POTENTIAL GNSO POLICY WORK ON GTLD NAME COLLISION MITIGATION

BACKGROUND

ICANN's mission and core values call for ICANN to preserve and enhance the operational stability, reliability, security, and global interoperability of the Internet's system of unique identifiers (names, IP numbers and protocol parameters). In pursuing these goals and following the direction of its Board of Directors as well as taking into consideration the advice of the Security and Stability Advisory Committee, ICANN has been working on understanding and mitigating the risks related to name collisions for the 2012 round of gTLDs.

As described by SAC 066 [10] "*The term "name collision" refers to the situation 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, and unexpected behavior may result where the intended use of the name is not the same in both namespaces. The circumstances that lead to a name collision could be accidental or malicious. In the context of top level domains (TLDs), the conflicting namespaces are the global Internet Domain Name System (DNS) namespace reflected in the root zone as published by the Root Zone Management Partners (currently the Internet Corporation for Assigned Names and Numbers (ICANN), the U.S. Department of Commerce National Telecommunications and Information Administration (NTIA), and Verisign) and any other namespace, regardless of whether that other namespace is intended for use with the DNS or any other protocol.*"

A common case of name collision occurs when users unknowingly access a name that has been delegated in the public DNS when the user's intent was to access a resource identified by the same name in a private network. Another common case of name collision occurs when using the "search list" functionality usually found in most operative systems and some applications, where one or more "default" domain names are added as suffix to names entered/used by the user. If the name without a default domain name is tried in the public DNS first, and it happen to exists, a name collision occurs.

Since early 2013 efforts had been focused on mitigating the name collision risks for the 2012 round of new gTLDs. Studies have been published, several discussions in different fora had taken place, preliminary measures were defined by the New gTLD Collision Occurrence Management Plan [5] before the first delegations in October 2013, and additional measures for new gTLDs were established on 30 July 2014 with the adoption of the Name Collision Occurrence Management Framework [13].

POTENTIAL GNSO POLICY WORK

From the start the name collision mitigation efforts have been concentrated on the 2012 round of new gTLDs. The measures implemented do not cover gTLDs delegated before the 2012 round (name collisions also happen under long-delegated gTLDs) or that could be introduced in future rounds of new gTLDs. Also, most of the measures established for 2012-round gTLDs cease two years after the delegation of the gTLD.

In the development of the Name Collision Occurrence Management Framework, ICANN contracted JAS Global Advisors to study the then remaining issues for 2012-round gTLDs and propose mitigation measures. In their final report [11], among other things, JAS recommended to "*further explore issues relating to collisions in existing DNS namespace, the practice of "domain drop catching," and the associated data feeds that may be leveraged by attackers when attempting to exploit collisions.*"

On 21 November 2013, the ICANN Board directed the ICANN President and CEO to develop a long-term plan to manage name collision at the root [9]. While working on this and given the aforementioned considerations, it was realized that the best approach to a long-term plan might be through policy work.

Finally, on the 30 July 2014 resolution [12] the New gTLD Program Committee of the ICANN Board directed staff to "*provide information to, and work with the GNSO to consider whether policy work on developing a long-term plan to manage gTLD name collision issues should be undertaken.*"

Given the aforementioned factors, the GNSO Council may want to consider, amongst others, the following questions in deciding whether there is need for work towards a comprehensive policy to manage the risks of name collisions in gTLDs:

- What measures, if any, should be taken to manage the name collision risks for future rounds of new gTLDs?
- What additional measures, if any, should be taken to manage the name collision risks for 2012-round gTLDs beyond their 2-year anniversary of delegation?
- What measures, if any, should be taken to manage the name collision risks for gTLDs delegated before the 2012 round?
- Should there be any safeguards regarding the practice of "domain drop catching" and similar services in gTLDs?
- Is any further data needed on the effectiveness of the current mitigation measures or other aspects of name collision before policy development could start?
- If there is policy work, should SSAC be invited to provide its advice given the nature of the issues?
- Is policy development the best approach to develop such measures and/or safeguards, or are there other methods by which this work could be undertaken (i.e., is the outcome expected to result in consensus policy recommendations which would require a policy development process)?

ICANN's mission and core values call to preserve and enhance the operational stability, reliability, security, and global interoperability of the Internet's system of unique identifiers (names, IP numbers and protocol parameters). ICANN is fully committed to the management and delegation of gTLDs in accordance with its mission and core values. ICANN appreciates GNSO consideration of these issues and stands ready to collaborate in further work.

REFERENCES

[1] ICANN's Security and Stability Advisory Committee, *SAC 057: SSAC Advisory on Internal Name Certificates*, 15 March 2013, <https://www.icann.org/en/groups/ssac/documents/sac-057-en.pdf>.

[2] Internet Corporation for Assigned Names and Numbers, *Board resolution directing a study on Name Collisions in the DNS as a follow up to SAC 057*, 18 May 2013, <https://www.icann.org/resources/board-material/resolutions-2013-05-18-en#2.a>.

[3] Interisle Consulting Group, *Name Collision in the DNS*, 02 August 2013, <https://www.icann.org/en/about/staff/security/ssr/name-collision-02aug13-en.pdf>.

[4] Internet Corporation for Assigned Names and Numbers, *Board New gTLD Program Committee's resolution adopting the New gTLD Collision Occurrence Management Plan*, 07 October 2013, <https://www.icann.org/resources/board-material/resolutions-new-gtld-2013-10-07-en>.

[5] Internet Corporation for Assigned Names and Numbers, *New gTLD Collision Occurrence Management Plan*, 07 October 2013, <http://www.icann.org/en/groups/board/documents/resolutions-new-gtld-annex-1-07oct13-en.pdf>.

[6] ICANN's Security and Stability Advisory Committee, *SAC 062: SSAC Advisory Concerning the Mitigation of Name Collision Risk*, 07 November 2013, <https://www.icann.org/en/groups/ssac/documents/sac-062-en.pdf>.

[7] Internet Corporation for Assigned Names and Numbers, *Board resolution directing ICANN to develop a long-term plan to manage name collision at the root*, 21 November 2013, <https://www.icann.org/resources/board-material/resolutions-2013-11-21-en#2.d>.

[8] ICANN's Security and Stability Advisory Committee, *SAC 064: SSAC Advisory on Search List Processing*, 13 February 2014, <https://www.icann.org/en/groups/ssac/documents/sac-064-en.pdf>.

[9] Internet Corporation for Assigned Names and Numbers, *Board resolution adopting SAC 062 recommendations*, 27 March 2014, <https://www.icann.org/resources/board-material/resolutions-2014-03-27-en#1.d>.

[10] ICANN's Security and Stability Advisory Committee, *SAC 066: SSAC Comment Concerning JAS Phase One Report on Mitigating the Risk of DNS Namespace Collisions*, 06 June 2014, <https://www.icann.org/en/system/files/files/sac-066-en.pdf>.

[11] JAS Global Advisors, *Mitigating the Risk of DNS Namespace Collisions Phase One*, 10 June 2014, <https://www.icann.org/en/system/files/files/name-collision-mitigation-study-06jun14-en.pdf>.

[12] Internet Corporation for Assigned Names and Numbers, *Board New gTLD Program Committee's resolution adopting the Name Collision Occurrence Management Framework*, 30 July 2014, <https://www.icann.org/resources/board-material/resolutions-new-gtld-2014-07-30-en#1.a>.

[13] Internet Corporation for Assigned Names and Numbers, *Name Collision Occurrence Management Framework*, 30 July 2014, <https://www.icann.org/en/system/files/files/name-collision-framework-30jul14-en.pdf>.