I C A N N

28 July 2017

Via Email

To: Steve Chan (who will forward to WT4)

RE: Additional New gTLD technical criteria?

Dear Work Track 4 chairs and members,

We are writing in response to a question raised in the call with the Work Track 4 (WT4) of the New gTLD Subsequent Procedures Policy Development Process on 8 June 2017. On the call, the WT4 team asked for ICANN's recommendations for updating Registry System Testing [i.e., Pre-Delegation Testing (PDT) and Registry Service Provider (RSP) Change Testing] based on issues or breaches seen by the SLA Monitoring (SLAM) system, as well as ICANN's recommendations generally for improving testing and technical evaluations. Below we have provided ICANN's recommendations to inform the WT ongoing discussions. It should be noted that these recommendations stand independently of each other and should not be understood to be contingent upon the implementation of another.

The ICANN organization recommends the following changes or updates to prevent the operational issues so far uncovered by the SLA monitoring system:

1. **Operational tests in PDT:** Since many of the issues seen by the SLAM system are caused by problems in operational tasks, having RSPs tested on their ability to do certain key operational tasks (e.g., key rollover, resigning TLD zone) could improve the chances of success when operating TLDs in production.
2. **Ongoing monitoring to predict potential performance issues:** In order to remove some tests from PDT and to improve the chances of proper operation of TLDs, ICANN recommends relying on ongoing monitoring of TLD operations against existing contractual requirements. ICANN is already planning to improve its active monitoring capabilities to cover as much as possible existing contractual provisions. Consideration should also be given as to whether repeated breaches should result in stricter penalties for Registry Operators/RSPs.
3. **Require certifications, minimum standards for operational and security practices, infrastructure and resourcing capabilities, and business continuity plans from the Registry Operators (ROs) and/or RSPs**: In order to improve the chances that a given RO/RSP is able to execute operation procedures within the expected standards, ICANN recommends considering requiring certifications or independent assessments (e.g., ITIL, ISO, CISSP, SOC2/3) of ROs/RSPs and/or key employees as well as requiring minimum operational and security practices, infrastructure and resourcing capabilities, certifications on infrastructure used, and setting criteria for business continuity plans.

4. **Periodic audits of RSP operations**: In order to ensure the operation of the RSP continues to be of the expected standards, ICANN recommends considering conducting periodic audits of the RSP operations.
5. **RSP pre-approval**: Having all RSPs complete pre-approval, which could incorporate many of the Technical and Operational evaluation questions, and would be independent of the TLD, would help to make the evaluation processes more efficient, as all RSPs will have undergone basic testing and vetting and are deemed ready to operate TLDs. A pre-approval approach would also help in ensuring a more secure and stable DNS by having a faster and more efficient mechanism to deal with potential issues that occur during the operation of a TLD. A pre-approval approach could consider the operations record of the RSP (e.g., lack of SLA breaches in a given amount of time) to avoid adding extra requirements for proven operators. A pre-approval approach could also support different tiers of approvals, approving an RSP for a specific capacity of TLDs or domains under management.

Additionally, ICANN recommends the below changes or updates to make Registry System Testing (RST) more efficient. Some of these have been previously suggested in the [Program Implementation Review report](#):

6. **Conduct some tests once per RSP and others for each TLD:** In order to improve the efficiency of RST and avoid duplicative testing, ICANN recommends removing tests from RST that are conducted independent of the TLD being tested (e.g., the documentation on load testing). Instead, ICANN recommends doing such tests only once per RSP (this could pair nicely with the concept of RSP pre-approval). The remaining tests that vary by TLD could be done as they are done now with an additional improvement to only have fully automated tests on a per TLD basis.
7. **Remove Internationalized Domain Name (IDN) table review from PDT**: During the 2012 round of the New gTLD Program, PDT included IDN table review. ICANN recommends that PDT only require automated testing that ensures IDN registration rules comply with stated policies and tables. ICANN would also recommend the adoption of reference tables pre-vetted by the community, so that any registry that uses those tables would forgo the need for table review. If a registry wanted to use a table that is not pre-vetted, the review could happen at some point before PDT.
8. **Consider the number of TLDs and expected registrations in a given RSP infrastructure**: During the 2012 round of the New gTLD Program, no consideration of the number of TLDs or expected registrations was given when reviewing RSP infrastructure. ICANN recommends that in order to ensure a secure and stable DNS, this consideration should be made as part of RST.

Finally, with regard to the Technical and Operational Capability Evaluation performed during Initial and Extended Evaluation, ICANN recommends the following changes or updates to improve the Technical and Operational Capability Evaluation:

9. **Incorporate most existing questions into the RSP evaluation**: In the 2012 round of the New gTLD Program, the application included 21 questions to evaluate the technical and operational capability of the applicant. ICANN recommends that most of these

questions be addressed by the RSP pre-approval program described above. While it is envisioned that the Technical and Operational evaluation questions could be greatly streamlined, Registry-Operator applicants could still propose variations, additions, etc. applicable to a particular string from their RSP baseline that could be evaluated as part of individual applications.

10. **Leverage components of existing RSEP criteria to evaluate additional services**: Variations of proposed services beyond the RSP pre-approval program could be included within the application and evaluated using a version of the existing Registry Services Evaluation Process (RSEP).

11. **Simplify the scoring framework**: During the 2012 round of the New gTLD Program, most question results were binary (0 or 1), but it was possible to earn 0, 1, or 2 points on some questions. This added complexity to the evaluation process with little benefit. ICANN recommends defining the criteria such that a passing score equates to the desired amount of capability to run a registry, and removing the option for 2 points.

We hope this information is helpful to you. Please do not hesitate to reach out to us with any additional questions or comments.

Sincerely,

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