

2016 ICANN-IETF MoU Supplemental Agreement

Introduction

This document is between the IETF Administrative Oversight Committee (IAOC) and the Internet Corporation for Assigned Names and Numbers (ICANN) to supplement the Memorandum of Understanding between the IETF and ICANN concerning the technical work of the Internet Assigned Numbers Authority (IANA) service as performed by ICANN dated March 1, 2000 ([RFC 2860](#) and <https://www.icann.org/resources/unthemed-pages/ietf-icann-mou-2000-03-01-en>).

This supplemental agreement between ICANN and the IAOC, forms part of the missing criteria and procedures referred to in section 4.1 of the MoU and describes the commitments, services, and tasks ICANN undertakes to fulfill the IANA services on behalf of the IETF, as well as the commitments, services, and tasks members of the IETF community will provide to ICANN at the direction of the Internet Engineering Steering Group (IESG) and/or Internet Architecture Board (IAB).

This agreement describes a base level of commitment on behalf of both parties. This document has evolved over time as new tasks were identified and existing tasks completed. Annual review will continue to update new and ongoing tasks and if/when service time expectations need to be revised. This supplemental agreement may be modified upon written agreement of the parties.

Services

ICANN in performing the IANA services will:

1. Maintain a publicly accessible, web-based “Resource Registry Matrix” (“Matrix”) document.

The Matrix describes:

- a. The name of each registry;
- b. Registration requirements for parameters in that registry;
- c. The normative RFC defining the requirement for the registry if applicable;
- d. Expert’s name if applicable

The Matrix will:

- a. Be kept current;
- b. Use hyperlinks to connect the Matrix to the registries it describes;
- c. Use nesting as appropriate to indicate sub-registries

If there are any significant changes to the format of the Matrix, the IAB and IESG will be consulted and any major changes will be mutually agreed on.

2. Provide a tool, on a queue-by-queue basis, for Public and IESG transparency into status of individual requests and continue to provide the public view of the status of all the approved Internet-Drafts and their state in the processing queue (www.iana.org/draft-status/draft-queue-status-all.html). This transparency includes the ability to:
 - a. Find/verify the existence of a request;
 - b. View the actual status of request

Note that the Public and IESG/Requester views are different. The IESG view includes more detail that is not appropriate for public visibility.

3. Continue, in confidence to the IESG, to document all newly discovered single points of failure/expertise (in a separate document to the monthly report) and detail efforts undertaken to address and/or ameliorate them.
4. Notify the resource requester **WITHIN THREE (3) BUSINESS DAYS** of learning when there is an expectation that action on the request will exceed established service levels with an explanation for the delay and, when possible, a forecast as to when action will be completed on the request.
5. When requested by the IESG, provide Fast Track Expedited Processing for a specified request as an exception to the normal first-in-first-out policy.
6. Perform a monthly review of the registries where temporary assignments are present, and notify the registrant and the IESG of any temporary assignments that have expired or are near expiration.

Service Levels

Due to the nature of resource request reviews, ICANN in performing the IANA services, and the IETF community, are jointly responsible for cooperatively managing the resource request process. ICANN in performing the IANA services has control over the services it performs directly, e.g., receiving requests, making sure they are syntactically and semantically sensible, forwarding the requests to Designated Experts where appropriate, creating and modifying the registries, etc. The IETF community has direct or indirect control over services performed by third parties, including IESG Designated Experts, the IESG, the IAB, the RFC Editor, and the requester. As such, the processing of requests has a “total processing time” calendar days goal established for each service and an “IANA processing time” calendar days goal to reflect time expended directly by ICANN in performing the IANA services.

1. When registries using Designated Experts are created, it is preferable that the IESG assign Designated Experts for resource registries at time of document approval. If the expert for the registry is not known at the time of document approval, a management item submitted by ICANN in performing the IANA services can request the IESG to designate an expert after the registry has been created. Prior to the appointment of a Designated Expert, the only registrations that will be included in that registry are the initial ones declared in the RFC. After approval of a Designated Expert, the IETF Secretariat will send a notification to ICANN to perform the IANA services. If an expert can not be designated and there is a high priority request, the IESG itself can act as the expert until one is named.
2. ICANN in performing the IANA services will meet or exceed goals for service expectations/commitments for 90% of all work requests as defined in “Appendix A – Service Time Commitments”.
3. “Third party processing time”, that is, the total processing time minus the “IANA processing time”, which exceeds the goals in Appendix A (unless otherwise stated elsewhere herein) will trigger the appropriate escalation procedure described in the section entitled “Escalation”.
4. Due dates will be provided in assignments for third party actions, such as Designated Experts, based upon processing times specified for such action herein.
5. As such, the “total processing time” of a request can be further broken down into an “IANA processing time”, “Requester processing time”, and “Other processing time”. When measuring the time taken to process requests, the “overall processing time” refers to the total amount of time (from whatever source) to complete the request. The “IANA processing time” refers to that portion of the time that is directly attributable to IANA activity, etc. This SLA includes target service times for the IANA portion of servicing requests. Target times for some (but not all) of the other components are also defined here.

Escalation

Escalation processes have been established to handle the cases where timely responses are not forthcoming. There are separate processes for escalation with the Designated Experts, the IESG, the Requester and ICANN. These have been mutually agreed upon and have been documented in Appendix B. Changes to the procedures can be made at any time after agreed upon by the IESG.

Documentation

ICANN in performing the IANA services will:

Keep documentation up-to-date for the services performed for the IETF. The processes and procedures to be documented include:

- a. Creation of new public registries as called for in IESG approved documents;
- b. Maintenance of public registries including updating registries as called for in IESG approved documents as well as updating registries via appropriate requests submitted directly to ICANN to perform the IANA services (i.e., for registries not requiring action as part of a document approval process);
- c. Review (for IANA Consideration actions) all documents that appear on IESG telechats (not all of which undergo a formal IETF Last Call).
- d. Interactions with document authors (and the IESG) when ensuring the IANA Considerations are sufficiently clear and unambiguous so that the actions can be completed (done prior to the document approval by the IESG);
- e. Coordination with the RFC Editor in the final steps of document publication;
- f. Maintenance of a publicly accessible list of the Designated Experts associated with those registries that make use of a Designated Expert, as well as a non-publicly accessible list of the contact information for those experts;
- g. Provide regular updates, not less than once per business day (unless no changes have been made), of a publicly accessible web page that provides a listing of the state of all approved Internet-Draft documents being processed by ICANN in performing the IANA services.

Reports

ICANN in performing the IANA services will:

1. Track Resource allocation statistics as described in item 2 (Reports) below and publically report on a monthly basis. A notification will be provided to the IAB and IESG when utilization rates for a specific registry show danger of exhaustion or when a single point of failure is identified and corrected.
2. Provide publicly accessible, clear, and accurate monthly statistics showing work that has been done and the work items that are currently queued. These statistics should be drawn over all IETF-related requests broken down into meaningful categories, i.e.:
 - a. IESG approved documents;
 - b. Reference Updates
 - c. Last Calls
 - d. Evaluations
 - e. New MIME type requests;
 - f. Modifications to and/or deletions of MIME type requests;

- g. New Port number requests;
- h. Modifications to and/or deletions of Port number requests;
- i. New Private Enterprise Number (PEN) requests;
- j. Modifications to and/or deletions of PEN requests;
- k. New TRIP ITAD Numbers
- l. Miscellaneous Protocol Parameter requests (when no more than 5 per month are received, they are grouped together here)

For those requests relating to other IETF-created registries for which the request rate is more than five per month, ICANN in performing the IANA services will track the rate for which requests are coming in and consult with the IESG regarding the need to track separately. IAB and IESG will be consulted regarding any changes required to monthly statistics reporting.

For each of these categories information should be collected for:

- a. Number of requests in the queue at the beginning of the reporting period
- b. Number of new requests received during the reporting period
- c. Number of requests completed during the reporting period
- d. Number of requests in the queue at the end of the reporting period
- e. Histogram showing the ages of requests still in the queue at end of reporting period
- f. Histogram for cumulative IETF requests for created/closed/resolved at the end of the reporting period and the year to date

For completed requests, information should be reported for:

- a. Mean service times (i.e., “total”);
- b. Mean service times, showing individual contribution from “IANA”, “Requester”, and “Other”;
- c. Standard deviation from the average service times;
- d. Minimum service time;
- e. Median service time;
- f. Cumulative statistics reflecting outliers, i.e., the totals of all completed requests within their respected categories, including outliers;
- g. Maximum service time;
- h. Histogram of cumulative statistics reflecting outliers (as e. above), data by proportion.
 - (1) Number completed within 0-7 days,
 - (2) Number completed within 8-14 days,
 - (3) Number completed within 15-30 days,
 - (4) Number completed in more than 30 days

These service times should be collected and published for “total”, “IANA” and “third party” times.

The exact statistics in this document continue to be reviewed and may change over time based upon experience. Such changes may be made by mutual agreement.

The optimal form for displaying monthly statistics is a work in progress and will likely change over time.

3. ICANN shall engage a third-party reviewer to conduct a review and evaluation of ICANN's implementation of the relevant IETF RFCs and related policies in performing the protocol parameter registry operation pursuant to this Agreement. The third-party reviewer will be selected by mutual agreement. ICANN shall be responsible for any costs that might be associated with the review. The third-party reviewer will generate a written report (Report), which shall be provided to the IAB and IAOC within 90 days of the end of the Agreement period, or as soon thereafter as practical. If the third-party Report is not completed within 90 days of the end of the Agreement period, ICANN shall provide a written rationale for the delay and a timeline as to when the report will be completed. Subject to agreement with the IAOC and the third-party reviewer, the final report or a summary of the final report, will be posted on the iana.org website. Within 150 days of the end of the Agreement period, ICANN shall provide a written response to the IAB and IAOC, including any explanation of deficiencies and/or actions and remediation plans in response to the findings of the report.

Collaboration

1. An effort continues to integrate the tools used by support services for the IETF so that all relevant information can be found within the IETF Datatracker. ICANN in performing the IANA service, the RFC-Editor and the Secretariat each have documented the requirements for what integration is needed in [RFC 6359](#). Future deliverables will be determined following discussions with the IAOC.
2. ICANN, in performing the IANA services, has significant experience on issues that have arisen in the registration process, the clarity of IANA Considerations sections, and other matters that relate to specific registries. As a result, input from ICANN personnel performing the IANA services is often desirable, as the IETF publishes new RFCs; in many specialized topics, such as requirements for IETF tools from a registry process perspective, such participation can be essential.

While IETF policy and registry operation are completely separated, the ICANN personnel, performing the IANA services, may participate as document authors, proponents, contributors, reviewers, and so on.

In this participation, regular IETF process is followed, as with all other work that leads to a publication in the IETF stream. As defined in [RFC 2026](#), IETF decisions are made through a consensus process. As long as the decision is made

according to this process with wide input from the community and not just from ICANN in performing the IANA services, due process and fairness can be assured.

3. The Parties agree to review the terms of this document in one year to determine whether any modifications may be required. Prior to this review, this document will be interpreted flexibly.

Transfer to Successor

To date there have been no unresolvable disputes or issues; however, the MOU allows for cancellation by the IETF or by ICANN with at least six (6) months notice. If either party cancels, the IETF will select a successor. Regardless of which party cancels the MOU, ICANN agrees to provide reasonable best efforts and cooperation to effect an orderly and efficient transfer to a successor at no cost to the IETF. Any fees charged by the successor chosen by the IETF, or any other party that might charge something as it relates to the transfer, will be the responsibility of the IETF. The transfer period shall not exceed six (6) months. Since its inception in 1998, ICANN has developed several proprietary software programs in support of the IETF protocol parameter registries at private expense. ICANN claims, and the IETF disclaims, any ownership and title in the software and software programs developed by ICANN in support of the IETF protocol parameter registries. ICANN retains complete ownership and title to all their software programs, and will retain title to any program under the agreement. ICANN does not claim any right to the contents of the protocol parameter registries as these are in the public domain.

IANA Services Action Summary Table

| IANA Services Action Summary | | | |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------------------------------|
| | Action | Section/Reference | Delivery Date After Effective Date |
| 1 | Single points of failure documentation to the IESG | Services/3 | Monthly form as needed |
| 2 | Provide monthly reports to the IESG on upcoming expirations of early allocations | Services/6 | Monthly |
| 3 | Provide publicly accessible, clear and accurate monthly statistics | Reports/2 | Monthly |
| 4 | Written report to the IAB and IAOC, on ICANN's implementation of the relevant IETF RFCs and related policies in performing the protocol parameter registry operation | Reports/3 | 90 days of the end of the Agreement period |
| 5 | Written response to the IAB and IAOC, including any explanation of deficiencies and/or actions and remediation plans in response to the findings of the report | Reports/3 | Within 150 days of the end of the Agreement period |
| 6 | Review terms of agreement with IAB and IAOC | Collaboration/5 | In one (1) year |

Effective Date

This agreement will be effective as of 1 October 2016 unless the IANA Agreement between NTIA and ICANN has not ended or terminated, and then it will become effective at that time, so long as such event occurs within three (3) months of that date.

Agreed to on 06 / 24 / 2016 **by**
(Month) (Day) (Year)

On behalf of ICANN:

On behalf of the IAOC:

Signature

Göran Marby

Name

President and CEO

Title

ICANN

Organization

Signature

Ray Pelletier

Name

IETF Administrative Director

Title

Internet Society

Organization

Appendix A – Service Time Commitments

| Resource | Proc Time | Clock starts at | Clock stops at |
|----------------------------------------------------------------------------------------------|---------------------|---------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|
| Documents (including IETF and RFC Editor submissions) | 14 | Receipt of official IESG approval of the document or receipt of official notice of intend to publish from the RFC-Editor. | Sending an “IANA Actions Complete” message to the RFC Editor |
| Last Call Reviews | Last Call Duration | Receipt of official notice of IETF Last Call Announcement | Receipt by IESG of comments regarding document actions |
| Evaluation Reviews | Evaluation Duration | Receipt of official notice of Evaluation Ballot | Receipt by IESG of comments regarding document actions |
| Reference Updates (for documents with completed IANA Actions) | 7 | Receipt of RFC number for the RFC-Editor | Completion of the reference updates in protocol registries |
| Protocol parameter requests requiring IESG Designated expert and/or IETF mailing list review | 14 | Receipt of initial request | Notification of resource assignment |
| Protocol parameter requests that do not require technical review | 7 | Receipt of initial request | Notification of resource assignment |
| All other requests (including modifications to existing assignments) | 14 | Receipt of initial request | Notification of resource assignment |

Additional IANA Service Processing Time and Third Party Service Time Requirements:

A. The Resource Registry Matrix will be updated with approved IESG Designated Experts within one (1) week of notification of the appointment.

B. The processing time goals for third parties will be in calendar days as follows:

1. Designated Experts – fourteen (14) days
2. Requester – thirty (30) days
3. IESG – fourteen (14) days
4. Other – seven (7) days

Notes:

- In prior years, this Service Level Agreement referred to a group called the “IETF-IANA Working Group”. This led to some confusion with official IETF Working Groups (<http://www.ietf.org/wg/>). Through mutual agreement the group’s name was changed to the IETF Protocol Registries Oversight Committee (IPROC). In

this agreement, the roles formerly performed by the IPROC are now handled by the IAB, IESG and/or IAOC.

- At implementation there will be a commitment to continuous process improvement leading to the reduction of outliers as reflected on histograms, and of processing times less than or equal to the values in the column entitled “Processing Time Now”.
- All processing times (“Proc Time”) are given in “net” IANA days, in terms of “calendar days”.
- The IAB, IESG and IAOC will be notified in advance if it is anticipated that any of these service time commitments will not be met. In such a case, documentation will be provided on the cause(s) of being unable to meet the commitment(s) and steps taken to address those causes.
- Changes to the service time commitments will be agreed on between ICANN and the IESG, with consultation of the IAB and IAOC as needed.

Appendix B – Escalation Procedures

For requests that are for registries that are created and maintained by RFCs created through the IETF consensus process, the following escalation procedures apply:

Designated Experts Escalation:

ICANN in performing the IANA services will:

1. Forward the request to the primary Designated Expert within seven (7) calendar days after receiving a correct and complete request.
2. Wait for a response from the Designated Expert for fourteen (14) calendar days. If a response is not received the request will be re-forwarded to the primary Designated Expert every seven (7) calendar days if no response is received thereafter for a period of thirty (30) calendar days.
3. If a response is not received within thirty (30) calendar days from the designated expert, the request will be re-assigned to the secondary Designated Expert if applicable. The primary expert will be notified that the request has been reassigned. If the primary expert continues to be non-responsive for subsequent requests, the IESG will be notified. In cases where there is no secondary expert, the IESG will be notified of the Designated Expert failure and request resolution of the problem (e.g., by replacing the Designated Expert per [RFC 5226](#) and subsequent revisions).

IESG Escalation:

ICANN in performing the IANA services will:

1. Upon issuing a request to the IESG (and document shepherds when appropriate, will wait for a response from the IESG for fourteen (14) calendar days. If no response is received, the request will be re-forwarded to the IESG at least once per business week thereafter until the thirtieth (30th) day.
2. If a response is not received within thirty (30) calendar days, the IAB will be notified of the lack of an IESG response to a request in a timely fashion and will request instruction as to what to do with the request. The IAB is tasked with working with the IESG and other relevant parties to resolve the issue. In order to preserve the normal appeals chain ([RFC 5226](#)), the IAB is not expected to directly resolve the request itself.

Requester Escalation:

ICANN in performing the IANA services will:

Wait for a response from the requestor. If not received will re-forward the request regularly (e.g., once per week). If no response is received within 30 days, a notification of the administrative close of the request (without prejudice) will be sent to the requestor and the ticket will be closed.

Change Control:

Change control and approval of these procedures is with the IESG, IAB and IAOC.