

Registries Stakeholder Group Statement



Universal Acceptance Roadmap for Domain Name Registry and Registrar Systems

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Reference url: <https://www.icann.org/en/public-comment/proceeding/universal-acceptance-roadmap-for-domain-name-registry-and-registrar-systems-31-08-2022> .

Background¹

The [Universal Acceptance \(UA\) Roadmap for Domain Name Registry and Registrar Systems](#) proposes how to test these systems for UA-readiness, based on the [Universal Acceptance Readiness Framework](#).

Two registry systems and one registrar system are tested and the results are reported in appendices. The study is published for review and feedback by the relevant technical community.

The UA roadmap will be finalized based on the input received and published for reference of domain name registries and registrars. The roadmap will be shared with relevant stakeholders to encourage them to become UA-ready.

Documents

- [Universal Acceptance \(UA\) Roadmap for Domain Name Registry and Registrar Systems](#)
- [Appendix A - Registry Testing](#)
- [Appendix B - Registrar Testing](#)

Registries Stakeholder Group comment*

Overall

The Registries Stakeholder Group (RySG) appreciates the opportunity to comment on the Universal Acceptance (UA) Roadmap for Domain Name Registry and Registrar Systems (the “Roadmap”). RySG experts who contributed to this comment recognize the amount of work by ICANN Staff and the consultants involved in developing this Roadmap and in executing the testing effort. We would like to give special mention to the compiled list of test data that is available as a starting point for registries and registrars as they undertake to confirm their own UA readiness.²

¹ Background: intended to give a brief context for the comment and to highlight what is most relevant for RO's in the subject document – it is not a summary of the subject document.

² The following two documents are the test cases for UA readiness evaluation:
<https://uasg.tech/download/uasg-004-use-cases-for-ua-readiness-evaluation-en/> and
<https://uasg.tech/download/uasg-004a-use-cases-for-ua-readiness-evaluation-data-en/>.

Indeed, perhaps the key overall comment we offer about this effort is that while the consultants involved in the development are highly regarded and deeply respected by their peers in the technical community, we believe that it represents a missed opportunity for deeper collaboration between ICANN Staff and the Contracted Party House (CPH) technical experts and the overall effort would have benefited from earlier consultation with a broader cross-section of CPH technologists, especially with regards to reviewing the illustrative registry and registrar architectures that were used to produce this roadmap.

The items that follow are sequenced by the order of appearance in the Roadmap document, not (at all) by importance.

As we understand that some readers may have limited time for review, the items that the RySG would identify as the most important are those in:

- Item 2: Unsupported scope expansion to corporate web and email
- Item 4: Assumption of interactions between Registry and Registrant
- Item 5: Scope extends to internal registry interfaces.

Section 1. Executive Summary

Item 1: Text engages in mild over-reach related to ccTLDs

Paragraph two of the Executive Summary includes:

“This study applies to both generic top-level domain (gTLD) and country code top-level domain (ccTLD) registry and registrar systems”

As this is an ICANN publication and ccTLDs have their own rules, ICANN likely should be more sensitive to this consideration.

Suggested text:

“This work applies to generic top-level domain registry and registrar systems, and may be applicable to certain country code top-level domains (ccTLDs).”

We note that Section 2 strikes a similar tone in the penultimate paragraph. So this edit would bring the Section 1 text into alignment.

Section 2: Introduction and Scope

Item 2: Unsupported scope expansion to corporate web and email

While we appreciate that the USAG [Universal Acceptance Readiness Framework](#) provides a general framework to assess UA readiness for software applications, etc. this effort is applicable to registry and registrar systems operating within ICANN’s scope. Therefore, the RySG does not believe that, for example, systems in Figure 1, fall within the scope of this Roadmap.

Section 5 contains text related to G12 and G13, corporate email and corporate web, respective. These gates are listed in Table 1 (page 7) and described on page 9:

“G12 and G13 are generic and include a variety of applications and systems, such as customer relationship management, communications, ticketing. These should be investigated the same way as proposed in this report, such as identifying gates and testing UA-readiness”

For registry operators, these systems do not have defined interactions in Figure 1 and we do not understand having them in scope for UA readiness when they are not necessarily critical to the function of the registry for end users or registrants. However, as we acknowledge under Item 3, some registry operators may use G12 and G13 for interactions such as required sign-up, registrant eligibility assessment, purchase etc, but such interactions vary depending on the operating model of the TLD.

Therefore, G12 and G13 should be optional unless G12 and G13 are utilised by the registry. This also impacts Table 1 on page 7.

In addition, the inclusion of registry backend systems in testing for EAI handling should be optional, depending on a registry's use of such functionality. That is, if a registry does not handle email addresses or send emails, the registry backend should not be subject to EAI testing.

This should also be reflected in Table 1, page 7, related to G14, with G14 being labeled as "optional" or "depending on functionality".

Item 3: Unidentified/missing reference

First sentence of Section 2 includes the reference "[UASG-TECH]" which does not appear in the references section. If this refers to "[UASG]", which refers to <https://uasg.tech>, then our comment would be altered to indicate that the URL lacks specificity.

It seems like this reference would be more accurate as "[UASG026]" because the Introduction of that document contains this definition of UA, stated very clearly.

As a related editorial point, the URL "https://uasg.tech" appears textually in the last sentence of Section 7.3; perhaps this should similarly be updated to refer to [UASG-TECH].

Section 3: High-Level Domain Name Registry and Registrar System Architectures

Issue: Language introduces ambiguity regarding implementation flexibility

The caption of Figure 1 uses the definite article "the" (as in: "Figure 1 illustrates the domain name registry high level system.") And prior to Figure 1, paragraph 1 of Section 3 includes the sentence: "Implementations may vary from this architecture".

Together these words could imply some standing for the documented architecture, when it is actually simply "a" domain name registry high-level system architecture. And the Roadmap has no standing to describe architectural requirements or suggestions for an architecture, in which it would "allow" an implementation to "vary from this architecture".

Suggested text: In the Figure 1 caption, replace "the" with "an example". Replace the sentence: "Implementations may vary from this architecture" with "Implementations can reasonably be expected to vary from this architecture".

Item 4: Assumption of interactions between Registry and Registrant

The Roadmap contains assumptions about communication interactions between the Registry and the Registrant that, while *permitted* by ICANN policy are not *required* by ICANN policy. For example, Figure 1 (page 3) shows an email link (marked "G14") between the (registry) "backend" and the registrant. The text that corresponds to this is near the top of page 4:

“The registrant interacts with the registrar interface to do various actions related to the provisioning of a domain name under a TLD managed by the registry. The registrant may receive emails from the registry for some administrative tasks such as confirmation of a registrar change. A potential registrant may sign-up for this purpose.”

The prevalence of ICANN gTLD registry operators sending emails to registrants is sufficiently low that this scenario deserves greater qualification in the text. And the example (“confirmation of a registrar change”) here is questionable, given the current policy work on inter-registrar transfers, which does not contemplate such a notification.

Suggested replacement text:

“The registrant interacts with the registrar interface to do various actions related to the provisioning of a domain name under a TLD managed by the registry. The registrant may receive emails from the registry for some administrative tasks such as confirmation of a registrar change, required sign-up, registrant eligibility assessment, purchase etc. A potential registrant may sign-up for this purpose. However, this is not the case with all registries and varies between operating models.”

Note that the replacement text moves the focus off the registrar interface to align more closely to the diagram’s purpose of describing the registry architecture.

Figure 1 (page 3)

A minor point: Figure 1 (page 3) should not include the box entitled “registrar web interface” as this is a registrar component and Figure 1 is a “domain name registry high-level system architecture”.

Item 5: Scope extends to internal registry interfaces

Figure 1 contains the “registry admin Interface” which is preceded by G16 and accessed by “registry staff”.

Whether or not the registry admin interface needs to be UA-ready is a service feature that individual Registry Operators can determine. Certain ROs will require the feature and others will not.

Therefore, G16 should be optional. This also impacts Table 1 on page 7.

Additionally the text on page 4 includes:

“The registrar staff performs various administrative tasks. The interface may be a web interface.”

We suggest that the second sentence be deleted because there are a wide variety of such administrative interfaces in the market. The current text could be misinterpreted as being normative or as somehow preventing an administrative interface that is not web-based.

Item 6: Unsupported and potentially confusing statements about unstandardized registry API interfaces.

The last paragraph of Section 3 opens with:

“It should be noted that additional protocols and interfaces may be provided by the registrar or the registry. For example, other domain provisioning protocols than EPP are also used by some registries and registrars. Other interfaces such as Representational state transfer (REST) application programming interface (API) are also commonly used by registry, registrars, resellers, and backend providers for various applications. This study did not investigate those other protocols or interfaces for UA-readiness, so that work...”

While we acknowledge that non-EPP APIs are common in the reseller market, we find the statement in the second sentence that “other domain provisioning protocols than EPP are used by some registries” to be potentially confusing to certain readers. EPP is required of both gTLDs and ICANN accredited registrars and thus is the only domain provisioning protocol. Perhaps you are suggesting other provisioning protocols for other purposes in support of domain provisioning, or perhaps this is intended to reference ccTLDs, or perhaps something else entirely. Regardless of the reason this should be clarified.

Item 7: Exports and Reports contains unnecessarily normative language

Section 3.1 opens with:

“ICANN contracted parties (registries and registrars) are required to provide data and reports to external entities. The data and reports may contain objects that may have UA-readiness considerations. For example, ICANN requires the following exports and reports be made to appropriate external parties:”

The current text needs to be adjusted to remove the implication that the language in this document is normative language. Additionally, there needs to be a temporal qualifier.

This notwithstanding, we understand the point that is being made.

Suggested text:

“ICANN contracted parties (registries and registrars) typically have requirements under their ICANN contracts to provide data and/or reports. These data/reports may contain objects that have UA-readiness considerations. For example, at the time of publication, certain ICANN contracts include requirements for the following exports/reports:”

Item 8: Missing precision in description of verification steps

Section 4 contains the description of the UA-readiness verification steps, adapted from UASG026. However, these steps do not precisely match those described in UASG026 and thus introduce unnecessary ambiguity. This description should be aligned so as to remove the ambiguity, presumably with UASG026 being the authoritative source.

The ambiguities we have identified are as follows:

The steps in the Roadmap are:

1. Accept
2. Validate
3. Process
4. Store
5. Process
6. Display

However, the steps in UASG026 are:

1. Accept
2. Validate
3. Process on Input
4. Store
5. Process on Output
6. Display

We note that in the Roadmap, steps 3 and 5 are labelled identically whereas in UASG026 they are different. Additionally, and perhaps more importantly, certain text blocks describing the steps lack precision, specifically:

- Step 1 focuses solely on the length of DNS labels and unacceptable characters; it does not mention email addresses, nor does it mention IDN labels at the top or second level.
- Step 2 uses a previously undefined term “PVALID code point”
- Step 3 makes an unnecessary and unsubstantiated statement that “process” (sic) is a “the core of the application”
- Step 5 implies that output processing is optional (“there can be a follow-up process which would read the database”, when in fact it will always be processed in some fashion (even if that process does nothing)

We note that UASG026 also includes a point about the steps that does not appear prominently in this Roadmap document.

Quoting from page 7 of UASG026:

“While steps (accept, validate, process, store, display) are defined, some may be aggregated together so that there is no separation between some of the steps. For example, validating and processing might take place together within the same method on the identifier object. This work proposes a model, but frontiers between components are often blurred”

Item 9: Unsupported implications regarding EPP futures

Section 6 (Protocols) contains the text:

“A new version of the EPP protocol to support EAI [EAIEPP] is being developed by the Internet Engineering Task Force (IETF).”

While there is work on EAI in IETF, this sentence overstates the situation and could be confusing to the uninformed, who might draw some unintended confusion about the stability of STD 69 (the set of RFCs that define EPP, see <https://www.rfc-editor.org/info/std69>).

Suggested text:

“A new extension to the EPP protocol to support EAI [EAIEPP] is being developed by the Internet Engineering Task Force (IETF).”

Item 10: Potentially confusing statements about IDN variant labels

Section 9 (IDN Variant Labels) contains the text:

“IDN variant labels are different labels that are grouped together because they are equivalent, either semantically or visually. Each label could either be allocatable for registration or blocked, signifying whether or not the label can be activated in the DNS.”

This text, while reasonable for an informed reader making a conservative interpretation, has certain ambiguities that could lead to confusion if taken out of context.

Suggested text:

“IDN variant labels are different labels that are grouped together because they are deemed equivalent under relevant label generation rules. Each label could either be allocatable for registration or blocked from registration.”

This text removes any possible assumption about DNS activation, which could be dependent on other factors. It also defers equivalence to the LGRs and indicates the possible fluidity of the concept.

Item 11: Precision with respect to Root Zone Label Generation Ruleset

Section 7.7 (IDN Handling) contains the text:

“For example, IDN TLD labels must be compliant with the Root Zone Label Generation Rules [RZ-LGR] which further restricts the repertoire and rules for IDN TLD labels.”

We would recommend including a footnote to reflect the nuance regarding the status of the Root Zone LGR:

For future TLDs, this statement reflects the recommendation 25.2 of the Subsequent Procedures Final Report adopted by the GNSO Council. For existing TLDs, this statement is dependent on the outcomes of the GNSO IDN EPDP and ccNSO ccPDP4.

Item 12: Missing external interactions

The illustrative registry and registrar architectures in Figures 1 and 2 do not include required external interactions, specifically the TMCH. Because registries and registrars are required to interact with it then it must be included in the set of components that must also be tested for UA-readiness.

As this component is provided and supported by ICANN directly, this analysis should point out the dependency that registries and registrars have on ICANN ensuring that this component is UA-ready. In addition, there are probably additions that should be made to the various tables, including Table 1: UA-Readiness Gates, Table 3: Protocols UA Fields, and the unlabeled table at the end of Section 6 listing the functions using the schema elements in the protocols in Table 3.

Summary of Submission:

The Registries Stakeholder Group (RySG) appreciates the opportunity to comment on the UA Roadmap for Domain Name Registry and Registrar Systems and recognizes the amount of work by ICANN Staff and the consultants involved in developing this Roadmap and in executing the testing effort. The RySG believes that the work would have benefitted from earlier consultation with a broader cross-section of CPH technologists and deeper collaboration between ICANN Staff and the Contracted Party House (CPH) technical experts, especially with regards to reviewing the illustrative registry and registrar architectures that were used to produce this roadmap.

The RySG provides feedback with regard to the unsupported scope expansion to corporate web and email, the assumption of interactions between Registry and Registrant, extending the scope to internal registry interfaces, and other issues.