



**RIPE NCC**

RIPE NETWORK COORDINATION CENTRE

# RPKI Update

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# RPKI Resiliency Project



- Procedural and Operational Compliance
- RFC and Security Compliance
- Certification Practice Statement
- RPKI Route Origin Validation for AS3333
- Redundancy and Availability Repositories
- Deprecating RIPE NCC RPKI Validator
- RPKI Roadmap 2021

# Procedural and Operational Compliance



- BSI has performed a gap analysis and identified 49 missing controls (out of a total of 179)
- Overview of control gaps:
  - Processing Integrity: 5 controls missing
  - Confidentiality: 1 control missing
  - Availability: 3 controls missing
  - Security: 40 controls missing
- We are in the process of closing the control gaps
- Full audit to be done in Q1 2022

# RFC and Security Compliance



- Radically Open Security performed an assessment between August and September 2020
- There were 35 findings that resulted in 35 actions
- The report and our response are on the website
  - <https://www.ripe.net/manage-ips-and-asns/resource-management/rpki/security-and-compliance>
- Follow-up pentest scheduled for June 2021
  - Followed by a red team test later this year

# Certification Practice Statement



- ripe-751:
  - <https://www.ripe.net/publications/docs/ripe-751>
- Complete re-write, following RFC7382
- Published in January 2021
- Will be reviewed every two years from now on
  - In cooperation with the Routing Working Group
- Special thanks to APNIC for their review

# RPKI Route Origin Validation for AS3333



- Thank you for your support on the WG list!
- We checked which routes would be dropped and impacted
- Reached out to 215 organisations associated with these 597 routes
- No back-door to [my.ripe.net](https://my.ripe.net)
- Enabled invalid == reject on 19 April 2021
- Received just a handful of questions from members
  - Mostly asking us how to create ROAs

# RPKI Route Origin Validation for AS3333



- We added a warning for LIRs and End Users that are about to lock themselves out of the portal

✓ Apply the changes   ✕ Discard the changes   ↶ Cancel


The ROAs you are about to apply will make existing announcements invalid.







Please make sure you intend these announcements to become invalid, for example to mitigate an active hijack. An invalid announcement will be dropped by routers performing Route Origin Validation. This could prevent further access to the RPKI dashboard, so please make sure that you have a backup internet connection (from a different AS/prefix) available.

**Confirm that you want to create an INVALID announcement:**

INVALID

- Credits:

 **Menno Schepers** 10:09 AM  
@here Fyi, we are now, since this morning, actively rejecting **RPKI** invalids on our company network, AS3333.

 12    3    3    1    1    1

# Publication of Repositories



- Rsync repository currently has a data atomicity issue
- Non-repeatable read:
  - Client reads two files that need to be mutually consistent, but one was updated before the other was retrieved
- We have implemented a fix on a public test environment
  - NOT to be used for production!
- Improved the publication process in RPKI Core and running krill-sync (generating rsync from RRDP)



# Cloud deployment

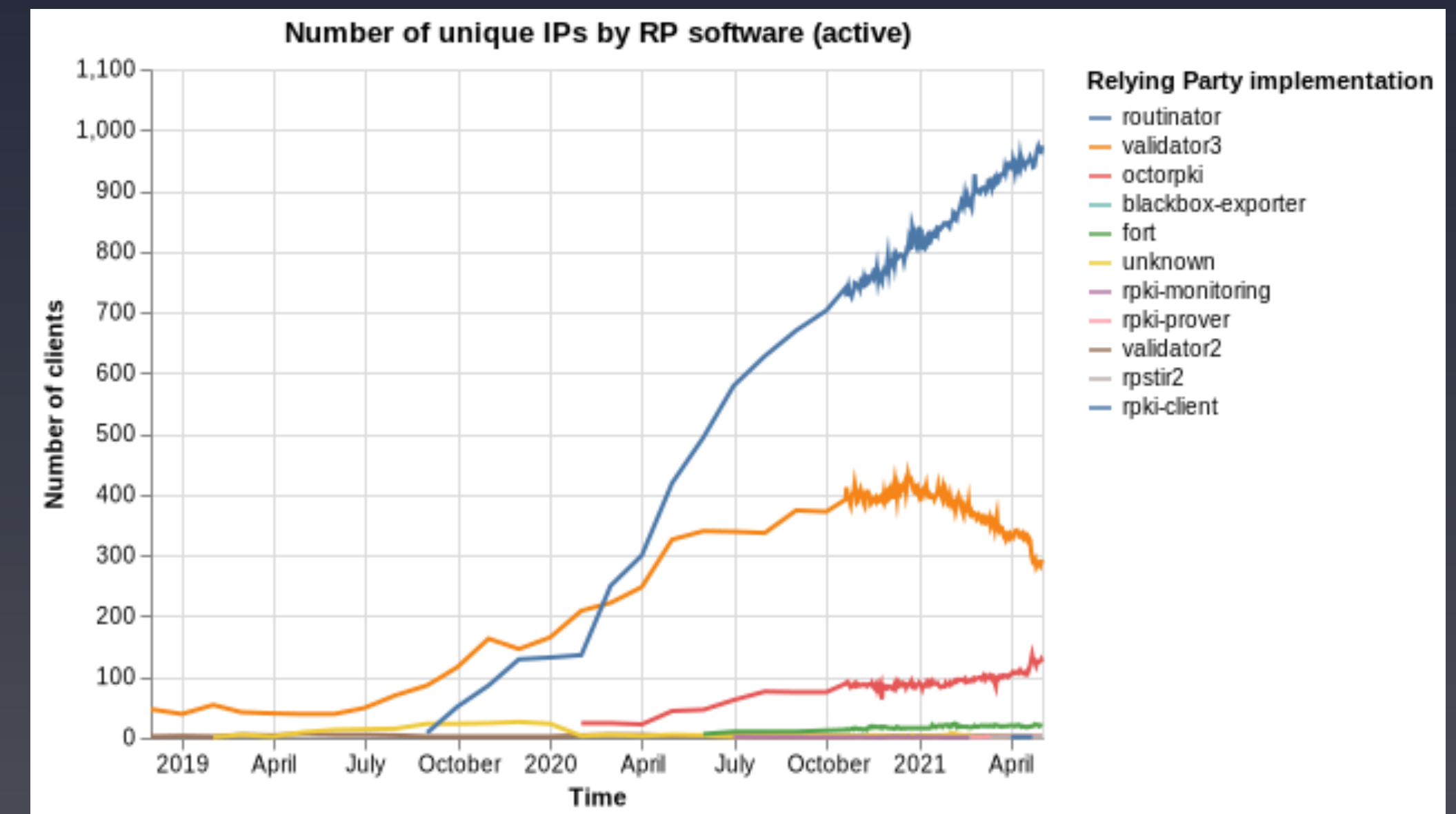


- We are working to significantly scale up our existing RPKI repositories infrastructure (RRDP & rsync)
- Deployment to AWS using multi-availability zones and multi-region architecture
- We will also offer a redundant infrastructure in house or through a secondary cloud provider
- Read this RIPE Labs article for more details:  
[https://labs.ripe.net/author/felipe\\_victolla\\_silveira/rpki-repositories-and-the-ripe-database-in-the-cloud/](https://labs.ripe.net/author/felipe_victolla_silveira/rpki-repositories-and-the-ripe-database-in-the-cloud/)

# Deprecating RIPE NCC RPKI Validator



- In less than 2 months we will stop maintenance for the RIPE NCC RPKI Validator
- Number of clients going down, still ~300 clients :(
- Please help us spread the word!

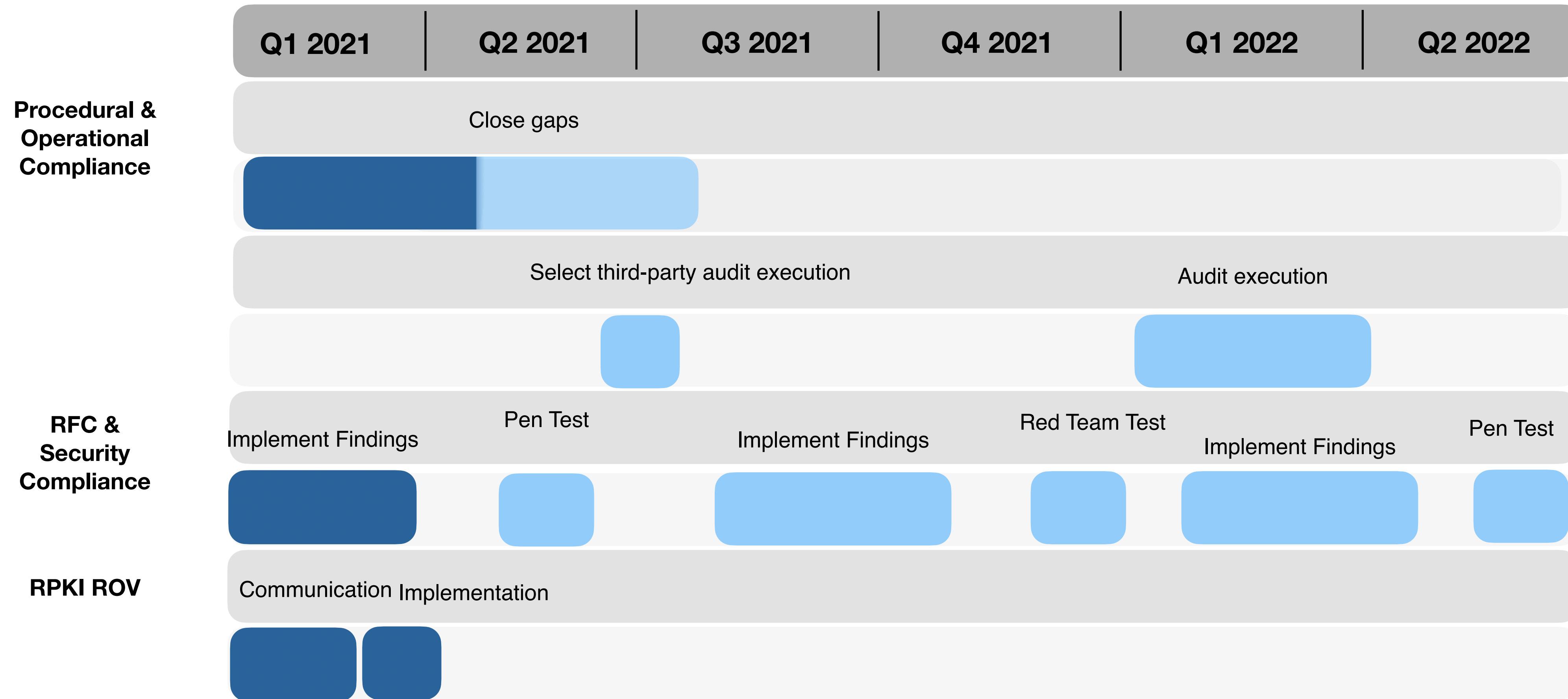


# Coming Soon

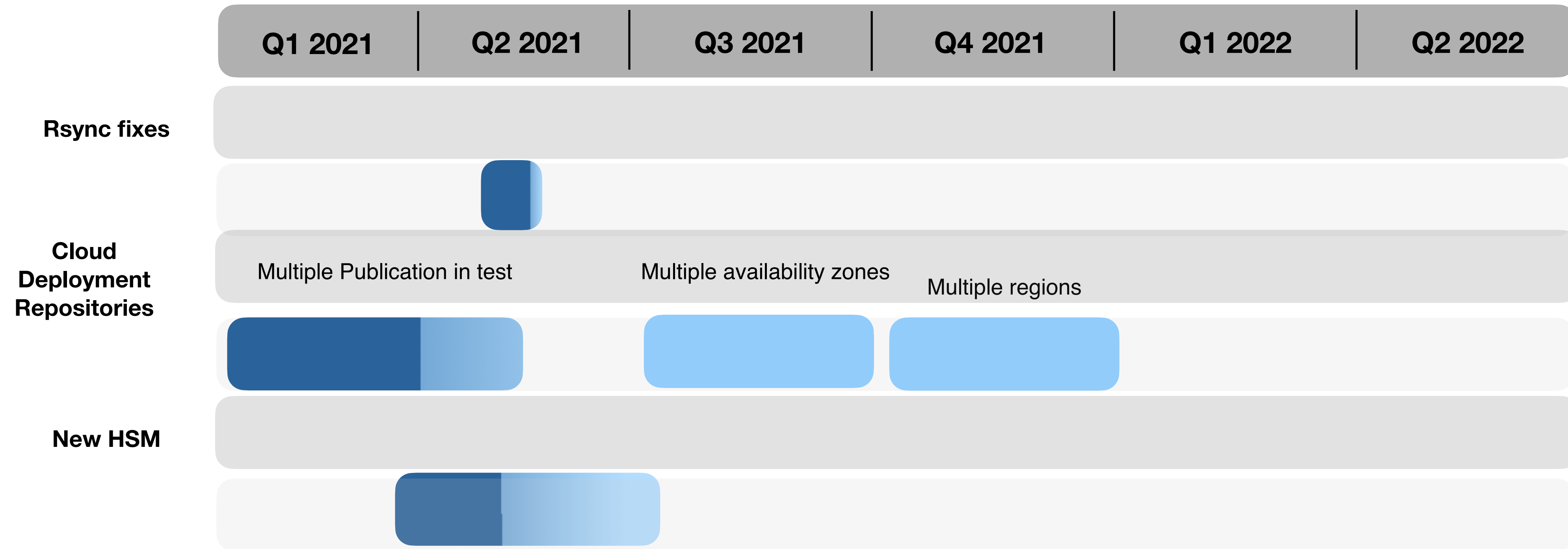


- RPKI Roadmap on the website
- Status page
- Quarterly RPKI health and progress reports
- Your suggestions?

# RPKI Roadmap 2021



# Technical Infrastructure





# Questions



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