# Agile WFO for SMB

# **Customer Guide to ShoreTel TAPI-WAV Integrations**

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# **Customer Guide to ShoreTel TAPI-WAV Integrations**

- Version: This guide should be used with NICE Uptivity (formerly Premise inContact WFO) 16.2 or later.
- Revision: March 2017
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  - Contact: Send suggestions or corrections regarding this guide to <u>documentationrequests@incontact.com</u>.

# **Table of Contents**

Introduction5
Audience5
Goals5
Assumptions
Need-to-Knows
What's New in this Version6
Customer Responsibilities6
ShoreTel TAPI-WAV Integration Overview7
Known Limitations
ShoreTel Requirements9
Hardware9
Software9
Licensing9
NICE Uptivity Requirements9
Hardware9
Software
Licensing
Customer Configuration Overview10
Customer Integration Tasks11
Configure a Route Point for NICE Uptivity11
Configure the Agent Class of Service for Recording

#### Introduction

D	Oocument Revision History	18
	Channel Configuration Settings	17
C	Customer Administration Tasks	17
	Register ShoreTel Remote Server	15
	Install ShoreWare Remote Server	15
	Recording Beep Tones Overview	14
	Configure Contact Center Integration (Optional)	14

# Introduction

# Audience

This document is written for customers and prospective customers interested in using NICE Uptivity in ShoreTel VoIP telephony environments. Readers who will perform procedures in this guide should have a basic level of familiarity with IP telephony, general networking, the Windows operating system, the ShoreTel hardware and software in use, and NICE Uptivity.

# Goals

The goal of this document is to provide knowledge, reference, and procedural information necessary to understand a proposed ShoreTel/NICE Uptivity integration using TAPI-WAV, and to configure ShoreTel to support the integration.

This document is NOT intended as a specific system or network design document. If further clarification is needed, consult with your telephony vendor(s).

# Assumptions

This document assumes the reader has access to an Uptivity Sales Engineer, Project Manager, or other resource to assist in applying this information to the reader's environment.

## **Need-to-Knows**

To facilitate ease of use, this document takes advantage of PDF bookmarks. By opening the bookmark pane, readers can easily refer to the portion(s) of the guide that are relevant to their needs. For example, the Uptivity application administrator can click on the **Customer Administration Tasks** bookmark to jump directly to that section.

To expand and collapse the bookmark pane, click on the bookmark icon on the left side of the document window.

For information and procedures related to Uptivity configuration, consult the Uptivity installation team.

#### Introduction

In addition to the TAPI-WAV integration discussed in this guide, Uptivity also supports a ShoreTel TAPI-VoIP integration that combines passive VoIP recording with TAPI for call control and metadata. Ask your Uptivity representative if you want additional information on this integration method.

## What's New in this Version

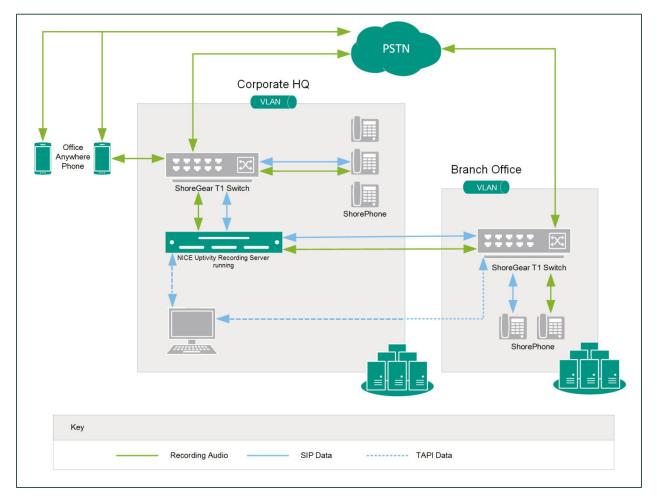
**ShoreTel Connect integration**: This integration has been tested with the latest version of ShoreTel software, known as ShoreTel Connect. Internal testing confirms that the existing integrations are supported on this version. Interoperability testing in ShoreTel's lab environments is pending. Some ShoreTel product names have changed slightly in ShoreTel Connect versus previous versions; refer to your ShoreTel resources for any clarification regarding ShoreTel products mentioned in this guide.

## **Customer Responsibilities**

You are responsible for supplying the physical connection(s), IP connection(s), or both to your telephone system and LAN, as well as for obtaining any licensing required by ShoreTel. You are also responsible for configuring your ShoreTel system to support the recording integration. See the <u>Customer Integration Tasks</u> section for additional information.

# **ShoreTel TAPI-WAV Integration Overview**

The ShoreTel TAPI-WAV integration is an active recording method that communicates with the ShoreTel System using TAPI. NICE Uptivity receives call control events and metadata (such as CallerID) from ShoreTel (ShoreWare) Director. Audio for designated calls is delivered to Uptivity by ShoreTel in the form of WAV files. This method is referred to as "native call recording" by ShoreTel.



General architectural example of a multi-site ShoreTel TAPI-WAV integration; the optional ShoreTel Contact Center is not shown

#### ShoreTel TAPI-WAV Integration Overview

Component	Function
ShoreGear T1 Switch	Provides trunking to the central office.
ShoreTel Connect Contact Center Director	Allows system administrators to configure entities of the ShoreTel Connect Contact Center and set the system parameters. Can be configured to set call variables that are passed to the TAPI interface.
ShoreTel RoutePoint	All audio is redirected from a ShoreTel route point (that is, extension) to Uptivity, which is configured in ShoreTel as another route point.
ShoreWare Remote Server	Provides the CTI connection to the ShoreTel PBX. This software must be installed on the Uptivity recording server.
NICE Uptivity Server(s)	Receives audio, metadata, and call control events from the ShoreTel Connect Contact Center Director. Associates metadata with audio and screen recordings (if applicable). Manages storage of completed files and generates call records in the Uptivity database. Provides user interface to Uptivity through the <b>Web Portal</b> .

# **Known Limitations**

- ShoreTel uses proprietary encryption for the SIP traffic, making Uptivity dependent on the TAPI messaging for recording. Therefore, Uptivity does **not** support recording ShoreTel SIP phones without TAPI.
- The TAPI-WAV method of recording is unable to capture audio of internal extension-to-extension conversations. This includes calls placed on SIP trunks. This is a functional limitation of ShoreTel's application architecture.
- The TAPI-WAV method of recording is unable to support live monitoring of calls as they are being recorded. This is a functional limitation of ShoreTel's application architecture.
- ShoreTel does not support sending audio to multiple recorders from a single route point, nor does it support sending the same audio to multiple recorders.
- One route point can have a call stack of up to 200 concurrent connections. If more than 200 concurrent recordings are anticipated, multiple route points are required. One Uptivity CTI Core recording service can support multiple route points, or multiple cores can be used.

- In multiple CTI Core scenarios, all recorders receive the same TAPI events from ShoreTel. Therefore, scripting, scheduling, or both must be used to distinguish which calls are recorded by each core.
- PBX client software pieces used in this integration (for example, ShoreWare Remote Server) are only supported on Microsoft Server 2012 R2 by ShoreTel v14.2.19.42.8801.0 or higher.
- ShoreTel TAPI integrations do not support the real-time blackout functionality in Uptivity

# **ShoreTel Requirements**

#### Hardware

Review your ShoreTel documentation for relevant hardware and system software specifications. These documents address server, agent computer, and telephone hardware requirements and restrictions that ShoreTel recommends. This integration requires:

- At least one (1) ShoreTel Voice Switch
- At least one (1) ShoreTel Contact Center Director server

#### Software

This integration has been tested with and is supported for:

• ShoreTel version 14.2 to ShoreTel Connect (version 14.2.19.42.8801.0 or higher is required if Uptivity is to be deployed on MS Server 2012 R2)

#### Licensing

The integration requires the following licensing:

• One (1) ShoreWare Remote Server Software license

## **NICE Uptivity Requirements**

#### Hardware

Uptivity hardware requirements vary depending on system configurations. Appropriate hardware is identified during the system implementation process. For more information, search online help for keyword *site requirements*.

#### ShoreTel TAPI-WAV Integration Overview

#### **Software**

This guide covers the following release:

• NICE Uptivity 16.2 or later

#### Licensing

- One (1) Voice seat license per named agent or
- One (1) Voice concurrent session license for each simultaneous call that will be recorded
- Additional licensing may be required if the system includes optional features (for example, Uptivity Screen Recording)

### **Customer Configuration Overview**

The following table provides a high-level overview of the customer configuration steps in ShoreTel integrations.

	Customer Configuration Steps for ShoreTel TAPI-WAV Integrations
1	Complete all necessary physical and IP connections between the recording server(s) and the LAN.
2	In ShoreTel Director, <u>Configure a Route Point for NICE Uptivity</u> . Provide the route point extension to the Uptivity installation team.
3	<u>Configure the Agent Class of Service for Recording</u> for all users who are to be recorded.
4	If applicable, configure integration with ShoreTel Contact Center.
5	If applicable, configure recording beep tones in ShoreTel Director.
6	After the Uptivity software has been installed and the Web Portal has been configured: Install ShoreWare Remote Server and Register ShoreTel Remote Server.

The information in this section is provided for your reference only. Detailed steps for ShoreTel configuration can be found in ShoreTel's documentation, which is available on the ShoreTel website. You should always use the appropriate manuals and/or guides from ShoreTel to install and configure ShoreTel components.

# **Configure a Route Point for NICE Uptivity**

- 1. Log in to ShoreTel Contact Center Director with an appropriately-permissioned account.
- 1. Click Administration -> Call Control -> Route Points.
- 2. For **Route Point Server**, select the Uptivity recording server from the dropdown list of application servers. Make note of the extension assigned to the route point and provide it to the Uptivity installation team.

ShoreWare Director - Microsoft In	nternet Explorer		X
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🔾 Back 🔹 🖓 - 💽 😰 🐔 🔑 5			
Address () http://locahost/ShoreWareD			💌 🔂 Go 🛛 Links 🏁
ShoreTel"	Route Points Edit Route Point	Hew Copy Save Delete Braset Help	-
ShoreWare Director	Edit this record	Refresh this page	
Logoff Administrator	Name:	CallCopy RoutePoint	
Administration .	Extension:	117	
Trunks     IP Phones	DID:		
Switches     Call Control	DNIS:	Edit DHIS Map	
<ul> <li>Account Codes</li> <li>Bridged Call</li> </ul>	Language:	English(US) 💌	
Appearances o Hunt Groups	User Group:	Executives	
Paging Groups     Route Points	Route Point Server:	Headquarters 💌	
<ul> <li>Options</li> </ul>	Mailbox (server)	Voice Mail Delivery and Notification	
Voice Mail     Auto-Attendant Menu	C Accept Broadcast Messages		
Workgroups     Schedules	Include in System Dial By Name	Directory	
<ul> <li>System Directory</li> <li>Application Servers</li> </ul>	Make Number Private		
Conference Bridges     Sites	Fax Redirect		
System Parameters     Preferences	Call Stack Depth:	100	
	Recorded Name:	Record Play Erase Import	
Maintenance • Quick Look • Switch Connectivity	Voice Mail Password:	Confirm:	
Conference Ports	🕶 On-Hours 🕨 🕨 C	M-Hours Holiday Custom	
Event Log     Services     Event Filters	Schedule:	Hone> 🗷 Edit this schedule	
Documentation	Call Handling:		
Administration Guide	Call Forward:	C Always @ No Answer/Busy C Never	
<ul> <li>Planning and Installation Guide</li> </ul>	Always:	@ Extension: 591 : Voice Mail Search	
Telephone User     Interface		© External: (e.g. 9+1 (408) 331-3300)	
1 Postine >	Busy:	C Extension: 591 : Voice Mail Search	-
<ul> <li>E</li> </ul>			Local intranet

- 3. For **Call Stack Depth**, select the number of recording channels purchased with Uptivity. This setting specifies the number of simultaneous calls to which the Route Point can be connected. For related information, see <u>Known Limitations</u>.
- 4. Click Save.

After completing this procedure, return to the <u>Additional licensing may</u> be required if the system includes optional features (for example, Uptivity Screen Recording)

Customer Configuration Overview.

# **Configure the Agent Class of Service for Recording**

All agents to be recorded must have the ability to record themselves.

- 1. Log in to ShoreTel Contact Center Director with an appropriately-permissioned account.
- 2. Click **Administration** > **Users**.
- 3. Click Individual Users.
- 4. For each user to be recorded, click the link in the **User Group** column.

ShoreTel <sup>®</sup>	Individual Users						
Director	Add new user	at site: Headquarte	rs 💌 <u>Go</u>				
Build 19.42.8801.0 Logoff ccadmin	Show page:	1 : ccadmin - test	•		6 Records 🔽 토 per pag		
Administration	First Name	Last Name	Site	User Group	Access License		
• Users	<u>ccadmin</u>		Headquarters	(Executives)	Personal		
Individual Users	test	1	Headquarters	Executives	Personal		
<ul> <li>User Groups</li> <li>Class of Service</li> </ul>	test	2	Headquarters	Executives	Personal		
<ul> <li>Class of Service</li> <li>Anonymous</li> </ul>	test	3	Headquarters	Executives	WG Agent		
Telephones	test	4	Headquarters	Executives	WG Agent		
<ul> <li>Extension Lists</li> <li>Batch Update Utility</li> </ul>	test	5	Headquarters	Executives	WG Agent		
Defaults • Trunks • IP Phones • Platform Hardware • Call Control • Voice Mail • System Directory • Application Servers • SIP Servers • Sites • System Parameters		<u>Tel, Ino. All rights reserve</u>					

5. Next to the **COS – Telephony** field, click **Go to this Class of Service**.

ShoreTel Director				
<b>ShoreTel</b>	User Groups Edit User Group	New Copy Save Delete Reset Help		
Director				
Build 19.42.8801.0	Edit this record	Refresh this page		
Logoff ccadmin	Name:	Executives		
Administration • Users	- COS - Telephony:	Fully Featured Go to this Class of Service		
<ul> <li>○ Individual Users</li> <li>○ User Groups</li> </ul>	COS - Call Permissions:	No Restrictions Go to this Class of Service		
<ul> <li>Class of Service</li> <li>Anonymous</li> </ul>	COS - Voice Mail:	Large Mail Box 🔄 Go to this Class of Service		
Telephones ○ Extension Lists	Send Caller ID as Caller's Emergency Service Identification (CESID).			
• Batch Update Utility	rvice Identification (CESID).			
<ul> <li>Call Handling Mode Defaults</li> </ul>	Account Code Collection:	Disabled <b>v</b>		

6. Select the checkbox for Allow Recording of Own Calls.

ShoreTel Director				
ShoreTel <sup>®</sup>	Class of Service Edit Telephony Features Permission	S Leve Copy Save Delete Reset		
Director	Edit this record	Refresh this page		
Build 19.42.8801.0 Logoff ccadmin	Name:	Fully Featured		
Administration • Users	Max. Call Stack Depth:	8		
<ul> <li>Individual Users</li> <li>User Groups</li> </ul>	Max. Buddies Per User:	500		
<ul> <li>Class of Service</li> <li>Anonymous</li> </ul>	Max. Personal Contacts:	500		
Telephones ○ Extension Lists	Max. Parties in Make Me Conference:	3 💌		
<ul> <li>Batch Update Utility</li> <li>Call Handling Mode</li> </ul>	IM Presence Invitation Handling:	Prompt to accept invitation		
Defaults • Trunks	Allow Call Pickup			
IP Phones     Platform Hardware	Allow Trunk-to-Trunk Transfer			
Call Control     Voice Mail	Allow Overhead and Group Paging			
Auto-Attendant Menus	C Allow Make Hunt Group Busy			
Workgroups     Schedules	Allow Extension Reassignment			
Communicator     System Directory	Allow PSTN Failover			
Application Servers     SIP Servers	Show Caller ID Name and Number for Other E	xtensions		
Sites     System Parameters	Enumerate Individual Held Calls for Unpark			
Preferences	Allow Customization of IP Phone Buttons and	Communicator Monitor Windows		
Maintenance	Show Extensions with Different Prefixes in Di	rectory		
<ul> <li>Diagnostics &amp; Monitoring</li> </ul>	C Allow Collaboration Features			
<ul> <li>Quick Look</li> <li>Connectivity</li> </ul>	Allow Recording of Own Calls			

7. Click **Save**.

After completing this procedure, return to the <u>Additional licensing may</u> be required if the system includes optional features (for example, Uptivity Screen Recording)

Customer Configuration Overview.

## **Configure Contact Center Integration (Optional)**

If you use ShoreTel Contact Center software, you can optionally configure Contact Center to pass call metadata through ShoreTel Director into the TAPI events received for a phone. The Uptivity installation team can modify the channel script to include this metadata in the call record.

For a complete description of mandatory and user-defined call profiles, and their associated user fields, see the *ShoreTel Contact Center Administrator Guide*.

- 1. On the Contact Center Server, in the directory in which ShoreTel Contact Center is installed, use a text editor (such as Notepad) to create a file named **shoretelcfg.ini**.
- 2. In the shoretelcfg.ini file, add a section named **call\_profile**.
- 3. In the call\_profile section, specify a key named **user\_fields** with call profile field names as values. Separate the values with a comma. For example:

```
[call_profile]
user_fields=AGENT_NUMBER, AccNo, Balance, DueDate
```

4. Restart the Contact Center Server.

The specified call profile field values will now display in the TAPI call properties and be available to the Uptivity channel script.

After completing this procedure, return to the <u>Additional licensing may</u> be required if the system includes optional features (for example, Uptivity Screen Recording)

Customer Configuration Overview.

## **Recording Beep Tones Overview**

ShoreTel Connect Contact Center Director offers the option of playing a beep tone on 2-way or Make Me Conference calls. The tone indicates the call is being monitored or recorded. This option is enabled by default and is a global setting.

When the recording is silent or hidden, there is no visual or audible indication that the call is being recorded. The periodic beeping sound (used to notify call participants that their calls are being recorded) is suppressed. Recording beep tones can be configured on the **Call Control Options** page of the ShoreTel Connect Contact Center Director web portal. Refer to the *ShoreTel Administration Guide* for more information regarding this feature.

## Install ShoreWare Remote Server

After the Uptivity installation engineer has installed the software and configured the recording Web Portal, you must install the ShoreWare Remote Server software on the recording server. The Remote Server software can usually be downloaded from the ShoreTel Director web interface at the following URL:

#### http://<directorhost>/ShoreWareDirector/RemoteInstall/

```
☑ Replace <directorhost> with the TCP/IP address or host name of the customer's ShoreTel Director Server.
```

Follow the prompts to install the application server. When prompted for the IP address or name of the headquarters server, specify the IP address (or hostname) of the ShoreTel Director. After a successful installation, you will be prompted to reboot the server.

For detailed instructions on installing Remote Server software, refer to the appropriate *ShoreTel Planning and Installation Guide* for the PBX version.

## **Register ShoreTel Remote Server**

Once the Remote Server software has been installed, you must register the recording server in ShoreTel Director.

- Go to the ShoreTel Director Web administration site at the listed URL, where <directorhost> is the TCP/IP address or host name of the ShoreTel Director Server: http://<directorhost>/ShoreWareDirector/
- 2. Log in with an appropriately-permissioned account.

#### 3. Click Administration > Application Server.

<b>Shore</b> Tel <sup>®</sup>	Application Servers				Help	
ShoreWare Director		a ta Unadava				
Build 15.21.5702.0	Add new application	Add new application server at site: Headquarters - Go				
Logoff Administrator	Name	At Location	Address	Secondary Address		
Administration	ContactCenter	Headquarters	10.100.10.70			
Users	Headquarters	Headquarters	10.100.1.71			

4. On the **Application Servers** page, select the site to which the application server will be added and click **Go**.

Application Servers	<u>N</u> ew	py <u>S</u> ave	Delete	Reset	Help
				* 1	nodified
Edit this record	Refresh this page				
Name:	Recorder				
Host IP Address:	10.100.1.10	Ping this Serve	r		
Site:	Headquarters				
SoftSwitch Name:	Recorder				
Maximum Trunks for Voice Mail Notification (1 - 200):	4				
Account Code Local Extension:					
Allow Voice Mailboxes					
Voice Mail and Auto Attendant:					
Voice Mail Extension:	136				
Voice Mail Login Extension:	137				
Auto Attendant Extension:	138				
Assigned User Group:	Voice Mail Notification	•			
Default Auto-Attendant Menu:	Default (Menu) - 700 👻	]			
Voice Mail Interface:					
Mode:	<none></none>	Ŧ			

- 5. On the **Edit Server** page, enter a **Name** for the Uptivity recording server.
- 6. In the **Host IP Address** field, enter the IP address of the Uptivity recording server on which you installed the Remote Server software.
- 7. Clear the checkbox for **Allow Voice Mailboxes**.
- 8. Click **Save**.

# **Customer Administration Tasks**

There are no regular, ongoing administrative tasks related to this integration. If you add channels to your system, your Uptivity administrator will need to increase the channel count on the voice board in the **Web Portal**.

The ShoreTel TAPI-WAV integration delivers audio to NICE Uptivity in the form of WAV files. There must be one channel in Uptivity for each anticipated concurrent connection. Therefore, the number of channels in Uptivity must match the Call Stack Depth value in the route point created on ShoreTel Director. For related information, see <u>Known Limitations</u> and <u>Configure a Route Point for NICE Uptivity</u>.

For more information on voice board tasks, search online help for keyword *voice boards*.

You must restart the CTI Core service after any changes to voice boards, channels, or both.

Any other voice board changes should only be done under direct supervision from Uptivity Support. Done incorrectly, voice board modifications can have serious negative impact to your system. In addition, altering the hardware configuration of your system may void your warranty.

# **Channel Configuration Settings**

The following settings apply when configuring channels for ShoreTel TAPI-WAV integrations:

Setting	Definition	Default
Assign	Used in deployments where physical devices and channels have a one-to-one correspondence, or to allocate specific channels to specific types of recording. For more information, search online help for keyword <i>channel assignment</i> .	Dedicated Record Device (Voice Port)
Assign Value	Enter the identifier for the device assigned to the channel (typically the phone extension). This value is case sensitive.	
Name	Optionally, enter a name for the channel that can be used in channel scripting.	

# **Document Revision History**

Revision	Change Description	Effective Date
0	Initial release	2015-04-30
1	Moved tasks for installing and registering ShoreWare Remote Server to customer guide.	2015-07-23
2	Updated to reflect integration with ShoreTel Connect.	2016-05-28
3	Rebranded for NICE Uptivity.	2017-03-31