

Study on Technical Use of Root Zone Label Generation Rules

Publication Date: 15 August 2019

Prepared By: RZ-LGR Study Group

Public Comment Proceeding

| | |
|------------------------|----------------|
| Open Date: | 15 May 2019 |
| Close Date: | 19 July 2019 |
| Staff Report Due Date: | 15 August 2019 |

Important Information Links

| |
|---|
| Announcement |
| Public Comment Proceeding |
| View Comments Submitted |

Staff Contact: Sarmad Hussain

Email: sarmad.hussain@icann.org

Section I: General Overview and Next Steps

Third version of the Root Zone Label Generation Rules (RZ-LGR-3) was [released](#) on 10 July 2019, integrating 16 script proposals out of the 28 scripts identified. As the RZ-LGR is being incrementally developed by the community, the Root Zone Label Generation Rules Study Group (RZ-LGR-SG) was constituted on the request of the ICANN Board to study technical considerations for utilizing the RZ-LGR to determine valid top-level domains (TLDs) and their variant labels in a harmonized manner.

The RZ-LGR-SG has released the [Recommendations for the Technical Utilization of the Root Zone Label Generation Rules](#) to seek feedback from the community. Based on the feedback, the RZ-LGR-SG will take into account the community input to finalize the recommendations. The final recommendations will be presented to the ICANN Board for further consideration.

Section II: Contributors

At the time this report was prepared, a total of three (3) community submissions had been posted to the forum. The contributors are listed below in chronological order by posting date with initials noted. To the extent that quotations are used in the foregoing narrative (Section III), such citations will reference the contributor's initials.

Organizations and Groups:

| Name | Submitted by | Initials |
|------------------------------|--------------------|----------|
| Integration Panel | Asmus Freytag | IP |
| Registries Stakeholder Group | Samantha Demetriou | RySG |

Individuals:

| Name | Affiliation (if provided) | Initials |
|---------------|---------------------------|----------|
| Marc Blanchet | | MB |

Section III: Summary of Comments

***General Disclaimer:** This section intends to summarize broadly and comprehensively the comments submitted to this public comment proceeding but does not address every specific position stated by each contributor. The preparer recommends that readers interested in specific aspects of any of the summarized comments, or the full context of others, refer directly to the specific contributions at the link referenced above (View Comments Submitted).*

IP makes following comments:

IP1. IP comments on recommendation 3.2 that to their knowledge, self-identified variants are not being delegated. Therefore, self-identified variants should not be taken into account, the RZ-LGR should be the only normative source of variants. If such a self-identified label happens to have variant status under the RZ-LGR, it should be processed as any other variant label would.

SG Response. The heading and the text of recommendation 3.2 will be revised to clarify that the RZ-LGR, if adopted, should be the single source to validate a TLD string and calculate its variant as well as its disposition.

IP2. The IP comments on recommendation 4 that it appears to focus only on adding code points while the future RZ-LGR may also include relaxing a context rule which could make some labels valid. IP agrees with the recommendation 4.2. However, the IP suggests the alternate text to restructure section 4 to cover (1) policy or procedure must not override the results of the RZ-LGR, (2) the applied-for label may be re-validated when a new RZ-LGR version becomes available, and (3) submitted labels are required to be in normalized NFC.

SG Response. The text in recommendation 4 will be restructured, based on the suggestion.

IP3. The IP agrees with recommendation 5 Option A, but strongly disagree with Option B. Option B must not be considered because the study of scripts repertoire and variants can be very complex and the cross-script interaction is also the key of the assessment. Option B is in some ways bypassing the whole process of the procedure and may introduce labels that will be incompatible with the future script LGR.

SG Response. This comment in inline with the SG's principles. However, option B may be moved to an appendix instead of deleting it, to capture the analysis done by the SG.

IP4. The IP comments on recommendation 6 that the number of delegated variants remains a very significant potential problem that should be undertaken. There should be a community-agreed recommended number to prevent a large number of variants, which will imply too many security issues.

SG Response. The number of variant labels depends on policy which is out of SG's scope. However, some community practices are in place for the the second level, for example, Chinese registry allow only three variants: all traditional chinese, all simplified chinese, and the applied-for label. SG will consider providing some technical input for policy development to consider, if possible.

IP5. IP comments that in multiple places the RZ-LGR is addressed as a single XML file. It should be addressed that he RZ-LGR consists of multiple XML files, or is an XML files set.

SG Response. The SG agrees to edit the language to imply that RZ-LGR is not a single XML file.

IP6. The IP points out that a reference to footnote [10] is misplaced. It should be placed after the "...as a tool for community service^[10]".

SG Response. The foot note at the end of the paragraph will be adjusted as suggested.

IP7. The IP comments on recommendation 11 that the LGR Procedure does not ask the RZ-LGR to be backward compatible with existing TLDs. However, it does say that if some delegated TLDs are not valid under the LGR when published, then they should be grandfathered. The IP, the GPs and the community have been active in verifying these and should continue to do so. The recommendation should be amended to reflect this.

SG Response. The text will be revised to include that backward compatibility was drawn from recommendation 6 in SAC 060, and because the removal of delegated TLD can have significant impact. Therefore the LGR should be backward compatible as much as possible. And it must be noted explicitly where it is not, so that the grandfathering requirement is made known to community during public comment.

RySG makes the following comments:

RySG1. RySG comments on the intended use of the RZ-LGR. It states that RZ-LGR is for the root and it should not be used for higher levels (e.g. second level) of the DNS without proper consideration. The RySG is supportive of and agrees with SSAC's assertion on this matter; per SAC060 (recommendation 3) "the root zone is a special case and the approach taken to variant management in the root need not prescribe the approach taken by individual TLD registries".

Furthermore "the SSAC asserts that TLD registry operators should not have an automatic obligation to abide by all the same variant tables and policies used at the root level of the DNS and ICANN should first and foremost concentrate on the rules for the root zone".

SG Response. SG acknowledges RySG comment and notes that the comment is aligned with the SG work, as SG is only focused on root zone and is not discussing higher level zones.

RySG2. RySG recommends on recommendation 3.1, assertion "Any such variations (i.e. synchronized TLDs) should be considered for alignment with RZ-LGR" that this issue should be deferred to the IDN Variant TLD Management process since the RZ-LGR merely declares two or more labels as variants, but the RZ-LGR does not (and should not) assume a variant management mechanism.

SG Response. SG will revise the text to clarify that the intention of the SG is not to develop a policy. However, some relevant technical suggestion e.g. grand-fathering may be considered as a recommendation, following further internal discussion by SG.

RySG3. RySG supports recommendation 5 option A; the use of RZ-LGR as the authoritative source to algorithmically validate a top-level domain label and to calculate its variant labels.

SG Response. This also agrees with the input by IP. SG will take up this option and will consider moving option B to appendix, to keep the analysis it has done for information.

MB makes the following comments:

MB1. Section 3.2: to his knowledge, self-identified variants are not being delegated. Therefore, they should not be taken into account. Instead, the RZ-LGR should be the only normative source of variants.

SG Response. Please see the response to IP1.

MB2. Section 4.1: in this context, IDNA2008 is not enough precise. IDNA2008 provides rules that are applied to Unicode properties. Therefore the assessment of if a code point is DISALLOWED or UNASSIGNED depends on which Unicode version it is applied. MB suggests modification of text to be « *An applied-for label containing any DISALLOWED or UNASSIGNED code point(s) per IDNA 2008 applied to the most recent supported Unicode version, at the time of the verification, or its successors, must not proceed.* »

SG Response. The SG will update the text to include the consideration of the latest supporting Unicode version.

MB3. Section 5: MB strongly disagree with option B Option B must not be considered because the study of scripts repertoire and variants can be very complex and the cross-script interaction is also the key of the assessment. Option B is in some ways bypassing the whole process of the procedure and may introduce labels that will be incompatible with the future script LGR.

SG Response. Please see the response to IP3.

MB4. Section 6: the number of delegated variants remains a very significant potential problem that should be undertaken. If no recommendation about this issue is agreed with the community, then we may end up later with applicants asking for a large number of variants, which will have way too many implications in security, in deployment, in software, etc. .

SG Response. Please see the response to IP4.

MB5. Multiple sections: it should be noted that the RZ-LGR consists of multiple XML files, or is an XML files set. Current writing in many places imply a single XML file.

SG Response. Please see the response to IP5.

MB6. Section 10: MB points out that a reference is misplaced and the IP suggests the modification.

SG Response. Please see the response to IP6.

Section IV: Analysis of Comments

General Disclaimer: This section intends to provide an analysis and evaluation of the comments submitted along with explanations regarding the basis for any recommendations provided within the analysis.

Analysis is interleaved in the section above in [blue](#).