

# RIPE Atlas

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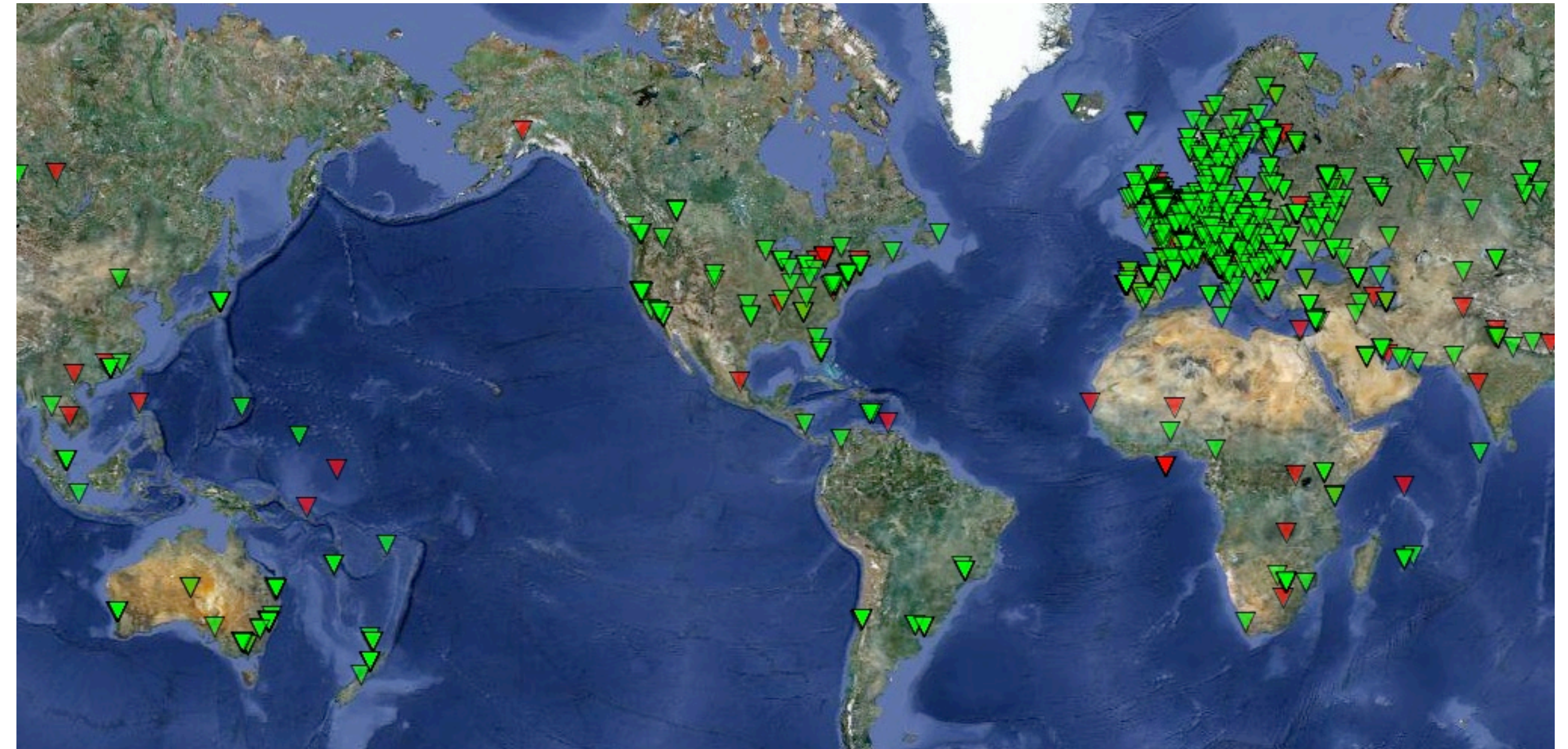
## ENOG4

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# RIPE Atlas

- RIPE Atlas: a network of active probes measuring the Internet infrastructure in real-time
- Started in 2010
- 1900 running probes in 104 countries
- 3600 users, 1356 LIRs!
- IPv4 980 ASNs, 1500 prefixes
- IPv6 330 ASNs, 420 prefixes



<https://atlas.ripe.net>

# RIPE Atlas: Current Status

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- Data collected from built-in measurements available to **everyone**
  - in forms of maps, tables, downloadable raw data from public probes
- User Defined Measurements (UDM) in 4 flavors available
  - Ping, Traceroute, DNS, SSL Certs: <https://atlas.ripe.net/udm>
  - New interface for constructing UDMs
  - Execution of multiple measurements in parallel
- Download measurement results without having to be logged in
  - You can share measurements results with colleagues, or the world, securely
  - Generate your API Keys and use it in URL query string

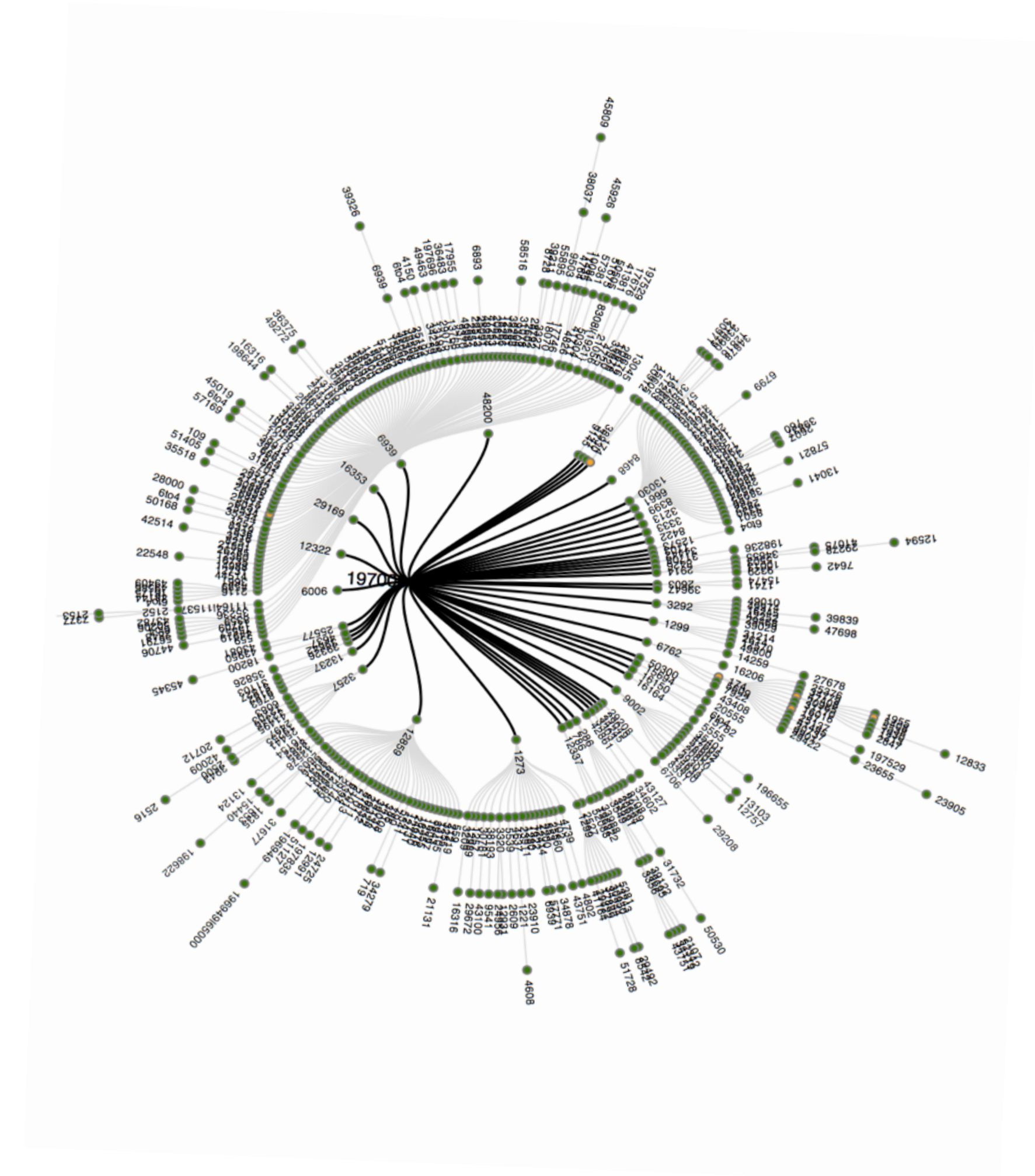
# RIPE Atlas: Current Status

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- New map: comparing TCP/UDP DNS measurements
  - <https://labs.ripe.net/Members/bwijnen/tcp-udp-dns-soa-rt-ratio>
- Internal improvements of resiliency and stability
- Integrated with RIPE NCC SSO
  - Everyone who has RIPE NCC account can use public data without hosting a probe
- The application procedure for **hosting** the Atlas probe made easy
  - Go now to <https://atlas.ripe.net/apply>
  - Get it today!

# RIPE Atlas: More Value for RIPE NCC Members:

- Out of 3600 users, 1356 are LIRs!
- One-click measurement "Test your IPv6"
  - interactive visualization of traceroute results
  - <https://labs.ripe.net/Members/becha/test-your-ipv6-reachability-using-ripe-atlas>
  - <https://labs.ripe.net/Members/emileaben/visualise-your-ipv6-connectivity-using-ripe-atlas>



# RIPE Atlas: More Value for RIPE NCC Members

- Introducing RIPE Atlas Anchors

<https://labs.ripe.net/Members/dfk/ripe-atlas-anchors>

- Powerful probes and well-known targets
- Topological diversity for built-in measurements
- Enabling only ping and traceroute towards AA
- Traceroute visualisation available to AA hosts
- Adding DNSMON SW to the Atlas Anchors
- Pilot starting now
- Goal: ~50 deployed in 2013
- Looking for potential hosts



# RIPE Atlas: Future outlook

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- Increasing overall probe uptime
- New and more powerful probes.
- Lifting the system usage limits
- Introducing "fast track" measurements
- Improving the presentation layer
- Integration with RIPEstat
  - Custom views, widgets

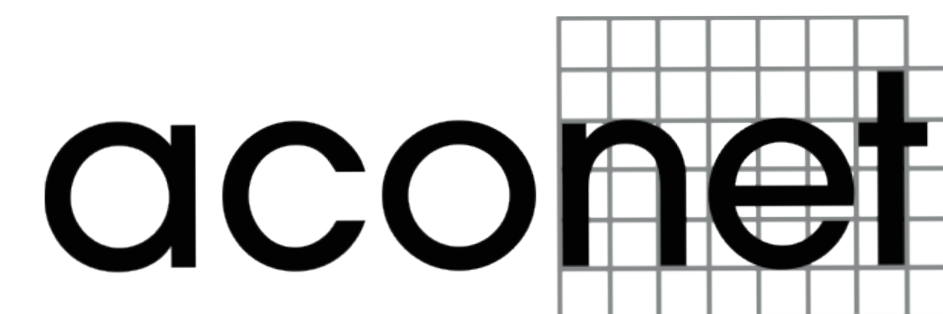
<https://labs.ripe.net/Members/becha/ripe-atlas-roadmap-september-2012-update>

# RIPE Atlas: Sponsors

**RIPE ATLAS is sponsored by:**



**New  
sponsors:**



Austrian Academic Computer Network





# RIPE Stat

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# Introduction to RIPEstat

- Modular & extendable toolbox
- Single interface to Internet related data
  - Routing data
  - Registration data
  - Geolocation data
  - ...
- For:
  - Network trouble-shooting
  - Data analysis
  - Scientific research

The screenshot displays the RIPEstat interface for the network 140.78.0.0/16. At the top, there is a search bar and a 'Sign in' link. Below the search bar, the user's network is identified as AS3303, 0.0.0.0/1. The main content area is divided into several sections:

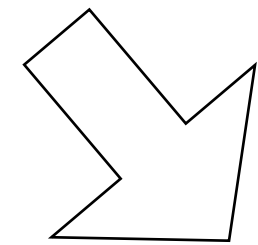
- At a Glance (4):** A sidebar menu with links to Routing (7), DNS (1), Anti Abuse (2), Database (9), and Geographic (2).
- Resource Overview (140.78/16):** States that the prefix is announced by AS1205 Johannes Kepler University and is part of 140.0.0.0/8, Legacy space, administered by ARIN.
- Geoloc (140.78/16):** A map showing the geographic distribution of the network across Europe, with a 100.00% visibility indicator.
- Object Browser (140.78/16):** A yellow box containing the following details:
  - 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: ASSIGNED PI
  - mnt-by: AS1205-MNT
- Routing Status (140.78/16):** Shows that 140.78.0.0/16 is 100% visible in BGP (by 98 of 98 full peers) and was first seen before Jan 01, 2001.

<https://stat.ripe.net>

# Using RIPEstat

- How can you use it?
  - data API
    - scriptable API with pure data
    - different format: json, yaml

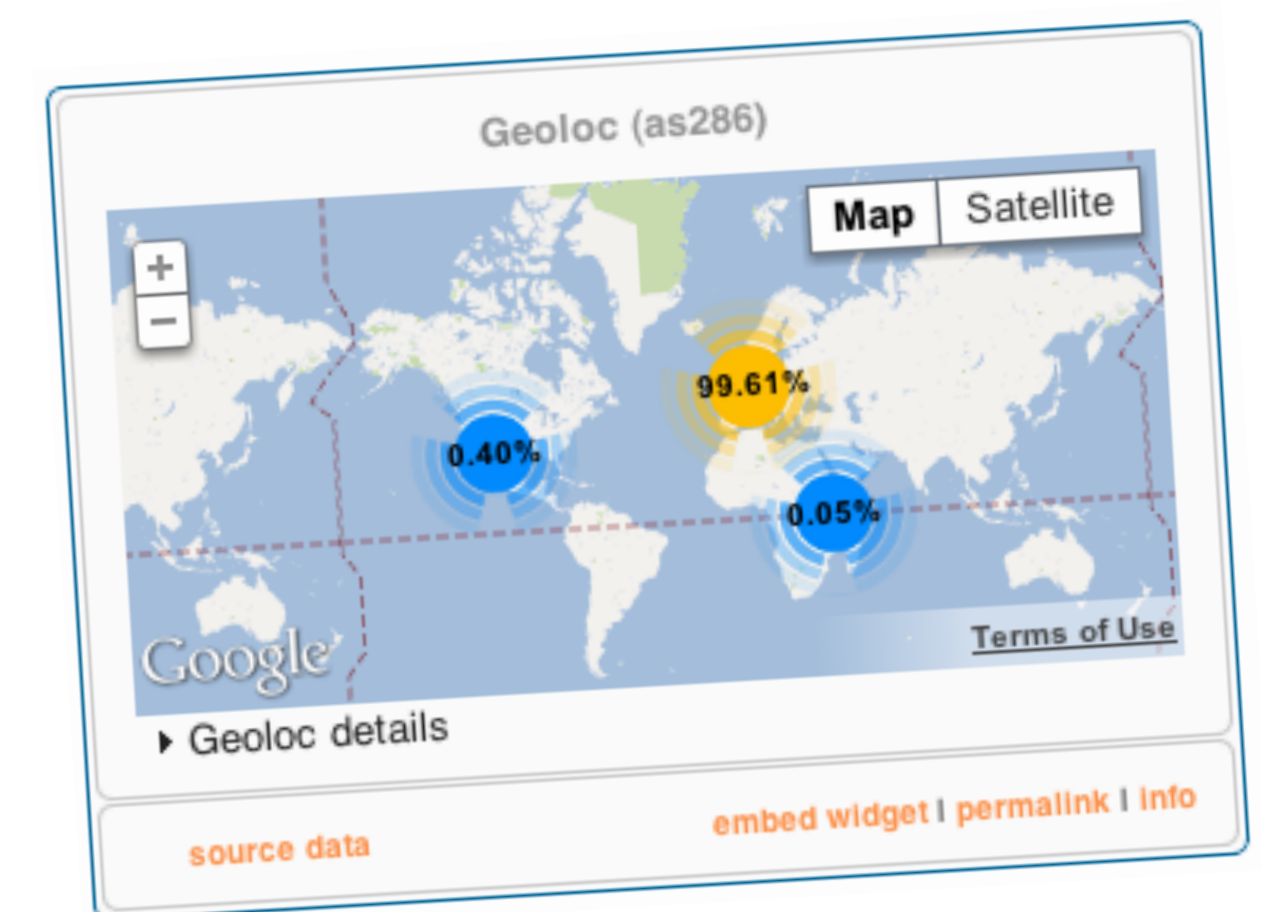
<https://stat.ripe.net/data/geoloc/data.json?resource=AS6412>



```
"data": {
  "locations": [
    {
      "city": "",
      "country": "AE(US)",
      "covered_percentage": 0.53379855360053385,
      "latitude": 0.0,
      "longitude": 0.0,
      "prefixes": [
        "168.187.0.0/16",
        "168.187.0.0/18",
        "168.187.64.0/18"
      ]
    },
    {
      "city": "",
      "country": "KW",
      "covered_percentage": 99.466201446399467,
      "latitude": 29.34,
      "longitude": 47.659999999999997,
      "prefixes": [
        "80.184.0.0/17",
        "161.252.0.0/16",
        "168.187.0.0/16",
        "168.187.0.0/18",
        "168.187.0.194/32",
        "168.187.32.0/19",
        "168.187.57.61/32",
        "168.187.64.0/18",
      ]
    }
  ]
}
```

# Using RIPEstat

- How can you use it?
  - widgets
    - Visualisations powered by the data API
    - On stat.ripe.net or embeddable on any other webpage



# Using RIPEstat

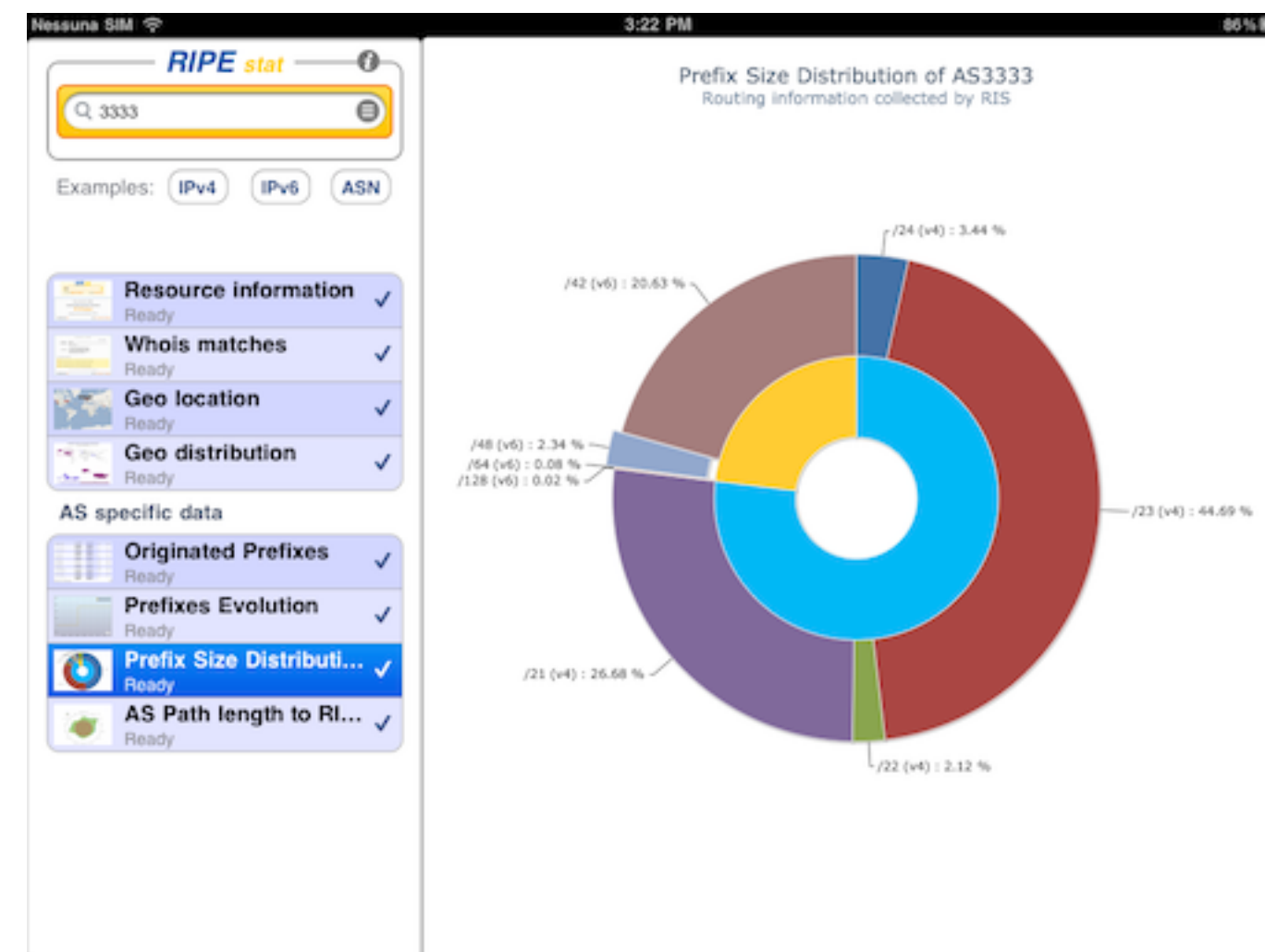
- How can you use it?
  - Command Line Interface (CLI)
  - Mobile App

```
guest130:server cteusche$ ripestat AS3333
% Results for 'AS3333'
% You can see graphical visualizations at https://stat.ripe.net/AS3333

as-overview:      AS3333
announced:      yes
description:     RIPE-NCC-AS - Reseaux IP Europeens Network Coordination Centre (RIPE NCC)
part-of:         AS1-65535: the 16-bit ASN Block

geoloc:          AS3333
location:        100.0% NL

object-browser:  AS3333
type:            aut-num
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
num-versions:   90
```



# Future Outlook

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- Atlas data in RIPEstat
- Country-based results
- Migration of RIPE NCC tools, e.g.:
  - ASInuse
  - PrefixInUse
  - ISAlarms
  - BGPViz
  - ...

# Discussion/Feedback

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- RIPE Atlas and RIPEstat are your tools:
  - Development driven by user feedback
- Get Involved
  - RIPE Atlas
    - Write to [atlas@ripe.net](mailto:atlas@ripe.net)
    - Visit <https://atlas.ripe.net>
  - RIPEstat
    - Use the comment feature and [stat.ripe.net/feedback](https://stat.ripe.net/feedback)
    - Write to [stat@ripe.net](mailto:stat@ripe.net)
    - Twitter (#ripestat)

# Q & A

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