

American Registry for Internet Numbers, Ltd.

Registration Services Department Audit

November 2023

Mike Cullen, CISA, CISSP, CIPP/US
Principal, Baker Tilly
mike.cullen@bakertilly.com

Ashley Dehr, CPA, CIA, CFE
Partner, Baker Tilly
Ashley.Dehr@bakertilly.com

www.bakertilly.com

Audit Overview

Baker Tilly, a national accounting and advisory firm, was engaged by the American Registry for Internet Numbers (ARIN) to assess ARIN's current Registration Services Department (RSD) processes for adherence to ARIN's Number Resource Policy Manual (NRPM) in the following areas:

- Internet Protocol (IP) address space allocation, transfer, and database record maintenance (both public and internal) for version 4 (IPv4) and version 6 (IPv6)
- Fraud detection, prevention, and follow-up
- Autonomous system number (ASN) allocation, transfer, and record maintenance

The scope of this audit included testing specific tickets of various customer requests, on a sample basis, to validate that RSD consistently follows the NRPM requirements and internal procedures. All documents reviewed are detailed in Appendix A.

Summary Results

Baker Tilly did not identify any RSD people, processes, or technology out of compliance with the NRPM. The department's collaborative and cross-trained management and staff understand, value, and support ARIN's mission.

Additionally, the department continues to demonstrate the following strengths:

- Understanding, valuing, and supporting ARIN's mission by the dedicated RSD management team that continues to evaluate methods to improve RSD efficiency.
- Understanding by RSD staff of their roles in identifying potentially fraudulent requests and by developing and revising practices to further protect against potential fraud.
- Hiring multiple new RSD team members, since Baker Tilly's 2021 review, who were successfully onboarded and trained to follow the NRPM and RSD internal procedures.

To further protect against potential fraud and to improve the efficiency of RSD, ARIN has implemented the following procedural changes:

- ARIN now requires any deviation from the documented internal procedures to be approved by the Director of Registration Services or another authorized member of the management team.
- ARIN has changed the Organization Create process to first require a fee to be paid through the Financial Services Department (FSD) prior to the ticket being routed to RSD for processing.
- ARIN requires all in-region organizations to have a signed Registration Services Agreement (RSA) for the Organization Create process and for any transfer of resources or resource reassignments to be approved.
- ARIN has dedicated two separate members of the management team to be responsible for reviewing and approving 8.2 and 8.3 transfers.

Baker Tilly identified certain recommended enhancements grouped into the following themes: perform procedures consistently, update internal procedures, and evaluate process efficiencies.

Themes

The overarching themes observed during the audit are presented below along with related recommendations for potential enhancements

Baker Tilly identified the following observations and related recommendations to improve RSD operations. The items are grouped into three thematic areas.

#	Theme	Recommendations for Consideration
1	Consistently executing procedures – Executing activities from internal procedures support consistent processing of customer request tickets among all RSD staff regardless of customer’s unique needs or RSD staff experience.	ARIN should consider additional refresher trainings for RSD to review updated internal procedures and reemphasize the importance of consistently executing internal procedures, including documenting all conclusions for customer requests.
2	Up-to-date internal procedures – Documented internal procedures that are up-to-date and reflect RSD current operations support the equitable processing of customer request tickets.	ARIN should consider an earlier than planned review of current internal procedures to verify that the text accurately reflects the current required steps, and then update the procedures as needed. Additionally, ARIN should update all internal procedures to clearly note which steps are required, which steps are only required under certain conditions, and which are optional and included for instructional guidance.
3	System enabled processing efficiency – Maintaining a single system for customer records and requests, or fully integrated/interfaced systems, supports RSD’s ability to process customer requests efficiently and effectively, including all communications, forms, and tickets.	ARIN should consider enhancing the functionality of the ARIN Online system or implementing a new service management system to make the review and approval of tickets more efficient.

Appendix A: Documentation Reviewed

Baker Tilly reviewed the following documentation:

- October 1, 2021 – September 15, 2023 ARIN Online Tickets [on a sample basis]
- October 1, 2021 – September 15, 2023 Transfer Sum Files [on a sample basis]
- October 1, 2021 – September 15, 2023 Transfer Worksheets [on a sample basis]
- October 1, 2021 – September 15, 2023 Transfer VIAP File Approvals [on a sample basis]
- 8.2 Mergers, Acquisitions, and Reorganizations Internal Procedures
- 8.3 Recipient Transfer (Recipient Organization) Internal Procedures
- 8.4 Inter-RIR Transfers to ARIN – Recipient Internal Procedures
- 8.4 Inter-RIR Transfers from ARIN – Source Internal Procedures
- ASN Requests Internal Procedures
- Chat Procedures
- General Procedures
- Internet Number Resource Fraud Reporting Procedure
- IPv4 End User Additional Request Internal Procedures
- IPv4 End User Initial Request Internal Procedures
- IPv4 Initial Request Internal Procedures
- IPv4 ISP Additional Request Internal Procedures
- IPv6 Requests (ISP and End User) Internal Procedures
- Number Resource Policy Manual (NRPM)
- Org Create Internal Procedures
- Org Name Changes Internal Procedures
- Org Recovery Internal Procedures
- POC Recovery Internal Procedures