Guidelines for Developing Reference Label Generation Rules (LGRs) for the Second Level Version 2

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<td>Sarmad Hussain <a href="mailto:sarmad.hussain@icann.org">sarmad.hussain@icann.org</a></td>
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**Brief Overview**

**Purpose:** Detailed analyses of multiple scripts have been completed for the Root Zone Label Generation Rules (RZ-LGR) by the relevant communities. These analyses can now be used for creating reference second-level Label Generation Rules (LGRs) for these scripts. Therefore, the Guidelines for Developing Reference LGRs for the Second Level are being updated to also include details of how to design script-based reference LGRs in addition to language-based reference LGRs. These guidelines are published for community feedback on the proposed methodology.

**Current Status:** ICANN org had published reference second-level LGRs for multiple languages to facilitate the security and stability of Internationalized Domain Name (IDN) operations of generic Top Level Domain (gTLD) registries and improve transparency and consistency of testing IDN tables. The existing guidelines used for these reference IDN tables focus on developing language-based references LGRs.

**Next Steps:** Based on these guidelines, which will be finalized after incorporating the input from the community, ICANN org will continue to develop the IDN tables for additional languages and scripts and post these for public comment.

**Your Comment:** Your submission, including responses to questions and your name, will be published in the Public Comment archive on ICANN org’s website. If you have any questions regarding Public Comment, please contact public-comment@icann.org.

**Section I: Description and Explanation**

The gTLD registries offering IDNs registrations are required to submit IDN tables for review by ICANN org. ICANN org reviews these IDN tables to facilitate security and stability of IDN operations of gTLDs registries. In order to improve transparency and consistency of testing IDN tables, ICANN org had developed reference IDN tables for the second level for many languages in LGR format. This initial set of reference LGRs was developed using guidelines specific for designing language-based LGRs.

These guidelines need to be extended to develop script-based reference LGRs for the second level. The process is based on the recent work by both the technical community and the community using the relevant script. The technical community has provided input, including Internet Engineering Task Force (IETF) Request for Comments (RFCs) such as RFC6912, RFC7940, RFC8228, etc. and Security and Stability Advisory Committee (SSAC) documents, such as SAC052, SAC060, SAC089, and SAC095.

Script communities have done detailed analysis and finalized solutions for the Root Zone Label Generation Rules (RZ-LGR) for Arabic, Armenian, Bangla, Chinese, Cyrillic, Devanagari, Ethiopic, Georgian, Gujarati, Gurmukhi, Hebrew, Kannada, Khmer, Lao, Malayalam, Oriya, Sinhala, Tamil, Telugu, and Thai scripts. Work continues on other scripts.

**Section II: Background**

The registries are generally encouraged to collaborate in defining common language-based or script-based tables to allow for consistency for end users and address any security and stability concerns. There are multiple formats to submit IDN tables. The IDN tables used by each gTLD and some ccTLDs are posted at the IANA Repository for IDN Practices.

**Section III: Relevant Resources**

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The IANA Repository for IDN Practices: [https://www.iana.org/domains/idn-tables](https://www.iana.org/domains/idn-tables)


**Section V: Reports**

**FINAL VERSION SUBMITTED (IF RATIFIED)**

The final version to be submitted, if the draft is ratified, will be placed here by upon completion of the vote.

**FINAL DRAFT VERSION TO BE VOTED UPON BY THE ALAC**
The final draft version to be voted upon by the ALAC will be placed here before the vote is to begin.

DRAFT SUBMITTED FOR DISCUSSION

The first draft submitted will be placed here before the call for comments begins. The Draft should be preceded by the name of the person submitting the draft and the date/time. If, during the discussion, the draft is revised, the older version(s) should be left in place and the new version along with a header line identifying the drafter and date/time should be placed above the older version(s), separated by a Horizontal Rule (available + Insert More Content control).