



**RIPE  
NCC**

# **RIPE NCC Measurements Tools Workshop**

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**Tehran | November 2014**

## RIPEstat

- Introduction to RIPE and the RIPE NCC
- Introduction to RIPEstat
- More about widgets
- List of widgets
  - *Exercise: Querying for a Resource*
- Useful routing widgets
  - *Exercise: BGPlay*
- Handling abuse
  - *Exercise: Handling Abuse*
- Personalising RIPEstat
  - *Exercise: MyView*
- Comparing results
  - *Exercise: Comparing Results*
  - *Exercise: RIPEstat Use Cases*

## RIPE Atlas

- Introduction to RIPE Atlas
- What you can get from RIPE Atlas as a visitor
- Exploring public probes
  - *Live Demo*
- Finding public measurements
  - *Exercise F: Analyse results*
- Creating a measurement
  - *Exercise G: Create a measurement*
- Network Monitoring
  - *Exercise H: Setting up 'Status Checks'*
- More RIPE Atlas features
- How to host a probe
- Advanced topics
  - Use cases and success stories
  - RIPE Atlas anchors
  - RIPE Atlas community



# Introduction to the RIPE NCC

## Section 1



**RIPE**  
NCC





- **RIPE NCC**
- **Located in Amsterdam**
- **Not-for-profit organisation**
- **One of the five Regional Internet Registries (RIRs)**
- **10,000+ members (LIRs)**

# Our service region

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## RIR SERVICE REGIONS





- **Distribute IPv4, IPv6, ASNs**
- **Training courses**
- **RIPE Database**
- **Support RIPE community**
- **RIPE Atlas, RIPEstat, Resource Certification**

- Started in 1989
- Discussion forum open to all parties interested
- Not a legal entity and no formal membership
- Develops policies
- Work done in Working Groups
- Activities are performed on a



# Introduction to RIPEstat

## Section 2



**RIPE**  
NCC

One interface for viewing all Internet number resource data

“One-stop shop”



**Search RIPEstat**

Your network: AS3333, 2001:67c:2e8::/48

e.g.: IPv4 prefix/range, IPv6, ASN

- **RIPE Database**
- **Other RIR data**
- **BGP routing data (RIS)**
- **Active measurements (RIPE Atlas, DNSMON)**
- **GeoLocation (third party)**
- **Blacklist data (third party)**
- **More...**



- IPv6 address
- IPv4 address
- ASN
- Hostname
- Country code

- **For your own network:**
  - Is someone else announcing my prefix?
  - How visible is my new IPv6 network?
  - Is my BGP routing consistent with Routing Registry?
  - Are my DNS and reverse DNS consistent?
  - Location of my customers' prefixes
  - Was my prefix visible yesterday in Tokyo?

- **For viewing other networks:**
  - How many IPv6 prefixes are announced in my country?
  - IPv6 in my country compared to neighbours
  - Who has more peers, AS1 or AS2?
  - How does the upstream outage look?
  - Is the prefix/ASN that I want already announced?
  - Which ASN announces an IP?
  - Where can I report abuse from an IP?

RIPEstat shows  
your own IP/ASN

RIPEstat Home • About RIPEstat • Documentation • Use Cases • Login

You are here: Home > Data & Tools > RIPEstat

**Search RIPEstat**

**AS3333**

Your network: **AS3333, 2001:67c:2e8::/3** e.g.: IPv4 prefix/range, IPv6, ASN

**BGPlay is back!**

Origin AS  
Collector peer  
Other  
Dynamic path

Number of ASes: 87  
Number of collector peers: 82  
Selected ASes: 0,1,6,7,11,12,15  
Total number of events: 95  
Date and time: 2012-06-15 12:44:57

Learn more

Learn more

Learn more

Learn more

RIPEstat Home • About RIPEstat • Documentation • Use Cases • Login

You are here: Home > Data & Tools > RIPEstat > AS3333

**AS3333**

RIPEstat Search

**More tabs with results**

- At a Glance (4)
- Routing (1)
- DNS (1)
- Anti Abuse (1)
- Database (5)
- Geographic (2)
- Activity (2)
- Suggestions (1)
- MyView

**Widgets**

**AS Overview (AS3333)**

Announced

Holder of this ASN:  
**RIPE-NCC-AS Reseaux IP Europeens Network Coordination Centre (RIPE NCC),NL**

Showing results for AS3333 as of 2014-07-25 08:00:00 UTC

source data embed code permalink info

**Geoloc (AS3333)**

Map | Satellite

Map Data Terms of Use Report a map error

• Geoloc details

Data is based on MaxMind's GeoLite City data set and valid for the stated query time (see below)

Showing results for AS3333 as of 2014-07-25 08:00:00 UTC

source data embed code permalink info

**Registry Browser (AS3333)**

Last updated on 2014-05-27 at 11:51:38 UTC.

aut-num: AS3333

as-name	RIPE-NCC-AS
descr	Reseaux IP Europeens Network Coordination Centre (RIPE NCC)
org	ORG-RIEN1-RIPE
admin-c	JDR-RIPE
admin-c	BRD-RIPE
tech-c	OPS4-RIPE
mnt-by	RIPE-NCC-END-MNT
mnt-by	RIPE-NCC-MNT

Showing results for AS3333 as of 2014-07-25 13:32:47 UTC

RIPE NCC members can access historical information by signing in with their LIR's RIPE NCC Access account.

source data embed code permalink info

**Routing Status (AS3333)**

At 2014-07-25 08:00:00 UTC, AS3333 was visible to 100% of 96 IPv4 and 100% of 95 IPv6 RIS full peers.

© First ever seen as origin announcing 193.0.0.0/21, on 2004-01-03 00:00:00 UTC.

Originated IPv4 prefixes: 6  
Originated IPv6 prefixes: 1  
Observed BGP neighbours: 509  
Address space announced (IPv4): 4608 IPs  
Address space announced (IPv6): equiv. to 1 /48s

• Advanced Settings

Showing results for AS3333 as of 2014-07-25 08:00:00 UTC

Results exclude routes with very low visibility (less than 3 RIS peers)

source data embed code permalink info



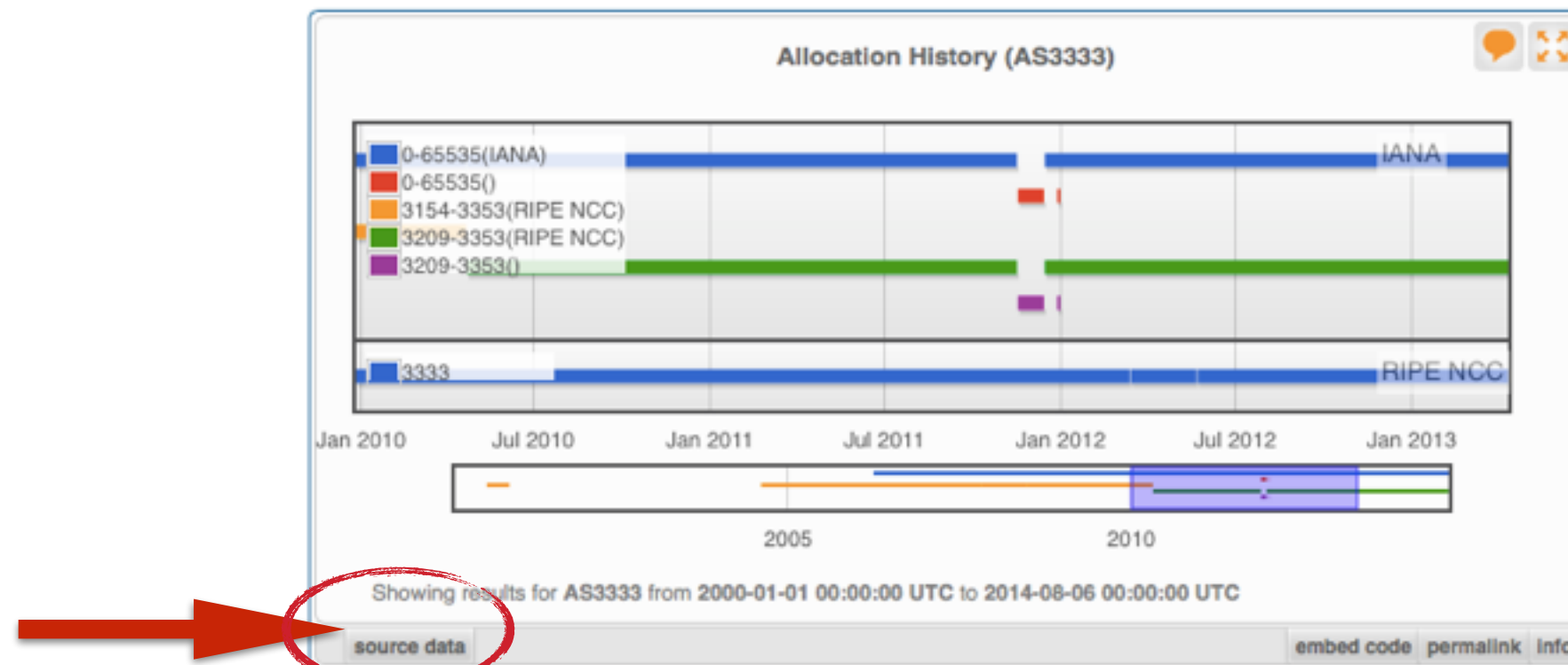
## More About Widgets

### Section 3



# Get the data behind the widget!

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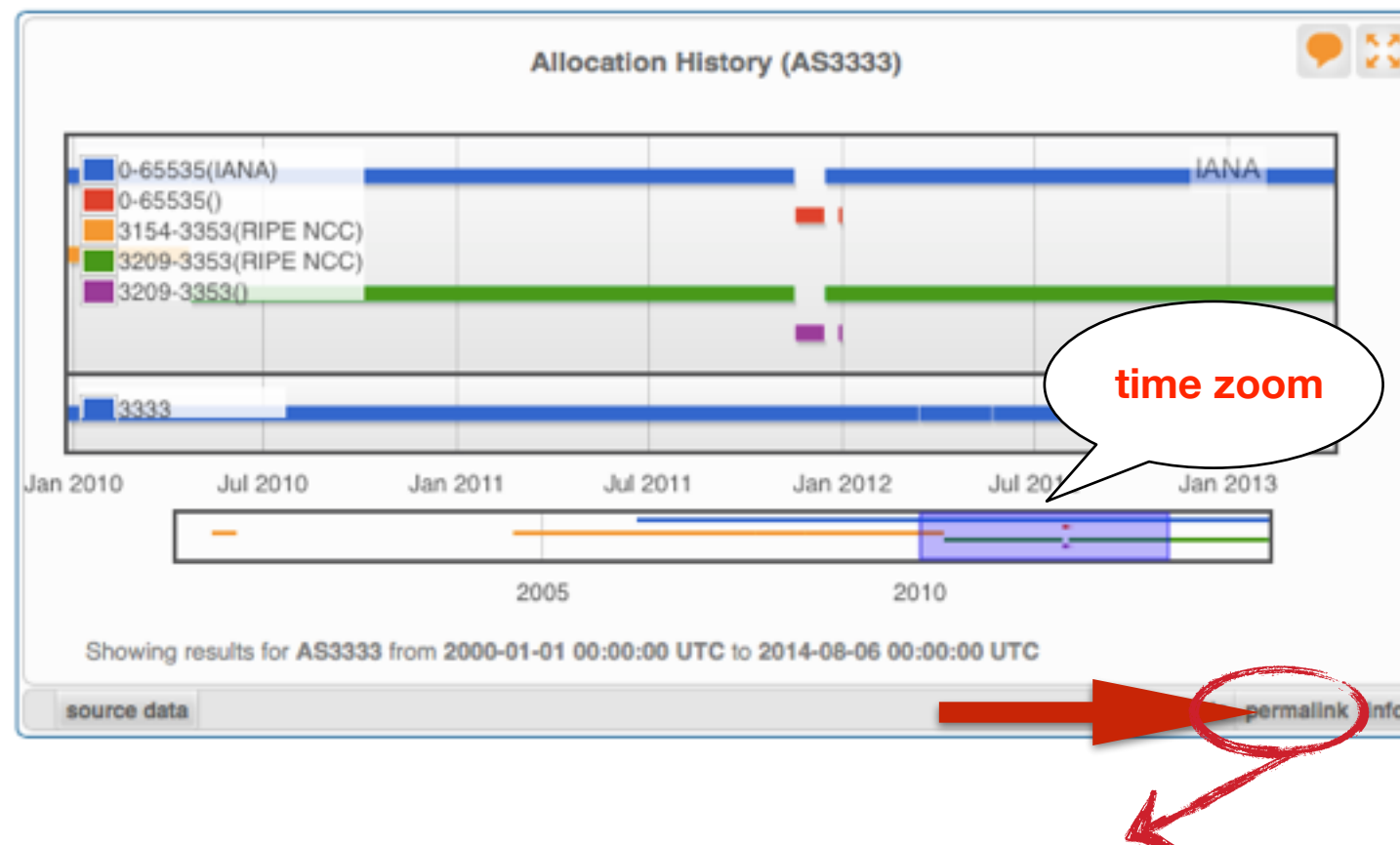


source data embed code permalink info

Get the data behind this widget with the Data API

<https://stat.ripe.net/data/allocation-history/data.json?resource=AS3333>

```
{
  "cached": true,
  "data": {
    "query_endtime": "2014-08-06T00:00:00",
    "query_starttime": "2000-01-01T00:00:00",
    "resource": "3333",
    "results": {
      "IANA": [
        {
          "resource": "0-65535",
          "status": "IANA",
          "timelines": [
            {
              "endtime": "2007-10-11T00:00:00",
              "starttime": "2007-10-11T00:00:00"
            },
            {
              "endtime": "2008-11-03T00:00:00",
              "starttime": "2007-10-27T00:00:00"
            }
          ]
        }
      ]
    }
  }
}
```

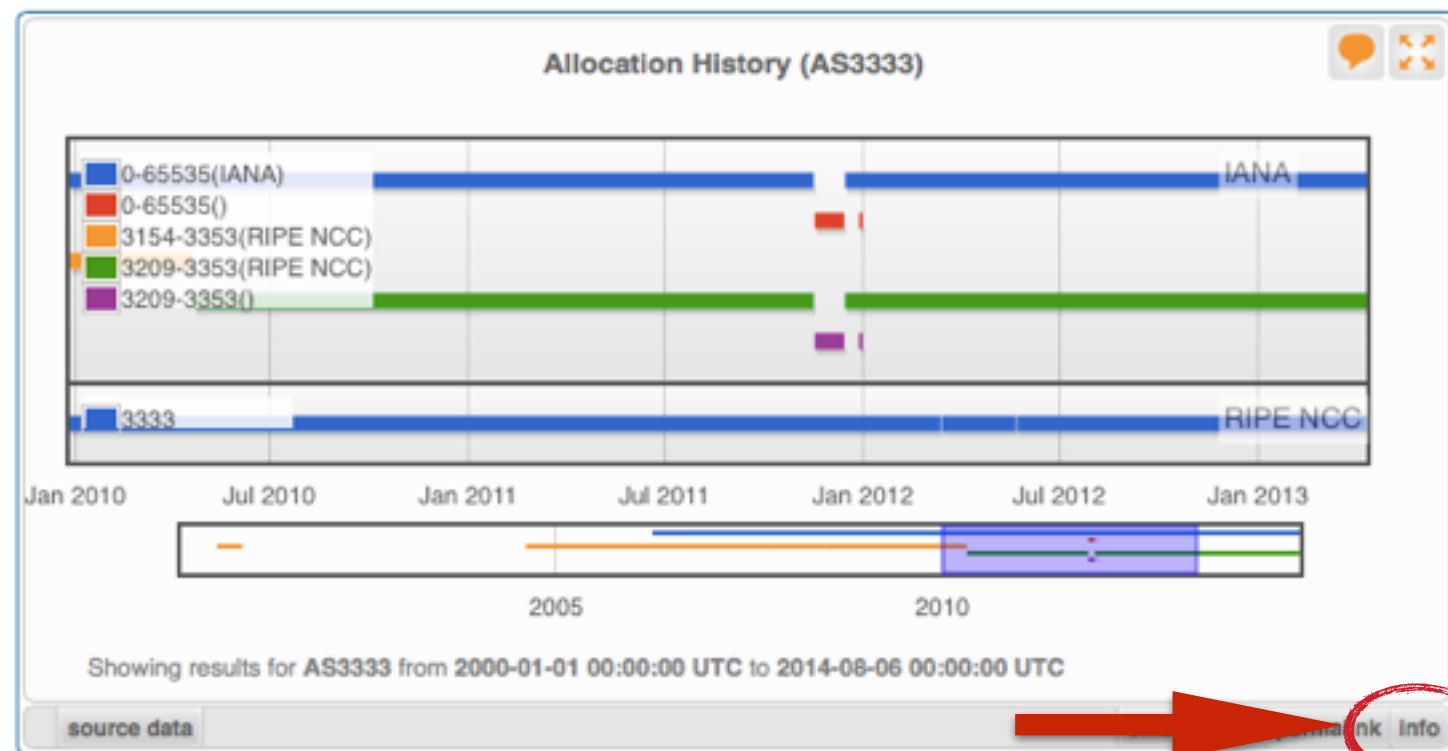


- Immutable shareable URL for each result!
- URL includes:
  - Zoom
  - History



# Where's the data from?

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source data embed code permalink info

### Content Explanation

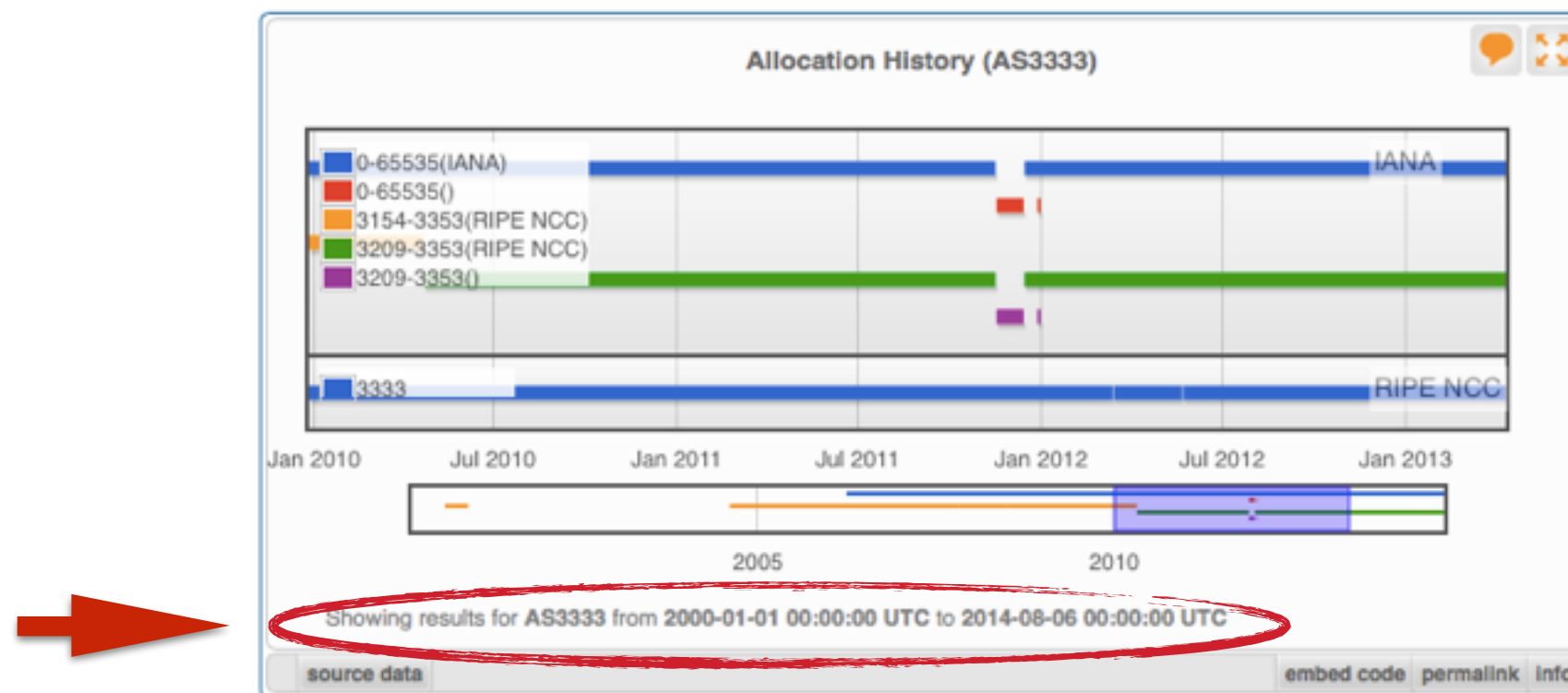
**What does this widget show?**  
Allocation History displays information about allocations and direct assignments of prefixes or AS numbers.

**How can the visualisation be interpreted?**  
When the queried resource was a prefix, the graph will show how that prefix and related (more or less specific prefixes) were allocated over time. When the queried resource was an ASN, the graph will show the allocation of that ASN.  
The legend will display all resources, including those which are not announced during the time range displayed. It is possible to change the displayed time period with the timeline selector underneath the graph.

The shaded area is displayed in the graph. This area can be adjusted by moving to the left or right end of the shaded area and then dragging it to the desired location. It is possible to change not only the start and end time, but also the length of the period which is shown.

**What is the data source?**  
The RIR statistics files summarise the current state of allocations and assignments of Internet number resources. They are intended to provide a snapshot of the status of Internet number resources, without any transactional or historical details. Find details for each RIR here:

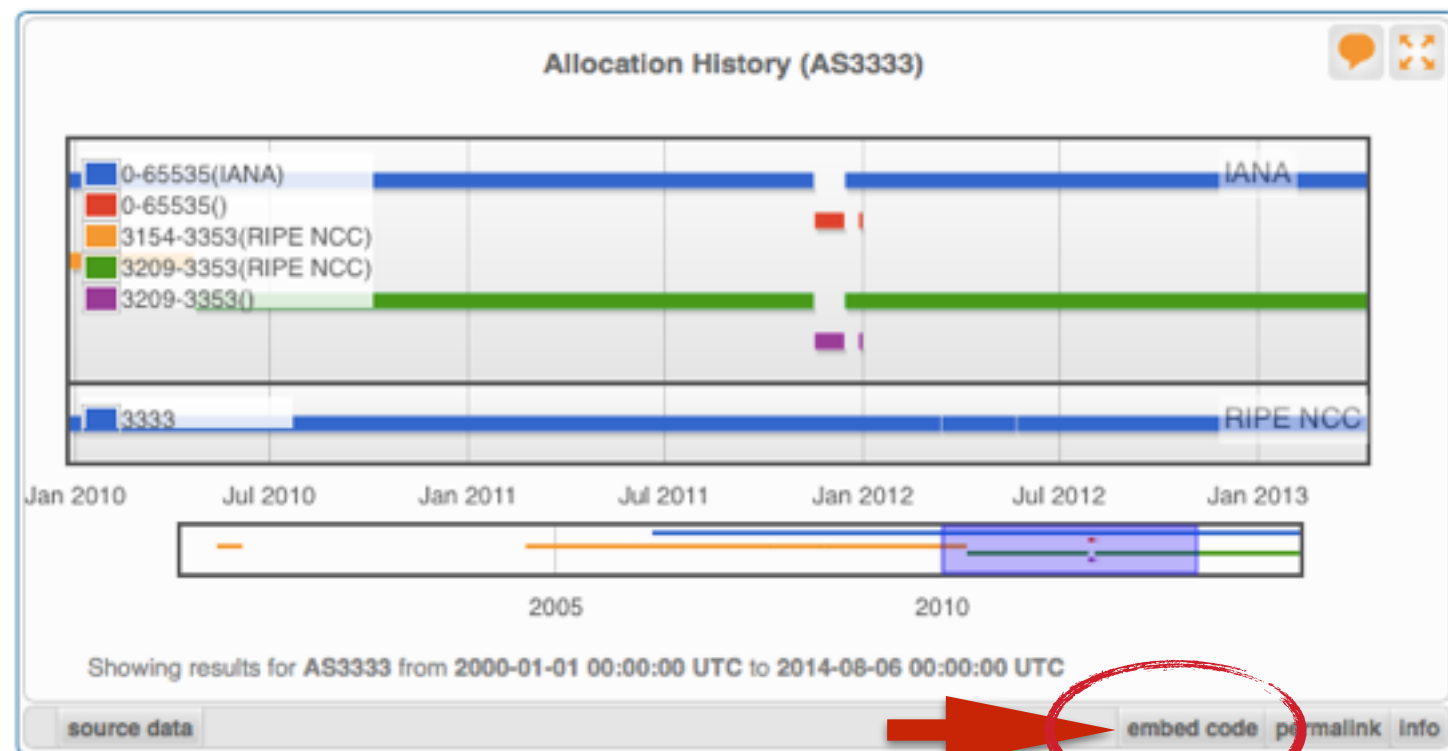
- AFRINIC
- APNIC
- ARIN
- LACNIC
- RIPE NCC



- Timestamp and time period of data
- Different widgets = different data update frequency
- Can be adjusted in most cases
  - Limits: Different maximum granularities

# Embed the widget!

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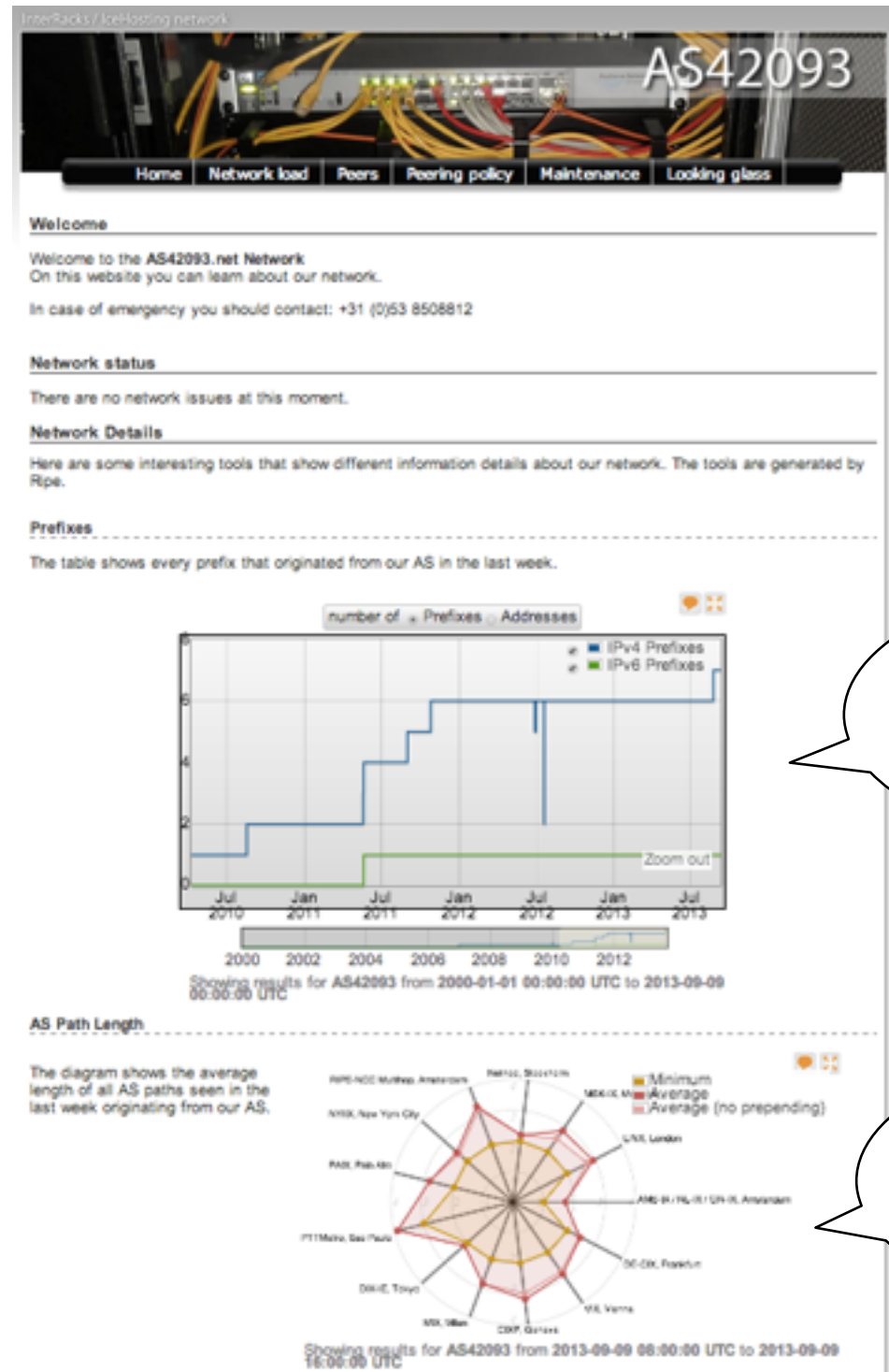
source data embed code permalink info

Embed this widget on your page

```
<script src="https://stat.ripe.net/widgets/widget_api.js"></script>
<div class="statwdgtauto"><script>ripestat.init("allocation-history",
{"resource":"AS3333"},null,{"size":"medium","disable":["controls"]})</script>
</div>
```

Copy and paste this code into an HTML webpage. Note: widget\_api.js (the 1st line) only needs to be included once per page.

For more usage details please view the RIPEstat Widget API documentation.



This ISP embedded widgets on its page

Prefix Count widget

AS Path Length widget

# List of Widgets

## Section 4



**RIPE**  
NCC

AS queried	Prefix queried
AS Overview	Prefix Overview
Registry Browser	Registry Browser
Geolocation	Geolocation
Routing Status	Routing Status

<https://stat.ripe.net/widget/list>












## RIPEstat Widgets

This is a complete list of all of the widgets that RIPEstat offers. Each of these widgets can be accessed using the links below.

When you view a widget you can also get code for **embedding** it in your own pages. The full procedure for embedding and configuring widgets is described in the Widget API Documentation.

Show  entries

Search:

Title (show slug)	Example	Prefix	IP address	ASN	Hostname	Country code
Abuse Contact Finder		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Address Space Hierarchy		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Address Space Usage		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Allocation History		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Announced Prefixes		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AS Overview		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AS Path Length		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AS Routing Consistency		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ASN Neighbours		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ASN Neighbours History		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RIPE Atlas Probes		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
RIPE Atlas Measurement Targets		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

AS queried	Prefix queried
Routing Status	Routing Status
BGP Update Activity	BGPlay
Routing History	BGP Update Activity
Announced Prefixes	Routing History
AS Path Length	Routing History
ASN Neighbours	BGP Looking Glass
ASN Neighbours History	Visibility
Prefix Count	Related Prefixes
Visibility	Prefix Routing Consistency
Prefix Size Distribution	
AS Routing Consistency	



AS queried	Prefix queried
Reverse DNS Consistency	Reverse DNS
	Reverse DNS Consistency

AS queried	Prefix queried
Abuse Contact Finder	Abuse Contact Finder
	Blacklist Entries

AS queried	Prefix queried
AS Overview	Prefix Overview
Registry Browser	Registry Browser
Allocation History	Address Space Hierarchy
Whois Matches	Allocation History
AS Routing Consistency	Address Space Usage
	RIR Prefix Size Distribution
	Prefix Routing Consistency
	Reverse DNS
	Whois Matches

AS queried	Prefix queried
Geolocation	Geolocation
Geolocation History	Geolocation History

AS queried	Prefix queried
RIPE Atlas Probes	Observed Bandwidth Capacity
RIPE Atlas Measurement Targets	Observed Network Activity
	Geolocation
	Geolocation History

AS queried	Prefix queried
RIPEstat Search Suggestions	RIPEstat Search Suggestions

**ROUTING  
DATABASE**

**ACTIVITY**



COUNTRY CODE queried	
	Country Routing Statistics
	Country Resource List
	Observed Bandwidth Capacity
	Observed Network Activity
	Address Space Distribution

**AT A GLANCE** {

**DNS** {

**GEOGRAPHIC** {

**ACTIVITY**

HOST NAME queried	
{	Geolocation
	DNS Chain
	Forward DNS
{	DNS Chain
	Forward DNS
{	Geolocation
	Geolocation History
	RIPE Atlas Measurement Targets





## **Exercise: Querying for a resource**

### **Exercise A**

**Refer to the exercise booklet**



**RIPE  
NCC**

- What network announces 140.78.50.90?
- Is 193.3.4.2 routed?
- In which country is 91.229.42.0/23 used?
- What is its corresponding INETNUM object?
- What widget provides real-time routing status?
- By what percent did the number of prefixes announced within Greece increase over the last two years?
- How would you share interesting network events with a colleague?



# Visualising BGP Routing Information

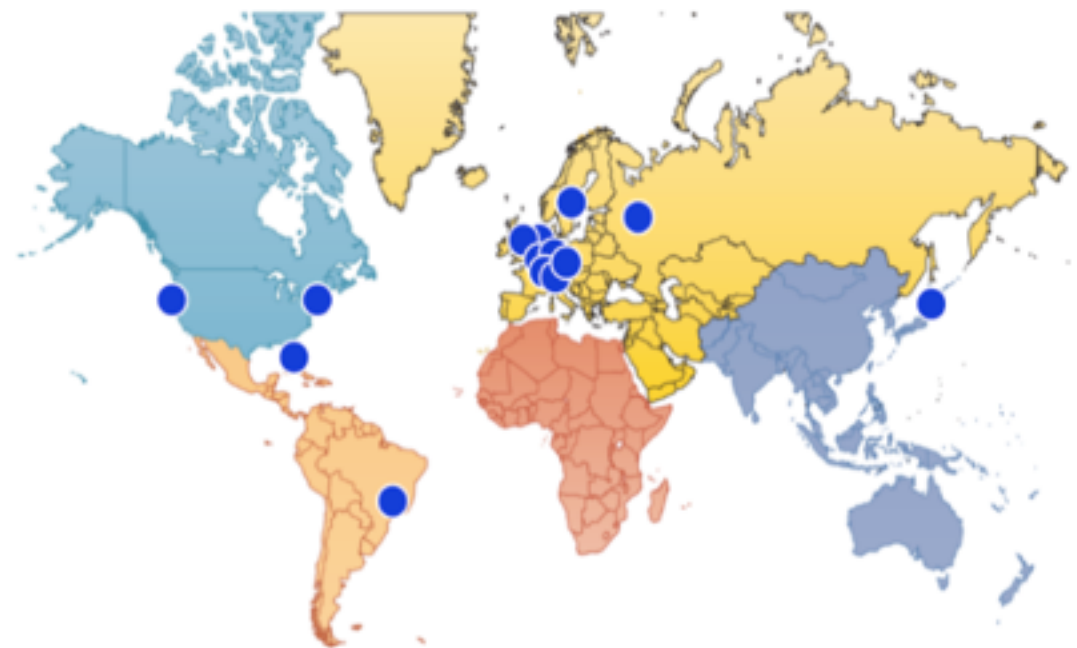
## Section 5



**RIPE**  
NCC

- **IP or ASN queried?**
  - You get different widgets!
- **ASN often visualised based on the prefixes it announces**

- RIPE NCC has been collecting BGP information since 1999
  - Raw data: [ris.ripe.net](http://ris.ripe.net)
- RIS has 15 route collectors and 600+ peers
- RIPEstat visualises RIS data



At a Glance

Routing

DNS

Anti Abuse

Databases

Geographic (2)

Activity (4)

Suggestions (1)

+ MyView ?

Prefix Overview (140.78.0.0/16)


Announced

This prefix is announced by  
AS1205  
JKU-LINZ-AS University Linz,AT  
and is part of 140.0.0.0/8, Legacy space,  
administered by ARIN.

Showing results for 140.78.0.0/16 as of 2014-08-13 08:00:00 UTC

source data embed code permalink info

Geoloc (140.78.0.0/16)



Geoloc details

Data is based on MaxMind's GeoLite City data set and valid for the stated query time (see below)

Showing results for 140.78.0.0/16 as of 2014-08-01 00:00:00 UTC

source data embed code permalink info

Registry Browser (140.78.0.0/16)

Last updated on 2014-05-27 at 12:53:54 UTC. Show more

inetnum:  
140.78.0.0/16

netname JKU-LAN  
descr Johannes Kepler University  
country AT  
org ORG-JKU1-RIPE  
admin-c ULAC1-RIPE  
tech-c ULNA1-RIPE  
status LEGACY  
mnt-by AS1205-MNT  
mnt-by ACONET-LIR-MNT

Showing results for 140.78.0.0/16 as of 2014-08-13 13:26:45 UTC

RIPE NCC members can access historical information by signing in with their LIR's RIPE NCC Access account.

source data embed code permalink info

Routing Status (140.78.0.0/16)

At 2014-08-13 08:00:00 UTC, 140.78.0.0/16 was 100% visible (by 97 of 97 RIS full peers).

First ever seen before Jan 2004 ( = beginning of available data).  
Originated by: AS1205 (valid route object in RIPE)  
No less-specific covering prefixes.

Advanced Settings  
Compare to 1 week earlier | ☒ Exclude low visibility routes

Showing results for 140.78.0.0/16 as of 2014-08-13 08:00:00 UTC

Results exclude routes with very low visibility (less than 3 RIS peers seeing).

source data embed code permalink info

Announced?  
By which AS?

Registered in  
the RIPE  
Database?

Announced?  
By which AS?  
What % visible?  
Since when?



**At a Glance** (4)

**AS Overview (AS1205)**

**Announced**

Holder of this ASN:  
**JKU-LINZ-AS University Linz,AT**

Showing results for AS1205 as of 2014-08-01 00:00:00 UTC

[source data](#) [embed code](#) [permalink](#) [info](#)

**Geoloc (AS1205)**

Map | Satellite

100.00%

Map Data Terms of Use Report a map error  
Geoloc details

Data is based on MaxMind's GeoLite City data set and valid for the stated query time (see below)

Showing results for AS1205 as of 2014-08-01 00:00:00 UTC

[source data](#) [embed code](#) [permalink](#) [info](#)

**Registry Browser (AS1205)**

Last updated on 2014-05-27 at 11:47:51 UTC. [Show more](#)

**aut-num: AS1205**

as-name JKU-LINZ-AS  
org ORG-JKU1-RIPE  
descr University Linz  
admin-c ULAC1-RIPE  
tech-c ULNA1-RIPE  
mnt-by AS1205-MNT  
mnt-by ACONET-LIR-MNT

Showing results for AS1205 as of 2014-08-13 13:49:15 UTC

RIPE NCC members can access historical information by signing in with their LIR's RIPE NCC Access account.

[source data](#) [embed code](#) [permalink](#) [info](#)

**Routing Status (AS1205)**

At 2014-08-13 08:00:00 UTC, AS1205 was visible to 100% of 97 IPv4 and 2% of 95 IPv6 RIS full peers.

First ever seen as origin announcing 193.186.172.0/22, on 2004-01-03 00:00:00 UTC.

Originated IPv4 prefixes: 3  
Originated IPv6 prefixes: 0  
Observed BGP neighbours: 2  
Address space announced (IPv4): 67584 IPs  
Address space announced (IPv6): equiv. to 0 /48s

**Advanced Settings**

Consent to  earlier | ☒ Exclude low visibility routes

Showing results for AS1205 as of 2014-08-13 08:00:00 UTC

Results exclude routes with very low visibility (less than 3 RIS peers seeing).

Given query time (2014-08-13 08:00:00 UTC) has been changed because it is earlier than the time there is data available for!

[source data](#) [embed code](#) [permalink](#) [info](#)

The rest is the same  
as for a prefix

- See how your network is routed
  - Announcements
  - Withdrawals
  - Path changes
- BGPlay shows routing history
  - Animated graphic
  - Highly interactive

<https://stat.ripe.net/widget/bgplay>



BGP event, ASN  
or ASN path details

click play

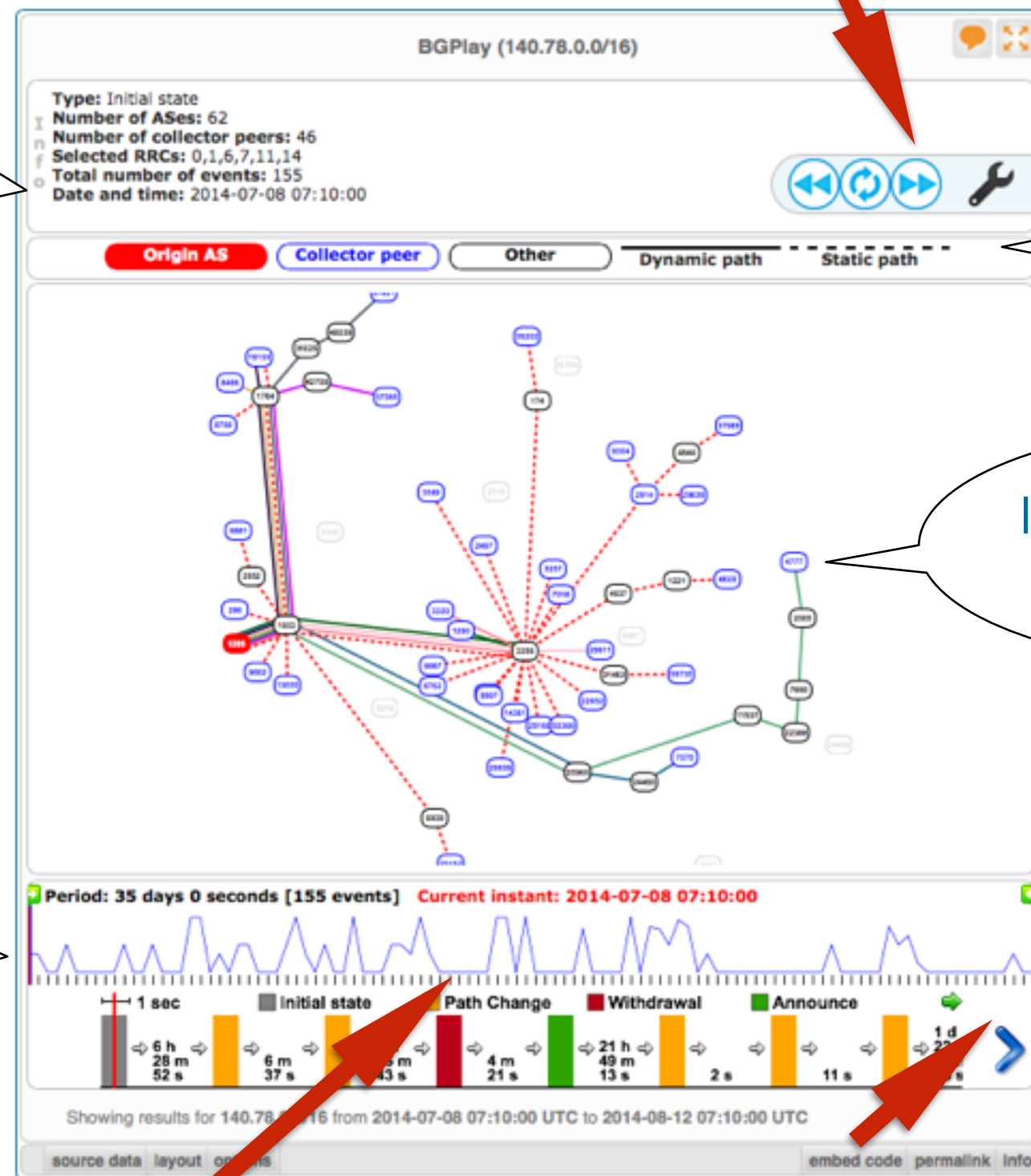
Control panel:

- Covered time period
- RRC selection

Interactive animated  
graph

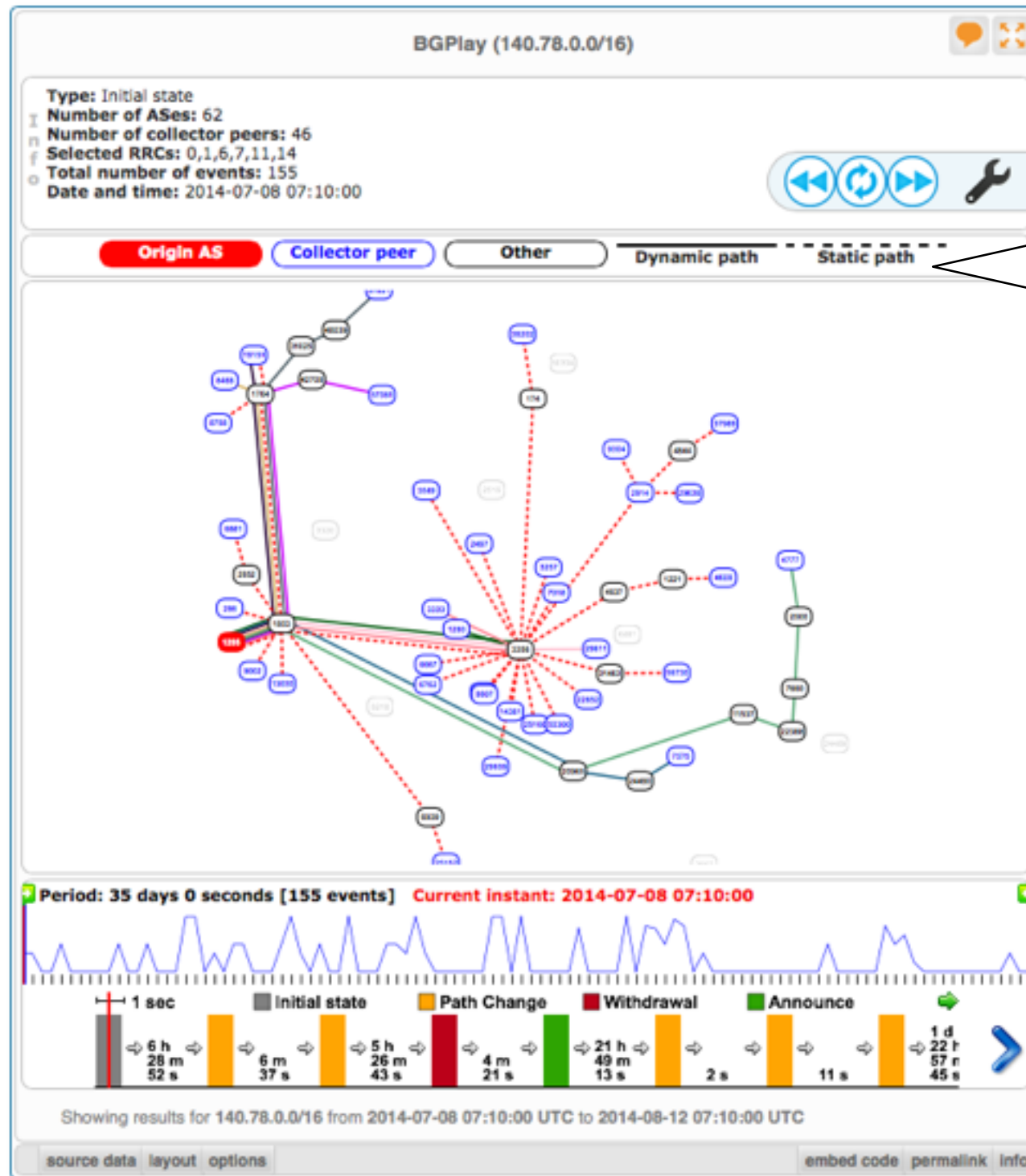
Control timeline

Detailed timeline  
with events



click play

click play movie



Examples: (2013/8/28-30)

- Prefix with announcements & withdrawals:  
84.205.64.0/24
- Check IPv6 connectivity:  
2001:67c:2e8::/48
- Multi-homed prefix:  
199.7.80.0/24
- BGP hijacking  
2008-02-28: 208.65.153.0/24  
Youtube traffic by Pakistan Telecom AS17557
- Blackholing:  
193.33.96.64

Announced Prefixes (AS1205)

Show 10 entries Search:

Prefix	First Seen ?	Last Seen ?
193.186.176.0/22	2014-07-30 08:00:00 UTC	2014-08-13 08:00:00 UTC
193.186.172.0/22	2014-07-30 08:00:00 UTC	2014-08-13 08:00:00 UTC
140.78.0.0/16	2014-07-30 08:00:00 UTC	2014-08-13 08:00:00 UTC


Showing 1 to 3 of 3 entries

[Click here to load the entire history, starting from 2004-01-01 00:00 UTC!](#)

[Advanced Settings](#)

☒ Exclude low visibility prefixes

Showing results for AS1205 from 2014-07-30 08:00:00 UTC to 2014-08-13 08:00:00 UTC

 Results exclude routes with very low visibility (less than 3 RIS peers seeing).

source data embed code permalink info

IPv4 vs IPv6?  
Sort by prefix  
or  
Search "." vs "::"

Time period  
shown in widget  
Default:  
last two weeks

### Announced Prefixes (AS1205)

Show 10 entries

Search:

Prefix	First Seen ?	Last Seen ?
193.186.176.0/22	2004-01-22 16:00:00 UTC	2014-08-13 08:00:00 UTC
193.186.172.0/22	2004-01-01 00:00:00 UTC	2014-08-13 08:00:00 UTC
193.171.8.0/24	2008-12-09 08:00:00 UTC	2008-12-11 16:00:00 UTC
193.171.32.0/20	2008-12-09 08:00:00 UTC	2008-12-11 16:00:00 UTC
193.171.200.0/21	2008-12-09 08:00:00 UTC	2008-12-11 16:00:00 UTC
193.170.32.0/21	2008-12-09 08:00:00 UTC	2008-12-11 16:00:00 UTC
140.78.0.0/16	2004-01-01 00:00:00 UTC	2014-08-13 08:00:00 UTC

Showing 1 to 7 of 7 entries

Advanced Settings

☒ Exclude low visibility prefixes

Showing results for AS1205 from 2004-01-01 00:00:00 UTC to 2014-08-13 08:00:00 UTC

i

Results exclude routes with very low visibility (less than 3 RIS peers seeing).

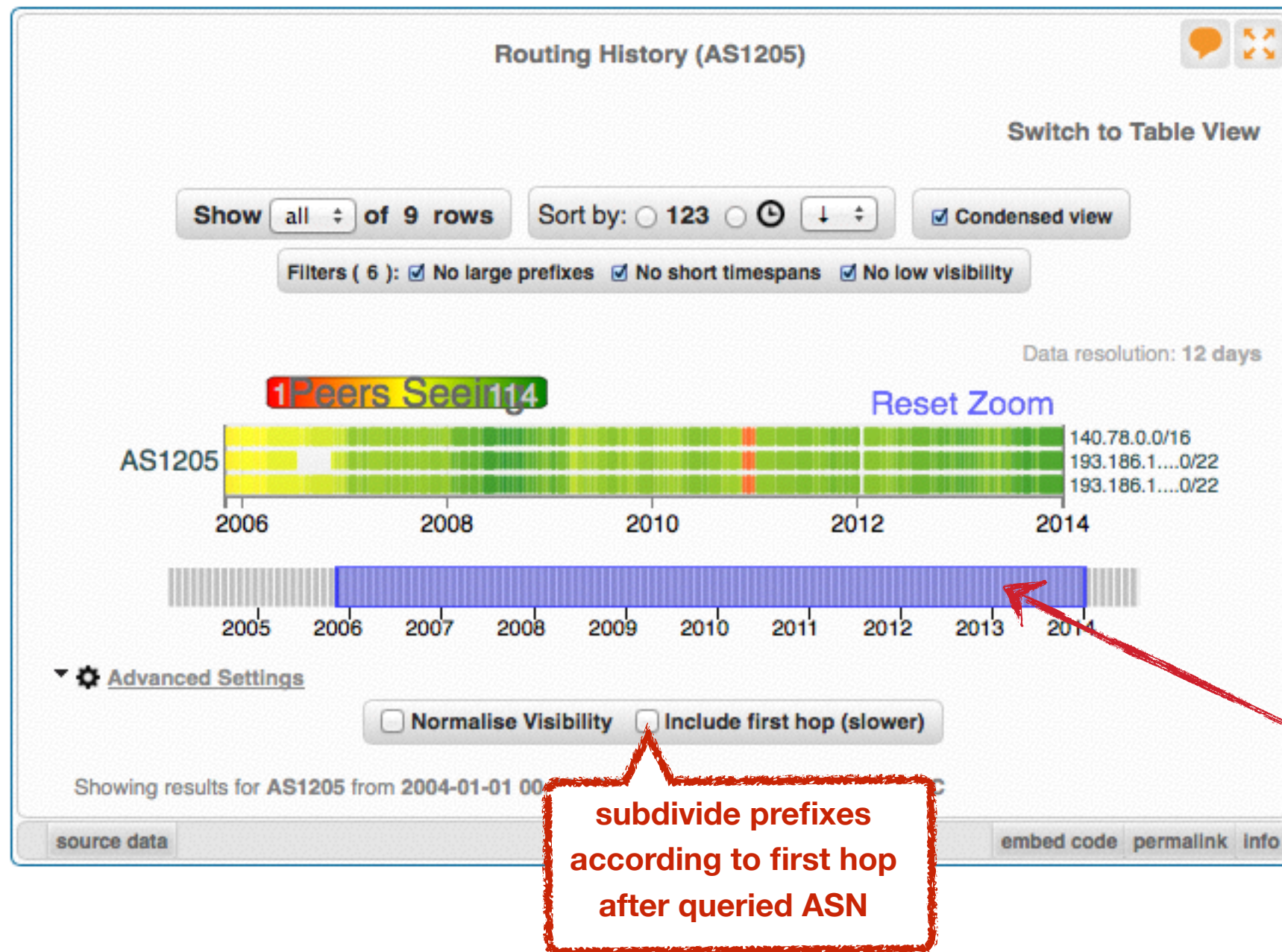
source data

embed code

permalink

info





Time scale  
selection



## Exercise: BGPlay

### Exercise B

**Refer to the exercise booklet**



**RIPE**  
NCC

- Find the up-stream provider for AS1205
- Is AS3333 multi-homed?
- Check the IPv6 connectivity of your own network

# Reporting Abuse

## Section 6



**RIPE**  
NCC



- **Who is attacking your network?**
- **What kind of attack is it?**

- Spam or unauthorised access?
  - Find IP in message headers or logs
- Want to contact their admin?
  - Find the correct email for reporting abuse
- RIPE Database
  - Contact details for every ASN and IP address
  - In Europe, the Middle East and parts of Central Asia

<https://labs.ripe.net/Members/cteusche/finding-anti-abuse-contact-information-with-ripestat>

- Take action with the Abuse Contact Finder

The screenshot shows the RIPEstat Abuse Contact Finder interface. At the top, a breadcrumb trail reads: RIPEstat Home • About RIPEstat • Documentation • Use Cases • Looking For Abuse Information. A red callout bubble points to the 'Use Cases' link, containing the text: 'Go to “Use Cases” > “Looking for Abuse Information”'. Below the breadcrumb, the page title is 'RIPEstat Abuse Contact Finder'. A descriptive paragraph states: 'The RIPEstat Abuse Contact Finder may be able to help you find the email address that should be used to report network abuse originating from a particular IP address.' Two information boxes follow: the first says 'You can learn more about network abuse in general and what you can do to stop it on the RIPE N Abuse Information page.' and the second says 'You can learn more about how the RIPEstat Abuse Contact Finder works and how to report abuse on this tutorial on RIPE Labs.' A red callout bubble points to the second box with the text: 'In -depth information about abuse'. The main form area is titled 'Abuse Contact Finder' and contains a text input field with the placeholder 'Enter an IP address'. A red callout bubble points to this field with the text: 'Enter IP address'. Below the input field are links for 'embed code', 'permanent link', and 'info'. At the bottom, a note states: 'For regular RIPEstat users: this widget, of course, can also be found on the regular result page in the “Anti Abuse” tab.'

Abuse Contact Finder (2001:67c:2e8::/48) **BETA**

Email-Contact

abuse@ripe.net

Contact-Quality-Rating

★★★★★ (5/5)

This contact can be used to report abuse.

☐ Show Complete Details  
☐ Info for Resource Holders

Showing results for 2001:67c:2e8::/48 as of 2013-08-30 14:39:00 UTC

**BETA** Beta status: Please note that even highly rated contacts can be incorrect

source data embed code permalink info

Rating of the contact

Email contact to report abuse

Abuse Contact Finder (2001:67c:2e8::/48) **BETA**

Email-Contact

**abuse@ripe.net**

Contact-Quality-Rating

★★★★★ (5/5)

This contact can be used to report abuse.

☐ Show Complete Details  
☐ Info for Resource Holders

Showing results for 2001:67c:2e8::/48 as of 2013-08-30 14:39:00 UTC

**BETA** Beta status: Please note that even highly rated contacts can be incorrect

source data embed code permalink info

Details about the resource and abuse contact:

☒ Show Complete Details

Details

- Results for

**193.0.18.0-193.0.21.255** ⓘ  
abuse@ripe.net from abuse-contact role

- Special Network Resource Information

This resource has been identified to be related to this information:  
RIPE NCC PI Allocation

Held by:  
**n.a.** ⓘ

- RIR Information

RIR	RIPE NCC
RIPE's Whois	<a href="https://apps.db.ripe.net/search/query.html">https://apps.db.ripe.net/search/query.html</a>



## **Exercise: Handling Abuse**

### **Exercise C**

**Refer to the exercise booklet**



**RIPE**  
NCC

- What is the abuse contact for 193.0.20.22 or the hotel network?
- Check an IP address from your home network
- Discussion: What can you do in these cases?
  - No abuse contact found
  - No response on an abuse report

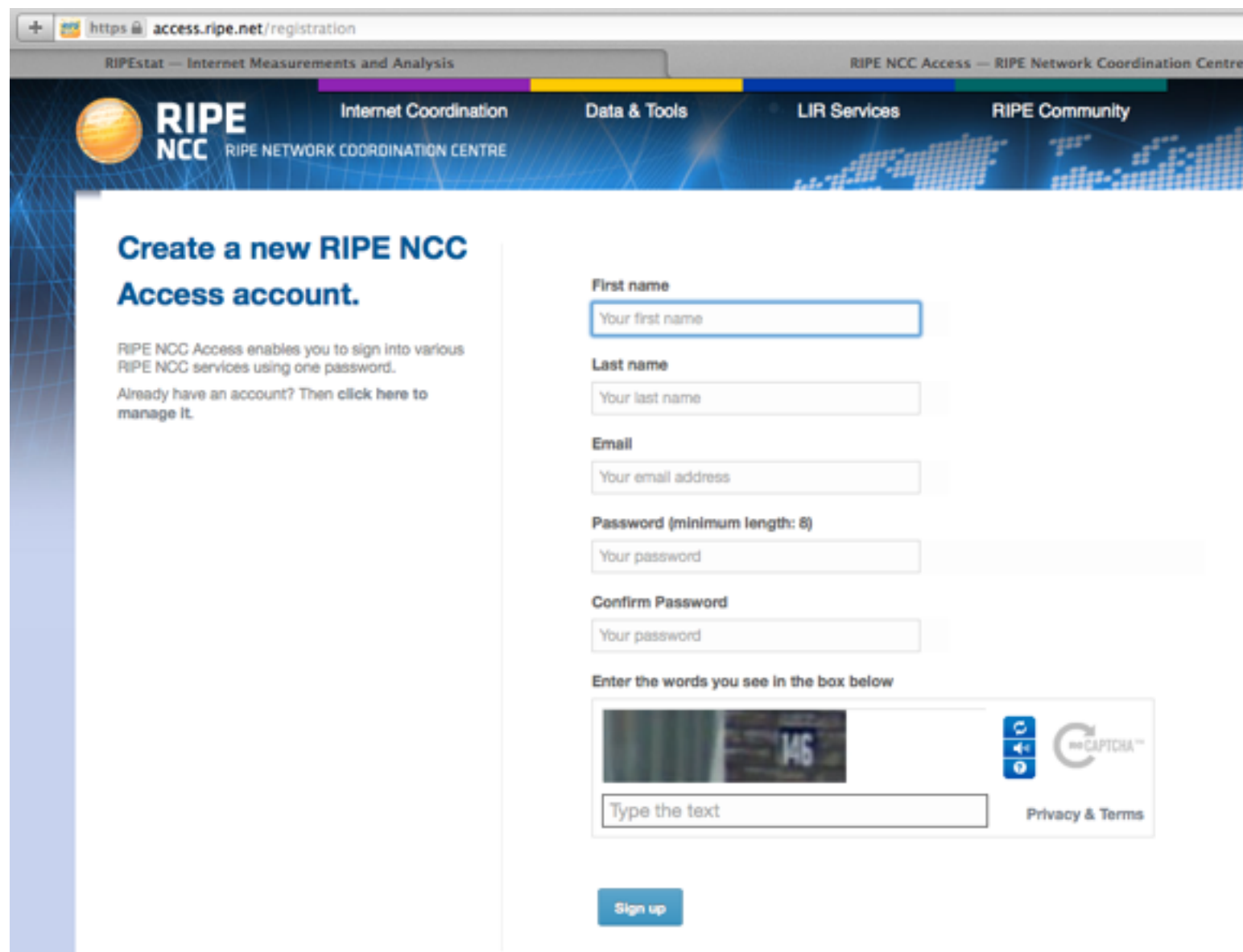
# Personalising RIPEstat

## Section 7





<https://access.ripe.net>

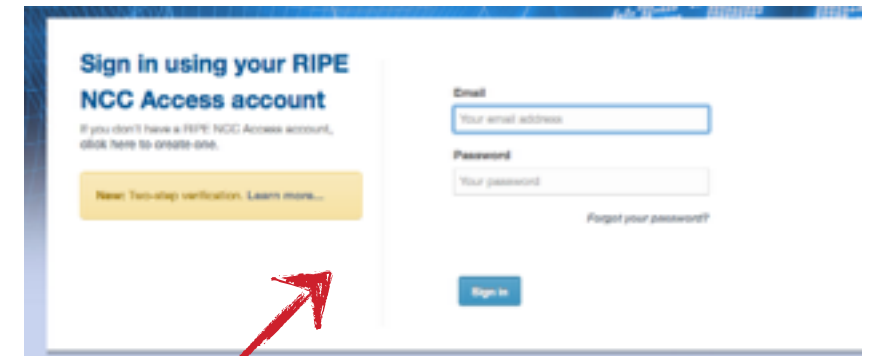


The screenshot shows the registration page for a RIPE NCC Access account. The browser address bar displays <https://access.ripe.net/registration>. The page header includes the RIPE NCC logo and navigation links for Internet Coordination, Data & Tools, LIR Services, and RIPE Community. The main heading is "Create a new RIPE NCC Access account." Below this, a paragraph explains that RIPE NCC Access enables signing into various services with one password, and a link is provided for existing accounts. The registration form consists of several fields: "First name" (placeholder: "Your first name"), "Last name" (placeholder: "Your last name"), "Email" (placeholder: "Your email address"), "Password (minimum length: 8)" (placeholder: "Your password"), and "Confirm Password" (placeholder: "Your password"). A CAPTCHA section follows, with the instruction "Enter the words you see in the box below" and a box containing the number "146". A "Type the text" input field is provided for the CAPTCHA. To the right of the CAPTCHA box are icons for CAPTCHA and a "Privacy & Terms" link. A blue "Sign up" button is located at the bottom of the form.

- If you have recurring lookup tasks that involve different widgets spread over multiple tabs
- Building a “history” of your lookups

# Log in to RIPE NCC Access account

63



Sign in using your RIPE NCC Access account

If you don't have a RIPE NCC Access account, click here to create one.


Never Two-step verification. Learn more...

Email  
Your email address

Password  
Your password

[Forgot your password?](#)

Sign in



RIPE Database Statistics RIPE Labs DNS RIPE Atlas RIPEstat

[RIPEstat Home](#) • [About RIPEstat](#) • [Documentation](#) • [Use Cases](#) • [Login](#)

You are here: [Home](#) > [Data & Tools](#) > RIPEstat

**Search RIPEstat**

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

Your network: [AS33333](#), [2001:67c:2e8::/48](#) e.g.: IPv4 prefix/range, IPv6, ASN

- **Create custom views**
  - Click the “MyView” button
  - Drag and drop the widgets you want to the MyView tab
- **Created under “ASN” or “IP”**

At a Glance (4)

Routing (11)

DNS (1)

Anti Abuse (1)

Database (5)

Geographic (2)

Activity (2)

Suggestions (1)

+ MyView

MyView-Test1 (2)

New (my-v... (0)

**Newly created MyView**

This view is empty :(

Add content by dragging a widget onto the tab of this view.

At a Glance (4)

Routing (10)

DNS (1)

Anti Abuse (1)

Database (5)

Geographic (2)

Activity (2)

MyView ? (2)

Resource Overview (AS)

RIPE-NCC-AS - Res

Europe's Network Co

Centre (RIPE NC

Showing results from 2013-04-23 00:00:00 UTC to

source data embed

Registry Browser (AS)

Last updated on 2012-04-17 at 10:12:15

aut-num: AS3333

as-name RIPE-NCC-AS

descr Reseaux IP Europ

Coordination Centr

org ORG-RIEN1-RIPE

admin-JDR-RIPE

permalink

For more information on custom views, please go to [custom views](#).

MyViews are only visible to you.  
The option to share your views  
will be available soon!

**Re-order widgets as you like**

**At a Glance (4)**  
Routing (11)  
DNS (1)  
Anti Abuse (1)  
Database (5)  
Geographic (2)  
Activity (2)  
Suggestions (1)  
+ MyView ?  
MyView-Test1 (2)  
**Monitor-2** (2)

**AS Overview (AS1205)**  
Announced  
Holder of this ASN:  
**JKU-LINZ-AS University Linz,AT**  
This ASN is part of 1-65535, the 16-bit ASN Block. This block contains all 16-bit ASNs, which are allocated to the RIRs according to <http://www.lana.org/assignments/as-numbers/as-numbers.xml> . See RFC 1930  
Showing results for AS1205 as of 2014-08-14 08:00:00 UTC  
source data embed code permalink info

**Routing Status (AS1205)**  
At 2014-08-14 08:00:00 UTC, AS1205 was visible to 100% of 97 IPv4 and 2% of 95 IPv6 RIS full peers.  
First ever seen as origin announcing 193.186.172.0/22, on 2004-01-03 00:00:00 UTC.  
Originated IPv4 prefixes: 3  
Originated IPv6 prefixes: 0  
Observed BGP neighbours: 2  
Address space announced (IPv4): 67584 IPs  
Address space announced (IPv6): equiv. to 0 /48s  
Advanced Settings  
Showing results for AS1205 as of 2014-08-14 08:00:00 UTC  
Results exclude routes with very low visibility (less than 3 RIS peers seeing).

- Rename
- Re-order
- Control visibility
- Remove

- MyView is only accessible after you have queried an ASN or IP
- A MyView created after an ASN query is only **visible** for other ASN queries
- A MyView created after IP query is only **visible** for other IP queries
- This can be changed via settings



Monitor-2 was created after an ASN query

Monitor-2's Settings

Resource Properties

Simplified Advanced

For what resource type should this view be visible:  
(Change by clicking on property)

☒ ASN ☐ IP ☐ Country

☐ Hostname

☒ view will be shown for resource type (e.g. 'ASN')  
☐ view will **not** be shown for resource type (e.g. 'ASN')

You can change visibility, to make Monitor-2 available for IP range queries

Monitor-2

First ever seen as origin announcing 193.0.0.0/21, on 2004-01-03 00:00:00 UTC.  
Originated IPv4 prefixes: 6  
Originated IPv6 prefixes: 1



- **RIPEAccess login required**
- **Customised selection of widgets**
- **It's like an extra tab, specifically for your queries**
- **By default, available for one type of resource (ASN or IP)**
- **Can't be shared**



## Exercise: MyView

### Exercise D

**Refer to the exercise booklet**



**RIPE**  
NCC

- **Create a RIPE Access account (if you don't already have one)**
- **Create a MyView for a prefix containing the following widgets:  
Routing Status, Looking Glass and Routing History**
- **Create another MyView with a least two widgets and give it a meaningful name**

# Comparing Networks

## Section 8



**RIPE**  
NCC

- Want to peer with AS-X?
  - Learn by opening multiple widgets about AS-X
- Choosing upstream ?
  - Compare AS-X with AS-Y by opening same widget loaded with two different ASNs
- Internet outage in a country?
  - Open multiple country-related widgets in same view

[https://labs.ripe.net/Members/suzanne\\_taylor\\_muzzin/ripestats-multiple-widget-and-resource-comparison](https://labs.ripe.net/Members/suzanne_taylor_muzzin/ripestats-multiple-widget-and-resource-comparison)

- Compare results in different widgets

RIPEstat Home • About RIPEstat • Documentation • Use Cases

You are here: Home > Data & Tools > RIPEstat

**Search RIPEstat**


Your network: AS3333, 2001:67c:2e8::/48 e.g.: IPv4 prefix/range, IPv6, ASN

**Compare Results**

Select up to six different widgets from the list to compare at one time. Different resources can be queried for each widget.

Select a widget

and a resource

+ Add  Permalink

**Select widget**

**Select resource**

**Compare Results**

Select up to six different widgets from the list to compare at one time. Different resources can be queried.

Select a widget: **Routing History** and a resource: **as3333**

+ Add / Permalink

**1** Select "Routing History" widget

**2** enter "AS3333"

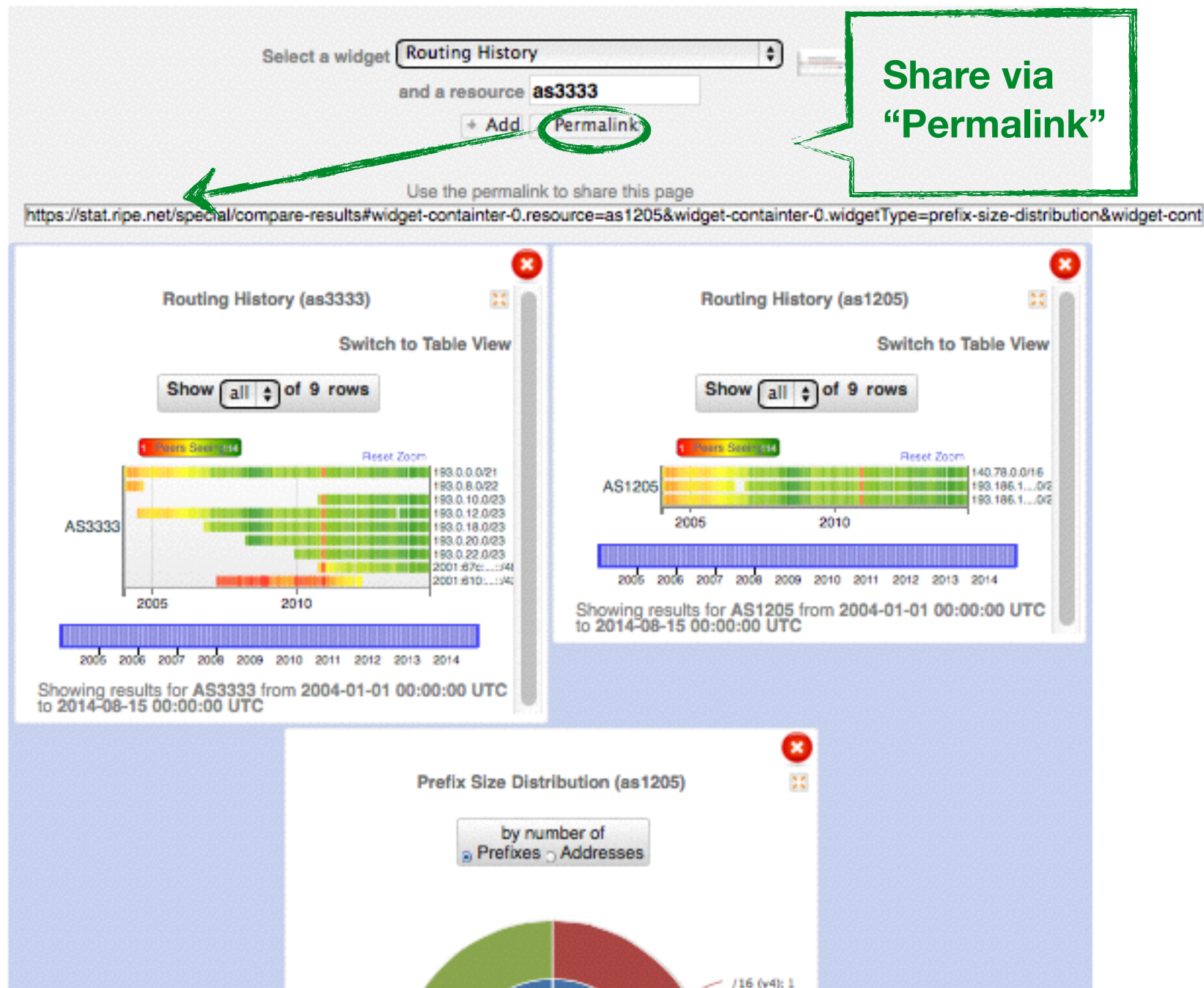
**3**

The screenshot displays the 'Compare Results' interface. At the top, a search bar shows 'Routing History' selected as the widget and 'as3333' as the resource. Below this, two 'Routing History' widgets are shown side-by-side. The left widget is for 'as3333' and the right is for 'as1205'. Both show a timeline from 2005 to 2014 with a color-coded bar representing the number of routes. The left widget is circled in red. Below the routing history widgets, a 'Prefix Size Distribution' widget for 'as1205' is shown, featuring a donut chart with three segments: IPv4 (3 (100%)), /16 (v4): 1, and /22 (v4): 2. At the bottom, there is a note: 'Results exclude routes with very low visibility (less than 3 RIS peers seeing)'.



## Compare Results

Select up to six different widgets from the list to compare at one time. Different resources can be queried for each widget.



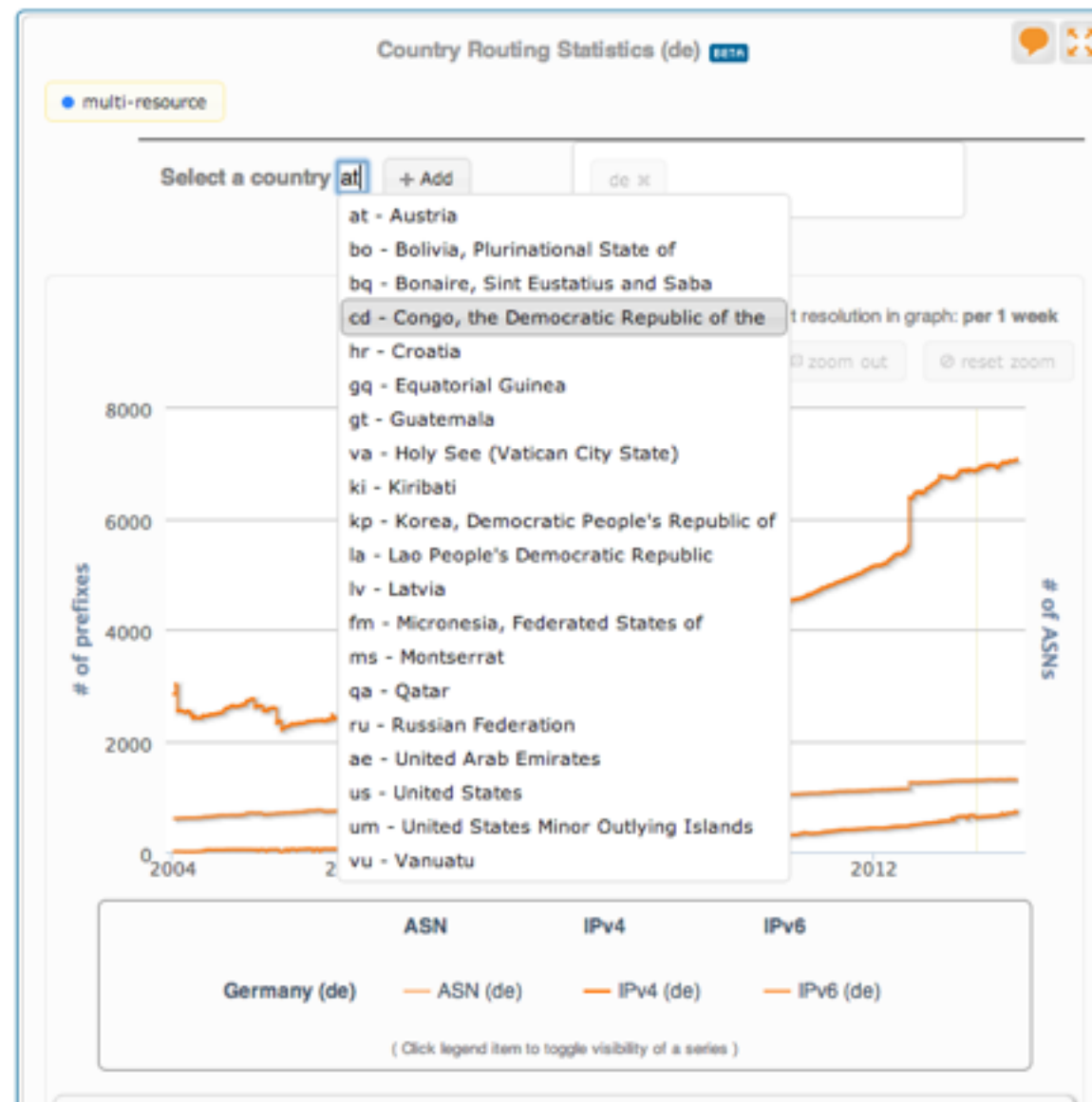
- No login required
- Add widgets **AND** input query for each widget (ASN or IP or...)
- It is a result page with widgets and query results
- Share it via a permanent link

- Compare the growth of ASNs in DE and NL
- See IPv6 adoption rate in four countries at the same time
- Analyse IP hijacking with 'BGP Update Activity Widget'

<https://labs.ripe.net/Members/wilhelm/bgp-leaks-in-indonesia>)

[https://labs.ripe.net/Members/suzanne\\_taylor\\_muzzin/new-in-ripestat-in-widget-comparison-and-monitoring](https://labs.ripe.net/Members/suzanne_taylor_muzzin/new-in-ripestat-in-widget-comparison-and-monitoring)

- Country Routing Statistics





## **Exercise: Comparing Results**

### **Exercise E**

**Refer to the exercise booklet**



**RIPE**  
NCC

- **Compare the number of announced prefixes for two networks over the past two years using the widget comparison page**
- **How does the Internet in Greece compare to the UK? Use in-widget comparison!**



## **Exercise: RIPEstat Use Cases**

### **Exercise F**



**RIPE**  
NCC



- **How can you see whether someone has hijacked your prefixes?**
- **How can you see whether you had an outage?**





# RIPE Atlas



**RIPE**  
NCC

## RIPE Atlas

- Introduction to RIPE Atlas
- What you can get from RIPE Atlas as a visitor
- Exploring public probes
  - *Live Demo*
- Finding public measurements
  - *Exercise F: Analyse results*
- Creating a measurement
  - *Exercise G: Create a measurement*
- Network Monitoring
  - *Exercise H: Setting up 'Status Checks'*
- More RIPE Atlas features
- How to host a probe
- Advanced topics
  - Use cases and success stories
  - RIPE Atlas anchors
  - RIPE Atlas community



# Introduction to RIPE Atlas

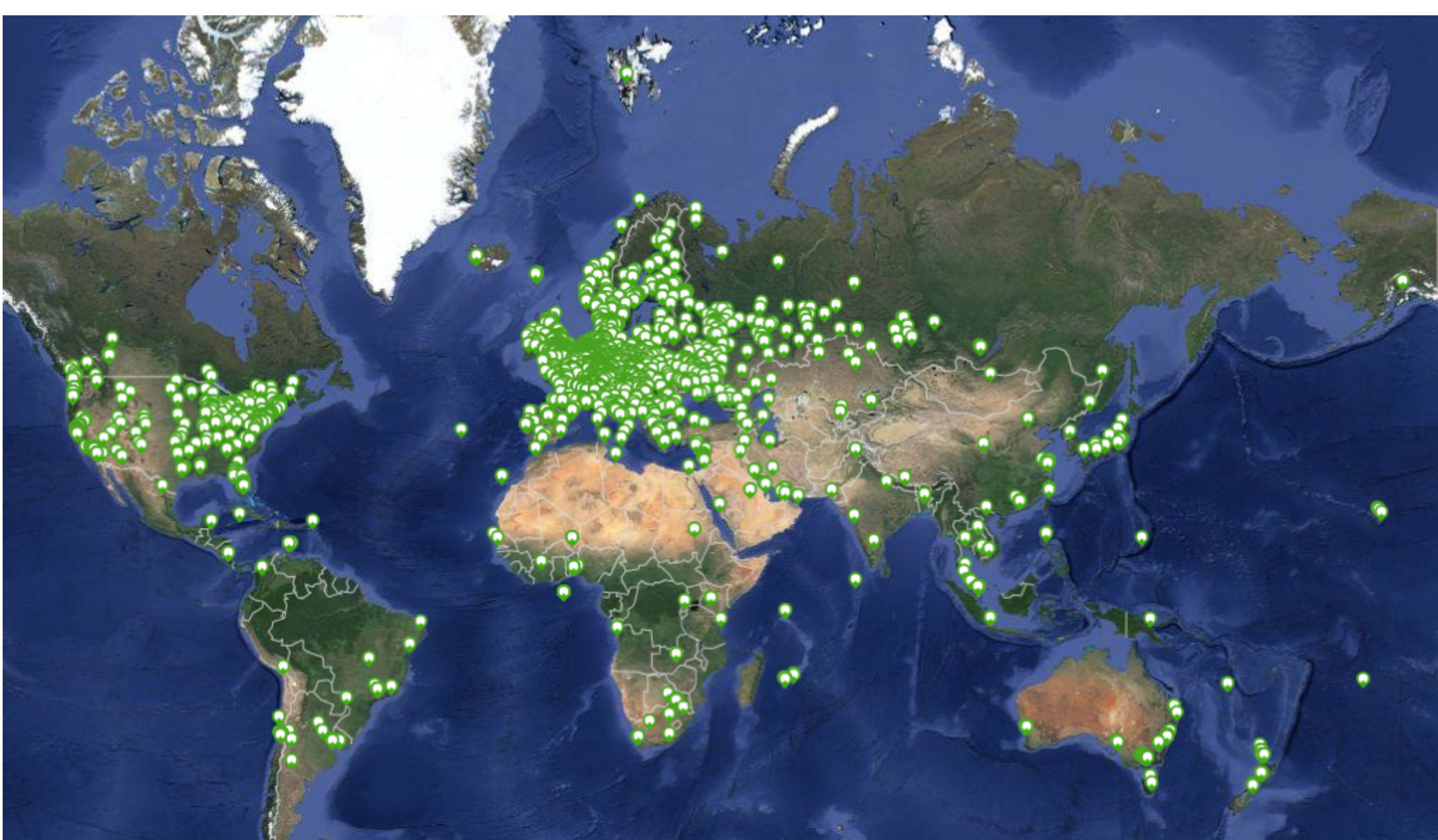
## Section 9



**RIPE**  
NCC

- **RIPE Atlas = global active measurements platform**
- **Goal: View Internet reachability**
- **Probes hosted by volunteers**
- **Measurements performed towards root name servers**
  - **Visualised as Internet traffic maps**
- **Users can also run customised measurements**
  - **ping, traceroute, DNS & SSL**
- **Data publicly available**

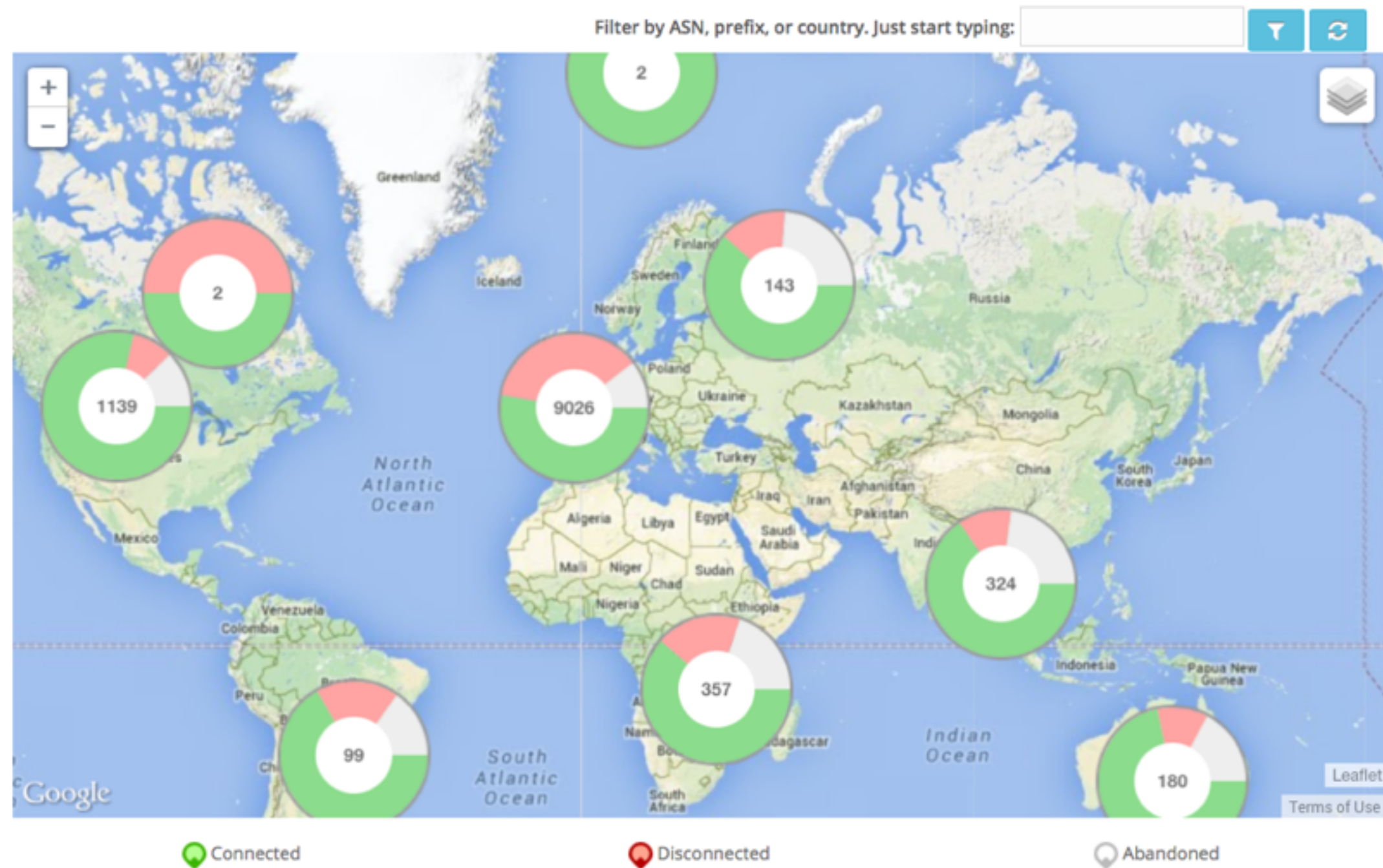






## Global RIPE Atlas Network Coverage

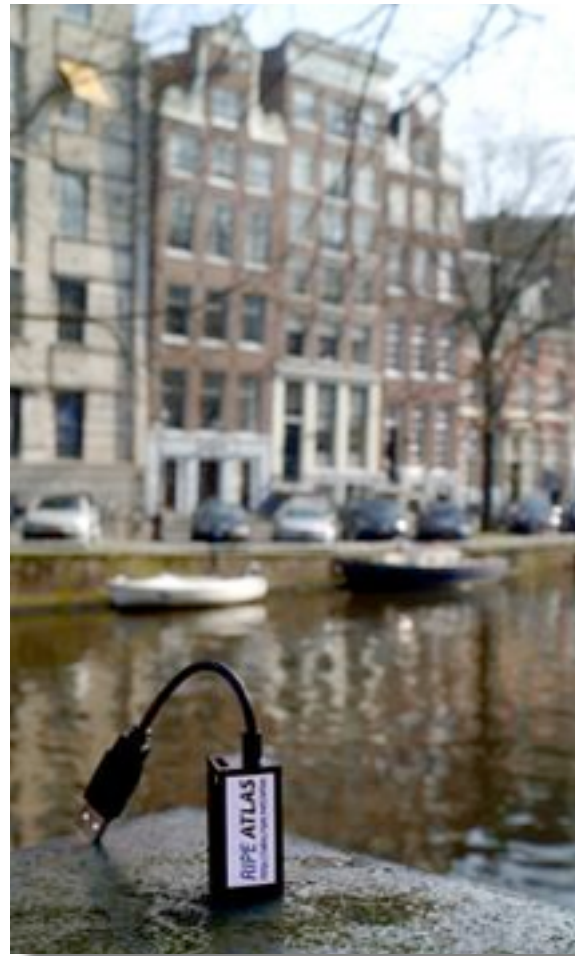
This map shows the locations of all RIPE Atlas probes, including those that are connected, disconnected and abandoned (meaning they have not been connected for a long period of time).



- v1 & v2: Lantronix XPort Pro
- v3: TP-Link TL-MR3020 powered from USB port
  - Does not work as a wireless router
  - Same functionality as the old probe
- RIPE Atlas anchor: Soekris net6501-70







- 7,300+ probes connected
- 4,500+ active users this year
- 1,000+ built-in measurements daily
- 5,000+ user-defined measurements daily
  - Available to hosts and members
  - ping, traceroute, DNS, SSL
- Goal by end 2014:
  - 10000 connected probes

Country	Probes
United States	749
Germany	723
France	616
United Kingdom	518
Russia	400
Nederland	385
Ukraine	171
Czech Republic	157
Belgium	156
Italy	136

- <https://atlas.ripe.net>
- Users mailing list: [ripe-atlas@ripe.net](mailto:ripe-atlas@ripe.net)
- Articles & updates on RIPE Labs:  
<https://labs.ripe.net/atlas>
- Questions and bugs: [atlas@ripe.net](mailto:atlas@ripe.net)



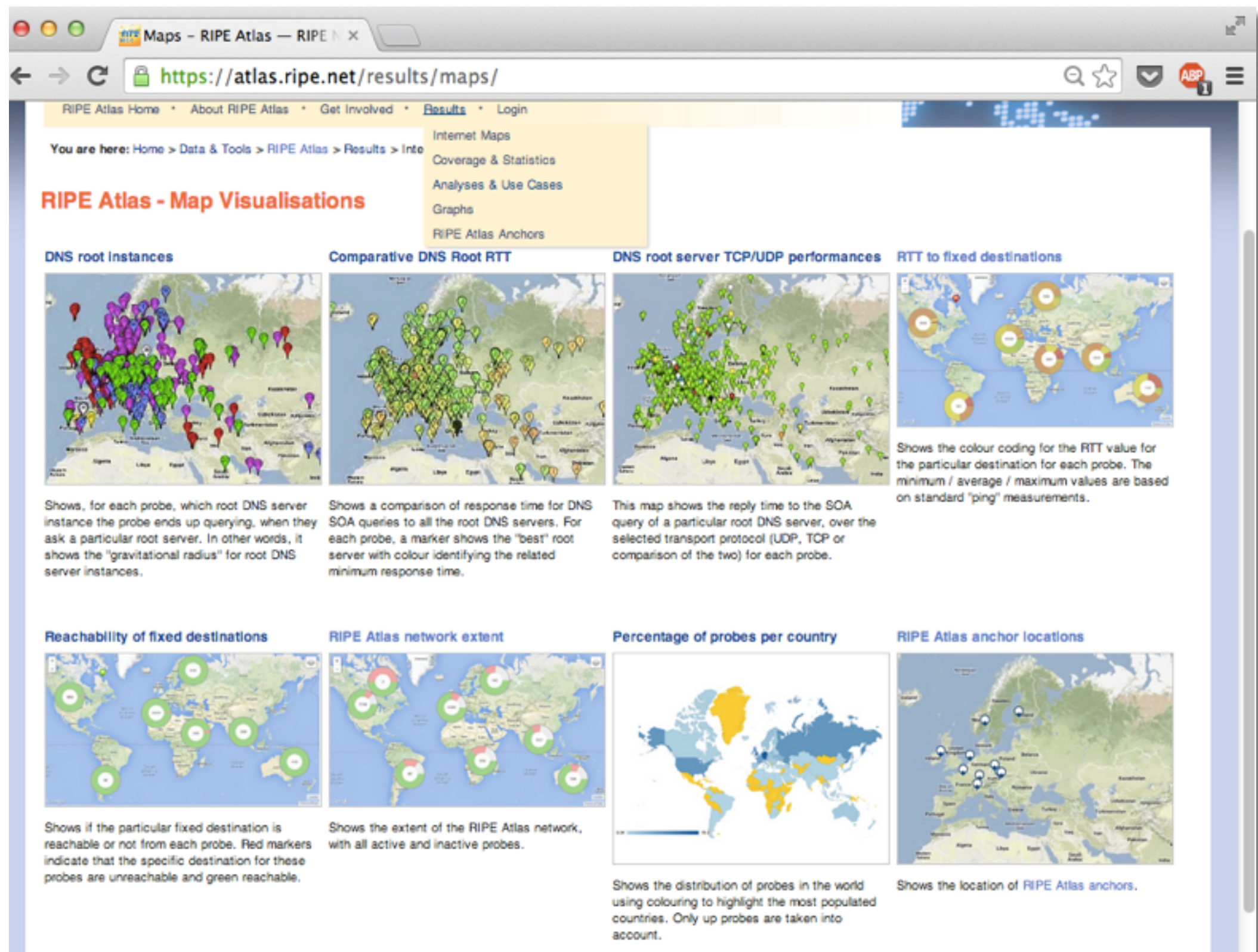
# What you can get from RIPE Atlas as a visitor

## Section 10



**RIPE**  
NCC

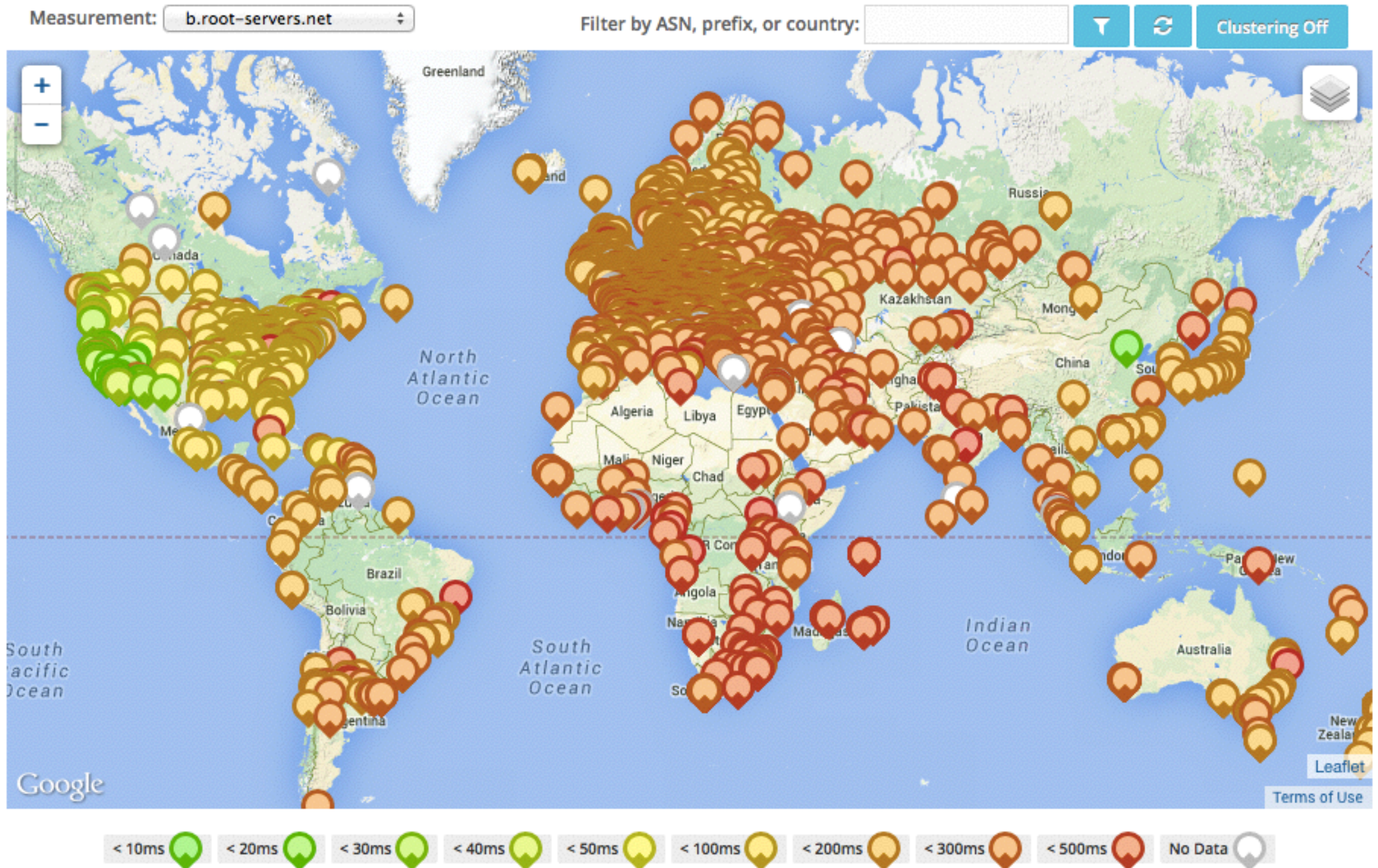






# Where is B-root?

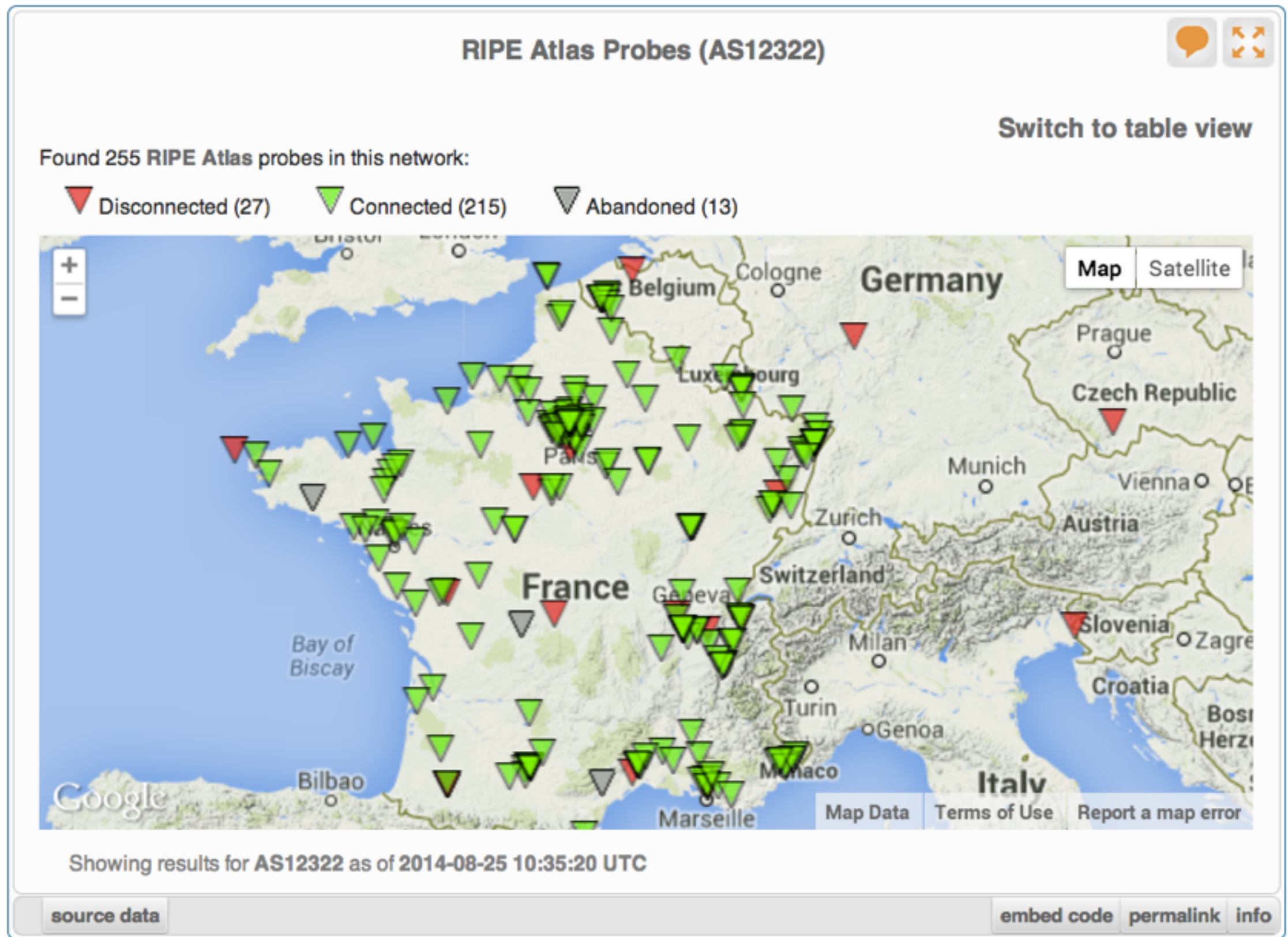
97





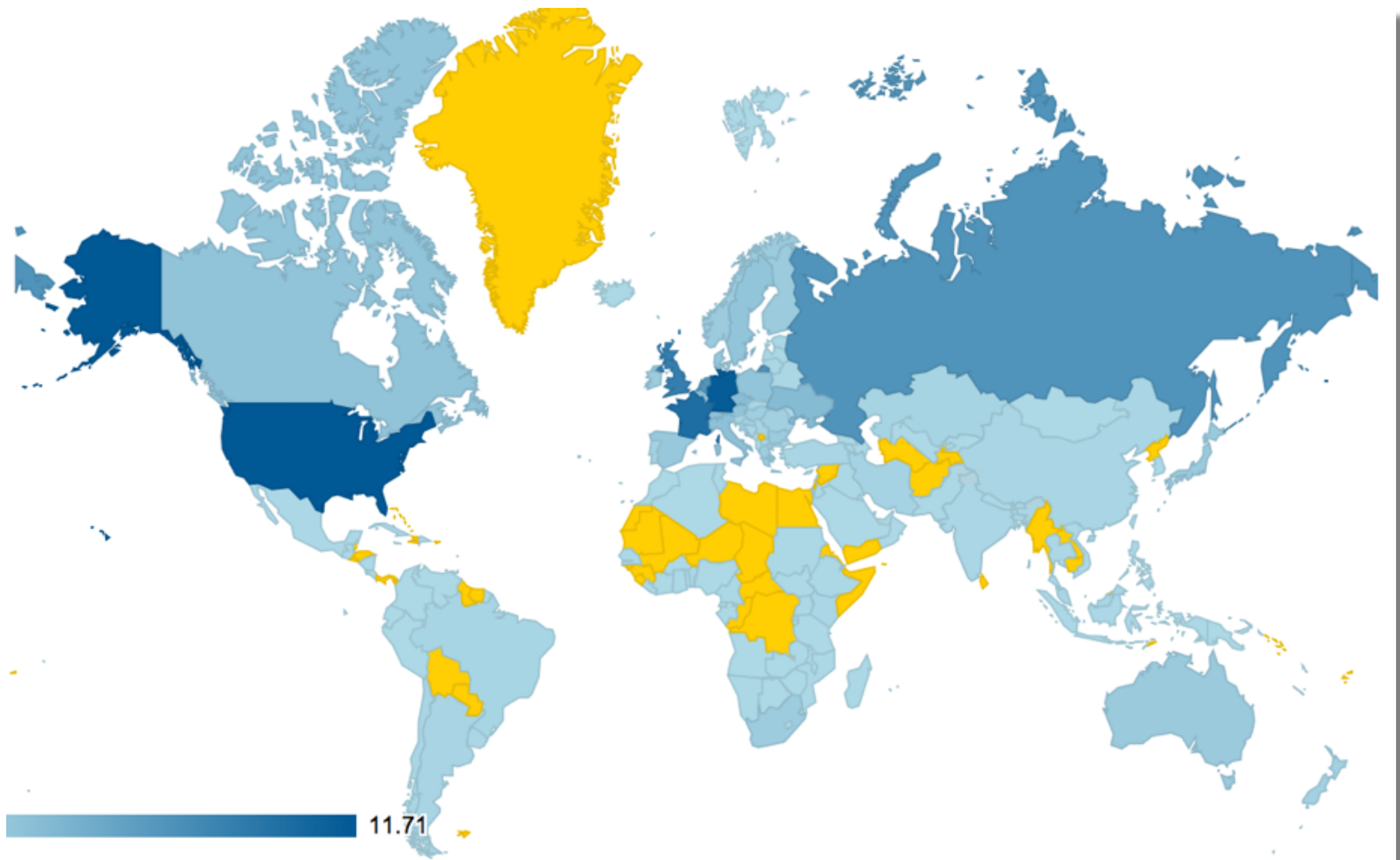
# Probes per ASN (in RIPEstat)

98



# Where we want to place probes

99





## RIPE Atlas: Measurements With Tagged Probes Coming Soon

Suzanne Taylor Muzzin — Sep 12, 2014 12:05 PM

We've been busy working on a number of developments, and we're really excited about a particular that will be ready soon: creating customised measurements using tagged probes. Learn more about it - along with some other recent additions - and let us know what you think.

Tags: atlas, measurements, tools

## Time Warner Cable Outage

Emile Aben — Aug 28, 2014 04:50 PM

The Time Warner Cable network suffered an outage on 27 August 2014 between approximately 9:40 and 10:55 UTC. We looked at some interesting details of the outage using RIS and RIPE Atlas.

Tags: atlas, routing

## RIPE Atlas Midsummer Update 2014

Fatemah Mafi — Jul 24, 2014 05:30 PM

Since RIPE 68 in Warsaw, the RIPE NCC has developed and released new features for the RIPE Atlas. We would like to inform the community of what we've been working on and how you can benefit from the RIPE Atlas service.

Tags: atlas, statistics

## How RIPE Atlas Helped Wikipedia Users

Emile Aben — Jul 09, 2014 12:25 PM

Engineers from the Wikimedia Foundation and the RIPE NCC recently collaborated on a project to measure the latency of Wikimedia sites for users worldwide. Together, they found ways to decrease latency and improve performance for users around the world.

ايرسل پاسخ جستجو در اين مبحث... جستجو

### پروژه بين المللى سنجش اينترنت - رايپ اطللس

توسط Khoramyar « سه شنبه مارس 18, 2014 1:42 pm »

سازمان رايپ - <http://www.ripe.net> - به عنوان يکي از پنج سازمان متولى منابع اينترنت جهانى پروژه بسيار جالب و جذابى را به نام پروژه اطللس شروع کرده است.

وب سايت رسمى پروژه اطللس: <https://atlas.ripe.net>

#### کاوشگران کوچک شبکه:

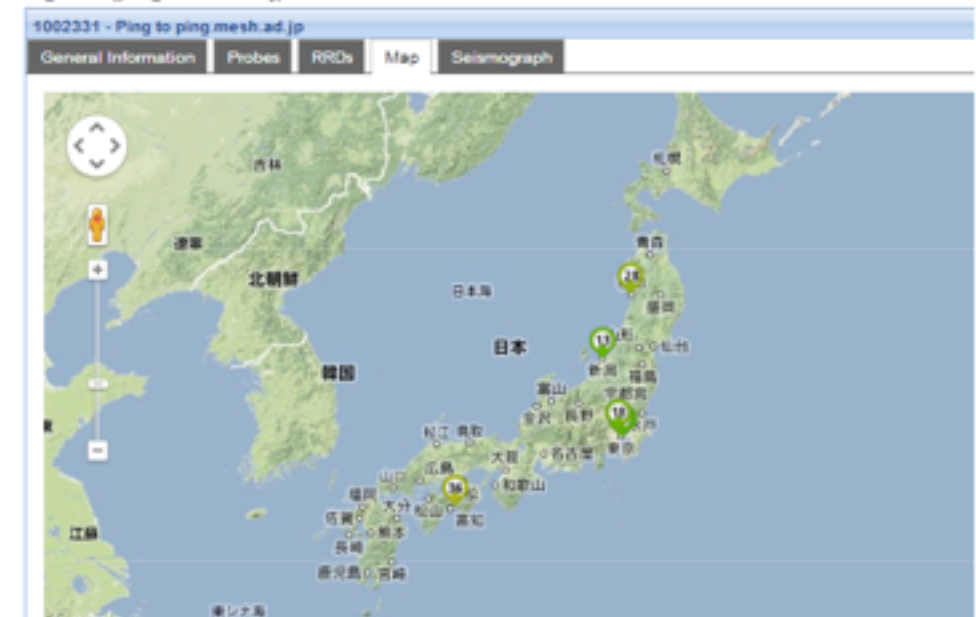
سازمان رايپ، با تغيير دادن نرم افزار مودم هاى کوچکى از شرکت TPLink آنها را به Probe ها يا کاوشگر هاى کوچکى تبديل کرده و آنها را به رايگان در اختيار متقاضيان ميگذارند. متقاضيان از کشور هاى مختلفى آنها را دريافت ميکنند و به اينترنت هاى ميارل و محل کارشان متصل ميکنند و اين کاوشگرها از نزديک ترين مودم به پروتکل DHCP آي پي دريافت کرده و از خط اينترنت با مراکز سنجش رايپ تماس ميگيرند. مراکز سنجش رايپ، به صورت ريموت به اين کاوشگر ها دستور ميدهند که چه سنجش هاى را انجام دهند.

اين سنجش ها شامل دستور هاى ساده شبکه مثل Ping - Traceroute و چند سنجش ديگر مثل DNS و امثال آنها است.

### 標準以外の計測先の追加

任意の宛先 (UDM) を登録して計測を行うことも可能です。My Atlas>Measurements>New リックして計測先を作成します。任意の宛先への計測には「クレジット」が必要になります。プロの稼働時間に応じて (24時間連続稼働すると21,600クレジットが貯まる) 溜まっていき、TraceRouteを行う度に消費 (pingは1回につき3クレジットを消費) されます。

biglobe (ping.mesh.ad.jp) へのUDM



# Looking up public probes

## Section 11



**RIPE**  
NCC

- **Create an RIPE NCC Access account**
  - Same for LIR Portal, RIPE Atlas, RIPEstat, RIPE Labs...
- **Advanced**
- **‘LIR contact’: additional benefits!**
  - Membership benefits for RIPE Atlas
  - Share probe management with LIR colleagues
  - Historical RIPE Database view in RIPEstat
- **Add yourself as ‘contact’ in LIR Portal**

# Searching for Probes

RIPE Atlas Home

Results • My Atlas: BECHA (Xs4all) • Logout

You are here: Home > Data & Tools > Probes

Filter by id/asn/location/country/description

Connected

My Favourite Probes

My Sponsored Probes

Public Probes

Probes

Measurements

Credits

API Keys

Anchors

Sponsorships

Settings

Id	ASN v4	ASN v6	Country	Description	Connection Status
20857	11775				4 days, 4 hours
20856	18			AirJaldi	3 days, 20 hours
20845	4766				5 days, 3 hours
208				MG-Home	1 week
208				Afilias YYZ1	1 week, 5 days
20825	4739	4739			2 weeks, 5 days
20488	5769	5769		Letiprobe	1 day, 20 hours
20444	5607			Cam	1 day, 11 hours

Filter based on ASN, Country, Location...

My Atlas / Probes

Possible to mark probes as favourites



Randomdata hackerspace

https://atlas.ripe.net/probes/4170/

[RIPE Atlas Home](#) • [About RIPE Atlas](#) • [Get Involved](#) • [Results](#) • [My Atlas: BECHA \(Xs4all\)](#) • [Logout](#)

You are here: [Home](#) > [Data & Tools](#) > [RIPE Atlas](#) > [Probes](#) > [Probe #4170](#)

## Randomdata hackerspace

General Information

Network Information

Results from Built-in Measurements

User-defined Measurements

### General Information

Id	4170
MAC Address	00:80:A3:91:41:79
Architecture	probev1
Firmware Version	4650
Router Type	
Bandwidth Limit	Not set
DNS Entry	Off
Shared Publicly	Yes
Tags	<span>NAT</span>

### Management Sharing

Only the probe host is permitted to administer this probe.

 1 week, 3 days

**Firmware** #4170  
4650

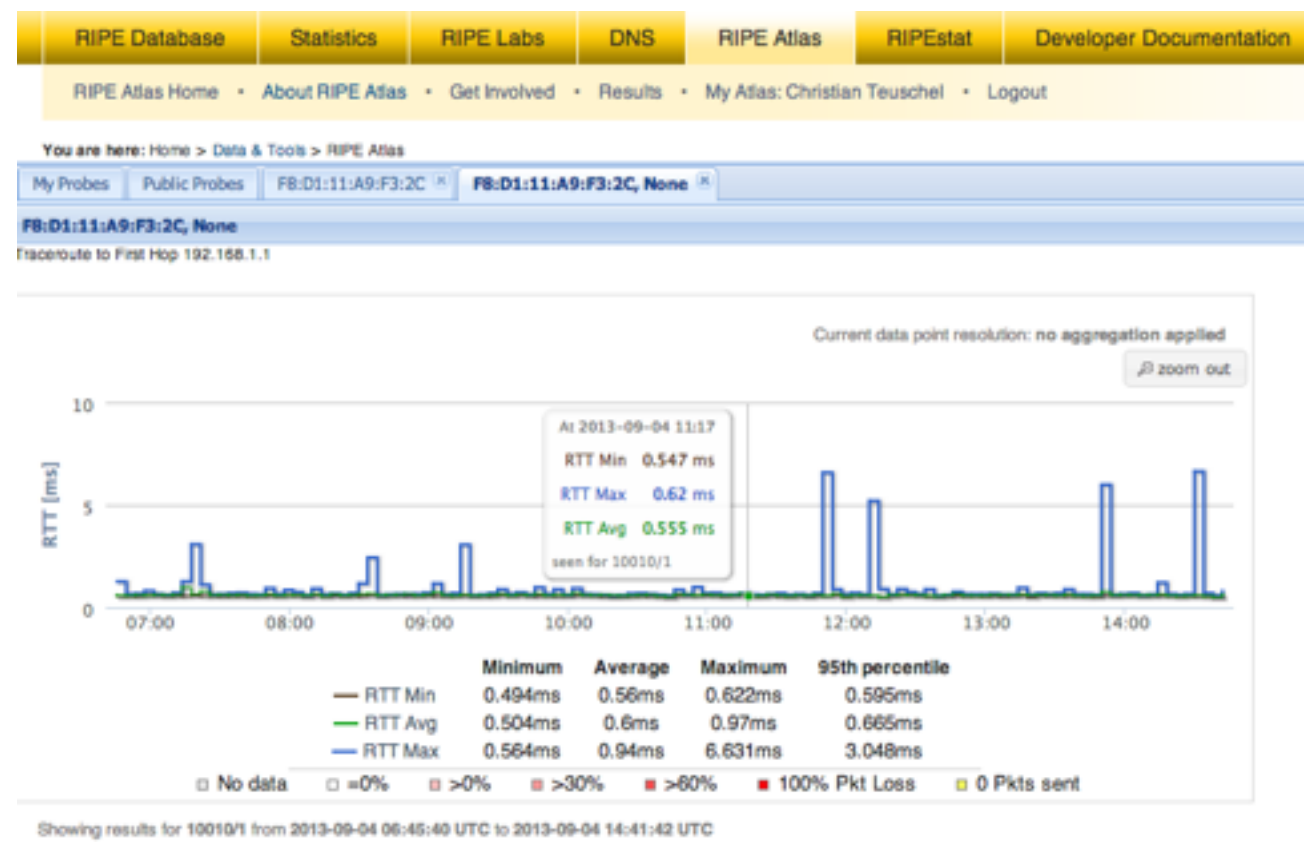
**Architecture**  
probev1

**MAC Address**  
00:80:A3:91:41:79

Map



- Replace multiple RRDs graphs: zoom in/out in time, in the same graph
- Easier visualisation of an event's details
- Selection of RTT class (max, min, average)



# Finding Results of Public Measurements

## Section 12



**RIPE**  
NCC

- Log in to atlas.ripe.net
- Go to “My Atlas” > “Measurements”
- Tip: fast-forward to the last page ;-)

My measurements								
Public measurements								
ID ▲	Type	Origin	Target	Descript...	#Probes (req/low/cur)	Status	Start Time c. (UTC)	End Time c. (UTC)
1000002	Ping	Area:EU(10)	atlas.ripe.net		10 / 5 / 7	Ongoing	2011-10-27 10:15	Never
1000005	Traceroute	Area:WW(10)	furmint.kistel.hu		10 / 5 / 0	Stopped	2011-11-16 10:33	2012-10-24 08:22
1000010	Ping6	Area:WW(8)	2001:500:14:6015:ad::1		8 / 4 / 0	Stopped	2011-11-18 10:00	2011-11-23 10:00
1000011	Traceroute6	Area:WW(8)	2001:500:14:6015:ad::1		8 / 4 / 0	Stopped	2011-11-18 10:01	2011-11-23 11:00
1000017	Ping	Area:WW(1)	64.147.85.24		1 / 1 / 0	Stopped	2011-11-18 16:43	2011-11-23 16:17
1000018	Ping	Area:WW(1)	64.147.85.24		1 / 1 / 0	Stopped	2011-11-18 16:45	2011-11-23 16:17
1000019	Ping	Area:WW(5)	91.199.39.2		5 / 1 / 0	Stopped	2011-11-18 17:01	2011-11-29 08:00
1000020	Ping6	Area:WW(10)	2001:500:14:6049:ad::1		10 / 5 / 0	Stopped	2011-11-18 17:10	2011-11-29 11:49
1000021	Ping	Area:WW(10)	houser.karrenberg.net		10 / 9 / 0	Stopped	2011-11-20 12:22	2011-11-21 13:00
1000022	Ping	Area:WW(10)	kgb.karrenberg.net		10 / 5 / 0	Stopped	2011-11-20 12:22	2012-08-02 19:52
1000023	Ping6	Area:WW(10)	2001:980:3500:1:220:...		10 / 5 / 0	Stopped	2011-11-20 13:00	2011-11-21 14:00
1000024	Ping	Area:WW(1)	84.205.72.1		1 / 1 / 0	Stopped	2011-11-20 17:37	2011-11-23 18:00
1000025	Ping6	Area:WW(1)	2001:7fb:fd02::1		1 / 1 / 0	Stopped	2011-11-20 17:43	2011-11-23 18:00
1000035	Ping	Area:WW(10)	94.100.125.129		10 / 5 / 0	Stopped	2011-11-22 15:59	2013-04-29 10:26
1000036	Ping	Area:WW(10)	94.100.126.15		10 / 5 / 0	Stopped	2011-11-22 16:00	2013-04-29 10:25
1000037	Ping	Area:WW(10)	94.100.112.1		10 / 5 / 0	Stopped	2011-11-22 16:02	2013-04-29 10:25

Page 1 of 221 Clear Filters Measurements 1 - 30 of 6621



# Searching for msm by type

My measurementsPublic measurements

ID ▲	Type	Origin	Target	Des
1000011	Traceroute6		00:14:6015:ad::1	
1000044	Traceroute6		as.fbi.h-da.de.	
1001615	Traceroute6		g.no	Trac
1001859	Traceroute6		e	IPv6
1002007	Traceroute6			
1002008	Traceroute6			
1002015	Traceroute6	Area:WW(7...	2a02:a	
1002020	Traceroute6	Area:WW(7...	2a02:a	
1002021	Traceroute6	Area:WW(7...	moe.ne	
1002022	Traceroute6	Area:WW(7...	ipv6.d	
1002023	Traceroute6	Area:WW(7...	www.n	
1002024	Traceroute6	Area:WW(7...	2A02:E	
1002025	Traceroute6	Area:WW(7...	service	
1002027	Traceroute6	Area:WW(7...	2a03:5	
1002028	Traceroute6	Area:WW(7...	2001:6	
1002029	Traceroute6	Area:WW(7...	2A02:2	
1002030	Traceroute6	Area:WW(7...	2A03:5	
1002031	Traceroute6	Area:WW(7...	www.e	

Sort Ascending

Sort Descending

Columns

Filters

☐ One-off

☐ Ping

☐ Traceroute

☐ Ping6

☒ Traceroute6

☐ DNS

☐ DNS6

☐ HTTP

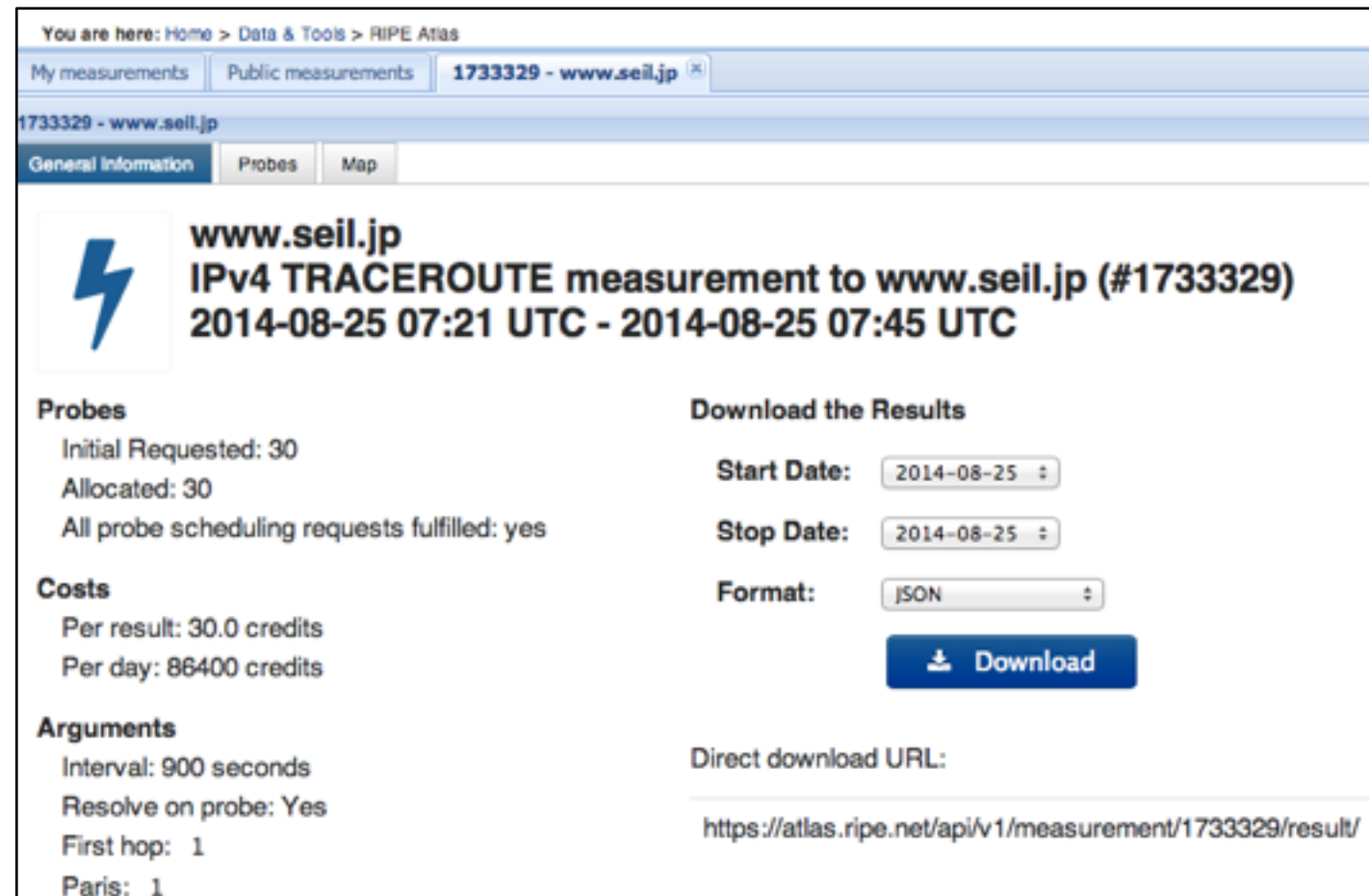
☐ HTTP6

☐ Traffic

☐ SSLCert

☐ SSLCert6

- Click on msm, then “Download”
- Or go to URL
- Or use the API
- Results in JSON
- Libraries for parsing available on gitHub



The screenshot shows the RIPE Atlas web interface for a specific measurement. The breadcrumb trail at the top reads "You are here: Home > Data & Tools > RIPE Atlas". Below this, there are tabs for "My measurements", "Public measurements", and a selected tab for "1733329 - www.seil.jp". The main content area has three sub-tabs: "General Information", "Probes", and "Map". The "General Information" tab is active, displaying a lightning bolt icon and the title "www.seil.jp IPv4 TRACEROUTE measurement to www.seil.jp (#1733329) 2014-08-25 07:21 UTC - 2014-08-25 07:45 UTC".

On the left side of the "General Information" tab, there are sections for "Probes", "Costs", and "Arguments".

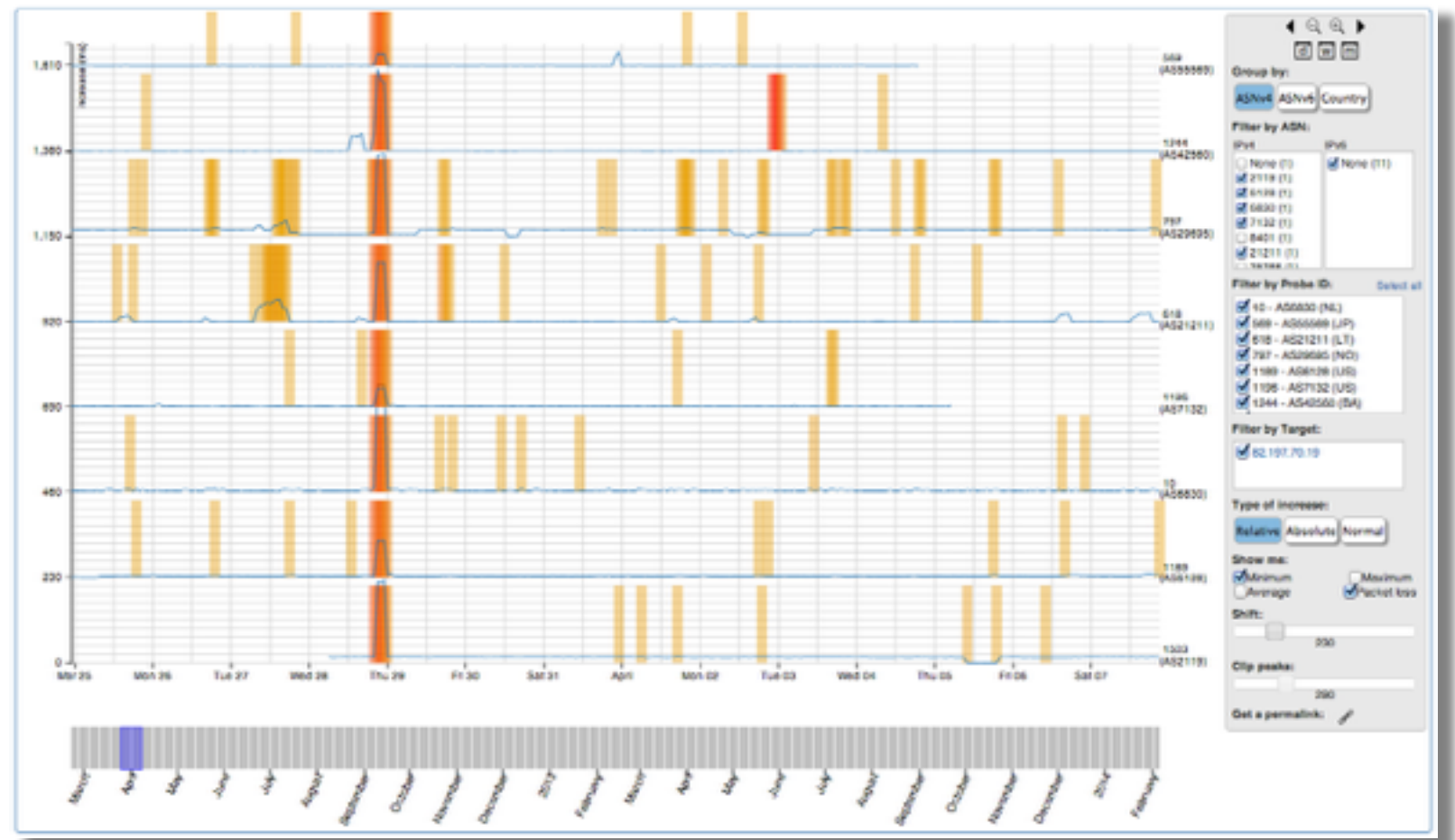
- Probes:** Initial Requested: 30, Allocated: 30, All probe scheduling requests fulfilled: yes.
- Costs:** Per result: 30.0 credits, Per day: 86400 credits.
- Arguments:** Interval: 900 seconds, Resolve on probe: Yes, First hop: 1, Paris: 1.

On the right side, under the heading "Download the Results", there are input fields for "Start Date" (2014-08-25) and "Stop Date" (2014-08-25), and a "Format" dropdown menu set to "JSON". Below these is a blue "Download" button with a download icon. At the bottom right, there is a "Direct download URL:" followed by the URL <https://atlas.ripe.net/api/v1/measurement/1733329/result/>.

- <https://github.com/RIPE-NCC/ripe.atlas.sagan>
- <https://github.com/RIPE-Atlas-Community/>

- Multiple ping measurements in one view
- Stacked chart and interactive control panel
- Go to Results > Anchors > choose one from the list > ping

[https://labs.ripe.net/Members/massimo\\_candela/seismograph-user-guide](https://labs.ripe.net/Members/massimo_candela/seismograph-user-guide)





# Search for msm by target in RIPEstat

111

Go to “RIPEstat >  
“RIPE Atlas Activity”

RIPEstat — Internet Measurements and Analysis







https://stat.ripe.net/widget/atlas-targets#w.resource=8.8.8.8

You are here: Home > Data & Tools > RIPEstat > atlas-targets

### RIPE Atlas Measurement Targets (8.8.8.8)

8.8.8.8

Show 10 targets/page Search:

Measurement ID	Stopped	Type	Target IP	Target Hostname
1040720 	ongoing	ping	8.8.8.8	google-public-dns-a.google.com
1006491 	ongoing	traceroute	8.8.8.8	not specified
1006192 	ongoing	ping	8.8.8.8	not specified
1004827 	ongoing	traceroute	8.8.8.8	not specified
1002630 	ongoing	ping	8.8.8.8	not specified
1478085 	2014-02-24 13:41 UTC	dns	8.8.8.5	not specified

- There are many measurements already running!
- Search for existing public measurements first
- ...Only then schedule your own measurement if you don't find what you're looking for



## **Exercise: Analyse Measurements Results**

### **Exercise G**

**Refer to the exercise booklet**



**RIPE  
NCC**



# Creating a Measurement

## Section 13



- Log in to atlas.ripe.net
- “My Atlas” > “Measurements”
- “New Measurement” or “One-off”
  - Most are periodic and last a long time
  - Choose type, target, frequency, # of probes, region...
  - You will spend credits
- <https://atlas.ripe.net/doc/udm>
- Or use the API:
  - <https://atlas.ripe.net/docs/measurement-creation-api/>

- **Measurements cost credits**
  - ping = 10 credits, traceroute = 20, etc.
- **Why? Fairness and to avoid overload**
- **Hosting a probe earns credits**
- **Earn extra credits by:**
  - Being a member
  - Hosting an anchor
  - Sponsoring probes

<https://atlas.ripe.net/doc/credits>



RIPE Atlas Home • About RIPE Atlas • Get Involved • Results • My Atlas: Vesna Manojlovic • Staff Pages • Logout

You are here: Home > Data & Tools > RIPE Atlas > My Atlas > My Credits

Account Information

History

Charts & Archives

Transfer

History

Probes

Measurements

Credits

API Keys

Anchors

Sponsorships

Ambassador Probes

Claim 1 Million Credits

IPv6 Connectivity Test

Quick Look

Settings

46,963.17

🕒 14,825.52 credits / hour

Download Credit Archives

Format

Download

Give credits to someone

My Atlas / Credits



## **Exercise: Create a Measurement**

### **Exercise H**

**Refer to the exercise booklet**



**RIPE  
NCC**

# Network Monitoring

## Section 14



**RIPE**  
NCC

- **Network operators use tools for monitoring network health**
  - Nagios & Icinga
- **Tools receive input from RIPE Atlas via the API**
- **Benefits:**
  - pings from 500 out of 6000+ probes around the world
  - See your network from the outside
  - Plug into your existing practices

1. **Create a RIPE Atlas ping measurement**
2. **Go to “Status Checks” URL**
3. **Add your alerts in Icinga or Nagios**



- **Status Checks work via RIPE Atlas' RESTful API**
  - [https://atlas.ripe.net/api/v1/status-checks/MEASUREMENT\\_ID/](https://atlas.ripe.net/api/v1/status-checks/MEASUREMENT_ID/)
- **You define the alert parameters, for example:**
  - Threshold for the percentage of probes that successfully received a reply
  - How many most recent measurements to base it on
- **What is the maximum packet loss acceptable**
- **Documentation:**
  - <https://atlas.ripe.net/docs/status-checks/>



- **Community of operators contributed configuration code!**
  - Making use of the built-in “check\_http” plugin
- **GitHub repo examples:**
  - [https://github.com/RIPE-Atlas-Community/ripe-atlas-community-contrib/blob/master/scripts\\_for\\_nagios\\_icinga\\_alerts](https://github.com/RIPE-Atlas-Community/ripe-atlas-community-contrib/blob/master/scripts_for_nagios_icinga_alerts)
- **Post on Icinga blog:**
  - <https://www.icinga.org/2014/03/05/monitoring-ripe-atlas-status-with-icinga-2/>



## **Exercise: Setting up “Status Checks”**

### **Exercise I**

**Refer to the exercise booklet**



**RIPE  
NCC**



## More RIPE Atlas Features

### Section 15



**RIPE**  
NCC

- <https://atlas.ripe.net/docs/measurement-latest-api/>
  - Widget monitoring value in real time (100 probes pinging websites worldwide)
  - Alert based on average measurements per hour
  - Big network event, e.g. Internet outage in a region
  - DNS domain monitoring; configurable measurements using 10 RIPE Atlas anchors
- [https://labs.ripe.net/Members/suzanne\\_taylor\\_muzzin/ripe-atlas-latest-results-api-and-parsing-library](https://labs.ripe.net/Members/suzanne_taylor_muzzin/ripe-atlas-latest-results-api-and-parsing-library)

- Use API keys to:
  - Create measurements without logging in
  - Securely share your measurement data with others
- To create, manage and delete API keys:
  - <https://atlas.ripe.net/keys/>
  - <https://atlas.ripe.net/docs/keys2/>
- Examples:
  - <https://atlas.ripe.net/docs/rest/>

- **Probes:**
  - Hardware trust material (regular server address, keys)
  - No open ports; initiate connection; NAT is okay
  - Don't listen to local traffic
  - No passive measurements
- **Measurements triggered by “command servers”**
  - Inverse ssh tunnels
- **Source code published**
- **Reported vulnerabilities:**
  - <https://atlas.ripe.net/docs/security/>



- **RIPE Atlas:**
  - Guaranteed probe application
  - Do NOT have to host a probe in order to perform customised measurements
  - 1,000,000 extra credits monthly via LIR Portal
  - “Quick Look” measurements via LIR Portal
  - IPv6 reachability testing (free - no credits needed)
  - Sharing probe management with LIR colleagues
- **RIPEstat:**
  - Historical view of RIPE DB objects

# How to Host a Probe

## Section 16



**RIPE**  
NCC

1. Create a RIPE NCC Access account
  2. Go to <https://atlas.ripe.net/apply>
  3. You will receive a probe by post
  4. Register your probe
  4. Plug in your probe
- If you receive a probe from an ambassador (trainer, sponsor, someone at a conference), just register it and plug it in!



**The End!**

**Край**

**Y Diwedd**

**النهاية**

**Соңы**

**ჟღერჴ**

**Fí**

**Finis**

**Ende**

**Finvezh**

**Liðugt**

**Кінець**

**Konec**

**Kraj**

**Ěnn**

**Fund**

**پایان**

**Lõpp**

**Beigas**

**Vége**

**Son**

**Край**

**An Críoch**

**הסוף**

**Fine**

**Endir**

**Sfârșit**

**Fin**

**Τέλος**

**Einde**

**Канец**

**Конец**

**Slut**

**Slutt**

**დასასრული**

**Pabaiga**

**Fim**

**Amaia**

**Loppu**

**Tmíem**

**Koniec**