inContact

Customer Guide to Avaya DP-MLS Integrations

www.incontact.com

Recording

Customer Guide to Avaya DP-MLS Integrations

- **Version** — This guide should be used with inContact WFO v5.6 or later
- **Revision** — March 2016
- **About inContact** — inContact (NASDAQ: SAAS) is leader in cloud contact center software, helping organizations around the globe create customer and contact center employee experiences that are more personalized, more empowering and more engaging today, tomorrow and in the future. inContact focuses on continuous innovation and is the only provider to offer core contact center infrastructure, workforce optimization plus an enterprise-class telecommunications network for the most complete customer journey management. inContact offers customers a choice of deployment options. To learn more, visit www.inContact.com.
- **Copyright** — ©2016 inContact, Inc.
- **Disclaimer** — inContact reserves the right to update or append this document, as needed.
- **Contact** — Send suggestions or corrections regarding this guide to documentationsrequest-discover@incontact.com.

Table of Contents

Introduction

Audience

This document is written for customers and prospective customers interested in using inContact Call Recording in an Avaya DP-MLS 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 MLS, 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 trunks and Avaya MLS, 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 information and procedures related to inContact WFO configuration, consult the inContact WFO installation team.

Terminology

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.
- **CS1000:** This is the legacy Nortel contact center PBX. It has been rebranded as Avaya and is still in use.
- **MLS:** Meridian Link Services. MLS is a legacy Nortel product that has been rebranded as Avaya and is still widely used.
- **TDM:** Time Division Multiplexing. Commonly-used as an acronym for traditional wired telephony, as opposed to VoIP.

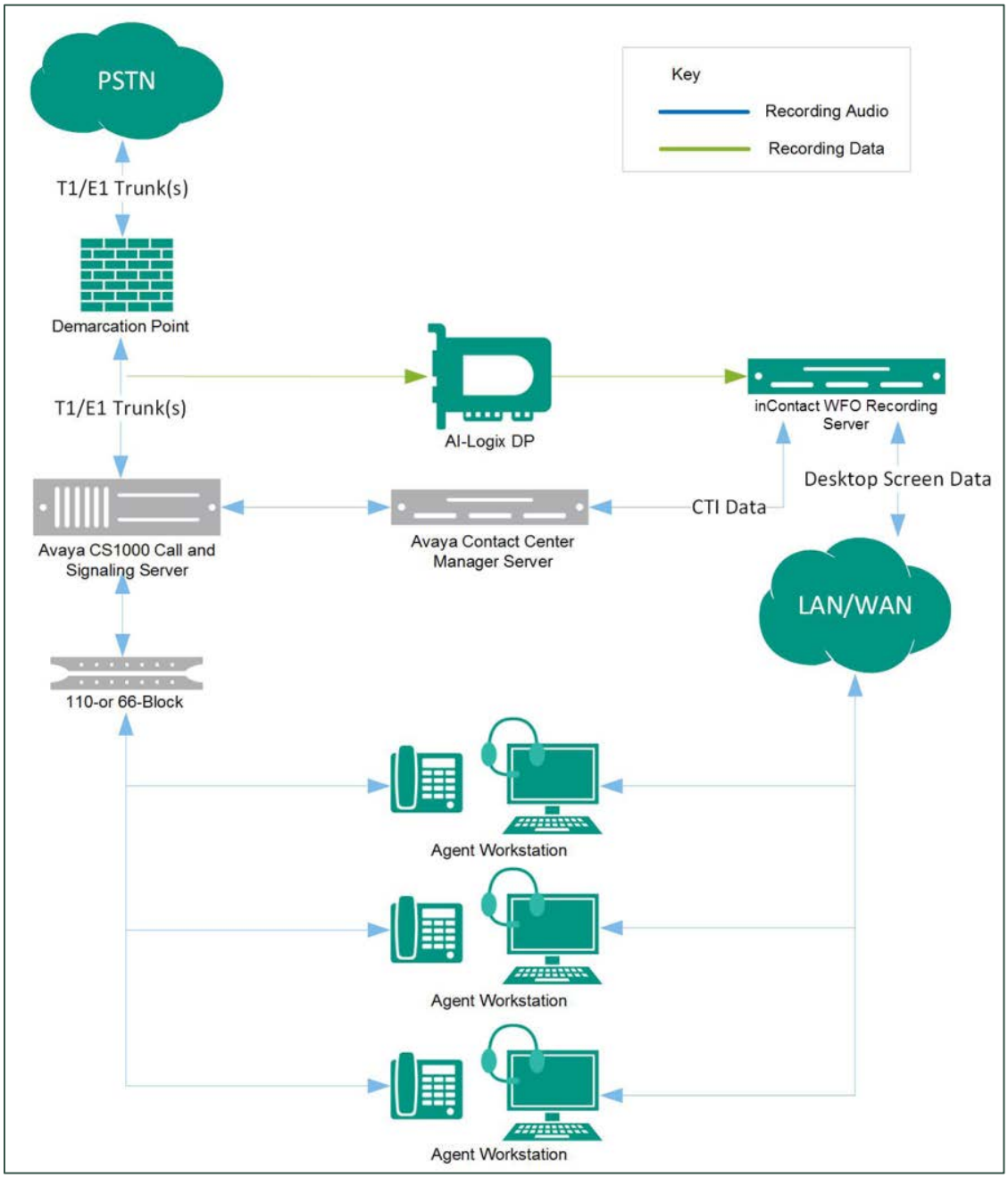
Customer Responsibilities

You are responsible for supplying the physical connection(s), IP connection(s), or both to your telephone system, as well as any licensing required by Avaya. You may also be responsible for configuring Avaya system components to support the recording integration. See your specific integration in the Customer Integration Tasks 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 DP-MLS Integration Overview

The Avaya VoIP-MLS integration uses Ai-Logix passive tap (DP) cards to connect to a T1/E1 trunk as an audio source. Call control events and metadata are received from the MLS server.

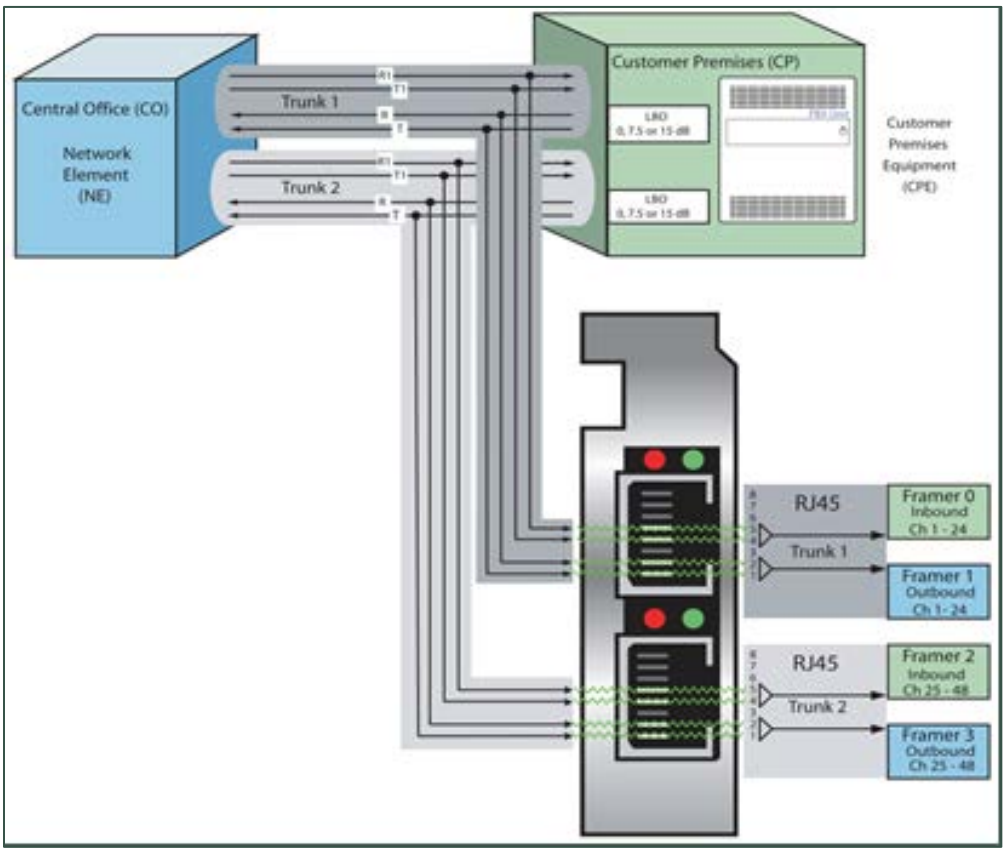


General architectural example of the Avaya DP-MLS integration

Component	Function
Avaya Communication Server (CS) 1000	PBX component that controls the audio being presented to and from digital and/or IP phones.
Avaya Contact Center Manager Server (CCMS)	Supports MLS and provides CTI call events such as start/stop to the inContact WFO server.
AI-Logix DP Voice Board	Audio capture card(s) installed in the inContact WFO recording server.
inContact WFO Server	Receives call control events, business data, and audio. Provides a CTI interface to the inContact WFO Recording node, which records audio. Creates call records and manages recording storage.

Wiring Example

inContact recommends that the wiring tap be accomplished through use of a patch panel that will split one input connection into two output connections: one to the PBX and one to the inContact WFO server. For more information, refer to AudioCodes documentation supplied with the Ai-Logix board or available from inContact.



Wiring diagram for passive trunk tapping

Known Limitations

- The Avaya DP-MLS integration does not support the real-time blackout functionality in inContact WFO.

Avaya Requirements

Hardware

- Avaya Communication Server (CS) 1000

Software

- Succession/CS1000 Release 4.5 – 7.5
- Contact Center Manager Server (CCMS) 6.0 – 7.5

Licensing

- Contact your Avaya representative concerning licensing requirements for your specific installation.

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 DP 6409 T1/E1 Passive 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

- inContact WFO, version 5.6 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 named agent **or**
- One (1) Voice concurrent session license for each simultaneous call that will be recorded.
- One (1) Screen Capture license for each workstation to be recorded if feature is used.

Customer Configuration Overview

The following table provides a high-level overview of the customer configuration steps in Avaya DP-MLS integrations. Links are provided for procedures covered in this guide.

Customer Configuration Steps for Avaya DP-MLS 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	Generate a TN Database List and provide the information to the inContact WFO installation team.
6	Generate a DN Database List and provide the information to the inContact WFO installation team.

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.

Generate a TN Database List

You will need trunk number information to configure the trunk channels in the Avaya MLS CTI module on the inContact WFO core.

To generate the database TN list, set up and run the following command on the Avaya console:

- Overlay Number: LD 20
- REQ: PRT
- TYPE: TNB
- TN: _tn of trunk_ (You can leave the TN value empty to get the full tn database.)

The remaining fields can be left blank.

inContact recommends that you use a terminal program (such as PuTTY or SecureCRT) with a buffer capture feature to capture the printout of this listing for later use.

> Sometimes the member numbers do not go in proper order or what's provided by MLS doesn't match the trunk numbers. In these situations, you must dial through all channels of the trunk to match the TN sent by MLS with the channel on which the audio is heard.

Generate a DN Database List

In an Avaya CS1000 environment, each phone can have different DNs (extension numbers) assigned to it. To record ACD calls, the ACID of each phone is needed. The ACID roughly equates to a position ID or line appearance – when an agent signs into the phone, their agent number is attached to this ACID.

Phone have DNs of their own, which are used when an agent places a call or when a non-ACD call is received. These DNs are usually listed with a TYPE parameter of "SL1". Avaya MLS requires that these monitors be started in a different way.

ACDNs can also be monitored for additional call detail. The ACDN determines the pool of agents to which calls are distributed. This is equivalent to an ACD queue.

You will need to provide each of these values for any phone you want to record to your inContact WFO installation team. Obtaining the DN database that contains these values requires console access to and administrative privileges for the Avaya CS1000.

inContact recommends that you use a terminal program (such as PuTTY or SecureCRT) with a buffer capture feature to capture the printout of this listing for later use. Within such a program, set up and run the following command on the Avaya console:

- Overlay Number: LD 20
- REQ: PRT
- TYPE: DNB

The remaining fields can be left blank.

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 and to the CTI Monitors page in the inContact WFO Web Portal when channels are added or must be reconfigured.

CTI Monitors are not used in all integrations, so the procedure for configuring them is included in this section.

With this integration, the number of channels on the inContact WFO Voice Board(s) corresponds to the number of trunks configured on the physical DP 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 in the *inContact WFO Administration Manual*. For channel settings specific to this integration, see Channel Configuration Settings. You must restart the Recorder service (cc_cticore.exe) after any Voice Board and/or Channel changes.

Any Voice Board changes other than channel configuration 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 DP-MLS integration:

Setting	Definition	Value
Number of Channels	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: ▪ **23 – T1 ISDN** for ISDN-signaled T1 trunks ▪ **24 – T1 RBS** for T1 trunks with Robbed-bit ▪ **30 – E1 ISDN** for ISDN-signaled E1 trunks ▪ **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, Channel Assignment Settings Definitions.	**Dedicated Record (Device)**
Assign Value	Type one PBX Trunk Member/Port ID per channel.	
Desc	Type an optional description for the channel.	
Trunk Tap	Indicates whether to use the trunk-tap capability of the card.	**Selected**

CTI Monitors Overview

In some integrations, inContact WFO requires a list of devices to monitor (CTI Monitors). Any phone or device that should be monitored must be configured in this list. You can also establish Prefix and Postfix settings for all monitors, which can be used to distinguish extensions by areas or groups.

With Avaya DP-MLS, the inContact WFO CTI Core monitors the **ACD/DN** for login/logoff events, the **Position ID** for ACD (incoming) calls, and the **PBX Extension** for direct and outbound calls. When you add or reconfigure a channel, you must configure a CTI Monitor for each of these values. The Avaya system differentiates the agent logged into the phone from the phone itself.

Configure CTI Monitors

To configure entities for monitoring:

1. Log in to the inContact WFO Web Portal with an appropriately-permissioned account.
2. Click the **Administration** tab and expand **Recorder Settings** in the left navigation menu.
3. Click **CTI Cores**.
4. Click the **Edit** icon on the line for the applicable CTI Core.
5. Scroll down and click the **Edit** icon on the line for the **cc_NortelMLS** module.
6. Select your choice from the **Monitor Type** list.
7. Type the ACD/DNs, PositionIDs, and/or PBX Extensions for recording in the **Monitor Values** field as a single entry (for example, 1234), multiple entries in a comma separated list (for example, 1234,2345,4321) or a range of entries using a hyphen (for example, 2300-2400).
8. Click the **Add** icon to add the monitor types to the list.
9. Click **Save**.

To delete single items from the Monitor list:

- Click the **Delete** icon beside the item.

To delete multiple items from the list:

- Type a range of items in the **Monitor Values** field and click the **Delete** icon.

To filter the displayed list of Monitor Types:

Select a value from the **Filter Monitors** drop-down list and click the **Filter** icon.

Appendix: Channel Configuration Settings Definitions

From time to time, your inContact WFO administrator may need to configure or reconfigure recording channels in your system. For procedural information, see the *inContact WFO Administration Manual*. For settings specific to your integration, see the applicable section in this guide.

The following table lists and defines the settings that may apply to channels. Individual settings appear in the inContact WFO Web Portal only if they are applicable to the type of Voice Board and channel being configured. Therefore, the table lists all settings in alphabetical order. The table also indicates default settings where applicable; not all settings have a default value.

Setting	Definition	Default
Number of Channels	Select the number of channels and signal type the Ai-Logix card uses from the drop-down list.	
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, see Channel Assignment Settings Definitions.	Anything
Assign Value	Type the identifier for the device assigned to the channel (typically the phone extension).	
Channel Map		N/A
Channel Name	Type an optional name for the channel that can be used in channel scripting.	
Channel Number	Value: set by application. Logical internal identifier for the recording port/channel. inContact WFO uses this number to refer to any actions taken on the channel.	
Deglitch	Value: milliseconds. Determines the length of time voltage must stay past the high or low threshold before an event is issued.	50
Desc	Type an optional description for the channel.	
Name	See **Channel Name**.	
Password	Type the password for the DMCC station.	
Polarity	Possible values: Default, Normal, Reverse. Should be set to match the polarity of the physical wiring taps.	Default
Station	Type a DMCC station extension.	

Trunk Name		
Trunk Tap	Indicates whether to use the trunk-tap capability of the card.	Unselected
Voltage Low	Type a value that can be used to determine when a physical phone has been taken off-hook. Required only when on/off hook signaling is used to determine recording start/stop.	
Voltage High	Type a value that can be used to determine when a physical phone has been place on-hook. Required only when on/off hook signaling is used to determine recording start/stop.	

Channel Assignment Settings Definitions

The following table lists and defines the values that can be selected for the Assign setting in channel configuration. Individual settings that appear in the inContact WFO Web Portal may vary depending on the type of Voice Board and channel being configured. Setting labels are affected by Terminology settings.

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.	2016-03-07