

Delegate Certificates for CSPs

**Help Your Enterprise Customers
Increase Answer Rates with Delegate
SHAKEN End Entity Certificates**

Enterprises Can Now Sign Calls with Newly Approved Delegate SHAKEN End Entity Certificates!

The global telecom industry has invested over \$5 trillion in the network infrastructure in the past 20 years. However, the call experience has not improved. The onslaught of robocalls, calls spoofing, and fraud have wreaked havoc on the phone channel.

Many legitimate enterprise calls to customers don't even get through because the Communications Service Provider (CSP) signed the calls with a low STIR/SHAKEN attestation level-causing them to be mis-tagged as spam or blocked. According to recent customer data, over half of business calls are not signed with an attestation level of "A".

It's critical that CSPs address this growing concern, since [close to 30% of their revenues are attributable to enterprises](#).



With the approval and implementation of Delegate Certificates by the STI-PA and STI-GA in October 2021, enterprises are now able to sign their own calls. That means their calls will get higher attestation levels, ensuring they are less likely to get mis-tagged as spam or blocked.

Through the use of Delegate SHAKEN End Entity Certificates, CSPs can both speed implementation of STIR/SHAKEN call authentication across the ecosystem, support enterprises, restore trust to phone calls, and pave the way for more advanced features like branded calling that transform the phone channel.

Read the eBook: [Outbound Calls Being Marked as Spam or Blocked? Find Out What You Can Do About It!](#)



How Attestation Works

Attestation levels are determined by the Originating Service Provider (OSP) that initiates the call. To determine the attestation level, the OSP considers:

- **The relationship they have with the enterprise:**
Is this enterprise my customer?
- **The phone number:** Did I give this Telephone Number (TN) to the enterprise.

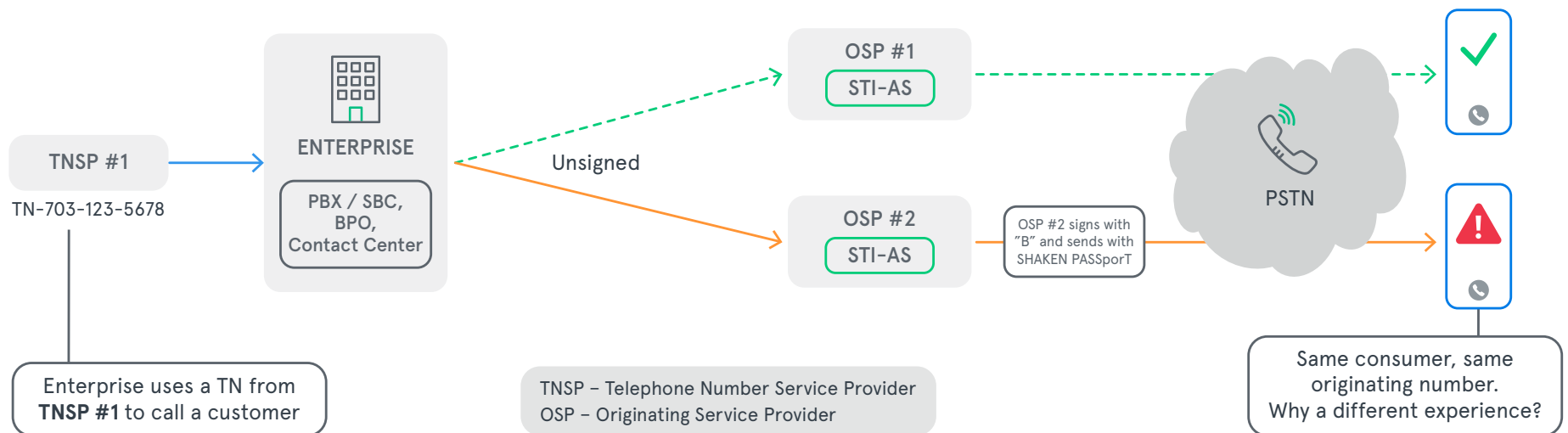
Read the eBook: [Overcoming the Attestation Gap.](#)
[A Technical Guide for CSPs and Enterprises.](#)

THE PROBLEM

Same TN, Different Results

A common situation is when an enterprise obtains a TN from a service provider other than the OSP. The OSP has no way of knowing if the enterprise is authorized to use that TN. As a result, an enterprise call to the same customer, using the same originating number, can have different results.

As shown below, OSP #2 does not recognize the TN as one they gave the enterprise, therefore they give the call a “B” attestation level, while OSP#1 gives the call an “A” because they provided the telephone number to the enterprise.



THE SOLUTION

Delegate SHAKEN End Entity Certificates = Same Result

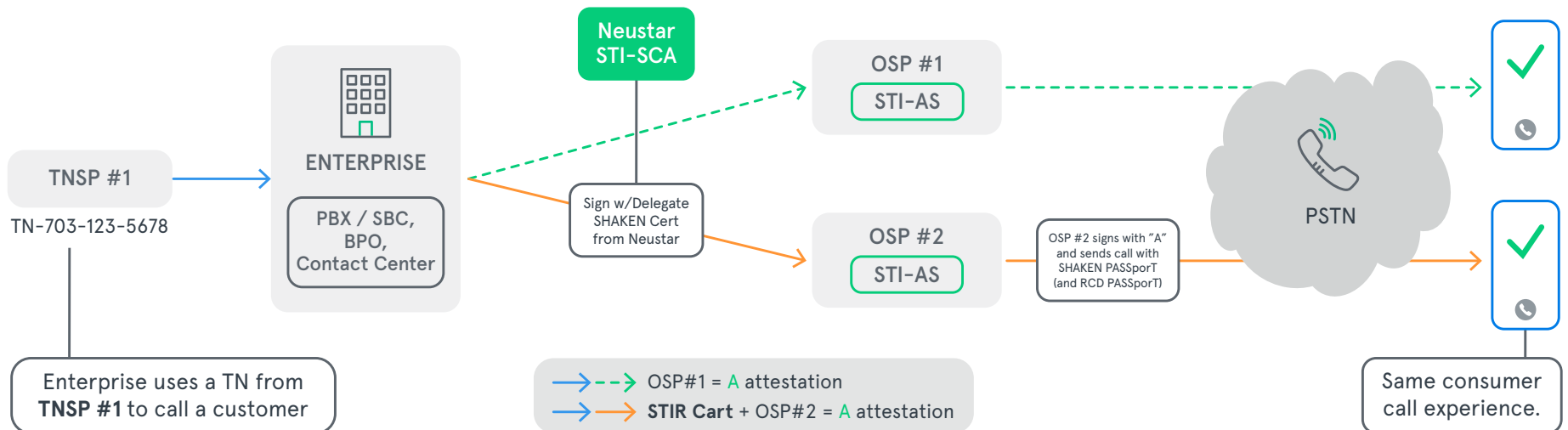
There are several options to resolve this, including the use of Delegate SHAKEN End Entity Certificates. As you can see below, the enterprise alerts the OSP via a Delegate SHAKEN End Entity Certificate that the enterprise has been vetted, and is authorized to use the TN, so both OSPs sign the call with an "A".



SOLUTION: Enterprise signs call with a Delegate SHAKEN End Entity Certificate

WHY? Both calls receive Attestation A

- a) OSP#1 signs call normally
- b) OSP#2 signs with A because STIR certificate alerts OSP that enterprise has been vetted, and is authorized to use this TN





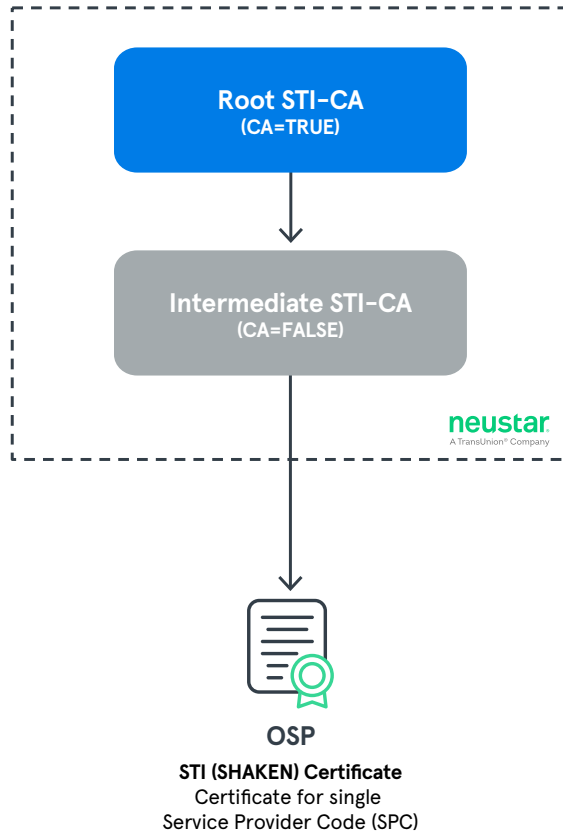
STIR/SHAKEN Certificate Process Differs From Delegate SHAKEN End Entity Certificates

As shown in the image that follows, on the left side, the Certificate request goes from the Root STI-CA, through the Intermediate STI-CA, which delivers the SHAKEN Certificate—with a single service provider code—to the OSP. However, on the right side you can see there's an additional step to create a Delegate SHAKEN End Entity Certificate that the enterprise can use to sign their own calls.

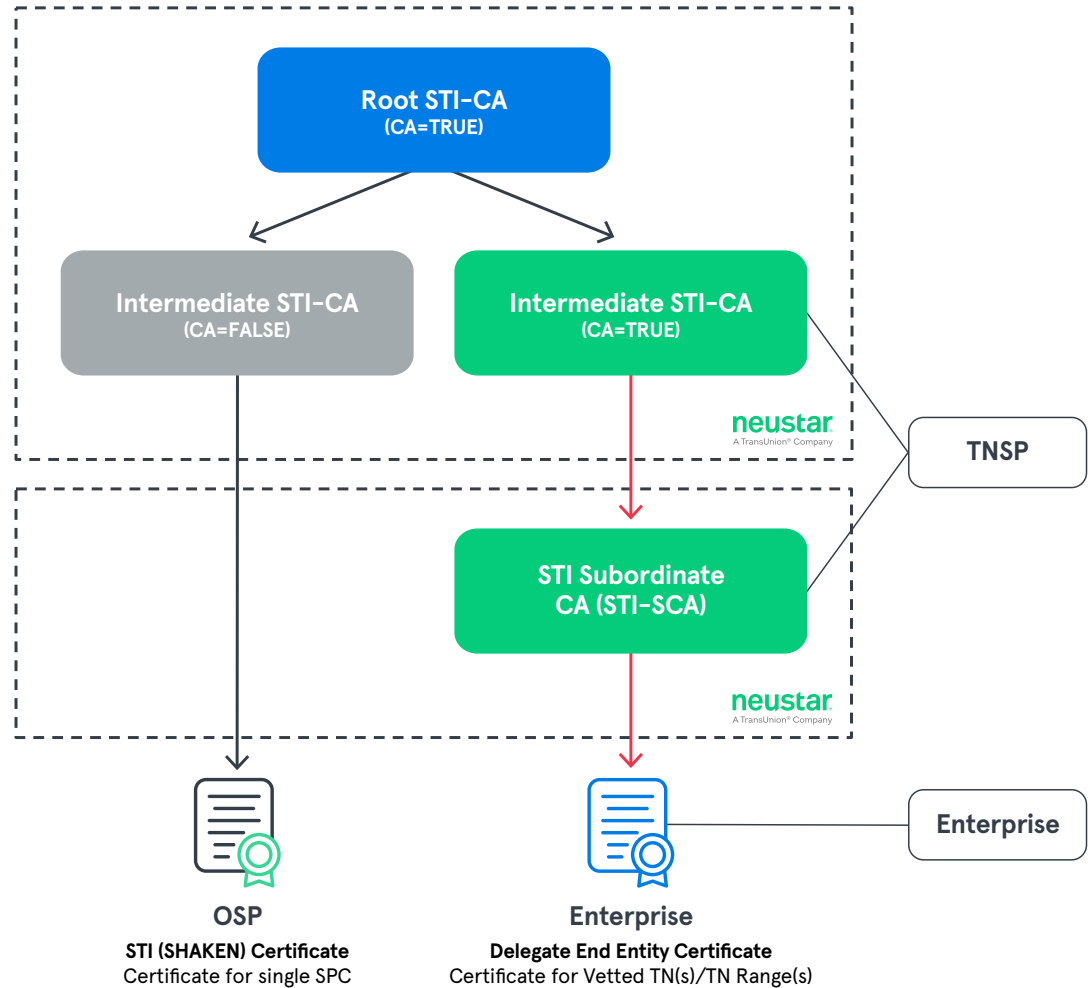
To achieve this, the owner of the TN, the Telephone Number Service Provider (TNSP), must leverage an STI Subordinate Certification Authority (STI-SCA) hosting service which issues Delegate SHAKEN End Entity certificates to TNSP customers.

STI-CA AND STI-SCA FOR DELEGATE CERTIFICATES

STI-CA Pre-10/22 U.S. STI-PA Release



STI-CA & STI-SCA Post-10/22 U.S. STI-PA Release



Ensure Your Enterprise Customers' Calls Get Answered!

Neustar, a TransUnion company, is a pioneer in call authentication as the co-author of STIR standards and early contributor to the SHAKEN framework, and we play an ongoing leadership role in defining industry standards with ATIS, IETF, and CRTC. We provide the industry's reference implementation of STIR/SHAKEN as the exclusive operator of the ATIS Robocalling Testbed, where real world STIR/SHAKEN implementations are being tested for interoperability, and Neustar leads the industry in commercial call authentication deployments.

Visit our [STIR/SHAKEN Resource Hub](#) to learn about insights, resources, and solutions.

Email callerid@team.neustar to learn more.

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