RIPE NCC
Database Update

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The RIPE NCC Database Team

The Three Focus Points

Operations

RIPE77-78

Working
Group &
Policies

Usability
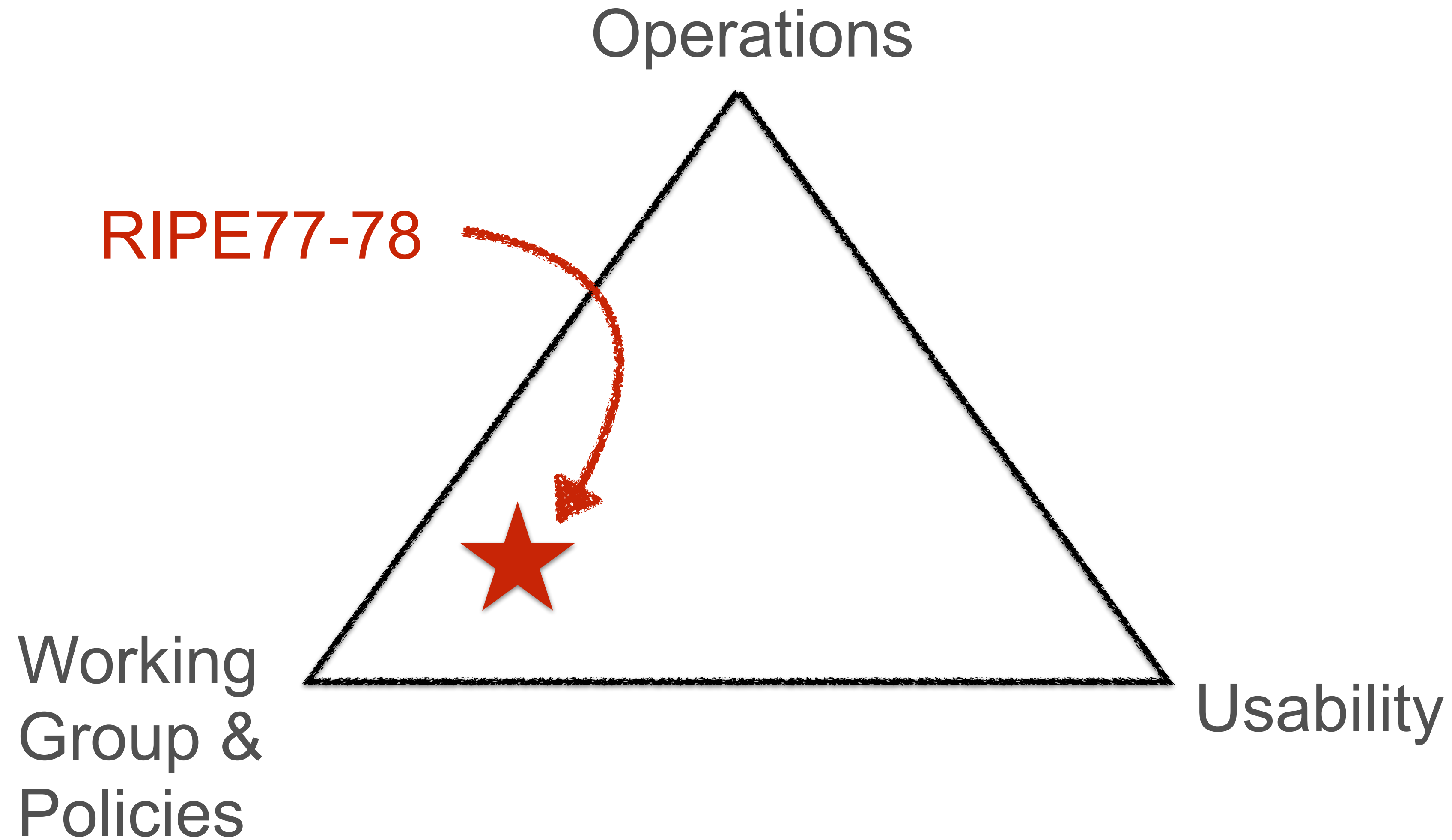
Working Group and Policies

- Whois 1.92.6.2
  - Fixed Full Text Search

- Whois 1.93
  - Improved Email Address syntax validation
  - Do not allow expired keys to authenticate updates, and expire signed updates
  - Warn on update if a resource abuse-c is identical to the organisation's abuse-c
  - Schema changes for abuse-c validation

- Whois 1.94
  - Full Text Search ACL (access control to personal data)
  - Abuse-c Validation comment

2017-02, "Regular Abuse-c Validation"

- Trial run with 900 LIR organisations (October - December)

- Board decision on implementation (December)

  - Notify users if abuse contact appears invalid, and direct to responsible LIR.

- Implementation according to three categories:

  1. LIR organisation abuse-c (February)

  2. LIR resources abuse-c (March)

  3. End User organisation and resources abuse-c (April - ongoing)

- Comment in Whois results if abuse-c validation not completed.

  - Deployed in Whois 1.94 in May.

- Project ahead of schedule

Whois Outages

- My Resources (12th February)

  - Mis-match between website and backend following a deployment. (3h)

- Full Text Search (21st - 28th February)

  - Certain queries caused Whois to run out of memory

  - Full text search was disabled completely until a fix was deployed. (5d)

  - Further improvements are planned

- NRTM Disrupted Connectivity

  - 10th February (1h30m) and 17th March (30m)

  - A single client consumed all connections. Workaround to disable client

  - Plan to implement rate limiting per client IP

Database Web Application

- Improved query page

    - (Re-)added Template and Verbose flags

    - Added abuse-c inverse flag

    - Fixed resources flag

    - Query results scroll properly (fetch results incrementally)

- My Resources

    - Sponsored Resources menu

- Full text search

- Abuse-c Validation

    - Validate abuse-c address, display "not validated" comment in search results

Website Analytics

- Matomo (formerly Piwik) Replaces Google Analytics

  - What do we use website analytics for?

    - How a visitor uses the site, so we can identify and make improvements

    - Monitoring performance (page load time, page size etc.)

  - Personal Data

    - Self-hosted (in-house)

    - Client IP is anonymised (on /24), no other user data is stored

    - Session data is retained for 90 days

    - Aggregated data stored longer for historical analysis

NWI-8: LIR's SSO Authentication Groups

- Problem Definition

  - LIRs would like a mechanism to easily add/remove users to centralised SSO authentication groups for maintaining objects in the RIPE Database

- Scope

  - Focus on synchronising LIR's user accounts with a maintainer

  - Defer authentication groups (and any new authentication method) until later

- Synchronise LIR's non-billing users with the RIPE Database

  - Add a synchronisation checkbox to the LIR portal (off by default)

  - Synchronise non-billing user SSO accounts with an existing default maintainer

  - Default maintainer is already set on **organisation** object and top-level resources

NWI-9: In-band Notification Mechanism

- Problem Statement
  - "There is a need within the routing community to have changes to all/nominated routing data objects in the RIPE Database pushed out to them, regardless of membership status."

- Proposed Solution Definition
  - Current NRTM is not suitable
    - NRTM is member-only service, with separate agreement
    - Custom protocol, not easy to extend, and used by small pool of clients
  - "NRTM over HTTPS"
    - Allow user to request a closed or open range of updates
    - Allow filtering by object type
    - Implement using HTTPS, WebSocket and JSON

RIPE NONAUTH Source (1/2)

- What's changed since NWI-5 Roll-out (September 2018) ?

  - 2,273 aut-num objects **(-2%)**

  - 64,815 route objects **(-7%) (~6K fewer objects)**

  - 1,801 route6 objects **(-11%)**

RIPE NONAUTH Source (2/2)

- ## 2018-06 "Non-Authoritative Route Object Clean-up"

  - In discussion phase. Version 2.0 just published.

  - March 2019: **33 route(6)** in NONAUTH with exact match in BGP are RPKI INVALID

  - "With every published ROA the 'RIPE-NONAUTH' source becomes cleaner" - Job.

- ## NWI-3 "AFRINIC IRR homing"

  - Move **all** Afrinic prefixes from RIPE NONAUTH source to Afrinic IRR

    - 43% aut-num, 77% routes, 28% route6 (of all objects are Afrinic)

  - Or delete **duplicates** between RIPE NONAUTH source and Afrinic IRR

    - 40% aut-num, 15% routes, 7% route6 (of all objects are duplicated in Afrinic)

    - This could be repeated nightly

Whois Release Process

- All releases go through 2-week Release Candidate stage

- Bug fixes must wait for the next planned release

  - This can take months

- Use Release Candidate for feature changes only?

  - Deploy bug fixes immediately to production

  - Perform extensive testing beforehand (as usual). We can always improve this

  - Notify the working group of all releases (as usual)

Authenticating References to Objects

- Currently only references to organisations are protected by the mnt-ref attribute.

- Mnt-ref could be made optional on other object types?

- Prevent unauthenticated references to:

  - Abuse-c role

  - Technical contact, Admin contact, Zone contact

  - Organisation maintainer(s)

  - etc.

Cleaning up Unreferenced Objects

- Nightly job to cleanup unreferenced objects after 90 days
  - **organisation**, **mntner**, **person**, **role** objects
  - **mntner** - **person**/**role** pairs

- This job could be extended?
  - **mntner** - **organisation** pairs (79)
  - **organisation** - **person**/**role** pairs (875)
  - **mntner** - **person**/**role** - **organisation** groups (488)

https://www.ripe.net/manage-ips-and-asns/db/support/clean-up-of-unreferenced-data

GDPR and the RIPE Database

- Improvements since RIPE77

  - Account for Personal Data returned in Full Text Search

  - Don't return related objects by default in UI

  - Filter responses by default in UI

- Upcoming Improvements

  - Legal review found we should not return historical contact details, as they may contain personal data, which is not in line with purpose of database or legislation.

  - Do not include personal data in historical queries

    - notify, e-mail, address

  - Do not include person/role references in historical queries

    - admin-c, tech-c, ping-hdl, zone-c

What's Coming up Next?

- RDAP

- GDPR

- NWI-8

- Whois Resiliency