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Recording

## **Customer Guide to Avaya DT-SO Integrations**

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

# Audience

This document is written for customers and prospective customers interested in using inContact Call Recording in an Avaya DT-SO telephony environment. Readers who will perform procedures in this guide should have a basic level of familiarity with traditional wired telephony, general networking, the Windows operating system, Avaya hardware and software, and inContact Workforce Optimization.

## Goals

The goal of this document is to provide knowledge, reference, and procedural information necessary to understand a proposed Avaya/inContact WFO integration using digital telephony trunks and Avaya SO, 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 inContact WFO Sales Engineer, Project Manager, or other resource to assist in applying this information to the reader's environment. It also assumes that the telephony trunks have been added to your Avaya PBX and are working correctly.

# 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.

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**

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.
- **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.
- **TDM:** Time Division Multiplexing. Commonly-used as an acronym for traditional wired telephony, as opposed to VoIP.
- **TSAPI:** Telephone Services Application Programming Interface. Avaya TSAPI is software provides the call control events and metadata to inContact WFO.
- **\$8300, \$8500, \$8700:** Common models of Avaya PBX equipment.

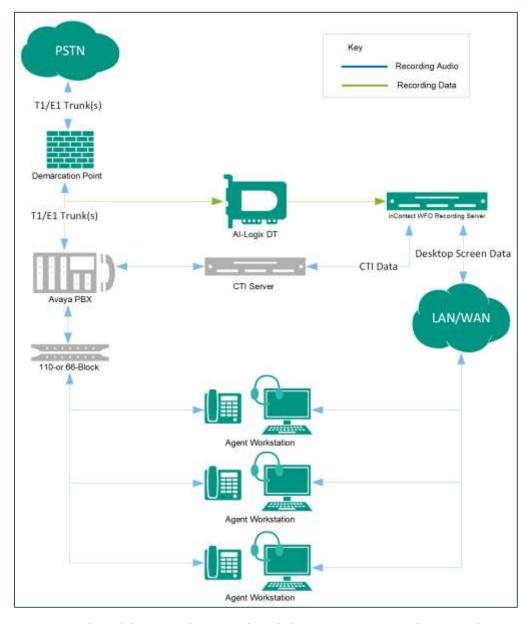
# **Customer Responsibilities**

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 <u>Customer Integration Tasks</u> section for additional information.

If you supply the server hardware for the installation, then you are also responsible for installing the physical Ai-Logix cards in the server.

# **Avaya DT-SO Integration Overview**

The Avaya DT-SO integration uses T1/E1 terminating trunks 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 service observe request to the PBX. The Avaya PBX then delivers the audio to the trunk. The number of trunk members available determines the number of simultaneous calls that can be recorded. For example, if two T1s are deployed in a PRI configuration, this allows for 46 simultaneous calls to be recorded ( $2 \times 23$  channels).

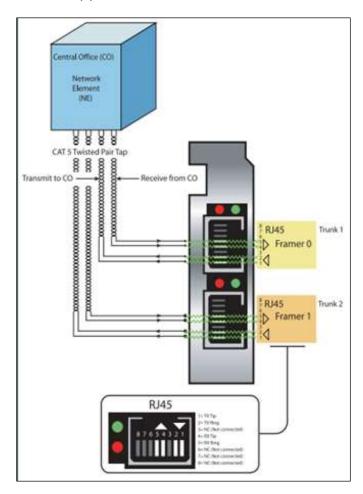


General architectural example of the Avaya DT-SO integration

Component	Function	
Avaya CM	Controls the audio presented to and from digital phones, IP phones, or both.	
Avaya AES	Provides a CTI Interface for call metadata and call control events that can be used as recording triggers.	
Ai-Logix DT Card	Audio capture card(s) installed in the inContact WFO recording server.	
inContact WFO Server	Receives audio, call control events, and business data. Provides a CTI interface for recording. In Premises deployments, hosts the Web Portal for playback and administration.	

# Wiring Example

In many cases, a T1 Crossover cable or adapter is needed to connect the Ai-Logix card to the Avaya DS1 Circuit pack. For more information, refer to AudioCodes documentation available on the AudioCodes Support website or from inContact.



Wiring diagram for terminating trunks

# **Known Limitations**

- This integration provides "muxed" (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.
- The Avaya DT-SO integration does not support the real-time blackout functionality in inContact WFO.

# Avaya Requirements

### **Hardware**

- Avaya S8300, S8500, or S8700 media server
- Avaya DS1 Circuit Packs

## **Software**

Avaya CM v3.1 through 7.0

## Licensing

• One (1) Station License per channel.

## inContact WFO Requirements

#### **Hardware**

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*.

Along with standard hardware, one or more of the following is specifically required for this integration based on the number of trunks to be recorded:

AudioCodes DT 6409 T1/E1 Terminating Tap Call Recording Blade

This card is dual-port and can connect to up to two (2) T1/E1 trunks. The number of channels that can be recorded per trunk varies depending on the configuration of the trunk itself:

Single T1: 24 channels (23 channels for ISDN-signaled T1)

Dual T1: 48 channels (46 channels for ISDN-signaled T1)

Single E1: 30 channels

Dual E1: 60 channels

## **Software**

This guide covers the following release:

inContact WFO, v5.6 or higher

Additional third-party software is required for the Ai-Logix digital trunk integration:

- AudioCodes SmartWORKS v3.11 5.4
- AudioCodes SmartWORKS v5.9 in MS 2012 environments

## Licensing

- One (1) Voice seat license per trunk channel.
- 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 DT-SO integrations. Links are provided for tasks that are covered in this guide.

	Customer Configuration Steps for Avaya DT-SO Integrations				
1	Install the Ai-Logix card(s) in customer-supplied server(s).				
2	Complete all necessary physical connections between the recording server(s) and the telephony system.				
3	Complete all necessary physical and IP connections between the recording server(s) and the LAN.				
4	Obtain any necessary Avaya software and licensing.				
5	Complete the tasks and procedures detailed in the <i>inContact WFO Customer Guide to Avaya TSAPI Integrations</i> .				
6	Set Call Center System Parameters.				
7	Enable Service Observing.				
8	Set a Service Observe Feature Access Code.				
9	Create a Class of Restriction (COR).				
10	Configure the DS1 Circuit Pack.				
11	Configure the Trunk Group.				
12	Configure the Trunk Signaling Group.				
13	Configure the Trunk Group Channels.				

# **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
                        FEATURE-RELATED SYSTEM PARAMETERS
CALL CENTER SYSTEM PARAMETERS
  EAS
         Expert Agent Selection (EAS) Enabled?
        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 VDN 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, and so forth).

To enable this functionality on the Avaya CM:

- 1. Log in to GEDI with an appropriately-permissioned account.
- 2. Type 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
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6 of 11
                                                                                                                                                                               CALL CENTER OPTIONAL FEATURES
                                                                                                                                                                                        Call Center Release: 3.0
                                                                                                                                                                                                                                  ACD? y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Reason Codes? y
                                                                                                                                                              BCMS (Basic)? y
                                                                                                                                                                                                                                                                                                                                                                             Service Level Maximizer? y
                                                                                                                                                                                                                                                                                            Service Level Maximizer? y
Service Observing (Basic)? y
                                                               BCMS/VuStats Service Level? y
                                                                                                                          Business Advocate? n
Call Work Codes? y

Ck Signals Business Advocate Signals Business Sign
               BSR Local Treatment for IP & ISDN? n
                                           DTMF Feedback Signals For VRU? n
                                                Dynamic Advocate? n Vectoring (Basic)? y

Expert Agent Selection (EAS)? y

EAS-PHD? y

Vectoring (G3V4 Enhanced)? y

Vectoring (3 O Enhanced)? y
                                                                                                                                                                                                                                                                                                                                                                                                                            Vectoring (Basic)? 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
Multiple Call Handling (On Request)? y

Multiple Call Handling (Forced)? y

PASTE (Display PBX Data on Phone)? y

(NOTE: You must locaff the large of the large o
                                                             (NOTE: You must logoff & login to effect the permission changes.)
```

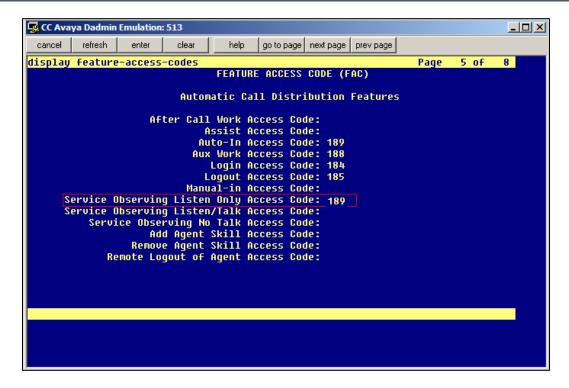
This integration uses the SO feature on the Avaya CM. To enable this feature:

- 1. Log in to GEDI with an appropriately-permissioned account.
- 2. Type 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



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. Type the command: change feature-access-codes.
- 3. Type 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 <u>Customer Configuration Overview</u>.

# Create a Class of Restriction (COR)

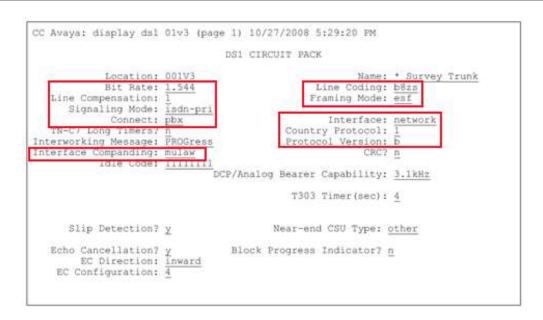
You must assign a class of restriction to each trunk group to allow it to issue the Service Observing code.

#### To create a COR:

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

After completing this procedure, return to the <u>Customer Configuration Overview</u>.

# Configure the DS1 Circuit Pack



To verify/configure required settings on the DS1 circuit pack:

- 1. Log in to GEDI with an appropriately-permissioned account.
- 2. Type the command: display ds1.
- 3. Verify that the settings match those shown in the image shown here.
- 4. Make a note of the settings and provide them to your inContact WFO installation team.

After completing this procedure, return to the <u>Customer Configuration Overview</u>.

# Configure the Trunk Group

You will need to perform this procedure for all trunk groups to be recorded.

To verify/configure required settings for the trunk group:

- 1. Log in to GEDI with an appropriately-permissioned account.
- 2. Type the command: **display trunk-group n**, where n is the number of the applicable trunk group.

```
CC Avaya: display trunk-group 10 (page 1) 10/27/2008 5:28:47 PM
                                TRUNK GROUP
Group Number: 10
                                                             CDR Reports: Y
                                   Group Type: isdn
                                          COR: 1
 Group Name: * Nortel
                                                         Carrier Medium: PRI/BRI
   Direction: two-way
                             Outgoing Display?
                               Busy Threshold: 255
 Dial Access?
Service Type: tie
                                    Auth Code? n
                                                            TestCall ITC: rest
                         Far End Test Line No:
TestCall BCC: 4
```

3. On page 1 of the display, configure the settings as shown in this image. For COR, type the ID you configured in <u>Create a Class of Restriction (COR)</u>.

```
CC Avaya: display trunk-group 10 (page 2) 10/27/2008 5:28:47 PM

Group Type: isdn

TRUNK PARAMETERS

Codeset to Send Display: 6 Codeset to Send National IEs: 6

Max Message Size to Send: 260 Charge Advice: none
Supplementary Service Protocol: a Digit Handling (in/out): enbloc/enbloc

Trunk Hunt: cyclical

Incoming Calling Number - Delete: Insert: Format:

Bit Rate: 1200 Synchronization: async Duplex: full
Disconnect Supervision - In? y Out? n
Answer Supervision Timeout: 0
```

4. On page 2 of the display, verify that **Group Type** is set to **isdn** as shown in this image.

```
CC Avaya: display trunk-group 10 (page 3) 10/27/2008 5:28:47 PM
TRUNK FEATURES
                                                                                                                                                        Measured: none Wideband Support. Maintenance Tests? y
                                                                                                                        Internal Alert? n Maintenance result Management Managem
                                       ACA Assignment? n
                                                                                                                                                                                                                           Send Calling Number: y
                                                                                                                                                                                                                    Send EMU Visitor CPN? n
                                             Used for DCS? n
  Suppress # Outpulsing? n Format: public
Outgoing Channel ID Encoding: preferred UUI IE Treatment: service-provider
                                                                                                                                                                                                  Replace Restricted Numbers? n
                                                                                                                                                                                               Replace Unavailable Numbers? n
                                                                                                                                                                                                                    Send Connected Number: y
Network Call Redirection: none
                                                                                                                                                                                                       Hold/Unhold Notifications? n
                                                 Send UUI IE? y
Send UCID? y
                                                                                                                                                                                         Modify Tandem Calling Number? n
  Send Codeset 6/7 LAI IE? \overline{y}
                                                                                                                                                                                                               Ds1 Echo Cancellation? n
                                                                                                                                                                      US NI Delayed Calling Name Update? n
                                                                                                                  Network (Japan) Needs Connect Before Disconnect? n
                                                                                                                                                                                                                              Apply Local Ringback? n
```

5. On page 3 of the display, verify all settings are as shown in this image.

After completing this procedure, return to the <u>Customer Configuration Overview</u>.

# Configure the Trunk Signaling Group

```
Group Number: 10

Group Type: isdn-pri
Associated Signaling? y
Primary D-Channel: 001V324

Trunk Group for Channel Selection: 10
TSC Supplementary Service Protocol: a

Page 1 of 5

Max number of NCA TSC: 0
Max number of CA TSC: 0
Trunk Group for NCA TSC:

Trunk Group for NCA TSC:
```

To verify/configure required settings for the trunk signaling group:

- 1. Log in to GEDI with an appropriately-permissioned account.
- 2. Type the command: **display signaling-group n**, where n is the number of the applicable trunk group.
- 3. For **Group Type**, type the value: **isdn-pri**.
- 4. For **Associated Signaling**, type the value: **y**.

- 5. For **Primary D-Channel**, the value must match channel 24 on the card used in the **add ds1** command when you configured the T1 board.
- 6. For **Trunk Group for Channel Selection**, the value should match the trunk group number used in the **add trunk group n** commands.
- 7. Make a note of the settings and provide them to your inContact WFO installation team.

After completing this procedure, return to the <u>Customer Configuration Overview</u>.

# Configure the Trunk Group Channels

display trunk-group 10 Page 5 of 21			of 21			
				TRUNK GROUP		
				Adminis	tered Members (min/max):	1/23
ROUI	MEMBER	ASSIGNN	MENTS	Tota	al Administered Members:	23
	Port	Code	Sfx Name	Night	Sig Grp	
1:	001V301	MM710		-	10	
2:	001V302	MM710			10	
3:	001V303	MM710			10	
4:	001V304	MM710			10	
5:	0017305	MM710			10	
6:	001V306	MM710			10	
7:	0017307	MM710			10	
8:	0017308	MM710			10	
9:	0017309	MM710			10	
10:	001V310	MM710			10	
11:	001V311	MM710			10	
12:	001V312	MM710			10	
13:	001V313	MM710			10	
	001V314	MM710			10	
	001V315	MM710			10	

To verify/configure the trunk group channels:

- 1. Log in to GEDI with an appropriately-permissioned account.
- 2. Type the command: **display trunk-group n**, where n is the number of the applicable trunk group.
- 3. On the first page of the trunk group channels (as shown in this image), verify that channels 01-23 on the board used are entered under Port and that **Sig Grp** matches the signaling group number for the trunk.
- 4. Make a note of the settings and provide them to your inContact WFO installation team.

After completing this procedure, return to the <u>Customer Configuration Overview</u>.

# **Customer Administration Tasks**

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.

With this integration, the number of channels on the inContact WFO Voice Board(s) corresponds to the number of trunks configured on the physical DT card. Adding channels may require the purchase and installation of server hardware and inContact WFO licensing. Contact inContact WFO Support for additional information.

## **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 online help or the *inContact WFO Administration Manual*. For channel settings specific to this integration, see <u>Channel Configuration Settings</u>. Unless your system is licensed for the Voice Board Reloading feature, you will need to 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 DT-SO integration:

Setting	Setting Definition	
	This will already be configured unless you are adding a new Ai-Logix card. In that scenario, select the value from the drop-down list based on the trunk configuration:	
Number of	<ul> <li>23 – T1 ISDN for ISDN-signaled T1 trunks</li> </ul>	
Channels	<ul> <li>24 – T1 RBS for T1 trunks with Robbed-bit</li> </ul>	
	<ul> <li>30 - E1 ISDN for ISDN-signaled E1 trunks</li> </ul>	
	■ 30 – E1 RBS for E1 trunks with Robbed-bit	
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,  Appendix: Channel Assignment Settings Definitions.	Anything
Assign Value	Type one PBX Trunk Member/Port ID per channel.	
Desc	<b>Desc</b> Type an optional description for the channel.	
Name	Type an optional name for the channel that can be used in channel scripting.	
Trunk Tap  Indicates whether to use the trunk-tap capability of the card.		Unselected

# **Appendix: Channel Assignment Settings Definitions**

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

Record and Instant Record	Limit calls to recording only, but of any recording type.	
Unlicensed	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.	

# **Document Revision History**

Revision	Change Description	Effective Date
0	Initial version for this release	2015-04-30
1	Rebranded content.	2016-03-08