
GAC Session on Security and Stability

Session 10

Session Agenda

During the security and stability themed session, the GAC will be meeting with the Security and Stability Advisory Committee (SSAC) on issues of common interest with the GAC, followed by a session with the SIDNLabs on matters related to DSSEC and Quantum.

Members of the SSAC will share information with GAC representatives on the latest developments in areas where they have common or overlapping interests with GAC member governments. Attendees will explore opportunities for future collaboration with the GAC on key topics.

The topics identified for bilateral discussion between the GAC and SSAC during this ICANN83 session include:

1. Domain registration data access
2. Update on the SSAC Free and Open-Source Software Work Party
3. Briefing on SSAC report on DNS Blocking

Subsequently, SIDN Labs will provide an overview to the GAC on the Post-quantum Algorithm Testing and Analysis for the DNS (PATAD) project developed with the University of Twente and SURF, and will discuss alternative paths for making DNSSEC Post-quantum Cryptography-ready to give GAC members a broader perspective on the solution space, as government organizations will need to prepare for upcoming possibly substantial changes in the DNS to implement the new algorithms and roll-over the cryptographic key material.

Background on SSAC

The SSAC advises the ICANN community and the ICANN Board on matters relating to the security and integrity of the naming and address allocation systems of the Internet. These include operational matters such as those pertaining to the correct and reliable operation of the Root Server System; administrative matters such as those pertaining to address allocation and Internet number assignment; and registration matters such as those pertaining to registry and registrar services like WHOIS. The SSAC also engages in ongoing threat assessment and risk analysis of the Internet naming and address allocation services to assess where the principal threats to stability and security lie, and advises the ICANN community accordingly.

[SSAC members](#) are technical security professionals who volunteer their time and expertise to improve the security and integrity of the Internet's addressing system. The SSAC produces [reports](#),

[correspondence, and comments](#) on a range of topics for the ICANN Board, the ICANN community, and the broader Internet community. The SSAC documents how the SSAC carries out its own work and the accumulated rationale in the [SSAC Operational Procedures](#).

1. Domain Registration Data Access

The SSAC has previously worked on domain registration data access issues, including in the publication [SAC122: SSAC Report on Urgent Requests in the gTLD Registration Data Policy](#). This publication contained three recommendations: The first on structure for urgent requests so that the process is handled in an expedited manner; the second on a policy for response times; and the third requesting the ICANN organization to compile data on urgent requests for the ICANN community. Other efforts include [SAC101v2: SSAC Advisory Regarding Access to Domain Name Registration Data](#) and [SAC118:SSAC Comments on Initial Report of the Expedited Policy Development Process \(EPDP\) on the Temporary Specification for gTLD Registration Data Team - Phase 2A](#).

2. SSAC Free and Open-Source Software Work Party

The SSAC has a current work party nearing completion that looks at how the Domain Name System (DNS) runs on free and open source software (FOSS). FOSS is often maintained by non-profit, volunteer, and commercial actors in a complex equilibrium. This report investigates and analyzes the data of how operators in the DNS utilize open source software, while addressing some common misconceptions about it. SSAC seeks to inform policy making efforts or regulatory interventions that seek to discuss, alter or regulate the development or subsequent use in infrastructure of software without due consideration of the role of open source software in the core of the Internet. This report will also present original data on the role of FOSS in the DNS and original survey data on the anticipated impacts of regulation on the open source model.

3. SSAC Report on DNS Blocking

The SSAC has just published its report [SAC 127](#), entitled: DNS Blocking Revisited. DNS blocking is a method for restricting access to information or services on the Internet by interfering with the normal process of responding to DNS queries about domain names or Internet Protocol addresses. This report focuses on the technical means by which DNS content blocking can be accomplished, and the effects—both intended and unintended—of its use in different contexts. The aim of this report is to advise the Internet community, and especially policymakers and government officials, of the implications and consequences of using DNS blocking to control access to resources on the Internet.

The three recommendations in SAC127 are addressed to any organization involved in implementing or mandating DNS blocking and to operators of recursive servers. The SSAC advises

that all such entities fully grasp the implications of DNS blocking, that those implementing it adhere to clear operational guidelines to minimize risks and collateral damage, and that server operators utilize DNS Extended Error codes for transparency. This report updates previous SSAC publications: [SAC050](#) and [SAC056](#), which were respectively published in 2011 and 2012. Since then, relevant Internet technologies and practices have evolved, and more examples of DNS blocking have been implemented.

Background on SIDNLabs

SIDN Labs is the research team of SIDN, the operator of the .nl top-level domain. The purpose of SIDN Labs is to further enhance the security and robustness of .nl and the broader internet infrastructure in the Netherlands, Europe and the rest of the world through applied technical research. We do this based on large-scale Internet measurements and analysis, and the design, prototyping and evaluation of new Internet technologies and systems. Our research focuses on domain name security, security of Internet core systems (DNS, BGP and NTP), and emerging Internet technologies such as post quantum cryptography.

References

- More information on the [PATAD PQC DNSSEC Testbed](#)

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