



Operators Tools

RIPE Labs

..illuminating new ideas and tools **from**
the community **for** the community

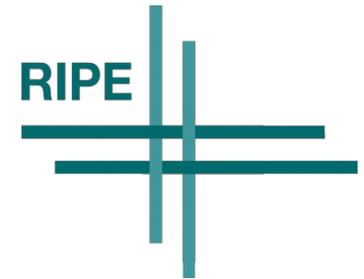


A Bit of History



Started as Coordination Center for the RIPE community

RIPE Database, mailing lists, meetings



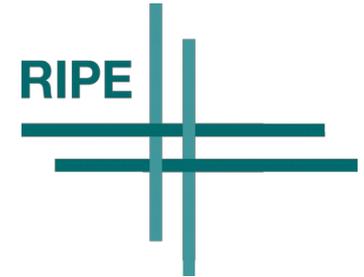


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Only later it became an RIR



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Only later it became an RIR

Once it was accepted as a neutral place

Providing platform for operators to coordinate their activities



RIPE Labs Back to the Roots

What is RIPE Labs?



- It is a web site, but more importantly:
 - A platform and a tool **for the community**
- You can
 - Test and evaluate new tools and prototypes
 - Contribute new ideas and research results
 - Discover and discuss in forums and blogs

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



Currently on RIPE Labs

Recent Articles

[Updated Heuristics for the Abuse Finder Service](#)
[IPv6 Ripeness - the Sequel](#)
[IPv6 CPE Survey](#)
[Serving ROAs as RPSL route\[6\] Objects from the RIPE Database](#)
[Historical BGPlay](#)
[Traffic in Network 14.0.0.0/8 and 223.0.0.0/8](#)
[Updates to the RIPE Database Query API and Search Clients](#)
[Use of the Routing Registry in the RIPE NCC Service Region](#)
[Interesting Graph - IPv6 Ripeness Movie](#)
[IPv6 Ripeness - First Steps](#)

INRDB

IP Allocation Movies

Resource Explainer (REX)

IPv4 and IPv6 Measurements

NetSense

DNS Related Tools

RIPE Database API and Tools

and much more ...

INRDB



- The Internet Number Resource Database
- A system to store and retrieve large amounts of Internet Number Resource related data
 - Routing Information Services (RIS) table dumps, IANA and RIR allocation and assignment data, other external datasets
- Helps accomplish RIPE NCC to serve the community by enabling efficient access across heterogeneous historical data
- Allows us to provide you new types of services

<http://labs.ripe.net/content/intro-inrdb-internet-number-resource-database>

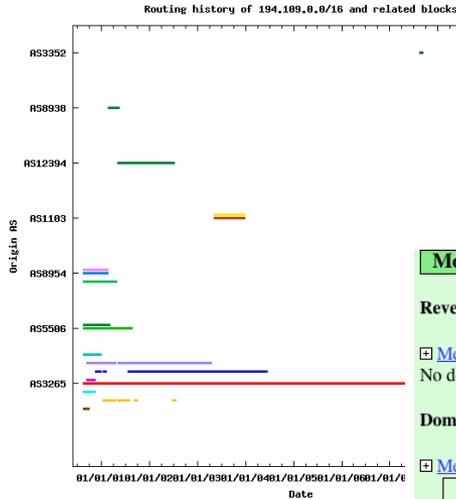
Resource Explainer



- Based on growing community needs, a service where:
 - History and current **status of resources** can be looked up
 - Information from many sources are **combined** and **explained**
- Some reasons are
 - Growing use of recycled / transferred resources
 - Proliferation of resource abuse
 - Support resource management activities

<http://labs.ripe.net/content/rex-resource-explainer>

Resource Explainer live!



Most recent information as of 2009-10-02

Reverse DNS delegations as seen in RIPE Database domain objects

[Methodology](#)

No domain objects found in the RIPE Database

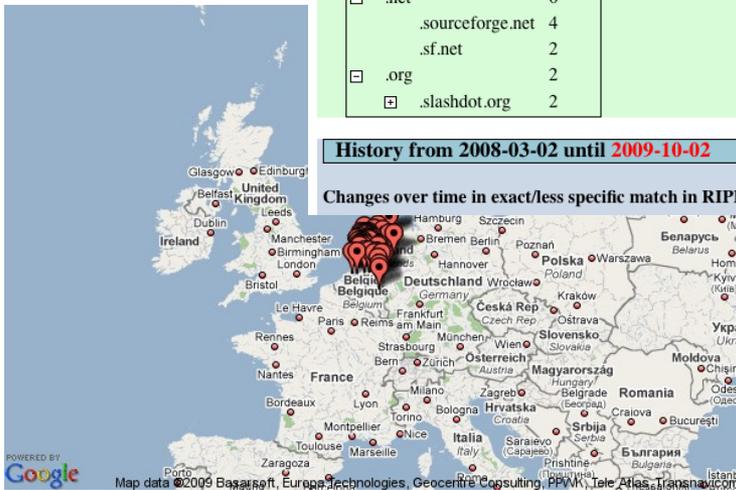
Domains seen in reverse DNS lookups in the month before 2009-09-30

[Methodology](#)

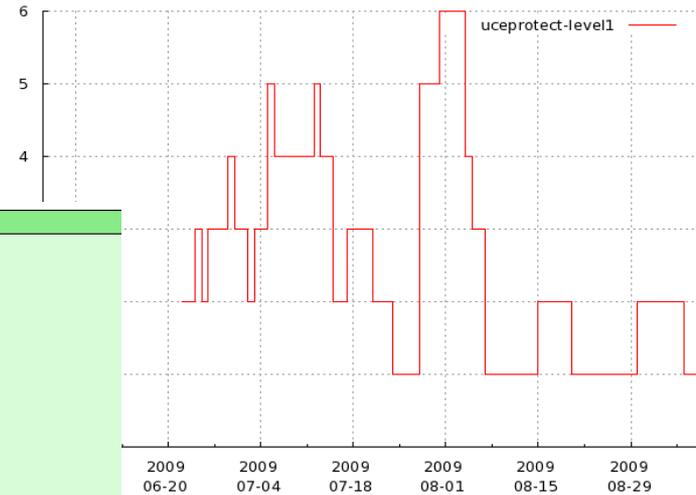
Domain	Count
.com	8
.sourceforge.com	4
.thinkgeek.com	3
.net	6
.sourceforge.net	4
.sf.net	2
.org	2
.slashdot.org	2

History from 2008-03-02 until 2009-10-02

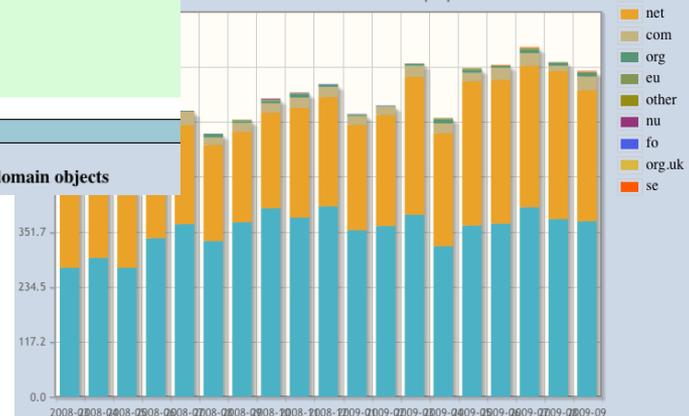
Changes over time in exact/less specific match in RIPE Database domain objects



entries in blacklists for 66.254.192.0/19



TLDs seen in reverse DNS lookups per month



NetSense



- Consistent interface integrating various measurement services provided by the RIPE NCC

AS3333 - RIPE-NCC RIPE Network ...

Prefix †	First Seen †	Last Update †
193.0.22.0/23	1 month ago	5 hours ago
193.0.18.0/23	9 months ago	4 hours ago
193.0.12.0/23	9 months ago	4 hours ago
193.0.20.0/23	9 months ago	5 hours ago
2001:610:240::/42	9 months ago	5 hours ago
193.0.0.0/21	9 months ago	4 hours ago

Visibility of AS3333



POWERED BY Google

Terms of Use

Routing Consistency ▶

Don't Filter Missing in routing table
 All inconsistencies Missing in RIPE database
 Present in both

Origin Prefixes ▼

BGP Routing Table †

193.0.18.0/23
193.0.22.0/23
193.0.20.0/23
193.0.12.0/23
2001:610:240::/42
193.0.0.0/21

Import Peers

RIPE Database †

193.0.18.0/23
193.0.22.0/23
193.0.20.0/23
193.0.12.0/23
Not present
193.0.0.0/21

Export Peers

Status †

Ok	✓
Not present	✗
Ok	✓

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



IPv6 Measurements



IPv6 Measurements Compilation

Measuring IPv6 at Web Clients & Caching Resolvers

Untunneling IPv6

IPv6 Ripeness

IPv6 CPE Survey

A compilation of IPv6 Measurements



- List of IPv6 measurements and tools from various sources with a short description and links to the tools and results
- Please let us know what type of measurements would be helpful for your operations

<http://labs.ripe.net/content/ipv6-measurement-compilation>

IPv6 at Web Clients & Resolvers



- When people connect to servers we measure

- IPv4 capability
- IPv6 capability
- IPv4/IPv6 preference

	labs	www
number of measurements	768	8176
web client IPv6 preference	7.2%	1.4%
web client IPv6 capability	9.2%	3.5%
resolver IPv6 capability	11.0%	5.0%

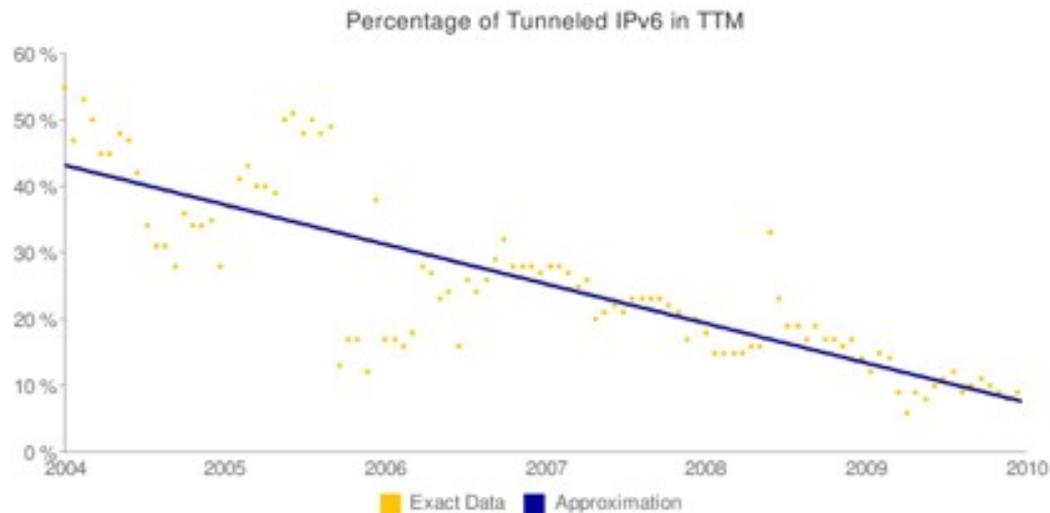
- More resolvers (4.9%) than clients (1.2%) have native IPv6 connectivity
 - Clients will increase over time
 - We will continue measurements

<http://labs.ripe.net/content/measuring-ipv6-web-clients-and-caching-resolvers-part-1>

Untunneling IPv6



- Using the Test Traffic Measurements Network to measure IPv6 native vs. IPv6 tunneled traffic
- Amount of tunneled traffic is decreasing



<http://labs.ripe.net/content/untunneling-ipv6>

IPv6 CPE Survey



- Survey among vendors of Customer Premise Equipment
- Results will be updated regularly

	AVM (FRITZ!Box)	Draytek	Zyxel	Juniper (ScreenOS)	Juniper (JUNOS)	Cisco
Hardware version required	7270, 7570	Vigor 2130 series, vigor 120	All models released in 2010	All	All	Most SOHO boxes
Minimum software level required	"Labor" only	2130:v1.3.0 120:v3.2.4.3	Per model, check vendor	6.1	10.2	12.4T or 15
Status	Beta	General deployment	Beta	General deployment	Early deployment	General deployment

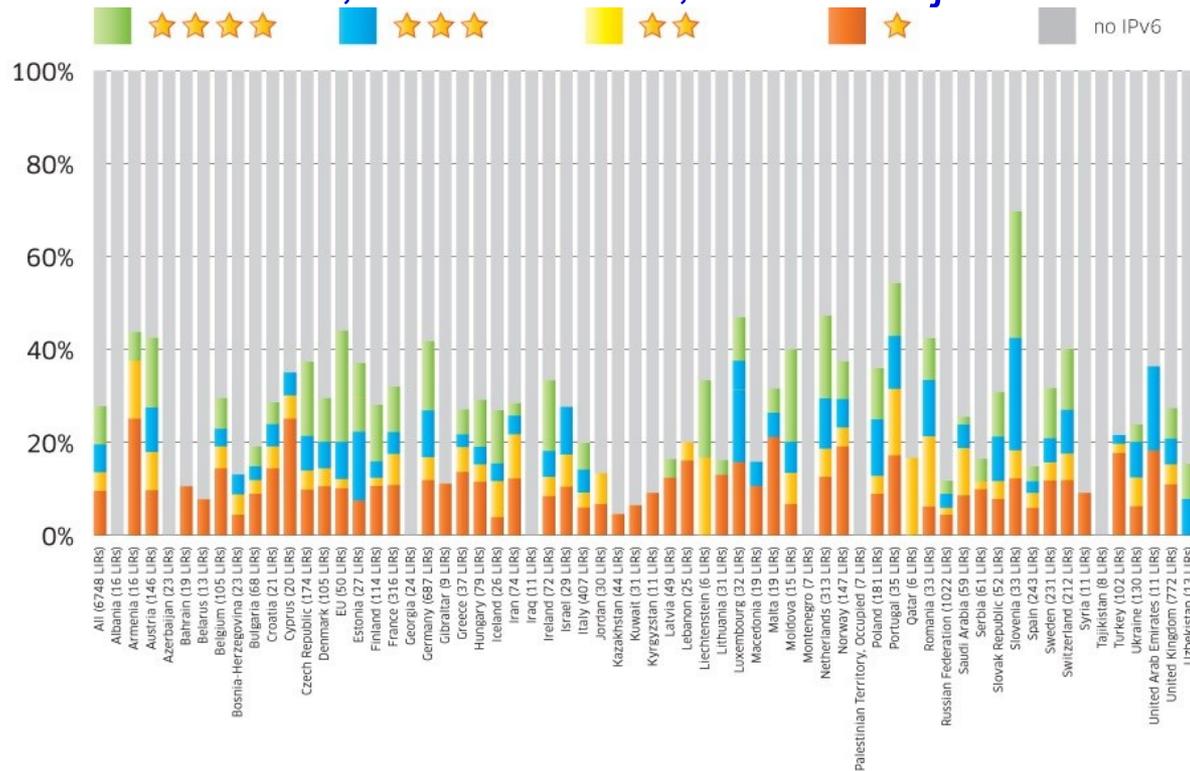
WAN layer 2						
Docsis 3.0	vendor	no	no	no	no	-
ADSL 2+	confirmed	120 only	vendor	confirmed	confirmed	confirmed
VDSL	confirmed	no	vendor	no	vendor	-
Ethernet	confirmed	vendor	vendor	confirmed	confirmed	confirmed
FTTx	-	vendor	vendor	no	no	-
WAN Layer 3						
PPPoA	confirmed	no	vendor	no	vendor	confirmed
PPPoE	confirmed	confirmed	vendor	confirmed	confirmed	confirmed
RFC1483/bridge	vendor	no	vendor	no	no	-
RFC1483/routed	-	-	vendor	vendor	vendor	-
Plain IP	-	vendor	vendor	confirmed	confirmed	confirmed
WAN address acquiring						
PPP link local only (unnumbered)	confirmed	confirmed	vendor	confirmed	confirmed	confirmed

<http://labs.ripe.net/content/ipv6-cpe-survey>

IPv6 Ripeness



- Rating system for LIRs/ISPs based on criteria
 - IPv6 allocation, reverse DNS, route6 object in RIPE DB



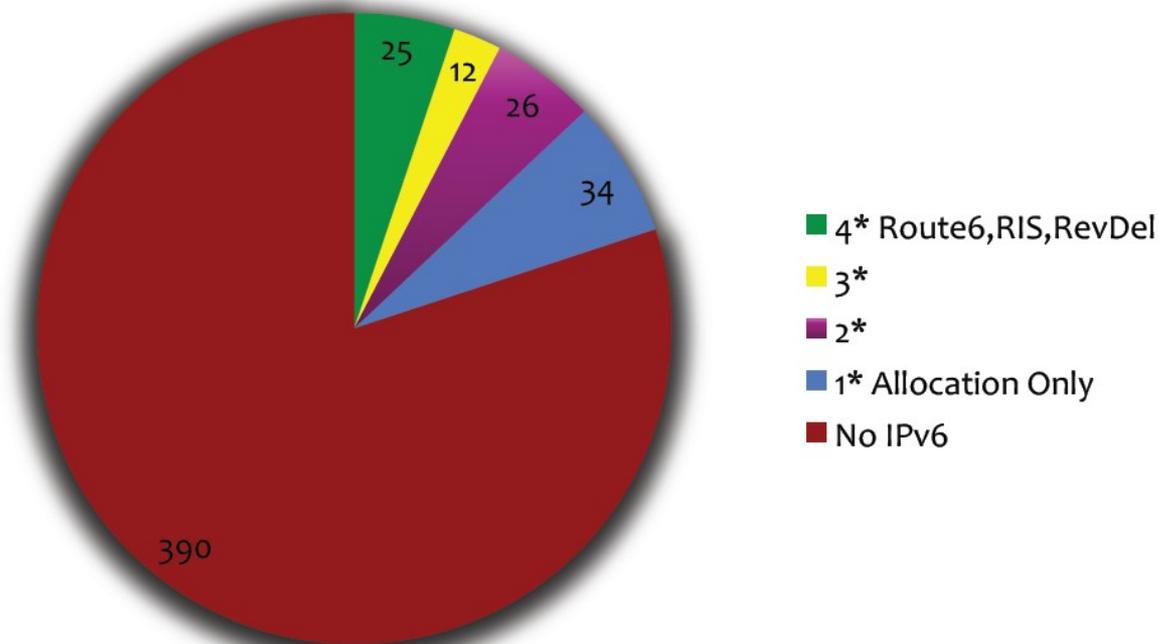
<http://labs.ripe.net/content/interesting-graph-ipv6-ripeness-movie>

IPv6 Ripeness



What about France?

Ipv6 deployment in France – Mars 2010



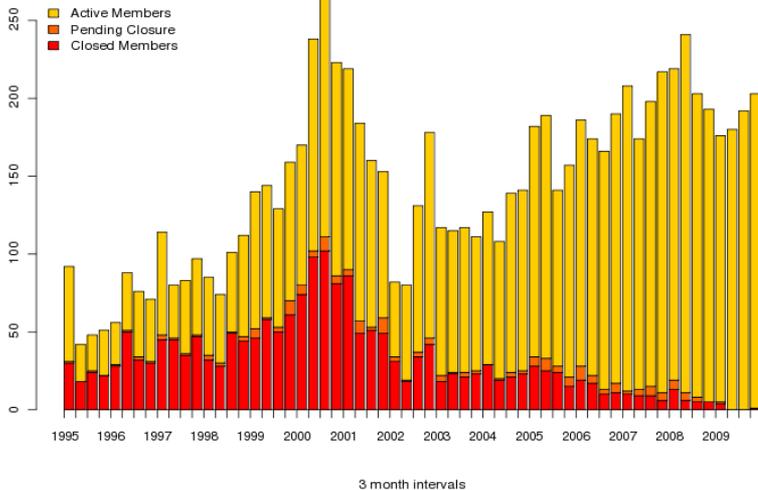
<http://labs.ripe.net/content/ipv6-ripeness-first-steps>

LIR Growth Statistics

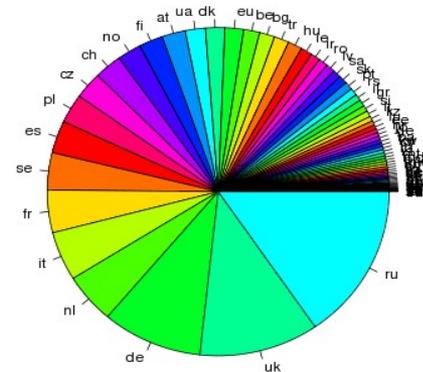


- RIPE NCC membership demographics
 - <http://labs.ripe.net/content/ripe-ncc-membership-growth>
- Internet number resources are distributed among the membership
 - <http://labs.ripe.net/content/members-and-their-number-resources>

Number of members vs. date of commit - all countries, 20100101



IPv4 allocations to current members, per country - 20100101



DNS Related Tools



- DNSSEC for the root zone
 - Monitoring the signing of K-root
- DNS reply-size tester
 - Easy tool to determine maximum size of DNS response packets your resolver can handle
 - Many people downloaded tool
 - First Results published

<http://labs.ripe.net/content/testing-your-resolver-dns-reply-size-issues>

RIPE Database – New Tools



- Whois data via RESTful Web
 - <http://labs.ripe.net/content/ripe-database-api>
- RIPE Database queries including search
 - <http://labs.ripe.net/content/ripe-database-query-api-including-search>
- Abuse Finder – A tool to find all abuse related contact information: <http://labs.ripe.net/content/abuse-finder>

This application uses the [RIPE Database REST API](#).

The RIPE Database is subject to [Terms and Conditions](http://www.ripe.net/db/support/db-terms-conditions.pdf).
See <http://www.ripe.net/db/support/db-terms-conditions.pdf>

RIPE Database

Search (returns max 100 objects per query)

Query string, you can specify up to five comma separated keys:

Sources	Types	Flags	Inverse lookup
<input type="checkbox"/> abuse-mailbox	<input checked="" type="checkbox"/> admin-c	<input type="checkbox"/> auth	<input type="checkbox"/> author
<input type="checkbox"/> irt-nfy	<input type="checkbox"/> local-as	<input type="checkbox"/> mbrs-by-ref	<input type="checkbox"/> member-of
<input type="checkbox"/> mnt-irt	<input type="checkbox"/> mnt-lower	<input type="checkbox"/> mnt-nfy	<input type="checkbox"/> mnt-ref
<input type="checkbox"/> nserver	<input type="checkbox"/> org	<input type="checkbox"/> origin	<input type="checkbox"/> person
<input type="checkbox"/> rev_srv	<input type="checkbox"/> sub-dom	<input checked="" type="checkbox"/> tech-c	<input type="checkbox"/> upd-to
			<input type="checkbox"/> zone-c
			<input type="checkbox"/> fingerpr
			<input type="checkbox"/> form
			<input type="checkbox"/> mnt-by
			<input type="checkbox"/> mnt-domains
			<input type="checkbox"/> mnt-routes
			<input type="checkbox"/> notify
			<input type="checkbox"/> ref-nfy
			<input type="checkbox"/> referral-by



24 Sep 2009

RIPE Labs - What's it All About?

Submitted by [mirjam](#) on Thu, 09/24/2009 - 12:09

RIPE Labs

is a new platform designed by the RIPE NCC for network operators, developers and industry experts to expose, test and discuss innovative Internet-related tools, ideas and analysis that can benefit the RIPE community and RIPE NCC members.

It's the place to showcase new and interesting things. Anyone can:

- Present research
- Showcase prototype tools
- Share operational experience
- Exchange ideas

Even if you don't have any new ideas at the moment, but are interested in reviewing the ideas and tools of others, please dive in. **RIPE Labs** is a platform **from** the RIPE community **for** the RIPE community.

» [Read more](#)



Discuss this topic here: [RIPE Labs - What's it All About?](#)

18 Sep 2009

Submit Your Ideas Now

RIPE Labs is all about you, and your ideas. You can contribute a new idea or tool by [creating a new topic](#) in the New Ideas forum or by [sending us an email](#).



Recent Articles

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[Intro to INRDB - the Internet Number Resource Database](#)

[REX - the Resource Explainer Disclaimer](#)

[Launch Date: October 6 2009](#)

[RIPE Labs - What's it All About?](#)

[16-bit ASN Exhaustion, Some Data](#)

[We're going to the movies!](#)

[RIPE 59 Meeting Plan in Google Calendar](#)

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Active forum topics

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[REX - the Resource Explainer](#)

[ASN-16 Exhaustion](#)

[Intro to INRDB](#)

[IP Address Allocation Movies](#)

[more](#)

Why RIPE Labs?



- Faster, tighter innovation cycle
 - Provide useful prototypes to you earlier
 - Adapt to the changing environment more quickly
- Closer involvement of the community
 - Openness
 - Make feedback and suggestions easier and more effective

RIPE Labs – Next Steps



- New Web site design
 - Based on conversation and discussion
 - Includes social media aspects
 - Tag clouds, twitter feeds, comments, ratings
- New structure
 - Project pages for long term topics and tools
 - Better search mechanism

New RIPE Labs



Internet Coordination | Data & Tools | LIR Services | RIPE Community | Help | Contact | Sitemap | RIPE Database Search

RIPE NCC INTERNET NUMBER RESOURCES

site search

RIPE Database | Statistics & Analytics | **RIPE Labs** | DNS | Data & Tools Support | Sign In

Blog • REX • NetSense • About RIPE Labs • FAQ

You are here: Home > Data & Tools > RIPE Labs

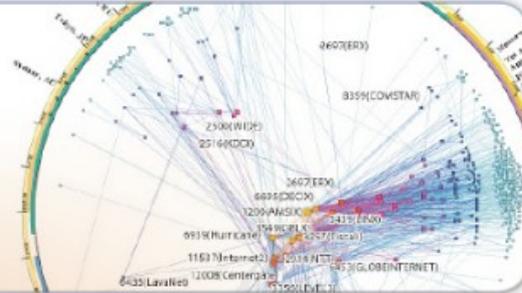


RIPE Labs

Expose, test and discuss innovative Internet-related tools, ideas and analysis

[Join for Free! >](#)

- Share operational experience
- Showcase prototype tools
- Present research
- Exchange ideas



Current Conversations

RSS 

25
comments

Updated Reply-Size Tester

Submitted by [Anand Buddhdev](#) on 29 January 2010 - 17:42

Yesterday, we released a newer version of the reply-size test tool. We took feedback from users, and made some changes to the tool. In this newer version, you will now see a drop-down list of all the resolvers that are configured on your system, and you can select one of these to test. You can also enter an IP address of your choice to test.

Tags: dns, performance

[» Read more](#)

Tags for RIPE Labs

address policy ipv6
adoption **allocation**

apnic arin draft experts ipv4 ipv4

depletion **ipv6** nro pi policy

policy development ripe ripe meeting

ripe ncc routing specs statistics

Follow us on Twitter



Published a new and improved version of the reply-size tester tool on RIPE Labs. Check it out here:

<http://tinyurl.com/ydctfa9>

29 January 2010 17:04

RT @buckthornati: Wonder what the iPad will do to the dwindling IPv4 address space?



Questions or Suggestions



- Please take a look and **participate**
- Questions or comments
 - mir@ripe.net or labs@ripe.net

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