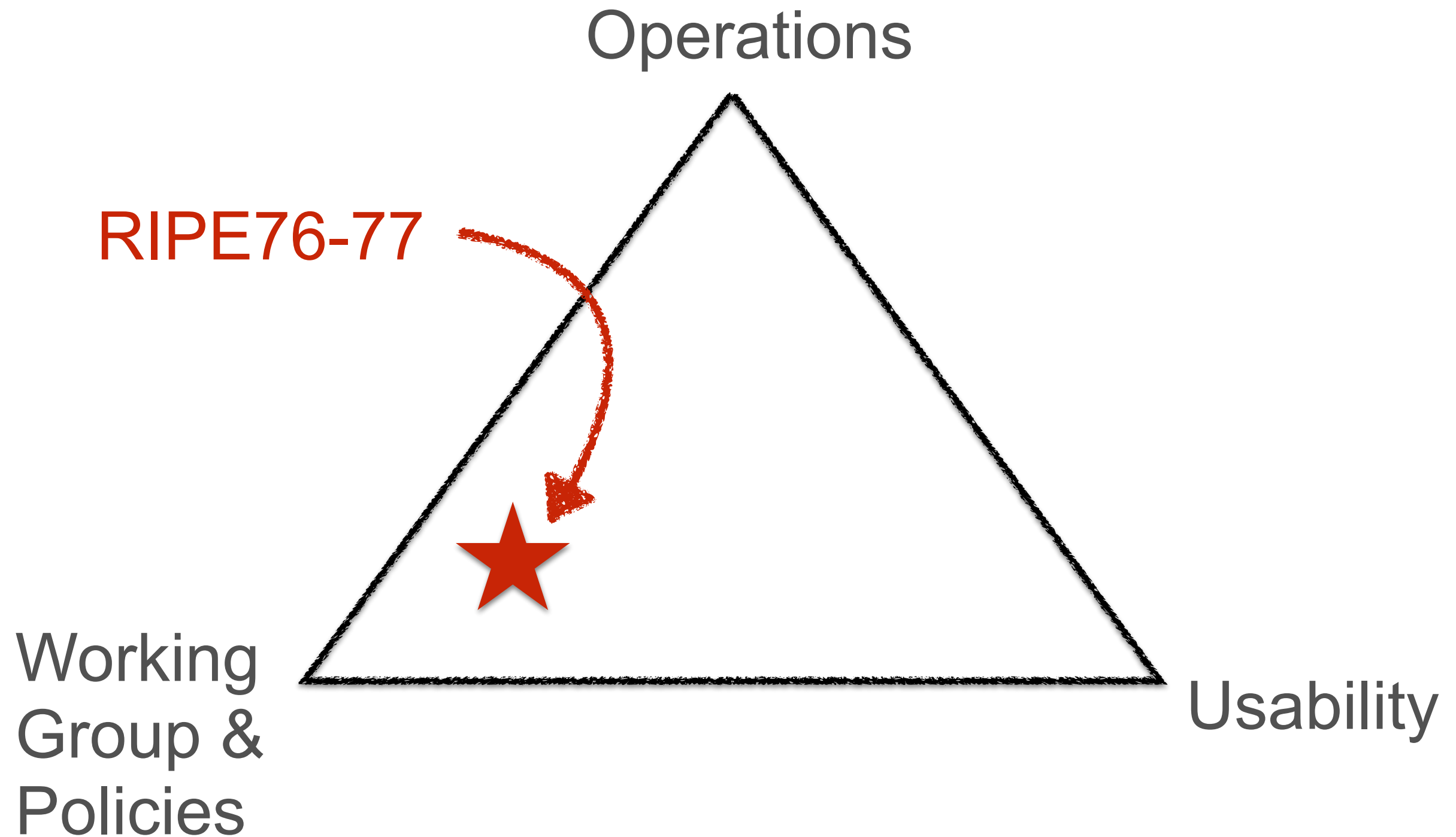# RIPE NCC
# Database Update

Ed Shryane | 18 October 2018 | RIPE 77

# The RIPE NCC Database Team

# The three focus points

Operations

RIPE76-77

Working
Group &
Policies

Usability

# Working Group and Policies

- Minor Releases 1.91.[3-6]

  - Validate reserved words and prefixes.

  - Don't return internal Zonemaster errors on domain update.

  - Fixed Syncupdates compressed responses.

  - Handle non-break space characters.

- Release 1.92.[0-6]

  - NWI-5 Implementation.

  - Bug fixes

    - Replace short-format attribute names on update.

    - Fixed rtr-set members and mp-members syntax.

# NWI-5 Implementation - Preparation

- Extensive DB-WG effort in discussing, agreeing and preparing for the NWI-5 changes.

- Impact Analysis and Implementation Plan published, and Labs articles explaining the changes.

- Communications involving the RIPE community, Working Groups, other RIRs, Network Operators.

-

# NWI-5 Implementation - Main Changes

- No new "out of region" aut-num, route(6) objects.

- Existing "out of region" objects moved to RIPE-NONAUTH source.

- No origin authentication on route(6) creation.

Impact Analysis: https://www.ripe.net/manage-ips-and-asns/db/impact-analysis-for-nwi-5-implementation

Labs article: https://labs.ripe.net/Members/denis/out-of-region-route-6-and-aut-num-objects-in-the-ripe-database

# NWI-5 Implementation - Details

- Out of Region objects can still be updated or deleted.

- Whois queries both RIPE and RIPE-NONAUTH sources by default, but either can be specified.

- AS Numbers that do not exist in the RIPE database can still be used as the route(6) origin (with a warning).

- Reserved AS numbers cannot be used as the origin.

- Origin AS holder will be notified on route(6) creation using notify: attribute on aut-num object.

- The "mnt-routes" attribute on aut-num is deprecated, and filtered out on update (with a warning).

- Whois REST API redirects to the correct source as necessary.

# NWI-5 Implementation - Rollout

- Test releases were deployed to RC.

- Maintainers of all affected objects were notified in advance, and also when objects were updated.

- Whois Updates

  - Removed mnt-routes attribute from 27K aut-num objects.

  - Removed the RPSL maintainer (updated 16K objects).

  - Updated source on 71K out of region objects.

  - 34 Pending route(6) objects (created or dropped).

- Rollback plan (not needed).

- Lessons learned

  - Lots of communication and testing before the release.

  - Announce bugfix releases in RC.

  - Announce when deployment is (finally) done.
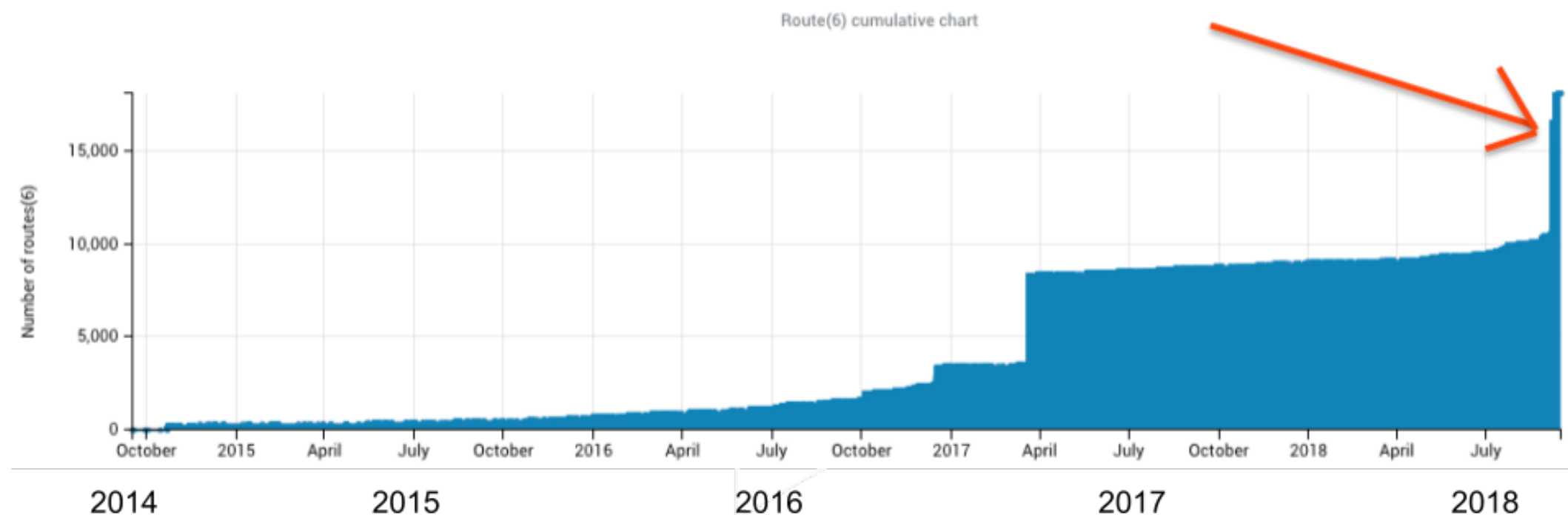
# NWI-5 Implementation

Removed the RPSL Maintainer (2004 - 2018).
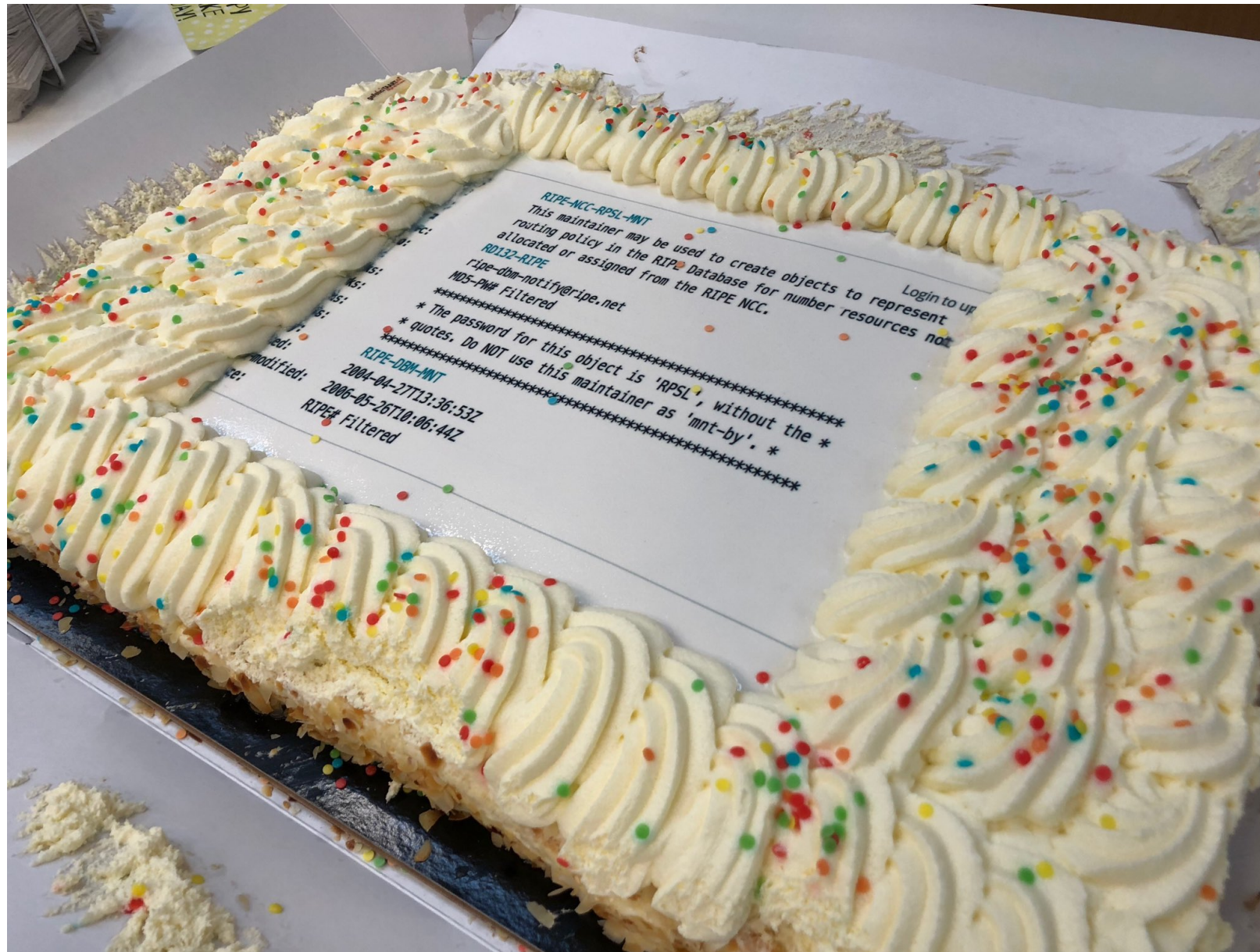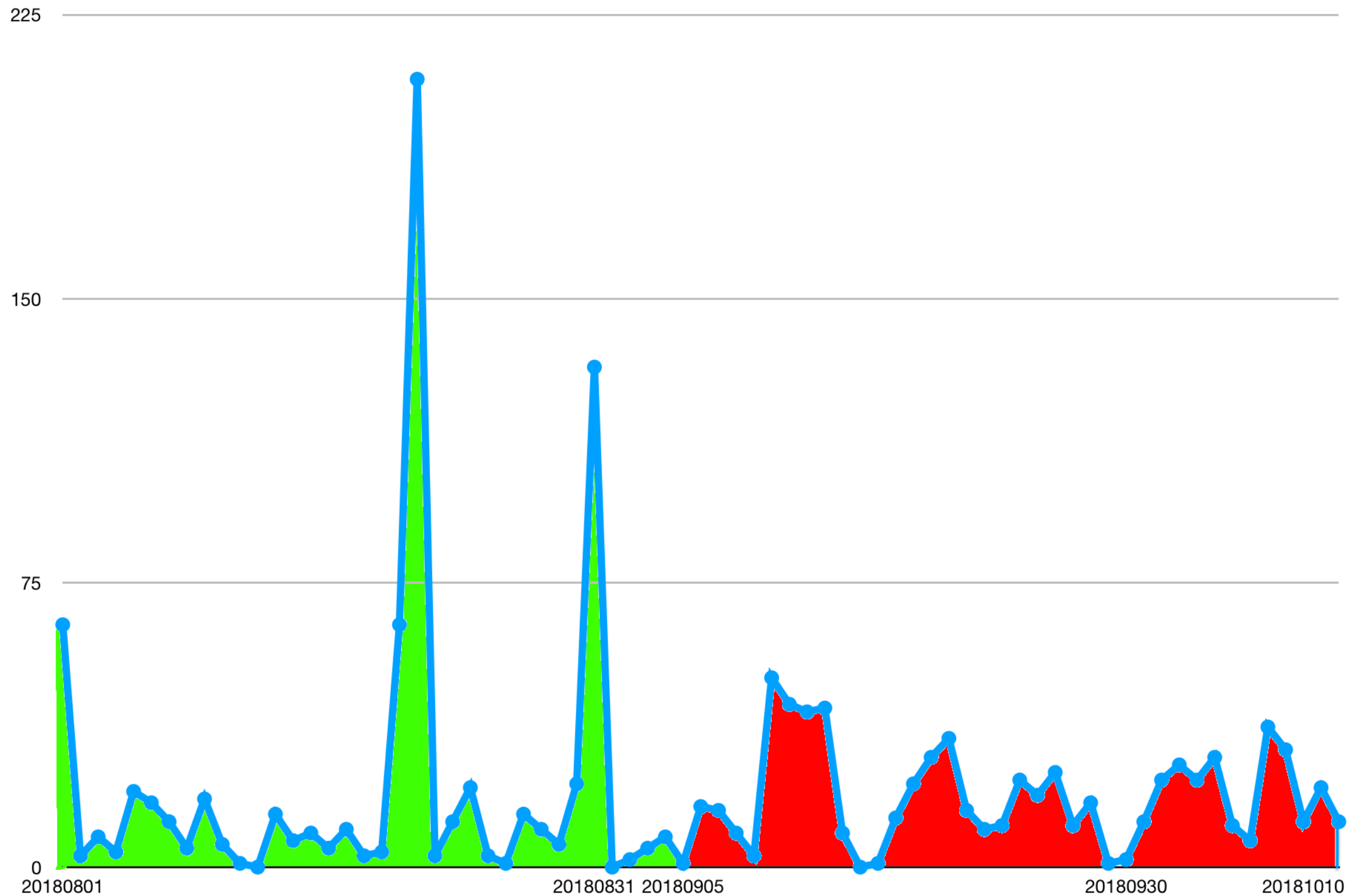
# NWI-5 - AFRINIC IRR

- Most out of region objects (~70%) have an AFRINIC prefix.
- AFRINIC is encouraging use of their IRR.
- Route(6) prefix must be allocated to AFRINIC.
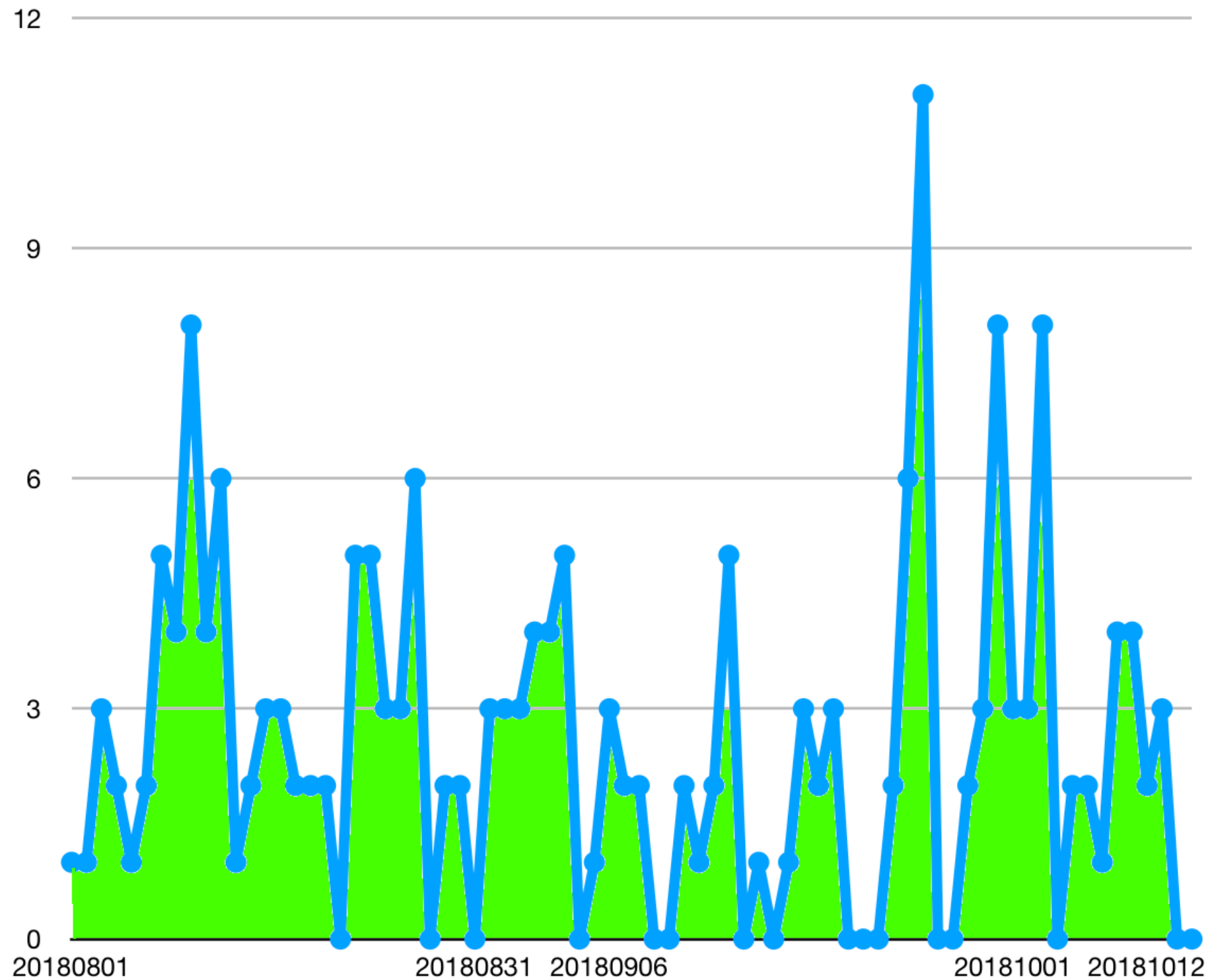- ASN authentication is now not necessary.

Route(6) cumulative chart

Source: https://www.afrinic.net/blog/381-dealing-with-recent-routing-registry-changes
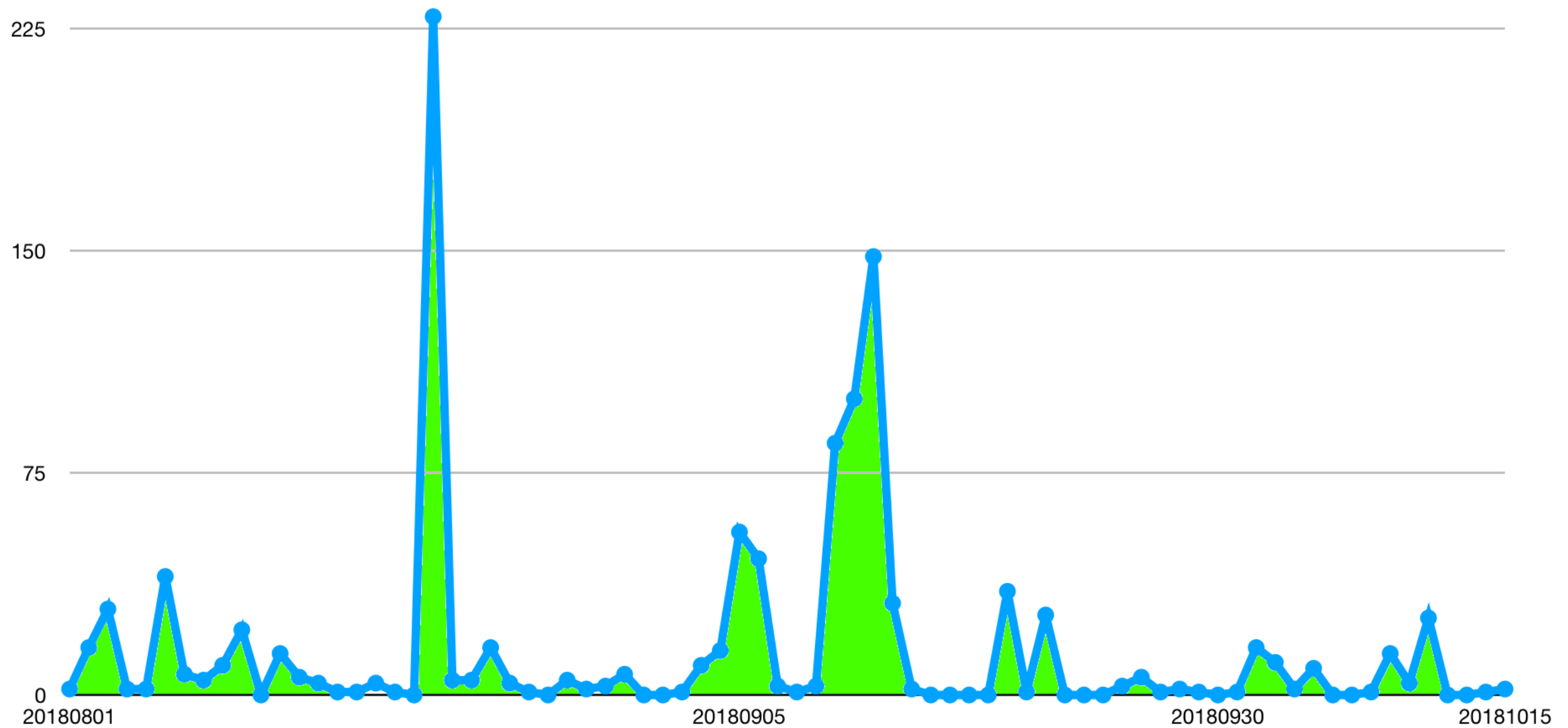
# NWI-5 Out of Region Objects Created

# NWI-5 Out of Region Objects Modified

# NWI-5 Out of Region Objects Deleted

# Abuse-c (2017-02) Implementation

- Validate Abuse-c email addresses on organisations and resources, at least once a year (~70k).

  - Combination of a static syntax check and online check.

  - Performed trial validations of LIR abuse-c addresses, 20-25% considered invalid.

  - Notify the organisation by opening a ticket, and send a validation link to the abuse-c address.

  - If the abuse-c address is validated, then automatically close the ticket.

  - If not validated, then send reminders and escalate ticket after 3 weeks.

- Phase 1: Trial run for 900 LIR abuse-c addresses (end Oct.).

- Phase 2: Validate all abuse-c addresses (early next year).

# Email Address Syntax Validation

- Currently email addresses validated using .+'@'.+ regex

- Relaxed validation causes problems parsing data, and sending mail.

- Stricter validation catches the following:

  - Trailing <mailto:user@host.org>

  - Leading mailto:user@host.org

  - Leading question mark '? user@host.org'

  - Leading colon ': user@host.org'

  - Trailing date user@host.org YYYYMMDD

  - Double at-sign user@@host.org

- 0.5% of existing addresses (22K/4M) fails the stricter check.

- An automated cleanup can fix 95% of the invalid values.

# NWI-7: Abuse-C On Resources

- Functionality introduced in Whois 1.90 (October 2017).

- There are now 7408 abuse-c references on resources (inetnum, inet6num, aut-num).

- However, 21% (1572) of these duplicate the org: abuse-c.

- Should we add extra validation to avoid this duplication (and cleanup the duplicates)?

# Upcoming Work

2017-02 Abuse-c (Phase 2)

Monitoring      GDPR      RDAP

RPKI

Refactoring

Security

Web Application

Site Reliability

Configuration Management

Usability      Maintenance

Bug Fixing      Load Testing

Transfers

# Questions