Second Security, Stability, and Resiliency Review Team (SSR2)

Public Comment Draft

10 February 2020

ICANN

SSR2 Public Comment Report

Draft report location:
https://www.icann.org/en/system/files/files/ssr2-review-24jan20-en.pdf

Public Comment period open through 04 March 2020 @ 23:59 UTC

See the Public Comment Proceedings for more information:
https://www.icann.org/public-comments/ssr2-rt-draft-report-2020-01-24-en

Workstream Areas

1

Workstream 1:

SSR1 implementation and impact

Section 4.6(c)(iv) of the ICANN Bylaws

2

Workstream 2:

Key security, stability, and resiliency issues within ICANN

Section 4.6(c)(i) of the ICANN Bylaws

3

Workstream 3:

Security, stability, and resilience of the DNS

Section 4.6(c)(iii) of the ICANN Bylaws

4

Workstream 4:

Future challenges

Section 4.6(c)(ii)(A,B,C) of the ICANN Bylaws

SSR2 Review Team

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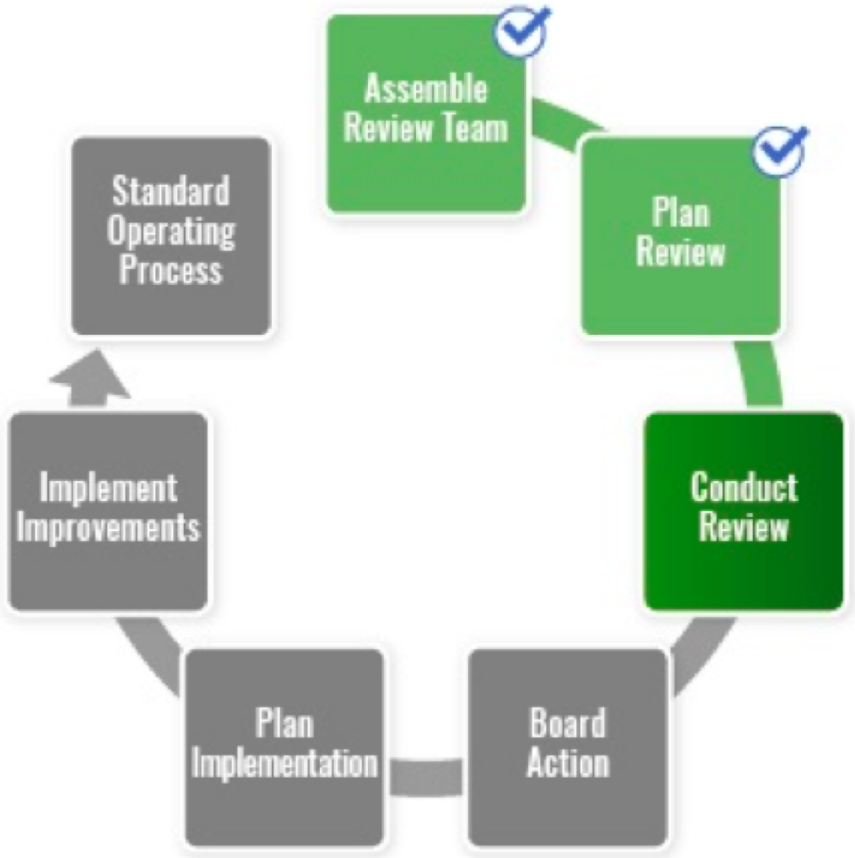
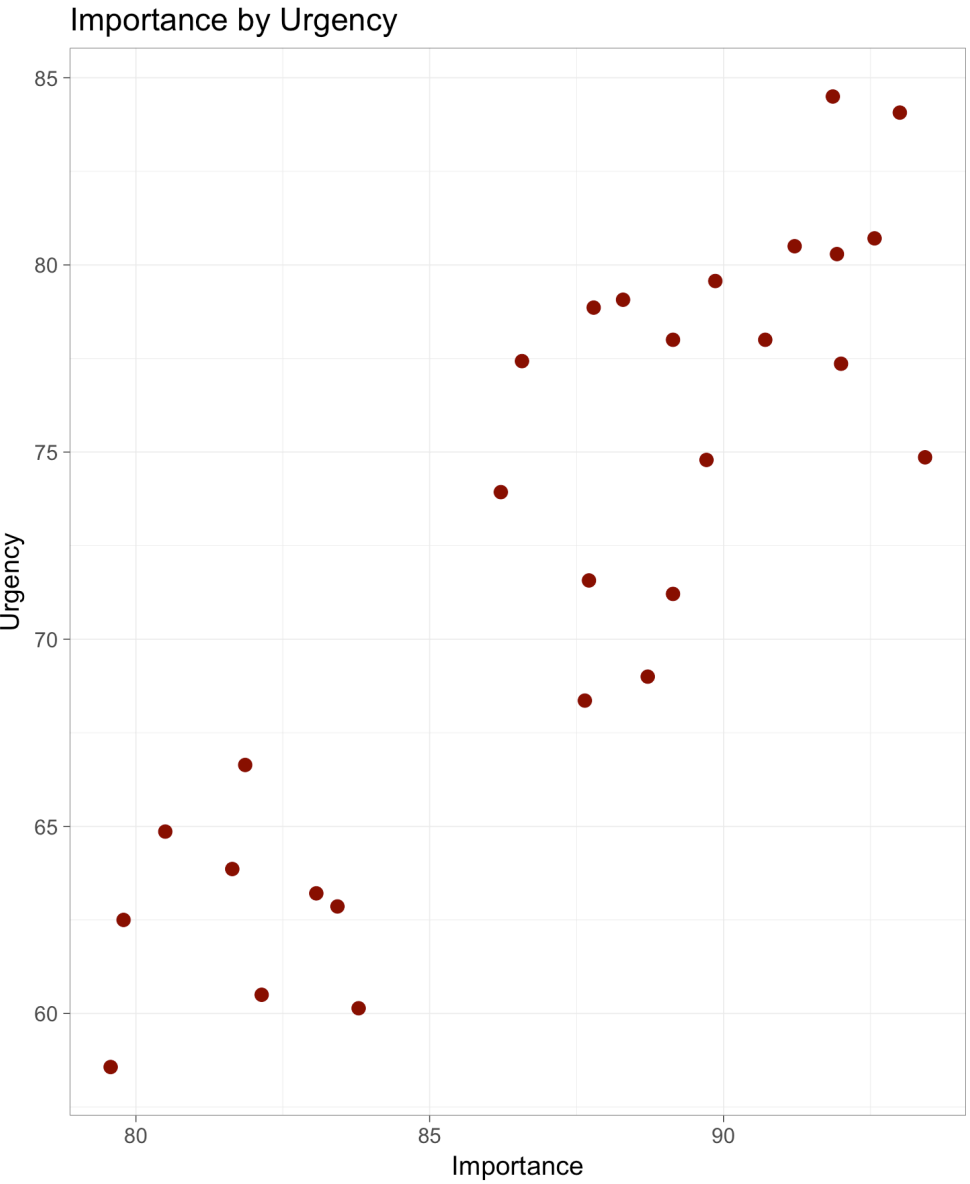
Review Process



Prioritization Process



- Team conducted a survey of SSR2 RT members
- On a scale of 50-100, all recommendations rated 75 or higher, in two clear groupings
- Terminology (low, medium, high) was guided by the definitions used in the CCT report

Recommendations

Review of SSR1 Recommendations

Covered by ICANN Bylaw 4.6(c) …

- 28 SSR1 Recommendations evaluated
- 27 SSR1 recommendations still relevant
  - Most relevant recommendations are not fully implemented

SSR2 recommends going beyond the original SSR1 recommendations in 7 cases

SSR2 Recommendation 1

ICANN org should continue its work to implement all relevant SSR1 Recommendations.

- See page 23 for full recommendation text
- Priority = High

SSR2 Recommendation 2

SSR1 Recommendation 9 – Information Security Management Systems and Security Certifications

- *Improve approach to security certification and audits*

  Priority = High

  See page 23 for full recommendation text

  See also page 71 for findings on the SSR1 recommendation (Appendix D – SSR1 Recommendation 9)

SSR2 Recommendation 3

SSR1 Recommendations 12,15, and 16 - SSR Strategy and Framework, Metrics, and Vulnerability Disclosures

- *Security issue handling and best practice development*

  Priority = High

  See page 24 for full recommendation text

  See also pages 75, 78, and 79 (Appendix D – SSR1 Recommendation 12, 15, and 16)

SSR2 Recommendation 4

SSR1 Recommendations 20 and 22 - Budget Transparency and Budgeting SSR in new gTLDs

- *Improving clarity around budget for SSR*

  Priority = Medium

  See page 24 for full recommendation text

  See also pages 75, 78, and 79 (Appendix D – SSR1 Recommendation 12, 15, and 16)

SSR2 Recommendation 5

SSR1 Recommendations 27 – Risk Management

- *Improving the Risk Management Framework*

  Priority = High

  See page 25 for full recommendation text

  See also pages 91 (Appendix D – SSR1 Recommendation 27)

SSR2 Recommendation 6

Create a Position Responsible for Both Strategic and Tactical Security and Risk Management

- *Recommending the creation of an executive C-Suite position focused on security*

  Priority = High

  See page 27 for full recommendation text

SSR2 Recommendation 7

Further Develop a Security Risk Management Framework

- *Articulate a security risk management framework, including adoption of ISO 31000 "Risk Management"*

  Priority = High

  See page 28 for full recommendation text

SSR2 Recommendation 8

Establish a Business Continuity Plan Based on ISO 22301

- *Establish a BCP for both ICANN and PTI operations based on ISO 22301, to be audited regularly by an external auditor*

  Priority = High

  See pages 29 – 30 for full recommendation text

SSR2 Recommendation 9

Ensure the Disaster Recovery Plan is Appropriate, Functional, and Well Documented

- *Establish a DR plan for ICANN and PTI Operations in line with ISO 27031, to be audited regularly by an external auditor*

  Priority = High

  See page 30 for full recommendation text

SSR2 Recommendation 10

Improve the Framework to Define and Measure Registrar & Registry Compliance

- *Improve compliance with WHOIS/RDS obligations via contracts and SLAs*

  Priority = High

  See pages 37 – 38 for full recommendation text

SSR2 Recommendation 11

Lead Efforts to Evolve Definitions Around Abuse and Enable Reporting Against Those Definitions

- *Starting with the existing definition, continue efforts to establish community consensus for the term "DNS Abuse"*

  Priority = High

  See page 38 for full recommendation text

SSR2 Recommendation 12

Create Legal and Appropriate Access Mechanisms to WHOIS Data

- *Resolve access issues for external parties such as law enforcement around WHOIS/RDS information*

  Priority = High

  See page 39 for full recommendation text

SSR2 Recommendation 13

Improve the Completeness and Utility of the Domain Abuse Activity Reporting Program

- *Improve the overall effectiveness and utility of DAAR*

  Priority = High

  See page 39 for full recommendation text

SSR2 Recommendation 14

Enable Rigorous Quantitative Analysis of the Relationship Between Payments for Domain Registrations and Evidence of Security Threats and Abuse

- *Collect, analyze, and publish pricing data*

  Priority = High

  See page 39 for full recommendation text

SSR2 Recommendation 15

Enhance Contracts with Registrars and Registries to Incent the Mitigation of DNS Abuse

- *Make SSR requirements mandatory in contracts*

  Priority = High

  See page 40 for full recommendation text

SSR2 Recommendation 16

Create Pricing Incentives for Contracted Parties to Mitigate Abuse and Security Threats

- *Offer incentives to encourage SSR within ICANN's contracted parties*

  Priority = High

  See pages 40 – 41 for full recommendation text

SSR2 Recommendation 17

Establish a Central Abuse Report Portal

- *Establish an abuse portal that automatically directs reports to relevant parties*

  Priority = High

  See page 41 for full recommendation text

SSR2 Recommendation 18

Ensure that the ICANN Compliance Activities are Neutral and Effective

- *Audit all compliance activities by a neutral third party, measured against appropriate SLAs*

  Priority = High

  See page 41 for full recommendation text

SSR2 Recommendation 19

Update Handling of Abusive Naming

- *Continue activities to define and measure misleading naming, and then include such data in DAAR when it reaches a level to be considered DNS abuse*

  Priority = High

  See pages 42 – 43 for full recommendation text

SSR2 Recommendation 20

Complete Development of a DNS Regression Test Suite

- *Finish work already started on the test suite*

  Priority = High

  See page 43 for full recommendation text

SSR2 Recommendation 21

Implement the Recommendations from SAC063 and SAC073 and Establish Formal Procedures for Key Rollovers

- *Establish formal KSK rollover process*

  Priority = High

  See page 45 for full recommendation text

SSR2 Recommendation 22

Establish Baseline Security Practices for Root Server Operators and Operations

- *Develop baseline security practices for root servers and recommend appropriate KPIs*

  Priority = High

  See page 46 for full recommendation text

SSR2 Recommendation 23

Accelerate the Implementation of the New-Generation RZMS

- *Increase urgency around deploying the new Root Zone Management System*

  Priority = High

  See page 47 for full recommendation text

SSR2 Recommendation 24

Create a List of Statistics and Metrics Around the Operational Status of the Unique Identifier Systems

- *Create a public list of statistics and metrics to support review of ICANN's unique identifier systems*

  Priority = Medium

  See page 48 for full recommendation text

SSR2 Recommendation 25

Ensure the Centralized Zone File Data Access is Consistently Available

- *Implement the recommendations found in SSAC 97*

  Priority = High

  See pages 48 – 49 for full recommendation text

SSR2 Recommendation 26

Document, Improve, and Test the EBERO Processes

- *Document and automate the Emergency Backend Registry Operator processes*

  Priority = High

  See page 50 for full recommendation text

SSR2 Recommendation 27

Update the DPS and Build Consensus Around future DNSKEY Algorithm Rollovers

- *Prepare for future transition to different digital signature algorithms*

  Priority = Medium

  See page 53 for full recommendation text

SSR2 Recommendation 28

Develop a Report on the Frequency of Name Collisions and Propose a Solution

- *Understand the frequency and nature of name collisions before the next round of gTLDs*

  Priority = Medium

  See page 53 for full recommendation text

SSR2 Recommendation 29

Focus on Privacy and SSR Measurements and Improving Policies Based on Those Measurements

- *Consider privacy impact of new technologies, such as DoH, and how to measure compliance with privacy requirements and principles*

  Priority = High

  See page 56 for full recommendation text

SSR2 Recommendation 30

Stay Informed on Academic Research of SSR Issues and Use That Information to Inform Policy Debates

- *Track developments around SSR in the academic community and disseminate that information to the ICANN community*

  Priority = Medium

  See page 57 for full recommendation text

SSR2 Recommendation 31

Clarify the SSR Implications of DNS-over-HTTPS

- *Commission an independent investigation around the implications of DoH*

  Priority = High

  See page 58 for full recommendation text

SSR2 Report Appendixes

- Definitions and Acronyms
- Suggestions
  - Items specifically targeted towards making future reviews easier to complete
- Process and Methodology
  - How SSR1 Recommendations were evaluated
  - How additional SSR2 work streams were evaluated (ICANN SSR, DNS SSR, and Future Challenges)
- Findings Related to SSR1
- Quoted Text from the ICANN Bylaws, Strategic Objectives and Goals Relevant to the SSR2 report
- Research Data on DNS Abuse Trends
- Table of Alignment Between Specific SSR2 Recommendations and the ICANN Bylaws, Strategic Objectives and Goals

Thank You and Questions

Visit our wiki at **https://community.icann.org/x/AE6AAw**

Submit a public comment: https://www.icann.org/public-comments/ssr2-rt-draft-report-2020-01-24-en