

Considerations for the Application of Han Script Single Character IDN Generic Top-Level Domains

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1. Background and Concerns

Single character Internationalized Domain Names (IDNs) as top-level domains (TLDs) were considered by the Joint ccNSO-GNSO IDN Working Group (JIG) in the [JIG Final Report on Single Character IDN TLDs](#), published in March 2011. The JIG suggested moving forward with the implementation of single character IDN TLDs while addressing relevant technical, linguistic, and policy matters. The ICANN Board [resolved](#) to conduct further work on this topic in August of 2011, as all of the technical and policy considerations (including those raised by the JIG) must be addressed prior to the delegation of any single-character IDN TLDs.

The Security and Stability Advisory Committee (SSAC) looked into the matter further and published the [SSAC Advisory on Delegation of Single-Character Internationalized Domain Name Top-Level Domains \(SAC052\)](#) in January 2012. SSAC wrote that “Single-character TLDs are more likely to cause user confusion than TLDs with more than one character,” and “No other significant security concerns are apparent with the delegation of single-character TLDs.” The SSAC also noted that there was additional ongoing work on string similarity and variant issues, which should be able to inform this discussion.

Therefore, the SSAC recommended “a very conservative approach to the delegation of single-character IDN top-level domains” adding that delegation of all single-character IDN TLDs in all scripts should be disallowed by default. Exceptions may be made for some scripts, but only after careful consideration of potential confusability both within and across scripts, after consulting the technical and linguistic community. The SSAC suggested that this matter be taken up after the work on string similarity and variant issues has been completed.

2. Work by the Community

Following these discussions, the ICANN community took up a detailed analysis of code points and their variants for TLDs following the [Procedure to Develop and Maintain the Label Generation Rules for the Root Zone in Respect of IDNA Labels](#) (the RZ-LGR Procedure). Clear cases of visual similarity of code points was also considered within the scope of variant code point analysis. It is noted in Section A.3.3. of the RZ-LGR Procedure that “Even for variants based on visual similarity, there exists a subset of evaluation rules that could be applied in an automated manner, obviating the need for further case-by-case or even contextual review. The LGR process as drafted would allow such rules, but only within the bounds established for the types of evaluation rules permissible under this process.”

The work resulted in the publication of the [Root Zone Label Generation Rules](#) (RZ-LGR). RZ-LGR was developed from the work done by the different script-based Generation Panels and Integration Panel consisting of experts in the Domain Name System (DNS), IDNs, linguistics, and Unicode. RZ-LGR proposals for each script went through multiple Public Comment periods to gather input from the broader ICANN community. Among other aspects, RZ-LGR identified “same” code points as variants, including those which are visually the “same” or indistinguishable. Detailed considerations for each script are explained by the panels in their [supporting documents](#).

3. Policy Development for Supporting Single Character IDN gTLDs by the GNSO

Based on the work done by the linguistic and technical community, the Generic Names Supporting Organization’s Policy Development Process Working Group (SubPro PDP working group) included a recommendation on single character gTLDs in the [Final Report on the new gTLD Subsequent Procedures Policy Development Process](#). The SubPro PDP working group recommended in Recommendation 25.4 that “Single character gTLDs may be allowed for limited script/language combinations where a character is an ideograph (or ideogram) and do not introduce confusion risks that rise above commonplace similarities, consistent with SSAC and Joint ccNSO-GNSO IDN Workgroup (JIG) reports.”

The GNSO’s [Phase 1 Final Report on the Internationalized Domain Names Expedited Policy Development Process](#) (IDN EPDP Phase 1) also addressed single character gTLDs. IDN EPDP

Phase 1 Final Recommendation 3.17 elaborated that “the only script that meets the criteria is the Han script, which is used in the Chinese, Japanese, and Korean languages. Nevertheless, applications for single-character gTLDs that are ideographs must not be accepted until relevant guidelines from the Chinese, Japanese, and Korean Script Generation Panels are developed, finalized after Public Comment, and implemented in the New gTLD Program.”

The IDN EPDP Phase 1 working group further recommended in its report that “In the event that the Generation Panels determine such additional guidelines beyond the analysis already provided in the RZ-LGR unnecessary, applications for single-character gTLDs in the Han script shall be accepted.”

The ICANN Board [adopted](#) the single-character TLD-related recommendation of the IDN EPDP Phase 1 in June 2024.

4. Subsequent Review by Chinese, Japanese and Korean Script Generation Panels

ICANN org reached out to the Chinese, Japanese, and Korean Script Generation Panels to seek their guidance on single character IDN gTLD applications in the Han script. Chinese, Japanese, and Korean Script Generation Panels initiated the discussion in March 2023. They consulted within each script community, and the three panel chairs and some members also met together online in addition to discussions at ICANN76 and ICANN77.

Based on these discussions, the Chinese, Japanese, and Korean Script Generation Panels agreed that the work already conducted to identify the code points and their variant code points in RZ-LGR sufficiently addresses the technical and linguistic concerns around string similarity for single character IDN TLDs identified in the JIG and SSAC reports.

The following are statements issued by the Chinese, Japanese, and Korean Script Generation Panels.

Chinese Script Generation Panel Statement on the Single Character IDN TLD Implementation

The Chinese Generation Panel (CGP), which was tasked by ICANN to develop a conservative and workable Chinese script table used for the Root Zone Label Generation Ruleset. The CGP concluded its work by presenting ICANN a “Proposal for a Chinese Scripts Root Zone LGR” in 2020.

In March 2023, the much-anticipated “Final Report on the new gTLD Subsequent Procedures Policy Development Process” was adopted by ICANN board, In the final report recommended

the following:

Recommendation 25.4: Single character gTLDs may be allowed for limited script/language combinations where a character is an ideograph (or ideogram) and do not introduce confusion risks that rise above commonplace similarities, consistent with SSAC and Joint ccNSO-GNSO IDN Workgroup (JIG) reports.

Recommendation 25.5: IDN gTLDs identified as variant TLDs of already existing or applied for gTLDs will be allowed only if labels are allocated to the same entity and, when delegated, only if they have the same back-end registry service provider. This policy must be captured in relevant Registry Agreements.

These recommendations mark the culmination of years of collaborative efforts by the language community.

The single character TLD was forbidden in the 2012 new gTLD round, and SAC052, published in 2012, explicitly suggested against the delegation of single character TLD if concerns were not properly addressed. Subsequent efforts, including the language Generation Panel and the formation of root zone label generation rules were aiming to tackle the concerns.

The Chinese community has expressed in various occasions for single Chinese character TLD ever since the 2012 new gTLD round. From the perspective of the CGP, it's taken CGP, plus the community, a good six years to formulate the "Proposal for a Chinese Scripts Root Zone LGR", with the aim, among others, to provide necessary guideline for the application and delegation of single character as well as multiple characters Chinese TLDs in the subsequent application rounds.

Specifically, in section 8 "Assigning Dispositions to Variant Labels" of the "Proposal for a Chinese Scripts Root Zone LGR", it is suggested that ICANN to delegate all simplified, all traditional and original applied-for labels, while blocking redundant all-simplified or all traditional labels, and blocking or allocating visual similar labels as per the Proposal. Given that any Chinese character is an independent semantic unit, CGP did not distinguish the difference between the single character and multiple characters Chinese strings, namely, the existing LGR could apply to single character Chinese TLD without modifying the CGP rule set.

Overall, CGP reckons that the "Final Report on the new gTLD Subsequent Procedures Policy Development Process", as well as the "Proposal for a Chinese Scripts Root Zone LGR", are suffice to address any lingering concerns surrounding the application and delegation of Chinese single character TLD in the upcoming sub pro round, thus no need to provide any additional rules for IDN EPDP WG for that matter.

Japanese Script Generation Panel Statement on the Single Character TLD Implementation

The current text of draft statement [by CGP] is in line with the basic thought kept by Japanese Generation Panel (JGP) and the Japanese community during the Japanese Root Zone LGR (J-LGR) development, i.e., differentiation between single-character TLDs and multiple-character TLDs was not considered necessary and the current J-LGR is applicable also to single character TLDs.

Korean Script Generation Panel Statement on the Single Character TLD Implementation

Korean Generation Panel (KGP) is of the position that 'There is no need to have additional guidelines on top of RZ-LGR'

5. Next Steps

Based on the inputs from the Chinese, Japanese, and Korean Script Generation Panels, no further analysis is required. So, ICANN org is able to move forward with implementing the policy recommendations regarding the single character IDN gTLDs in the Han script. Any confusion that may arise from a specific single character gTLD string will be reviewed during the string similarity review conducted by the String Similarity Review Panel. This will be part of the regular gTLD string review in the application process.