SSAC Activities Update

Rod Rasmussen, SSAC Chair | ICANN61 | March 2018

Agenda

1 Introducing New SSAC Leadership

2 Overview of SSAC

3 Name Collision Analysis Project

4 Evolution of Registration Directory Service Data / Impacts and Implications

5 Recent Publications

6 Community Interaction

Introducing New SSAC Leadership

Rod Rasmussen
SSAC Chair
2018 - 2020

Julie Hammer
SSAC Vice Chair
2018 - 2020

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Security and Stability Advisory Committee (SSAC)

Who We Are

- 37 Members
- Appointed by the ICANN Board

What We Do

Charter: Advise the ICANN community and Board on matters relating to the security and integrity of the Internet's naming and address allocation systems.

What is Our Expertise

- Addressing and Routing
- Domain Name System (DNS)
- DNS Security Extensions (DNSSEC)
- Domain Registry/Registrar Operations
- DNS Abuse & Cybercrime
- Internationalization (Domain Names and Data)
- Internet Service/Access Provider
- ICANN Policy and Operations

How We Advise
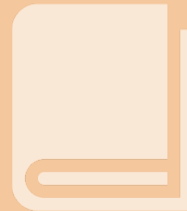
100 Publications since 2002

⊙ REPORTS ⊙ ADVISORIES ⊙ COMMENTS

OUTREACH

Security and Stability Advisory Committee (SSAC)

ICANN's Mission & Commitments

- To ensure the stable and secure operation of the Internet's unique identifier systems.
- Preserving and enhancing the operational stability, reliability, security and global interoperability, resilience, and openness of the DNS and the Internet.

SSAC Publication Process

Form Work Party → Research and Writing → Review and Approve → Publish
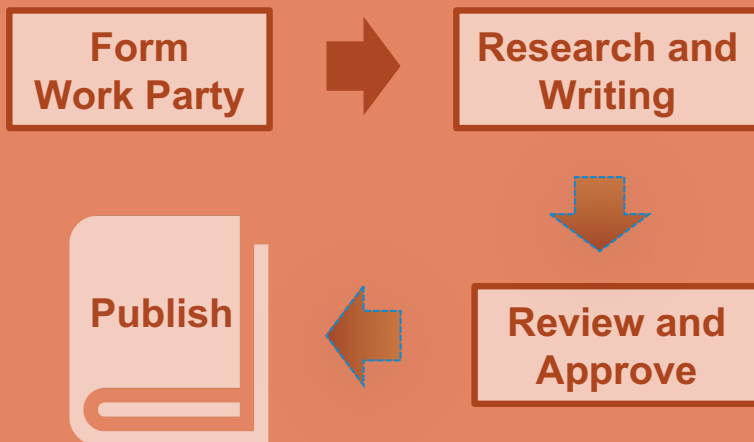
Consideration of SSAC Advice

(to the ICANN Board)

SSAC Submits Advice to ICANN Board

↓

Board Acknowledges & Studies the Advice

↓

Board Takes Formal Action on the Advice

1. Policy Development Process

2. Staff Implementation with Public Consultation

3. Dissemination of Advice to Affected Parties

4. Chose different solutions (explain why advice is not followed)

ICANN

Security and Stability Advisory Committee (SSAC)

Current Work Parties	Recent Publications
⊙ Name Collisions Analysis ⊙ SSAC Organizational Review ⊙ WHOIS Rate Limiting ⊙ Internet of Things ⊙ DNSSEC Workshops (Ongoing) ⊙ Membership Committee (Ongoing)	[SSAC2018-1]: New SSAC Document Numbering System (3 January 2018) [SSAC2018-2]: SSAC Comments on the CCWG-Accountability-WS2 Draft Recommendations to Improve Diversity (3 January 2018) [SAC99]: SSAC Response to the ICANN Internationalized Domain Name Guidelines Working Group (17 November 2017) [SAC100]: SSAC Response to the New gTLD Subsequent Procedures Policy Development Process Working Group Request (22 December 2017)

ICANN | SSAC
Security and Stability Advisory Committee

Outreach

🌐 ssac.icann.org and SSAC Intro: www.icann.org/news/multimedia/621

f www.facebook.com/pages/SSAC/432173130235645

▶ SAC067 SSAC Advisory on Maintaining the Security and Stability of the IANA Functions Through the Stewardship Transition and SAC068 SSAC Report on the IANA Functions Contract: www.icann.org/news/multimedia/729

Current Work in Progress

◉ Name Collision Analysis Project (NCAP)

◉ SSAC Organizational Review

◉ WHOIS Rate Limiting

◉ Internet of Things (IoT)

◉ DNSSEC Workshops (Ongoing)

◉ Membership Committee (Ongoing)

Topics of Interest/Possible New Work

- Signing root NS Sets Analysis
- Are We Ready for an IPv6-Only Internet?
- Challenges of Hosting Large Domain Portfolios
- Proposal for .internal
- SSAC Publication Review & Updates
- SSAC Skills Survey
- "Emerging Security Issues" Sessions at ICANN meetings
- Best Practices Related to Takedown Requests

Current and Future Milestones

Q4 & Q1 2018

✓ **[SSAC2018-3]: SSAC Comments on the Independent Review of the ICANN Nominating Committee Assessment Report (14 February 2018)**

✓ **SSAC2018-2]: SSAC Comments on the CCWG-Accountability-WS2 Draft Recommendations to Improve Diversity (3 January 2018)**

✓ **[SSAC2018-1]: New SSAC Document Numbering System (3 January 2018)**

✓ **[SAC100]: SSAC Response to the New gTLD Subsequent Procedures Policy Development Process Working Group Request (22 December 2017)**

✓ **[SAC99]: SSAC Response to the ICANN Internationalized Domain Name Guidelines Working Group (17 November 2017)**

Q2 2018

◉ SSAC Organizational Review

◉ Possible Advisory on WHOIS Rate Limiting

◉ Possible Advisory on Internet of Things

◉ DNSSEC Workshops (Ongoing)

◉ Membership Committee (Ongoing)

Second SSAC Organizational Review

- July 2017: The SSAC formed its own review party to review SSAC procedures and operations; the WP has made recommendations to change SSAC operational procedures

- February 2018: ICANN selected Analysis Group to conduct review of the SSAC

- March - May: Independent Examiner starts review of SSAC through interviews and surveys

- June 2018: Assessment report published for comment

- November 2018: Final Report (with recommendations) published

Name Collision Analysis Project (NCAP)

What are we dealing with?

- Board Resolution: https://www.icann.org/resources/board-material/resolutions-2017-11-02-en#2.a

- SSAC to conduct studies to present data, analysis and points of view, and provide advice to the Board regarding:

  - A proper definition for name collision

  - Suggested criteria for determining whether an undelegated string should be considered a string that manifests name collisions, i.e., is a "Collision String"

  - Suggested criteria for determining whether a Collision String should not be delegated

  - Suggested criteria for determining how to remove an undelegated string from the list of "Collision Strings" (aka mitigations)

- Studies to be conducted in a thorough and inclusive manner that includes technical experts (such as participants of IETF working groups, technical members of the GNSO, and other technologists)

Why is this an issue?

- CORP, HOME, and MAIL, future strings and Controlled Interruption
  - See Board resolution for further background material
- The effect of name collisions on interoperability, resilience, security and/or stability of the DNS is not fully understood.
  - Internet users can and have been impacted, but the empirical extent and impacts are not well understood.
- Address key questions for all future proposed TLDs
  - Establish guidelines for identifying strings that might result in name collisions
  - Determine parameters for delegation risks and methods to determine whether to delegate, mitigate, or withhold
    - Establish guidelines for evaluating the efficacy of controlled interruption specifically
    - Propose other mitigation strategies, their pros and cons

What are we doing?

- ◉ SSAC has proposed 3 studies to provide input to its analysis
- ◉ Details and discussion of the project:
  - ○ Cross Community Session, Monday, 1515, Ballroom A
  - ○ Open SSAC NCAP Work Party, Tuesday, 0830, 101-B
  - ○ SSAC NCAP Wiki
    <https://community.icann.org/display/NCAP>
- ◉ Study 1
  - ○ Current State of Name Collision and Data Repository
  - ○ Examine prior work
  - ○ Build data repository for Study 2
  - ○ Primer for people new to the issues
- ◉ Study 2
  - ○ Root Cause & Impact Analysis
  - ○ Gather data
  - ○ Build Impact Analysis Test System
- ◉ Study 3
  - ○ Mitigation Options
  - ○ Recommendations on Delegation Parameters

Call for participation

- The SSAC NCAP Work Party will function as an ordinary SSAC Work Party but also in an inclusive and open manner
  - Membership will be extended to non-SSAC technical experts (SSAC Invited Guests) by invitation from the NCAP WP based on data contributions, relevant skills and/or experience
  - There will also be some open work party meetings
- SSAC NCAP Discussion Group for open discussion
  - Anyone completing an SOI can join the discussion group
  - All work party members will be subscribed
- Cross Community Session at most ICANN meetings
- Three workshops planned for dedicated work
- Interim reports will have public comment periods
- We will provide ways for people to contribute any data or material that anyone believes the work party should consider

Evolution of Registration Directory Service Data / Impacts and Implications

Evolution of RDS Data / Impacts and Implications

- Technical abuse of the Internet - SSAC is concerned with the ability of the technical abuse community to efficiently continue its valuable work going forward

- Law enforcement - SSAC continues to support law enforcement access to registration data

- Gated access to registration data - SSAC is considering offering some advice on the recommended ways to implement such technologies

Recent Publications

Recent Publications

- [SSAC2018-1]: New SSAC Document Numbering System (3 January 2018)
    - Existing SACnnn series for SSAC reports, advisories and comments on Security, Stability, Resilience (SSR) issues
    - A new numbering series for SSAC letters, comments and work on administrative, community and other issues.
- [SSAC2018-2]: SSAC Comments on the CCWG-Accountability-WS2 Draft Recommendations to Improve Diversity (3 January 2018)
    - The SSAC is generally supportive of the recommendations in the report to improve diversity.
    - The SSAC is not convinced of the necessity for a dedicated and independent Office of Diversity.

Recent Publications

- [SSAC2018-3]: SSAC Comments on the Independent Review of the ICANN Nominating Committee (NomCom) Assessment Report (14 February 2018)
    - Stability of NomCom process and procedures
    - Long-term strategy of NomCom
    - Unexpected change this year in Voting vs. non-voting NomCom members (SSAC, RSSAC, GAC).
    - Needs assessment and skill gaps
    - Given ICANN's SSR mission, it is important to ensure the ICANN and PTI Boards and the other leadership positions chosen by NomCom consistently includes leaders with appropriate technical skills

Recent Publications

[SAC099]: SSAC Response to the ICANN Internationalized Domain Name Guidelines Working Group (17 November 2017)

- Delegation and other infrastructure records should either be:
i. a traditional label, i.e., a string consisting of ASCII letters, digits, and the hyphen or
ii. a valid A-label complying with IDNA2008 and their successors, and not in any way dependent on mapping.
- These records should be used without delegated variants.
- This advice does not apply to special name types in the DNS or using DNS syntax, such as the SRV (and other) record types or multicast DNS.

Recent Publications

[SAC100]: SSAC Response to the New gTLD Subsequent Procedures Policy Development Process Working Group Request (22 December 2017)

Recommendations:

1. ICANN should continue developing the monitoring and early warning capability with respect to root zone scaling.

2. ICANN should focus on the rate of change in the root zone, rather than the total number of delegated strings for a given calendar year.

3. ICANN should structure its obligations to new gTLD registries so that it can delay their addition to the root zone in case of DNS service instabilities.

4. ICANN should investigate and catalog the long term obligations of maintaining a larger root zone.

Questions to the Community

- What topics would you like SSAC to consider as additional work items?
- What issues would you suggest for SSAC to comment on?

Thank you