Operational Considerations for SHAKEN STI Certification Authorities and Policy Administrators

based on
ATIS-IPNNI-2017-00051R004.docx

Note: this does not represent a complete set of guidelines – this is a working document subject to change
Overview

Describes operational considerations and recommended practices for STI-PA in managing approved STI-CAs and authorized Service Providers:

• Trust Authority Policy
• Certificate Policy & Certification Practice Statements
• Management of List of STI-CAs
• STI-PA Administration of Service Providers
Trust Authority Model

- STI-PA is external to the PKI – maintains list of Trusted CAs on behalf of the relying parties in the PKI
- STI-PA serves as the Trust Anchor to the relying parties in the PKI
- Each STI-CA must support Certificate Policy (CP) as established by the STI-PA
- STI-PA reviews Certification Practice Statement (CPS) as provided by the STI-CAs to ensure compliance
Trust Authority Policy

• STI-PA is the only Trust Authority in the model – STI-CAs should not inherit trust from other CAs (no policy mapping)

• STI-PA can remove an STI-CA from the list of trusted CAs based on pre-established criteria (e.g., failure to comply with the CP established by the STI-PA)

• STI-CA is responsible for the following:
  – Notify STI-PA should it no longer choose to issue STI certificates
  – Notify STI-PA if certificates are revoked
  – Follow recommended procedures for CA key rollover
Certificate Policy

• Standarizes server and CA naming to avoid collisions
• Root CAs should NOT be online – offline CAs should be in a secure vault until a new certificate requires issuance.
• Defines profile for extensions to be supported – e.g., must support TNAuthList extension
• Provides mechanism to support certificate revocation
• Requires provision of secure mechanisms for key recovery and data recovery agents.
• Requires CA to maintain proper system time (e.g. secure NTP).
List of Valid STI-CAs
List of Valid CAs

• STI-PA (administrative body) reviews the CPS of the STI-CA to ensure it is operated to an acceptable level of assurance:
  – Ensures polices per CP are supported
  – Determines that the STI-CA/PKI provides a warranty with regards to issued certificates
  – Periodic audits recommended

• STI-PA periodically distributes/updates list:
  – Mechanism details TBD
  – Periodicity should be shorter than certificate lifetimes
  – Updated list should be distributed if an STI-CA is removed
  – Service Providers can request updated list if it expires
STI-PA Administration of Service Providers

• Existing identifiers (e.g., OCNs), allocated and managed by an entity authorized by an NRAA, are used as Service Provider Codes:
  – Provide uniqueness & accountability

• Prior to requesting a certificate, a Service Provider must:
  – Create an account with the STI-PA
  – Create an account with an STI-CA
  – Obtain a service provider code token from the STI-PA (as Trust Anchor) per the procedures outlined in ATIS-1000080.