



## **Avaya Solution and Interoperability Test Lab**

---

# **Application Notes for Uptivity Discover R5.2 with Avaya Aura® Contact Center Release 6.3 and Avaya Communication Server 1000 Release 7.6 via Meridian Link Services – Issue 1.0**

### **Abstract**

These Application Notes describe a solution comprised of Avaya Aura® Contact Center Release 6.3 and Uptivity Discover R5.2. During the compliant testing, the Uptivity Discover R5.2 was able to connect to Contact Center Manager Server using Meridian Link Services, acquire and monitor keys of IP Phone, and record Voice over IP calls made from/to IP Phone of Avaya Communication Server 1000.

Information in these Application Notes has been obtained through DevConnect compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program at the Avaya Solution and Interoperability Test Lab.

# 1. Introduction

The objective of this interoperability compliance testing is to verify that the Uptivity Discover R5.2 (hereafter referred as Discover) can successfully connect to the Avaya Aura® Contact Center (hereafter referred as Contact Center) using Meridian Link Services (MLS) and record Voice over IP calls for the IP Phones of Avaya Communication Server 1000 release 7.6 (hereafter referred as Communication Server 1000).

## 2. General Test Approach and Test Results

The general test approach was to verify that Discover is able to acquire and monitor keys of IP Phones of Communication Server 1000 by communicating with the MLS server of Contact Center system, duplicate the media stream of monitored IP Phone and save recorded calls.

### 2.1. Interoperability Compliance Testing

The focus of this compliance testing was to prove and verify that Discover was able to interoperate with Contact Center and Communication Server 1000 system. The following areas were tested:

- Discover successfully utilizes the MLS to access the functionality of the Contact Center Manager Server (CCMS) and Communication Server 1000 to record all calls.
- Recording provides information of the Automated Call Distribution (ACD) Agent, Dialed Number Identification Service (DNIS), Calling Line Identification (CLID), Directory Number (DN), Day/Time, Days of week, and Call Duration.
- Agent Resiliency Information.
- Multiple DN Call Recording.

### 2.2. Test Results

The objectives outlined in the **Section 2.1** were verified and met. All test cases were executed and they all passed with the following observation.

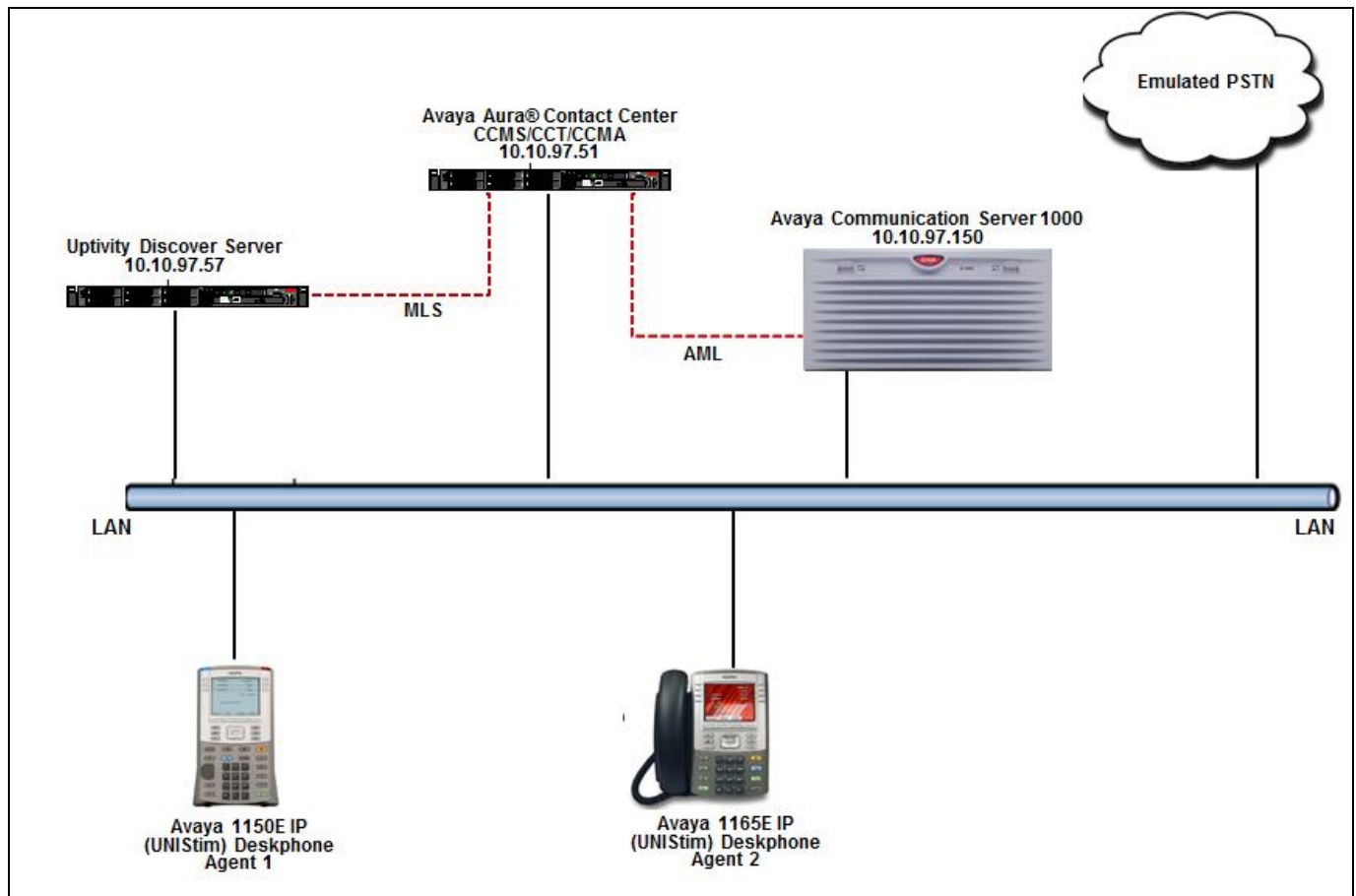
- Discover does not get the agent's Name information from the Contact Center. However there is an option in the Discover application to add users with Name information and associate the user with their positionID.

### 2.3. Support

Technical support for Uptivity Discover can be obtained by contacting Uptivity via Email at [support@uptivity.com](mailto:support@uptivity.com) or Phone at 1-888-922-5526, option 2 (or 614-340-3346 for international callers).

### 3. Reference Configuration

**Figure 1** illustrates the network diagram configuration used during the compliant testing event between the Discover and Contact Center.



**Figure 1: Network Diagram Configuration**

### 4. Equipment and Software Validated

The following equipment and software were used during the lab testing:

Equipment	Software/Firmware
Avaya Communication Server 1000	7.65P+ SP 3 DepList 1 created 2013-10-11
Avaya Aura® Contact Center	6.3 SP10
Avaya IP (UNISTim) Deskphones: 1150E 1165E	0x27C8Q 0x25C8Q
Uptivity Discover Server OS	Windows Server 2008 R2 Standard SP1 64-bit
Uptivity Discover	5.2

## 5. Configure Avaya Communication Server 1000

This document assumes that the Communication Server 1000 is properly installed and configured. These Application Notes provide the necessary configuration that has to be done on Communication Server 1000 to work with Contact Center and Discover. For more information about how to install and configure Avaya Communication Server 1000, refer to **Section 10**.

### 5.1. Create ELAN for Contact Center application on the Call Server

Log in to the command line interface of Call Server with the appropriate credentials and issue overlay **LD 17** to access the **ADAN** gate opener to create a new ELAN for the Contact Center application. During compliance testing **ELAN 19** was created as shown below.

```
ADAN      ELAN 19
CTYP ELAN
DES  AACC62
N1    512
```

### 5.2. Create VAS for the ELAN of Contact Center on the Call Server

Log in to the command line interface of Call Server with the appropriate credentials and issue overlay **LD 17** to access the **VAS** gate opener to create a value added server (VAS) for the ELAN 19 created above for the Contact Center application. During compliance testing **VSID 19** was created as shown below.

```
VSID      019
ELAN 019
SECU YES
INTL 0001
MCNT 9999
```

### 5.3. Enable IPIE feature for IP call recording on the Call Server

Log in to the command line interface of Call Server with the appropriate credentials and issue overlay **LD 17** to access the **PARM** gate opener to enable the **Enhanced Unsolicited Status Message (USM) IE (IPIE)** as shown in the screen below.

```
PARM
LPIB 3500
HPIB 3500
.
.
.
MARP YES
IPIE YES
FRPT NEFR
.
.
```

## 5.4. Enable class of service RECA for IP Phone

Log in to the command line interface of Call server with the appropriate credentials and issue overlay **LD 20** to add or change the configuration of a Deskphone. Screen below shows that the **Recording Allowed (RECA)** has been added to the class of service for the deskphone.

```
DES AGENT6
TN 096 0 02 05 VIRTUAL
TYPE 1150
.
.
.CAC_MFC 0
CLS CTD FBA WTA LPR MTD FNA HTA TDD HFA CRPD
MWA LMPN RMMD SMWD AAD IMD XHD IRD NID OLD VCE DRG1
POD SLKD CCSD SWD LND CNDA
CFTD SFD MRD DDV CNID CDCA MSID DAPA BFED RCBF
ICDA CDMD LLCN MCTD CLBD AUTU
GPUD DPUD DNDA CFXA ARHD CNTD CLTD ASCD
CPFA CPTA ABDD CFHD FICD NAID BUZZ AGRD MOAD
UDI RCC HBTD AHA IPND DDGA NAMA MIND PRSD NRWD NRCD NROD
DRDD EXR0
USMD USRD ULAD CCBF RTDD RBDD RBHD PGND OCBF FLXD FTTC DNDY DNO3
MCBN
FDSF NOVF VOLA VOUD CDMR PRED RECA MCDD T87D SBMD
KEM3 MSNV FRA PKCH MUTA MWTD DVLD CROD ELCD VMSA
CPND_LANG ENG
.
.
.
```

## 5.5. Configure the Associated Set Assignment (AST) for IP phone

Log in to the command line interface of Call Server with the appropriate credentials and issue overlay **LD 20** to add or change the configuration of a Deskphone. To define which key/s of IP Phone needs to be recorded, assign them at the AST prompt. During compliance testing, calls coming to keys 00 and 03 were recorded as shown in the screen below.

```
DES AGENT6
TN 096 0 02 05 VIRTUAL
TYPE 1150
.
.
.
SPID NONE
AST 00 03
IAPG 0
.
.
```

## 6. Configure Avaya Aura® Contact Center

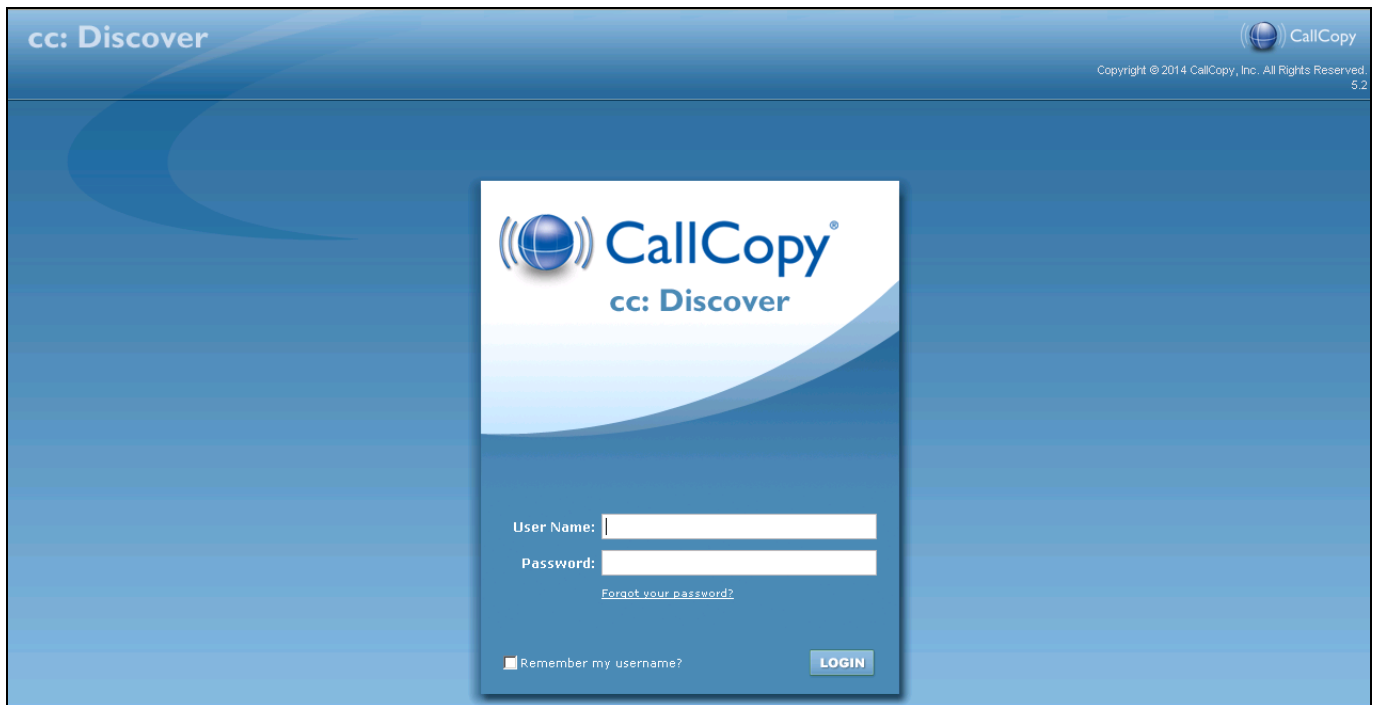
This document assumes that the Contact Center system with all its modules including CCMS and MLS are installed and configured correctly and it communicates to the Communication Server 1000. For more information how to install and configure the Contact Center please refer to **Section 10**.

## 7. Configure Discover Server

This section provides the detail configuration on the Discover server for recording VoIP calls of agent's deskphones residing on Communication Server 1000.

### 7.1. Login to Discover Application

Access the Login screen for Discover by entering the Discover Server IP address on a browser's URL. Screen below shows the main login screen. Enter the required credentials and click on the **LOGIN** button.



cc: Discover

CallCopy  
cc: Discover

User Name:

Password:

[Forgot your password?](#)

☐ Remember my username?

LOGIN

CallCopy  
Copyright © 2014 CallCopy, Inc. All Rights Reserved.  
5.2

## 7.2. Configuring Voice Boards

To add a voice board, navigate to **Administration** → **Recorder Settings** → **Voice Boards** and click on the **Add Board** button. During compliance testing a voice board with the name **NORTELMLS** is added as shown in the screen below.

The screenshot displays the cc:Discover Administration interface. The top navigation bar includes links for Home, Web Player, Coaching, Reporting, Surveys, and Administration (which is highlighted). The left sidebar contains a menu with Recorder Settings, System Settings, and Web Portal Settings. Under Recorder Settings, there are links for CTI Cores, Custom Lookup, IP Phones, On Demand, Transcoder, and Voice Boards (which is highlighted). The main content area is titled 'Voice Boards List' and features buttons for 'Add Board', 'Clear Boards', and 'Save Configuration'. A table lists the voice boards with columns for '#', 'Name', and 'Channels'. One entry is shown: a board with ID 1, name 'NORTELMLS', and 5 channels. The table also includes edit and delete icons for each entry.

#	Name	Channels
1	NORTELMLS	5

Screen below shows the values configured for the NortelMLS voice board.

**Number of Channel:** 5

**Recording IP (full IP of the recorder):** 10.10.97.57; which is the IP address of Discover server.

**RTP Listening Interface (NIC):** This is generated by running the cc\_interfaceBrowser.exe utility found on the Discover server. Retain default values for other fields.

The screenshot displays the 'cc:Discover' Administration interface. The top navigation bar includes 'Home', 'Web Player', 'Coaching', 'Reporting', 'Surveys', and 'Administration'. The 'Administration' tab is active, showing 'Core Functions' and 'Add-Ons'. The left sidebar contains 'Permissions' (Users, Groups, Roles), 'Scheduling', 'Tools', 'Recorder Settings', 'System Settings', and 'Web Portal Settings'. The main content area is titled 'NortelMLS :: Board Options' and includes a 'Cancel' and 'Save' button. The 'Board Options' section contains the following fields:

- Number of Channel: 5
- Virtual Board Host: http://127.0.0.1:2002
- Logging Server Port: 2003
- API Server Host: 127.0.0.1
- API Port: 5620
- API Connection Timeout: 1000
- API Socket Timeout: 10000
- Recording IP (full IP of the recorder): 10.10.97.57
- RTP Listening Interface (NIC): D682CF7-9AFA-4ASE-A3EB-9233A702A74D
- RTP Endpoint Initial Port: 7000
- Generate Warning Tone: False
- Temp Recording Location: c:\default\_rec
- UNC Paths: (Add button)

Below the 'Board Options' section is the 'Board 1 of 1 :: Channel Configuration' section, which includes a 'Channels Per Page' dropdown set to 25. The configuration table is as follows:

#Assign	Assign Val	Name	Map
1	Anything		N/A
2	Anything		N/A
3	Anything		N/A
4	Anything		N/A
5	Anything		N/A



## 7.3. Configuring CTI Cores

To add a CTI Core, navigate to **Administration** → **Recorder Settings** → **CTI Cores** and click on the **Add Core** button. During compliance testing a CTI Core with the name **MLSDMS** is added as shown in the screen below

The screenshot displays the cc:Discover web application interface. The top navigation bar includes links for Home, Web Player, Coaching, Reporting, Surveys, and Administration (highlighted with a red box). The user is logged in as 'superuser'. The left sidebar contains a 'Tools' section with 'Recorder Settings' highlighted (red box), which includes sub-links for CTI Cores, Custom Lookup, IP Phones, On Demand, Transcoder, and Voice Boards. The main content area is titled 'CTI Cores List' and features an 'Add Core' button. A table lists the existing CTI Core:


#	Name
5	MLS DMS

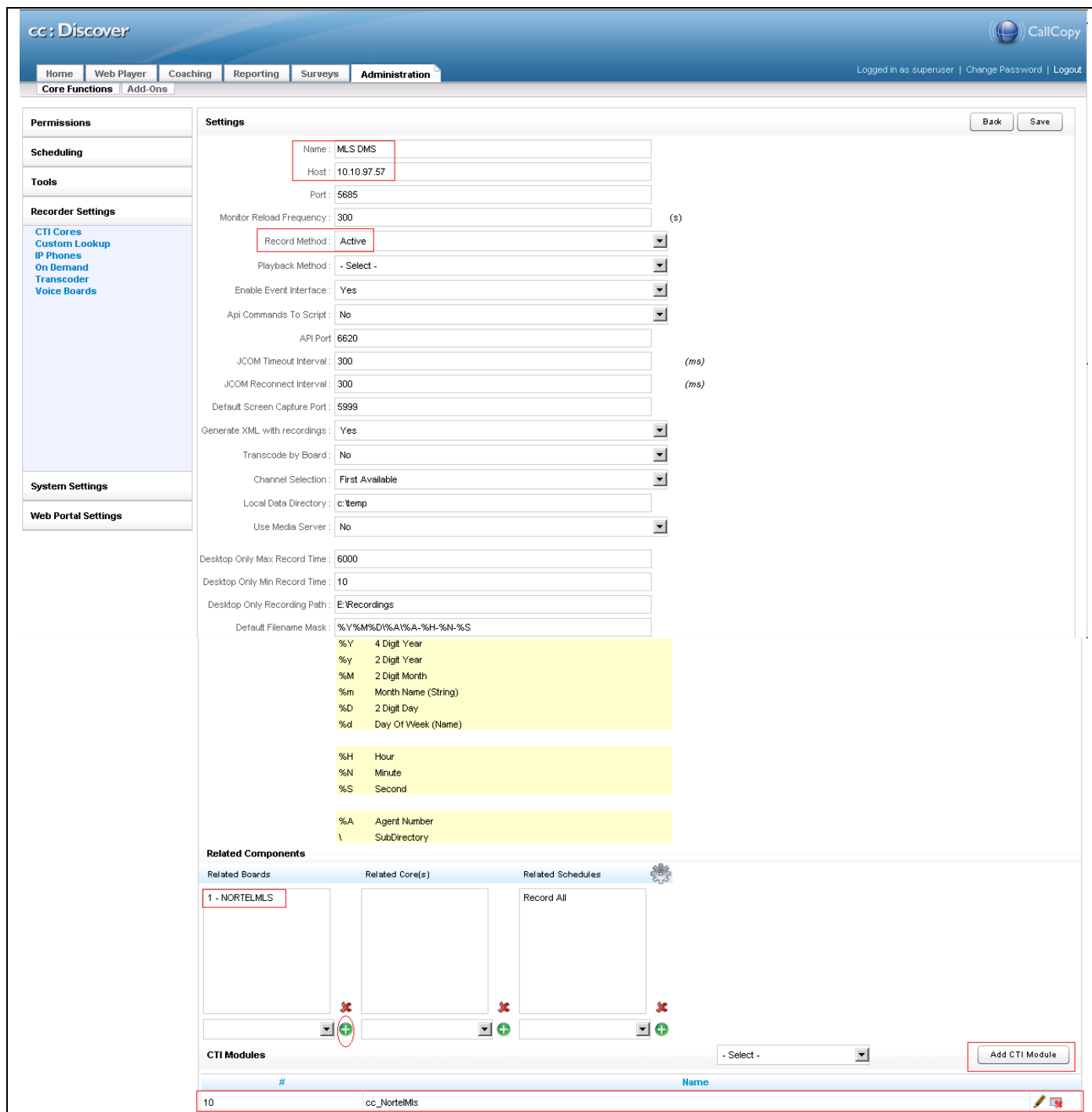
Screen below shows the values configured for the MLSDMS CTI Core.

**Name:** *MLSDMS*

**Host:** *10.10.97.57*; which is the IP address of Discover server.

**Record Method:** Select *Active* from the drop down menu.

Click on the green  button to add the voice board *NortelMLS* under **Related Components**. Click on the **Add CTI Module** button to add *cc\_NortelMls* under **CTI Modules**. Retain default values for other fields.



The screenshot displays the 'cc:Discover' Administration interface. The left sidebar contains navigation links: Home, Web Player, Coaching, Reporting, Surveys, and Administration (selected). Below these are tabs for Core Functions and Add-Ons. The main content area is titled 'Settings' and contains various configuration fields. The 'Name' field is set to 'MLS DMS' and the 'Host' field is set to '10.10.97.57'. The 'Record Method' is set to 'Active'. Other fields include 'Monitor Reload Frequency' (300), 'Playback Method' (- Select -), 'Enable Event Interface' (Yes), 'Api Commands To Script' (No), 'API Port' (6620), 'JCOM Timeout Interval' (300), 'JCOM Reconnect Interval' (300), 'Default Screen Capture Port' (5999), 'Generate XML with recordings' (Yes), 'Transcode by Board' (No), 'Channel Selection' (First Available), 'Local Data Directory' (c:\temp), 'Use Media Server' (No), 'Desktop Only Max Record Time' (6000), 'Desktop Only Min Record Time' (10), 'Desktop Only Recording Path' (E:\Recordings), and 'Default Filename Mask' (%Y%M%D%A%H-%N-%S). A legend for the filename mask is provided below. The 'Related Components' section shows 'Related Boards' with '1 - NORTELMLS', 'Related Core(s)' (empty), and 'Related Schedules' (Record All). The 'CTI Modules' section shows a table with one entry: '10' and 'cc\_NortelMls'. A green plus icon is visible next to the '10' entry, and an 'Add CTI Module' button is present.

**Settings**

Name: MLS DMS  
Host: 10.10.97.57  
Port: 5685  
Monitor Reload Frequency: 300 (s)  
Record Method: Active  
Playback Method: - Select -  
Enable Event Interface: Yes  
Api Commands To Script: No  
API Port: 6620  
JCOM Timeout Interval: 300 (ms)  
JCOM Reconnect Interval: 300 (ms)  
Default Screen Capture Port: 5999  
Generate XML with recordings: Yes  
Transcode by Board: No  
Channel Selection: First Available  
Local Data Directory: c:\temp  
Use Media Server: No  
Desktop Only Max Record Time: 6000  
Desktop Only Min Record Time: 10  
Desktop Only Recording Path: E:\Recordings  
Default Filename Mask: %Y%M%D%A%H-%N-%S

**Legend:**

- %Y 4 Digit Year
- %y 2 Digit Year
- %M 2 Digit Month
- %m Month Name (String)
- %D 2 Digit Day
- %d Day Of Week (Name)
- %H Hour
- %N Minute
- %S Second
- %A Agent Number
- % SubDirectory

**Related Components**

Related Boards	Related Core(s)	Related Schedules
1 - NORTELMLS		Record All

**CTI Modules**


#	Name
10	cc_NortelMls

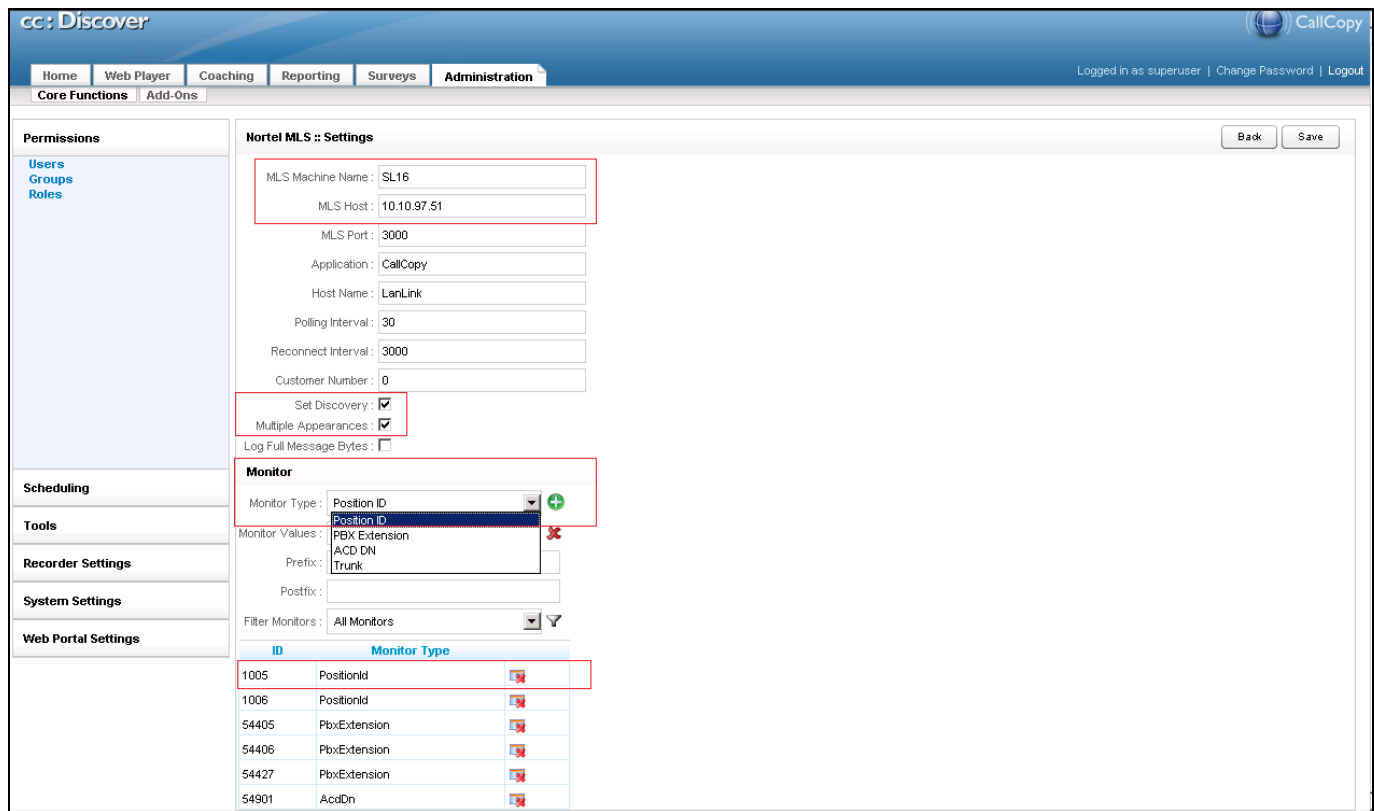
Screen below shows the values configured for the cc\_NortelMIs CTI Module.

**MLS Machine Name:** *SL16*

**MLS Host:** *10.10.97.51*; which is the IP address of Contact Center.

Enable the check boxes for **Set Discovery** and **Multiple Appearances**.

Select a type to monitor from the **Monitor** drop down list. Click on the green  button to add the value to be monitored. For example during compliance testing *Position ID* was selected. Retain default values for other fields.



**Nortel MLS :: Settings**

MLS Machine Name: SL16  
MLS Host: 10.10.97.51  
MLS Port: 3000  
Application: CallCopy  
Host Name: LanLink  
Polling Interval: 30  
Reconnect Interval: 3000  
Customer Number: 0

Set Discovery: ☒  
Multiple Appearances: ☒  
Log Full Message Bytes: ☐

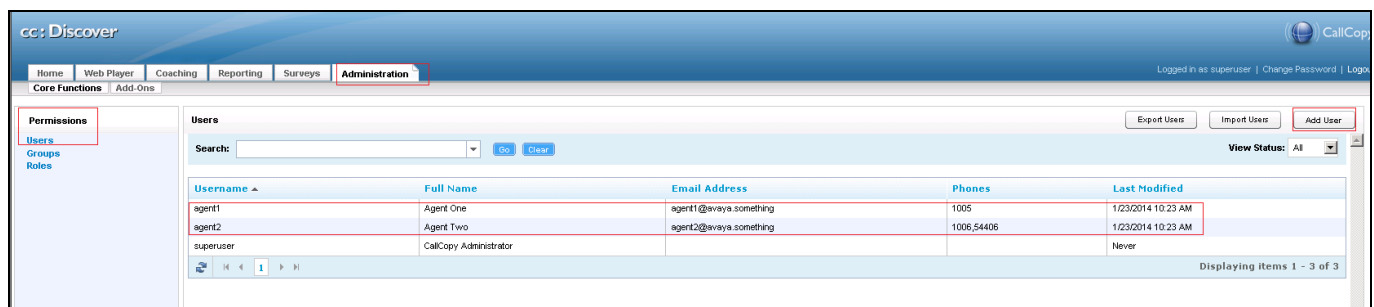
**Monitor**

Monitor Type: Position ID  
Monitor Values: PBX Extension, ACD DN, Trunk  
Prefix:   
Postfix:   
Filter Monitors: All Monitors

ID	Monitor Type
1005	PositionId
1006	PositionId
54405	PbxExtension
54406	PbxExtension
54427	PbxExtension
54901	AcDn

## 7.4. Configuring Users

To add a User, navigate to **Administration** → **Permissions** → **Users** and click on the **Add User** button. During compliance testing a couple of users like **agent1** and **agent2** were added as shown in the screen below



**Users**

Search:  Go Clear

View Status: All

Username	Full Name	Email Address	Phones	Last Modified
agent1	Agent One	agent1@avaya.something	1005	1/23/2014 10:23 AM
agent2	Agent Two	agent2@avaya.something	1005,54406	1/23/2014 10:23 AM
superuser	CallCopy Administrator			Never

Displaying items 1 - 3 of 3

Screen below shows the values configured for the User agent1.

**Username:** A descriptive name.

**First Name:** A valid first name.

**Last Name:** A valid last name.

**Email Address:** A valid email address.

**Server Nodes:** Select *Master Node* from the drop down list.

**Phones:** Add the positionID associated with the agent. During compliance testing 1005 was added.

Retain default values for other fields.

The screenshot displays the 'cc:Discover' Administration interface. The 'Edit User' form is open for user 'agent1'. The form is divided into several sections: 'Basic Information', 'Additional Information', and 'Preferences'. In the 'Basic Information' section, the 'Username' is 'agent1', 'First Name' is 'Agent', 'Last Name' is 'One', and 'Email Address' is 'agent1@avaya.comthing'. The 'Account Locked' checkbox is unchecked, and the 'Agent' checkbox is checked. The 'Created By' and 'Modified By' fields both show 'superuser @ 1/23/2014 9:42 AM'. In the 'Additional Information' section, the 'System Username' and 'System Domain' fields are empty. The 'Active Directory Username' and 'Active Directory Domain' fields are also empty. The 'Employee ID' and 'CRM Username' fields are empty. The 'Server Nodes' dropdown menu is set to 'Master Node'. The 'Quota' field is set to '0'. In the 'Preferences' section, the 'Shift Times to User's Timezone' checkbox is unchecked. The 'Time Display Format' is set to 'AMP/PM'. The 'Phones' field is set to '1005'. The 'Delete', 'Back', and 'Save' buttons are visible in the top right corner of the form.

## 8. Verification Steps

The following are typical steps to verify the interoperability between the Discover and Contact Center and Avaya Communication Server 1000.

- Ensure that the Discover can connect to the Contact Center and acquire the required information from CCMS via the MLS.
- Process a call and record the same. Screen below shows a few recorded calls that can be played back via the Web Player.

The screenshot displays the Avaya Discover Web Player interface. The top navigation bar includes links for Home, Web Player (selected), Coaching, Reporting, Surveys, and Administration. A user is logged in as 'superuser'. The main content area features a 'Filter' dropdown set to 'Time Recorded' and a table of recorded calls. The table columns are: Record ID, First Name, Last Name, Voice Port, Time Recorded, Duration, CallerID ANI, Call Direction, Call ID, Agent Number, ACD Gate, and Total Hold Time. The table lists several calls, with Record ID 58 highlighted. Below the table, there are pagination controls showing 'Pages: 1' and '25 Items Per Page'. At the bottom, there is a 'Web Player' section with a 'Layer Details' tab and a 'Playback Details' section showing a progress bar and volume control.

Record ID	First Name	Last Name	Voice Port	Time Recorded	Duration	CallerID ANI	Call Direction	Call ID	Agent Number	ACD Gate	Total Hold Time
59			54405	1/23/2014 3:05:19 PM	00:03:51	53010	I		54405		0
58	Agent	Two	54406	1/23/2014 10:27:02 AM	00:00:04	58007	I		54406		0
57	Agent	Two	1006	1/23/2014 10:25:52 AM	00:00:12	58007	I		54406	54901	0
56			54405	1/23/2014 10:24:28 AM	00:00:13	58007	I		54405		0
55			54406	1/23/2014 10:17:59 AM	00:00:07	58007	I		54406		0
54			1006	1/23/2014 10:17:39 AM	00:00:07	58007	I		54406	54901	0
53	Agent	One	54405	1/23/2014 10:16:29 AM	00:00:05	58007	I		54405		0
52	Agent	One	1005	1/23/2014 10:16:08 AM	00:00:07	58007	I		54405	54901	0

## 9. Conclusion

All of the executed test cases have passed and met the objectives outlined in **Section 2** with any observations or exceptions noted in **Section 2.2**. The Uptivity Discover R5.2 is considered compliant with Avaya Aura® Contact Center Release 6.3 and Avaya Communication Server 1000 Release 7.6.

## 10. Additional References

Product documentation for Avaya CS 1000 products may be found at:

<https://support.avaya.com/css/Products/>

Product documentation for Uptivity Discover may be found at:

<http://www.uptivity.com/support>

[1] Avaya Communication Server 1000 Documents:

*Communication Server 1000E Installation and Commissioning*, March 2013, Release 7.6, NN46041- 310  
*Co-resident Call Server and Signaling Server Fundamentals - Avaya Communication Sever 1000*, March 2013, Release 7.6, NN43001-509

*Element Manager System Reference – Administration - Avaya Communication Server 1000*, March 2013, Release 7.6, NN43001-632

[2] Avaya Aura® Contact Center R6.3 Documents:

*Avaya Aura® Contact Center Planning and Engineering* (NN44400-210) May 2013

*Avaya Aura® Contact Center Installation* (NN44400-311) May 2013

*Avaya Aura® Contact Center Server Administration* (NN44400-610) May 2013

*Avaya Aura® Contact Center Overview* (NN44400-111) May 2013

*Avaya Aura® Contact Center Fundamentals* (NN44400-110) May 2013

*Avaya Aura® Contact Center Manager Administration – Client Administration* (NN44400-611) May 2013.

---

**©2014 Avaya Inc. All Rights Reserved.**

Avaya and the Avaya Logo are trademarks of Avaya Inc. All trademarks identified by ® and ™ are registered trademarks or trademarks, respectively, of Avaya Inc. All other trademarks are the property of their respective owners. The information provided in these Application Notes is subject to change without notice. The configurations, technical data, and recommendations provided in these Application Notes are believed to be accurate and dependable, but are presented without express or implied warranty. Users are responsible for their application of any products specified in these Application Notes.

Please e-mail any questions or comments pertaining to these Application Notes along with the full title name and filename, located in the lower right corner, directly to the Avaya DevConnect Program at [devconnect@avaya.com](mailto:devconnect@avaya.com).