NICE | UPTIVITY
Agile WFO for SMB

Customer Guide to Avaya DMCC-SSC Integrations

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Version: Avaya DMCC-SSC versions 4.2.1-8.1 are supported. This guide should be used with NICE Uptivity 16.3 or later.

Contact: Send suggestions or corrections regarding this guide to documentationrequests@incontact.com.

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Introduction

Audience

This document is written for customers and prospective customers interested in using Uptivity Call Recording in an Avaya DMCC-SSC 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, Avaya telephony, and NICE Uptivity.

Goals

The goal of this document is to provide knowledge, reference, and procedural information necessary to understand a proposed Avaya/NICE Uptivity integration using DMCC-SSC, and to configure the Avaya 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 questions related to Uptivity configuration, consult the Uptivity installation team.

This integration uses Avaya TSAPI. Refer to the *Customer Guide to Avaya TSAPI Integrations* for additional limitations, licensing requirements, and customer integration tasks.

Terminology

To ensure a common frame of reference, this guide uses the following terms in conjunction with this Avaya integration:

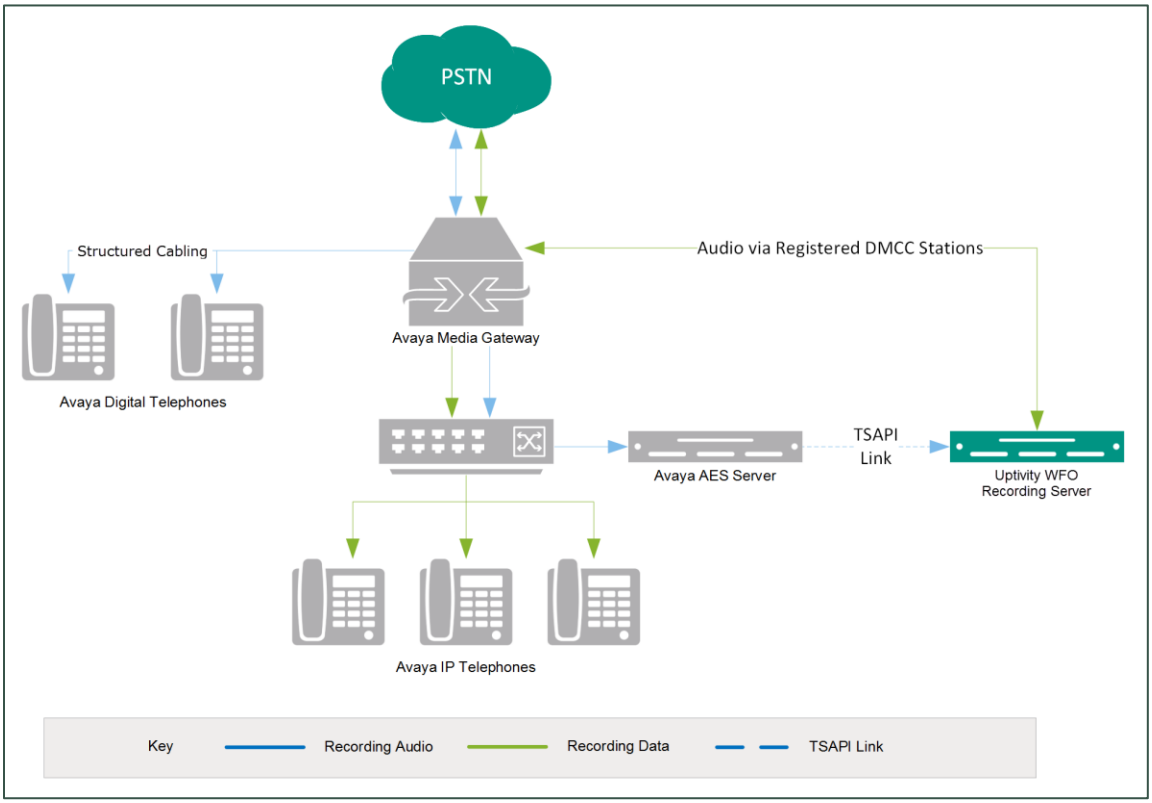
- **AES —** Application Enablement Services. The AES server in an Avaya contact center hosts software that provides CTI events
- **Avaya CMS —** Avaya Call Management System. This contact center product is designed for businesses with complex contact center operations and high call volume. Sometimes referred to as Avaya CM.
- **DMCC —** Device Media Call Control. This functionality of the Avaya AES and AACC servers provides a means of active recording via VoIP, even for endpoints that are not IP telephones.
- **GEDI —** Graphically-Enhanced DEFINITY Interface. Used by the customer or Avaya vendor to configure the Avaya CMS.
- **MR —** Multiple Registration. Avaya functionality that allows the customer to register up to three devices against a single softphone extension.
- **TSAPI —** Telephone Services Application Programming Interface. Avaya TSAPI is the actual software that provides the call control events and metadata to Uptivity.
- **S8300, S8500, S8700 —** Common models of Avaya PBX equipment

Customer Responsibilities

You are responsible for supplying the physical connection(s), IP connection(s), or both to your telephone system and LAN, and for obtaining and loading any licensing required by Avaya. You are also responsible for configuring Avaya system components to support the recording integration. See the Customer Integration Tasks section for additional information.

Avaya DMCC-SSC Integration Overview

The Avaya DMCC-SSC integration uses softphones on the Avaya AES server as the audio source, and receives call control events and metadata through AES using TSAPI. NICE Uptivity detects when a station joins a call and makes a request for a single step conference between Uptivity, the agent's phone, and the corresponding softphone on the AES server.



General architectural example of the Avaya DMCC-SSC integration

Component	Function
Avaya CM Media Gateway	Controls audio presented to and from digital phones, IP phones, or both.
Avaya AES	Provides DMCC CTI Interface to create and control virtual softphones for call recording and to provide call metadata.
Uptivity Recording Server	Receives audio, call control events, and business data. Provides a CTI interface for recording. May host the **Web Portal** for playback and administration.

Known Limitations

- Only devices supporting Physical Device Services can be recorded. This excludes devices without a speaker-phone (such as CallMaster). This is an Avaya limitation.
- This integration provides "muxed" (mono) audio and therefore does not support speaker separation for reporting or analytics.

Avaya Requirements

> This integration requires Avaya TSAPI, which has additional software and licensing requirements. See the *Customer Guide to Avaya TSAPI Integrations*.

Hardware

- Avaya S8300, S8500, or S8700 media server
- Avaya AES

Software

- Avaya CM
- Avaya AES

Licensing

- One (1) DMCC *basic* license per recording channel: either DMCC_DMC on AES **or** IP_API_A on CM.
- One (1) IP station (IP_STA) license from the CM per recording channel.

> A *full* DMCC license could be used instead, since it includes both the DMCC basic license and the IP station license. Avaya licensing is subject to change and should always be verified with your Avaya vendor.

NICE Uptivity Requirements

Hardware

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

Software

This guide covers the following:

- NICE Uptivity

Additional third-party software is required for this integration:

- CACE WinPcap version 4.1.x (available from the WinPCAP organization's website)

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, inContact Screen Recording)

Customer Configuration Overview

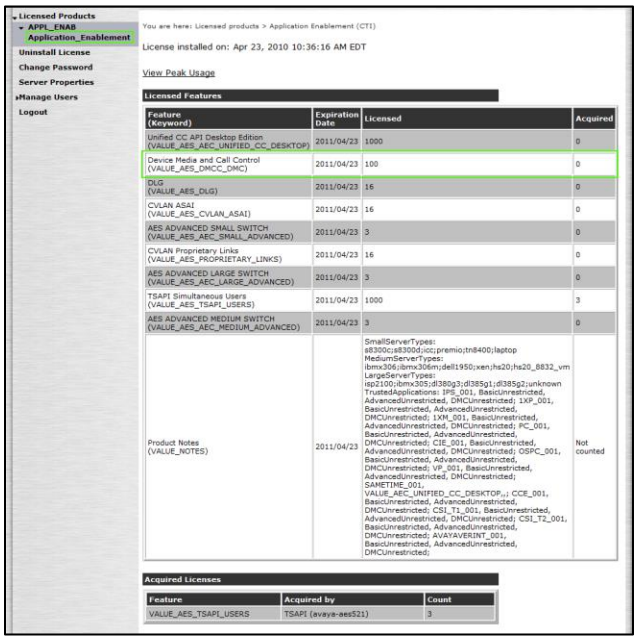
The following table provides a high-level overview of the customer configuration steps in Avaya DMCC-SSC integrations. Links are provided for tasks that are covered in this guide.

Customer Configuration Steps for Avaya DMCC-SSC Integrations	
1	Complete all necessary physical and IP connections between the recording server(s) and the LAN.
2	Obtain any necessary Avaya software and licensing.
3	Complete the tasks and procedures detailed in the *Customer Guide to Avaya TSAPI Integrations*.
4	Verify DMCC License Availability.
5	Verify the Switch Configuration in AES.
6	Configure Softphone Stations on the AES Server.

Customer Integration Tasks

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

Verify DMCC License Availability



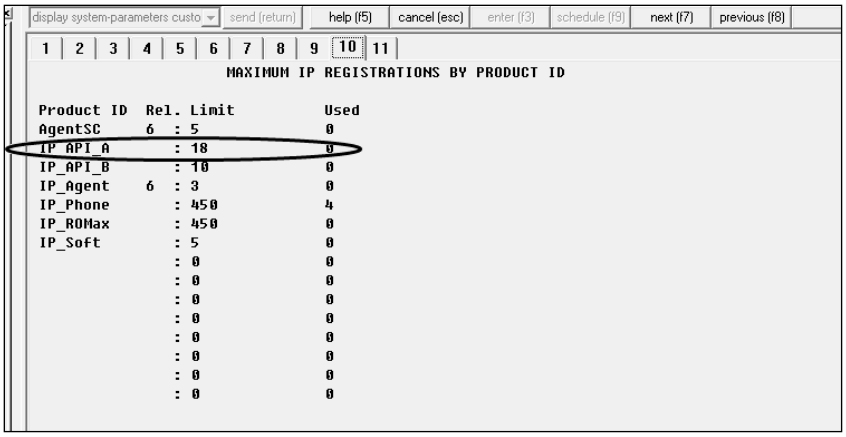
DMCC stations must be licensed to be used for recording audio. Each DMCC station needs either a DMCC_DMC license on the AES server **OR** an IP_API_A license on the Avaya CM.

1. In your web browser, browse to the Web License Manager site for your AES server (typically http://aes-server/WebLM/, where 'aes-server' is the hostname or IP Address of the AES).
2. Log in with an administrative account.
3. From the Licensed Products menu section, click **Application Enablement**.
4. On the **Licensed Features** table, the **Device Media and Call Control** entry will list the total and used values for DMCC_DMC licenses.

The available IP_API_A license count can be accessed using GEDI.

- Run **GEDI** and enter ***display system-parameters customer***.

In this image, the limit of available licenses is 18, and there are 0 licenses used. This means that 18 concurrent softphones can be controlled through DMCC, and thus 18 concurrent recordings are possible.



After completing this procedure, return to the Customer Configuration Overview.

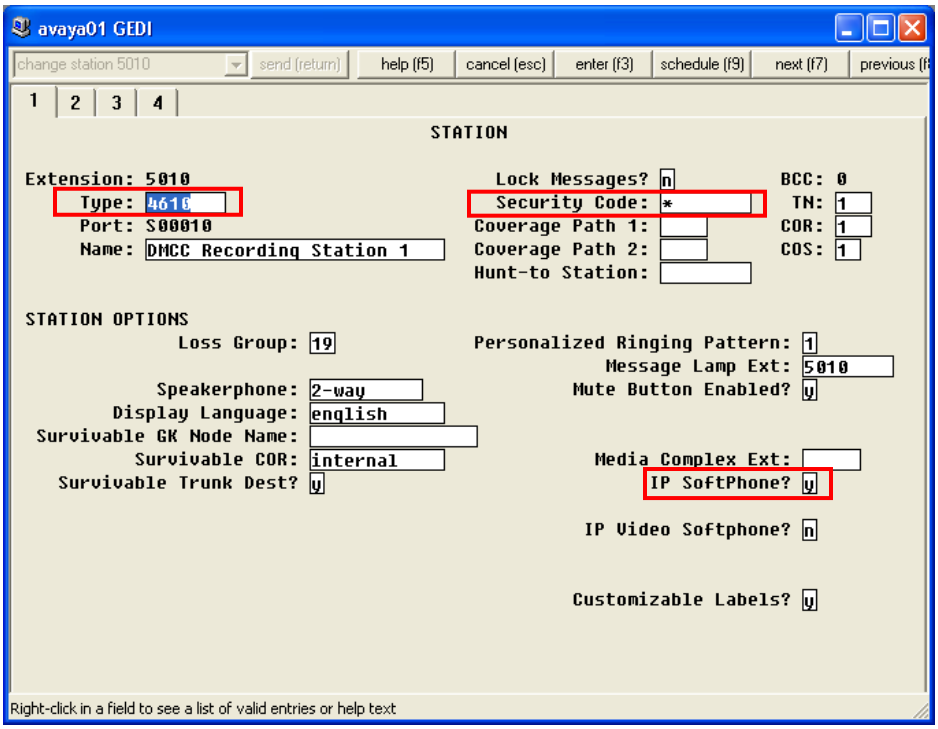
Verify the Switch Configuration in AES

If a switch connection will be used to configure the Uptivity voice board, you must confirm that the connection was created, copy the connection name **exactly** as it appears, and provide that name to the Uptivity installation team.

1. Log in to the AES server with an administrative account.
2. Navigate to **Communication Manager Interface** and click **Switch Connection**.
3. Click **Edit H.323 Gatekeeper**.
4. Enter the gatekeeper's IP address if necessary.

After completing this procedure, return to the Customer Configuration Overview.

Configure Softphone Stations on the AES Server



For each Uptivity recording channel, a corresponding softphone station must be created and configured on the AES server.

To edit the configuration of a station:

1. In GEDI, enter: **Display station xxxx**, where **xxxx** is the station extension.
2. Set **Type** to a VoIP phone type (for example, 4610).
3. Enter the **Security Code** (numerical passcode) for the extension.
4. Set **IP Softphone** to ***Y***.

> The "IP_Soft" license is used to allow the actual "Avaya IP Softphone" software client to connect and register an extension. Since our DMCC stations do not use this software, we do not require any additional licenses for the integration.

Record the **Extension** and **Security Code** used and provide this information to the Uptivity installation team.

Customer Administration Tasks

During ongoing use of the system, your Uptivity administrator may need to configure new channels or reconfigure existing channels. This integration requires changes to the **Voice Boards** page in the Uptivity **Web Portal** when channels are added or must be reconfigured.

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

Channel Configuration Settings

This section provides a reference to channel settings that must be configured for the Avaya DMCC-SSC integration. You should refer to this section whenever you add new channels to your NICE Uptivity system. To learn how to add channels to a voice board, visit online help.

Any other voice board changes should only be done under direct supervision from 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.

The following settings apply when configuring channels for Avaya DMCC-SSC integrations:

Setting	Definition	Value
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 details, search online help for keyword *channel assignment*.	***Anything***
Station	Enter a DMCC station extension.	
Password	Enter the password for the DMCC station.	
Name	Enter an optional name for the channel that can be used in channel scripting.	

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

Appendix: Avaya DMCC Recording Method Comparison

NICE Uptivity supports three different recording methods using DMCC. The following table may help you evaluate the pros and cons of each method during discovery, and determine which integration is best for you. This table is based on information from inContact's experience with Uptivity WFO implementations and the Avaya application note *Developing Client-Side IP Call Recording Applications Using Avaya Application Enablement Services*. Licensing requirements should always be verified with your Avaya representative.

	Single Step Conference (SSC)	Service Observe (SO)	Multiple Registration (MR)
DMCC License	One Full per concurrent recording channel OR One Basic per concurrent recording channel AND one IP Station license per concurrent recording channel	One Full per concurrent recording channel OR One Basic per concurrent recording channel AND one IP Station license per concurrent recording channel	One Basic per concurrent recording channel
TSAPI License	One per recorded device to monitor the device for phone events; one per concurrent recording channel to initiate SSC for recording; and one for the skill monitored for recording.	One per recorded device. Used to monitor the device for phone events. Joining the recording station to the call is performed via DMCC resources.	One per recorded device
Maximum active participants per call	Five. CM supports up to six participants including the recording device, leaving five possible phone participants.	Five. CM supports up to six participants including the recording device, leaving five possible phone participants.	Six
Supported extension types	All	All	DCP and Avaya H.323. Can register recording devices only at extensions that are softphone-enabled on CM's Station form.

Appendix: Avaya DMCC Recording Method Comparison

	Single Step Conference (SSC)	Service Observe (SO)	Multiple Registration (MR)
Maximum recording devices in a call	Four in a two-party call (six minus the number of active participants).	Two for Communication Manager 4.0 and higher One for earlier releases.	Six (one per participant).
Available in AES/CM releases	AES 3.0 and higher CM 3.0 and higher	AES 3.0 and higher CM 3.0 and higher	AES 4.1 and higher CM 5.0 and higher
Additional media processors consumed	One per recording device	One per recording device	One per recording device
Additional TDM time slots consumed (assuming a single port network)	Active Paticipation: One per recording device Silent Participation: 0	Listen/Talk FAC : One per recording device Listen Only FAC: 0	0
Allows recording notification warning to be played to participants	No. Avaya AES supports this feature with SSC but Uptivity runs as a Silent Participant, preventing it from sending the notification.	Yes	No
Class of Restrictions (CORs) needed	N/A	Restricted via CORs on both station and agent levels. **Benefit**: Security. Agent must be logged into the CM to be recorded. **Drawback**: Requires additional administration for phones and agents.	N/A

	Single Step Conference (SSC)	Service Observe (SO)	Multiple Registration (MR)
Supports highly-available call recording	Yes, but at cost of available active party slots in calls.	Yes, two for Communication Manager 4.0 and higher	Yes. Depending on configuration and provisioning, each registration can be through separate hardware and network paths, or overlapped, to achieve varying levels of high availability. Supports registration of a second recording device at a target extension, providing a back-up should one recording fail. Additional hardware or licensing may be required.
Potential delay starting call or recording start failure	N/A	SO requires a feature access code and target number to be dialed; there can be a slight delay (hundreds of milliseconds) after the call has started before the recording device joins the call. Since the SO session requires dialing, there can be a small chance of failure if the CM does not interpret the dial string correctly.	N/A

Regular registration of target recording devices	N/A	N/A	Not recommended if target devices are not registered with the CM on a regular basis (that is, daily). MR does not notify secondary stations when the primary is unregistered; thus, secondary stations initiate retry events for registration that may eventually lead to resource issues on the AES.

	Single Step Conference (SSC)	Service Observe (SO)	Multiple Registration (MR)
Records Trunk-to-Trunk Transfers	Trunk-to-Trunk calls transferred over a VDN can be recorded by monitoring the VDN for call IDs and conferencing a DMCC station into the calls.	N/A	N/A
Records Avaya one-X® Attendant Stations	No	Yes with special configuration.	No
Allows dynamic channel allocation	No	No	Yes with Uptivity Voice Board Reloading license.