



RIPE NCC
RIPE NETWORK COORDINATION CENTRE

The State of the Internet in Finland

-

Interpreting RIPE NCC Data

Mirjam Kühne

RIPE NCC Services



● Member Services

- Resource distribution (IPv4, IPv6, ASNs)
- Resource certification
- Training
- LIR Portal features
- Extra features in RIPE Atlas

● Public Services

- RIPE Database
- Reverse DNS
- Operating K-root server
- Operator tools
 - RIPE Atlas, RIPEstat, RIS, RIPE Labs
- Data sharing
- Open meetings



IPv6 Deployment

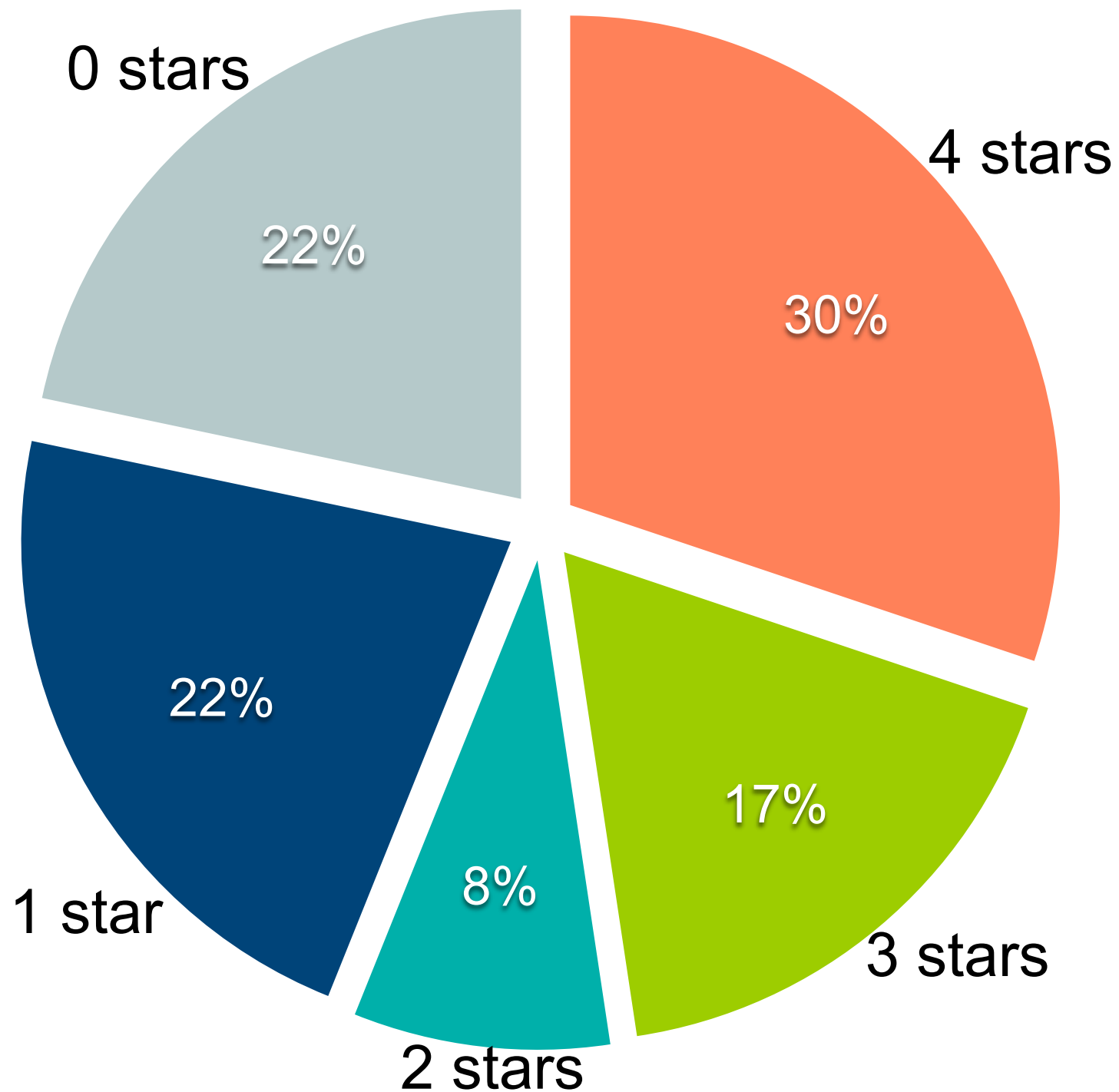
IPv6 RIPEness



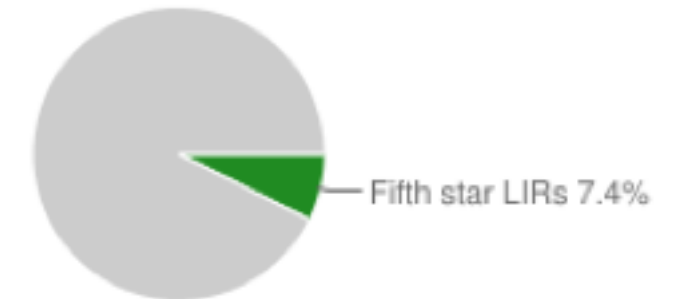
- Rating system to monitor IPv6 deployment among RIPE NCC members
- Stars are awarded for:
 - Obtaining an IPv6 address (allocation)
 - Visibility in global routing table
 - Setting up routing registry entries
 - Setting up reverse DNS
- Per country statistics published daily

<http://ipv6ripeness.ripe.net/>

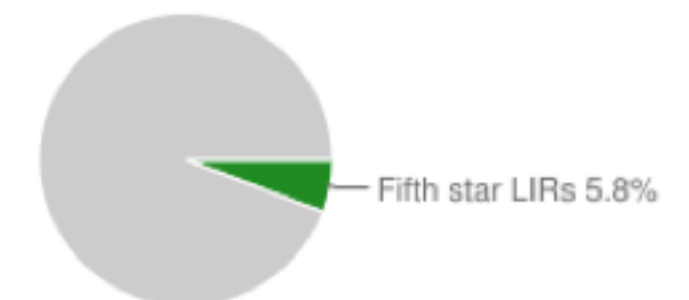
IPv6 RIPEness in FI (189 LIRs)



Content



Access



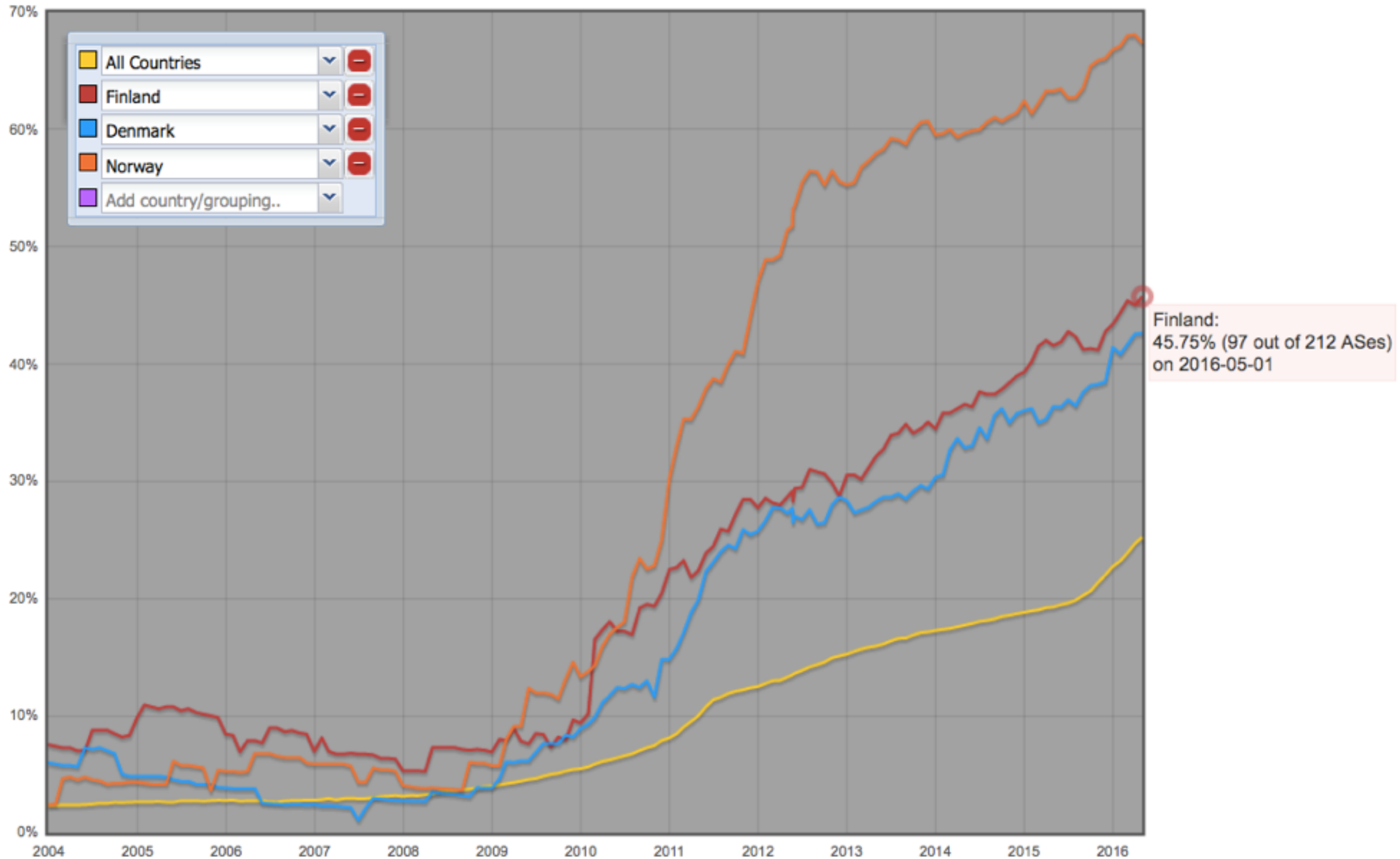
IPv6 RIPLEness - Fifth Star



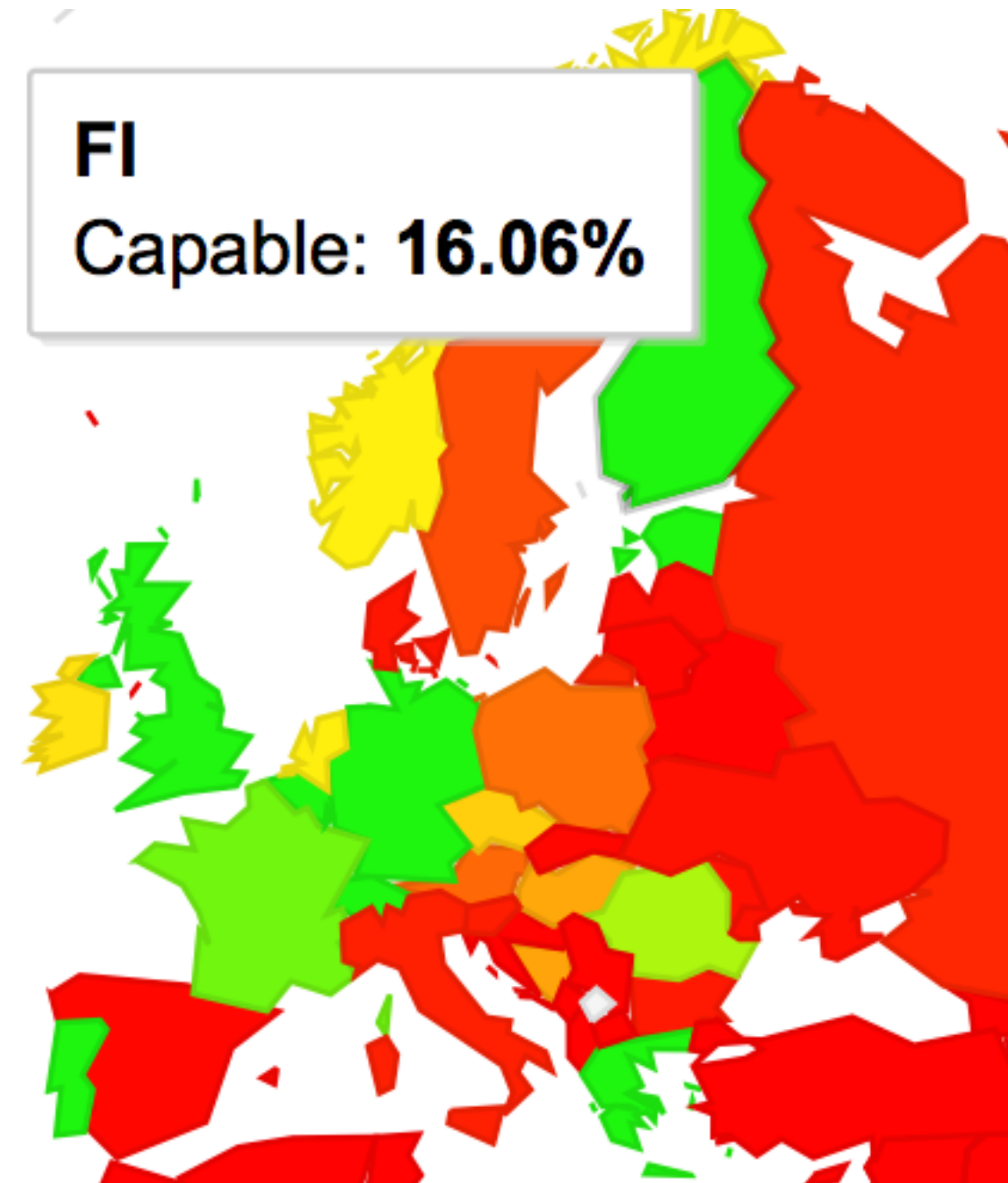
- Members can qualify for a fifth star
- This measures IPv6 deployment at the edge and looks at:
 - **Content** - 16% of content must be accessible over IPv6; or
 - **Access** - 16% of your customers are IPv6-capable
- The threshold doubles every year
- Get a new 5-star RIPLEness t-shirt every year!

<http://ipv6ripeness.ripe.net/5star/FI.html>

ASes Announcing IPv6 Prefixes



Actual Use of IPv6 in Finland



<http://stats.labs.apnic.net/ipv6/>

Capable and Preferred IPv6 Use





RIPE Atlas

Active Measurements Network



- Probe distribution
 - 14,000 RIPE Atlas probes distributed
 - 9,300 RIPE Atlas probes active
 - 120 active RIPE Atlas anchors
- Coverage
 - 176 countries covered
 - Originating ASes covered
 - 3,251 (IPv4), 1,187 (IPv6)
- ping, traceroute, DNS, SSLcert



IXP Country Jedi Tampere

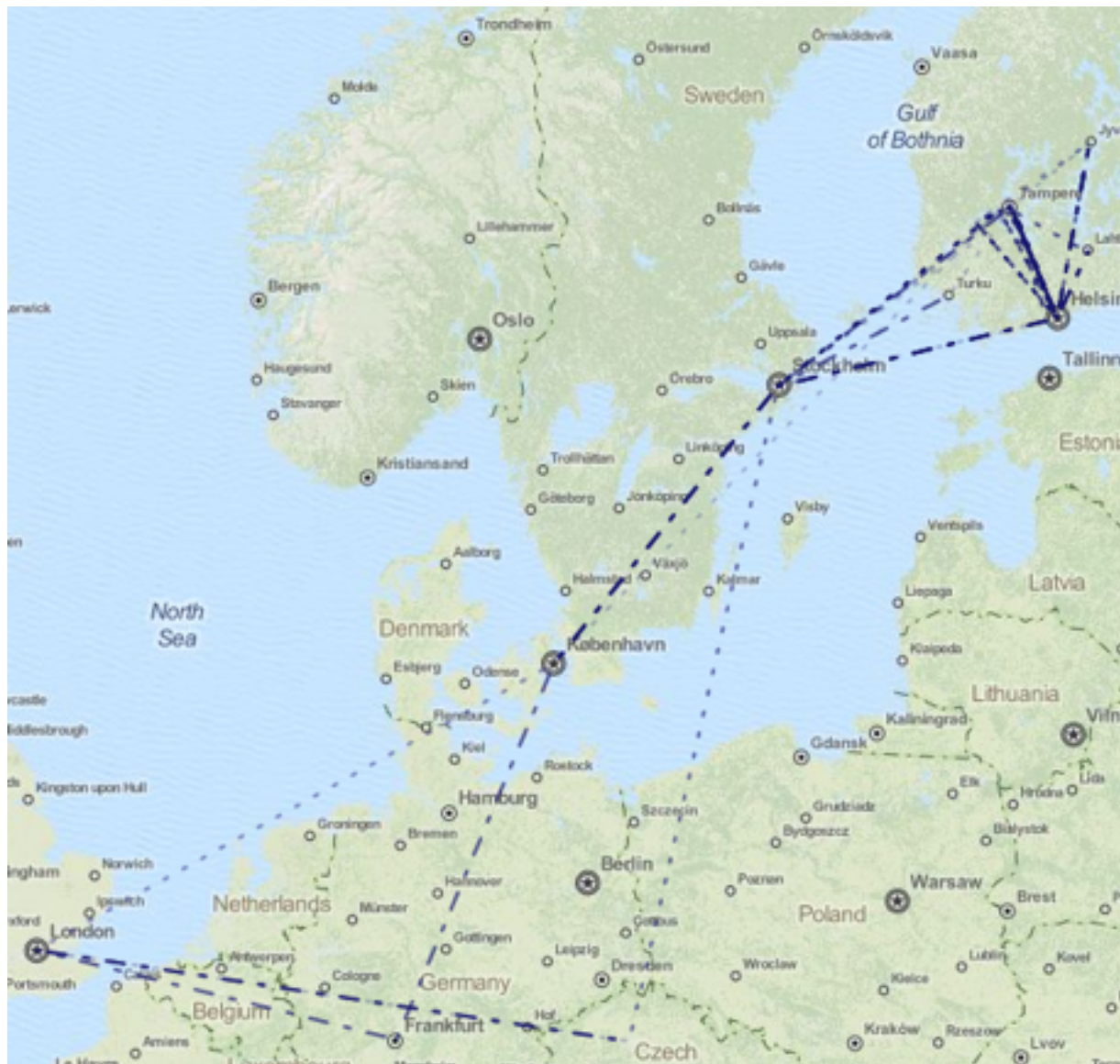


- IXP-Country-jedi
 - Are the paths between ASes staying in the country?
 - What is the difference between IPv6 & IPv4?
 - How many paths go via a local IXP?
 - Which peer could you add to improve reachability?
- Experimental tool
 - Feature requests welcome!
 - Depends on probe distribution in a country

Difference between IPv4 & IPv6



- Do paths stay in the country?
 - Fewer RIPE Atlas probes support IPv6



How Many Paths Go Via Local IXP?



IXP: Yes

Out of country IPs: No

IXP: No

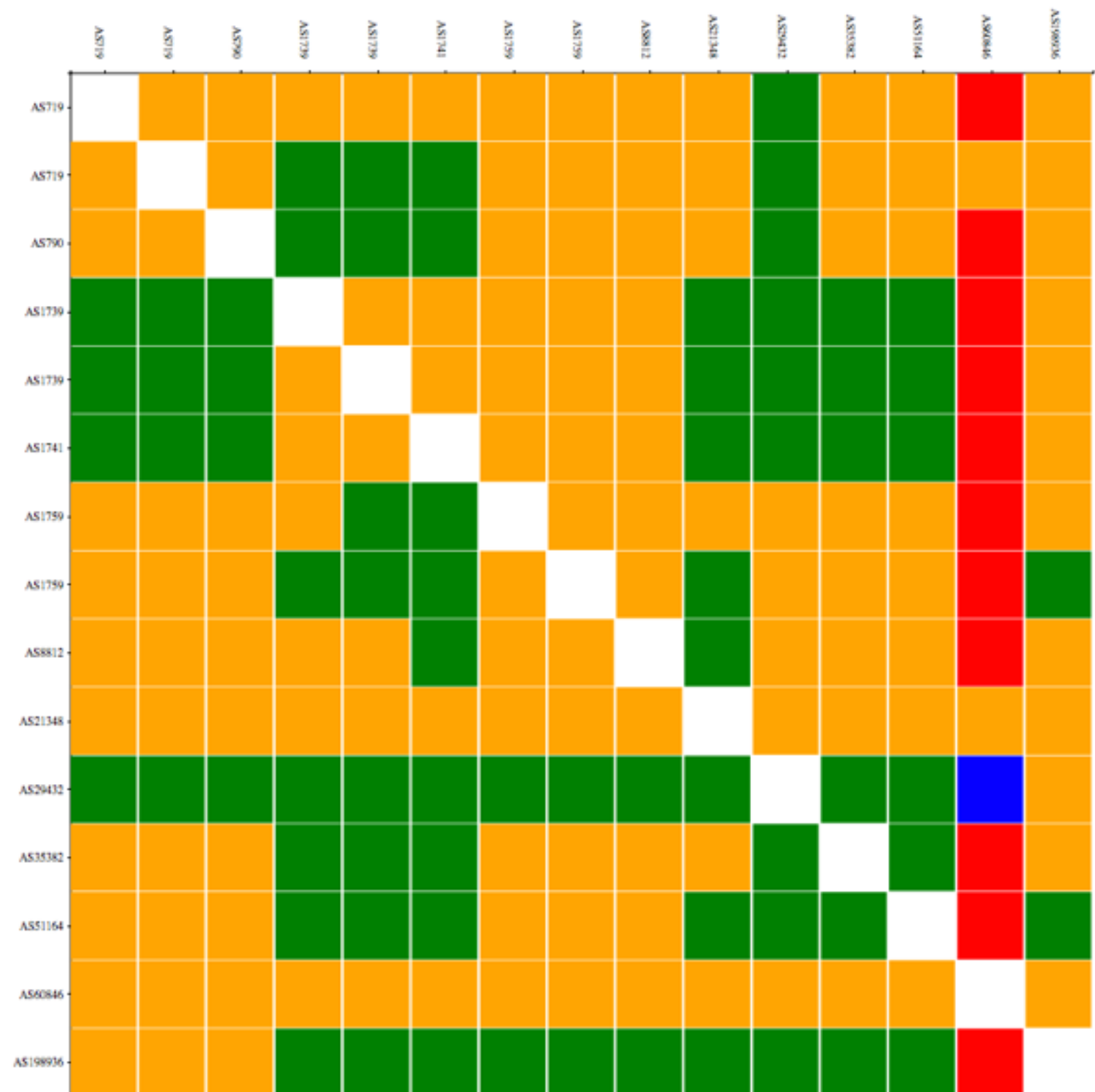
Out of country IPs: No

IXP: Yes

Out of country IPs: Yes

IXP: No

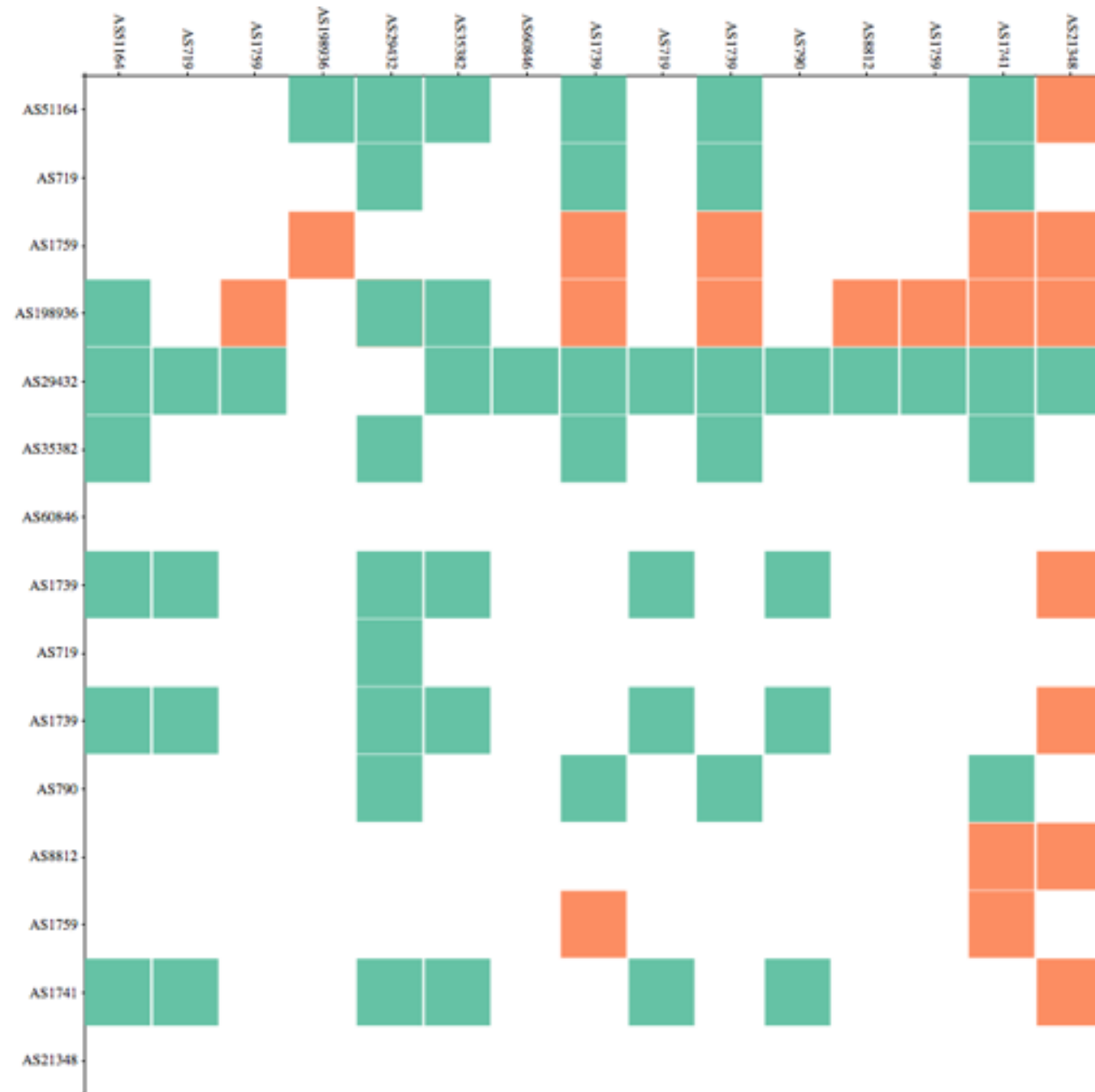
Out of country IPs: Yes



IXP LANs for Tampere Probe Mesh



TREX
FICIX



<http://sg-pub.ripe.net/emile/ixp-country-jedi/specials/2016-06-01-Tampere/>



RIPE Labs



- RIPE Labs
- Data Repository
- Security
- RIPE NCC Statistics
- RIPE Database
- RIPE Atlas
- RIPEstat
- About

Your IP address is:
2001:67c:2e8:9::c100:14e6

Statistics

12,971

Number of LIRs



912,384

Number of IPv4 addresses transferred last month



9,857

LIRs with IPv6



View more statistics



TagCloud

BGP allocation api ases atlas certification country cpe database datarepository dns dnsmon dnssec geolocation ipv4 ipv6

RIPE Labs
INNOVATIVE INTERNET TOOLS AND IDEAS
SHARE EXPERIENCE | SHOWCASE TOOLS | PRESENT RESEARCH

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RSS

Measuring More Internet with RIPE Atlas

Emile Aben — Jan 27, 2016 01:20 PM

RIPE Atlas collects a lot of measurements. But how much of the Internet are we actually measuring? We had a sense that with a limited amount of extra load on the system, we could dramatically increase the number of router IPs seen on a given day in RIPE Atlas - and that means measuring more of the Internet.

Tags: atlas measurements visualisation

Tweet 0 comments

Read more →

Behind the Curtain: Making IPv6 Work

George Michaelson — Jan 26, 2016 12:55 PM

Wouldn't it be nice if turning on IPv6 really was 'press one button and the rest is magic' easy?

Tags: ipv6

Tweet 0 comments

Read more →

RIPE Atlas WiFi Measurements - Part 2

Suzanne Taylor Muzzin — Jan 25, 2016 02:41 PM

A little while ago, we asked what you thought about the idea of conducting WiFi measurements in RIPE Atlas. After some consideration and community feedback

Tweet 1 comment

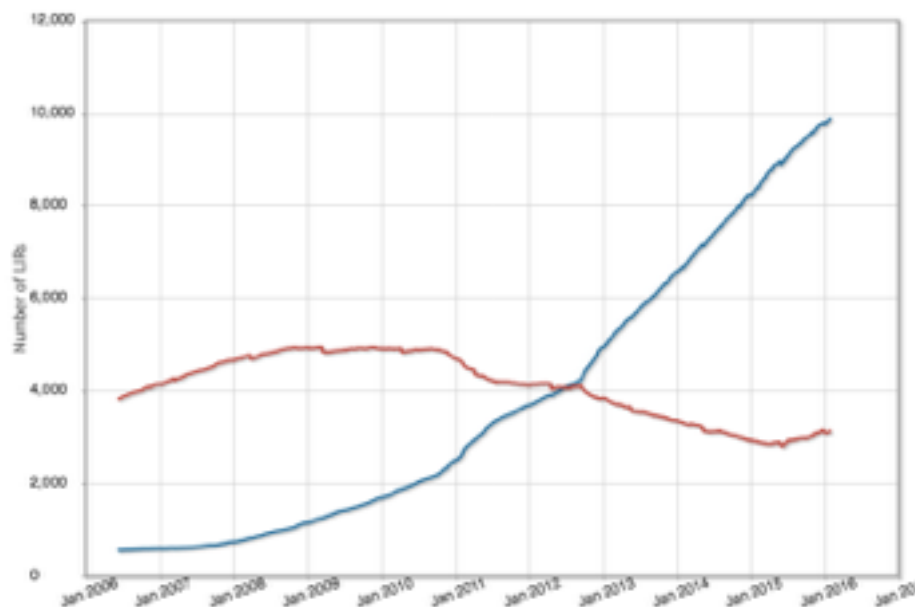
RIPE Labs Statistics Dashboard



Tags

allocation ases atlas
 certification country
 database ipv4 ipv6
 k-root lirs meetings
 ripestat routing syria
 transfers

LIRs With and Without IPv6



Statistics

12,971

Number of LIRs



912,384

Number of IPv4 addresses transferred last month



9,857

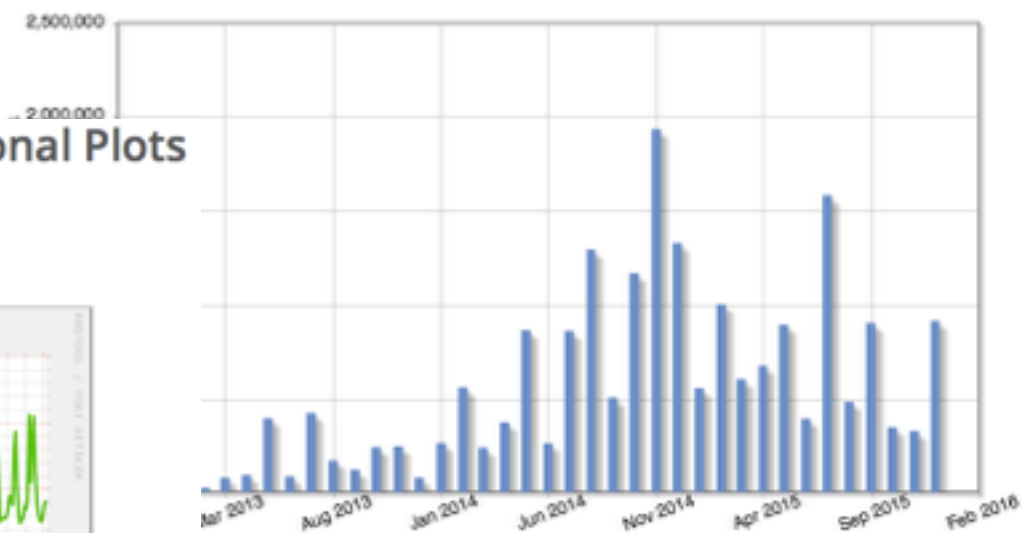
LIRs with IPv6



View more statistics



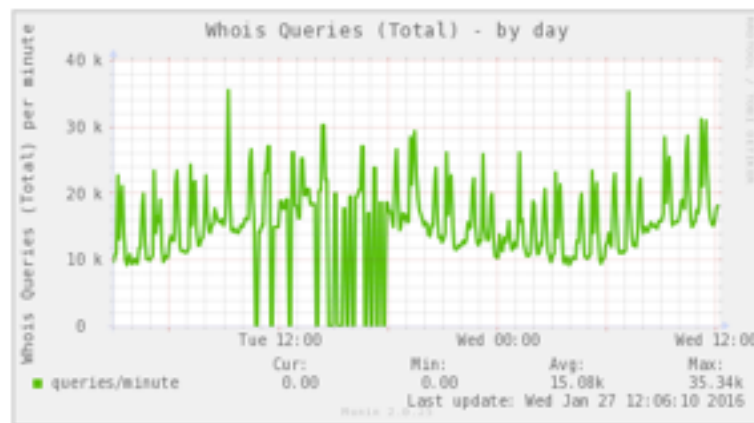
IPv4 Addresses Transferred



RIPE Database Server - Operational Plots

Query rate:

The number of RIPE Database queries we serve in total





Current Activities

Current Activities (1)



- General Meeting decisions
 - Multiple LIRs allowed
 - Nigel Titley and Remco van Mook re-elected on EB
 - Feedback needed for IETF endowment fund
 - Measures to tighten the last /8 procedures
- RIPE Database
 - Improving usability
 - Deleting unreferenced objects (potentially 800,000 objects)
 - Improving Reverse DNS flow

Current Activities (2)



- Current policy proposals
 - 2015-04: single transfer policy document for all resources
 - 2016-01: abuse-c for legacy resources
 - 2016-02: authenticate resources by API-key
 - 2016-03: one /22 IPv4 per LIR
- New online LIR Training Course in July
- RIPE Forum
 - Web-based interface to all RIPE mailing lists

<https://ripe.net/s/ripe-forum>

RIPE NCC Survey 2016



- We run these surveys to find out:
 - How we can better help our members and the community
 - What direction we should be taking in the coming years
- The survey is completely anonymous and shorter than ever before
- Complete the survey and be in with a chance to win one of five iPads!
- The survey runs until 30 June

www.ripe.net/survey2016



Questions



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