



ORACLE

Oracle SBC Configuration Template Outline for Genesys Pure Engage with Twilio Elastic SIP Trunking

Technical Application Note

ORACLE

COMMUNICATIONS



Disclaimer

The following is intended to outline our general product direction. It is intended for information purposes only, and may not be incorporated into any contract. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, and timing of any features or functionality described for Oracle's products remains at the sole discretion of Oracle.

Contents

1	INTENDED AUDIENCE	4
2	INTRODUCTION	4
3	REVISION HISTORY	4
4	DOCUMENT OVERVIEW	5
5	REQUIREMENTS	5
6	GENESYS PURE ENGAGE TWILIO TRUNK CONFIGURATION ASSISTANCE TEMPLATE	5
6.1	INITIAL GUI ACCESS	6
6.2	NETWORKING	8
6.2.1	Page 1-Genesys Pure Engage Network.....	8
6.2.2	Page 2-Twilio Elastic SIP Trunk Network.....	9
6.3	SECURITY	9
6.3.1	Page 3-Import DigiCert Root Trusted CA Certificate.....	9
6.3.2	Page 4 -SBC Certificates for Twilio side.	10
6.4	TRANSCODING	11
6.4.1	Page 5-Transcoding.....	11
6.5	ADDITIONAL CONFIGURATION.....	13
6.5.1	Page 6- Session translation capabilities.....	13
6.6	REVIEW	14
6.7	DOWNLOAD AND/OR APPLY.....	15
7	CONFIGURATION ASSISTANT ACCESS	16

1 Intended Audience

This document is intended for use by Oracle Systems Engineers, third party Systems Integrators, Oracle Enterprise customers, partners and end users of the Oracle Enterprise Session Border Controller (SBC).

Please note, applying a configuration to the SBC via the Configuration Assistant will overwrite any existing configuration currently applied to the SBC. **We highly recommend this only be used for initial setup of the SBC. This feature is not recommended to be used to make changes to existing configurations.**

2 Introduction

When you first log on to the E-SBC, the system requires you to set the configuration parameters necessary for basic operation. To help you set the initial configuration with minimal effort, the E-SBC provides the Configuration Assistant. The Configuration Assistant, which you can run from the Web GUI or the Acme Command Line Interface (ACLI), asks you questions and uses your answers to set parameters for managing and securing call traffic. You can use the Configuration Assistant for the initial set up to make to the basic configuration. See "Configuration Assistant Operations" in the [Web GUI User Guide](#) and "Configuration Assistant Workflow and Checklist" in the [ACLI Configuration Guide](#)

3 Revision History

Date	Document Version	Template Version	Comments
04-06-2021	1.0	1.0	Initial Revision

4 Document Overview

This Oracle document describes how to use our Configuration Assistant feature as a quick and simple way to configure the Oracle SBC for integration with Genesys Pure Engage and Twilio Elastic SIP Trunking.

These software releases with the configuration listed below can run on any of the following products:

- AP 1100
- AP 3900
- AP 4600
- AP 6350
- AP 6300
- VME

5 Requirements

- SBC running release SCZ840p5A or later
- TLS certificate for the SBC preferably in PKCS format, or access to Twilio supported CA to sign certificate once CSR is generated by the SBC. A list of supported CA's can be found [here](#).
- **The template can be downloaded from our app note link given below**
<https://www.oracle.com/technical-resources/documentation/acme-packet.html>

The template designed for Genesys Pure Engage and Twilio can be found under “Configuration Assistant Templates” section of the app note page.

6 Genesys Pure Engage Twilio Trunk Configuration Assistance Template

The following outline assumes you have established initial access to the SBC via console and completed the following steps:

- Configured boot parameters for management access
- Setup Product
- Set Entitlements
- Configured HTTP-Server to establish access to SBC GUI

For more information on how to complete the above, please refer to Section 6 of the [Oracle SBC integration with Genesys Pure Engage and Twilio Elastic Sip Trunking](#)

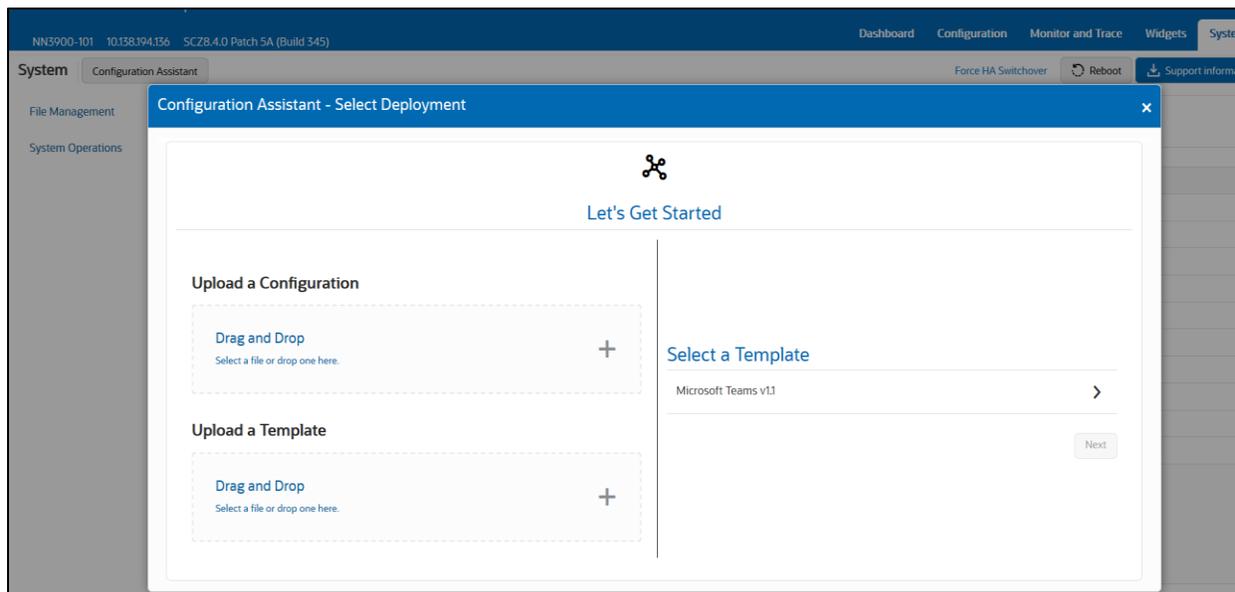
6.1 Initial GUI Access

The Oracle SBC WebGui can be accessed by entering the following in your web browser:

http(s)://<SBC Management IP>.

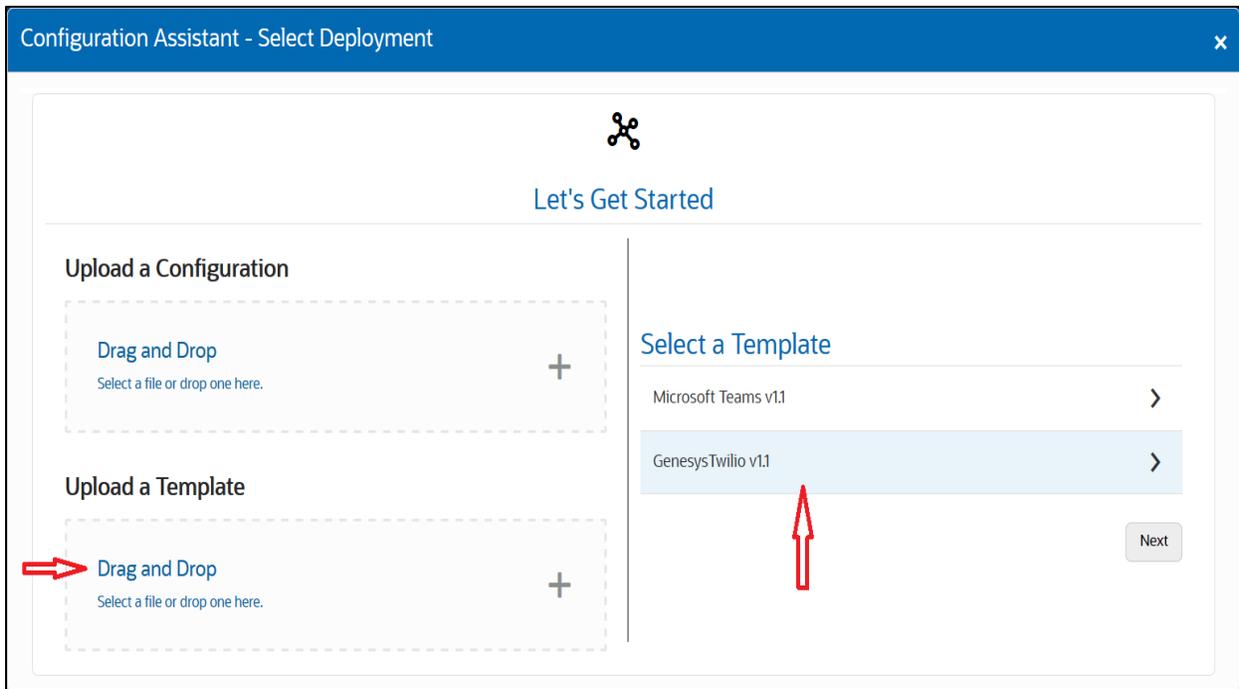
The username and password are the same as that of the CLI.

If there is no configuration on the SBC, the configuration assistant will show immediately upon login to the SBC GUI:

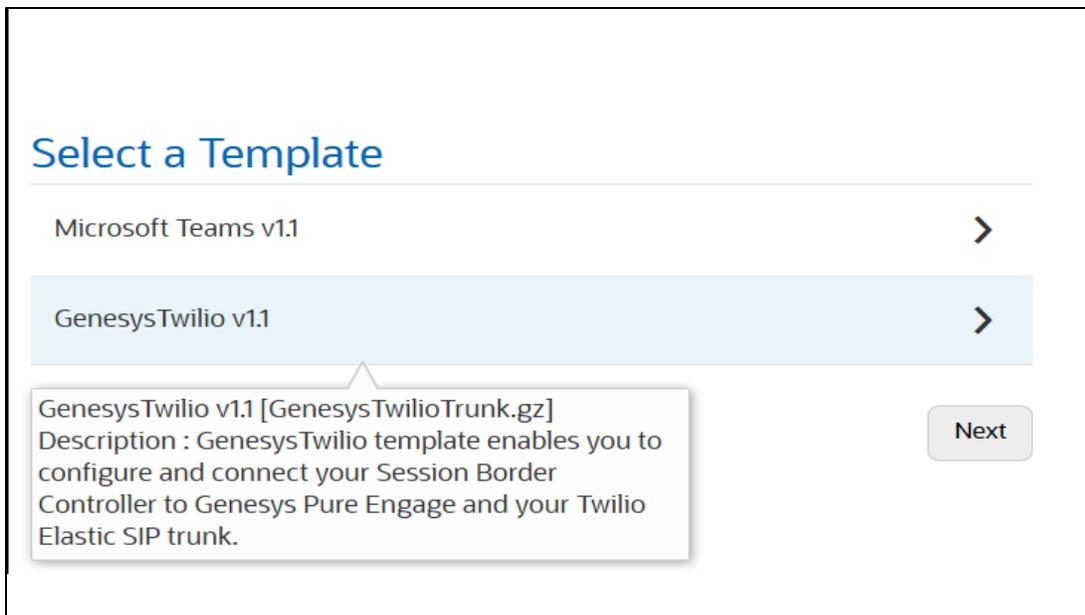


As you can see in the screen shot above, on the right side, Microsoft Teams is already listed under “Select a Template” which is the default template along with this patch. Please select “Upload a Template” tab on left hand side and select the Genesys Twilio template downloaded from the app note site to upload that to the SBC. **The template downloaded from the app note site will be in .gz(zipped) format.**

As an alternate, the template file downloaded from the site can also be loaded to /code/configAssistant/templates folder of the SBC using WinSCP or any file transfer software. Once done, the template shows up under Select Template tab as shown below.



Once you highlight “GenesysTwilio v1.1” template, you will see a pop up with the filename and description of the templates purpose:



Click **Next**. The following “Notes” will be displayed.

Notes

Warning:

- Proceeding with the Configuration Assistant results in erasing the existing configuration.

Pre-requisites:

- Connect Port 0 and Port 1 of the Session Border Controller (SBC) to your network.
- Add the SRTP license to the system.
- Enable the Advanced entitlement on the system.
- Set Session Capacity in the entitlement.
- Set the system time.
- This Template creates a basic configuration required to interwork between Twilio Elastic SIP Trunk and Genesys Pure Engage on the SBC. Some parameters are subjected to change depending upon each network setup. Please modify/configure them manually via the WebGUI/CLI in your system.

Recommendations:

- Obtain a signed certificate in PKCS12 format from your Certificate Authority.

OK

Click OK at the bottom.

6.2 Networking

6.2.1 Page 1-Genesys Pure Engage Network

Page 1 of the template is where you will configure the network information that connects to Genesys Pure Engage side. The top entry box on this page, “Genesys Session Agent IP/hostname”, in this field is where you will enter the next hop IP address/hostname for sip signaling to and from your Genesys Pure Engage.

Configuration Assistant - Genesys Pure Engage Network

< Back 1 2 3 4 5 6 Skip >

Genesys Pure Engage Network Twilio Elastic SIP Trunk Network Root Trusted Certificate for Twilio SBC Certificate for Twilio Transcoding Additional Configuration

Let's configure the Session Agent and the network interface that communicates with Genesys Pure Engage Side

Genesys Session Agent IP/hostname Required

Genesys Session Agent Port Required

Port Number Required

Slot Number Required

Network IP Address Required

Next to each field is a help icon. If you hover over the icon, you will be provided with a description or definition of each field. Also, pay close attention to which fields are listed as “required”.

6.2.2 Page 2-Twilio Elastic SIP Trunk Network

Page 2 of the template is where you will configure the network that connects to Twilio Elastic SIP trunking.

The top entry box on this page, “Twilio Session Agent IP/hostname”, in this field is where you will enter the next hop IP address/hostname for sip signaling to and from your Twilio Elastic SIP trunk.

Configuration Assistant - Twilio Elastic SIP Trunk Network

Progress: 1. Genesys Pure Engage Network (Completed), 2. Twilio Elastic SIP Trunk Network (Current), 3. Root Trusted Certificate for Twilio, 4. SBC Certificate for Twilio, 5. Transcoding, 6. Additional Configuration

Let's configure the Session Agent and the network interface that communicates with the Twilio Elastic SIP Trunk

Twilio Session Agent IP/hostname [?]

Required

Twilio Session Agent Port [?]

Required

Port Number [?]
Port 1
Required

Slot Number [?]
Slot 0
Required

Network IP address [?]

Required

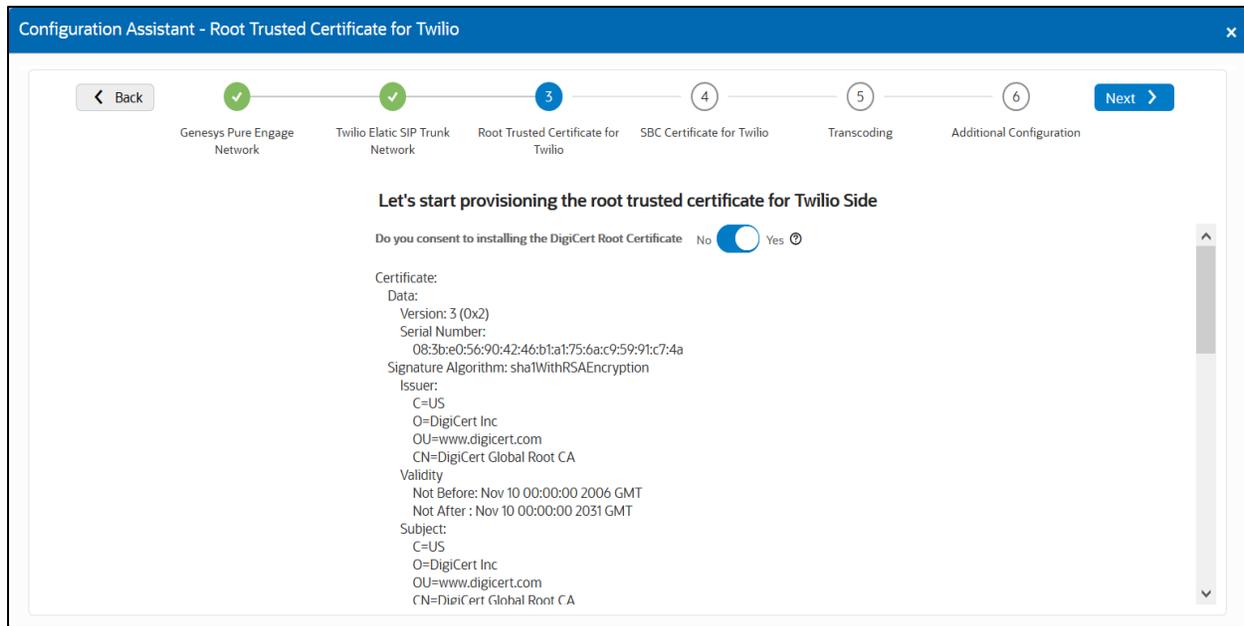
Buttons: Back, Skip

Once all required boxes are populated on each page, Top Right, *Skip* becomes *Next*. Click *Next* to proceed to the next page of the template.

6.3 Security

6.3.1 Page 3-Import DigiCert Root Trusted CA Certificate

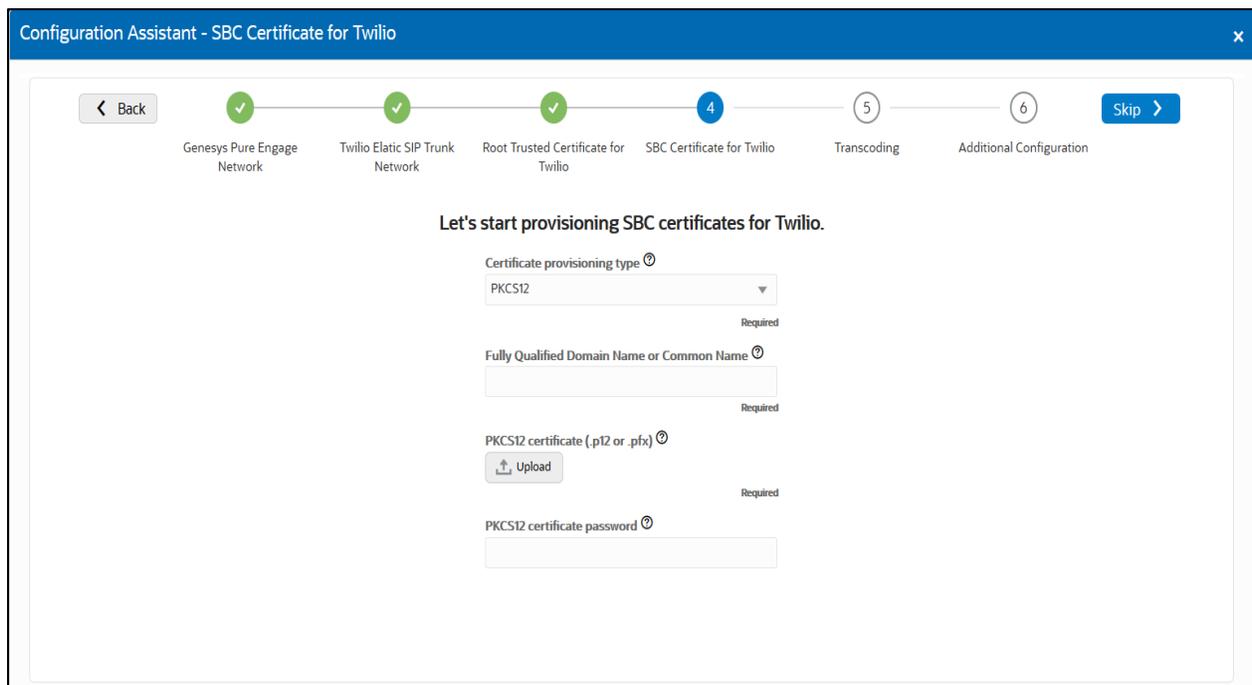
Page 3 of this template is where the SBC will import the DigiCert Root CA certificate, which Twilio side use to sign the certs it presents to the SBC during the TLS handshake.



Importing the DigiCert Root CA certs is enabled by default.

6.3.2 Page 4 -SBC Certificates for Twilio side.

Page 4 of this template is where you will either import or create a tls certificate for the SBC for Twilio trunk side.



6.3.2.1 PKCS12 Import

By default, the SBC is set to import a certificate in PKCS 12 format. This is the simplest and recommended way to add a certificate to the Oracle SBC. Using this method, you will add the SBC's hostname under "FQDN or Common Name" field, upload a certificate from Twilio supported CA, and enter the certificates password.

6.3.2.2 Certificate Signing Request (CSR)

The alternative to importing a PKCS12 certificate to the SBC is to configure a certificate and generate a certificate signing request that you will have signed by Twilio supported CA.

Configuration Assistant - SBC Certificate for Twilio

Back | Genesys Pure Engage Network | Twilio Elastic SIP Trunk Network | Root Trusted Certificate for Twilio | **4** | 5 | 6 | Skip

Let's start provisioning SBC certificates for Twilio.

Certificate provisioning type [ⓘ]
CSR Required

Fully Qualified Domain Name or Common Name [ⓘ]
 Required

Country [ⓘ]

State [ⓘ]

Locality [ⓘ]

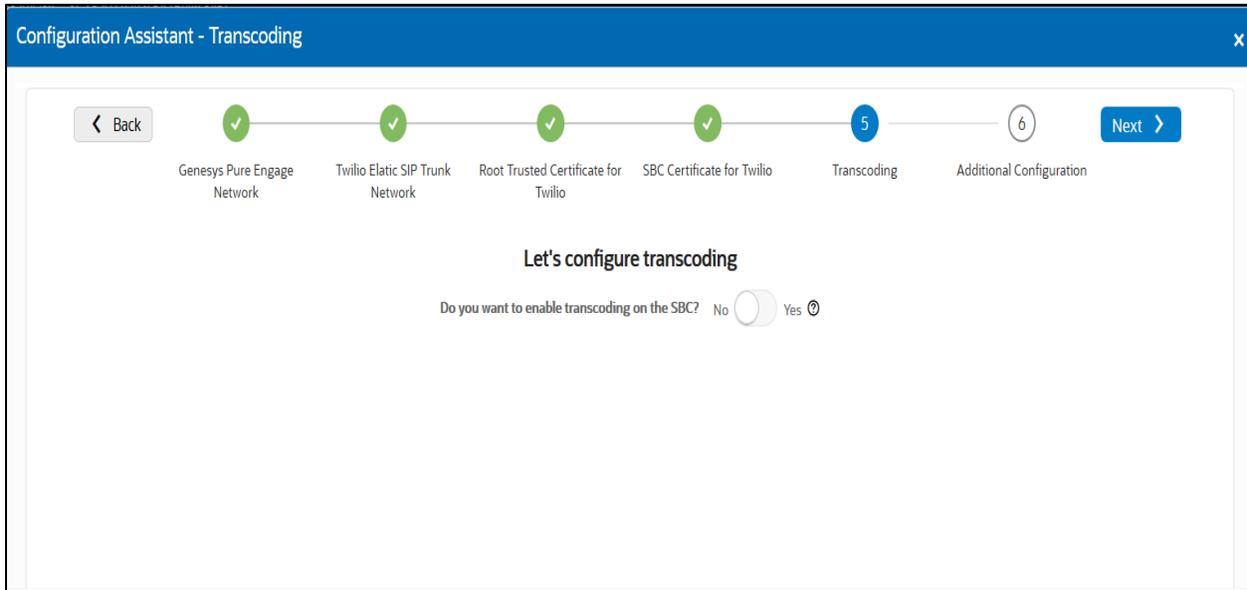
Organization [ⓘ]

Same as PKCS12, you will enter the SBC's hostname under "FQDN or Common Name" field (required) and answer the remaining question presented on this page (optional).

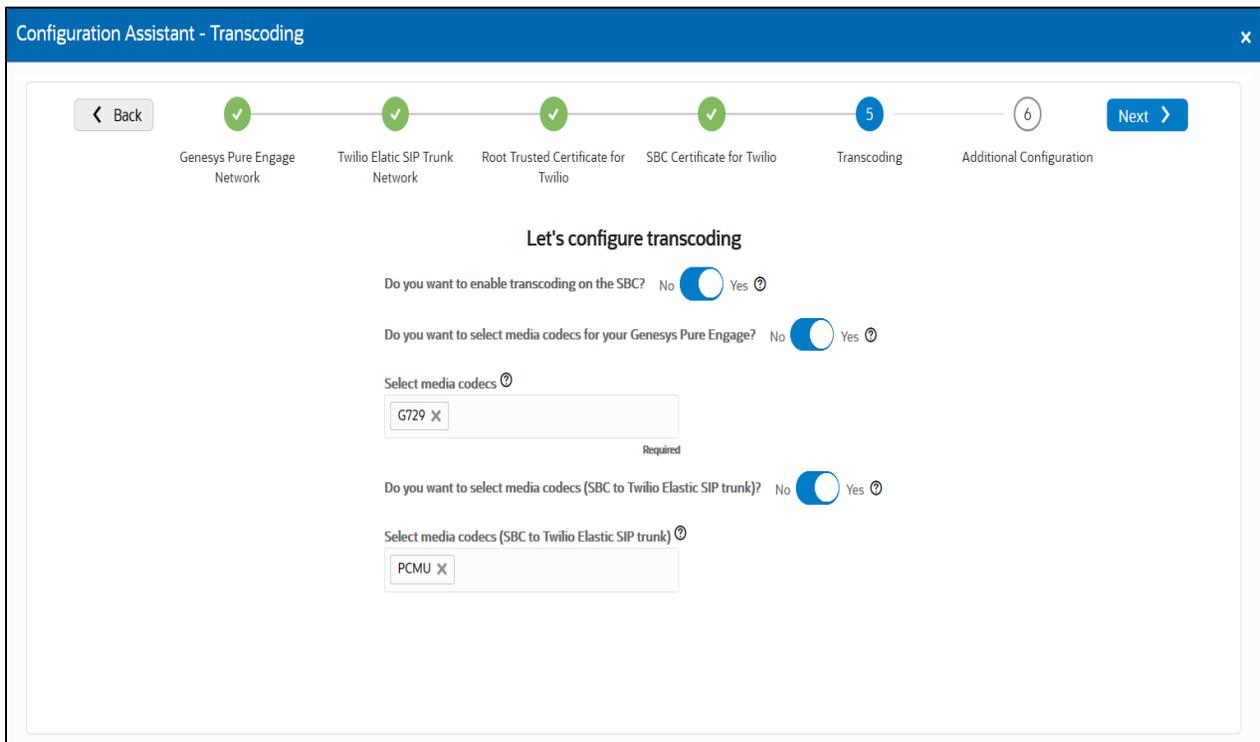
6.4 Transcoding

6.4.1 Page 5-Transcoding

Page 5 is where you will be able to configure transcoding between the SBC and Pure Engage side, and/or between your Twilio Elastic SIP trunk and Pure Engage Side.



If you select yes to either question regarding media codecs, you will be presented with a required drop down. You can select as many codecs from the list presented as you would like for each side. Please note that we have created default set of Codec Profiles on the SBC. If this does not suit your Network requirement you can skip the section and configure relevant Codec-Policy on the SBC manually through the WebGUI or the CLI configuration.



6.5 Additional Configuration

6.5.1 Page 6- Session translation capabilities

Page 6 is where you will be able to configure Session translation capabilities for Genesys Pure Engage side and Twilio Elastic SIP trunk Side.

Configuration Assistant - Additional Configuration

Back

Genesys Pure Engage Network

Twilio Elastic SIP Trunk Network

Root Trusted Certificate for Twilio

SBC Certificate for Twilio

Transcoding

6 Additional Configuration

Review

Let's configure session translation capabilities

Do you want to enable session translation on your Twilio Elastic SIP trunk? No Yes

Do you want to enable session translation towards Genesys Pure Engage? No Yes

Configuration Assistant - Additional Configuration

Back

Genesys Pure Engage Network

Twilio Elastic SIP Trunk Network

Root Trusted Certificate for Twilio

SBC Certificate for Twilio

Transcoding

6 Additional Configuration

Review

Let's configure session translation capabilities

Do you want to enable session translation on your Twilio Elastic SIP trunk? No Yes

Select your operation

Add

Do you want to enable session translation? +1

Do you want to enable session translation towards Genesys Pure Engage? No Yes

Select your operation

Remove

Do you want to enable session translation? +1

6.6 Review

At the end of the template, you will notice in the top right, a “*Review*” tab. If all 6 pages presented across the top are showing green, indicating there are no errors with the information entered, click on the “*Review*” tab:

The screenshot shows the 'Configuration Assistant - Summary' window. It is divided into three main sections:

- Genesys Pure Engage Network:** A table with configuration parameters and their values, including Genesys Session Agent IP/hostname (172.18.0.124), Port Number (172.18.0.124), Network IP Address (10.232.50.68), and DNS Domain.
- Twilio Elastic SIP Trunk Network:** A table with configuration parameters and their values, including Twilio Session Agent IP/hostname (oracle.pstn.twilio.com), Port Number (172.18.0.124), and DNS Domain.
- Generated Configuration:** A text area displaying the complete CLI output for the SBC, including certificate records, codec policies, and local policies. A 'Copy' button is visible next to the output.

At the top right of the window, there are 'Download' and 'Apply' buttons. Each network configuration section has an 'Edit' button.

On the left side of the review contains the entries for each page. Each page has an “*Edit*” tab that can be used to make changes to the information entered on that specific page without having to go through the entire template again.

On the right side of the review page, under the “*Generated Config*” tab is the ACLI output from the SBC. This is the complete configuration of the SBC based on the information entered throughout the template.

Also on the right side of the review page you may see another tab, “*TwilioCSR CSR*”.

On Page 4 of the template, if you chose CSR from the drop down menu instead of PKCS, the SBC configures a certificate record and generates a certificate signing request for you.

Click the copy button under the CSR, and paste the output into a text file. Next, provide the txt file to your CA for signature. Once the certificate is signed by Twilio supported CA, you will need to import that certificate into the SBC manually, either via ACLI or through the GUI.

Note: if you chose to import a certificate in PKCS12 format, the CSR tab will not be present under review.

6.7 Download and/or Apply

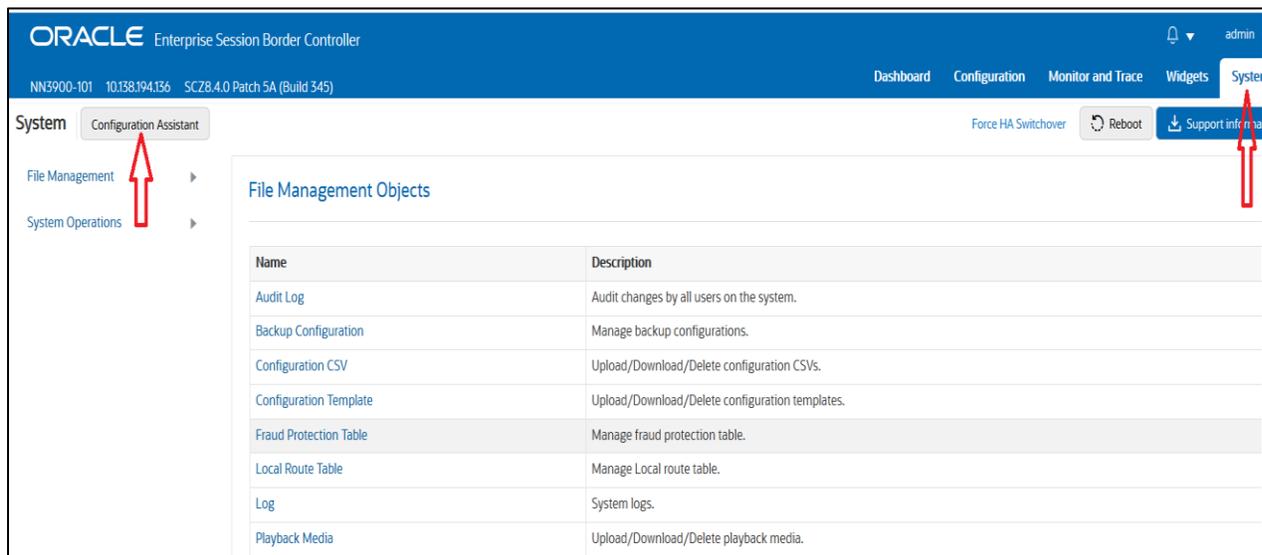
Now that the entries provided throughout the template have been reviewed, and the CSR has been copied into a text file (optional), the template provides you with the ability to “Download” the config by clicking the “**Download**” tab on the top right. Next, click the “**Apply**” button on the top right, and you will see the following pop up box appear:

Now you can click “*Confirm*” to confirm you want to apply the configuration to the SBC. The SBC will reboot. When it comes back up, the SBC will have a basic configuration in place for Genesys Pure Engage and Twilio.

7 Configuration Assistant Access

Upon initial login, if the Configuration Assistant Template does not immediately appear on the screen, you can access by clicking on the “*SYSTEM*” tab, top right of your screen.

Next, click on the “*Configuration Assistant*” tab, top left.



The screenshot displays the Oracle Enterprise Session Border Controller (SBC) GUI. The top navigation bar includes the Oracle logo, the product name "Enterprise Session Border Controller", and the user "admin". Below this, the system information "NN3900-101 10.138.194.136 SCZ8.4.0 Patch 5A (Build 345)" is shown. The main navigation tabs are "Dashboard", "Configuration", "Monitor and Trace", "Widgets", and "System". The "System" tab is active, and the "Configuration Assistant" sub-tab is selected. The left sidebar shows "File Management" and "System Operations" with red arrows pointing to them. The main content area displays "File Management Objects" with a table of system objects.

Name	Description
Audit Log	Audit changes by all users on the system.
Backup Configuration	Manage backup configurations.
Configuration CSV	Upload/Download/Delete configuration CSVs.
Configuration Template	Upload/Download/Delete configuration templates.
Fraud Protection Table	Manage fraud protection table.
Local Route Table	Manage Local route table.
Log	System logs.
Playback Media	Upload/Download/Delete playback media.

This allows end users to access the Configuration Assistance at any time through the SBC GUI.



CONNECT WITH US

 blogs.oracle.com/oracle

 facebook.com/Oracle/

 twitter.com/Oracle

 oracle.com

Oracle Corporation, World Headquarters

500 Oracle Parkway
Redwood Shores, CA 94065, USA

Worldwide Inquiries

Phone: +1.650.506.7000
Fax: +1.650.506.7200

Integrated Cloud Applications & Platform Services

Copyright © 2021, Oracle and/or its affiliates. All rights reserved. This document is provided for information purposes only, and the contents hereof are subject to change without notice. This document is not warranted to be error-free, nor subject to any other warranties or conditions, whether expressed orally or implied in law, including implied warranties and conditions of merchantability or fitness for a particular purpose. We specifically disclaim any liability with respect to this document, and no contractual obligations are formed either directly or indirectly by this document. This document may not be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose, without our prior written permission.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group. 0615