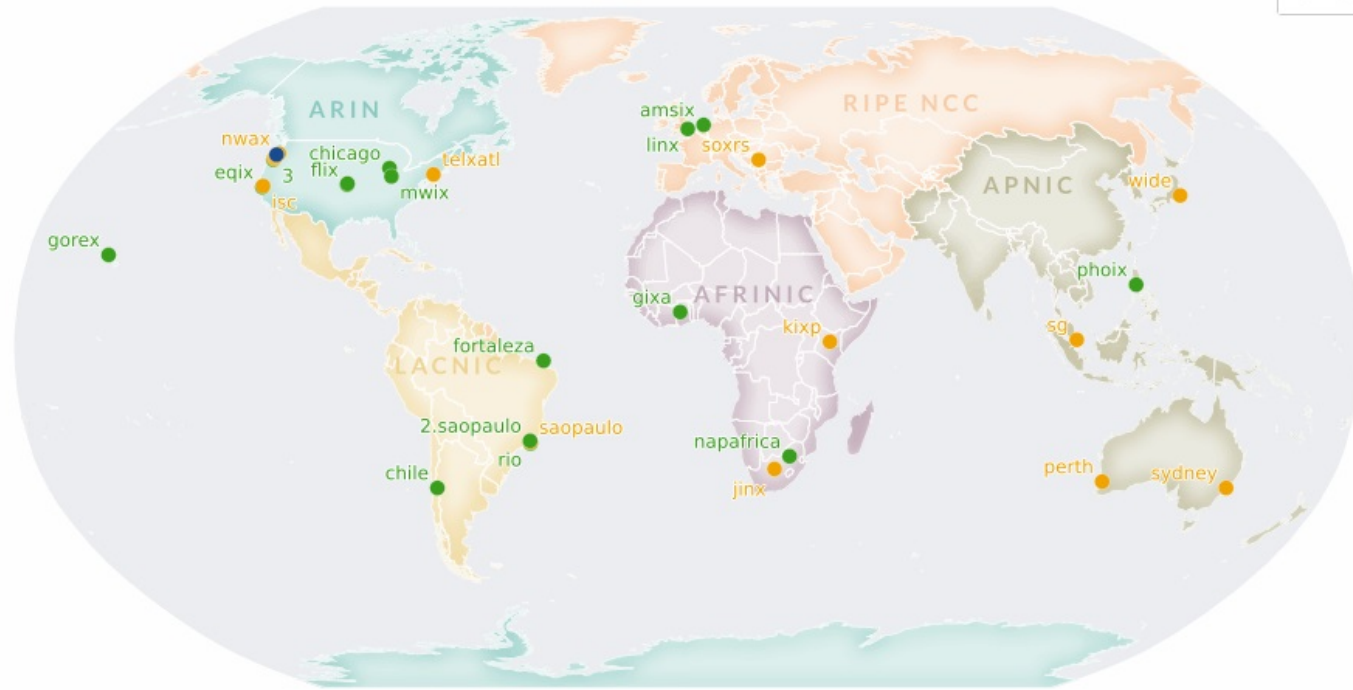
Reset Save Map

Zoom 1m 3m 6m YTD 1y All

From Dec 18, 2014 To Jul 27, 2016



- View in full screen
- Print chart
- Download PNG image
- Download JPEG image
- Download PDF document
- Download SVG vector image
- Download CSV
- Download XLS
- View data table
- Open in Highcharts Cloud



Filter collectors Collectors graphs Regional graph

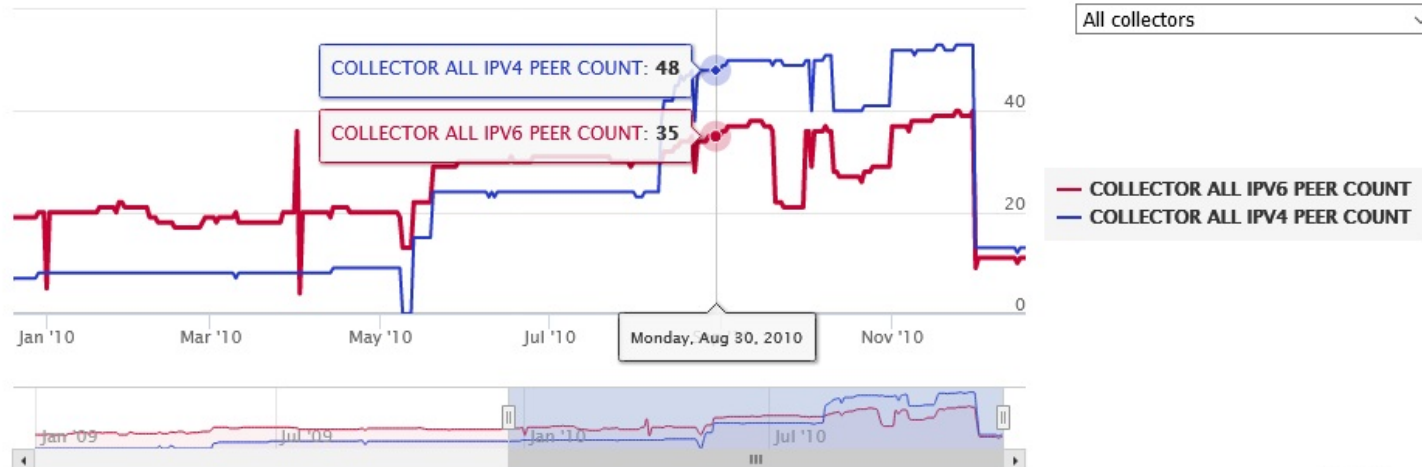
Search collectors by name or IP...

Maintain filters during search

Reset Save Map

Zoom 1m 3m 6m YTD 1y All

From Dec 20, 2009 To Dec 20, 2010



Thank you.

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