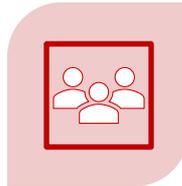


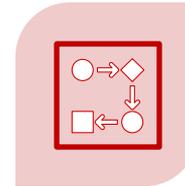
Agenda



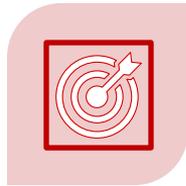
PROGRAM
INTRO



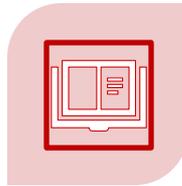
PROGRAM TEAM



WHAT HAVE WE
BEEN WORKING
ON?



WHAT ARE WE
AIMING FOR IN
2025?



LEARN MORE
AND REACH OUT



Q&A

What's the NRO?



ABOUT

ACCOUNTABILITY

INTERNET GOVERNANCE

TECHNICAL COORDINATION

POLICY

DOCUMENTS

MISSION

To actively contribute to an open, stable and secure internet, through:

Providing and promoting a coordinated Internet number registry system

Being an authoritative voice on the multi-stakeholder model and bottom-up policy process in Internet governance

Coordinating and supporting joint activities of the RIRs

Program Intro

NRO Strategic
Review Process

- Agreement to work toward providing a robust, coordinated and secure RPKI service

The NRO RPKI
Program was
created

- Purpose: **“To provide a more consistent and uniformly secure, resilient and reliable RPKI service”**

Why is this program important?

- It creates a space for structured **coordination and collaboration** on RPKI among the RIRs
- Current diversity/inconsistency among RIRs
 - In RPKI related services/features being offered
 - Hosted/delegated, testing env, API
 - In user experience
 - In API endpoints
 - In design decisions, implementations, etc.



E.g. Differences in the UI

ACCOUNT MANAGER RPKI: Create ROA

OrgID: ARIN | Hosted RPKI | Overview | SOAs | Certificates/Resouces

Create route origin authorizations (ROAs) for the IP resources covered by your RPKI Certificate.

Create a Route Origin Authorization (ROA)

Routing Security

Transfer Resources

Payments & Billing

Downloads & Services

Add ARIN

Create a help desk ticket

*Origin AS: 38870

*Prefix: 198.112.112.0/24

*Max Length: 24

ROA Name: [Optional. Provide a helpful nickname, such as DDOS_Mitigation]

Next Step

A Route Origin Authorization (ROA) is a cryptographically signed object that states which Autonomous System (AS) is authorized to originate a particular prefix or set of prefixes.

For more information, visit ARIN's Route Origin Authorization documentation.

Information Center - (Afrinic Ltd.)

Home > ROA > Add ROA

Add ROA

Please be patient while your transaction is being processed.

* Name: RPKI_Course_ROA

Your AS Numbers: 33764

* AS Number: 33764

IPV4 address range: 196.192.140.0/22

IPV4 prefixes: 196.192.140.0/22 | 22

IPV6 address range: 2001:429:340

IPV6 prefixes: 2001:429:340/40 | 40

* Not Valid Before (YYYY-MM-DD): 2022-01-07

* Not Valid After (YYYY-MM-DD): 2024-01-08

Cancel

Create route

Prefix: 2406:6400::/32

Origin AS: AS135541

Most specific announcement: /36

ROA

Options

You are not permitted access to RPKI. Click here to enable two-factor authentication, which will allow you access to RPKI.

Define Whois route attributes

Notify additional contacts

RPKI Dashboard

9 CERTIFIED RESOURCES | NO ALERT EMAIL CONFIGURED

41 BGP Announcements

4 ROAs

4 Valid | 1 Invalid | 36 Unknown

3 OK | 1 Causing problems

BGP Announcements | Route Origin Authorisations (ROAs) | History

Create ROAs for selected BGP Announcements

Review and publish changes

Staged ROAs

Affected announcements

AS12654 | 2001:7fb:fe01::/48 -- 48

AS12654 | 2001:7fb:fe0f::/48 -- 48

AS12654 | 2001:7fb:fe0c::/48 -- 48

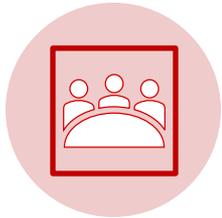
AS12654 | 2001:7fb:fe01::/48 UNKNOWN -- VALID

AS12654 | 2001:7fb:fe0f::/48 UNKNOWN -- VALID

AS12654 | 2001:7fb:fe0c::/48 UNKNOWN -- VALID

Are those differences hindering the adoption of RPKI?

Program Team



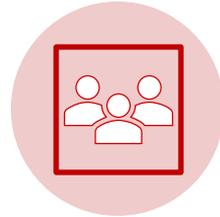
The **NRO EC**, as the executive sponsor of the program, with a role of strategic goal prioritisation, approval and funding.



The **NRO RPKI Program Manager**, with a role of operational direction, oversight and support



The **RPKI Steering Group**, which includes RPKI experts from the five RIRs and has a role of specific direction and advise related to agreed objectives



Other RIR **RPKI Subject Matter Experts** (SMEs) and consultative groups, with a role of goal delivery and execution

RPKI Steering Group

Name	Title	RIR
Yogesh Chadee	Head of Value Added Services	AFRINIC
Anton Strydom	Director, Engineering	APNIC
Tom Harrison	Product and Delivery Manager - Registry Product	APNIC
Mark Kusters	Chief Technology Officer	ARIN
Brad Gorman	Senior Product Owner, Routing Security	ARIN
Carlos Martinez Cagnazzo	Chief Technology Officer	LACNIC
Jorge Cano	Senior Software Architect	LACNIC
Felipe Victolla Silveira	Chief Technology Officer	RIPE NCC
Tim Bruijnzeels	Principal Engineer RPKI	RIPE NCC



NRO

What have we been working on?

- **Better understanding of what a single, global RPKI system would look like**
 - Documentation of baseline for RPKI services/features offered by each RIR
 - User research with users interacting with multiple RIRs
 - Documentation of problem statement and exploration of solutions to improve current RPKI trust anchor configuration
- **Better measuring the robustness of the RPKI system as a whole**
 - Documentation of key aspects of robustness for each RIR
- **Keep the technical community informed and engaged throughout the program and to address RPKI-related concerns in a coordinated way**
 - Periodic progress updates at relevant events and through blog posts
 - Responded to community input in a coordinated way

What are we aiming for in 2025?

- Progress towards improved transparency, robustness, and security of the RPKI system
- Increased consistency of the RPKI system user experience
- The technical community is kept informed and engaged throughout the program.

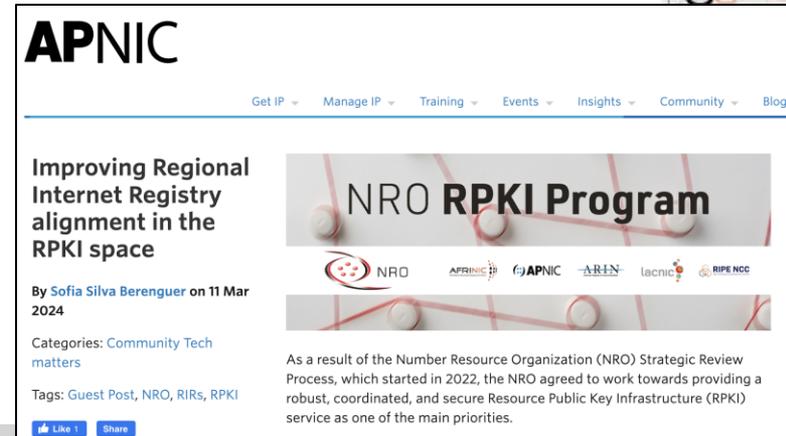


LEARN MORE AND REACH OUT

2001:610:240:0 193:0:0:202 62:109:128 195:048:02:03 178:12:02:02 2001:610:240 193:0:0:203
62:109:128 195:048:02:03 193:0:0:202 62:109:128 195:048:02:03 178:12:02:02 2001:610:240 193:0:0:203
193:0:0:203 2001:610:240:0 193:0:0:202 62:109:128 195:048:02:03 178:12:02:02 2001:610:240 193:0:0:203
2001:610:240:0 193:0:0:202 62:109:128 195:048:02:03 178:12:02:02 2001:610:240 193:0:0:203
Number Resource Organization

Do you want to know more?

- Visit our webpage:
 - https://www.nro.net/technical-coordination/security/certification/#rpki_program
- Read our blog series:
 - <https://blog.apnic.net/2024/03/11/improving-regional-internet-registry-alignment-in-the-rpki-space/>
 - <https://blog.apnic.net/2024/05/22/working-towards-a-coordinated-rpki-system/>
 - <https://blog.apnic.net/2024/08/26/are-differences-in-rir-rpki-implementations-hindering-rpki-adoption/>
 - <https://blog.apnic.net/2024/12/19/nro-rpki-program-2024-in-review/>



We want to hear from you!

- What are the **main barriers or obstacles** for RPKI adoption that could be solved (or at least improved!) through **better coordination and collaboration** among the RIRs?
- Are there **NIR Members** that also interact with other RIRs?
 - What challenges are they experiencing?
 - What are their expectations?
- Please reach out through rpki_program@nro.net



**THANKS FOR YOUR
ATTENTION!**

Number Resource Organization

Q&A

Together, we can build a more secure Internet



Number Resource Organization