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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Started as Coordination Center for the RIPE community
RIPE Database, mailing lists, meetings

Only later it became an RIR
Once it was accepted as a neutral place
Providing platform for operators to coordinate their activities

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

<table>
<thead>
<tr>
<th>Domain</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>.com</td>
<td></td>
</tr>
<tr>
<td>.sourceforge.com</td>
<td>4</td>
</tr>
<tr>
<td>.thinkgeek.com</td>
<td>3</td>
</tr>
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<td>.net</td>
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<tr>
<td>.sourceforge.net</td>
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<tr>
<td>.org</td>
<td>2</td>
</tr>
<tr>
<td>.slashdot.org</td>
<td>2</td>
</tr>
</tbody>
</table>

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

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

LDs seen in reverse DNS lookups per month

Map data ©2009 Google, New England Cartographics, Geocenter Graphics, BSCF, TopoMap, Ing getSize.com
NetSense

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

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

<table>
<thead>
<tr>
<th></th>
<th>labs</th>
<th>www</th>
</tr>
</thead>
<tbody>
<tr>
<td>number of measurements</td>
<td>768</td>
<td>8176</td>
</tr>
<tr>
<td>web client IPv6 preference</td>
<td>7.2%</td>
<td>1.4%</td>
</tr>
<tr>
<td>web client IPv6 capability</td>
<td>9.2%</td>
<td>3.5%</td>
</tr>
<tr>
<td>resolver IPv6 capability</td>
<td>11.0%</td>
<td>5.0%</td>
</tr>
</tbody>
</table>

• 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

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

![Graph showing number of members versus date of commit - all countries, 20100101](image1)

![Pie chart showing IPv4 allocations to current members, per country - 20100101](image2)
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
RIPE Labs - What's it All About?

Submitted by miriam 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?

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.
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

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

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

Current Conversations

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 look 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

Follow us on Twitter

Updated Reply-Size Tester
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 @buddhdev: Wonder what the iPad will do to the dwindling IPv4
address pool?
Questions or Suggestions

• Please take a look and **participate**

• Questions or comments
  • mir@ripe.net or labs@ripe.net