



# Security and Stability Advisory Committee

Activities Update

ICANN London Meeting  
June 2014

# Agenda

1. Overview (5 minutes)
2. Recent Achievements (5 minutes)
  1. SAC066: SSAC Comment on JAS Phase I Report (10 minutes)
  2. Work in Progress and Future Milestones (5 minutes)
  3. IANA Functions Stewardship Transition Work Party (10 minutes)
3. Possible New Work Parties (15 minutes)
4. Interaction with the Community (10 minutes)

# Overview

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# Security and Stability Advisory Committee (SSAC) Overview

- 2001: SSAC initiated; 2002: Began operation.
- Provides guidance to ICANN Board, Supporting Organizations and Advisory Committees, staff and general community.
- Charter: To advise the ICANN community and Board on matters relating to the security and integrity of the Internet's naming and address allocation systems.
- Members as of June 2014: 40; appointed by ICANN Board for 3-year terms.

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# Recent Achievements

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# 2014 Achievements

## Publications Since ICANN-49 Singapore:

- [SAC066]: SSAC Comment on JAS Phase I Report on Mitigating the Risk of DNS Namespace Collisions – 06 June 2014

## Publications since ICANN-48 Buenos Aires

- [SAC065]: SSAC Advisory on DDoS Attacks Leveraging DNS Infrastructure – 18 February 2014
- [SAC064]: SSAC Advisory on DNS “Search List” Processing – 13 February 2014



# SAC066: SSAC Comment on JAS Phase I Report on Mitigating the Risk of DNS Namespace Collisions

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# Issues

- “Namespace collision”: where a name that is defined and used in one namespace may also appear in another.
- Users and applications intending to use a name in one namespace may actually use it in a different one
- Unexpected behavior may result where the intended use of the name is not the same in both namespaces.





# Issues, Cont.

- Circumstances that lead to a name collision could be accidental or malicious.
- In the context of TLDs, the conflicting namespaces are the DNS namespace reflected in the root zone and any other namespace, regardless of whether that other namespace is intended for use with the DNS or any other protocol.

# Operational Recommendations Summary

## ICANN should:

- Expand the range of situations that would trigger an emergency response.
- Instead of a single controlled interruption period, introduce rolling interruption periods, broken by periods of normal operation.
- Perform an evaluation of potential notification approaches prior to implementing any notification approach.

# Operational Recommendations Summary, Cont.

## ICANN should:

- Implement a notification approach that accommodates IPv6-only hosts as well as IPv4-only or dual-stack hosts.
- Provide clarity to registries on the rules and the method of allocation of blocked names after the conclusion of the test period.

# Strategic Recommendations Summary

## ICANN should:

- Consider not taking any actions solely based on the JAS Phase One Report.
- In due course publish information about not yet disclosed issues.
- Seek to provide stronger justification for extrapolating findings based on one kind of measurement or data gathering to other situations.

# Work in Progress and Future Milestones

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# Work in Progress

- IANA Function Stewardship Transition: Developing principles and description document.
- SSAC Membership Committee: Evaluating new member candidates and conducting SSAC member annual review.
- DNSSEC Workshop: Held at ICANN-50 in London.
- SSAC Outreach to Law Enforcement: Ongoing outreach and presentations in at ICANN-50 London.
- IGF Workshop: Developing workshop and paper for Istanbul IGF in September 2014.
- Public Suffix Lists: Developing advisory.

# Future Milestones

## Q3 2014:

- SSAC Advisory on Principles for the Transition of the Stewardship of the IANA Function
- IGF Workshop and Draft SSAC Advisory

## Q4 2014:

- SSAC Advisory on Public Suffix Lists
- Final SSAC Advisory on IGF Workshop Topic



# IANA Function Stewardship Transition Work Party

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# Background

- In March 2014, the US Department of Commerce announced that it intends to end its long-standing "IANA functions contract" and complete the long-planned transition of certain Internet infrastructure maintenance tasks to the private sector.
- It is soliciting a proposal for assuring both proper operation and oversight of IANA in the absence of the US Government contract.

# Recent Developments

## The SSAC:

- Established a Work Party to consider postulates, principles, and technical considerations relating to the transition of the stewardship of the IANA functions.
- Is focused solely on the security and stability of the IANA functions during and after the stewardship transition.

# Recent Developments, Cont.

## The SSAC:

- Will not provide conclusions or recommendations concerning the operations of the IANA functions except when such mechanisms have direct impact on security and stability issues.

# Analysis

To inform its work the Work Party is conducting a rough analysis of the roles of:

- The NTIA, ICANN as the IANA Functions Operator, Verisign in the context of Root Zone Maintainer related to the IANA Root Management Function, and the Root Server system as it pertains to the IANA functions.
- The IETF and the NRO as policy providers to IANA.

# Terminology

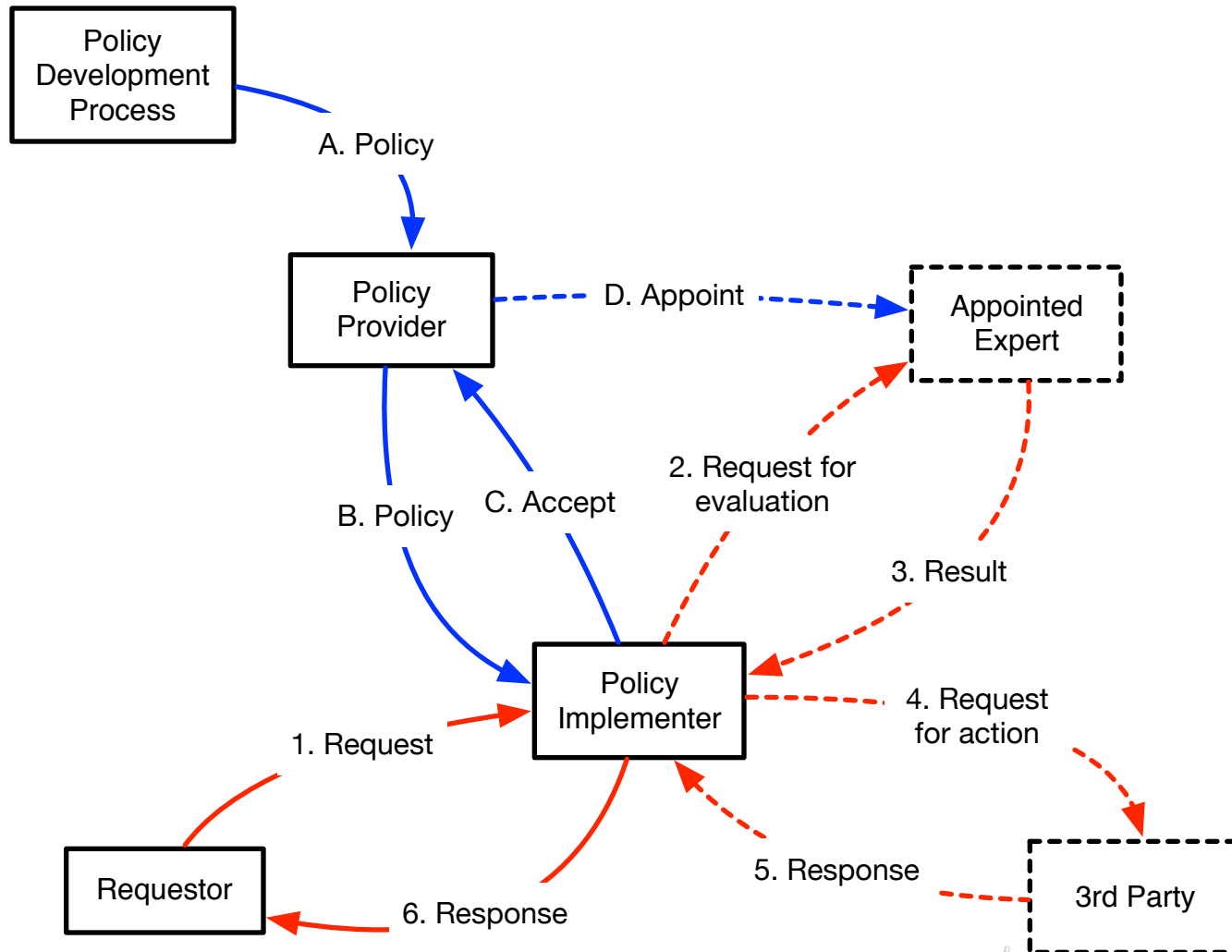
The Work Party is developing terminology to help describe the roles in the IANA Function. The primary roles are:

- Policy Provider – hands over a policy to the Policy Implementer for implementation.
- Policy Implementer – the party that accepts and then implements the policy developed by the policy development process, handed over by the Policy Provider.

The following chart illustrates the roles and actions.



# Policy Provider Flow Chart



# Next Steps

- The SSAC will provide an update on the progress of the Work Party at the ICANN-50 meeting in London.
- The SSAC's goal is to publish the principles document in Q3.
- The SSAC also may begin work on a technical issues document.

# Possible New Work Parties

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# Questions from the Community

- How does the SSAC prioritize new work?
- How does the SSAC address requests from the ICANN Board and the community?
- How does the SSAC communicate its work?

# Current Work Parties Pending Assignment

- DNSSEC Validation
- Implications of the growing IPv4 address markets
- Registrant Protection: Technical Recommendations to Registrars on Credential Repositories (BCP)
- Multicast Domain Name System (MDNS): Complexity/Challenges in the DNS
- WHOIS (including new registry directory services and related issues)

# Interaction with the Community

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# Questions to the Community

- Are the SSAC publications accessible and understandable?
  - How is the length (long, short, just right?)
  - How is the level of detail?
  - Do the publications reach their audience?
- How can the SSAC do a better job for the community?
- What can the SSAC do differently?
- What topics are missing from the current list of work parties?



Thank You

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