At-Large Label Generation Ruleset for the Root Zone Version 1 (LGR-1) Workspace

Comment Close Date	Statement Name	Status	Assignee (s)	Call for Comments Open	Call for Comments Close	Vote Open	Vote Close	Date of Submission	Staff Contact and Email	Statement Number
27 Jan 2016	Label Generation Ruleset for the Root Zone Version 1 (LGR-1)	No Statement	n/a	n/a	n/a	n/a	n/a	n/a	Sarmad Hussain sarmad.hussain@icann.org	n/a

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- Comments Forum

Brief Overview

Purpose: The Integration Panel (IP) has successfully evaluated the finalized Proposal for Arabic script Root Zone Label Generation Rules (LGR) submitted by the Arabic Script Generation Panel (GP), following the release of the proposal for public comments. The IP has integrated this proposal by the Arabic script GP into the first version of the Root Zone LGR (LGR-1 [PDF, 786 KB]). As per the Procedure to Develop and Maintain the Label Generation Rules for the Root Zone in Respect of IDNA Labels [PDF, 1.39 MB], LGR-1 is being released for public comments before finalization.

Current Status: Starting with the Maximal Starting Repertoire version 2 (MSR-2) and following the release for public comments of the proposals for the Arabic script and the Armenian script Root Zone LGR, finalized proposals have been submitted for the Arabic script and the Armenian script by their respective GPs. Following the guidelines and principles given in the Procedure to Develop and Maintain the Label Generation Rules for the Root Zone in Respect of IDNA Labels[PDF, 1.39 MB], the Integration Panel (IP) has deferred the evaluation of the Armenian proposal. The IP has successfully evaluated the proposal for the Arabic script and integrated it in LGR-1 (see details in *Section III: Document and Resource Links* below).

Next Steps: The IP will review the public comments received and finalize the first version of Label Generation Rules for the Root Zone (LGR-1 [PDF, 786 KB]). The LGR is intended to mechanically evaluate a label for its validity and also to determine its variants, for stable and secure operation of the Internet's Root Zone.

As the LGR proposals from the additional script GPs are received, these proposals will also be evaluated and integrated into future versions of the Root Zone LGR by the IP. Therefore, theRoot Zone LGR is anticipated to incrementally grow to support all the scripts identified in theMSR.

Section I: Description, Explanation, and Purpose

The Label Generation Ruleset for the Root Zone, the first version of which is being released for public comment, defines the mechanism to mechanically determine valid IDN TLDs and their variants. LGR-1 [PDF, 786 KB] is developed following the Procedure to Develop and Maintain the Label Generation Rules for the Root Zone in Respect of IDNA Labels [PDF, 1.39 MB], and is designed to be the first installment of a Root Zone LGR that meets the requirement for a conservative set of label generation rules for stable and secure operation of the Internet's Root Zone.

This first version of the LGR contains code points and variants for the Arabic script, to be followed by future versions that will add additional scripts as they become available. It is necessary to ensure that these future additions are upwardly compatible. As the Armenian proposal has an interaction with the LGRs for several other scripts that are being developed, it was deemed prudent to delay its integration until the effect of these interactions on the affected scripts is better understood.

Once each version the Root Zone LGR is finalized, it is intended to be applied mechanically as part of the registration process for TLDs to determine the validity of the applied-for label and the maximal set of allocable variant labels. Further mechanisms need to be developed to determine which of the allocable variants from this maximal set will actually be allocated to the applicants.

Section II: Background

The Root Zone LGR development procedure requires three steps. Initially, the IP creates the MSR for GPs to initiate their work. Based on the latest version of the MSR the community based Generation Panels should organize for the different scripts or writing systems and develop proposals for the Root Zone LGR for their respective scripts or writing systems. After public comments, these proposals are submitted to the IP for evaluation. Finally, the successfully evaluated proposals are integrated into the Root Zone LGR.

In the LGR Procedure [PDF, 1.39 MB] it is stated that the IP creates a set of recommended label generation rules that includes the union of all the approved proposals from the GPs. When the IPhas created such a set, it is posted for public comment using the prevailing ICANN procedures. At the end of the public comment period, the IP receives and reviews the public comments. The resulting label generation rules become the new LGR for the Root Zone.

Successful development of LGR depends on having community based GP for each script or writing system. A GP develops a LGR proposal to be used to generate valid TLD labels and their variant labels for the relevant script or writing system. Each proposal contains the valid code points, their variants and Whole Label Evaluation (WLE) rules. In doing so, the GP may need to coordinate efforts with other GPs, whenever their respective scripts are closely related. Each proposal is reviewed by the community through public comment process before submission to the IP for further consideration. The details are defined in Procedure to Develop and Maintain the Label Generation Rules for the Root Zone in Respect of IDNA Labels [PDF, 1.39 MB].

Section III: Relevant Resources
Following documents are being released as part of the LGR-1 package:

- LGR-1 Root Zone Label Generation Rules — Overview and Summary (PDF):https://www.icann.org/sites/default/files/lgr/lgr-1-overview-01dec15-en.pdf [PDF, 786 KB]
- LGR-1 Code Table (PDF): https://www.icann.org/sites/default/files/lgr/lgr-1-non-cjk-01dec15-en.pdf [PDF, 638 KB]
- LGR-1-Merged-LGR-Common (HTML): https://www.icann.org/sites/default/files/lgr/lgr-1-common-01dec15-en.html
- LGR-1-Merged-LGR-Common (XML): https://www.icann.org/sites/default/files/lgr/lgr-1-common-01dec15-en.xml [XML, 33 KB]
- LGR-1-Element-LGR-ArabicScript (HTML): https://www.icann.org/sites/default/files/lgr/lgr-1-arabic-script-01dec15-en.html
- LGR-1-Element-LGR-ArabicScript (XML): https://www.icann.org/sites/default/files/lgr/lgr-1-arabic-script-01dec15-en.xml [XML, 39 KB]

Section IV: Additional Information

- Finalized Proposals for Root Zone Label Generation Ruleset (LGR) by the Generation Panels: https://www.icann.org/resources/pages/lgr-proposals-2015-12-01-en
- Public Comment for the initial Proposal for the Arabic Script Root Zone LGR:https://www.icann.org/public-comments/arabic-lgr-proposal-2015-08-24-en
- Public Comment for the initial Proposal for the Armenian Script Root Zone LGR:https://www.icann.org/public-comments/proposal-armenian-lgr-2015-07-22-en
- Maximal Starting Repertoire Version 2: https://www.icann.org/resources/pages/msr-2015-06-21-en
- Call for Generation Panels: Call for Generation Panels to develop Root Zone Label Generation Rules [PDF, 149 KB]
- LGR Procedure: Procedure to Develop and Maintain the Label Generation Rules for theRoot Zone in Respect of IDNA Labels [PDF, 1.39 MB]

Section V: Reports

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FINAL VERSION TO BE 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.

FIRST DRAFT SUBMITTED

The first draft submitted will be placed here before the call for comments begins.