



24 February 2022

Addendum to SAC114: Additional Context for Recommendation 1, Recommendation 3, Recommendation 7, and Additional References

The SSAC has carefully considered both ICANN Board and Community feedback on SAC114: SSAC Comments on the GNSO New gTLD Subsequent Procedures Draft Final Report. In retrospect, the up-front statement contained in SAC114 that, "the SSAC believes that the introduction of more gTLDs to the root namespace is not consistent with ICANN's mission and commitment to keep the Internet secure, stable, and interoperable" does a poor job of stating the SSAC's position regarding adding additional gTLDs. While other text in SAC114 provides more detail and draws out the substance of the SSAC's specific concerns, this particular summary statement has had a range of interpretations in the community, and combined with its leading position, has clearly colored the interpretation of much of the rest of SAC114 in many readers' minds in a way unintended by the SSAC. This addendum provides clarification on the intent of SAC114, its recommendations, and how the Board might proceed with considering SAC114 moving forward.

1. SAC114 Recommendation 1

SAC 114 Recommendation 1: The SSAC recommends that the ICANN Board initiate a fundamental review to determine whether continuing to increase the number of gTLDs is consistent with ICANN's strategic objective to "evolve the unique identifier systems in coordination and collaboration with relevant parties to continue to serve the needs of the global Internet user base." This review should be considered an input towards updating ICANN's strategic goals in conjunction with implementing the CCT Review Team's recommendations. Such a fundamental review should include at least the following areas of study based on prior rounds of the New gTLD Program:

- *Impacts on root server operations*
- *Impacts on SSR issues*
- *Impacts on overall DNS operations*
- *Analysis of how all metrics for success were met*
- *Risk analysis*

The SSAC began reexamining SAC114 after ICANN70 to discuss the community's feedback. The majority of these discussions focused on the rationale behind Recommendation 1 and how

better to express its short- and long-term concerns related to the New gTLD Subsequent Procedures. In SAC114 Section 2.1, SSAC provides expert evidence-based opinion that expresses a particular view and that view is an important input that should be duly considered by the Board, along with other inputs such as the Competition, Consumer Trust and Consumer Choice (CCT) Review, the Second Security, Stability, and Resiliency (SSR2) Review, and the GNSO New gTLD Subsequent Procedures Draft Final Report.

As stated in Section 2.1, SSAC remains concerned “that the gTLD Subsequent Procedures have been crafted without adequate learning from the prior expansion round to understand the trade-offs between benefits garnered and costs incurred in relation to the program’s overall strategic objectives, and that such an analysis was outside of the Final Report’s scope. The SSAC’s concern aligns with concerns raised in the [CCT] Final Report and its challenges with being able to adequately assess ‘the extent to which the expansion of gTLDs promoted consumer trust and the effectiveness of safeguards adopted by new TLD operators in mitigating certain risks involved in such expansion.’”¹ As stated in Section 2.3, the CCT Review Team called out several of these and other issues that one would expect to have been completed prior to further expansion. The SSAC is particularly concerned that the strategic goal to “support the continued evolution of the Internet’s unique identifier systems with a new round of gTLDs that is responsibly funded, managed, risk-evaluated, and consistent with ICANN processes”² has not been sufficiently accomplished in terms of risk evaluation at this time. Further, without adequate learning from the previous round, we don’t have an understanding of how this strategic goal actually achieves its larger objective to “evolve the unique identifier systems in coordination and collaboration with relevant parties to continue to serve the needs of the global Internet user base.”³ Preferably such work should be done up-front with the community agreeing on the risk factors and user impact metrics to be evaluated.

Perhaps the most prominent issue in the community is persistent DNS abuse. Unfortunately, despite various efforts to mitigate, SSAC finds substantial evidence that some new gTLDs have amplified the already considerable challenges with domain name abuse. We provide a list of related references below, including two new studies released since SAC114 was published. These studies reinforce our view that the security and stability of the namespace would be best served by careful and interdisciplinary data-driven examination of DNS abuse as a high priority. Gathering, sharing, and examining data to inform decisions and policy on expanding the root zone is consistent with prior SSAC and other community advice.

¹ See Chapter 5, Data-Driven Analysis: Recommendations for Additional Data Collection and Analysis, Competition, Consumer Trust, and Consumer Choice Review (CCT) Final Report, <https://www.icann.org/en/system/files/files/cct-final-08sep18-en.pdf>

² See ICANN Strategic Plan: Fiscal Years 2021 - 2025, p. 22, <https://www.icann.org/en/system/files/files/strategic-plan-2021-2025-24jun19-en.pdf>

³ See ICANN Strategic Plan: Fiscal Years 2021 - 2025, p. 18, <https://www.icann.org/en/system/files/files/strategic-plan-2021-2025-24jun19-en.pdf>

We emphasize that we agree with the New gTLD Subsequent Procedures Working Group that a holistic solution is needed to handle abuse -- the vast majority of abuse occurs in legacy TLDs, even if it is disproportionately represented in the smaller gTLDs. However, as stated in SAC114, waiting until efforts to mitigate DNS abuse can be equally applied to all existing and new gTLDs effectively cedes the ground to malicious actors who can depend upon a long Policy Development Process to hinder meaningful anti-abuse measures. As this has been an issue under consideration for over a decade without resolution, our view is that from a security perspective, measurable progress on this issue is a higher priority than namespace expansion at this time. This short-term concern was one motivation for the urgency expressed in Recommendation 1. The pending CCT recommendations provided further motivation.

The SSAC also recognizes significant longer term concerns. The SSAC is concerned that when it comes to root zone expansion, the ICANN community is providing instructions for the tactics of root zone expansion without determining and agreeing upon a long-term strategy. The tactics of expansion are well understood, and the SSAC understands that a subsequent round of the New gTLD Program is likely to occur and specific comments regarding this round can be found in SAC114 Sections 2.4, 3.1-3.3. Despite the stated strategic goal for another round, the SSAC is particularly concerned with the lack of a fully articulated long-term strategy for root zone expansion. In the absence of such a strategy, the SSAC observes that there is an assumption within the ICANN community that root zone expansion will be operationalized as a continuous process without bound in the long term and without a sufficient framework to address consumer protection and infrastructure integrity concerns.

It is our expert opinion that ICANN has insufficient information at this time to operationalize continual, successive waves of root zone expansion. Such an expansion, particularly in an unbounded fashion, may eventually lead to serious operational issues that affect the overall domain name system, but we lack the knowledge to make any firm predictions at this time. However, as thoroughly reviewed and discussed in SAC117: Report on Root Service Early Warning Systems, an early warning system is currently infeasible, as was also concluded by OCTO-15: Recommendations for Early Warning for Root Zone Scaling. The root zone system is highly complex, and our current understanding of it does not allow us to predict imminent failure within its conventional and conservative operational parameters. It is therefore advisable from a security, stability, and resiliency perspective to take a conservative approach in expanding the root zone, with risks understood, balanced against other considerations, and mitigated to the extent possible.

Recommendation 1 provides the impetus for the Board to consider these short- and long-term concerns at this time. This is what the SSAC meant in the SAC114 introduction when it explained how the SSAC took an in-depth look at broader issues related to this topic space and used this opportunity to provide to the Board substantive comments and recommendations on the

future of deploying new gTLDs. The SSAC observed that there appears to be conflicting tension between ICANN's commitments to ensure the stable and secure operation of the Internet's unique identifier systems and ICANN's strategic objective to "evolve the unique identifier systems in coordination and collaboration with relevant parties to continue to serve the needs of the global Internet user base"⁴ without sufficient framework for consumer protections and infrastructure integrity. Recommendation 1 calls for a review of the underlying fundamental principles in order to examine this tension and endeavor that any future round of the New gTLD program will make a net positive contribution to the evolution of the unique identifier system. Such a review should include overall strategic goals associated with expanding the number of gTLDs delegated in the DNS along with the scale and aims of such expansion. As part of this review we believe an update to the Board's rationale document from 2011 is appropriate, including but not limited to Section 5 on steps to mitigate malicious conduct. That rationale document⁵ quotes ICANN's Affirmations of Commitments⁶ as follows:

ICANN will ensure that as it contemplates expanding the top-level domain space, the various issues that are involved (including competition, consumer protection, security, stability and resiliency, malicious abuse issues, sovereignty concerns, and rights protection) will be adequately addressed prior to implementation.

Given our extensive discussion of subsequent rounds of gTLDs in SAC114, we acknowledge the suggested timing of Recommendation 1 is confusing. We would like to clarify that *at this time*, from a security perspective, we cannot advise that the ICANN community proceed with another round before pursuing such a fundamental review. To clear up one point of confusion raised, the SSAC is not concerned about adding *even a single* TLD to the root namespace. Our concerns relate to further rounds of gTLD expansion without a clear understanding of how such rounds of expansion impact on the stability and utility of the DNS.

The SSAC's advice in SAC114 Recommendation 1, in conjunction with the CCT Review Team's recommendations, should be considered by the Board as it develops and articulates the overall strategy for root zone expansion. The SSAC understands there are other factors in play regarding ICANN policy with respect to namespace expansion in both the short and longer term. Further, the SSAC recognizes that it is for the Board to evaluate any risks associated with root zone expansion and balance those risks against other considerations that may be beyond SSAC's purview. The SSAC recommends that risks should be re-evaluated for any proposed round of the

⁴ See ICANN Strategic Plan: Fiscal Years 2021 - 2025, p. 18, <https://www.icann.org/en/system/files/files/strategic-plan-2021-2025-24jun19-en.pdf>

⁵ See ICANN Board Rationale for the Approval of the Launch of the New gTLD Program, <https://www.icann.org/en/system/files/bm/rationale-board-approval-new-gtld-program-launch-final-20jun11-en.pdf>

⁶ See Affirmation of Commitments by the United States Department of Commerce and the Internet Corporation for Assigned Names and Numbers, <https://www.icann.org/resources/pages/affirmation-of-commitments-2009-09-30-en>

New gTLD Program and decisions on how to proceed should be made after carefully understanding those risks against its overall strategy and public interest commitments.

2. SAC114 Recommendation 3

SAC114 Recommendation 3: The SSAC recommends that the ICANN Board, prior to launching the next round of new gTLDs, commission a study of the causes of, responses to, and best practices for mitigation of the domain name abuse that proliferates in the new gTLDs from the 2012 round. This activity should be done in conjunction with implementing the CCT Review Team's relevant recommendations. The best practices should be incorporated into enforced requirements, as appropriate, for at least all future rounds.

Community feedback revealed some confusion as to the intended timing of Recommendation 3 with regard to the timeline of the development and implementation of a subsequent round of the New gTLD Program. While this would normally be clarified through the Action Request Register, for transparency to the full community, the SSAC would like to provide clarification on Recommendation 3.

The SSAC notes that further informing this recommendation are the CCT Review Team's own recommendations regarding abuse.⁷ These recommendations have remained "pending" since 2019. Recommendation 15 was that ICANN renegotiate the registry and registrar agreements – which would affect all TLDs, new and old, and all registrars. They considered this prerequisite to a future round of gTLDs, in order that "provisions to address systemic DNS Security Abuse should be included in the baseline contract for any future new gTLDs." SAC114 states in Section 2.4,

Given the serious problems that some new gTLDs had with DNS abuse,^{19,20} it is clear that these issues need to be understood and mitigated prior to the launch of any new gTLDs under a new policy regime. For example, a focused effort to understand these issues by the ICANN organization (ICANN org) could inform the crafting of new guidance to potential TLD operators and enable the adoption of best practices learned in dealing with large-scale problems in the previous round.

However, in Recommendation 3 the SSAC states the dependency of completing the recommended study is “prior to launching the next round of new gTLDs.” The SSAC would like to clarify any perceived discrepancy between these two statements in SAC114. This recommendation could be addressed concurrently with other necessary work to plan for, support, and enable a program to introduce additional gTLDs to the root zone. The constraint that

⁷ See Recommendations 13, 15, 16, and 20, Competition, Consumer Trust, and Consumer Choice Review Final Report, <https://www.icann.org/en/system/files/files/cct-rt-final-08sep18-en.pdf>

motivated the timing included in Recommendation 3 is that proceeding without documenting best practices, baseline contract provisions, and policies prior to the launch of the application window leads to transactions where applicants are committing to contracts without essential information.

3. SAC114 Recommendation 7

SAC114 Recommendation 7: The SSAC recommends that the ICANN Board, prior to authorizing the addition of new gTLDs to the root zone, receive and consider the results of the Name Collision Analysis Project, pursuant to Board Resolution 2017.11.02.30.

Community feedback also revealed some confusion as to the intended timing of Recommendation 7 with regard to the timeline of the development and implementation of a subsequent round of the New gTLD Program. While this would normally be clarified through the Action Request Register, for transparency to the full community, the SSAC would like to provide clarification on Recommendation 7.

Recommendation 7 could be addressed concurrently with other necessary work to plan for, support, and enable a program to introduce additional gTLDs to the root zone. While it would be best to have this work completed before the launch of the application window, it seems essential to have it completed before delegation of such gTLDs.

4. Additional References

Several community members asked for further information on issues raised in SAC114 in conjunction with domain name system abuse. Additional references and examples of items relating to domain name system abuse discussed in SAC114 Section 2.4 are listed below:

- European Commission, Directorate-General for Communications Networks, Content and Technology, Paulovics, I., Duda, A., Korczynski, M. (2022). “Study on Domain Name System (DNS) abuse”, <https://data.europa.eu/doi/10.2759/616244>
- Maciej Korczynski, Maarten Wullink, Samaneh Tajalizadehkhoob, Giovane C.M. Moura, and Cristian Hesselman. "Statistical Analysis of DNS Abuse in gTLDs Final Report", <https://www.icann.org/en/system/files/files/sadag-final-09aug17-en.pdf>
- Zhanhao Chen, Jun Javier Wang and Kelvin Kwan, Palo Alto Networks, Unit 42, Newly Registered Domains: Malicious Abuse by Bad Actors, <https://unit42.paloaltonetworks.com/newly-registered-domains-malicious-abuse-by-bad-actors/>
- Gordon Hampton, Spot, The Perils of an .xyz Domain, <https://www.spotvirtual.com/blog/the-perils-of-an-xyz-domain/>

- Interisle Consulting Group, Phishing Landscape 2021: An Annual Study of the Scope and Distribution of Phishing, <https://www.interisle.net/PhishingLandscape2021.pdf>
- Anti-Phishing Working Group, Global Phishing Survey, <https://apwg.org/globalphishingsurvey/>

The SSAC appreciates this opportunity to address concerns raised by the ICANN Board and community and further clarify the intent of recommendations in SAC114. The SSAC requests that the ICANN org formally take SAC114 recommendations out of their deferred state in the Action Request Register and proceed with the consideration process.

5. Dissents and Withdrawals

5.1 Dissents

While we believe we share some of the core objectives of those with whom we have not been able to agree, it is important to state clearly that this new addendum and the original document to which it is attached do not represent unanimity within SSAC.

Following the publication of SAC114, the boilerplate used in the preface of SSAC publications was modified to include the following clarification:

SSAC members participate as individuals, not as representatives of their employers or other organizations. SSAC consensus on a document occurs when the listed authors agree on the content and recommendations with no final objections from the remainder of the SSAC, with the exception of any dissenting opinions or alternative views that are included at the end of the document.

This modification, the considerable time that has passed since the publication of SAC114 and the final distillation of the new addendum illustrate many of the internal tensions regarding consensus that have built within SSAC.

We do not agree with aspects of the tone, direction and approach of this document. We believe the document oversteps with respect to the role of SSAC in the wider community and arrives at some conclusions based on analysis that is insufficiently rigorous. It seems clear that these differences will not be easily resolved by yet further discussion.

This is an awkward situation. We respect the views of our colleagues and acknowledge that there are issues in this document on which reasonable people can, in good faith, come to different conclusions. However, we believe that these disagreements should not be ignored simply in the interests of constructing the appearance of strong consensus.

We look forward to continuing to work with our colleagues within SSAC and with the wider community in support of the security and stability of the name space.

Joe Abley
Jeff Bedser
Ram Mohan
Suzanne Woolf

5.2 Withdrawals

The following SSAC member(s) withdrew from the SAC114 Addendum:

James Galvin