RSSAC Activities Update

Brad Verd and Tripti Sinha
RSSAC Co-Chairs │ ICANN 56 │ June 2016

Agenda

1 RSSAC Overview

2 Measurements of the Root Server System (v3)

3 RSSAC Workshop 2 Report

4 Updates on Current RSSAC and Caucus Work

5 Community Interaction

RSSAC Overview

Tripti Sinha

What is RSSAC?

- The role of the Root Server System Advisory Committee ("RSSAC") is to advise the ICANN community and Board on matters relating to the operation, administration, security, and integrity of the Internet's Root Server System.

- (This is a very narrow scope!)

RSSAC organization

- RSSAC
  - Appointed representatives from the 12 root server operators
  - Alternates to these
  - Liaisons

- RSSAC Caucus
  - Body of volunteer subject matter experts
  - Appointed by RSSAC

Caucus

- Members
  - 74 Technical Experts (47% not from Root Server Operators)
  - Public statements of interest
  - Public credit for individual work
- Purpose
  - Pool of experts who produce documents
    - Expertise, critical mass, broad spectrum
  - Transparency of who does the work
    - Who, what expertise, which other hats
  - Framework for getting work done
    - Results, leaders, deadlines
- To apply, email rssac-membership@icann.org
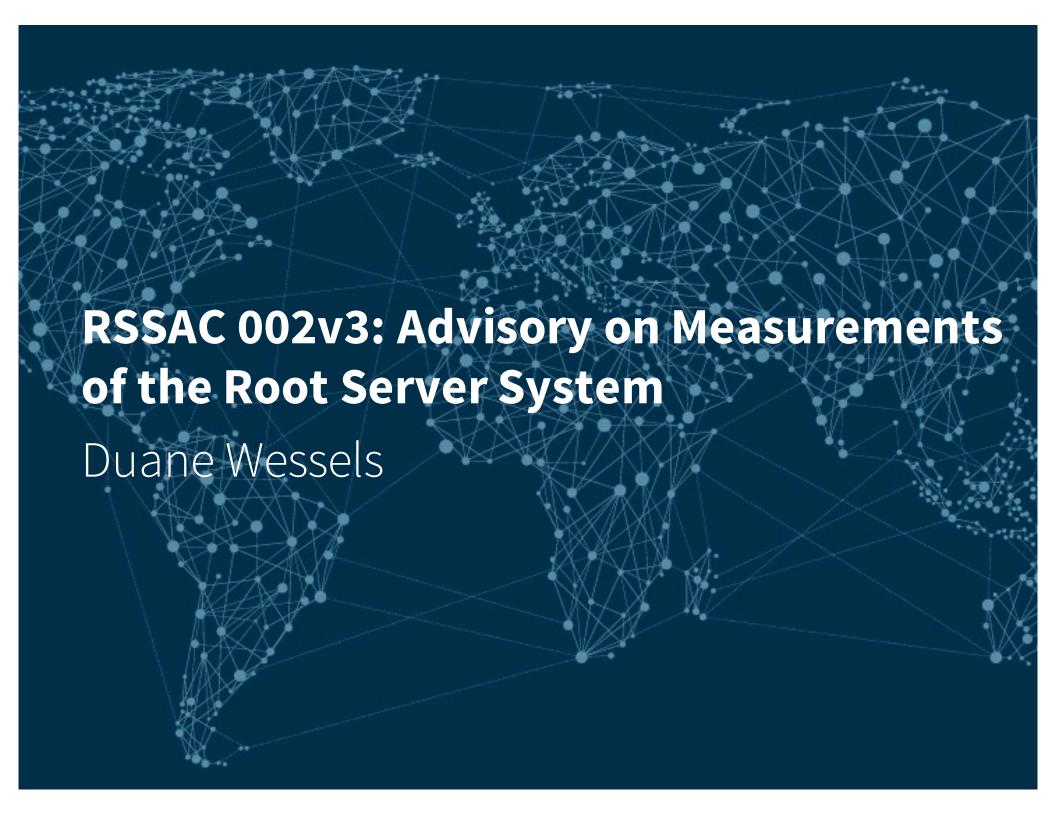
Next Caucus Meeting
17 July 2016 @ IETF 96 Berlin

RSSAC publications since ICANN 55

- Reports
  - RSSAC002v3: Advisory on Measurements of the Root Server System [6 June 2016]

- Statements
  - Report from the 2nd RSSAC Workshop [22 June 2016]

RSSAC 002v3: Advisory on Measurements of the Root Server System

Duane Wessels

RSSAC002v3: Measurements of the Root System v3

- Helps meet the requirements of RSSAC001 (Advisory on Service Expectations of Root Server Operators)

- Provides valuable data regarding the ongoing expansion of the root zone

- Updated RSSAC002v2 based on implementation experience

- Added clarifications to document scope

ICANN

RSSAC002 Measurements

- Latency in publishing available data
- Size of the overall root zone
- Volume of traffic
- Query and response size distribution
- RCODE distribution
- Number of sources seen

Changes from RSSAC002v2:

- Latency calculation changed to 95th percentile
- Zone size only reported by Root Zone Maintainer
- Clarify reasons for responses in traffic volume
- Response metrics include only responses <u>from</u> server
- Version number added to YAML for future proofing
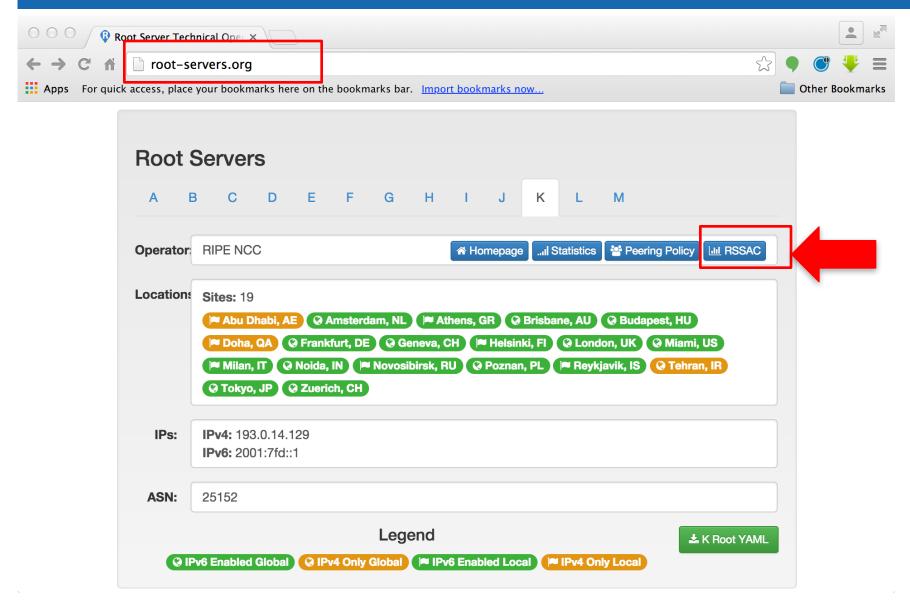- A naming scheme added to allow operators to create their own metrics

RSSAC002 Implementation Status (As of ICANN 56)

Root Letter	Current Status	Expected Completion
A	Publishing	Done
B	Publishing	Done
C	Publishing	Done
D	Publishing	Done
E	Publishing	Done
F	Collecting	Q4 2016
G	Collecting	Q3 2016
H	Publishing	Done
I	Collecting	Q3 2016
J	Publishing	Done
K	Publishing	Done
L	Publishing	Done
M	Publishing	Done

Where to find the statistics (root-servers.org)

DNS-OARC is also collecting and consolidating the RSSAC002 data (https://www.dns-oarc.net/node/348)

RSSAC Workshop 2 Report

Brad Verd

RSSAC Workshop 2

- RSSAC conducted its second workshop in May 2016.

- Purpose of the Workshop was to continue addressing issues initiated in Workshop 1.

- A Workshop Planning Committee developed statements ahead of time to prompt the discussions.

RSSAC Workshop 2 – Statements

- Architecture

  - Reliability and Robustness

  - DNS Root Service Performance and Availability

  - Root Server Operator Expectations

- Evolution

- Reinventing RSSAC

- Reliability and Robustness

    - The DNS root service has consistently offered a reliable and robust service. Failure of any single operator poses no threat to the system.

    - A work party was formed to document the architectural and service robustness of the root server system

- DNS Root Service Performance and Availability

    - Discussion concerning the technical risks and benefits of adding or removing authoritative name servers to the root zone.

    - Consensus reached that there is no technical need for more Root Zone authoritative name servers.

RSSAC Workshop 2 – Architecture

- Root Server Operator Expectations

  - Discussion concerning the commitment of the 12 DNS root server operators.

  - RSSAC will issue a statement that will be released to the community reflecting the commitments of the root server operators.

Evolution:

- Focused on technical metrics that define the expectations for operating a root server.

- A work party was formed from the RSSAC to draft a document that will define the technical requirements against which potential root operators could be evaluated.

Reinventing RSSAC:

- Focused on questions concerning the communications role of RSSAC in root server operations.

- RSSAC took action to be the front door to global DNS root service, and to the RSOs.

Updates on Current RSSAC Work

Tripti Sinha

History of Root Server System

In collaboration with root server operators, the RSSAC has produced a report to inform the community on the current root server system, and its history from beginnings to present day. The report:

1. contains a chronological history of the root server system from its origin to its current structure, divided into historical periods.

2. contains a description the current operators, and their histories in operating the root service, provided by each operator organization.

Root Server System Naming Scheme

On 9 July 2015, the RSSAC established a Caucus [work party](#) to produce **"History and Technical Analysis of the Naming Scheme Used for Individual Root Servers"** with the following scope to:

1. Document the technical history of the names assigned to individual root servers;
2. Consider changes to the current naming scheme, in particular whether the names assigned to individual root servers should be moved into the root zone from the root-servers.net zone;
3. Consider the impact on the priming response of including DNSSEC signatures over root server address records;
4. Perform a risk analysis; and
5. Make a recommendation to root server operators, root zone management partners, and ICANN on whether changes should be made, and what those changes should be.

Community Interaction

Questions?

For more information on the RSSAC see:

- ⊙ Main webpage: https://www.icann.org/resources/pages/rssac-4c-2012-02-25-en

- ⊙ Publications: https://www.icann.org/resources/pages/rssac-publications-2014-05-12-en

Interested in joining RSSAC caucus, see:

- ⊙ Caucus webpage: https://www.icann.org/resources/pages/rssac-caucus-2014-05-06-en

- ⊙ Send email to rssac-membership@icann.org

Thank You