Business Benefits

- Simplified, low impact network deployment of STIR/SHAKEN.
- ATIS 1000082 compliant cloud STIR/SHAKEN interface.
- Industry leading attestation and OrigID setting capabilities.
- SIP and TDM support in one integrated appliance.
- Minimized STIR/SHAKEN implementation impact.
- Minimized STIR/SHAKEN implementation cost.

The Challenge

American consumers receive over 200K unwanted and/or fraudulent calls every minute, many using spoofed caller IDs to increase the likelihood that the called party will answer the call. Both the FCC in the USA and the CRTC in Canada have mandated service provider implementation of the STIR/SHAKEN set of standards as a solution to the widespread use of CLI spoofing in fraudulent calls.

Service Providers operating IP-based voice services must implement STIR/SHAKEN in their networks by June 30th, 2021 in the USA and Canada. This implementation can be daunting and complex. Service providers need a simplified, rapid and low impact way to deploy STIR/SHAKEN.
The NetNumber Solution

Guaranteed Caller™ Cloud Connect provides an easy, low impact and low-cost way to connect a telecom network to any ATIS 1000082-compliant cloud STIR/SHAKEN service, including NetNumber’s Guaranteed Caller™. Cloud Connect features an industry-leading capability set, including:

**IP/VoIP and TDM Support**
Guaranteed Caller™ Cloud Connect supports both SIP/VoIP and ISUP over either TDM or SIGTRAN. It fully supports the draft industry standard TDM-SHAKEN, including all STI-CPS interactions for origination and termination. SIP and ISUP are supported simultaneously, allowing one network element to connect all network call sources to STIR/SHAKEN.

**Highly Flexible Network Deployment Models**
Guaranteed Caller™ Cloud Connect is based on NetNumber’s field-hardened TITAN technology, deployed in major service provider networks around the world. TITAN supports all common network element topologies, and so Cloud Connect can be deployed in a variety of network roles, as best suited to ease the integration of STIR/SHAKEN into any given network. As a few examples, Cloud Connect can be deployed as a SIP Redirect Server, a SIP Proxy Server, an IN SCP, a Class 4/5 session control element and as a network monitor. Many other deployment models are possible and supported.

**Industry Leading Attestation and OrigID Setting (“Tagging”)**
Attesting to network trust in a caller lies at the heart of STIR/SHAKEN, as does call traceback in the event of compromise by a bad actor. Guaranteed Caller™ Cloud Connect provides unparalleled flexibility in selecting calls for each of A, B and C attestation levels. This same highly flexible selection capability is also applied to selecting calls for operator provisioned OrigID values.

As just a few examples, Cloud Connect can select calls for either or both of attestation and OrigID values by Trunk Group, by Routing Number, by individual TN (entire TN inventories can be bulk loaded if desired), by TN ranges and by partial TN (TN blocks). Similar constructs can be applied to SIP URIs and input/output VPNs. Specific to SS7, Cloud Connect adds OPC, DPC and CIC to the set of available selectors.

**On Net STIR/SHAKEN Bypass**
Guaranteed Caller™ Cloud Connect can optionally save service providers significant STIR/SHAKEN-related cloud charges by bypassing cloud processing entirely for on-net calls (calls originating and terminating in the service provider’s own network). In this case, all necessary STIR/SHAKEN processing is performed locally at Cloud Connect and no cloud dip fees apply.

Business Benefits – the STIR/SHAKEN “Easy Button”

STIR/SHAKEN network implementation can be slow, costly and complex, requiring network element upgrades, new supporting network elements and pervasive changes to call routing and call processing. Guaranteed Caller™ Cloud Connect simplifies all of that complexity, centralizing all cloud STIR/SHAKEN interfacing requirements into one central and non-intrusive network hub. In many cases, deploying a Cloud Connect element is all that is required to connect a network to its cloud STIR/SHAKEN provider.

Guaranteed Caller™ Cloud Connect also provides both SIP and TDM/SS7 support “out of the box”, including full support for the TDM-enabling Call Placement Service (STI-CPS). This means that businesses purchasing TDM-SHAKEN compatible cloud STIR/SHAKEN services, such as NetNumber’s Guaranteed Caller™, can cover both the IP and non-IP portions of their network right away, without need of additional technologies to meet FCC robocall mitigation requirements.
ATIS 1000082 Compliant
Guaranteed Caller™ Cloud Connect is fully ATIS 1000082 compliant.

Telco Grade Reliability
Guaranteed Caller™ Cloud Connect is available as a telco-grade appliance or as a VM.

Low Cost, High Performance
Guaranteed Caller™ Cloud Connect is offered at a surprisingly low price while despite more than enough performance for the largest of service provider networks.

Highly Configurable Call Attestation Setting
STIR/SHAKEN relies on accurate call attestation. Guaranteed Caller™ Cloud Connect provides a rich set of call selectors for setting attestation levels, ensuring that this critical value is set in compliance with local network policy.

Highly Configurable OrigID Setting
The STIR/SHAKEN OrigID value supports traceback of calls that received an incorrect attestation level. Guaranteed Caller™ Cloud Connect provides a rich set of call selectors for setting OrigID in conformance to local network policies.

On Net STIR/SHAKEN Bypass
Not all calls need to be signed to be known free from CLI spoofing. Unnecessary call signing may equate to unnecessary OPEX. Guaranteed Caller™ Cloud Connect provides highly configurable call signing selection, allowing service providers to optionally bypass cloud STIR/SHAKEN processing for known on-net calls. This can save service providers significant unnecessary expense.

SIP and ISUP Support
Guaranteed Caller™ Cloud Connect supports both SIP and ISUP simultaneously, allowing one network element to cover both the IP and non-IP portions of the network with STIR/SHAKEN. ISUP is supported over T1/E1 links and over SIGTRAN. Up to 8 T1/E1 links can be connected per Cloud Connect.

TDM-SHAKEN Support
Guaranteed Caller™ Cloud Connect includes full support for TDM-SHAKEN including all draft standard interactions with the STI-CPS cloud call repository.

Low Impact Network Deployment
Guaranteed Caller™ Cloud Connect is based on NetNumber’s field-hardened TITAN technology, deployed in major service provider networks around the world. TITAN supports all common network element topologies, and so Cloud Connect can be deployed in a variety of network roles, allowing it to adopt whatever network role best minimizes the STIR/SHAKEN introduction impact.

Guaranteed Caller™ Cloud Connect can be deployed as:
- SIP Redirect Server
- SIP Proxy Server
- Class 4/5 IP or TDM session control element
- IN SSP
- IN STP
- IN SCP
- Network Monitor

Many other deployment models are possible and supported.

Contact NetNumber Today
Please visit www.netnumber.com for product or solution information. For configuration and pricing details, please contact your local account representative via sales@netnumber.com.

About NetNumber

NetNumber, Inc. brings two decades of experience delivering innovative signaling control solutions that enable carriers to accelerate implementation of new services across multiple generations of networks, while dramatically simplifying the core network and reducing operating costs. Today, we are the leading provider of Centralized Signaling and Routing Control (CSRC) solutions to the global communications industry.

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