A Checklist for Telecommunications Service Providers (TSPs) Implementing STIR/SHAKEN in Canada

STIR/SHAKEN are industry-developed protocols and a framework designed to combat illegal call spoofing by verifying caller identity. TSPs in Canada are being directed by the Canadian Radio and Telecommunications Commission (CRTC) to implement STIR/SHAKEN call authentication by 30 November 2021. The Canadian Secure Token Governance Authority, Inc., (CST-GA) was approved and created to oversee this process.

To participate, the first step is to contact the CST-GA here: **https://cstga.ca/**. Whether your organization is just beginning the process, or you are well on your way, this checklist of steps will help ensure you have everything in place for a successful deployment.

STIR/SHAKEN IMPLEMENTATION CHECKLIST

REGISTERING AND REQUESTING A SECURE TELEPHONE IDENTITY (STI) SIGNING CERTIFICATE

- [ ] **1. Registering with Canadian Policy Administrator (PA)** – To take part in the STIR/SHAKEN ecosystem, TSPs, as qualified by the CST-GA, must register with the Canadian PA. TSPs will then successfully execute a test plan in the User Acceptance Test (UAT) environment before being granted access to the Production environment. The current Canadian PA is Neustar.

- [ ] **2. Select a Canadian Certificate Authority (CA)** – TSPs next select the CA they will work with to request a STI Certificate. A generated "fingerprint" is then included as part of the request for a Service Provider Code (SPC) Token, as well as to validate a request for a STI Certificate. The current (approved) Canadian CA is Neustar.

- [ ] **3. Obtain a Service Provider Code Token** – TSPs then request an SPC Token from the PA for one of its assigned Operating Company Numbers (OCNs). The SPC Token with an assigned OCN and the generated "fingerprint" is used when requesting a STI Certificate. Note that this OCN is an identifier for the TSP and is not meant to define any numbering scope of authority.

- [ ] **4. Request a STI (or Signing) Certificate** - To enable end-to-end SHAKEN authentication, a TSP must obtain a STI certificate from their selected CA. To request a STI Certificate, the TSP sends a Certificate Signing Request (CSR) to the CA, along with its associated SPC Token.

TESTING AND IMPLEMENTATION

- [ ] **5. Implement STIR/SHAKEN Solution** – Deploy all necessary components that perform functions associated with the STIR/SHAKEN specification (STI-AS, STI-VS, SP-KMS, SKS and optional STI-CR Canada).

- [ ] **6. Perform Functional Testing** – It is important that TSPs test calls in a lab environment before deploying in a live network. Internal testing provides an opportunity to ensure hardware and software are configured properly to avoid wasting resources and causing service disruptions.

☐ **7. End-to-End Testing** – To begin testing between networks, TSPs should start by focusing on calls that originate and terminate within their own network to validate that authentication and verification functionality is working as expected. Next, they should expand to testing calls with other TSPs.

Note: If you are a Neustar **Certified Caller** customer, you can leverage our comprehensive SHAKEN test plan, integration tools and hosted User Acceptance Test (UAT) environment. For non-Neustar Certified Caller customers, the ATIS Robocalling Testbed is an industry SHAKEN interoperability test facility that Neustar exclusively hosts for qualified TSPs and vendors.

☐ **8. Operational Support & Training** – To deliver a new capability at scale, a participating TSP needs to transition network management activities from Engineering to Operations and update systems and processes. Customer education will also be imperative, so they understand how to interpret any new messages and alerts appearing on their device(s).

ATIS Robocalling Testbed

The ATIS Robocalling Testbed is the industry interoperability test platform, exclusively hosted by Neustar, to verify implementations of the SHAKEN call authentication framework and help advance efforts to mitigate nuisance calls and illegal caller ID spoofing. The virtual test environment removes obstacles and accelerates the validation of call authentication standards in real world STIR/SHAKEN implementations.

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