



# REX

*Number **R**esource **EX**plainer*

Mark Dranse  
RIPE NCC  
<[markd@ripe.net](mailto:markd@ripe.net)>



# *“All you ever wanted to know about an Internet Number Resource”*

Imagine a tool which tells you:

- Who is responsible for an IP block / AS number
- If the resource is used ...
- Seen in routing tables ...
- Where it is used ...
- .....

Both present **AND** historic states .....



# Utopia?

- Not entirely
- RIPE NCC has a lot of data
  - RIPE database
  - Internal registration data
  - Reverse DNS delegations (RIPE region)
  - Routing Information Service (10 years of collected BGP data)
- And there's more publicly available
  - RIR delegation statistics
  - Geolocation
  - Blacklists / spamlists
  - .....





# The Idea

Based on *current data* amended by *data collected specifically* for this purpose we could develop a **new service** which:

- Provides **comprehensive, interpreted information** about historic and current state of specific resources (IPv4, IPv6 addresses & AS numbers)
- Could be a **one-stop-shop** for all who seek information about the resources
- Can deliver information **specialised** towards different user groups
- Fulfils part of our “**Trusted Source of Data**” mission

# Motivation

- We observe a *clear need* for 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
  - Supporting resource management activities



# Current Status

- NCC Science Group have implemented a prototype
  - Fully functional, publicly available
  - First focus is on content
  - Currently digs into:
    - Routing information (10 years of RIS BGP table dumps)
    - RIPE Database (7 years of transaction history)
    - RIR delegation stats
    - Geolocation (maxmind's geolite)
    - Blacklists (uceprotect, spamhaus drop)
    - CAIDA IPv4 DNS-names





# RIPE NCC Information Services

- Routing Information Service (RIS)
  - Collects BGP data
  - 600+ peers
  - 16 Internet Exchange Points
  - <http://www.ripe.net/ris>
- Test Traffic Measurements (TTM)
  - Measures delay and loss
  - Stores traceroute data
  - Full mesh ~80 nodes
  - <http://www.ripe.net/ttm>
- DNSMON - <http://dnsmon.ripe.net> - Monitors 225 DNS servers





# RIPE Labs

**RIPE Labs**

Home News Ideas Tools Forums Blogs

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.

Recent Articles

[Forums and Movies - most popular content during RIPE 59](#)

[RIPE NCC NetSense](#)

[REX - the Resource Explainer](#)

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

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

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

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

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

User login

<http://labs.ripe.net>





# REX

## REX - the RIPE NCC Resource Explainer

Resource:  [examples](#)

Start Date:  (YYYY-MM-DD) (optional)

End Date:  (YYYY-MM-DD) (optional)

For the full experience, please make sure you have JavaScript enabled for these pages.

*Disclaimer:*

This is a prototype service, as part of [RIPE Labs](#).

The service is described in more detail [here](#).

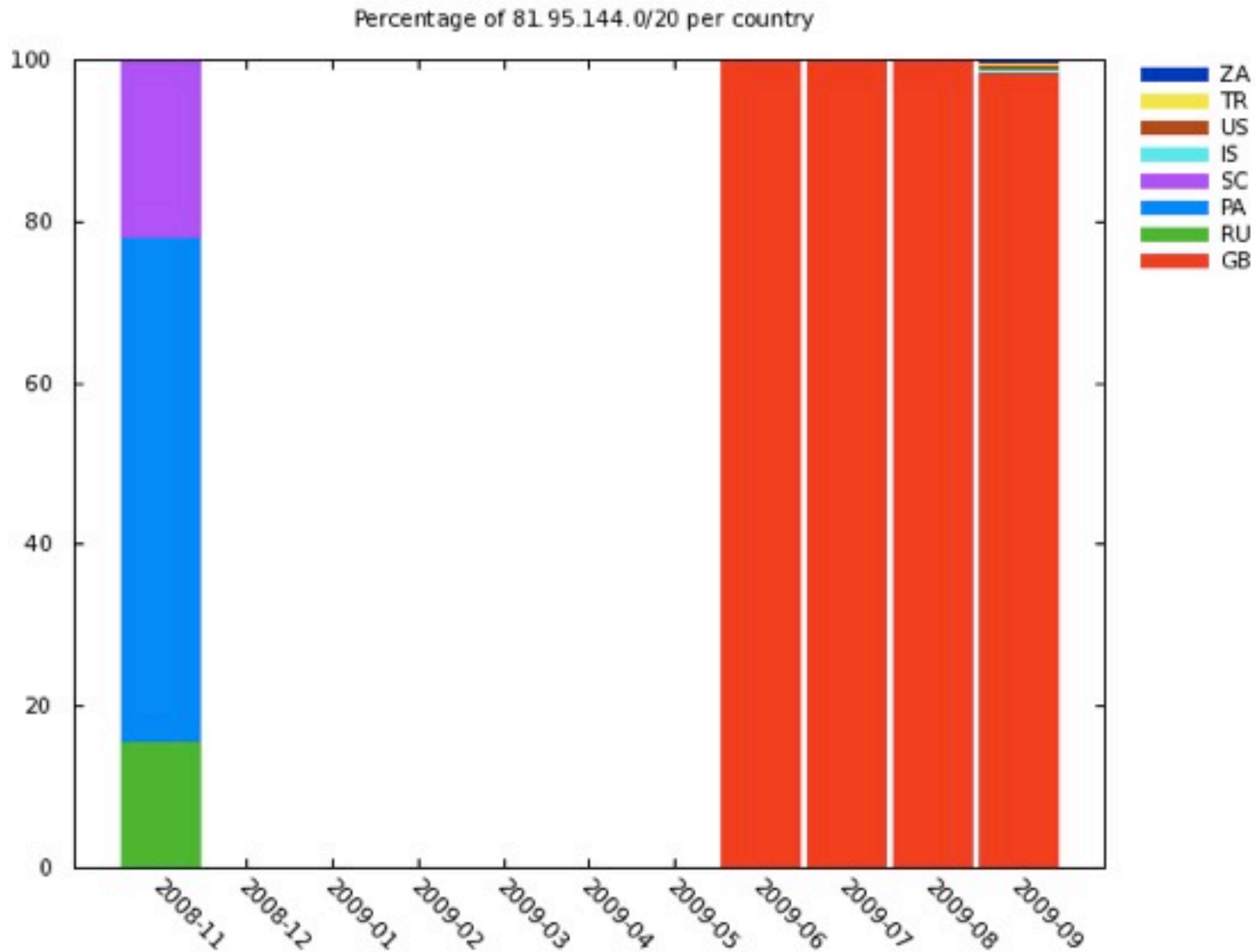
If you want to help us make this service better, please post questions, improvements or other feedback on the [forum](#).

---

Rex v0.1.12



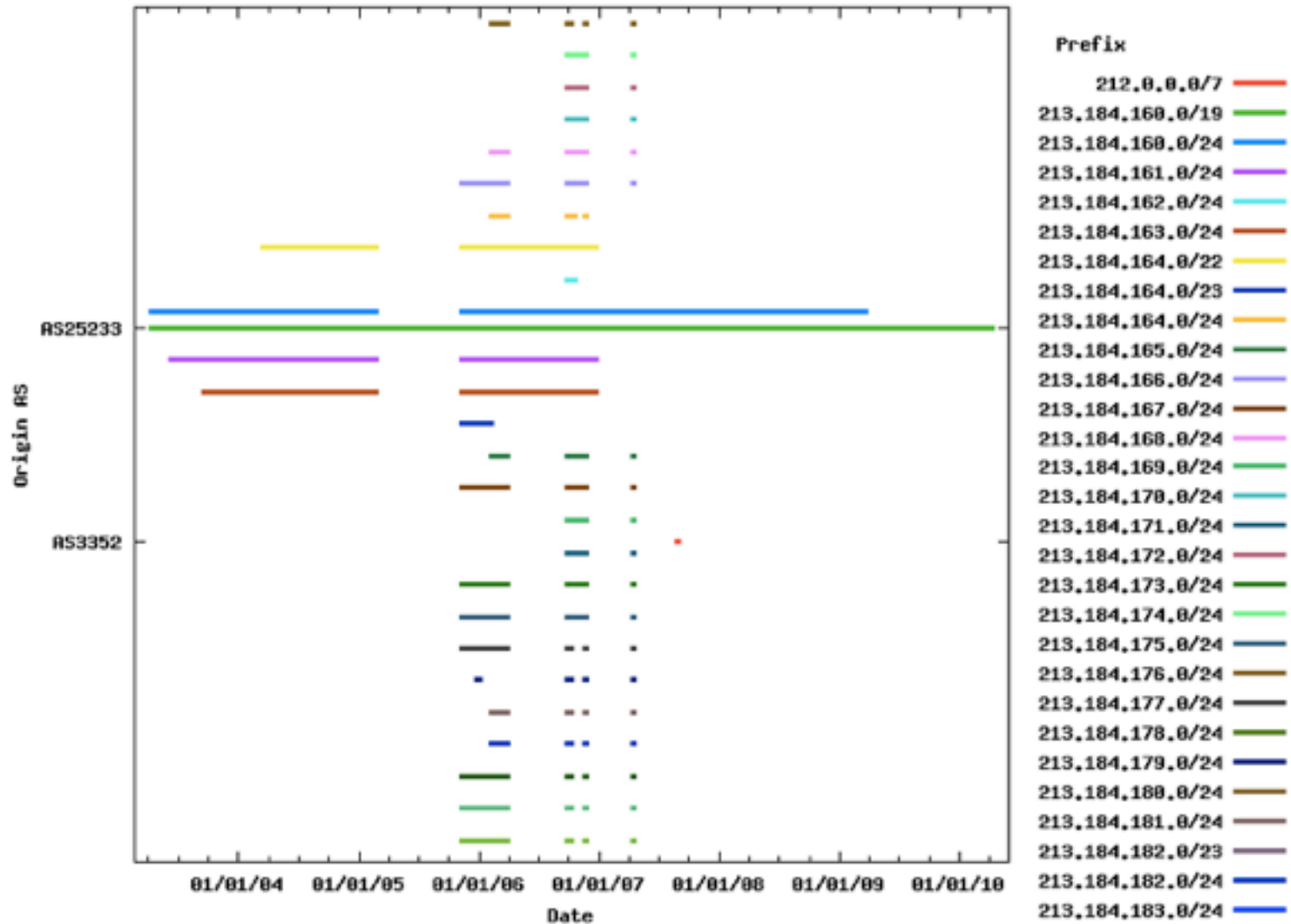
# REX - by country





# REX - routing history

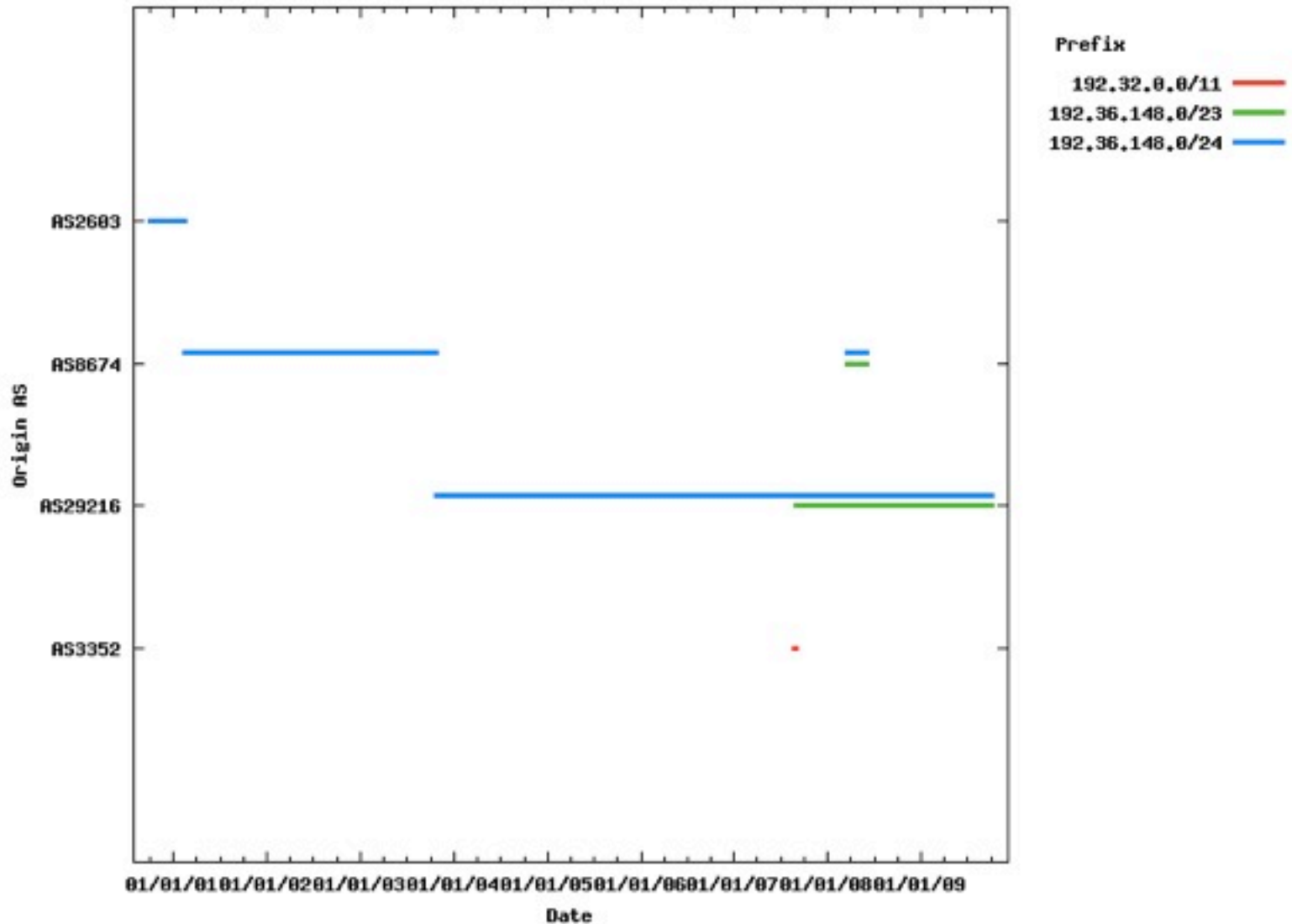
Routing history of 213.184.160.0/19 and related blocks



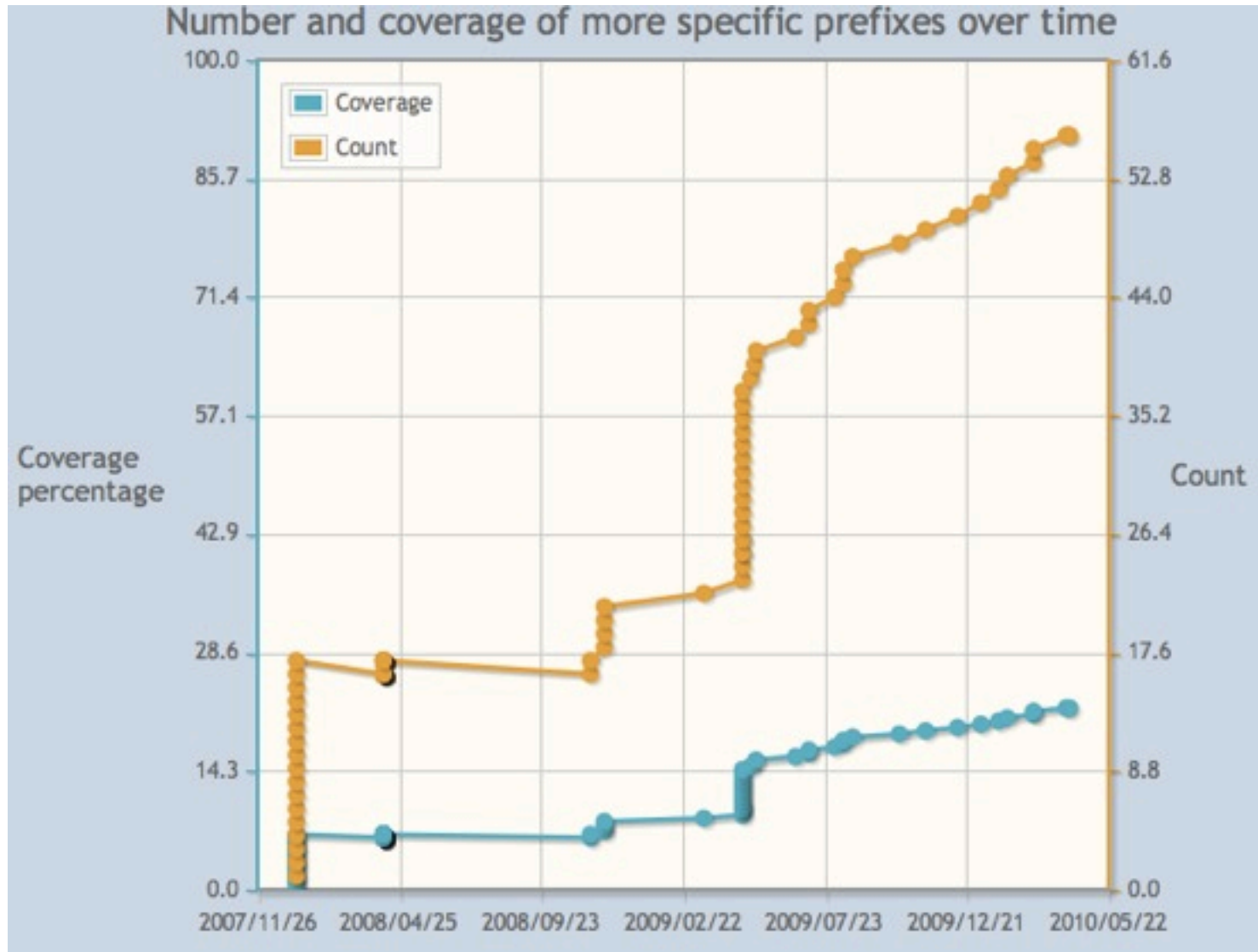


# REX - routing history

Routing history of 192.36.148.0/24 and related blocks



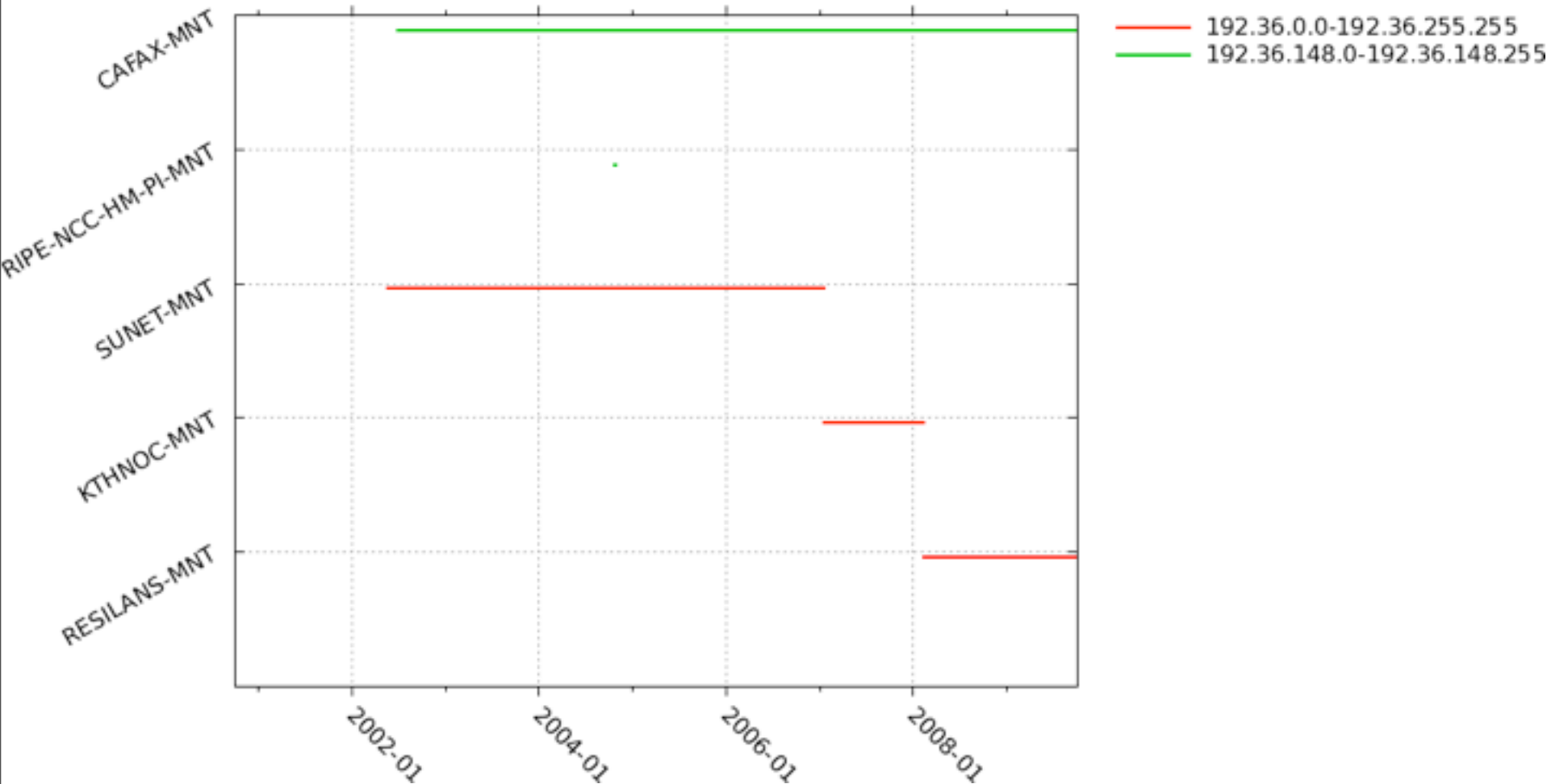
# REX - DNS data





# REX - maintainer history

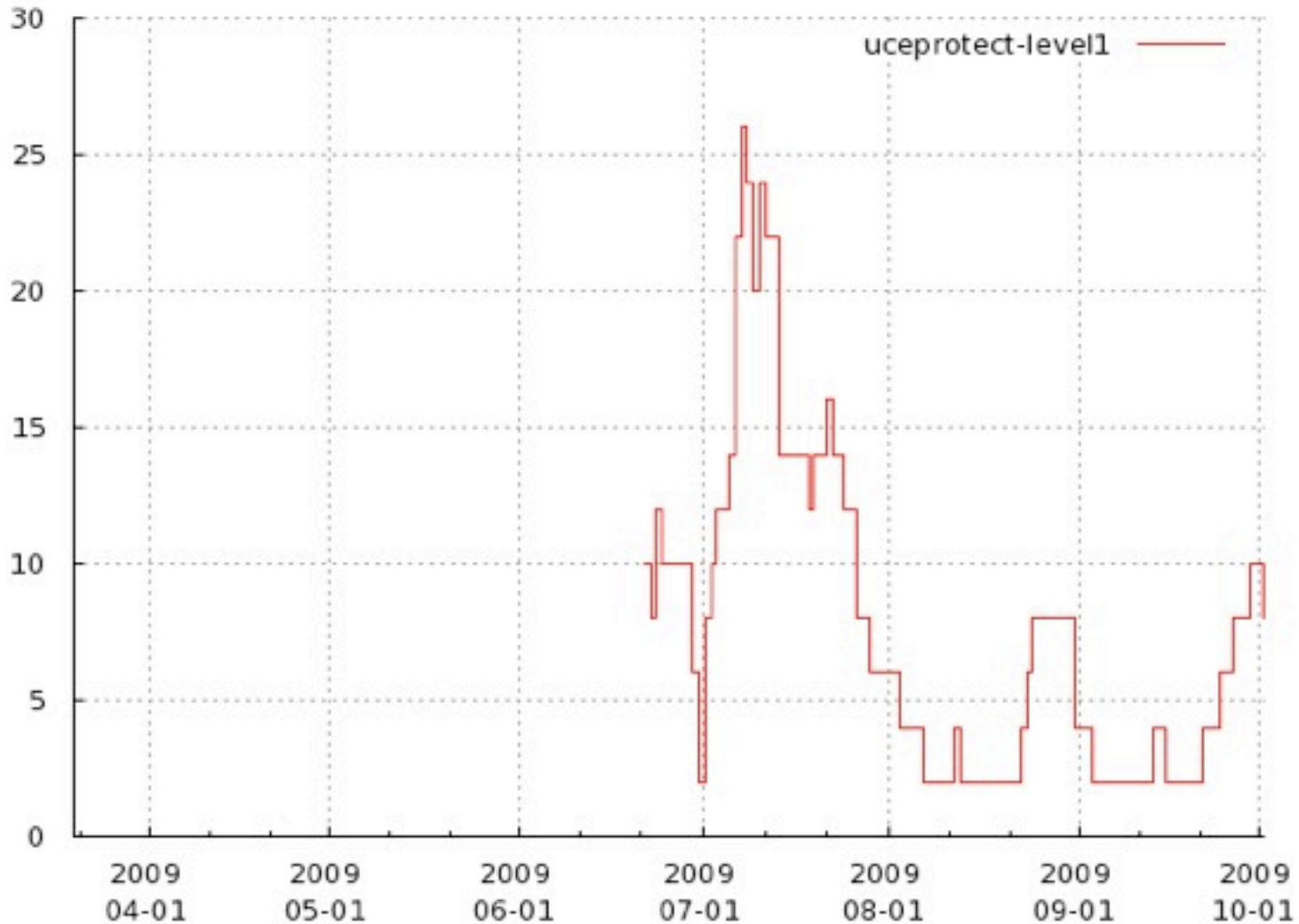
History of responsible maintainers by resource from 2001-09-21 to 2009-10-02





# REX - blacklists

# entries in blacklists for 194.109.0.0/16



# Live Demo





# Next steps

- Based on community feedback:
  - Continue with development
  - Expand reports
  - Improvements in User Interface, graphics
  - More combining, interpreting and explaining
  - Tailored reports for specific user groups
  - ....
- Need *your* input
  - Give it a try at: <http://rex.ripe.net/>
  - Discussion: <http://labs.ripe.net/node/54>
  - Contribute: <http://is-portal.ripe.net>



# Questions?



<http://rex.ripe.net>

Discussion: <http://labs.ripe.net/node/54>