

# Root Server Operators

## March 2025 Meeting Report

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On March 16, 2025, the root server operators met in Bangkok, Thailand prior to the IETF meeting. Representatives from all 12 organizations were present, with 20 attendees in person and 20 attendees remote.

### Personnel Changes

The meeting opened with introductions and notice of any personnel changes since the last meeting. Personnel changes at ICANN, ARL, and RIPE NCC were noted.

### Alert System Test

A regularly scheduled test of the alert system was conducted. Everyone reported receiving the expected alert notifications via at least one method (SMS, voice, email). There were no reports of missed notifications.

### TSIG Key

As part of the procedure for generating a new zone transfer TSIG key, all participants chose and spoke a word or phrase. The words will be collated and provided as a source of randomness when generating the key, which will be distributed after the meeting.

### Incidents

Verisign noted a few short, but high-volume attacks consisting of both DNS and non-DNS packets received at A-root. A small number of RSOs reported seeing these attacks as well.

As a follow-up to previous incidents involving stale data, the group discussed inter-RSO monitoring and alerting. A proposal was presented that provides guidelines for when and how RSOs should notify each other of potential problems.

### Architecture Presentation

The team from University of Maryland gave a presentation on the architecture and operations for D-root and answered questions from the other RSOs.

## Root Zone Distribution

Verisign gave a presentation on its root zone distribution system, which leverages many anycast sites. The group discussed the tradeoffs between high availability and short-term consistency.

## Data Collection

The RSSAC002 data for UMD was temporarily missing at [rssac002.root-servers.org](https://rssac002.root-servers.org) due to an HTTP to HTTPS transition. Updating the script to fetch from the current URL restored the missing data.

The RSSAC002 data for E-root shows a recent increasing trend.

Verisign noted that “chromium queries” to the root zone have been decreasing in recent years.

DNS-OARC’s 2025 DITL collection will be taking place in coming months.

## Root KSK Rollovers

The root zone KSK rollover is proceeding as scheduled. The KSK-2024 key was published in the root zone on January 11, 2025 as the rollover entered phase “D”.

## RPKI Status

Service	IPv4 ROAs	IPv6 ROAs	Validating
A	Planned	Planned	
B	Yes	Yes	
C			
D	Yes	Yes	No
E			
F	Yes	Yes	No, but monitoring
G	Researching	Researching	
H	Researching	Researching	
I	Yes	Yes	
J	Yes (/32 ROAs)	Planned	
K	Yes	Yes	No
L			
M	Planned	Yes	No
SNS	Planned	Planned	

## Collaboration Systems

The collaboration server has now been migrated to a new operating system and new hardware. Some new tools were shown. The sysadmin team continues to address issues and add features.

Some out-of-date information relating to telephone bridge services was identified and will be cleaned up.

## External Communications

A high-level diversity report has been drafted and was presented to the group. A few minor additions and updates were suggested. The updates will be made after the meeting and the final version sent out for approval.

## Root Server System Governance Working Group Update

A brief update on the RSS GWG was given for any RSO participants that are not already participating in the GWG. Since all RSO organizations have direct representation in the GWG, there was no significant follow-up discussion.

## Root Server System Advisory Committee Update

Representatives from RSSAC provided updates on the committee's recent activities. RSSAC's work party on changing root server IP addresses has been completed and its report will be published soon. The work party on security incident reporting is also wrapping up and may be voted on soon. RSSAC will be considering updates to RSSAC001 soon.

## Root Zone Evolution Review Committee Update

RZERC resumed its monthly meetings after new committee appointments and electing a new chair. There is a proposal from the RZERC chair to sign the root-servers.net zone, with requests for feedback from RZERC, IANA, and the root zone maintainer.

## Meeting Expenses

Four RSOs have volunteered to cover costs for this meeting and should expect to receive invoices shortly.

The group again discussed possible ways to simplify and improve the process of invoicing and paying for rootops meetings.