RSSAC Activities Update
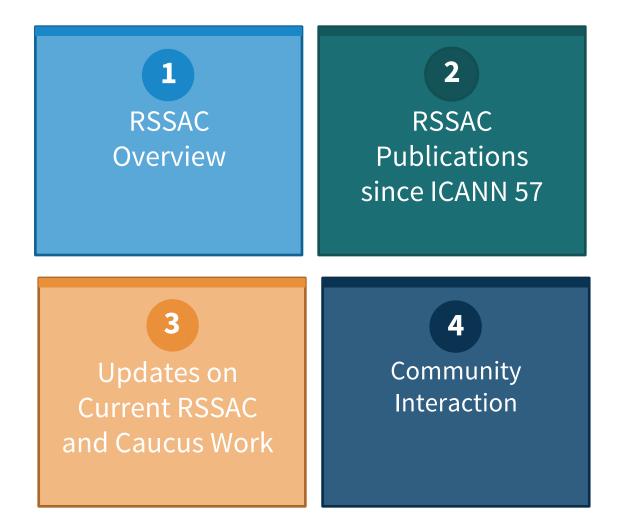
Brad Verd and Tripti Sinha
RSSAC Co-Chairs | ICANN58 | March 2017

Agenda

1 RSSAC Overview

2 RSSAC Publications since ICANN 57

3 Updates on Current RSSAC and Caucus Work

4 Community Interaction

RSSAC Overview

Tripti Sinha

RSSAC Co-Chair

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
  - 85 Technical Experts
  - Public statements of interest
  - Public credit for individual work
- Purpose
  - Pool of experts
    - 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

Caucus Meeting at IETF98

Sunday 26 March 2017
15:30 – 17:00 CDT
20:30 – 22:00 UTC

RSSAC Administration Update

- Numbering of RSSAC Publications
  - Every RSSAC publication now has a number
  - View publications by date or document type
    - advisories, comments, procedures, reports
  - New URL at:
    https://www.icann.org/groups/rssac/documents

RSSAC Publications | By Date

The RSSAC may publish advisories, reports, and statements within its mandate of advising the ICANN community and Board as well as documents related to its own administration and work.

By Date I By Document Type and Date I By Number and Version

Number	Name	Date
RSSAC022	Response to the GNSO Policy Development Process (PDP) Working Group on the new Generic Top Level Domains (gTLDs) Subsequent Procedures	06 October 2016
RSSAC021	RSSAC Statement Concerning The Impact of the Unavailability of a Single Root Server	08 September 2016
RSSAC000v2	RSSAC Operational Procedures	30 June 2016
RSSAC020	RSSAC Statement on Client Side Reliability of Root DNS Data	28 June 2016
RSSAC019	RSSAC Workshop 2 Report	26 June 2016
RSSAC002v3	Advisory on Measurements of the Root Server System	06 June 2016
RSSAC018	RSSAC Statement on the Transmission of the ICG and CCWG-Accountability Proposals	10 March 2016

RSSAC Administration Update

- Kaveh Ranjbar has been selected as the RSSAC liaison to ICANN Board

- Fred Baker replaced Brian Reid as the F-root representative to the RSSAC

Recent RSSAC Publications

RSSAC Publications since ICANN 57

- RSSAC023: History of Root Server System

- RSSAC024: Key Technical Elements of Potential Root Operators

- RSSAC025: RSSAC October 2016 Workshop Report

- RSSAC026: RSSAC Lexicon

History of Root Server System – RSSAC023

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.

As an outcome of the RSSAC Workshop 2, held in May 2016, the RSSAC produced **"Key Technical Elements of Potential Root Operators"**

- Lists important technical elements for potential new root operators that would be a critical part of any potential root server operator designation process.
- Uses RSSAC001 and RFC 7720 as starting points, expands on them
- Multiple types of elements; Design, Experience & Networking, Diversity, Documentation, Data & Measurement

October 11-13, 2016 at University of Maryland

- Developed a 50,000 foot mindmap consisting of topics ranging from empowerment, finance, designation/removal, audit/accountability, technical elements to root server association
- Other topics include a lexicon, RSSAC and Root Server System Transparency

Workshop Outcome:

- Created work party to refine lexicon
- Document entities that the root server system empowers, identify mechanisms and gaps in how we interact with those who are empowered
- Determined that a designation/remove function is necessary
- Determined the need for an accountability function
- Reached consensus to revise and strengthen "RSSAC001: Service Expectations of Root Servers"
- Documented current transparency efforts and identified communities to seek further input

RSSAC Lexicon – RSSAC026

- Purpose: To increase the understanding of terms commonly used when discussing the root server system to the broader ICANN community.

- Defines twelve terms related to root server operations for the ICANN community

- Deprecates nine terms
  - Mirror, master, hidden master, primary, secondary, slave, stealth master, stealth distribution, secondary name server

Current Work: Root Server 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:

- Document the technical history of the names assigned to individual root servers;
- 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;
- Consider the impact on the priming response of including DNSSEC signatures over root server address records;
- Perform a risk analysis; and
- 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.

Current Work: Distribution of Anycast Instances

On 6 October 2016, the RSSAC established a Caucus work party to produce **"Best Practices for the Distribution of Anycast Instances of the Root Name Service"** with the following research questions:

- Given the state of current internet technology, what is the maximum latency a relying party should experience when transacting with the DNS root service as opposed to with a single "root server?"
- Will adding more instances in more topologically diverse locations make the system more resilient to Denial Of Service (DOS) attacks?
- If root operators were to coordinate their deployments of anycast instances, what considerations should be contemplated?
- Are there any regional or global technological risks (or benefits) if only a subset of operators (versus all or the majority of root operators) deploy anycast instances?

Current Work: Anonymizing Root Query Data

- RSSAC is investigating starting a Work Party to investigate the harmonization of anonymization procedure for data collecting.

  - Consider whether harmonization of anonymization procedures is something to recommend to the RSO community.

  - If yes, recommend a preferred way to anonymize the data.

  - Consider whether to recommend that anonymization be undertaken by all who share data.

Current Work: RSSAC Tools

- A new collaborative effort to collect and develop software tools related to the root server system.

- Currently consists of a Github organization and a mailing list.

  - https://github.com/rssac-caucus

  - rssac-tools@icann.org

- Contact Wes Hardaker hardaker@isi.edu if interested in participating.

Community Interaction

Wes Hardaker

Transparency

RSSAC

- Establishment of a Caucus
- Publishing minutes & workshop reports
- Public RSSAC & Caucus Calendar
- RSSAC Public Meetings
- Meetings with other ICANN community groups
- Tutorials
- Liaison relationships
- Our operational procedures: RSSAC000

RSOs

- Publishing Minutes
- RSSAC002 statistics
- Participating in RSSAC
- Public web page
  - www.root-servers.org
- Individual web pages
- Public letters with IANA
- Collaborative reports on major events
- RSSAC can respond to technical RSS questions

Transparency Feedback

- Were you aware of these transparency items?

- What is missing from these lists?

- How can we further improve our transparency?

Questions?

For more information on the RSSAC see:

- ⊙ Main webpage: https://rssac.icann.org/

- ⊙ Publications: https://www.icann.org/groups/rssac/documents

Interested in joining RSSAC Caucus, see:

- ⊙ Caucus webpage: https://www.icann.org/groups/rssac-caucus

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

Thank You