

American Registry for Internet Numbers, Ltd.

Summary Results of Registration Services Department Audit

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Audit Overview

The accounting and advisory firm of Baker Tilly was engaged by the American Registry for Internet Numbers (ARIN) to:

- Assess ARIN's current Registration Services Department (RSD) processes against 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
- Test specific tickets, on a sample basis, from all types of customer requests to validate that NRPM requirements and internal procedures are consistently followed

Baker Tilly performed the following activities to meet the objectives of this audit:

- Reviewed relevant documentation (e.g., NRPM, internal procedures, checklists, worksheets) to gain an understanding of ARIN's current registration processes (for a list of all documents reviewed, please see Appendix A)
- Conducted a group interview with key RSD personnel to understand changes in RSD's allocation and assignment processes since the previous audit
- Validated that RSD met the requirements in the NRPM and followed internal procedures by testing a sample of 100 tickets used to track various customer requests
- Conducted follow up meetings with RSD personnel to clarify testing questions and ARIN procedures and processes

Summary Results

During the course of the audit and based on the specific procedures performed, Baker Tilly did not identify any people, processes, or technology that were out of compliance with the NRPM. RSD has worked to maintain ARIN's compliance with the continually changing, community-based NRPM with dedicated people, processes, and technology. The department's collaborative and cross-trained management and staff understand, value, and support ARIN's mission. The department has continued to develop and revise practices adapted to equitably resolving the depleted IPv4 addresses. ARIN has changed the waitlist process in response to suspected and actual fraudulent customer activities, as well as other customer situations identified by RSD. Additionally, staff appear to be mindful of their roles in detecting potential fraud perpetrated by customers as they conduct their work. Management continues to look for ways to improve the organization and efficiency of RSD. Furthermore, Baker Tilly identified potential enhancements to clarify and support internally performed procedures, update internal procedure documentation, and create process efficiencies.

Strengths

During the audit, we noted the following strengths exhibited by RSD:

- Understanding, valuing, and supporting ARIN's mission by the dedicated RSD management team (i.e., Senior Director of Registration Services, Transfer Services Manager, Senior Resource Analyst, and Principal Technical Analyst) and staff
- Understanding by staff of their roles in identifying potentially fraudulent requests (e.g., recognizing importance of independent verification of requests, escalating requests to management for further review)
- Developing and revising procedures and practices to equitably resolve and distribute the depleted IPv4 addresses, as well as to handle increased transfer requests
- Maintaining reasonably prompt time frames for responding to customers despite the high volume of requests and transfers

Themes

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

#	Theme	Recommendations for ARIN's Consideration
1	Consistency in following internal procedures – RSD staff following all key steps in the documented internal procedures supports consistent processing of tickets	ARIN should consider a refresher training with RSD staff to review the internal procedures and emphasize the importance of consistent application of the procedures, including using internal notes to document steps taken by analysts.
2	Documentation of current internal procedures – Clear and updated documentation supports consistent processing of tickets	ARIN should consider a review of current internal procedures to verify that the text accurately reflects the current required processing steps and then update the procedures accordingly. In addition, ARIN should continue to document new internal procedures based on changing practices and policies.
3	Functionality of ARIN Online – Clearly defined guidelines and potential additional automation for ARIN Online supports consistent and efficient processing of tickets	ARIN should consider having staff monitor ARIN Online for tickets with no activity for 90 days to determine whether these tickets should be closed. Additionally, consider documenting reasons for which inactive tickets should remain open.
4	Efficiency of ticket documentation – Consolidation of various customer and ticket documentation from varied, manual, and paper records to a single, automated electronic system supports efficient processing of tickets	ARIN should consider scanning/digitizing and then uploading copies of all paper ticket documentation to ARIN Online. In addition, ARIN should consider requiring the current offline manual management approvals to be documented in ARIN Online, instead of in paper files.

Appendix A: Documentation Reviewed

We reviewed the following documentation:

- July 1, 2018 – June 30, 2019 ARIN Online Tickets [on a sample basis]
- July 1, 2018 – June 30, 2019 Transfer Tickets [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
- Annual Conflict of Interest Statement Acknowledgement Form for Key Employees
- ASN Requests Internal Procedures
- Confidentiality, Non-Competition, Non-Solicitation and Inventions Agreement
- Employee Handbook Sections:
 - 104 Business Ethics and Conduct
 - 106 Anti-Fraud Policy
 - 108 Conflicts of Interest
 - 109 Gifts and Entertainment
- 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
- Non-Disclosure Agreement
- Number Resource Policy Manual (NRPM)
- Org Create Internal Procedures
- Org Name Changes Internal Procedures
- Org Recovery Internal Procedures
- POC Recovery Internal Procedures