

# Interface Control Document Genesys Cloud CX<sup>™</sup> with E911 Anywhere<sup>®</sup>

Version 1.1 | August 11<sup>th</sup>, 2022

© 2022 by RedSky Technologies, Inc., All rights reserved.



No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written permission of RedSky Technologies, Inc., except in the case of brief quotations embodied in critical reviews and certain other noncommercial uses permitted by copyright law. For permission requests, write to the RedSky Technologies, Inc., addressed "Attention: Permissions Coordinator," at the address below.

#### RedSky Technologies, Inc.

333 North Michigan Avenue, Suite 1600 Chicago, IL 60601 <u>www.redskye911.com</u>

E911 Anywhere<sup>®</sup> and Horizon Mobility<sup>®</sup> are registered trademarks of RedSky Technologies, Inc.

Genesys Cloud CX<sup>™</sup> is a registered trademark of Genesys



#### Table of Contents

1.	Intr	oduction	. 5
2.	Solu	ution Design Diagram	. 6
3.	Syst	tem Requirements	. 7
4.	Net	work Requirements	. 7
5.	Ger	nesys Cloud CX Configuration	. 8
	5.1.	Configure an External Trunk	. 8
	5.2.	Create a New Number Plan	12
	5.3.	Create an Outbound Route	13
6.	Ref	erences	14

### Table of Figures

Figure 1: Call flow of emergency calls routed from Genesys Cloud	6
Figure 2: External Trunk Configuration Options	8
Figure 3: SIP Servers or Proxies Configuration	9
Figure 4: Example Prioritized Caller Selection	10
Figure 5: SIP Access Control Configuration	10
Figure 6: Custom SIP Header Configuration	11
Figure 7: HELD Company ID found within RedSky portal	11
Figure 8: Number Plan Configuration	12
Figure 9: Outbound Route Configuration	13



## **Revision History**

Date	Version	Revision	Made By
05/24/2022	1.0	Initial Draft	Dennis Penaranda
08/11/2022	1.1	Updated System/Network requirements General formatting	Dennis Penaranda



## 1. Introduction

This document details the technical aspects of the integration between RedSky's E911 Anywhere® and Genesys Cloud CX<sup>™</sup>. With E911 Anywhere®, administrators can provision ALI records in the national ALI Database, and provides routing of 9-1-1 calls to the correct Public Safety Answering Point (PSAP) based on the phone number or Alternate ID of the caller.

Genesys Cloud can be supported by using E911 Anywhere® and MyE911. Calls are routed to E911 Anywhere® over a SIP trunk either directly from Genesys Cloud or from the customer's Bring Your Own Carrier (BYOC) SBC.

#### For customers routing calls directly from the Genesys Cloud platform:

In order for RedSky to determine which customer has placed the emergency call, the **E911-Organization-ID** must be added to all SIP calls sent to E911 Anywhere<sup>®</sup>. See below for the changes made to the Genesys Cloud platform to insert this header and route calls to E911 Anywhere<sup>®</sup>.



## 2. Solution Design Diagram



Figure 1: Call flow of emergency calls routed from Genesys Cloud



## 3. System Requirements

Component:	Requirement:	Notes:
Genesys Cloud	April 6, 2022 release or higher	The prioritized caller selection feature was approved for release beginning April 6 <sup>th</sup> , 2022
Media Tier	Version 1.0.0.11160 or higher	
Genesys Add Ons	BYOC Cloud	BYOC Cloud add-on must be activated in order to configure an external SIP trunk directly from Genesys Cloud to E911 Anywhere <sup>®</sup> over the public internet. Contact your Genesys representative for information on activating of this feature.
Genesys Cloud User	Genesys Cloud User 1, Genesys Cloud User 2, or Genesys Cloud User 3 Subscription	The prioritized caller selection feature requires one of the listed subscriptions.

## 4. Network Requirements

Protocol:	Transport Method:	Ports:	Notes:
SIP			The VoIP protocol used to deliver emergency calls
SIP Signaling	TLS	5061	SIP signaling occurs on port 5061 utilizing encrypted TLS communication
SIP (SRTP) Media	TLS	30000-60000	Audio/Media stream for SIP calls



## 5. Genesys Cloud CX Configuration

In order to leverage E911 Anywhere<sup>®</sup> for emergency call routing, an External Trunk will need to be configured to send 9-1-1 and 9-3-3 test calls to RedSky's gateways. The following will need to be configured:

### 5.1. Configure an External Trunk

Navigate to Telephony > Trunks > External Trunks

- 5.1.1. External Trunk Name: Enter a descriptive name (e.g. RedSky)
- 5.1.2. **Type:** 
  - BYOC Carrier
  - Generic BYOC Carrier
- 5.1.3. Trunk State: In Service
- 5.1.4. Protocol: TLS
- 5.1.5. Inbound SIP Termination Identifier: Unique URI within your Genesys Cloud organization's region (e.g. RedSky)

°00	Activity Directory <del>-</del> D	ocuments Performance <del>v</del> Reports <b>Admin</b>	
	■ Telephony / Trunks / Ex	ternal Trunks / Edit External Trunk	
~>	Topology	External Trunk Name	
~	Metrics	RedSky Type () Generic BYOC Carrier	
$\bigcirc$	Trunks	Metrics	
C	Sites	Inbound Calls 년 0 Outbound Calls 년 0	
	Edge Groups	QoS Mismatches 🖂 0	
S	Edges	Turk Mith C	2
Ð	Phone Management	In Service TLS	-
0	Certificate Authorities		
ß	DID Numbers	Inbound / Termination	
<u>ç</u> »	Extensions	RedSky	

Figure 2: External Trunk Configuration Options



#### 5.1.6. SIP Servers or Proxies: E911 Anywhere® gateways FQDN.

- Hostname: gw1.anywhere.e911cloud.com, Port: 5061
- Hostname: gw2.anywhere.e911cloud.com, Port: 5061

ő	Activity Directory - Doci	uments Performance - Reports Admin
	E Telephony / Trunks / Exter	nal Trunks / Edit External Trunk
ŝ	Topology	Outhound Request-URI Reference
Q	Metrics	INVITE sip+xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
	Trunks	
S	Sites	SIP Servers or Proxies 😧
	Edge Groups	
$\otimes$	Edges	★ yw2.anywhere.e911cloud.com:5061
ĝ	Phone Management	
	Certificate Authorities	

Figure 3: SIP Servers or Proxies Configuration

- 5.1.7. **Prioritized Caller Selection**: This determines what information will be sent with the emergency call to determine the location of the caller (i.e. what phone number/extension is outpulsed with the emergency call)
  - 5.1.7.1. Recommended order if end users may or may not have a DID assigned to them:
    - 5.1.7.1.1. Call Source (Queue /Campaign / User DID)
    - 5.1.7.1.2. User Extension
    - 5.1.7.1.3. Site
    - 5.1.7.1.4. This Trunk
  - 5.1.7.2. Recommended order if end users do not have a DID assigned to them:
    - 5.1.7.2.1. User Extension
    - 5.1.7.2.2. Site
    - 5.1.7.2.3. This Trunk
  - 5.1.7.3. The *prioritized caller selection* will ensure that in the event that the caller does not have DID assigned to them, the User extension will be outpulsed. If the call was placed from a phone that is not tied to a user, the Site ANI will be used. If the Site ANI is empty, Genesys Cloud will default to the Trunk ANI.



00	Activity Directory <del>-</del> Docu	ments Performance <del>-</del> Reports <b>Admin</b>							
0	Telephony / Trunks / External Trunks / Edit External Trunk								
<i>ح</i> ح	Topology	Calling Caller ID ⇔	Prioritized Caller Selection 5						
$\sim$	Metrics	== +1 ▼ 312-432-4300 × &	Add location 🗸						
Q	Trunks	This trunk's caller ID address to use as the outgoing origination address.							
<u> </u>	Sites	Caller Name	Call Source (Queue / Campaign / User DID) 🕆 🧎 🛄						
L <sup>p</sup>	Edge Groups	This trunk's caller name to use as the outgoing origination name.	User Extension 1 🗘 🔟						
S	Edges		Site						
Ð	Phone Management		This Trunk ↑ 🔶 🔟						
Q	Certificate Authorities		The caller ID and name will come from the following locations. The locations are checked in order and the first found will be used.						
ß	DID Numbers Suppress User Name								
<u>റ്റു</u>	Extensions		Never ~						
			When the call source is a user, the user name can be suppressed, and the next "Caller Selection Location" will be checked.						

Figure 4: Example Prioritized Caller Selection

5.1.8. SIP Access Control: Add the E911 Anywhere® gateway IP addresses:

- 3.135.80.158
- 18.217.182.60

00°	Activity	Directory 👻	Documents	Performance 👻	Reports	Admin	
	≡ Tele	phony / Trunks	/ External Trunks	/ Edit External Trunk			
ጵ	Topology		SIP Acces	ss Control ⑦ ne Following Addresses ⑦			
0	Metrics		3.13	35.80.158			Û
	Sites		18.2	217.182.60			Û
م د	Edge Groups	3	Add	an IP or CIDR address			+

Figure 5: SIP Access Control Configuration



#### 5.1.9. Enable Static User Data.

5.1.9.1. Expand the **Protocol** section under *External Trunk Configuration* 

5.1.9.2. In the **Outbound** section, enter the following *Custom SIP header*:

- Header: E911-Organization-ID
- Value: HELD Company ID found on the Dashboard page of the RedSky admin portal

ര	Activity Directory <del>-</del> Docu	nts Performance <del>v</del> Reports <b>Admin</b>	
0	■ Telephony / Trunks / Extern	runks / Edit External Trunk	
<u>ج^</u> ک	Topology	tbound	
~	Metrics	Header Value	
Ò	Trunks	E911-Organization-ID 64040628-LD E91 100-LD	Ŵ
CP	Sites		
	Edge Groups		
S	Edges		
Ð	Phone Management	Header Value	+
<u>م</u>	Certificate Authorities		

Figure 6: Custom SIP Header Configuration

IDs and Access Codes						
Name	Value	Copy/View				
HELD Company ID	64040628-	•				
HELD+ Secret Key		•				
Organization ID	2040008-000-400e- 08x-8508:08408					

Figure 7: HELD Company ID found within RedSky portal



#### 5.2. Create a New Number Plan

Navigate to Telephony > Sites > (Select Your Site) > Number Plan

- 5.2.1. Number Plan Name: Enter a descriptive name (e.g. RedSky E911)
- 5.2.2. Match Type: Number List
- 5.2.3. Numbers: 911, 933
  - These are the dial patterns that you want to route to E911 Anywhere®
- 5.2.4. Classification: Enter a new classification that is not called 'Emergency' (e.g. E911)

00°	Activity Directory 🗸	Documents Performance 👻	Reports Admin			
0						
\$	Topology	General Number Plans Outb	Itbound Routes Simulate Call			
_	Metrics	Number Plans are evaluated from top	op to bottom. Order can be changed by dragging and dropping number plans.			
Q	Trunks	- + New Number Plan	l c c c c c c	Delete Number Plan		
G	Sites	E911 Primelab	Number Plan Name			
	Edge Groups	RedSky E911	Notes Tree			
S	Edges Extension		Number List	*		
	Phone Management	National	Numbers ⑦			
	Certificate Authorities	International	911, 933			
Ø	DID Numbers	Network	Classification ①			
<u>o</u> "	Extensions		E911	Ŧ		
$\sim$		Save Number Plans Cancel	el			

Figure 8: Number Plan Configuration



#### 5.3. Create an Outbound Route

Navigate to Telephony > Sites > (Select Your Site) > Outbound Routes

- 5.3.1. Enter an outbound route Name and a Description.
- 5.3.2. From the **Classifications** list, select the classification created with the Number Plan. (See section 5.2)
- 5.3.3. From the Select an External Trunk list, select the RedSky External Trunks. (See section 5.1)
- 5.3.4. If you select more than one external trunk, you can specify a **Distribution Pattern** to define how outgoing calls are routed to available trunks.
  - 5.3.4.1. Select **Sequential** to route outgoing calls to each trunk in succession beginning with the first trunk. (If the first trunk has reached its capacity or the call is rejected, then outgoing calls are routed to the second trunk and so on.)
  - 5.3.4.2. Select **Random** to route outgoing calls to a randomly selected trunk. (You can use this option to essentially load balance outgoing calls across all available trunks.)
- 5.3.5. To enable the outbound route, enable the **State** setting.
- 5.3.6. Click Save Outbound Routes.



Figure 9: Outbound Route Configuration



## 6. References

Detailed steps to configure a BYOC Trunk can be found on the following links:

- Create a BYOC Cloud Trunk
- Create a BYOC Premises Trunk
- <u>Configure SIP Routing for a BYOC Cloud Trunk</u>
- <u>External Trunk Settings</u>
- Add Number Plan
- <u>Create Outbound Route</u>
- <u>Genesys Cloud Resource Center Search Engine</u>