

**NICE**



**UPTIVITY**

Agile WFO for SMB

## **Customer Guide to Cisco UCCX Integrations**

# Customer Guide to Cisco UCCX Integrations

Version: Cisco UCCX versions 10.0-12.0 are supported. This guide should be used with NICE Uptivity 16.2 or later.

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# Introduction

## Audience

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

## Goals

The goal of this document is to provide knowledge, reference, and procedural information necessary to understand a proposed Cisco/ NICE Uptivity integration using Cisco UCCX, and to configure the Cisco equipment 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, talk to your Uptivity installation team.

Cisco UCCX can also be used in various combinations with Cisco JTAPI-BiB, Cisco TAPI-BiB, or passive VoIP recording. In these scenarios, refer to the *Customer Guide to Cisco JTAPI-BiB Integrations*, the *Customer Guide to Cisco TAPI-BiB Integrations*, or the *Customer Guide to Passive VoIP Recording*, as appropriate.

## Terminology

To ensure a common frame of reference, this guide uses the following terms:

- **CUCM** — Cisco Unified Communications Manager. CUCM is a software-based call-processing system that includes gateways, routers, phones, voicemail boxes, and a variety of other VoIP components. Sometimes referred to as CallManager.
- **UCCX** — Unified Contact Center Express. UCCX is a single-server customer interaction management solution for up to 400 agents.
- **JTAPI** — Java Telephony Application Programming Interface. Cisco JTAPI allows custom applications to monitor and interact with the CUCM and Cisco IP phones.
- **TAPI** — Telephony Application Programming Interface. Like JTAPI, Cisco TAPI allows custom applications to monitor and interact with the CUCM and Cisco IP phones.
- **BiB** — Built-in Bridge. Capability of some Cisco IP phone models to fork the media stream and deliver audio from both sides of a phone call to an alternate destination (for example, NICE Uptivity).
- **SCCP** — Skinny Call Control Protocol. SCCP is a signaling protocol used by Cisco phones. This protocol can be used to provide metadata and limited call control in passive VoIP recording.

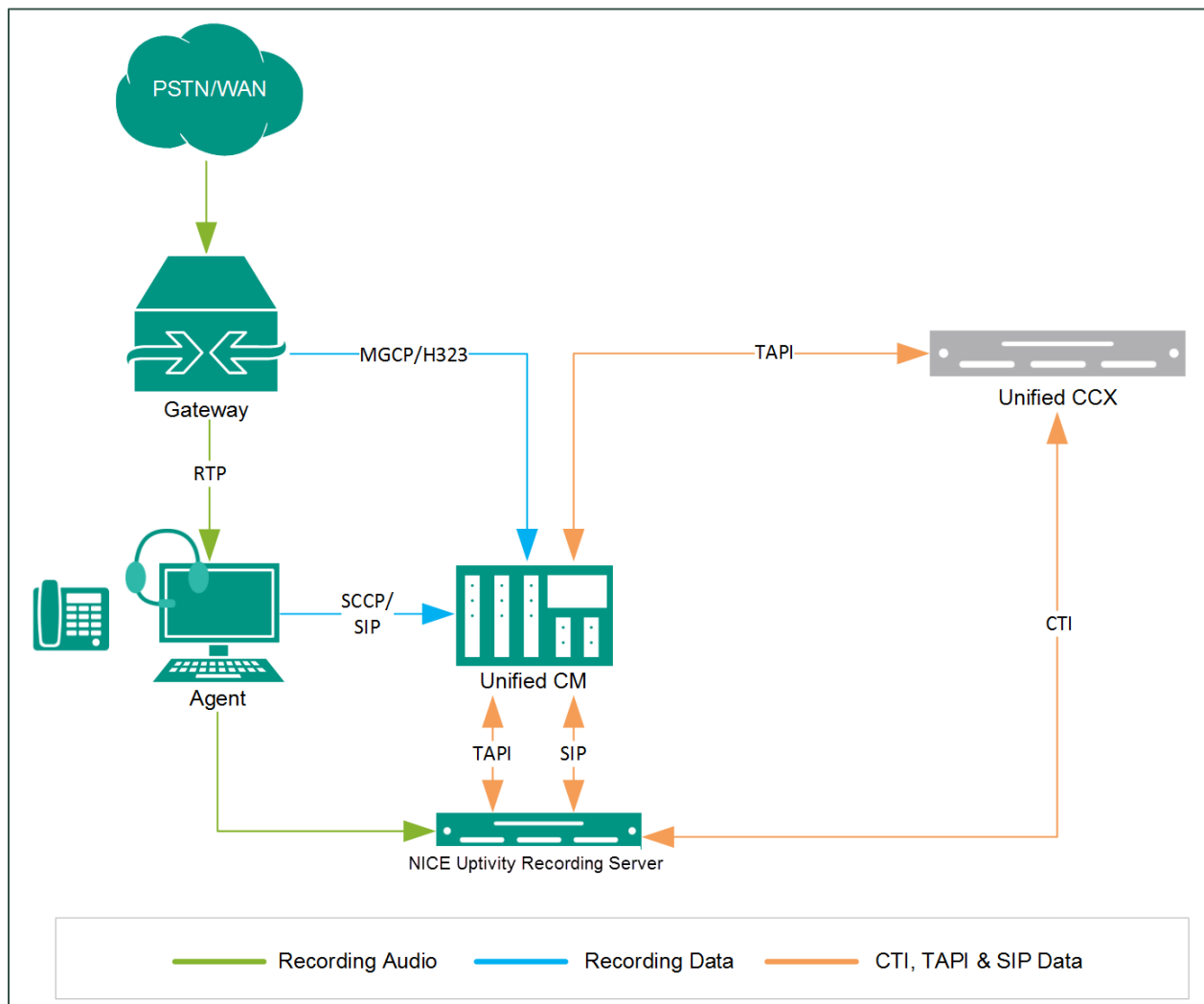
## Customer Responsibilities

You are responsible for supplying the physical connection(s), IP connection(s) or both to your telephone system, as well as for obtaining and loading any licensing required by Cisco. You may also be responsible for configuring Cisco system components to support the recording integration. See your specific integration in the [Customer Integration Tasks](#) section for additional information.

## Cisco UCCX Integration Overview

This integration can work with passive VoIP, JTAPI-BiB, or TAPI-BiB as an audio source (refer to the *Customer Guide to Cisco JTAPI-BiB Integrations*, the *Customer Guide to Cisco TAPI-BiB Integrations*, or the *Customer Guide to Passive VoIP Recording*, as appropriate). Call control and metadata are provided by the Resource Manager-Contact Manager (RmCm) subsystem in the UCCX.

With the optional Uptivity Agent Sync module, this integration can automatically synchronize agent changes in UCCX with the Uptivity database (see [Appendix: Agent Sync Module](#) for details). The UCCX integration does not stand alone but is meant to work with an existing CTI Core.



**General architectural example of an integration using Cisco TAPI-BiB and Cisco UCCX**

Component	Function
<b>Cisco Voice Gateway</b>	Directs customer and agent audio streams.
<b>Cisco Unified Communication Manager (UCM)</b>	Manages call setup messages to the agent phone and SIP INVITE messages to Uptivity to record the call.
<b>UCCX</b>	All UCCX CTI messages are received and sent through the CTI server module of the RmCm (Resource Manager-Contact Manager) subsystem, which is used for monitoring agent phones, controlling agent states, and routing and queuing calls. The RmCm subsystem requires a UCM user account to register with the CTI Manager so that it can observe an agent's device when the agent logs in.
<b>Third-Generation Phones</b>	Each third generation phone being recorded uses built-in bridge to forward audio streams for each side of the call to Uptivity.
<b>NICE Uptivity Recording Server</b>	Receives call control events, business data, and audio. Provides a CTI interface to the Uptivity recording server. Creates call records and manages recording storage. Supports automatic CTI failover in UCCX High Availability configurations. May also host the <b>Web Portal</b> for playback and system administration.

## Cisco Requirements

In addition to the requirements listed here, you will also need to review the requirements for any audio source integrations that apply (for example, TAPI-BiB or passive VoIP).

### Hardware

Review the Cisco UCCX installation and configuration guide, the administrator guide, and the hardware and system software specifications. These documents address server, agent computer, and telephone hardware requirements and restrictions that Cisco recommends.

### Software

- Cisco UCCX

### Licensing

No additional Cisco licenses are needed for integrating UCCX with NICE Uptivity.

## NICE Uptivity Requirements

In addition to the requirements listed here, you will also need to review the requirements for any audio source integrations that apply (for example, TAPI-BiB or passive VoIP).

### 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 to 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 Cisco UCCX integrations.

Customer Configuration Steps for Cisco UCCX Integrations	
1	Complete all necessary physical and IP connections between the recording server(s) and the LAN.
2	Obtain and load any necessary Cisco software and licensing.
3	Complete all procedures to configure the JTAPI-BiB, TAPI-BiB, or passive VoIP integration for audio.
4	Create a user account with permission to read the UCCX database. and provide the username and password to the Uptivity installation team.
5	<p>Provide the following information to the Uptivity deployment team:</p> <ul style="list-style-type: none"> <li>• Username for the UCCX database account</li> <li>• Password for the UCCX database account</li> <li>• IP address for the primary RmCm server (and any secondary servers)</li> <li>• Communication port used by the primary RmCm (and any secondary servers). See <a href="#">Confirm Resource Manager-Contact Manager (RmCm) Port.</a></li> </ul>

## Customer Integration Tasks

Refer to the appropriate guide for customer tasks related to your audio source integration: the *Customer Guide to Cisco TAPI-BiB Integrations*, the *Customer Guide to Cisco JTAPI-BiB Integrations*, or the *Customer Guide to Passive VoIP Recording*. Audio source integration tasks should be completed before tasks in this guide.

See your Cisco documentation for instructions on creating a user account that has permissions to read the UCCX database.

### Confirm Resource Manager-Contact Manager (RmCm) Port

You must provide the Uptivity installation team with the port used by the UCCX RmCM subsystem.

1. Log into the UCCX Administration site with an appropriately permissioned account.
2. Click **System** > **System Parameters**.
3. Under **System Ports Parameters**, find the **RmCm TCP Port** value.

## Customer Administration Tasks

There are no regular, ongoing administrative tasks related to this integration. For tasks specific to your audio source integration, refer to the appropriate guide: the *Customer Guide to Cisco TAPI-BiB Integrations*, the *Customer Guide to Cisco JTAPI-BiB Integrations*, or the *Customer Guide to Passive VoIP Recording*.

## Appendix: Agent Sync Module

The optional Agent Sync module automatically synchronizes agent changes in UCCX with the Uptivity database. Users are matched by username and are synchronized before teams/groups. Users and groups originally created in Uptivity (for example, SourceAgentID=Null) will not be changed during synchronization unless a matching username or group exists in UCCX, in which case the module will match them and update the SourceAgentID.

If the agent or group exists in Uptivity but does not match the UCCX equivalent (for example, SourceAgentID is not null and does not match), the agent/group is disabled and will not appear in Uptivity. If a user or group exists in UCCX but not Uptivity, it will be created in Uptivity during synchronization.

The following information can be synchronized:

- UCCX resources with Uptivity users
- UCCX teams with Uptivity groups

This module does NOT synchronize:

- **Password** — This value is not in UCCX
- **Server node** — This value is Uptivity-specific
- Supervisor and Team/Group attachments
- Administrator roles/permissions
- Users not configured as Agents

UCCX does not synchronize user info beyond an agent. If a user in the UCM is not registered as an agent, they are not listed in the UCCX database, and therefore will not be synchronized.

This table shows the mapping between the UCCX Resource database table and Uptivity database tables.

<b>UCCX Resource Table</b>	<b>Uptivity User</b>
resourceLoginID	Username
resourceID	SourceAgentID
resourceFirstName	First Name
resourceLastName	Last Name
resourceName	Last Name (if no resourceLastName is specified)
resourceType (1-Agent, 2-Supervisor, 3-Administrator)	Agent ( <i>Yes</i> or <i>No</i> )
extension	Extension
<b>UCCX Team Table</b>	<b>Uptivity Group</b>
teamName	Group Name
Active (f-Inactive/t-Active)	Delete/Not delete Group
<b>UCCX Resource/Team Table</b>	<b>Uptivity Group</b>
assignedTeamID/teamID	SourceGroupID