

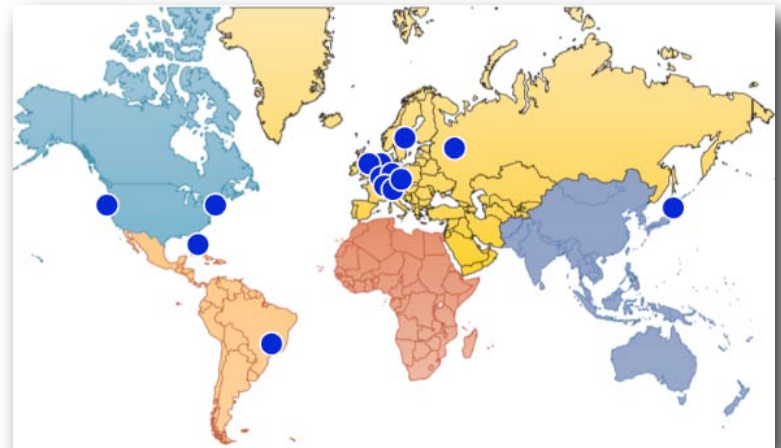


RIPE NCC Tools for Network Operators

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RIPE NCC

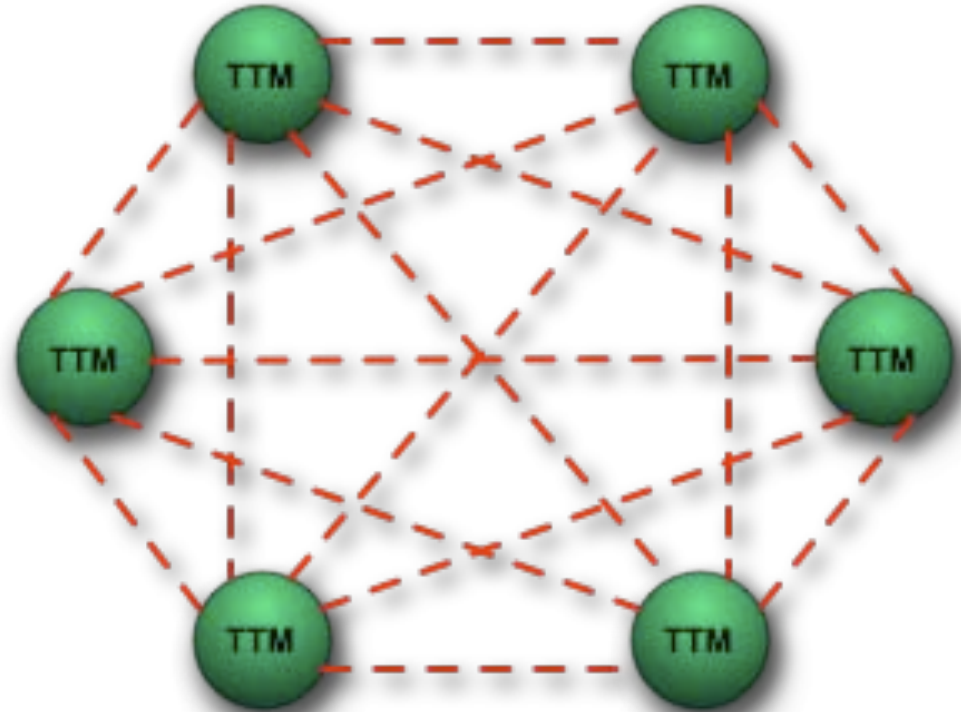
RIPE NCC Information Services

- Test Traffic Measurements (TTM)
 - Measures delay and loss
 - Stores traceroute data
 - Full mesh ~80 nodes
 - <http://www.ripe.net/ttm>
- Routing Information Service (RIS)
 - Collects BGP data
 - ~600 peers
 - 16 Internet Exchange Points
 - <http://www.ripe.net/ris>
- DNSMON - <http://dnsmon.ripe.net> - Monitors 200+ DNS servers

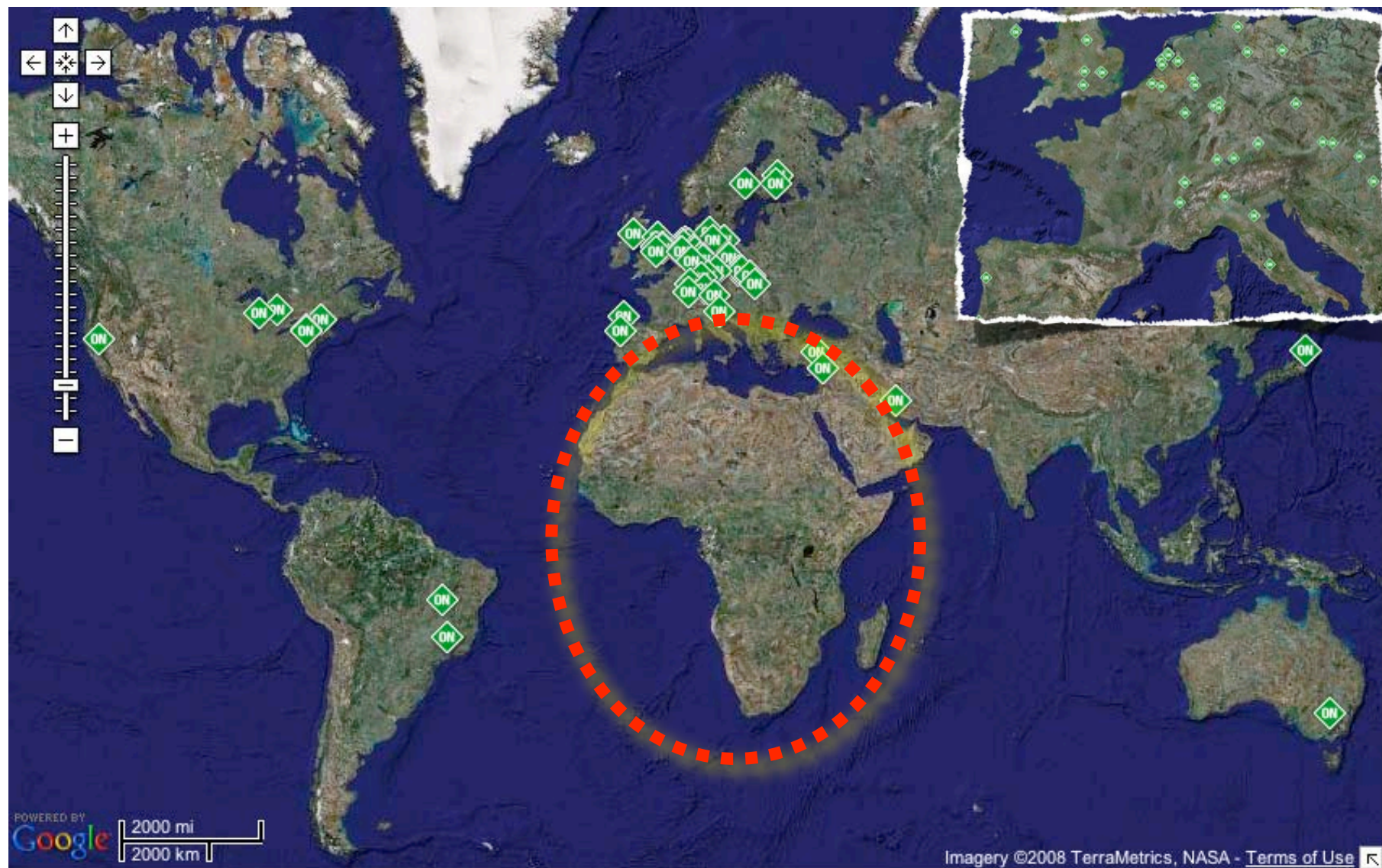


TTM - Test Traffic Measurements

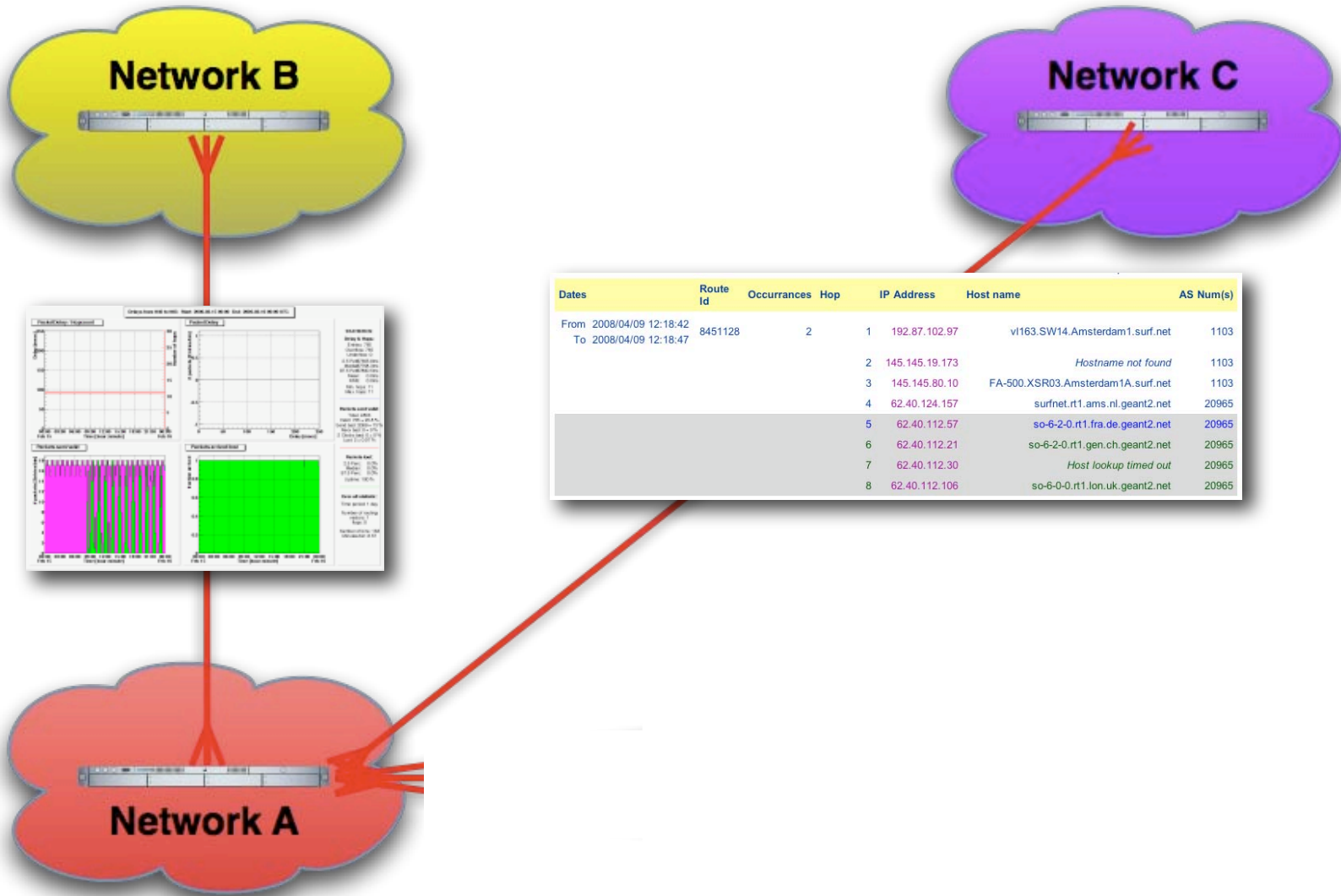
- One way measurements of delay/loss/jitter between all nodes
- Uses GPS for timing
- Data freely available (subject to AUP)



TTM - Test Traffic Measurements



TTM - Test Traffic Measurements





TTM - Traceroute database



Test Traffic Measurements

[Test Traffic Home Page](#)

Test Traffic Measurement

Query Traceroute Database [tt26 - tt120]

SRC:

DST:

Start Date Start Time Resolve IPs ☒ yes ☐ no

End Date End Time Sort on

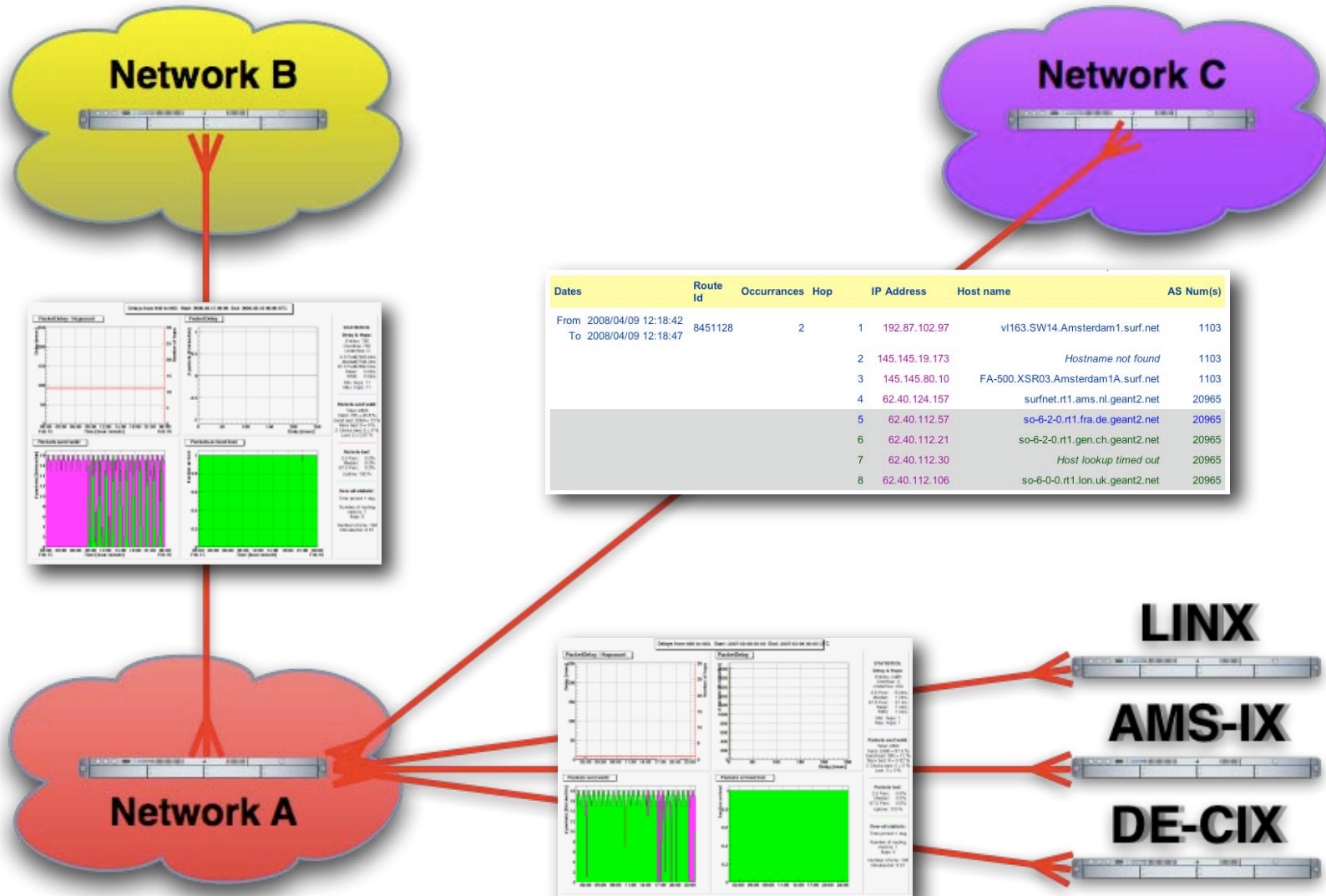
Traces in ☒ IP ☐ AS For ☒ IPv4 ☐ IPv6 test traffic Show diffs ☒ yes ☐ no

[[See delay](#) or [jitter](#) plots for this time period] [[swap source and destination](#)]

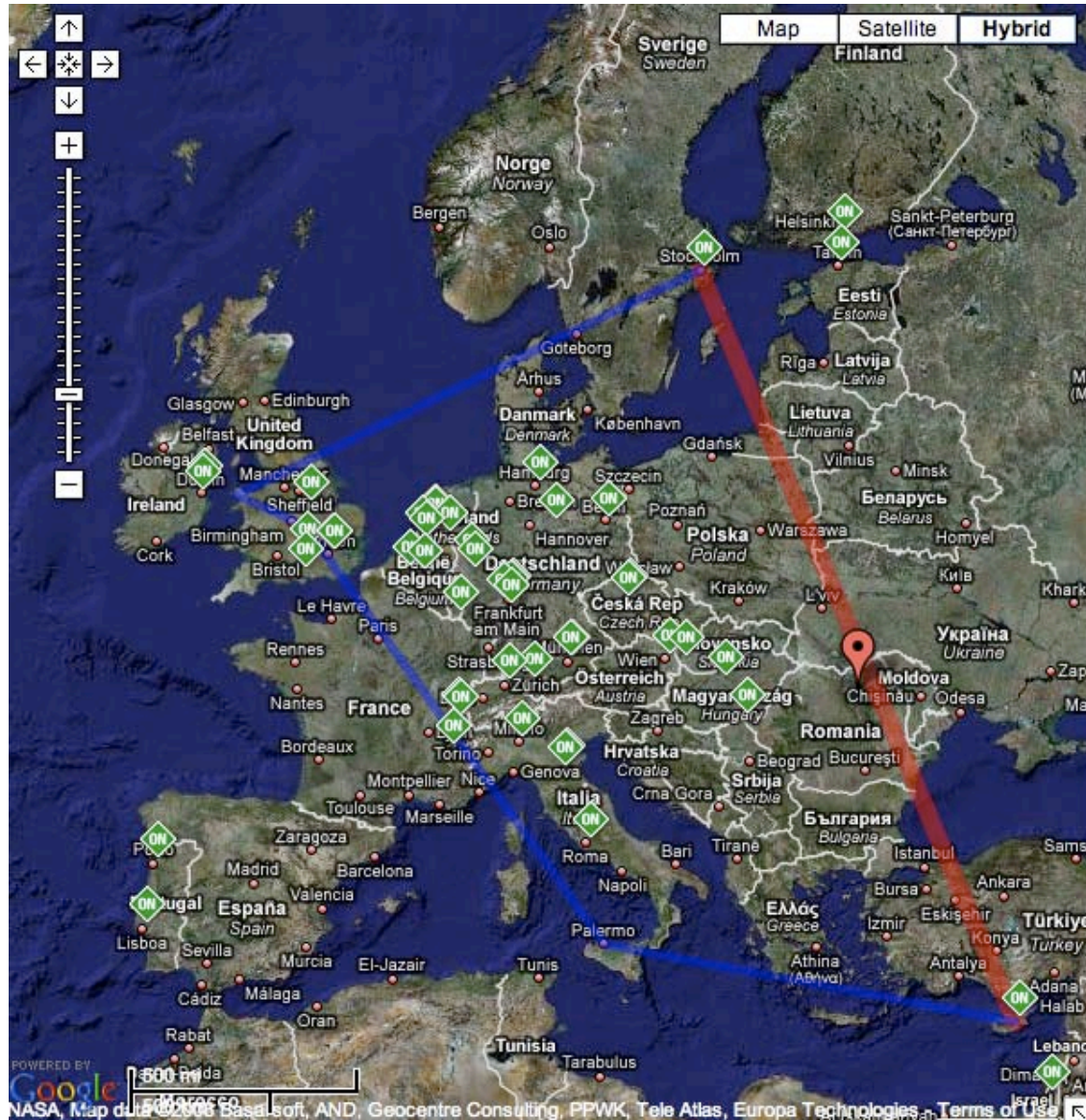
Click [here](#) for an explanation regarding the Query Traceroute Database CGI, or go to the [legend](#) instead.

Dates	Route Id	Occurrences	Hop	IP Address	Host name	AS Num(s)
From 2007/07/07 01:03:54 To 2007/07/30 23:43:16	4588612	5630	1	195.66.248.73	e3-1.tr3.tcm.linx.net	5459
			2	195.66.248.125	g0-1.pr2.tcm.linx.net	5459
			3	195.66.226.61	fe1-1-nom-col2.nominet.org.uk	5459
			4	213.248.206.227	host-213-248-206-227.nominet.org.uk	8683

TTM - Test Traffic Measurements



TTM Enhancements



Selection

tt07, S-10272 Stockholm (SE) Select

tt136, Lefkosia (CY) Select

Show Traceroutes

Filter

- ☒ ON Online
- ☐ Setup Setup
- ☐ Historic Historic
- ☐ Offline Offline
- ☐ Custom Selection Custom Selection

tt01, Amsterdam (NL) Select

Textbox in custom list (click to remove): None

Traceroutes

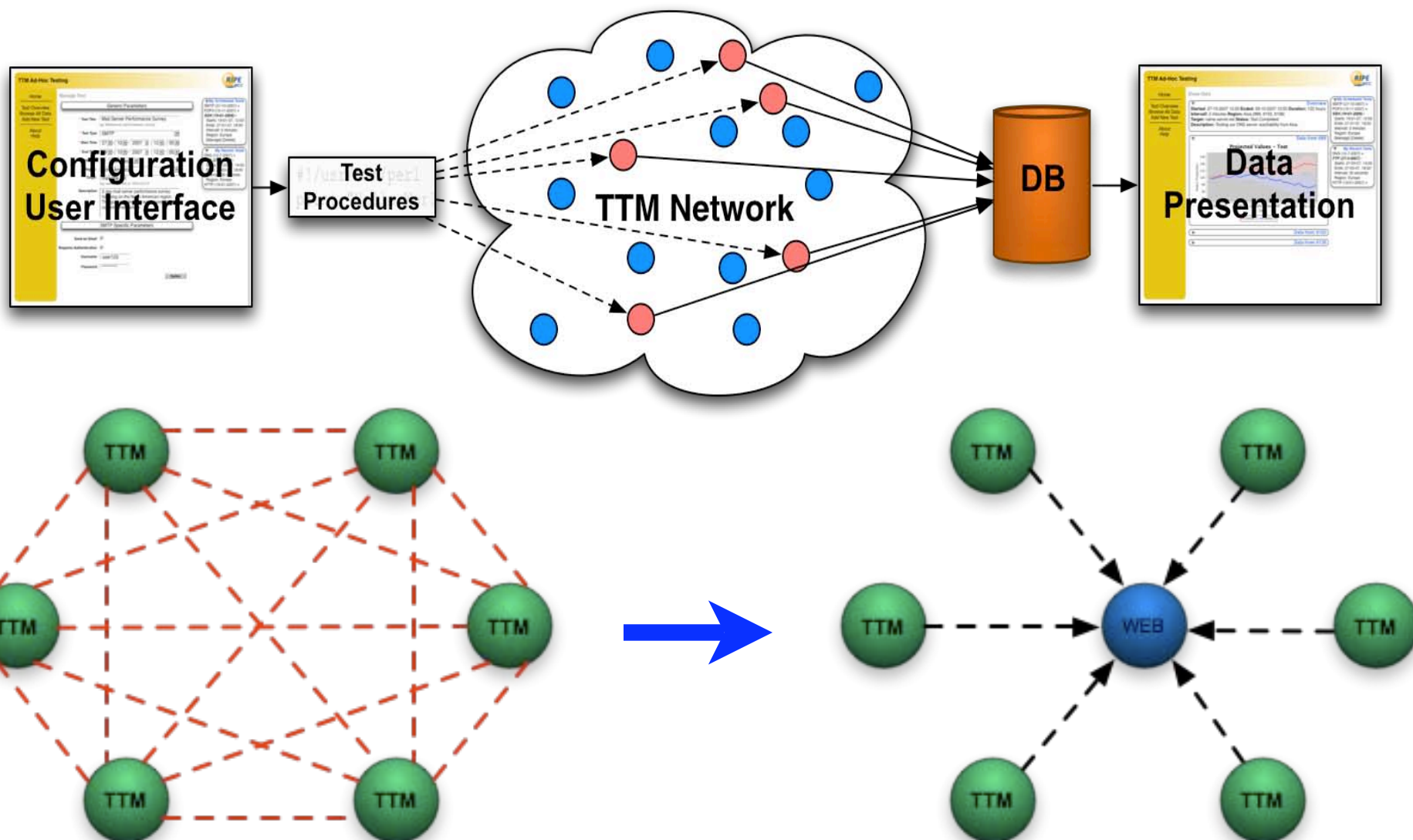
From tt07 to tt136, between 7/5/2008 0:56 and 14/5/2008 1:53.

[\[Earlier\]](#)

1. 192.36.143.193 (1880) [\[tt07\]](#)
2. 194.71.10.16 (1880)
3. 192.108.195.125 (1880)
4. 213.206.129.86 (1239)
5. 213.206.129.33 (1239)
6. 213.206.129.37 (1239)
7. 213.206.128.57 (1239)
8. 82.195.191.6 (1239)
9. 213.144.181.1 (6762)
10. 213.144.181.42 (6762)
11. 195.14.157.60 (6866) [\[tt136\]](#)

Disclaimer: The geolocation data is based on the [GeoLite database](#) and might not be 100% correct.

Ad-Hoc tests



Ad-Hoc tests

General parameters

Test Title:

Eg. Webserver performance survey

Test Type:

Select a test type.

Timezone:

Select timezone

Start time: at

Eg. 25/12/2012 and 10:55

End time: at

Eg. 26/12/2012 and 12:35

Interval:

Select a test interval.

Region:

Select a region.

Description:



General parameters

The general parameters are used to describe the scope of an experiment and are the standard parameters for all test types.

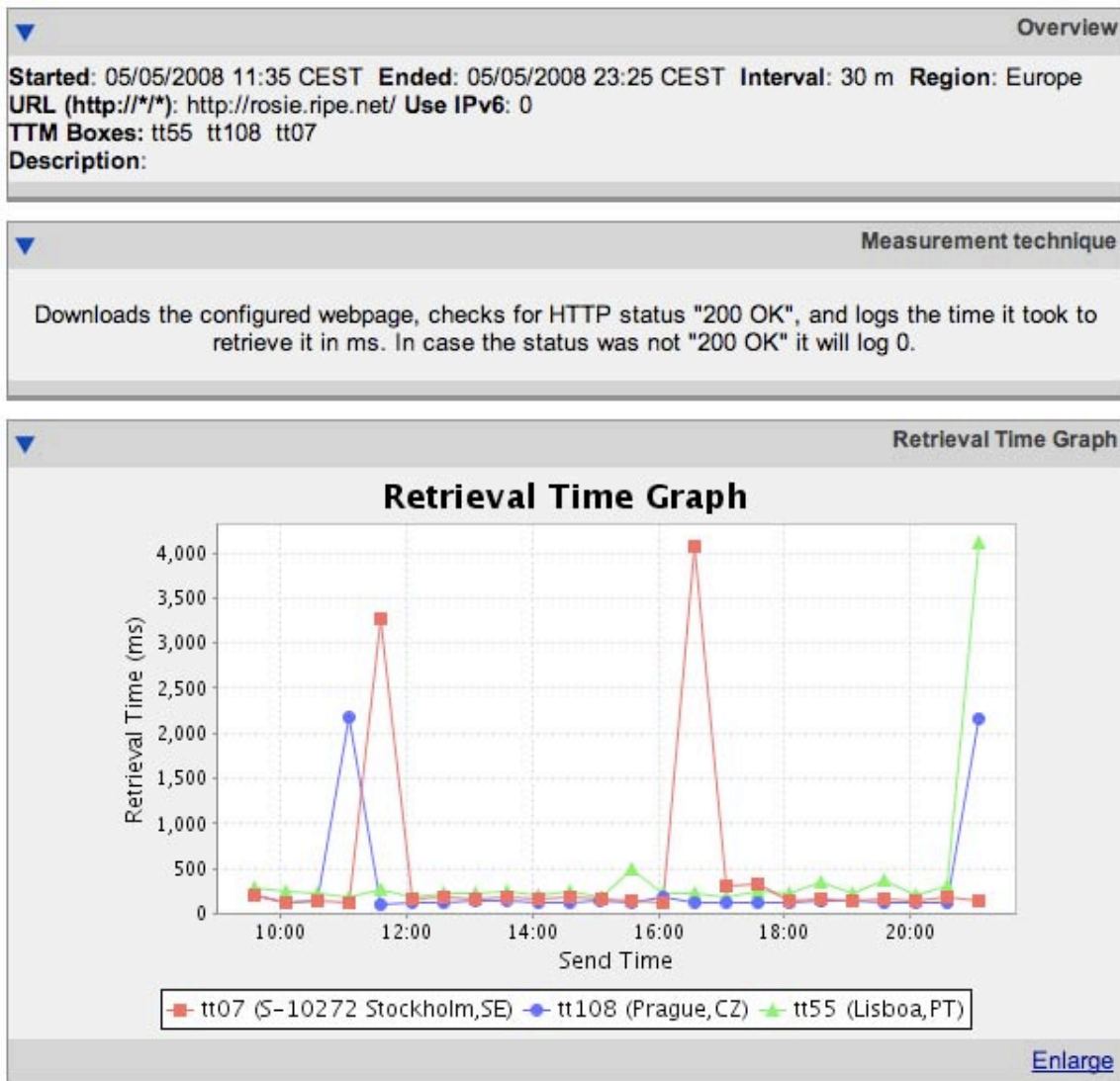
Start and end time specify the time frame of an experiment and the interval sets the time in between measurements. The region allows you to geographically scope your experiment. Selecting a region will prompt the system to chose available testboxes in that area.

Http Plugin Specific Parameters

URL (http://*/*):

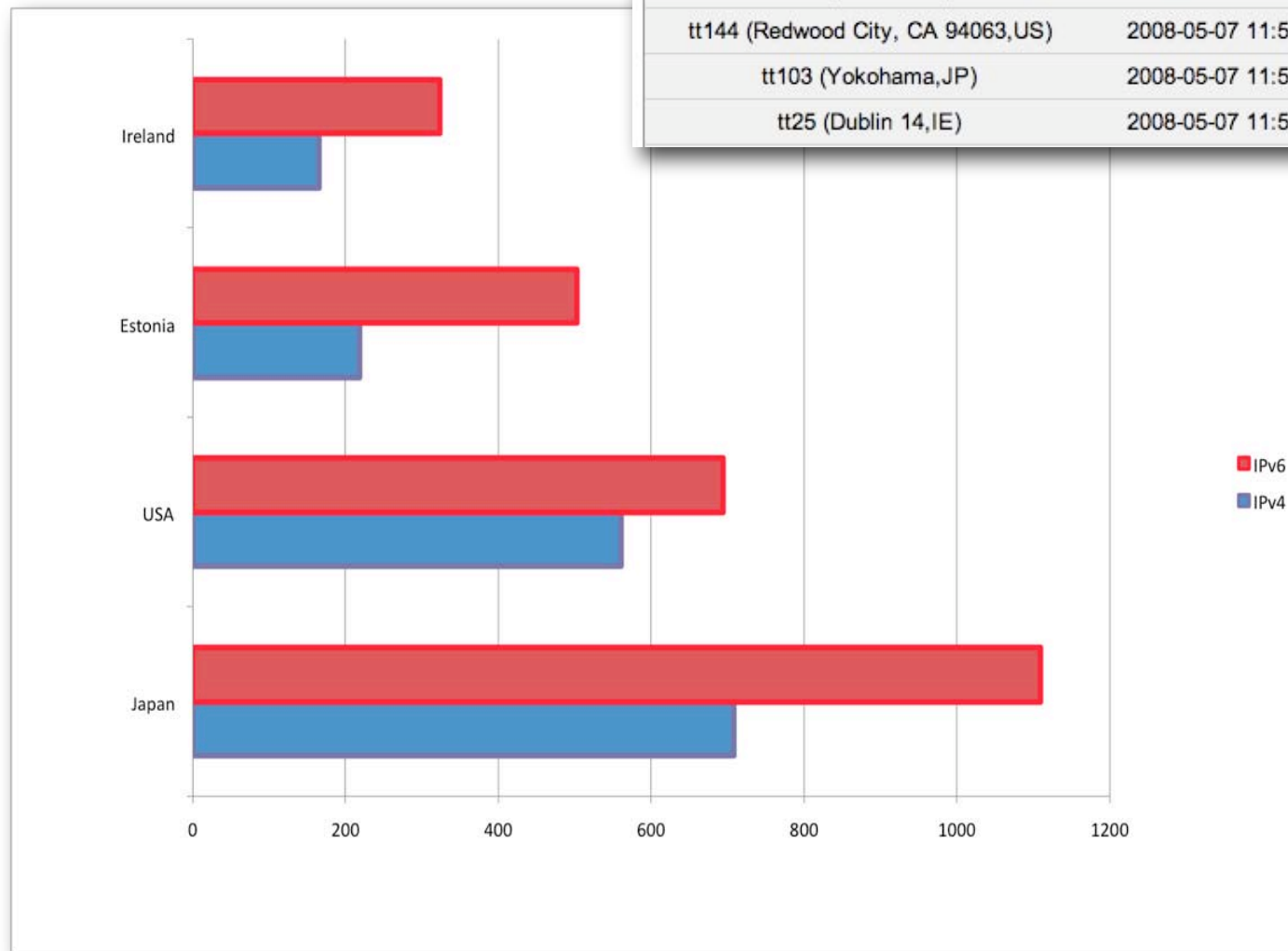
Use IPv6: ☒

Test output



Test output

Round-Trip Delay Table		
TTM Box	Send Time	Round-Trip Delay (ms)
tt56 (Tallinn,EE)	2008-05-07 11:54:58.0	67.9739
tt144 (Redwood City, CA 94063,US)	2008-05-07 11:54:55.0	193.538
tt103 (Yokohama,JP)	2008-05-07 11:54:54.0	309.386
tt25 (Dublin 14,IE)	2008-05-07 11:54:53.0	66.097



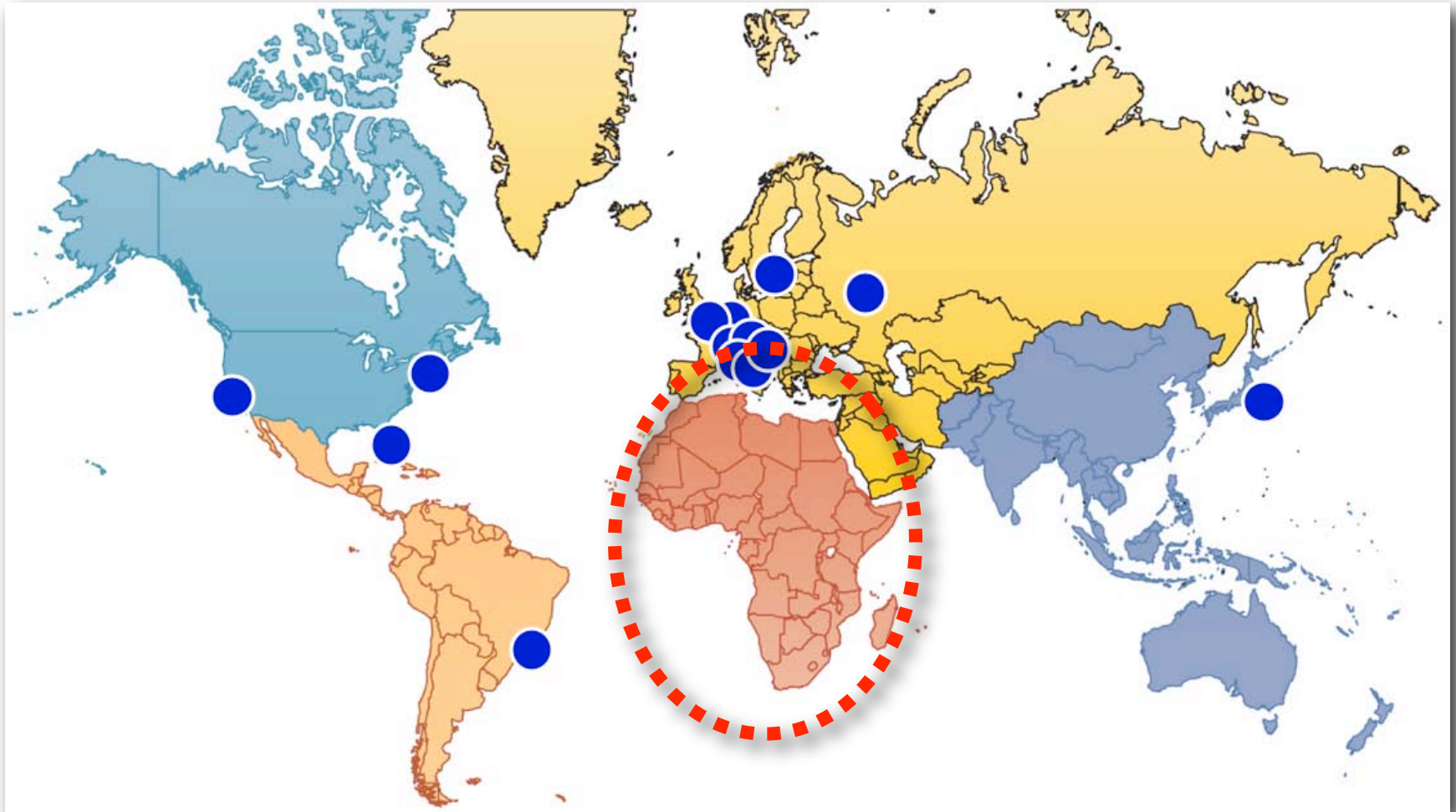


Routing Information Service - RIS

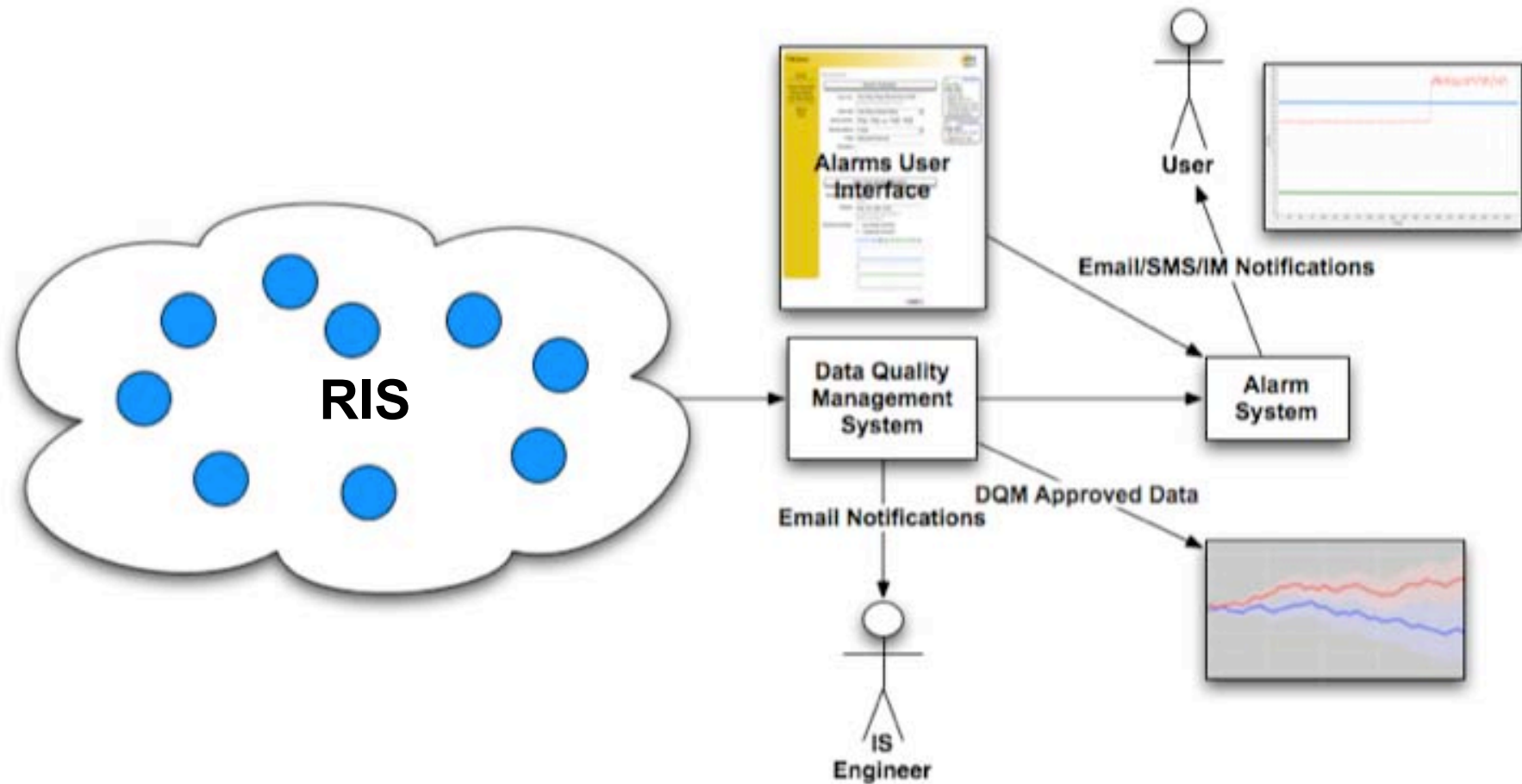
- Looking glass with history
- Collects routing information (BGP)
 - AS12654 has 600 peers
 - 15 Remote Route Collectors (RRCs) at IXPs
- 3 months live data searchable online
 - Powerful query tools
- All raw data available to everyone

<http://www.ripe.net/ris>

RIS - Remote Route Collectors (RRCs)



MyASN - Alarms





MyASN - Creating Alarms

Create New Alarm

You are logged in as [mark] and you are editing 12654

[MyASN](#) » - Create New Alarm

Alarm type:

Origin

Alarm group:

demo

[manage alarm groups](#)

my AS Number(s):

2121

Their AS Number(s):

Prefix:

194.0.24.0/21

Other upstreams:

Prefix exceptions:

Min Event Duration (MinED):

1m

Min Event Count (MinEC):

1

Alarm Detection Window (ADW):

1h

AS path regular expression:

\b(2121)\$

Note about 4-byte ASNs: 4-byte ASNs **must** be in x.y notation as documented [here](#) . Note that you **must not** escape any periods yourself, even though the ASN ends up in a regular expression.

Create

Reset

[RIS Main Page](#) | [Feedback & bug reports](#) | [About RIPE NCC](#)



MyASN - Triggered Alarms

View triggered alarms

You are logged in as [mark] and you are editing 12654

[MyASN](#) » - View Alarms

Showing alarms in group. | [Manage alarm groups...](#) | [Add an alarm...](#)

ID	Group	Prefix	Type	RegEX	MinED	MinEC	ADW	State	Events	Details	Delete log
3294	va	+ 84.205.67.0/24	origin	My AS#: 65510	1m	1	1h	A	232275	view	delete log
2736	nagios monitor	+ 147.60.0.0/16	origin	My AS#: 65533	1m	1	1m	A	6419	view	delete log
748	dfk	+ 192.6.143.0/24	origin	My AS#: 14496	1m	1	1h	A	9	view	delete log

[RIS Main Page](#) | [Feedback & bug reports](#) | [About RIPE NCC](#)



MyASN - Notifications

From: MyASN Notifications <ris@ripe.net>
 Date: February 24, 2008 18:48:22
 To: alerts@youtube.com
 Subject: New MyASN alarms for 36561

Dear MyASN contact,

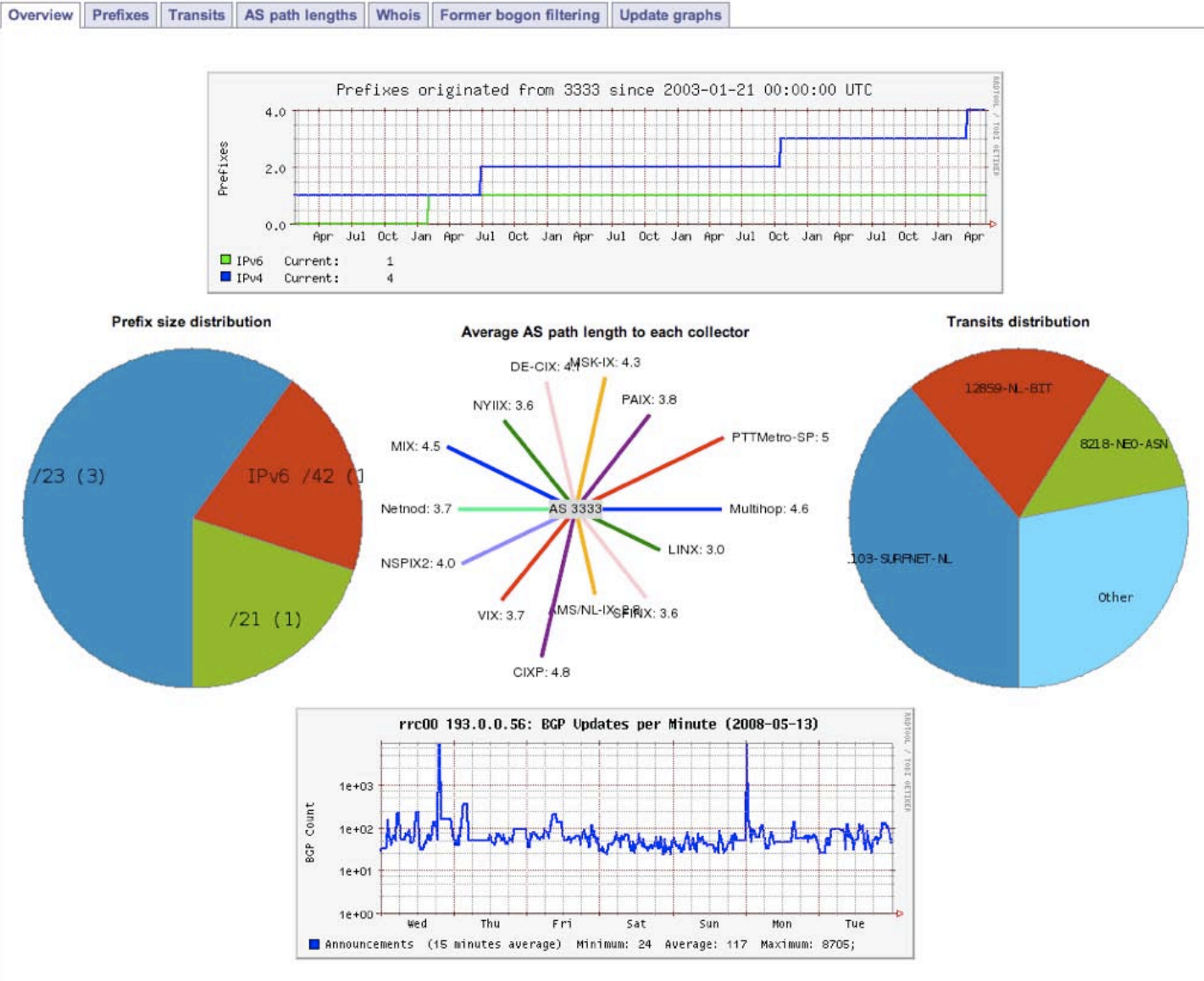
New alarms were detected for 36561. Please find the details below.
 Depending on your detail level settings you might not see all the events.

Please use the web interface for further details:
<http://www.ris.ripe.net/myasn/>

If you have any questions, don't hesitate to contact us at:
ris@ripe.net

RRC	Prefix	AS Path	Conflict AS	Peer	First seen
rrc00	208.65.153.0/24	3333 6320 3549 3491 17557	17557	193.203.0.124	Sun Feb 24 18:47:32 2008

RIS - AS Dashboard



RIS - Prefix dashboard

This prefix originated from [AS5459](#) (LINX-AS London Internet Exchange Ltd.).

This prefix comes from space allocated to RIPE NCC by the IANA.

Related (overlapping) prefixes seen by RIS in the last 30 days

<u>Prefix</u>	<u>Origin AS</u>	<u>AS name</u>	<u>Last seen</u>
195.66.230.0/24	2914	NTT-COMMUNICATIONS-2914 - NTT America, Inc.	2008-05-03 21:42:11 UTC

Note: Prefixes **marked orange** are currently not announced. The entries refer to announcements in the past.

Prefix stability and visibility in the last 48 hours

⊕ *Explanation*



Visibility

The visibility of this prefix is **99%**.

During the last 48 hours, **0 updates** per peer sending this prefix were found.



Stability



RIS Tools

[RIPE NCC](#)
[LIR Portal](#)
[RIPE](#)

[About RIPE NCC](#)
[Contact](#)
[Search](#)
[Sitemap](#)

Routing Information Service

you are here: [home](#) -> [RIPE NCC Projects](#) -> [RIS](#)

RIS:

- [RIS Home Page](#)
- [Tools](#)
- [Statistics](#)
- [RIS Raw Data](#)
- [Documentation](#)
- [RIS Analysis Links Page](#)
- [Related Sites](#)
- [Contact Us](#)
- [Send Feedback](#)

Tools

RIS Status

- [RIS Status Overview](#) lists maintenance announcements, outages and the current RIS status

Querying the RIS for Data

- **RIS Dashboard:** Enter an ASN or prefix:
 (New prototype tool)
- [BGPlay](#) visualises routing updates seen by the RIS
- [Search](#) allows you to search for RIS data for a specific prefix or Autonomous System (AS) (New version)
- [Looking glass](#) allows you to directly query our collectors
- [ASInUse](#) can determine whether an AS is currently in use on the Internet and list the peers that RIS can see
- [PrefixInUse](#) can determine when a prefix was last seen on the Internet and who originated it (New version)
- [RISwhois](#) searches the latest RIS data for details of an IP address. It is useful when querying RIS from scripts. This also has a [web interface](#)

Miscellaneous

- [MyASN](#) is a notification system for some types of rogue announcements of your address space
- [RIS Beacons](#) lists details of current beacon and anchor prefixes announced by RIS, including flapping times and a RIS database query matrix
- [De-Bogonising New Address Blocks](#) allows you to test reachability and view statistics for the visibility of new address blocks over the Internet

RELATED TOPICS

- [DNS Monitoring](#)
- [DISI](#)
- [K-root Name Server](#)
- [RRCC](#)
- [TTM](#)

<http://www.ris.ripe.net>



RIS Tools - prefixinuse

Prefix	195.184.224.0/19	Exact match	Submit
RRC Box	rrc03, AMS-IX		
Sort results	by time		
Time interval	1 month		
Output type	☒ HTML ☐ Text		

The last announcement of this prefix occurred on **2008-05-14 09:34:43 UTC**. The RIS database contains data until **2008-05-14 10:25:00 UTC**.

1 entries found for 195.184.224.0/19

Prefix	Last announced	Origin AS
195.184.224.0/19	2008-05-14 09:34:43 UTC	8897

RIS Tools - asinuse

AS number	3333	Submit
RRC Box	rrc00, RIPE NCC	
Sort results	by peer AS	
Time interval	1 month	
Output type	☒ HTML ☐ Text	

The RIS database contains data until 2007-08-15 07:55:00Z. Copy [the link](#) to get the URL for this search.

AS3333 was last announced on 2007-08-15 07:54:52Z. 108 peers are found for **AS3333**.

<u>Neighbor of AS3333</u>	<u>Last seen</u>	<u>ASpath</u>
42	2007-08-15 00:49:01Z	3333 42 32978
174	2007-08-15 07:51:50Z	3333 174 9299 7491
286	2007-08-15 07:54:13Z	3333 286 209 721 27064 27066 3538 5988
702	2007-08-15 07:44:52Z	3333 702 20485 21127 8410 8410 34833
1103	2007-08-15 07:54:51Z	3333 1103 20965 24490 24475 4621
1126	2007-08-07 04:10:47Z	3333 1126 21286
1257	2007-08-15 07:03:42Z	3333 1257 42732 21042
1299	2007-08-15 07:54:28Z	3333 1299 5518 35809
1836	2007-08-13 00:25:13Z	3333 1836



RIS Tools - riswhois

```
% This is RIPE NCC's Routing Information Service
% whois gateway to collected BGP Routing Tables
% IPv4 or IPv6 address to origin prefix match
%
% For more information visit http://www.ripe.net/ris/riswhois.html
```

```
route:      195.66.224.0/19
origin:     AS5459
descr:      LINX-AS London Internet Exchange Ltd.
lastupd-frst: 2008-02-18 21:10Z 198.32.160.96@rrc11
lastupd-last: 2008-05-14 07:34Z 195.69.145.216@rrc03
seen-at:     rrc00,rrc01,rrc02,rrc03,rrc04,rrc05,rrc06,rrc07,rrc10,rrc11,rrc12,rrc13,rrc14,rrc15,rrc16
num-rispeers: 133
source:      RISWHOIS
```

rrc00 ▾
Query RIS Looking Glass
Query RIS Database

Address or Prefix

☐ All more specific matches ☒ All less specific matches

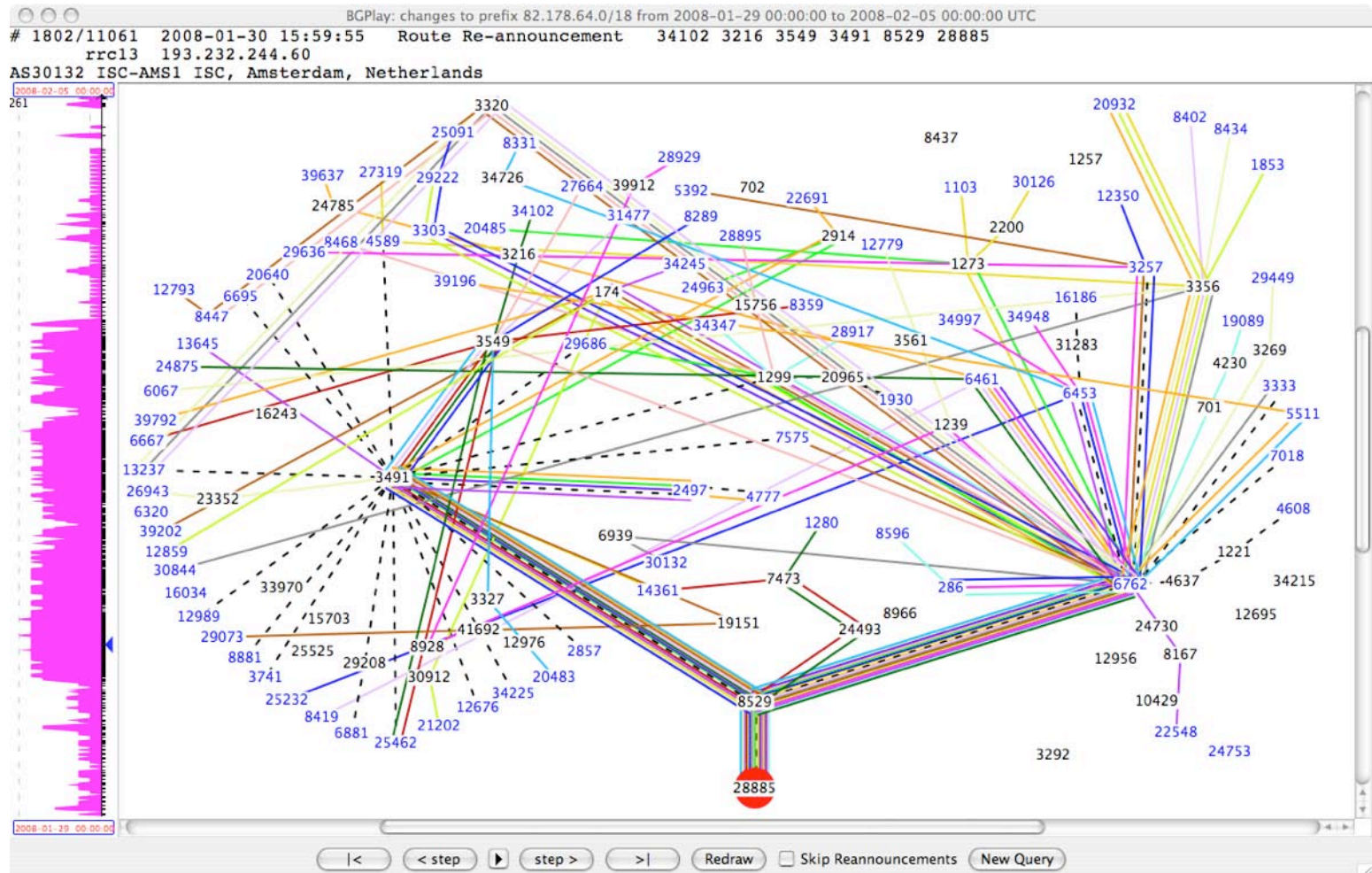
☐ Exact match only

☐ Short fast output

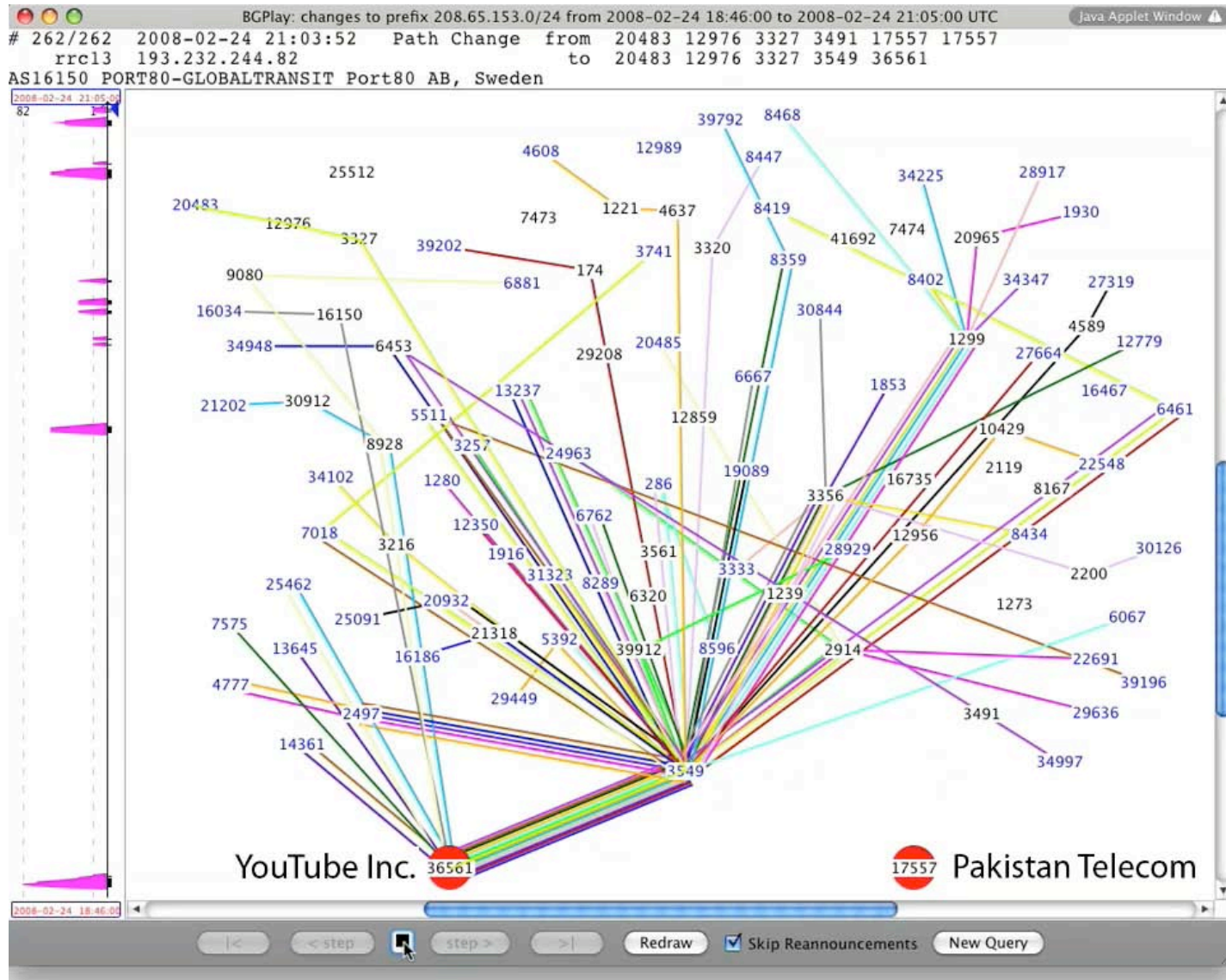
☐ Return primary keys only

whois -h riswhois.ripe.net 195.66.224.0/23

RIS Tools - BGPlay



RIS Tools - BGPlay





RIS - Reporting and statistics

- RIS weekly reports:
 - Prefix distribution
 - Average AS path lengths
 - Numbers of single and multihomed ASs
 - Martians and hotspots

o List of hot-spots during the week.

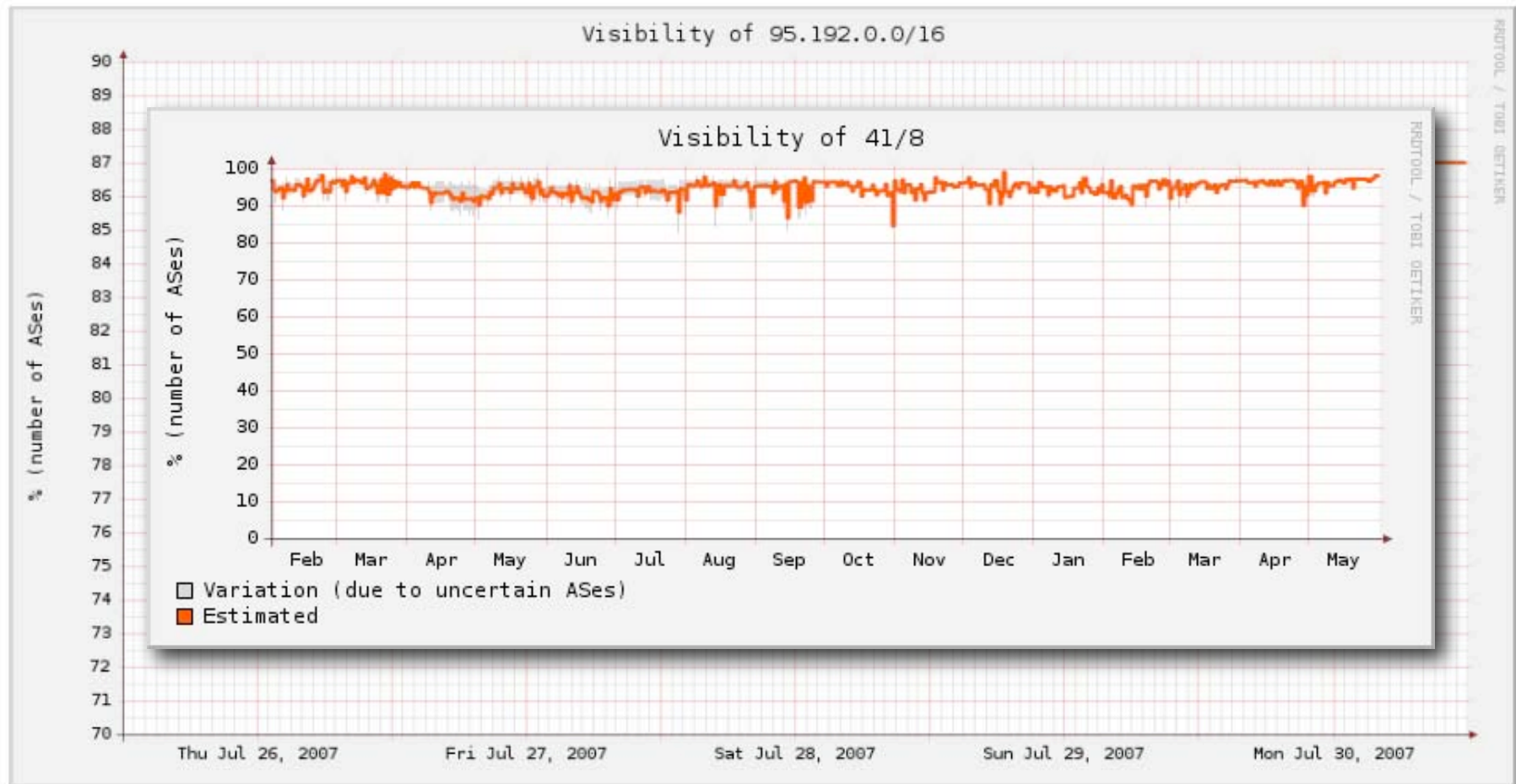
Prefix	Origin AS	Number of updates
203.34.88.0/24	18117	2986855
194.110.73.0/24	30850	1062492
62.24.238.0/24	13285	625800
193.242.111.0/24	2128	624969
77.247.128.0/20	43043	515486
221.135.253.0/24	9583	335059
80.243.64.0/20	21332	268483
12.106.30.0/24	22072	265643

o List of martians appearing throughout the week.

Prefix	Origin AS
10.11.12.0/24	34245
10.90.3.0/24	174
172.16.0.0/16	7908
172.16.2.2/32	8447
192.0.2.0/24	2854
192.168.1.0/24	7908

<http://www.ripe.net/projects/ris/stats>

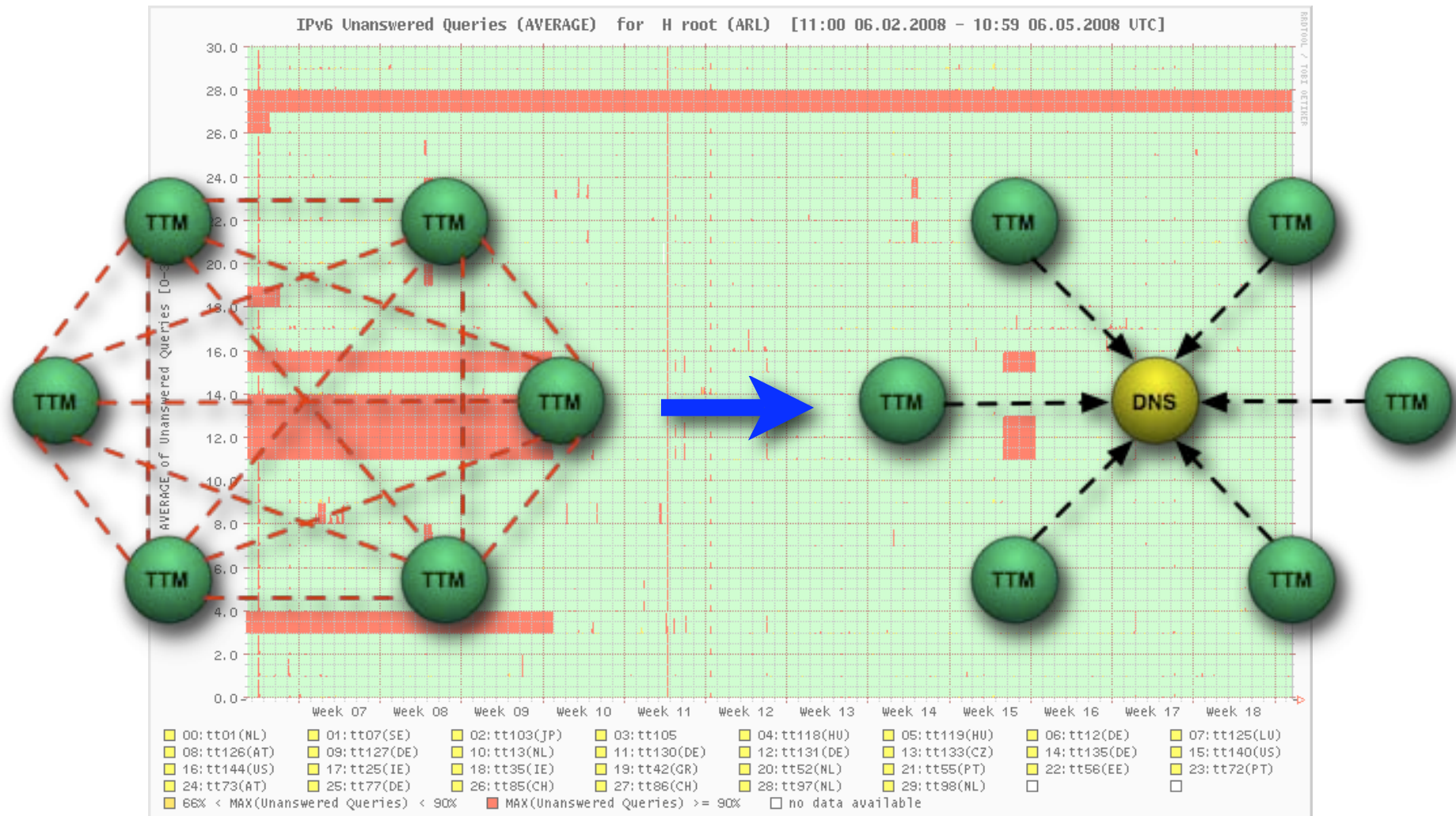
RIS - Debogon (95/8)



<http://www.ris.ripe.net/debogon>

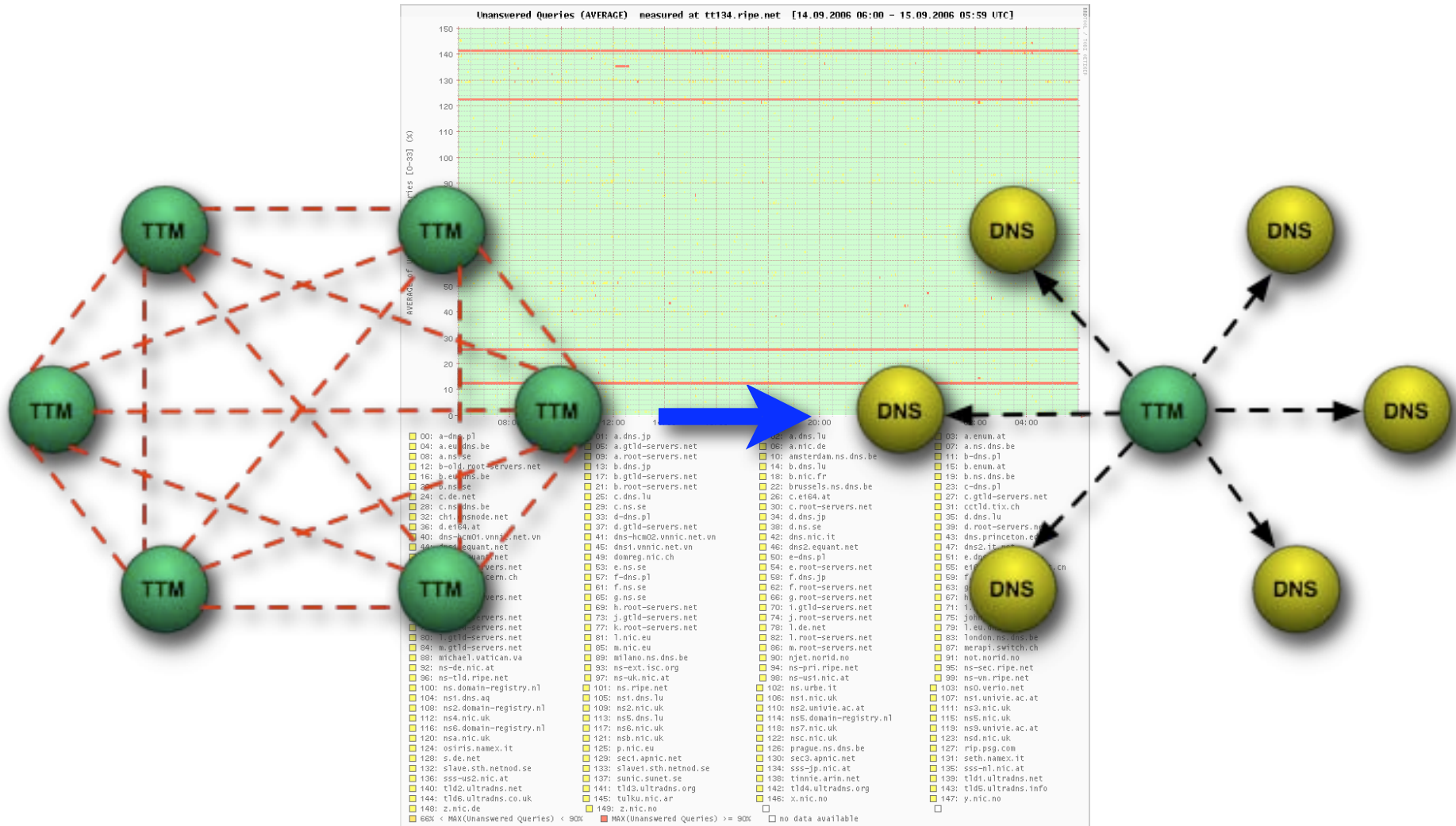
DNSMON

Monitors 200+ DNS servers (ccTLD/gTLD) worldwide



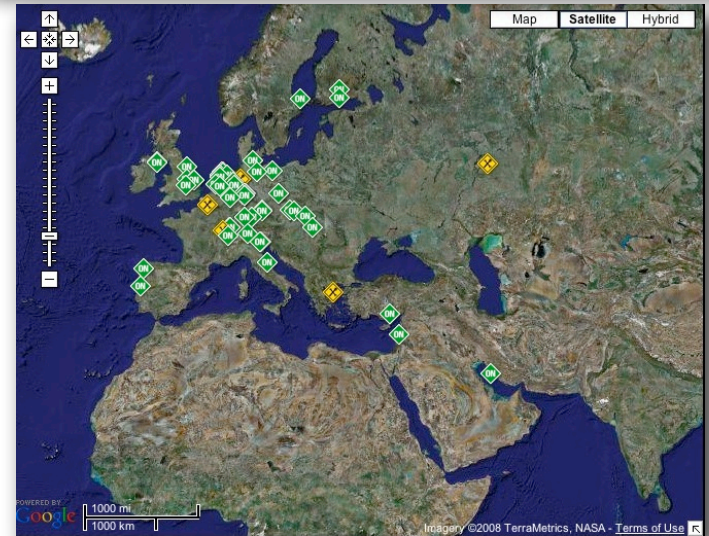
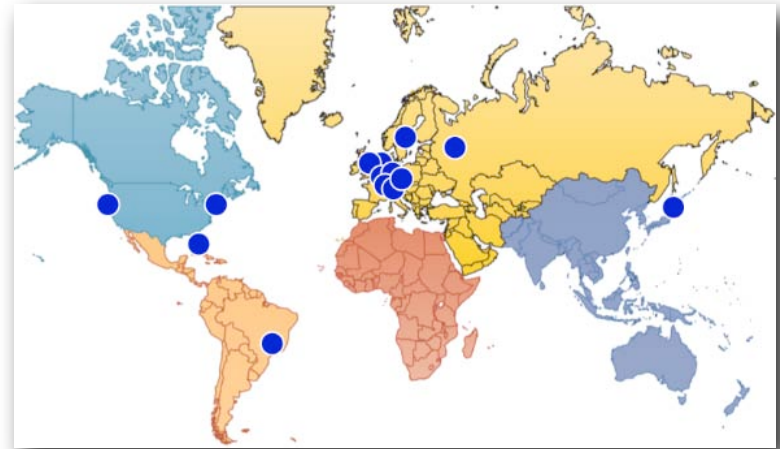
DNSMON

Monitors connectivity of a TTM probe



Credits

- RIPE NCC Information Services
 - <http://is-portal.ripe.net>
- Routing Information Service (RIS)
 - <http://www.ripe.net/ris>
- Test Traffic Measurements (TTM)
 - <http://www.ripe.net/ttm>
- DNSMON
 - <http://dnsmon.ripe.net>
- Full NCC Science Group analysis
 - <http://ripe.net/projects/reports/2008cable-cut>
 - <http://www.ripe.net/news/study-youtube-hijacking.html>



Questions?

