Introduction

Twilio Elastic SIP Trunking is a cloud-based solution that provides connectivity for IP-based communications infrastructure to connect to the PSTN for making and receiving telephone calls to the rest of the world via any broadband internet connection. Twilio's Elastic SIP Trunking service automatically scales, up or down, to meet your traffic needs with unlimited capacity. In just minutes you can deploy globally with Twilio's easy-to-use self-service tools without having to rely on slow providers.

Sign up for a free Twilio trial and learn more about configuring your Twilio Elastic SIP Trunk.

ProSBC is connects your IP-PBX to Twilio Elastic SIP Trunking. This article describes how to connect ProSBC to Twilio Elastic SIP Trunking.

Prerequisites

- ProSBC must be installed as described in their respective installation guides.
- Twilio Elastic SIP Trunking Account. Please visit the following link for more details about Twilio Elastic SIP Trunking

Typical Use Case for SIP Trunking with Twilio
## Configuration Steps:

<table>
<thead>
<tr>
<th>(Step 1) Create IP Network</th>
<th>(Step 2) Create Protocol Stack</th>
<th>(Step 3) Create Call Route</th>
<th>(Step 4) Create Twilio Elastic SIP Trunk</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Configuring an IP Virtual Port</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Configuring a VLAN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Configuring IP Interfaces</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Create an IP port range</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Create an IP port range</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Create a SIP stack</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Create a SIP transport server</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Modify profile</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Allocate a SIP NAP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Create a first call route</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Create a new IP ACL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Create a New Trunk</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Associate Phone numbers on your Trunk</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## NAP Configuration for Twilio Elastic SIP Trunking
In this example, we will use telcobridges.pstn.twilio.com trunk information:

**NOTE: Connection to Twilio Elastic SIP Trunking is available in multiple geographic edge locations. If you wish to manually connect to a specific geographic edge location that is closest to the location of your communications infrastructure, you may do so by pointing your communications infrastructure to any of the following localized Termination SIP URIs:**

- {example}.pstn.ashburn.twilio.com (North America Virginia)
- {example}.pstn.umatilla.twilio.com (North America Oregon)
- {example}.pstn.dublin.twilio.com (Europe Ireland)
- {example}.pstn.frankfurt.twilio.com (Europe Frankfurt)
- {example}.pstn.singapore.twilio.com (Asia Pacific Singapore)
- {example}.pstn.tokyo.twilio.com (Asia Pacific Tokyo)
- {example}.pstn.sao-paulo.twilio.com (South America São Paulo)
- {example}.pstn.sydney.twilio.com (Asia Pacific Sydney)

[Click here for more information on Twilio Elastic SIP Trunking IP Addresses](#)

**Route Configuration for Twilio Elastic Trunking**
See [Create a first call route](#)

In this example, we will create an outgoing and incoming routes for Twilio Elastic Trunk

### Route for outgoing to Twilio

![Configuration form](image)

**Creating New Route:**

- **Name**: ROUTE_2_TWILIO
- **Routeset Name**: 
- **Called**: 
- **Calling**: 
- **NAP**: IPPBX
- **Remapped Called**: 
- **Remapped Calling**: 
- **Remapped NAP**: TWILIO
- **Source call leg remapped Profile**: (same as NAP)
- **Destination call leg remapped Profile**: (same as NAP)

**Custom Parameters**

- **priority**: 
- **weight**: 
- **private_address**: 
- **remapped_private_address**: 
- **forward_sip_domain**: 
- **forward_sip_parameters**: 

[Create](#)
### Route for incoming from Twilio

#### Creating New Route:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>ROUTE_FROM_TWILIO</td>
</tr>
<tr>
<td>Routeset Name</td>
<td></td>
</tr>
<tr>
<td>Called</td>
<td></td>
</tr>
<tr>
<td>Calling</td>
<td></td>
</tr>
<tr>
<td>NAP</td>
<td>TWILIO</td>
</tr>
<tr>
<td>Remapped Called</td>
<td></td>
</tr>
<tr>
<td>Remapped Calling</td>
<td></td>
</tr>
<tr>
<td>Remapped NAP</td>
<td>IPPBX</td>
</tr>
<tr>
<td>Source call leg remapped Profile</td>
<td>(same as NAP)</td>
</tr>
<tr>
<td>Destination call leg remapped Profile</td>
<td>(same as NAP)</td>
</tr>
</tbody>
</table>

#### Custom Parameters

- priority
- weight
- private_address
- remapped_private_address
- forward_sip_domain
- forward_sip_parameters

Create
From your Twilio Console, navigate to the Elastic SIP Trunking area (or click on the icon on the left vertical navigation bar).

Create a new IP-ACL

Click on Authentication in the left navigation, and then click on IP Access Control Lists.
In this example an IP-ACL is created with the name: "MyExampleACL". Add your SBCs IP addresses to the IP-ACL you create.

Create a new Trunk

For each geographical region desired (e.g., North America, Europe), create a new Elastic SIP Trunk.

Now click on **Trunks** again on the left vertical navigation bar, and create a new Trunk.

Under the **General Settings** you can enable different features as desired.
Features

To learn more about SIP Trunking features, please see our user documentation.

Call Recording

Disabled
Calls will not be recorded.

Call Recording

Record from ringing

Recording Trim

Disabled
Silence will not be trimmed from recording

Secure Trunking

Disabled
RTP must be used for media packets. SIP messages may be sent unencrypted or encrypted using TLS. Any SRTP encrypted calls will be rejected

Call Transfer (SIP REFER)

Enabled
Twilio will consume an incoming SIP REFER from your communications infrastructure and create an INVITE message to the address in the Refer-To header

[ ] Enable PSTN Transfer
允许使用线路转移功能

Symmetric RTP

Enabled
Twilio will detect where the remote RTP stream is coming from and start sending RTP to that destination instead of the one negotiated in the SDP

Additional Features
In the **Termination** section, select a Termination SIP URI.

**Termination URI**

Configure a SIP Domain Name to uniquely identify your Termination SIP URI for this Trunk. This URI will be used by your communications infrastructure to direct SIP traffic towards Twilio. Be sure to select a localized SIP URI to ensure your traffic takes the lowest latency path. If a localized version isn't selected, then your traffic will be sent to US1. [Learn more about Termination Settings](#)

<table>
<thead>
<tr>
<th>TERMINATION URI</th>
<th>telcobridges.pstn.twilio.com</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Show Localized URIs</strong></td>
<td></td>
</tr>
</tbody>
</table>

Click on “Show localized URI’s” and copy and paste this information as you will use this on your SBC to configure your Trunk.

- **NORTH AMERICA VIRGINIA**  
  telcobridges.pstn.ashburn.twilio.com
- **NORTH AMERICA OREGON**  
  telcobridges.pstn.umatilla.twilio.com
- **EUROPE DUBLIN**  
  telcobridges.pstn.dublin.twilio.com
- **EUROPE FRANKFURT**  
  telcobridges.pstn.frankfurt.twilio.com
- **SOUTH AMERICA SAO PAULO**  
  telcobridges.pstn.sao-paulo.twilio.com
- **ASIA PACIFIC SINGAPORE**  
  telcobridges.pstn.singapore.twilio.com
- **ASIA PACIFIC TOKYO**  
  telcobridges.pstn.tokyo.twilio.com
- **ASIA PACIFIC SYDNEY**  
  telcobridges.pstn.sydney.twilio.com

or

Assign the IP ACL ("MyExampleACL") that you created in the previous step.
In the **Origination** section, we'll add Origination URI's to route traffic towards your TelcoBridges SBC. The recommended practice is to configure a redundant mesh per geographic region (in this context a region is one of North America, Europe, etc). In this case, we configure two Origination URIs, each egressing from a different Twilio Edge.

Click on ‘Add New Origination URI’, we'll depict the configuration for North America:
Continue to add the other Origination URIs if desired. Origination URIs are listed as follows:

**Origination URIs**

Configure the IP address (or FQDN) of the network element entry point into your communications infrastructure (e.g. IP-PBX, SBC).

Show more about provisioning for high service availability

<table>
<thead>
<tr>
<th>ORIGINATION URI</th>
<th>PRIORITY</th>
<th>WEIGHT</th>
<th>ENABLED</th>
</tr>
</thead>
<tbody>
<tr>
<td>sip:telobridges.com:edge=ashburn</td>
<td>10</td>
<td>10</td>
<td>✔</td>
</tr>
<tr>
<td>sip:telobridges.com:edge=umatilla</td>
<td>10</td>
<td>10</td>
<td>✗</td>
</tr>
</tbody>
</table>

In this example, Origination traffic is routed via Twilio’s Ashburn edge, if that fails then we'll route from Twilio’s Umatilla edge.

**Associate Phone Numbers on your Trunk**

In the **Numbers** section of your Trunk, add the Phone Numbers that you want to associate with each Trunk. Remember to associate the Numbers from a given country in the right Trunk. For example, associate US & Canada Numbers with the North American Trunk and European Numbers with the European Trunk etc.

**Numbers**

**Emergency Calling Update:** Each number must be associated with an emergency address with matching ISO Country. Please select numbers to enable from one country at a time.

<table>
<thead>
<tr>
<th>NUMBER</th>
<th>FRIENDLY NAME</th>
<th>COUNTRY</th>
<th>EMERGENCY CALLING STATUS</th>
<th>EMERGENCY ADDRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>+18321234567</td>
<td>375 BEALE ST 3rd floor suite, SF, CA, 94105</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>+16312345678</td>
<td>375 BEALE ST 3rd floor suite, SF, CA, 94105</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>+17650123456</td>
<td>Disabled</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Troubleshooting

Support resources, including access to the free TBwiki and TB Support Forum, can be found here: https://freesbc.telcobridges.com/support/