

DNSSEC for the Root Zone

Internetdagarna
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Quick Review of the past 12 months

DNSSEC Notice of Inquiry

- NTIA issued a Notice of Inquiry (NOI) on the implementation of DNSSEC at the root zone level on October 9, 2008.
- Fifty five substantive comments from industry, non-profit organizations, academia, and individuals were submitted by the November 24, 2008 deadline.
- <http://www.ntia.doc.gov/DNS/dnssec.html>

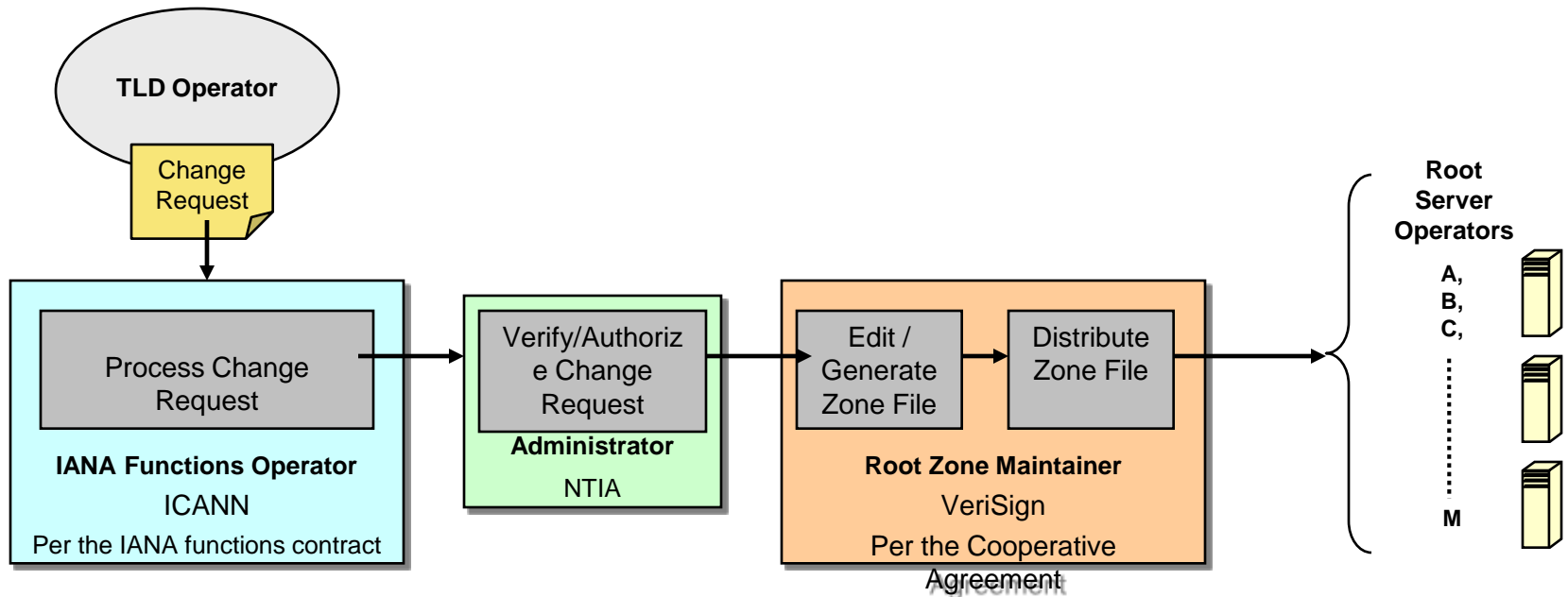
DNSSEC NOI Results

- The NOI process revealed almost unanimous consensus among respondents that DNSSEC should be implemented at the root zone level.
- Other important points raised through the process:
 - Implement DNSSEC as soon as practically possible,
 - Implement in a manner that maintains the security and stability of the DNS,
 - DNSSEC implementation should be aligned with functions of the root zone management process,
 - DNSSEC is about data, integrity, and authenticity – not control.

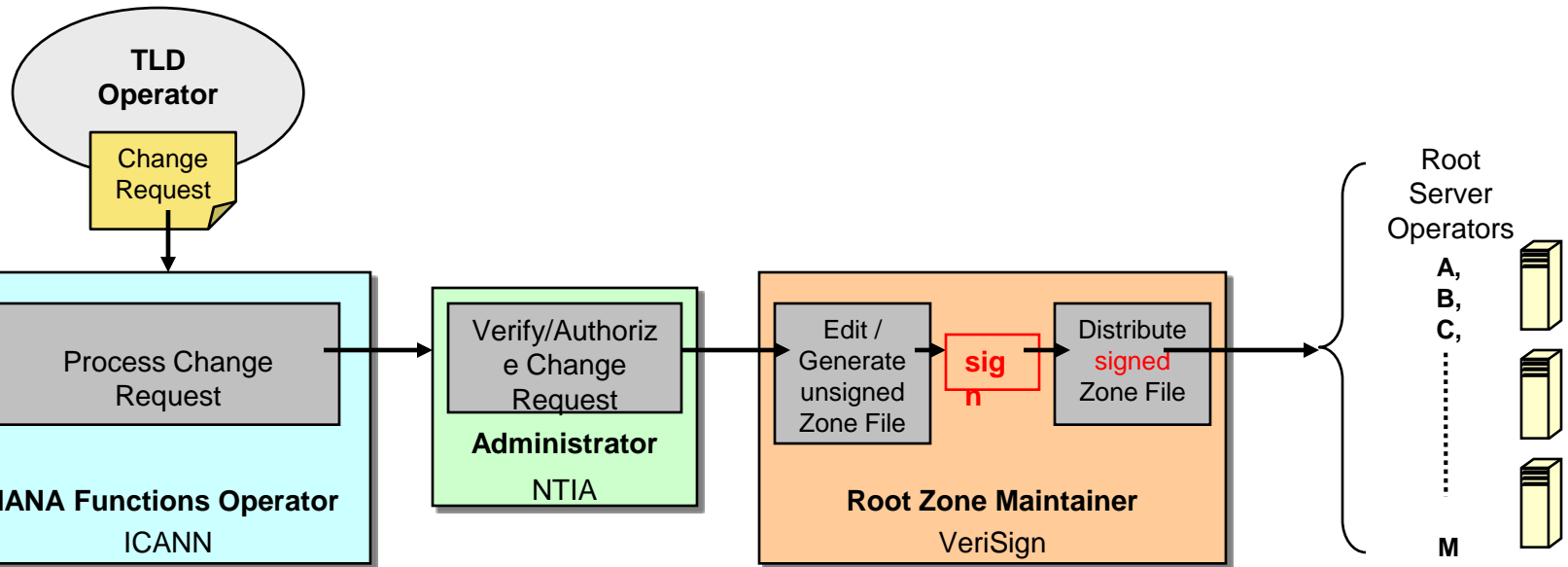
Post NOI: Determination

- DNSSEC to be implemented at the authoritative root zone level.
- An interim approach closely aligned with the existing root zone management process will be utilized to ensure rapid implementation while maintaining the security and stability of the DNS.
- Once implemented, interim approach will be reviewed taking into consideration any advancement in technology, process and/or procedure related to DNSSEC, to determine whether the approach needs to be adjusted.
- DNSSEC implementation at the root will be an iterative process that will include ongoing consultation with the DNS technical community.

Current Root Zone Management



Root Zone Management + DNSSEC



Consultation & Documentation

Consultation

- Commitment to consult with the Internet technical community.
- This is an iterative process that will include ongoing consultation.

Documentation

- ICANN and VeriSign working collaboratively in development of documentation.
- By the time DNSSEC is operational at the root, there's going to be a lot of documentation.
- Most, if not all, will be made publicly available.

DOC Requirements

- NTIA/NIST drafted high-level requirements for DNSSEC implementation at the root including a baseline architecture, security, and basic functionality requirements.
- ICANN and VeriSign required to develop and make available:
 - Access Control policies
 - Auditing & Accountability procedures
 - Key Rollover procedures
 - Contingency plans / Emergency procedures
- NIST specifications are non-binding guidelines and recommendations.
 - Comparable standards can be substituted as ICANN/VeriSign establish viable IT security policies.
- Status of Document:
 - Consulted with technical experts within DNS community
 - Consulted with ICANN and VeriSign
 - Modified requirements document to take into account consultations
 - Final document posted at <http://www.ntia.doc.gov/DNS/dnssec.html>

High-Level Technical Architecture

- Describes proposed technical architecture for DNSSEC deployment at the root
 - Drafted by ICANN/VeriSign design team
 - Based on DOC requirements
- High – level description
 - Details to be contained in accompanying documentation
- Draft circulated to members of technical expert community for feedback.
- Working Draft
 - A work in progress as implementation and testing evolve
- Posted at <http://www.ntia.doc.gov/DNS/dnssec.html>

DNSSEC Policy and Practice Statements (DPS)

- Both ICANN and VeriSign have DPS
- States practices and provisions employed in root zone signing and zone distribution services
- Drafts submitted to NTIA
- To be circulated
- To be posted

Next Steps

- ICANN and VeriSign to continue producing documentation.
- Community input to continue being sought.
- Documentation to be posted as becomes available.
- ICANN and VeriSign to work on implementation and testing.
- Sign root.

Thanks!

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