Customer Guide to ShoreTel TAPI-WAV Integrations

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Version: ShoreTel TAPI-WAV versions 14.2 GA19 (ShoreTel Connect) - 21.90.9738.0 (Mitel MiVoice Connect) are supported. This guide should be used with NICE Uptivity 17.1 or later.

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Introduction

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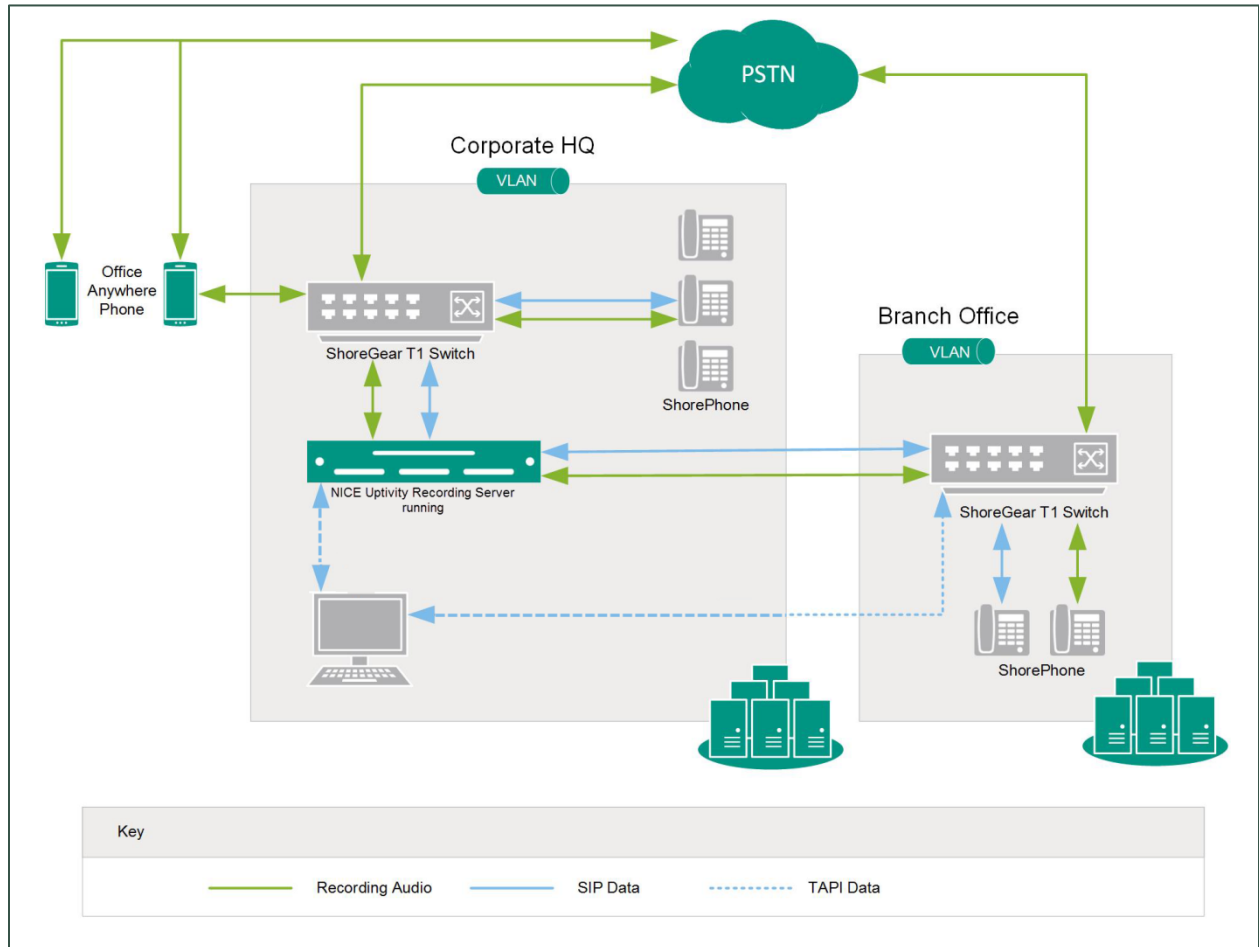
General architectural example of a multi-site ShoreTel TAPI-WAV integration; the optional ShoreTel Contact Center is not shown

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 **Web Portal**.

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

- ShoreTel Connect or Mitel MiVoice Connect

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*.

Software

- NICE Uptivity

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, Configure a Route Point for NICE Uptivity. Provide the route point extension to the Uptivity installation team.
3	Configure the Agent Class of Service for Recording 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.

Customer Integration Tasks

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 drop-down list of application servers. Make note of the extension assigned to the route point and provide it to the Uptivity installation team.

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 Known Limitations.

4. Click **Save**.

Customer Integration Tasks

After completing this procedure, return to the Additional licensing may 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.

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

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

7. Click **Save**.

After completing this procedure, return to the Additional licensing may 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 [Additional licensing may](#) 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.

1. 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**.

Customer Integration Tasks

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

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**.

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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 Known Limitations and Configure a Route Point for NICE Uptivity.

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 *channel assignment*.	*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.	