Root Zone KSK Operator Termination Plan

Version 3.4

Root Zone KSK Operator Policy Management Authority

19 October 2022

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1 Introduction

Public Technical Identifiers (PTI) performs the Root Zone Key Signing Key (RZ KSK) Operator role pursuant to a contract from the Internet Corporation for Assigned Names and Numbers (ICANN).

The RZ KSK Operator will implement a termination plan if its roles and responsibilities must transition to another entity. The termination and transition process MUST be carried out in cooperation with ICANN for an orderly, stable, and secure transition to a successor.

The transition activities will necessitate a KSK rollover from the RZ KSK Operator to the successor. This document does not address the technical specifications of a KSK rollover, but instead focuses on the procedural aspect of the transition process.

As part of a transition or termination, the RZ KSK Operator is not under any obligation to provide any information that is considered to be proprietary to its business operations, other than the information provided under any required audits of the RZ KSK Operations. It will be the successor's sole responsibility to create a process that adheres to the specific requirements of ICANN.

During an RZ KSK Operator function transition, it is assumed that the current Key Management Facilities will no longer be used and the new entity has built comparable facilities, functions, and personnel approved by ICANN.

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "NOT RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in BCP 14 [RFC2119] [RFC8174] when, and only when, they appear in all capitals, as shown here.

2 Objective and Scope

This document is a high-level plan for terminating and transferring the roles and responsibilities of the RZ KSK Operator to a successor.

3 Roles and Responsibilities
3.1 RZ KSK Policy Management Authority

The Root Zone KSK Operator Policy Management Authority (PMA) is comprised of PTI and ICANN representatives from each functional group who are responsible for running the RZ KSK Operator function. The PMA consists of two types of members: voting members and subject matter experts. All critical decisions related to the Domain Name System Security Extensions (DNSSEC) operations within ICANN are made by this group.

3.2   RZ KSK Operations Security

RZ KSK Operations Security (RKOS) is responsible for managing the information to be transferred to the KSK Operator successor in conjunction with relevant third-party auditors.

3.3   Successor of the RZ KSK Operator

The successor of the RZ KSK Operator is the entity that has been authorized by ICANN to assume the responsibilities for management of the RZ KSK.

The successor of the RZ KSK Operator is responsible for creating policies and procedures and for provisioning an environment that will accommodate the DNSSEC operations for the RZ KSK Operator at ICANN's direction.

4   Role Transition Procedures

The technical transition of the KSK Operator role REQUIRES a rollover of the RZ KSK. The following procedure addresses the transition of duties:

1. The PMA Chair will be notified of an occurrence that may require the permanent termination of the RZ KSK operations and transfer of the RZ KSK Operator responsibility to a successor. The notification MUST be made by sending an email or written correspondence to the PMA Chair.
2. The PMA Chair MUST chair a PMA meeting to determine the impact of the occurrence that would affect the RZ KSK Operator's ability to continue operations as the RZ KSK Operator. An occurrence that would lead to the RZ KSK operator's inability to continue these operations would be escalated to ICANN's executive management.
3. The PMA Chair MUST notify the RZ ZSK operator (unless provided the initial notice referred to in step 1) of the occurrence that would prevent the RZ KSK Operator from continuing to perform the KSK operations.
4. The PMA Chair MUST engage the RZ ZSK Operator to create a schedule of events for the proper transition of duties to the appointed RZ KSK Operator successor once the transition has been approved.
5. The following steps for conducting the transition will occur by rolling over the RZ KSK and include:
   a. The RZ KSK Operator successor generates a new KSK using its key management procedures and equipment.
   b. At the next RZ KSK Operator's signing ceremony, RZ KSK Operator successor equipment MUST be brought alongside ICANN equipment to include the successor's key in the RZ Domain Name System Key (DNSKEY) resource record set (RRset) and facilitate an orderly RFC 5011 KSK rollover to the successor.
   c. ICANN MUST announce the rollover using the channels stipulated in the DPS.

d. When the required 30 days of notice has elapsed after a successful rollover, the successor MUST seamlessly take over the responsibilities of the RZ KSK Operator without further interaction with its predecessor.

6. The RZ KSK Operator MUST transfer to the successor the relevant logs and audit information that may be valuable for the continued operations of the RZ KSK.

7. The KSK Operation is transitioned once ICANN confirms that the successor's systems and processes are functioning as designed, at which point the predecessor MUST destroy the private component of the previous Trust Anchor.

5   Contact Information

Root Zone KSK Policy Management Authority
Public Technical Identifiers
12025 Waterfront Drive, Suite 300.
Los Angeles, CA 90094
USA
+1 (424) 254-5300 (voice)
+1 (424) 254-5033 (fax)
root-ksk-pma@iana.org

Appendix A: Acronyms

DNSKEY   Domain Name System Key

DNSSEC   Domain Name System Security Extensions

ICANN   Internet Corporation for Assigned Names and Numbers

KSK   Key Signing Key

PMA   Root Zone KSK Operator Policy Management Authority

PTI   Public Technical Identifiers

RFC   Request for Comments

RKOS   RZ KSK Operations Security

RRset   Resource Record Set

RZ   Root Zone

Appendix B: Change Log

Revision 3 - 04 October 2018
- Converted the document to use the latest Word template.
- Made minor editorial, formatting, and style changes.
- Made all cross-references hyperlinks.
- Adopted the RFC "MUST", "SHOULD", etc. convention throughout each document. Added a paragraph to Section 1 that explains the RFC wording convention.
- Added an acronym list.
- Cover: Changed the version from 2.3 to 3.0.
- Section 1: Expanded the Introduction to include texts from other documents.
- Section 2: Renamed the section from Scope and Exclusion
- Section 4: Renamed the section from DNSSEC Root Zone Key Signing Key Operator Termination Flow

Revision 3.1 - 28 October 2019
- Annual review: Update version information and dates.
- Made minor editorial, formatting, and style changes.
- Updated Appendix A to reflect only the acronyms present in the document.

Revision 3.2 - 04 November 2020
- Annual review: Update version information and dates.
- Overall: Uniformly specified "Practices Manager" as "PMA Chair".
- Section 3.3 and 4: Specified "DNS RZ" as "RZ KSK".

Revision 3.3 - 22 September 2021
- Annual review: Update version information and dates.
- Section 1: Clarified use of key words as described in RFC 2119 and RFC 8174

Revision 3.4 - 19 October 2022
- Annual review: Update version information and dates.