TouchTone
communications

Restore Call Confidence with STIR/SHAKEN

Help your customers feel more comfortable with answering your calls.

TouchTone has adopted STIR/SHAKEN, industry standards designed to reduce spam robocalls, across its IP voice solutions.

STIR/SHAKEN is not only designed to help protect consumers against spam robocalls, but to also give our enterprise/business customers the confidence in knowing that their calls are more likely to get answered.

How will STIR/SHAKEN benefit you?

With the rise of robocalls and spoofing scams, more and more consumers are opting not to answer calls from unknown numbers - even if they are indeed legitimate. With STIR/SHAKEN, authentication is built right into our solutions so that your customers can feel more confident in answering your calls, rather than ignoring or blocking them all together.

Reduce Robocalls

Identify inbound robocalls to your contact center and interactive voice response system

Increase Voice Security

Help customers know who is really calling with trusted Caller ID data

SPAM Protection

Increase answer rates by reducing the number of legitimate calls marked as spam

Enhance Customer Experience

Leverage automated voice authentication and extend voice self-service options

In addition to the adoption of STIR/SHAKEN, TouchTone has also executed additional protocols to help further prevent, detect and mitigate illegal robocalls. The company's goal is to improve the overall customer experience and increase consumer confidence in picking up a phone call.

What is STIR/SHAKEN?

STIR/SHAKEN is a carrier-based Caller ID authentication that requires carriers to digitally sign calls originated by their customers. Its main purpose is to help combat illegal caller ID spoofing, which scammers use to trick people into answering their phones. Spoofing is when a caller deliberately falsifies the information transmitted to your caller ID display to disguise their identity. With neighborhood spoofing, scammers use a local number for Caller ID from a company or a government agency that you may already know and trust.

So how does STIR/SHAKEN work.
STIR stands for Secure Telephone Identity Revisited, and SHAKEN stands for Secure Handling of Asserted information using toKENs.

TOGETHER, THEY ARE AUTHENTICATION STANDARDS THAT HELP TO VERIFY THAT CALLS COME FROM A REAL CALLER ID INSTEAD OF A SPOOFED OR FAKE CALLER ID.

In short, calls traveling through interconnected phone networks would have their caller ID "signed" as legitimate by originating carriers and validated by other carriers before reaching consumers. STIR/SHAKEN uses the same public-key cryptography process that secures e-commerce websites. **For additional information on the levels of verification, see "Attestation Levels" chart.**

Additionally, STIR/SHAKEN helps to identify the source of illegal robocalls in order to reduce their frequency and impact. It gives greater accuracy of caller ID information and allows voice service providers, such as TouchTone, to provide helpful information to their consumers about which calls to answer.

STIR/SHAKEN is not the same as call blocking.

With STIR/SHAKEN, attestation ratings are used by the carrier's analytics partner as an input into its blocking algorithm. These algorithms take into account hundreds of variables including complaints, calling patterns, call duration, etc.

STIR/SHAKEN offers accountability for number use and helps to reduce legitimate calls from being blocked.

How STIR/SHAKEN works in TouchTone's network.

1 SIP INVITE is received by originating service provider checks the call source (customer) and calling number to determine how to attest for the validity of the calling number (full, partial or gateway). **See "Attestation Levels" for additional information.**

2 Originating service provider sends SIP INVITE to the authentication service.

3 Authentication service returns SIP INVITE with SIP Identity Header containing PASSporT header, PASSporT payload, PASSporT signature, encryption algorithm and location of certificate repository.

4 SIP INVITE with Identity header is sent to terminating service provider.

Call Flow
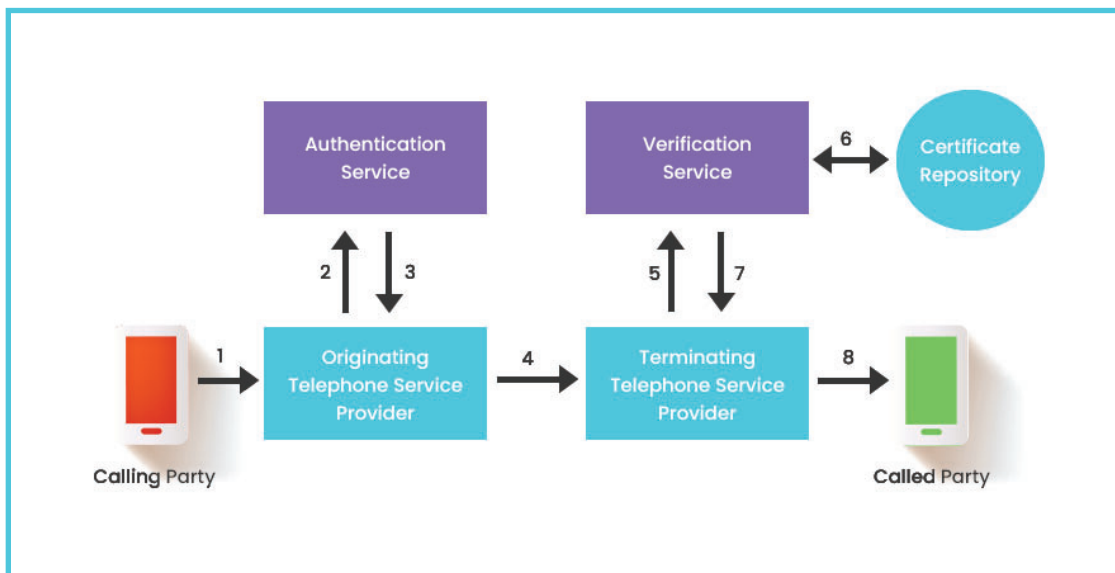
5 Terminating service provider sends SIP INVITE with Identity header to Verification Service.

6 Verification Service obtains the digital certificate with the public key, decodes the identity header and verifies that the originating service provider is authorized to originate calls for the calling number.

7 Verification Service returns results indicating whether the Identity Header was valid and whether telephone number validation passed, failed or wasn't performed.

8 Terminating service provider completes the call to the called party.

Attestation Levels

ATTESTATION LEVEL	INDUSTRY STANDARD (ATIS)	TOUCHTONE'S APPLICATION
A / Full	The service provider knows the calling party (customer) and they are authorized to use the calling number.	TouchTone Customer using a TouchTone owned or provided phone number.
B / Partial	The service provider knows the customer, but not the source of the phone number.	TouchTone Customer: • Using another provider's phone number • 3rd-party contact center using enterprise's phone number • Legitimate number spoofing (caller ID appears from one phone number but call is originated from another number)
C / Gateway	The service provider has originated the call onto the network, but can't authenticate the call source e.g., international gateway.	TouchTone will not attest any calls as "C" for customers.

Is STIR/SHAKEN something TouchTone can do for me, or do I have to do this on my own?

Customers will not need to do anything to take advantage of STIR/SHAKEN's attestation framework when implemented. If you procure your telephone numbers from TouchTone, and originate all calls on our network, then TouchTone can implement STIR/SHAKEN functionality on your behalf.

Otherwise, to take control of how your calls will be signed and to what attestation level, you will need to implement STIR/SHAKEN on your own. **For more information see "If you Choose to Sign Your Own Calls".**

What can I do to prepare for STIR/SHAKEN deployments?

✔ Ensure that TouchTone has all telephone numbers used from the calling platform registered; otherwise we cannot guarantee a level A attestation.

✔ Contact your TouchTone channel manager or Authorized TouchTone agent to learn more on how to schedule testing.

How will STIR/SHAKEN impact legitimate use cases of call spoofing (for example, displaying a toll-free number for service calls)?

With STIR/SHAKEN, legitimate use cases of call spoofing can still be verified if the carrier knows the customer has the right to spoof that number.
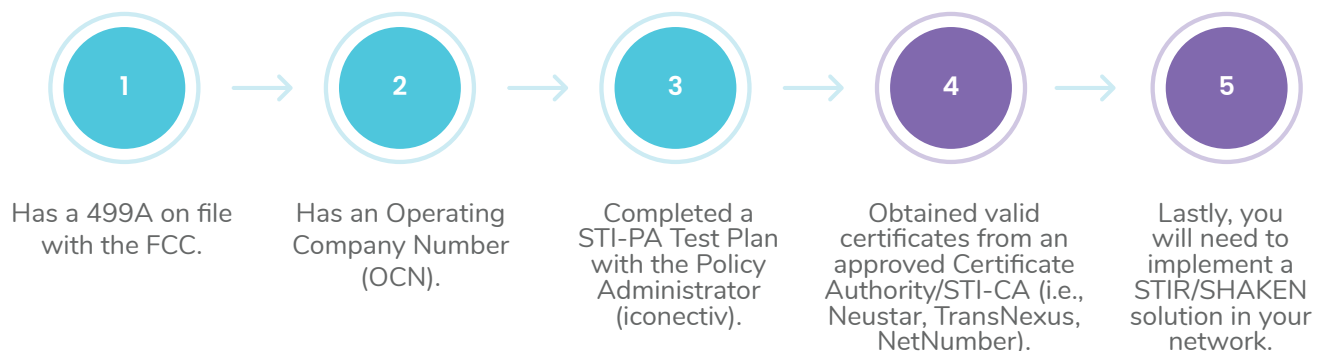
If you choose to sign your own calls.

While most of our customers work with TouchTone to deploy STIR/SHAKEN, some have begun the process of "call signing", or looking to obtain their own certificates. To support these customers, and in keeping with FCC mandates, TouchTone has developed a solution that will transmit the SIP identity headers to the terminating service provider so that the certificate information remains intact.

What is involved in signing your own calls.

You will need to be an Interconnected VoIP Provider (IVoIP) that has completed the following steps.

1 → **2** → **3** → **4** → **5**

1	2	3	4	5
Has a 499A on file with the FCC.	Has an Operating Company Number (OCN).	Completed a STI-PA Test Plan with the Policy Administrator (iconectiv).	Obtained valid certificates from an approved Certificate Authority/STI-CA (i.e., Neustar, TransNexus, NetNumber).	Lastly, you will need to implement a STIR/SHAKEN solution in your network.

Questions?

If you have questions, or would like to learn more about TouchTone's STIR/SHAKEN adoption, please contact your Authorized TouchTone Agent or email business.support@touchtone.net.

TouchTone
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