



# Customer Guide to Avaya DMCC-SO Integrations

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**Recording**

### Customer Guide to Avaya DMCC-SO Integrations

- **Version** — This guide should be used with inContact WFO v5.6 or later
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# Introduction

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## Audience

This document is written for customers and prospective customers interested in using inContact WFO Call Recording in an Avaya DMCC-SO 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 inContact WFO.

## Goals

The goal of this document is to provide knowledge, reference, and procedural information necessary to understand a proposed Avaya/inContact WFO integration using DMCC-SO, and to configure the Avaya equipment to support the integration. The information is presented in the following order:

- Overview of the Avaya DMCC-SO integration
- Customer knowledge and procedures related to integration tasks
- Customer knowledge and procedures for maintaining the recording 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 inContact WFO 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 inContact WFO application administrator can click on the **Customer Administration Tasks** bookmark to jump directly to that section.

## Customer Guide to Avaya DMCC-SO Integrations

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

For questions related to inContact WFO configuration, consult the inContact WFO installation team.

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

## Terminology

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

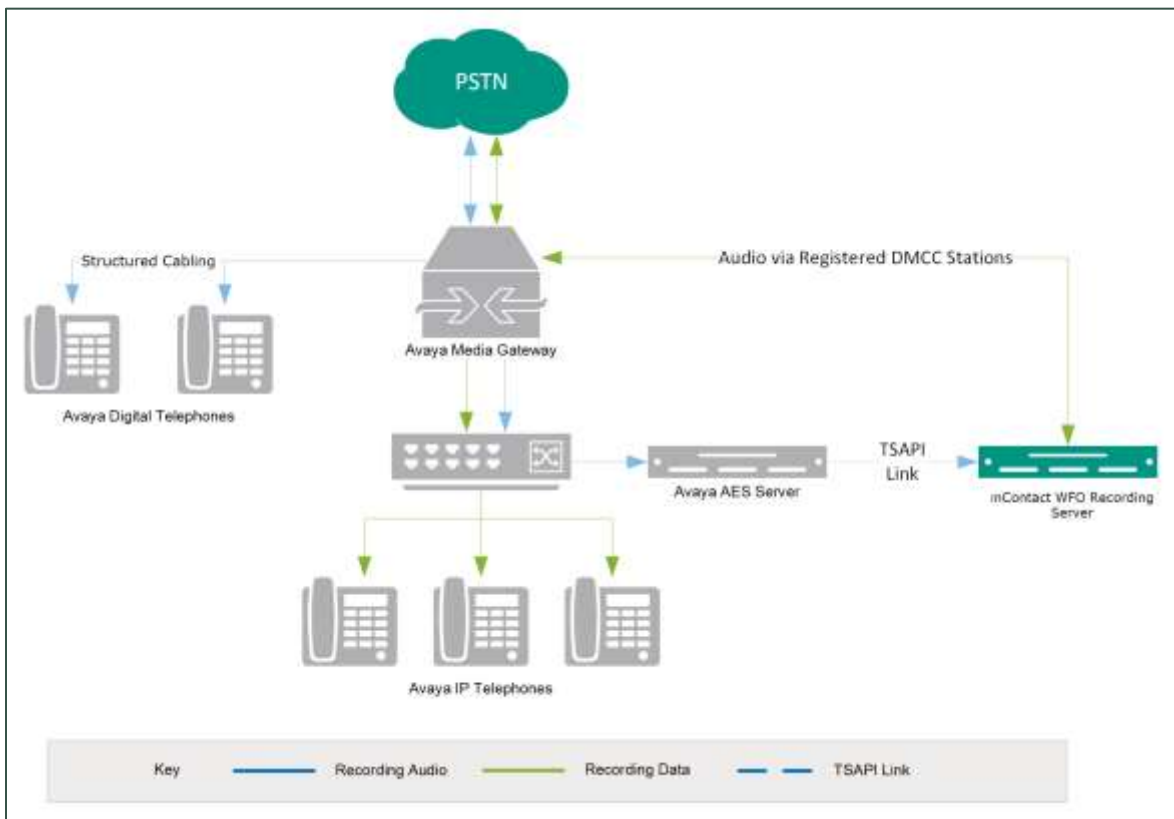
- **AACC:** Avaya Aura Contact Center. AACC is an Avaya contact center product that is common in VoIP environments and in multi-channel call centers due to its support for non-voice interactions.
- **AES:** Application Enablement Services. The AES server in an Avaya contact center hosts software that 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. Avaya AES and AACC functionality that provides inContact WFO with 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.
- **SO:** Service Observe. Avaya functionality that allows a person or device to listen to a call in progress.
- **TSAPI:** Telephone Services Application Programming Interface. Avaya TSAPI is software provides the call control events and metadata to inContact WFO.
- **S8300, S8500, S8700:** Common models of Avaya PBX equipment.

## Customer Responsibilities

You are responsible for supplying the physical and/or IP connection(s) 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-SO Integration Overview

The Avaya DMCC-SO integration uses softphones on the Avaya AES server as the audio source, and receives call control events and metadata through AES using TSAPI. inContact WFO detects when a station joins a call and makes a request to service observe that call using the corresponding softphone on the AES server.



General architectural example of the Avaya DMCC-SO integration

| Component                     | Function  |
|-------------------------------|---|
| <b>Avaya CM Media Gateway</b> | Controls the audio presented to and from digital and/or IP phones.  |
| <b>Avaya AES</b>              | Provides the DMCC CTI Interface to create and control virtual softphones for the purpose of call recording and to provide call metadata.  |
| <b>inContact WFO</b>          | Receives audio, call control events, and business data. Provides a CTI interface for recording. In Premises deployments, 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.
- Avaya one-X<sup>®</sup> Attendant stations can be recorded, but only with special configuration using a physical physical station as the "answering device". Because all calls appear to be from the one-X Attendant to the answering device, inContact WFO cannot capture actual ANI, actual DNIS, or call direction.
- This integration provides "muted" (mono) audio and therefore does not support speaker separation for reporting or analytics.
- Versions of Avaya CM prior to v4.0 allow only one Service Observer in a call.

### Avaya Requirements

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

#### Hardware

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

#### Software

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- Avaya CM v3.1 through 7.0
- Avaya AES v3.1 with SP 4 or higher through 7.0

#### Licensing

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- 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.

**i** 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.

Licensing requirements should always be verified with your Avaya representative.

# inContact WFO Requirements

## Hardware

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inContact WFO hardware requirements vary depending on system configurations. Appropriate hardware is identified during the system implementation process. For additional information, see *Customer Site Requirements for inContact WFO*.

## Software

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This guide covers the following release:

- inContact WFO v5.6 or later

Additional third-party software is required for this integration:

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

## Licensing

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- One (1) Voice seat license per named agent **or**
- One (1) Voice concurrent session license for each simultaneous call that will be recorded.
- Optional: One (1) Screen Capture license per workstation to be recorded.

## Customer Configuration Overview

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

| Customer Configuration Steps for Avaya DMCC-SO 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 <i>Customer Guide to Avaya TSAPI Integrations</i> .  |
| 4   | <p><b>On the Avaya CM:</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Set Call Center System Parameters</a></li> <li>• <a href="#">Enable Service Observing</a></li> <li>• <a href="#">Set a Service Observe Feature Access Code</a></li> <li>• <a href="#">Create a Class of Restriction (COR)</a></li> </ul> |
| 5   | <a href="#">Verify DMCC License Availability.</a>  |
| 6   | <a href="#">Verify the Switch Configuration in AES.</a>  |
| 7   | <a href="#">Configure Softphone Stations on the AES Server.</a>  |

## 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 manuals and/or guides from Avaya to install and configure Avaya components.

### Set Call Center System Parameters

```
change system-parameters features Page 11 of 18
FEATURE-RELATED SYSTEM PARAMETERS
CALL CENTER SYSTEM PARAMETERS
EAS
  Expert Agent Selection (EAS) Enabled? y
  Minimum Agent-LoginID Password Length: -
  Direct Agent Announcement Extension:                      Delay:   
  Message Waiting Lamp Indicates Status For: station

VECTORING
  Converse First Data Delay: 0 Second Data Delay: 2
  Converse Signaling Tone (msec): 100 Pause (msec): 70
  Prompting Timeout (secs): 10
  Interflow-qpos EWT Threshold: 2
  Reverse Star/Pound Digit For Collect Step? n
  Available Agent Adjustments for BSR? n
  BSR Tie Strategy: 1st-found
  Store UDN Name in Station's Local Call Log? n
SERVICE OBSERVING
  Service Observing: Warning Tone? n or Conference Tone? n
  Service Observing Allowed with Exclusion? n
  Allow Two Observers in Same Call? y
```

Sometimes inContact WFO needs to observe and make two recordings for a single call (for example, agent-to-agent calls, conference calls with more than one participating agent, etc.).

To enable this functionality on the Avaya CM:

1. Log in to GEDI with an appropriately-permissioned account.
2. Enter the command: **change system-parameters features**.
3. On page 11 of the display, verify that **Allow Two Observers in Same Call?** is set to **y**.

After completing this procedure, return to the [Customer Configuration Overview](#).

### Enable Service Observing

```
display system-parameters customer-options          Page 6 of 11
CALL CENTER OPTIONAL FEATURES

Call Center Release: 3.0

ACD? y                      Reason Codes? y
BCMS (Basic)? y             Service Level Maximizer? y
BCMS/VuStats Service Level? y Service Observing (Basic)? y
BSR Local Treatment for IP & ISDN? n Service Observing (Remote/By FAC)? y
Business Advocate? n       Service Observing (VDNs)? y
Call Work Codes? y        Timed ACW? y
DTMF Feedback Signals For VRU? n Vectoring (Basic)? y
Dynamic Advocate? n       Vectoring (Prompting)? y
Expert Agent Selection (EAS)? y Vectoring (G3V4 Enhanced)? y
EAS-PHD? y                Vectoring (3.0 Enhanced)? n
Forced ACD Calls? n       Vectoring (ANI/II-Digits Routing)? y
Least Occupied Agent? n   Vectoring (G3V4 Advanced Routing)? y
Lookahead Interflow (LAI)? y Vectoring (CINFO)? y
Multiple Call Handling (On Request)? y Vectoring (Best Service Routing)? n
Multiple Call Handling (Forced)? y Vectoring (Holidays)? n
PASTE (Display PBX Data on Phone)? y Vectoring (Variables)? n
(NOTE: You must logoff & login to effect the permission changes.)
```

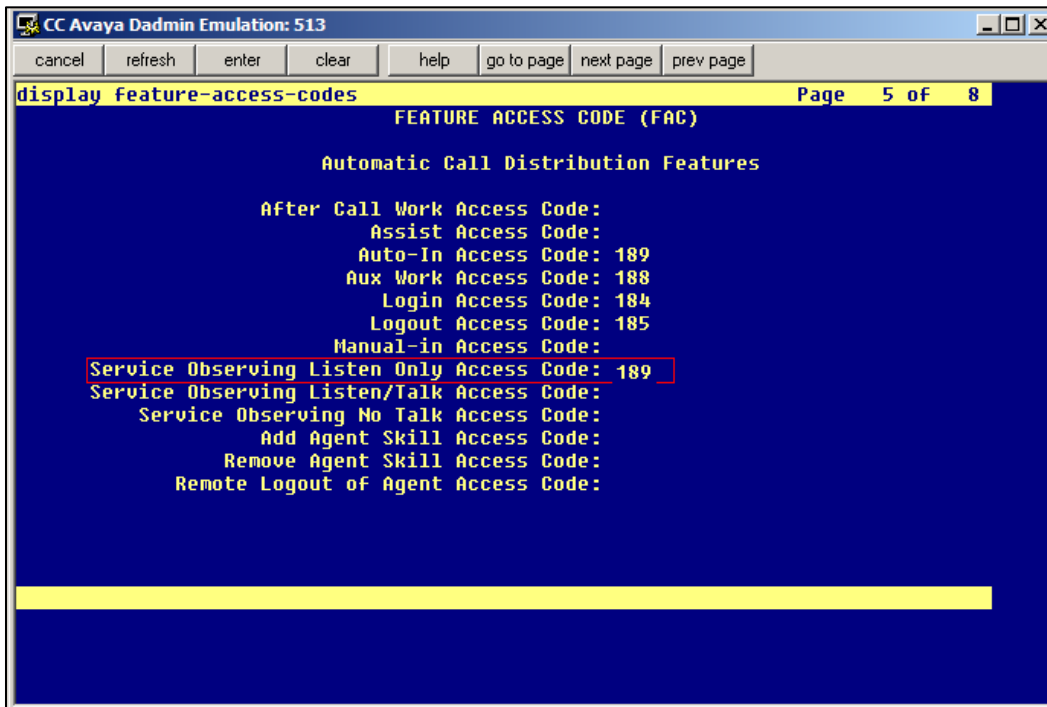
This integration uses the SO feature on the Avaya CM. To enable this feature:

1. Log in to GEDI with an appropriately-permissioned account.
2. Enter the **display system-parameters customer-options** command to open the CM System Parameter Customer-Options screen.
3. Verify that **Service Observing (Basic)** and **Service Observing (Remote/By FAC)** are both set to **y**.

If these fields are not enabled, contact your Avaya representative for information on how your installation was initially configured.

After completing this procedure, return to the [Customer Configuration Overview](#).

# Set a Service Observe Feature Access Code



The screenshot shows a terminal window titled "CC Avaya Dadmin Emulation: 513". The window has a menu bar with buttons: cancel, refresh, enter, clear, help, go to page, next page, prev page. Below the menu bar, the command "display feature-access-codes" is entered, and the output is displayed on a blue background with white text. The output shows "FEATURE ACCESS CODE (FAC)" and "Automatic Call Distribution Features". A list of access codes is shown, with "Service Observing Listen Only Access Code: 189" highlighted by a red box. A yellow horizontal bar is at the bottom of the terminal window.

```
CC Avaya Dadmin Emulation: 513
cancel refresh enter clear help go to page next page prev page
display feature-access-codes Page 5 of 8
FEATURE ACCESS CODE (FAC)
Automatic Call Distribution Features
After Call Work Access Code:
  Assist Access Code:
  Auto-In Access Code: 189
  Aux Work Access Code: 188
  Login Access Code: 184
  Logout Access Code: 185
  Manual-in Access Code:
Service Observing Listen Only Access Code: 189
Service Observing Listen/Talk Access Code:
  Service Observing No Talk Access Code:
  Add Agent Skill Access Code:
  Remove Agent Skill Access Code:
  Remote Logout of Agent Access Code:
```

When supervisors perform a service observe, they must enter an access code. inContact WFO must be configured to use this access code as well. You will need to set the **Service Observing Listen Only Access Code** for the Avaya CM and provide this code to your inContact WFO installation team.

1. Log in to GEDI with an appropriately-permissioned account.
2. Enter the command: **change feature-access-codes**.
3. Enter a code for **Service Observing Listen Only Access Code** (in the screenshot, the code is 189) and provide this number to the inContact WFO installation team.

After completing this procedure, return to the [Customer Configuration Overview](#).

## Create a Class of Restriction (COR)

You must assign a class of restriction to each trunk group to allow it to issue the Service Observing code.

To create a COR:

1. Log in to GEDI with an appropriately-permissioned account.
2. Enter the command: **change cor *n*** to create a COR (*n* can be any number).
3. Enter a description.
4. Set **Can Be a Service Observer** to **y**.

After completing this procedure, return to the [Customer Configuration Overview](#).

## 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.

To verify DMCC\_DMC licensing on the AES (based on AES 5.2.1):

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).





## Configure Softphone Stations on the AES Server

avaya01 GEDI

change station 5010 send (return) help (f5) cancel (esc) enter (f3) schedule (f9) next (f7) previous (f6)

1 2 3 4

**STATION**

Extension: 5010  
 Type: 4610  
 Port: S00010  
 Name: DMCC Recording Station 1

Lock Messages?  n  
 Security Code: \*  
 Coverage Path 1:  
 Coverage Path 2:  
 Hunt-to Station:

BCC: 0  
 TN: 1  
 COR: 1  
 COS: 1

**STATION OPTIONS**

Loss Group: 19  
 Personalized Ringing Pattern: 1  
 Message Lamp Ext: 5010  
 Mute Button Enabled?  y

Speakerphone: 2-way  
 Display Language: english  
 Survivable GK Node Name:  
 Survivable COR: internal  
 Survivable Trunk Dest?  y

Media Complex Ext:  
 IP SoftPhone?  y

IP Video Softphone?  n

Customizable Labels?  y

Right-click in a field to see a list of valid entries or help text

For each inContact WFO 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 (ex. 4610).
3. Enter the **Security Code** (numerical passcode) for the extension.
4. Set the **COR** to that created previously (see [Create a Class of Restriction \(COR\)](#)).
5. Set **IP Softphone** to Y.

**i** 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 inContact WFO installation team.

# Optional: Configure Avaya for Recording one-X Attendants

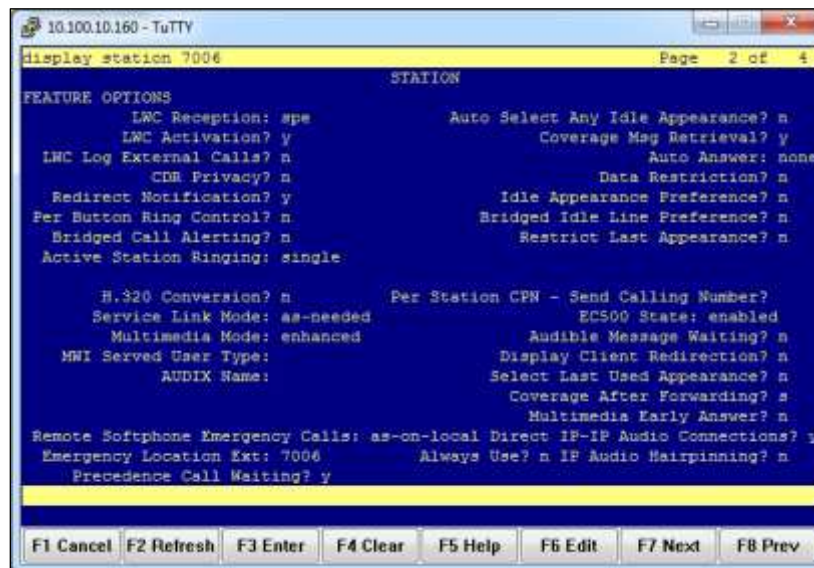
## one-X Attendant Stations Overview

Avaya one-X<sup>®</sup> Attendant is an application that provides a softphone for users who are typically in an operator or switchboard role. Because of the way the application interacts with the Avaya CM, one-X Attendant stations require special configuration for recording. Service Observe is the only Avaya DMCC recording method that supports capturing one-X Attendant audio.

In addition to the one-X Attendant station, the user must also have an associated physical station (i.e. a 9641 station) which inContact WFO terms the "answering device". inContact WFO monitors the answering device for call events and then sends a call to record audio from the one-X Attendant station when needed.

## Set Service Link Mode

When the answering device is configured, Service Link Mode must be set to "as needed". Setting the mode to "permanent" causes Avaya to create a single call for the entire time the user is logged into the one-X Attendant.



To configure this mode:

1. Log in to the Communication Manager administrative interface.
2. Navigate to page 2 of the station settings for the answering device.
3. Set **Service Link Mode** to as-needed.

### Set Telecommuter Mode

---

For this recording integration, the one-X Attendant must always be in Telecommuter mode. In this mode, the one-X Attendant is configured to forward calls to the answering device, and inContact WFO monitors and records audio for that device. The user will also answer incoming and make outgoing calls on the answering device.

The screenshot shows a 'Login' dialog box with the following fields and options:

- Extension: 7006
- Password: [Redacted]
- Configuration: Telecommuter (selected in a drop-down menu)
- Call Server Address: 10.100.10.160
- Telephone At: 7006 (selected in a drop-down menu)
- Dialing Location: My Location (selected in a drop-down menu)
- Remember password for next login session:
- Automatically log in if possible when application restarts:
- Buttons: Log in, Settings..., Cancel, Help
- Warning: The telephone number shown in the "Telephone at" box will be used for talkpath. Be sure to enter an access code, if required (e.g. 9).

To set this mode:

1. Open the **Login** dialog box for the one-X Attendant.
2. Under **Configuration**, select **Telecommuter** from the drop-down menu.
3. Under **Telephone at**, select the extension of the answering device.
4. Click the **Log in** button.

# Customer Administration Tasks

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

## Voice Boards Overview

Voice Boards control how inContact WFO acquires audio. This component provides **what** inContact WFO is to record. At least one Voice Board is required for most integrations. While Voice Boards can correspond to physical audio capture boards in some integrations, they are not those boards.

inContact WFO uses per-channel licensing, and each Voice Board software component maintains the count of licensed, used and available channels associated with it. The system will not use any Voice Boards or channels for which it is not licensed.

## Voice Board Configuration

The basic procedure for configuring Voice Board channels is the same for all integrations and can be found in the *inContact WFO Administration Manual*. For channel settings specific to this integration, see [Channel Configuration Settings](#). Unless your system is licensed for the Voice Board Reloading feature, you must restart the Recorder service (cc\_cticore.exe) after any Voice Board and/or Channel changes.

Any other Voice Board changes should only be done under direct supervision from inContact WFO 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 an Avaya DMCC-SO integration:

| Setting         | Definition  | Value           |
|-----------------|---|-----------------|
| <b>Assign</b>   | 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, see <a href="#">Appendix: Channel Assignment Settings Definitions</a> . | <b>Anything</b> |
| <b>Station</b>  | Enter a DMCC station extension.   |                 |
| <b>Password</b> | Enter the password for the DMCC station.  |                 |
| <b>Name</b>     | Enter an optional name for the channel that can be used in channel scripting.   |                 |

## Avaya one-X Attendant Configuration

**i** This section applies only if you are recording one-X Attendant stations.

Each user of a one-X Attendant station must also have an associated physical station (i.e. a 9641 station) which inContact WFO terms the "answering device". inContact WFO monitors the answering device for call events and then sends a call to record audio from the one-X Attendant station when needed.

Your inContact WFO installation team created a recording schedule for the one-X Attendant stations that specifically excludes the answering devices. This ensures that inContact WFO never tries to record audio on the answering device, but only monitors it for events.

If you make changes to the one-X Attendant stations and/or the associated physical station, this schedule may need to be modified. For instructions on creating and editing schedules, see the current *inContact WFO Administration Guide*. If you have additional questions, contact inContact WFO Support.

## Appendix: Channel Assignment Settings Definitions

The following table lists and defines the values that appear in the Assign setting drop-down list in Channel Configuration. Labels for these settings are affected by Terminology settings in the inContact WFO Web Portal.

This list is presented solely as a reference. You should always choose the Assign setting called for by your specific integration.

| Setting                                   | Definition  |
|---|---|
| <b>Not in Use</b>                         | Identifies a channel that is licensed in the system but not currently used.   |
| <b>Anything</b>                           | Allows channel to be used for all recording and playback events, as determined by schedule priorities.                      |
| <b>Playback Anything</b>                  | Limits channel to playback of recordings via telephone.   |
| <b>Record Anything</b>                    | Allows channel to be used for any scheduled or API-triggered recording.   |
| <b>Instant Record</b>                     | Dedicates channel to instant recording requests from the API.   |
| <b>Dedicated Record ACD Group</b>         | Limits channel to recording only the specified ACD/PBX group (not the inContact WFO Group), independently of any schedules. |
| <b>Dedicated Record Device ID</b>         | Limits channel to recording a specific hardware resource (e.g., voice port or DN) on the ACD/PBX.                           |
| <b>Dedicated Record Agent ID</b>          | Limits channel to recording a specific agent number or extension.   |
| <b>Dedicated Record Dialed Number</b>     | Limits channel to recording a specific inbound number, such as an 800-number carrying traffic to your facility.             |
| <b>Dedicated Record Caller ID</b>         | Limits channel to recording a specific ANI. Full or partial ANI matches may be used, e.g., limit to a matching area code.   |
| <b>Dedicated Record User1(2)(3)(4)(5)</b> | Limits channel to recording a specific user-defined value as set by the API. Examples include Account and Case Number.      |
| <b>Playback and Instant Record</b>        | Limits channel to playback and instant recording requests from the API.   |
| <b>Playback and Record</b>                | Limit channel to scheduled recordings and playback.   |

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|                                  |  |
|----------------------------------|--|
| <b>Record and Instant Record</b> | Limit calls to recording only, but of any recording type.  |
| <b>Unlicensed</b>                | Identifies a channel which may be present (for example, on a physical audio capture card) but for which there is no license in the system. |

## Appendix: Avaya DMCC Recording Method Comparison

inContact WFO supports three different recording methods using DMCC. The following table may help you evaluate the pros and cons of each method during the inContact WFO discovery process, and determine which integration is best for you. This table is based on information from inContact's experience with inContact 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)  |
|--|--|---|-----------------------------|
| <b>DMCC License</b>                                    | 1 Full per concurrent recording channel<br>OR<br>1 Basic per concurrent recording channel AND 1 IP Station license per concurrent recording channel                                      | 1 Full per concurrent recording channel<br>OR<br>1 Basic per concurrent recording channel AND 1 IP Station license per concurrent recording channel | 1 Basic per recorded device |
| <b>TSAPI License</b>                                   | 1 per recorded device to monitor the device for phone events; 1 per concurrent recording channel to initiate the SSC for recording; and 1 for the skill that is monitored for recording. | 1 per recorded device. Used to monitor the device for phone events. Joining the recording station to the call is performed via DMCC resources.      | 1 per recorded device.      |
| <b>Maximum number of active participants in a call</b> | 5. CM supports up to 6 participants including the recording device, leaving 5 possible phone participants.   | 5. CM supports up to 6 participants including the recording device, leaving 5 possible phone participants.  | 6                           |



## Customer Guide to Avaya DMCC-SO Integrations

|  |   |   |   |
|--|---|---|---|
| <b>Supported extension types</b>   | All   | All   | DCP and Avaya H.323. Client applications can register recording devices only at extensions that are softphone-enabled on CM's Station form. |
|  | <b>Single Step Conference (SSC)</b>   | <b>Service Observe (SO)</b>   | <b>Multiple Registration (MR)</b>   |
| <b>Maximum number of recording devices in a call</b>                       | 4 in a two-party call (6 minus the number of active participants).  | 2 for Communication Manager 4.0 and higher<br>1 for earlier releases. | 6 (one per participant).  |
| <b>Available in AES/CM releases</b>  | AES 3.0 and higher<br>CM 3.0 and higher   | AES 3.0 and higher<br>CM 3.0 and higher                               | AES 4.1 and higher<br>CM 5.0 and higher   |
| <b>Additional media processors consumed</b>                                | 1 per recording device  | 1 per recording device  | 1 per recording device  |
| <b>Additional TDM time slots consumed (assuming a single port network)</b> | Active Participation: 1 per recording device<br>Silent Participation: 0   | Listen/Talk FAC : 1 per recording device<br>Listen Only FAC: 0        | 0   |
| <b>Allows recording notification warning to be played to participants</b>  | No. Avaya AES supports this feature with SSC but inContact WFO runs as a Silent Participant, preventing it from sending the notification. | Yes   | No  |

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|   |  |  |  |
|---|--|--|--|
| <b>Class of Restrictions (CORs) needed</b>      | N/A  | Restricted via CORs on both station and agent levels.<br><b>Benefit:</b> Security. Agent must be logged into the CM to be recorded. <b>Drawback:</b> Requires additional administration for phones and agents. | N/A  |
|   | <b>Single Step Conference (SSC)</b>                        | <b>Service Observe (SO)</b>  | <b>Multiple Registration (MR)</b>  |
| <b>Supports highly-available call recording</b> | Yes, but at cost of available active party slots in calls. | Yes, 2 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.<br>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. |

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|  |  |   |   |
|--|--|---|---|
| <p><b>Potential delay starting call or recording start failure</b></p> | <p>N/A</p>                                 | <p>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.<br/>                 Since the SO session requires dialing, there can be a small chance of failure if the CM does not interpret the dial string correctly.</p> | <p>N/A</p>  |
|  | <p><b>Single Step Conference (SSC)</b></p> | <p><b>Service Observe (SO)</b></p>  | <p><b>Multiple Registration (MR)</b></p>  |
| <p><b>Regular registration of target recording devices</b></p>         | <p>N/A</p>                                 | <p>N/A</p>  | <p>Not recommended if target devices are not registered with the CM on a regular basis (e.g., 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.</p> |

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|--|--|---------------------------------|---|
| <b>Records Trunk-to-Trunk Transfers</b>        | 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   |
| <b>Records Avaya one-X® Attendant Stations</b> | No   | Yes with special configuration. | No  |
| <b>Allows dynamic channel allocation</b>       | No   | No                              | Yes with inContact WFO Voice Board Reloading license. |

## Document Revision History

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| Revision | Change Description                                | Effective Date |
|----------|---|----------------|
| 0        | Initial version for this release                  | 2015-04-30     |
| 1        | Rebranded content.                                | 2016-02-05     |
| 2        | Enhanced description of required Avaya licensing. | 2016-05-18     |