

0. Proposal type

Identify which category of the IANA functions this submission proposes to address: [] Names [X] Numbers [] Protocol Parameters

I. Description of Community's Use of IANA Functions

This section should list the specific, distinct IANA functions your community relies on. For each IANA function on which your community relies, please provide the following:

- A description of the function;
- A description of the customer(s) of the function;
- What registries are involved in providing the function;
- A description of any overlaps or interdependencies between your IANA requirements and the functions required by other customer communities. If your community relies on any other IANA service or activity beyond the scope of the IANA functions contract, you may describe them here. In this case please also describe how the service or activity should be addressed by the transition plan.

The global Internet community relies upon the appropriate administration of Internet Protocol (IP) addresses and Autonomous System (AS) numbers. These identifier spaces are collectively referred to as "Internet number resources", and policy authority for the general-purpose regions within these registries has been delegated by the IETF to the "Regional Internet Registries" (RIRs) to administer on behalf of the affected community.

The IANA operator performs a valuable function by administering the unallocated portion of the Internet number resource registries. The direct customers of this IANA function are the "Regional Internet Registries" (RIRs). The RIRs in turn serve "Local Internet Registries" (LIRs) and other customers. Collectively, the system for administering Internet number resources is referred to as the "Internet Number Registry System" and is described in detail in RFC 7020¹.

The specific registries that are administered by the IANA per the authority delegated to the Internet Number Registry System are "Autonomous System (AS) Numbers", "IANA IPv4 Address Space Registry", and "IPv6 Global Unicast Address Assignments". Note that within each IANA registry, there are also special-purpose values, and those special-purpose values are outside the Internet Numbers Registry System and instead administered under the direction of the IETF. The delineation of the specific ranges delegated to the Internet Number Registry system is provided in RFC 7249² and the IANA operator administers the unallocated portion of these Internet number registries to the Regional Internet Registries in accordance with global

¹"The Internet Numbers Registry System", RFC 7020, <https://tools.ietf.org/html/rfc7020>

²"Internet Numbers Registries", RFC 7249, <https://tools.ietf.org/html/rfc7249>

policies established by the RIR community.

The global Internet community also depends upon the IANA operator for administration of the special-purpose "IN-ADDR.ARPA" and "IPv6.ARPA" DNS zones which is associated with IPv4 and IPv6 number resources respectively. It is the understanding of the Regional Internet Registry community that the IANA operator administers these zones per request of the Internet Architecture Board ("IAB")³ as "agreed technical work items" per the IETF-ICANN IANA MOU⁴.

II. Existing, Pre-Transition Arrangements

This section should describe how existing IANA-related arrangements work, prior to the transition.

A. Policy Sources

This section should identify the specific source(s) of policy which must be followed by the IANA functions operator in its conduct of the services or activities described above. If there are distinct sources of policy or policy development for different IANA functions, then please describe these separately. For each source of policy or policy development, please provide the following:

- Which IANA function (identified in Section I) are affected.
- A description of how policy is developed and established and who is involved in policy development and establishment.
- A description of how disputes about policy are resolved.
- References to documentation of policy development and dispute resolution processes.

The IANA operator administers the delegated portions of the "Autonomous System (AS) Numbers", "IANA IPv4 Address Space Registry", and "IPv6 Global Unicast Address Assignments" registries in accordance with global Internet number resource policies that are developed by the Internet number resource community.

The development process for Global Internet Number Resource Policies is specified in Appendix A of the ICANN Address Supporting Organization (ASO) MoU, which is an agreement between ICANN and the Regional Internet Registries⁵[5], with the individual RIRs acting collectively via the Number Resource Organization (NRO). Global Internet number resource policies are

³ "Transition of IN-ADDR.ARPA generation", Internet Architecture Board , <http://www.iab.org/documents/correspondence-reports-documents/docs2010/transition-of-in-addr-arpa-generation/>

⁴ "IETF-ICANN Memorandum of Understanding Concerning the Technical Work of the Internet Assigned Numbers Authority" <https://www.icann.org/resources/unthemed-pages/ietf-icann-mou-2000-03-01-en>

⁵ ICANN Address Supporting Organization (ASO) MoU <http://archive.icann.org/en/aso/aso-mou-29oct04.htm>

published on the NRO and ICANN websites^{6,7}

Global Internet number resource policies are the result of all RIR communities reaching a position of common agreement and a common text to describe the proposed global policy. Each RIR community engages in its own regional policy development process – these processes are open to all stakeholders regardless of specific background or interest.

The Address Supporting Organization Advisory Council (ASO AC), a predominantly community-elected body, reviews that the policy process was followed by each of the RIR communities, assures itself that the significant viewpoints of interested parties were adequately considered, and that the common text is not substantively different than what each of the RIR communities support, and only after this confirmation does it forward global policy proposals to the ICANN Board for ratification.

Jason Schiller 11/21/2014 10:36 AM

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The ICANN Board reviews the received global number resource policy proposals and may ask questions and otherwise consult with the ASO Address Council and/or the individual RIRs acting collectively through the NRO. The ICANN Board may also consult with other parties as the Board considers appropriate. If the ICANN Board rejects the proposed policy, it delivers to the ASO Address Council a statement of its concerns with the proposed policy, including in particular an explanation of the significant viewpoints that were not adequately considered during the regular RIR processes. By agreement of all RIRs, the ASO Address Council may forward a new proposed policy (either reaffirming the previous proposal or a modified proposal) to the ICANN Board. If the resubmitted proposed policy is rejected for a second time by ICANN, then the RIRs or ICANN shall refer the matter to mediation.

In case of disputes where mediation has failed to resolve the dispute, the ICANN ASO MoU agreement provides for arbitration via ICC rules in the jurisdiction of Bermuda or such other location as is agreed between the RIRs and ICANN. It is also worth noting that the Regional Internet Registries have been participating (as the ASO) in the periodic independent review processes for Accountability and Transparency (ATR) that is called for per ICANN's Bylaws.

B. Oversight and Accountability

This section should describe all the ways in which oversight is conducted over the IANA functions operator's provision of the services and activities listed in Section I and all the ways in which the IANA functions operator is currently held accountable for the provision of those services. For each oversight or accountability mechanism, please provide as many of the following as are applicable:

- Which IANA function (identified in Section I) are affected.

⁶ "Global Policies Development" <https://www.nro.net/policies/global-policies-development-process>

⁷ "Global Addressing Policies" <https://www.icann.org/resources/pages/global-addressing-2012-02-25-en>

- If the policy sources identified in Section II.A are affected, identify which ones are affected and explain in what way.
- A description of the entity or entities that provide oversight or perform accountability functions, including how individuals are selected or removed from participation in those entities.
- A description of the mechanism (e.g., contract, reporting scheme, auditing scheme, etc.). This should include a description of the consequences of the IANA functions operator not meeting the standards established by the mechanism, the extent to which the output of the mechanism is transparent and the terms under which the mechanism may change.
- Jurisdiction(s) in which the mechanism applies and the legal basis on which the mechanism rests.

The IANA operator administers the unallocated portion of the Internet number resource registries in accordance with global policies established by the RIR community. Administration consists predominantly of processing of requests from the Regional Internet Registries for issuance of additional number resources. The five Regional Internet Registries are intimately familiar with global number resource policies under which the requests are made and maintain communications with the IANA operations team throughout the request process. The IANA operations team provides escalation procedures for use in resolving any issues with requests⁸.

The IANA operator provides monthly reporting on their performance in processing requests for the allocation of Internet number resources; these reports include IANA operator performance against key metrics of accuracy, timeliness, and transparency, as well as the performance metrics for individual requests⁹.

While the IANA operator escalation and reporting mechanisms are public in nature, the Internet number community is primarily represented in oversight of the IANA operator performance by the Regional Internet Registries, which are member-based based organizations with elected governance boards.

There is no contractual obligation directly to the Internet number resource community for the IANA operator to provide IANA registry services for the Internet number registries; IANA services for the Internet number registries are provided by ICANN since its formation as a result of the NTIA IANA Functions contract¹⁰ and hence IANA services for the Internet number registries are presently subject to change per that agreement.

⁸ "IANA-Customer Service Complaint Resolution Process"
<http://www.iana.org/help/escalation-procedure>

⁹ "IANA-Performance Standards Metrics Report"
<http://www.iana.org/performance/metrics>

¹⁰ "IANA Functions Contract-NTIA" <http://www.ntia.doc.gov/page/iana-functions-purchase-order>

III. Proposed Post-Transition Oversight and Accountability Arrangements

This section should describe what changes your community is proposing to the arrangements listed in Section II.B in light of the transition. If your community is proposing to replace one or more existing arrangements with new arrangements, that replacement should be explained and all of the elements listed in Section II.B should be described for the new arrangements. Your community should provide its rationale and justification for the new arrangements.

If your community's proposal carries any implications for the interface between the IANA functions and existing policy arrangements described in Section II.A, those implications should be described here.

If your community is not proposing changes to arrangements listed in Section II.B, the rationale and justification for that choice should be provided here.

The Internet number community proposes that a legally binding agreement for IANA services for Internet number registries be established between the present IANA operator (ICANN) and the RIRs to replace the Internet number registry-related elements of the current ICANN-NTIA agreement.

The agreement should have the IANA operator perform administration of the unallocated portions of the Internet number registries on behalf of the Regional Internet Registries and specify service levels and performance reporting commensurate with current mechanisms. The agreement should provide for faithful administration of the unallocated portion of the Internet number registries in accordance with approved global number policy. IANA operations should be reliable and consistent, with any registry changes made in an open and transparent manner to the global community. The agreement should also require the IANA operator to appropriately coordinate with any other operator of IANA-related registry services. An outline for the proposed agreement is attached as Appendix A.

While it has not been utilized with respect to Internet number registries, the existing NTIA contract for the IANA services for the Internet number registries also provides a point of oversight for the policy authority for the Internet number registry system. While the RIR community has strong existing accountability mechanisms on policy development (including the independent review of global policies by both the community-based ASO AC as well as the ICANN Board), the RIRs should reaffirm their commitment to open, transparent, and accountable global number policy. This affirmation will be made to ICANN (as the entity in its coordination role that is providing ratification of global number policy) and the IETF (as the delegator of policy authority for Internet number registries) and provide for periodic independent review of the RIR's fidelity to these principles for global Internet number resource administration.

As an additional measure of security and stability, the RIRs have documented their individual accountability and governance mechanisms, and asked the community-based Address Supporting Organization Advisory Council (ASO AC) to undertake a review of these mechanisms and make recommendations for improvements that may be warranted given the nature of the stewardship transition for Internet number resources.

Jason Schiller 11/21/2014 10:45 AM

Comment [1]: You want to include the SLA and performance metrics in the contract, and break and enter into a new contract to changes those metrics? Would it be better to reference a separate document?

Jason Schiller 11/21/2014 10:46 AM

Comment [2]: Does this suggest the community is comfortable with the current metrics?

Jason Schiller 11/21/2014 10:49 AM

Comment [3]: I am accustomed to seeing open, transparent, and bottom-up always showing up together... why no reference to bottom-up?

Jason Schiller 11/21/2014 11:20 AM

Comment [4]: Shouldn't this affirmation also be made to the RIR communities?

Jason Schiller 11/21/2014 12:44 PM

Comment [5]: I support this. Assuming the ASO-AC sorts this out, the community support it, and the RIRs implement it prior to NTIA transition, then all is fine. This should include a review of RIR governance.

This should also include a review of the oversight of IANA functions WRT the contract with ICANN for the number related operations, and oversight of governance of ICANN WRT ratification of Global Policy Ratification.

I expect this work would include a formal process for modification of IANA function SLA metrics and reporting, as well as a formal process of reviewing IANA operations reports and declaration of (non-)compliance, and appropriate community (or membership) oversight.

IV. Transition Implications

This section should describe what your community views as the implications of the changes it proposed in Section III. These implications may include some or all of the following, or other implications specific to your community:

- Description of operational requirements to achieve continuity of service and possible new service integration throughout the transition.
- Risks to operational continuity and how they will be addressed.
- Description of any legal framework requirements in the absence of the NTIA contract.
- Description of how you have tested or evaluated the workability of any new technical or operational methods proposed in this document and how they compare to established arrangements.
- Description of how long the proposals in Section III are expected to take to complete, and any intermediate milestones that may occur before they are completed.

No material change to operational or technical arrangements are proposed by the Internet number community with respect to the IANA functions for Internet number registries, thus eliminating operational or continuity risks associated with stewardship transition.

The proposed stewardship arrangements build on the existing Regional Internet Registry organizations (which are open to participation from all stakeholders) and strengthen the existing model by formalizing accountability of these organizations to the affected community. The proposal reduces risk associated with creation of new organizations whose accountability is unproven.

The necessary agreement proposed for IANA operation services for the Internet number registries can be established well before the NTIA target date for transition (September 2015), as there are no changes to existing service levels or reporting that are being proposed, only a change in contracting party to align with the delegated policy authority.

NTIA Requirements

Additionally, NTIA has established that the transition proposal must meet the following five requirements:

- Support and enhance the multistakeholder model
- Maintain the security, stability, and resiliency of the Internet DNS;
- Meet the needs and expectation of the global customers and partners of the IANA functions;
- Maintain the openness of the Internet;
- The proposal must not replace the NTIA role with a government-led or an inter-governmental organization solution. This section should explain how your community's proposal meets these requirements and how it responds to the global interest in the IANA functions.

The proposal for the IANA stewardship transition for the Internet number registries builds upon the existing, successful framework used by the Internet number community today. The major characteristics of this approach include:

1. Global number policy development which is open and transparent to any and all participants
2. Continuance of existing IANA service levels, escalation processes, and reporting mechanisms
3. Maintenance of independent review and ratification for developed global Internet number resource policy
4. Continued use of periodic third-party independent reviews of accountability and transparency of processes
5. No change of the existing IANA operator for maximum stability and security of operational processes and systems
6. Accountable, member-based, globally-distributed Regional Internet Registry organizations providing routine IANA operational oversight for the Internet number registries

Jason Schiller 11/21/2014 11:01 AM
Comment [6]: Open, transparent, and bottom-up

As a result of the approach taken (and its characteristics as outlined above), it is clear that the proposal from the Internet number community meets the stated NTIA requirements.

VI. Community Process

This section should describe the process your community used for developing this proposal, including:

- The steps that were taken to develop the proposal and to determine consensus.
- Links to announcements, agendas, mailing lists, consultations and meeting proceedings.
- An assessment of the level of consensus behind your community's proposal, including a description of areas of contention or disagreement.

Steps and timeline for proposal development and links to announcements, mailing lists, and proceedings - <https://www.nro.net/nro-and-internet-governance/iana-oversight/timeline-for-rirs-engagement-in-iana-stewardship-transition-process>

Assessment of consensus level - *TBD*

APPENDIX A - *TBD*