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Technical Transition Plan - IANA Functions

Design Team L of the Cross Community Working Group to Develop an IANA Stewardship Transition Proposal on Naming Related Functions

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Overview:

Table of Contents:

[Overview:](#)

[Table of Contents:](#)

[Purpose and scope](#)

[Requirements:](#)

[Contract requirement:](#)

[Current Planning:](#)

[Assessment of existing transition mechanisms:](#)

[Transition Plan Elements:](#)

[Background and Existing Transition Planning Documents](#)

[Acknowledgements](#)

[Technical Transition Plan](#)

[Documentation published on IANA.org](#)

[IANA Functions registry data](#)

[Root Zone Automation System](#)

[Historical Data relating to IANA requests](#)

[Secure Notification System](#)

[Root KSK Transition Process](#)

[IANA Staff Knowledge Transition](#)

[Management of Transition Process](#)

[References](#)

[Appendix 1: IANA Documentation Master List](#)

Purpose and scope

The technical transition plan (TTP) has been compiled by Design Team L (DT-L) under the auspices of the CWG-Stewardship, it is intended to inform a technical response to the requirements of the NTIA to ensure a clear and complete plan for transitioning any IANA functions to a new operator if such a transition is required. The outcome of DT-L will be included as part of the Transition Proposal section III.A.1.1.1.

The goal of this transition plan is to describe the functional aspects of transitioning to a new IANA functions operator if required, it will not examine the circumstances of that transition or the requirements for initiating the transition plan.

The plan shall contain an overview of the actions and procedures necessary to transition each key system and function designated in the TTP. The TTP shall describe, at a high level, the transition scope and strategy for each key function performed by the IANA. A diagram shall be

included or referenced to provide a high level overview of the architectural / basic structure of each key function.

Requirements:

Using the documentation examined in Phase 1 of the work of Design Team L of the CWG-Stewardship as a base, design a detailed and functional transition plan that the team feels will meet the requirements of the ICG as specified in Section III of the ICG RFP¹ namely the following requirement

“Description of operational requirements to achieve continuity of service and possible new service integration throughout the transition”

Contract requirement:

The current IANA Functions contract requires ICANN to provide a plan that would allow ICANN to transition performance of the IANA Functions to a successor organization:

“C.7.3 Transition to Successor Contractor – In the event the Government selects a successor contractor, the Contractor shall have a plan in place for transitioning each of the IANA functions to ensure an orderly transition while maintaining continuity and security of operations. The plan shall be submitted to the COR eighteen (18) months after date of contract award, reviewed annually, and updated as appropriate.”

Current Planning:

The current transition to successor contractor plan² reads as follows:

Transition Actions: Below is an overview of the actions ICANN would take to transition the performance of the IANA Functions to a successor organization.

1. Documents published on ICANN’s IANA website ICANN would provide copies of, or links to, the publicly available text for all processes, performance standards, request templates and other pages used to support operations or provide context to reporting.
2. IANA Functions registry data ICANN would provide a copy of all registry data for Protocol Parameter and Internet Number Resources registries, including a copy of the .ARPA zone file. ICANN would also provide the public registration data for the root DNS zone, along with management information, such as special instructions from

¹ <https://www.icann.org/en/system/files/files/rfp-iana-stewardship-08sep14-en.pdf>

² <https://www.iana.org/reports/2014/transition-plan-201404.pdf>

governments associated with ccTLDs. ICANN would provide a copy of the .INT zone file, along with the contact information for the registrants.

3. Root Zone Automation system design ICANN would provide a description of the functional requirements that a successor might need in order to develop a Root Zone Management software suite, along with descriptions of the APIs. C.7.3 – Plan for Transition to successor April 2014 C.7.3 – Plan for Transition to successor/Final/LLV
4. Request history data ICANN would provide a copy of the databases it has used to store requests data, including ticketing systems and workflow management systems used for protocol parameter registries and the maintenance of the Root DNS Zone. ICANN would also provide copies of any published reports and paper records it holds supporting these request histories.
5. Secure notification system data ICANN would provide details of the notification categories, the subscribers to those categories and a history of notifications.
6. Root KSK transition In 2010, ICANN developed a Root Zone KSK Operator Function Termination Plan that sets out the steps ICANN would take if required to transition its duties and responsibilities as the Root Zone Key Signing Key (KSK) operator to another entity. This plan was provided to NTIA in 2010.

The plan further sets out deliverables which are identified as not requiring transition:

There are a number of contract deliverables that ICANN is required to provide to the NTIA under the IANA Functions contract that will not need to be provided to a successor organization in order for that successor organization to perform the IANA Functions. These include, but are not limited to, C.4.2 (Monthly Performance Progress reports), C.4.5 (Customer Satisfaction Surveys), C.5.3 (External Auditor reports), C.6 (Conflicts of Interest processes established by ICANN), and C.7.2 (ICANN's Contingency and Continuity of Operations Plan). Conclusion This document describes what ICANN would need to transition to allow a successor organization to perform the IANA Functions

Assessment of existing transition mechanisms:

Design Team L has assessed the existing transition to successor plan and has made the following findings:

1. **Training & Overlapping Time Period:** The transition document does not mandate an overlapping time period wherein the old operator would be required to assist and train the employees of the new operator in taking over the IANA functions. The overlapping time period should only end once the requisite security and stability has been reached by the new operator. Such a process may also require the old operator to develop training material.

2. **Website & IPR:** The transition plan only requires the old operator to share the data that is publicly available on the website. It does not require the operator to transfer the website itself (iana.org). It is also silent about the assignment of associated IPR. For example, IANA is a registered trademark of ICANN. Similarly, ICANN has a copyright on all documents produced by the IANA staff.
3. **Root Zone Key:** The transition of responsibilities for root zone key is in a separate document that is currently not available to the public. Design Team L has filed a DIDP request with ICANN to request that this document is made available.
4. **Software and Machinery:** The transition document only requires the old operator to provide a description of the functional requirements of the software and APIs. It excludes transfer of the existing software and the existing essential machinery that is used by the old operator. This may have serious stability and security implications. The transition plan should require the transfer of all essential softwares and machinery from the old operator to the new operator, especially for the overlapping time period.
5. **Specific Exclusion:** It is not clear why certain types of documents have been excluded from transition and marked as "deliverables not requiring transition". The rationale for this exclusion needs to be tested against the stress scenarios.
6. **Breakup of IANA:** The transition plan does not address the possibility that IANA may be broken into three smaller IANAs in the future. The associated issues need to be addressed.
7. **Old data:** The transition plan should require the old operator to permanently delete all data. If the old operator retains any data that it no longer requires, then it should continue to provide the requisite security for maintaining the data.
8. **Holistic View:** A systematic transition plan will typically address associated HR issues, legal issues, procurement issues, IT issues, cultural issues, finance issues and finally also develop a proper Gantt chart with estimated timelines.

Transition Plan Elements:

The TTP shall examine the following elements:

1. Documentation published on IANA.org
2. IANA Functions registry data
3. Root Zone Automation System
4. Historical Data relating to IANA requests
5. Secure Notification System

6. Root KSK Transition Process
7. IANA Staff Knowledge Transition
8. Management of Transition Process

Background and Existing Transition Planning Documents

A number of existing documents have been identified as being particularly informative to the work of DT-L and have been used as reference throughout the process of preparing this document. The TTP is not intended to be a successor to any of these documents but rather to be used to expand upon certain aspects that are contained in them. These items are contained in the references section of this document.

Acknowledgements

Technical Transition Plan

1. Documentation published on IANA.org

1.1. Documentation master list.

1.1.1. A master list of all current documentation pertaining to the IANA will be compiled by the current IANA functions operator. This list will include but not be limited to the publicly available text for all processes, performance standards, request templates and other pages used to support operations or provide context to reporting.

1.1.2. The document master list will contain document title, author, revision number, document format, and the location of the current authoritative version. A template is provided in Appendix 1.

1.2. Verification of master data.

1.2.1. A second person verification will be performed on the current authoritative version location. The verifier will confirm that the current authoritative version is accessible, matches the current known authoritative revision and that the document is complete and uncorrupted.

1.3. Transfer of documentation to new IANA functions operator.

1.3.1. *Placeholder text*

2. IANA Functions registry data

2.1.1. *Placeholder text*

3. Root Zone Automation System

3.1. *Placeholder text*

4. Historical Data relating to IANA requests

4.1. *Placeholder text*

5. Secure Notification System

5.1.1. *Placeholder text*

6. Root KSK Transition Process

6.1. *Placeholder text*

7. IANA Staff Knowledge Transition

7.1.1. Placeholder text

8. Management of Transition Process

- 8.1. Upon identification of a need to transition to IANA functions a transition coordinator must be appointed by the current IANA functions operator.
- 8.2. The transition coordinator is responsible for all aspects of the transition. He / she must:
 - 8.2.1. Ensure suitable premises are available to coordinate the transition, this must include a facility for remote participation.
 - 8.2.2. Ensure suitable communications are prepared and issued to all current customers of the IANA and to all SO/AC communities within ICANN.
 - 8.2.3. The transition coordinator will ensure that all aspects of the Technical Transition Plan are executed as per the timeline in Appendix 1.
 - 8.2.4. The transition coordinator will be responsible for ensuring that no activity performed will impact the stability of the DNS Root Zone functions by

References

1. IANA Functions Contract C.7.3: Plan for Transition to Successor Contractor
<https://www.iana.org/reports/2014/transition-plan-201404.pdf>
2. IANA Stewardship Transition Coordination Group Request for Proposals
<https://www.icann.org/en/system/files/files/rfp-iana-stewardship-08sep14-en.pdf>
3. SSAC Advisory on Maintaining the Security and Stability of the IANA Functions Through the Stewardship Transition
<https://www.icann.org/en/system/files/files/sac-069-en.pdf>
4. DNSSEC Practise Statement
<https://www.iana.org/dnssec/icann-dps.txt>

