



## DevConnect Program

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# Application Notes for Comstice Wallboard V2024 with Avaya Aura® Communication Manager R10.2 and Avaya Call Management System R21 using Call History and Real-Time Socket Interfaces – Issue 1.0

## Abstract

These Application Notes describe the configuration steps required to integrate Comstice Wallboard with Avaya Call Management System Release 21 using the historical Open Database Connectivity (ODBC) and Real-Time Socket interfaces to capture ACD contact center data from Avaya Aura® Communication Manager. The Call History Interface is used to obtain historical splits/skills, Vector Directory Numbers (VDNs), and agent data periodically while the real-time socket interface displays the real-time status of agent, skill and VDN.

Readers should pay attention to **Section 2**, in particular the scope of testing as outlined in **Section 2.1** as well as any observations noted in **Section 2.2**, to ensure that their own use cases are adequately covered by this scope and results.

Information in these Application Notes has been obtained through DevConnect Compliance Testing and additional technical discussions. Testing was conducted via the Avaya DevConnect Program.

# 1. Introduction

These Application Notes describe the configuration steps required to integrate Comstice Wallboard with Avaya Call Management System (CMS) using the historical ODBC and Real-Time Socket interfaces to capture ACD contact center data from Avaya Aura® Communication Manager (Communication Manager). The ODBC interface is used to obtain historical splits/skills, Vector Directory Numbers (VDNs), and agent data periodically while the real-time socket interface displays the real-time status of agent, skill and VDN.

The Comstice Wallboard application are services that will be installed in the customer's environment to enable data collection via ODBC from one or many Avaya CMS servers. These services are installed and supported by the Comstice support team.

Comstice Wallboard for Avaya CMS helps companies to better report & analyze contact center activity, set thresholds & receive daily emails about the performance, design visual scorecards, & receive daily, weekly monthly scorecards by email, repetitive call analysis, customer patience analysis, call result analysis, weekly heatmaps, year on year charts, visual report designer, omnichannel customer journey maps & visual cradle to grave reports.

Comstice Wallboard requires the following Avaya licenses;

- CMS RT\_Socket license,
- CMS ODBC connection license

Comstice Wallboard uses stock real-time reports or gem files for the RT\_Socket feed. There is no custom report template required for the real-time feed.

## 2. General Test Approach and Test Results

The feature test cases were performed manually. Incoming calls were made to the monitored ACD/Skill and VDN groups to enable data streams to be sent to Avaya CMS.

The serviceability test cases were performed manually by stopping and restarting the Comstice service, and by disconnecting and reconnecting the LAN cable to the Comstice server.

DevConnect Compliance Testing is conducted jointly by Avaya and DevConnect members. The jointly-defined test plan focuses on exercising APIs and/or standards-based interfaces pertinent to the interoperability of the tested products and their functionalities. DevConnect Compliance Testing is not intended to substitute full product performance or feature testing performed by DevConnect members, nor is it to be construed as an endorsement by Avaya of the suitability or completeness of a DevConnect member's solution.

Avaya recommends our customers implement Avaya solutions using appropriate security and encryption capabilities enabled by our products. The testing referenced in these DevConnect Application Notes included the enablement of supported encryption capabilities in the Avaya products. Readers should consult the appropriate Avaya product documentation for further information regarding security and encryption capabilities supported by those Avaya products.

Support for these security and encryption capabilities in any non-Avaya solution component is the responsibility of each individual vendor. Readers should consult the appropriate vendor-supplied product documentation for more information regarding those products.

For the testing associated with this Application Note, the interface between Avaya systems and the Comstice did not include use of any specific encryption features.

## **2.1. Interoperability Compliance Testing**

The interoperability compliance test included feature and serviceability testing. The feature testing focused on:

- Obtaining the call data and displaying different types of call report that includes ACD/Skill, VDN, and Agent information from Avaya CMS via the ODBC interface.
- Parsing and displaying ACD/Skill, VDN, and Agent data in real-time from Avaya CMS.

The serviceability testing focused on verifying the ability of Comstice server to recover from adverse conditions, such as restarting Comstice services and interfaces.

## **2.2. Test Results**

The test objectives listed in **Section 2.1** were verified and all test cases were executed and passed.

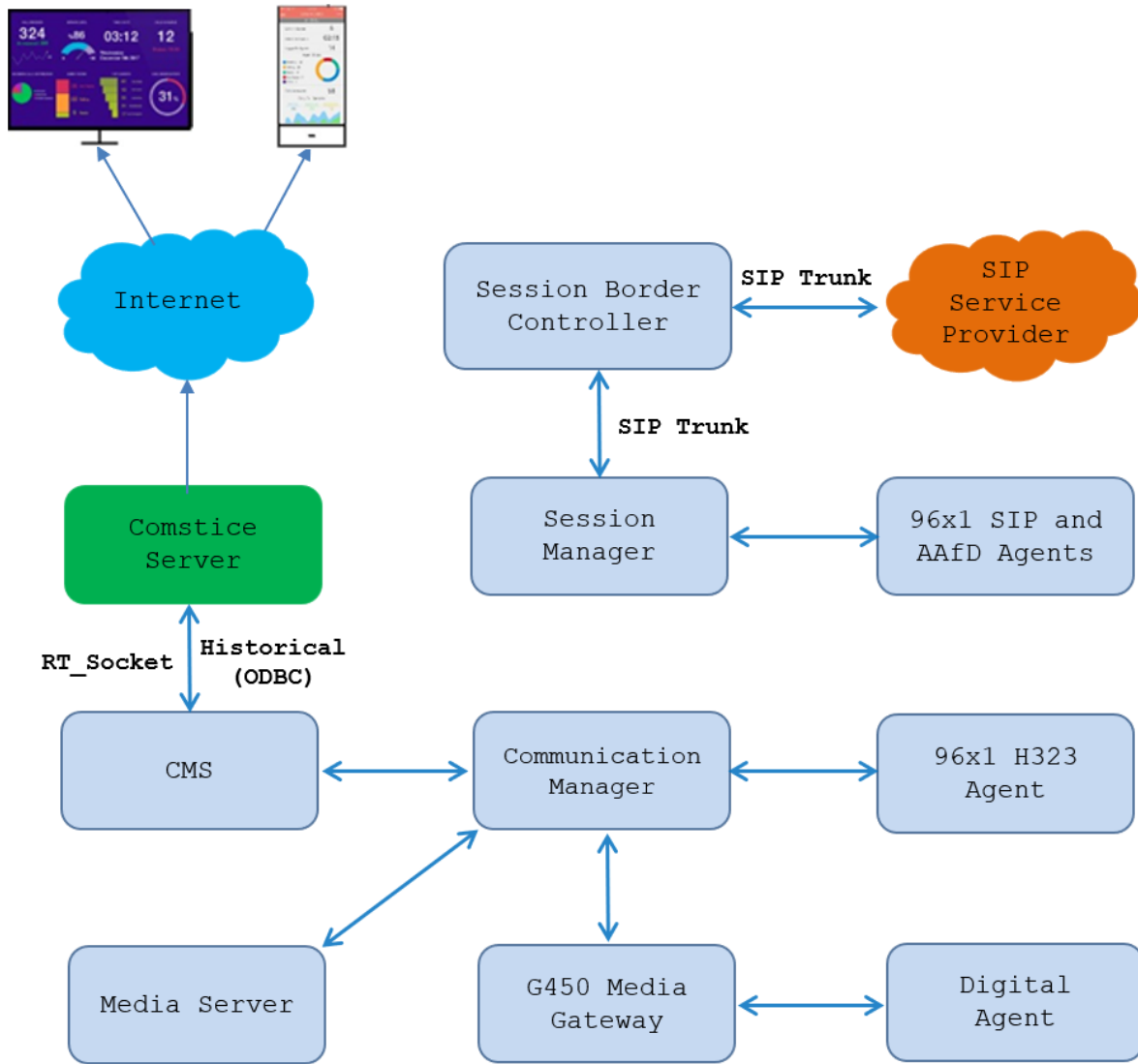
## **2.3. Support**

Contact Comstice for technical support.

- Web: <https://comstice.com/support>
- Phone: +1 713 929 3714
- Email: [support@comstice.com](mailto:support@comstice.com)

### 3. Reference Configuration

**Figure 1** illustrates the configuration used for compliance testing. The network consisted of Communication Manager, Avaya Call Management System and Comstice server running on a virtualized environment.



**Figure 1: Reference Configuration**

## 4. Equipment and Software Validated

The following equipment and software were used for the sample configuration provided:

Equipment/Software	Release/Version
Avaya Aura® Communication Manager running on Virtualized Environment	10.2.0.1 02.0.229.0-28126
Avaya Aura® Media Server running on Virtualized Environment	10.1.0
Avaya Call Management System Real-Time Socket Version	21.0 8.0.1
Avaya Aura® Application Enablement Services running on Virtualized Environment	10.2.0.1.1.3
Avaya G450 Media Gateway	43.9.0
Avaya Aura® System Manager running on Virtualized Environment	10.2.0.1 Software Update Revision No: 10.2.0.1.0517101 Service Pack 1 Hot Fix - 1020117101
Avaya Aura® Session Manager running on Virtualized Environment	10.2.0.1 10.2.0.1.1020108
Avaya Session Border Controller running on Virtualized Environment	10.2.0.0-86-24077
Avaya IP Deskphones - 9641GS (H.323) - 9611G (SIP)	6.8.5.5.1 7.1.15.2.1
Avaya Agent for Desktop (SIP and H.323)	2.0.6.25
Comstice Wallboard application running on Ubuntu Linux 20	Version 202411211600

## 5. Configure Avaya Aura® Communication Manager

This section describes the steps required for Communication Manager to support the configuration in **Figure 1**. The following pages provide step-by-step instructions on how to administer parameters specific to the Call Management System solution only. The assumption is that the appropriate license and authentication files have been installed on the servers and that login and password credentials are available and that the reader has a basic understanding of the administration of Communication Manager. It is assumed that all other connections, (e.g., to PSTN, to LAN) are configured and will not be covered in this document. The reader will need access to the System Access Terminal (SAT). For detailed information on the installation, maintenance, and configuration of Communication Manager, please refer to **Section 10**.

This section provides the procedures for configuring Communication Manager. The procedures include the following areas:

- Verify Communication Manager Options.
- Administer adjunct CMS release.
- Administer processor interface channel.
- Administer measured VDN.
- Administer measured Skill.

The detailed administration of contact center devices such as ACD/Skill, VDN, Vector, and Agents are assumed to be in place. These Application Notes will only cover how to enable ACD/Skill, VDN, and Agent data to be sent to Avaya CMS.

## 5.1. Verify Avaya Aura® Communication Manager Software Options

Log into the System Access Terminal (SAT) to verify that the Communication Manager license has proper permissions for features illustrated in these Application Notes. Use the “display system-parameters customer-options” command to verify that the **G3 Version** field is set to “V20” on **Page 1**, as shown below.

```
display system-parameters customer-options                               Page 1 of 12
                                OPTIONAL FEATURES

G3 Version: V20                                                    Software Package: Enterprise
  Location: 2                                                            System ID (SID): 1
  Platform: 28                                                           Module ID (MID): 1

                                USED
      Platform Maximum Ports: 81000 124
      Maximum Stations: 41000 61
      Maximum XMOBILE Stations: 41000 0
Maximum Off-PBX Telephones - EC500: 41000 0
Maximum Off-PBX Telephones - OPS: 41000 21
Maximum Off-PBX Telephones - PBFMC: 41000 0
Maximum Off-PBX Telephones - PVFMC: 41000 0
Maximum Off-PBX Telephones - SCCAN: 0 0
Maximum Off-PBX Telephones - EMX: 41000 0
      Maximum Survivable Processors: 313 1

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

Navigate to **Page 7** and verify that the **Call Center Release** field is set to “10.1”, as shown below.

```

display system-parameters customer-options                               Page 7 of 12
                                CALL CENTER OPTIONAL FEATURES

                                Call Center Release: 10.1

                                ACD? y                                Reason Codes? y
                                BCMS (Basic)? y                      Service Level Maximizer? n
                                BCMS/VuStats Service Level? y      Service Observing (Basic)? y
                                BSR Local Treatment for IP & ISDN? y  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? y      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)? y
                                Forced ACD Calls? n                  Vectoring (ANI/II-Digits Routing)? y
                                Least Occupied Agent? y              Vectoring (G3V4 Advanced Routing)? y
                                Lookahead Interflow (LAI)? y         Vectoring (CINFO)? y
                                Multiple Call Handling (On Request)? y Vectoring (Best Service Routing)? y
                                Multiple Call Handling (Forced)? y    Vectoring (Holidays)? y
                                PASTE (Display PBX Data on Phone)? y  Vectoring (Variable

```

*Note: Values used were specific to this Compliance Test. When integrating with other releases please use the Version information provided for that release.*

## 5.2. Administer Adjunct CMS Release

Use the “change system-parameters features” command and navigate to **Page 12**. Set the **Reporting Adjunct Release** field for **CMS** to the software release of the Avaya CMS. In this case, “R18.1/19.0” is used to correspond to Avaya CMS software release R 21.0.

```

change system-parameters features                                       Page 12 of 19
                                FEATURE-RELATED SYSTEM PARAMETERS

                                AGENT AND CALL SELECTION
                                MIA Across Splits or Skills? n
                                ACW Agents Considered Idle? y
                                AUX Agents Considered Idle (MIA)? n
                                AUX Agent Remains in LOA Queue? n
                                Call Selection Measurement: current-wait-time
                                Service Level Supervisor Call Selection Override? n
                                Auto Reserve Agents: none
                                Block Hang-up by Logged-in Auto-Answer Agents? n

                                CALL MANAGEMENT SYSTEM
                                REPORTING ADJUNCT RELEASE (determines protocol used by appl link)
                                    CMS (appl mis): R18.1/R19.0
                                    AAPC/IQ (appl ccr):

                                BCMS/VuStats LoginIDs? y
                                BCMS/VuStats Measurement Interval: hour
                                BCMS/VuStats Abandon Call Timer (seconds):
                                    Validate BCMS/VuStats Login IDs? n
                                    Clear VuStats Shift Data: on-login
                                Remove Inactive BCMS/VuStats Agents? n

```

### 5.3. Administer Node Name

Add an IP Address entry in the node names forum with the “change node-names ip” command.

```
change node-names ip                                     Page 1 of 2
```

IP NODE NAMES	
Name	IP Address
ams	10.33.1.95
<b>cms21</b>	<b>10.33.1.4</b>
default	0.0.0.0
<b>procr</b>	<b>10.33.1.7</b>
procr6	::
sm102	10.33.1.92

### 5.4. Administer Processor Interface Channel

Assign a new processor interface channel with the “change communication-interface processor-channels” command. Add an entry with the following values and submit these changes.

- **Enable:** “y”
- **Appl.:** “mis”
- **Mode:** “s” for server mode.
- **Interface Link:** “pv4”
- **Interface Chan:** TCP channel number for Avaya CMS. In this case “5001”.
- **Destination Node:** The node name configured in previous section.
- **Destination Port:** “0”
- **Session Local:** **Local Session ID** for the connection to CMS. In this case “1”
- **Session Remote:** **Remote Session ID** for the connection to CMS. In this case “1”

The **Interface Chan** field contains the Avaya CMS TCP channel number, which is defined as part of the Avaya CMS installation. For the compliance testing, the TCP channel number of “5001” was used.

```
change communication-interface processor-channels       Page 1 of 24
```

PROCESSOR CHANNEL ASSIGNMENT									
Proc	Chan	Enable	Appl.	Gtwy To	Interface Link/Chan	Destination Node	Port	Session Local/Remote	Mach ID
	<b>1:</b>	<b>y</b>	<b>mis</b>		<b>s pv4 5001</b>	<b>cms21</b>	<b>0</b>	<b>1</b>	<b>1</b>

## 5.5. Administer Measured VDN

Use the “change vdn n” command, where “n” is the extension of the VDN to be measured by Avaya CMS. Set the **Measured** field to “external” or “both” to enable measurement data on the VDN to be sent to Avaya CMS. Repeat this step for all VDNs that will be monitored by Avaya CMS.

```
change vdn 2400                                     Page 1 of 3
                                                    VECTOR DIRECTORY NUMBER
                                                    Extension: 2400                               Unicode Name? n
                                                    Name*: Contact Center 1
                                                    Destination: Vector Number 1
Attendant Vectoring? n
Meet-me Conferencing? n
Allow VDN Override? n
COR: 1
TN*: 1
Measured: both      Report Adjunct Calls as ACD*? n
Acceptable Service Level (sec): 20

VDN of Origin Annc. Extension*:
1st Skill*:
2nd Skill*:
3rd Skill*:

SIP URI:

* Follows VDN Override Rules
```

## 5.6. Administer Measured Skill

Use the “change hunt-group n” command, where “n” is the extension of the ACD/Skill group number to be measured by Avaya CMS. On **Page 2** set the **Measured** field to “external” or “both” to enable real-time measurement data on the ACD/Skill group and the associated agents to be sent to Avaya CMS. Repeat this step for all ACD/Skill groups that will be measured by Avaya CMS.

```
change hunt-group 1                               Page 2 of 4
                                                    HUNT GROUP
                                                    Skill? y      Expected Call Handling Time (sec): 180
                                                    AAS? n       Service Level Target (% in sec): 80 in 20
Measured: both
Supervisor Extension:

Controlling Adjunct: none

VuStats Objective:

Multiple Call Handling: none

Timed ACW Interval (sec):      After Xfer or Held Call Drops? n
```

## 5.7. Administer Agent

To add an **Agent LoginID**, use the command “**add agent-loginID <agent ID>**” for each agent. In the compliance test, three agent login IDs 1000, 1001 and 1002 were created.

```
add agent-loginID 1000                                     Page 1 of 2
                                     AGENT LOGINID
Login ID: 1000                                           AAS? n
Name: Agent 1000                                         AUDIX? n
TN: 1
COR: 1
Coverage Path:                                           LWC Reception: spe
Security Code: 1234                                       LWC Log External Calls? n
Attribute:                                               AUDIX Name for Messaging:
LoginID for ISDN/SIP Display? n
Password:
Password (enter again):
Auto Answer: station
MIA Across Skills: system
AUX Agent Considered Idle (MIA)? system ACW Agent Considered Idle: system
Aux Work Reason Code Type: system
Logout Reason Code Type: system
Maximum time agent in ACW before logout (sec): system
Forced Agent Logout Time:
WARNING: Agent must log in again before changes take effect
```

On **Page 2** of the **Agent LoginID** form, set the skill number (**SN**) to hunt group 1, which is the hunt group (skill) that the agents will log into.

```
add agent-loginID 1000                                     Page 2 of 2
                                     AGENT LOGINID
Direct Agent Skill:                                       Service Objective? n
Call Handling Preference: skill-level                     Local Call Preference? n
SN   RL SL      SN   RL SL
1: 1      1      16:
2:      1      17:
3:      1      18:
4:      1      19:
5:      1      20:
6:
7:
8:
9:
10:
11:
12:
13:
14:
15:
```

## 6. Configure Avaya Call Management System

This section shows the basic configuration in Avaya CMS to work with Comstice Wallboard application. Comstice Wallboard application uses the synonym table to query historical call data from the CMS ODBC database therefore the agent name, agent group, skill group, and VDN need to be configured in the synonym table in the CMS Dictionary.

### 6.1. Verify Licenses

To verify the ODBC and JDBC license, log in to the web license manager by entering the link <https://<IP address or FQDN>:52233/WebLM/LicenseServer>, which the host name or FQDN is the license manager. Enter a proper username and its password to login (not shown), the WebLM Home displays. Navigate to **CMS → CMS → View license capacity**, verify the ODBC/JDBC session has enough subscriptions.

Note that Comstice Wallboard solution requires two CMS ODBC licenses.

License installed on: July 21, 2024 8:02:56 PM -07:00

License File Host IDs: V3-A6-6F-28-0C-D2-01

**Licensed Features**

10 Items Show All

Feature (License Keyword)	Expiration date	Licensed capacity	Currently Used
Maximum number of CMS CLInt sessions for external use VALUE_CMS_CLINT_EXT	permanent	1024	0
Maximum number of CMS agents VALUE_CMS_AGENTS	permanent	1024	0
Maximum number of Historical Connectors VALUE_CMS_HR_CONNECTORS	permanent	100	0
Maximum number of Other Connectors VALUE_CMS_OT_CONNECTORS	permanent	100	0
Support Centralized Licensing FEAT_WLM_CENTRALIZED	permanent	on	Not counted
Maximum number of CMS ACDs VALUE_CMS_ACD_CONNECTIONS	permanent	100	2
Maximum number of CMS ODBC/JDBC sessions VALUE_CMS_ODBC_JDBC_SUBSCRIPTIONS	permanent	1024	1
Maximum number of CMS CLInt sessions for internal use VALUE_CMS_CLINT_INT	permanent	1024	1
Maximum number of Real-Time Connectors VALUE_CMS_RT_CONNECTORS	permanent	100	5
Maximum number of CMS supervisor sessions VALUE_CMS_SUPERVISORS	permanent	1024	0

## 6.2. Administer Database User

A user needs to be created with a read privilege and assigned to the Informix “dbaccess” group in the CMS, this user will be used later by the Comstice Wallboard application to access the ODBC database. To create a new user, from CMS menu, navigate to **User Permission → User Data**.

```

1/18/25 06:02 Avaya(TM) CMS
Windows: 0 of 10  ^^

lMainMenuqqqqqqqqqqqqqqqqqqqqqqqqk
x Reports> x
x Dictionary> x
x Exceptions> x
x Agent Administration> x
x Call Center Administration> x
x Custom Reportlqqqqqqqqqqqqqqqqqqqqqqk
x User Permissix User Data x
x System Setup>x Feature Access x
x Maintenance> x Main Menu Addition Access x
x Generic-RTA> x Split/Skill Access x
x RT_Socket> x Trunk Group Access x
x ECH Handler> x ACD Access x
x Logout x Vector Access x
x ; x VDN Access x
mqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqj
  
```

The **User Permission: User Data** window displays, enter a desired user id in the **User ID** field, a username in the **User name** field, leave other fields at default and select **Add**.

```

User Permissions: User Data ALL ACDs
User ID: comstice x Add
User name: comstice x Delete
Room number: x Find one
Telephone number: x List all
Default printer name: x Modify
x Next
Login type (select only one) : x Previous
<x> Normal user mqqqqqqqqqq
< > Administrator

Maximum user window count (1-12): 4
Minimum refresh rate (seconds): 30
Login ACD: 1
  
```

Go to the CMS command line to set a password for the new username “**comstice**” above.

```

[root@cms21 cms]# passwd comstice
Changing password for user comstice.
New password:
Retype new password:
passwd: all authentication tokens updated successfully.
  
```

Add the new username “comstice” to the “dbaccess” database group.

```
[root@cms21 cms]# usermod -G dbaccess comstice
```

Update the Informix database in the “**cmsadm**” menu by selecting the option “**10) dbaccess**”. This change will grant the access permission to the requested user “comstice”.

```
[root@cms21 cms]# cmsadm
```

```
Avaya(TM) Call Management System Administration Menu
```

```
Select a command from the list below.
```

- 1) acd\_create Define a new ACD
- 2) acd\_remove Remove all administration and data for an ACD
- 3) backup Filesystem backup
- 4) pkg\_install Install a feature package
- 5) pkg\_remove Remove a feature package
- 6) run\_pkg Turn a feature package on or off
- 7) run\_ids Turn Informix Database on or off
- 8) run\_cms Turn Avaya CMS on or off
- 9) passwd\_age Set password aging options
- 10) dbaccess** Change Informix DB access permissions
- 11) config\_pkg Configure a feature

```
Enter choice (1-11) or q to quit: 10
```

```
Begin CMS DB Access Permissions changes
```

```
Please wait while connect permissions are granted for requested users
```

```
grant connect to "comstice";
```

```
grant connect to "cms";
```

```
grant connect to "sale";
```

```
Changes to CMS DB Access Permissions finished.
```

### 6.3. Administer Agent Name

To add an agent name, from the CMS menu, navigate to **Dictionary → Login Identifications**.

```

1/17/25 14:58 Avaya(TM) CMS
Windows: 0 of 10 ^

lMainMenuqqqqqqqqqqqqqqqqqqqqqqqqk
x Reports> lqqqqqqqqqqqqqqqqqqqqqqk
x Dictionary> x Login Identifications x
x Exceptions> x Agent Groups x
x Agent Adminisx Calculations x
x Call Center Ax Constants x
x Custom Reportx Database Items> x
x User Permissix ACDS x
x System Setup>x ACD Groups x
x Maintenance> x Splits/Skills x
x CALA-RTA> x Trunk Groups x
x Generic-RTA> x Global Search x
x RT_Socket> x Report x
x Calabrio> x AUX Reason Codes x
x ECH Handler> x Logout Reason Codes x
x Logout x Location IDs x
x ; x Announcements x
mqqqqqqqqqqqqqqx Call Work Codes x
x VDNs x
x Vectors x
mqqqqqqqqqqqqqqqqqqqqqqqqqqqqqj
  
```

In the **Dictionary: Login Identifications** window, enter a desired name in the **Agent Name** field, agent login ID as defined in **Section 5.7** in the **Login ID** field and select the **Add** button in the left menu. Repeat the procedure to add another agent name if necessary.

```

Dictionary: Login Identifications cm102

Agent Name: Agent 1000
Login ID: 1000
Description: Agent Login ID 1002

x Add
x Delete
x Find one
x List all
x Modify
x Next
x Previous
  
```

## 6.4. Administer Agent Group

To configure agent group, from the CMS menu, navigate to **Dictionary → Agent Groups** (Not Shown). The **Dictionary: Agent Groups** window displays, enter a description name in the **Agent group name** field and select **Add**.

```

Dictionary: Agent Groups                                intercm102
                                                    x Add
                                                    x Copy
                                                    x Delete
                                                    x Find one
                                                    x Get contents
                                                    x List all
                                                    x Next
                                                    x Previous
                                                    mqqqqqqqqqqqqq
  
```

The new agent group needs to add the agent in the group, to add the agent name as defined in **Section 6.1** to the agent group. Select **Get contents**, the **Dictionary: Agent Groups: Get contents** window displays, enter login ID in the **Login IDs** field and select **Add**.

```

Dictionary: Agent Groups: Get contents                  intercm102
                                                    x Add
                                                    x Delete
                                                    x List all
Login IDs: 1000
mqqqqqqqqqqqqq
  
```

## 6.5. Administer Skills/Splits Group

To configure a skill group, from the CMS menu, navigate to **Dictionary → Splits/Skills**.

```

1/17/25 13:51 Avaya(TM) CMS
Windows: 0 of 10 ^
lMainMenuqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqq
x Reports> lqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqk
x Dictionary> x Login Identifications x
x Exceptions> x Agent Groups x
x Agent Adminisx Calculations x
x Call Center Ax Constants x
x Custom Reportx Database Items> x
x User Permissix ACDS x
x System Setup>x ACD Groups x
x Maintenance> x Splits/Skills x
x CALA-RTA> x Trunk Groups x
x Generic-RTA> x Global Search x
x RT_Socket> x Report x
x Calabrio> x AUX Reason Codes x
x ECH Handler> x Logout Reason Codes x
x Logout x Location IDs x
x ; x Announcements x
mqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqx
x VDNs x
x Vectors x
  
```

The **Dictionary: Splits/Skills** window displays, enter a desired skill name in the **Split/Skill name** field, a skill number as defined in **Section 5.6** in the **Split/Skill number** field and select **Add**.

<b>Dictionary: Splits/Skills</b>	intercm102
<b>Split/Skill name: Skill_1</b> Split/Skill number: Description:	<input type="checkbox"/> <b>Add</b> <input type="checkbox"/> Delete <input type="checkbox"/> Find one <input type="checkbox"/> List all <input type="checkbox"/> Modify <input type="checkbox"/> Next <input type="checkbox"/> Previous mqqqqqqqqqqq
Successful	

## 6.6. Administer VDN

To add VDN, from the CMS menu, navigate to **Dictionary → VDNs**.

```

1/17/25 14:21 Avaya(TM) CMS
Windows: 0 of 10 ^

lMainMenuqqqqqqqqqqqqqqqqqqqqqqqk
x Reports> lqqqqqqqqqqqqqqqqqqqqqk
x Dictionary> x Login Identifications x
x Exceptions> x Agent Groups x
x Agent Adminisx Calculations x
x Call Center Ax Constants x
x Custom Reportx Database Items> x
x User Permissix ACDs x
x System Setup>x ACD Groups x
x Maintenance> x Splits/Skills x
x CALA-RTA> x Trunk Groups x
x Generic-RTA> x Global Search x
x RT_Socket> x Report x
x Calabrio> x AUX Reason Codes x
x ECH Handler> x Logout Reason Codes x
x Logout x Location IDs x
x ; x Announcements x
mqqqqqqqqqqqqqqqx Call Work Codes x
x VDNs x
x Vectors x
mqqqqqqqqqqqqqqqqqqqqqqqqqqqqj
  
```

The **Dictionary: VDNs** window displays, enter a desired name in the **VDN name** field and VDN number as defined in **Section 5.5** in the **VDN field** and select **Add**.

<b>Dictionary: VDNs</b>	intercm102
<b>VDN name: VDN 2400</b> <b>VDN: 2400</b> Description:	<input type="checkbox"/> <b>Add</b> <input type="checkbox"/> Delete <input type="checkbox"/> Find one <input type="checkbox"/> List all <input type="checkbox"/> Modify <input type="checkbox"/> Next <input type="checkbox"/> Previous

## 6.7. Administer RT\_Socket Adapter

The RT-Socket adapter is configured through a configuration file named **rta.conf** located in the directory where the adapter software is installed. In the compliance test configuration, the path to the directory was **/opt/Avaya/cmsconnector/rt\_socket**. In the **rta.conf** file, select a Session number and configure the following items:

- **HOST:** IP address or hostname of the Aceyus server which is defined in **/etc/hosts**
- **PORT:** port for the TCP/IP connection
- **ACD:** ACD that sources the real-time date
- **REFRESH:** real-time report refresh rate

The following screenshot shows how the RT\_Socket adapter was configured in the test configuration. Note that in the compliance test, Aceyus used three sessions with different ports to connect to the CMS server to collect different data feeds.

```
#----- System Configuration Items -----
#set -a      # Export all variables set in this file
HACMS=no    # Change to yes if HA CMS and auto-failover desired

#----- Session 1 -----
HOST1=comstice
PORT1=7000
ACD1=1
OPTS1=""
REPORT1=itvn_agent
MONITOR_LIST1="1-2000"
REFRESH1=5
EXT_CLINT_LIC1=no
ENCRYPTED1=no
ALARMING1=no
SYSLOG1=no
SYSLVL1=3
DEST_APP1="Comstice Agent RT"

#----- Session 2 -----
HOST2=comstice
PORT2=7001
ACD2=1
OPTS2=""
REPORT2=tvil
MONITOR_LIST2="1-2000"
REFRESH2=5
EXT_CLINT_LIC2=no
ENCRYPTED2=no
ALARMING2=no
SYSLOG2=no
SYSLVL2=3
DEST_APP2="Comstice Skill RT"

#----- Session 3 -----
HOST3=comstice
PORT3=7002
ACD3=1
OPTS3=""
REPORT3=itnv_vdn
```

```
MONITOR_LIST3="1-2000"  
REFRESH3=5  
EXT_CLINT_LIC3=no  
ENCRYPTED3=no  
ALARMING3=no  
SYSLOG3=no  
SYSLLVL3=3  
DEST_APP3="Comstice VDN RT"
```

Enable `RT_Socket` adapter, from the folder where the `RT_Socket` adapter installed, run the command `./menurta`, the **RT\_Socket Menu** is displayed.

```
----- RT_Socket Menu -----  
1) Start RT_Socket Interface  
2) Stop RT_Socket Interface  
3) Check Status  
4) View Maintenance Log  
5) Show RT_Socket Version  
6) Show/Verify Licensed Authorizations  
7) Show Staffed Agents Count  
8) Change RT_Socket Input Parameters  
9) Show RT_Socket Configuration  
Q) Quit  
-----  
Selection: 1
```

Enter the option “1” followed by the **Enter** key, to start the interface select the option [all] to start all three sessions.

```
----- RT_Socket Menu -----  
1) Start RT_Socket Interface  
2) Stop RT_Socket Interface  
3) Check Status  
4) View Maintenance Log  
5) Show RT_Socket Version  
6) Show/Verify Licensed Authorizations  
7) Show Staffed Agents Count  
8) Change RT_Socket Input Parameters  
9) Show RT_Socket Configuration  
Q) Quit  
-----  
Selection: 1  
  
Which RT_Socket session do you want to start? [1-32] [all]  
Starting rt_socket session 1. Please wait ...  
  
Press Enter to return to menu:
```

## 7. Configure Comstice

Comstice Professional Services will login to the data collection server (a windows server) installed in the customer’s environment to configure the “Comstice – Avaya CMS Historical Adapter” service. This will include installing the necessary MSSQL database for data to be stored in, setting data retention sizing, configuring ODBC and testing data migration.

## 8. Verification Steps

This section provides the tests that can be performed to verify proper configuration of Communication Manager, Avaya Call Management System, and Comstice.

### 8.1. Verify Avaya Aura® Communication Manager

Verify the status of the processor interface channel by using the “status processor-channels n” command, where “n” is the processor channel number from **Section 5.4**. Verify that the **Session Layer Status** is “In Service”, and that the **Socket Status** is “TCP connected”, as shown below.

```
status processor-channels 1
                          PROCESSOR-CHANNEL STATUS

      Channel Number: 1
Session Layer Status: In Service
      Socket Status: TCP connected
      Link Number: pv4
      Link Type: processor ethernet
Message Buffer Number: 0

      Last Failure: None
      At:
```

## 8.2. Verify Avaya Call Management System

### 8.2.1. Connection Status

From the CMS **MainMenu**, verify the status of the connection to Communication Manager by selecting **Maintenance** → **Connection Status**, as shown below.

```
1/18/25 06:26 Avaya(TM) CMS
Windows: 0 of 10  ^^

lMainMenuqqqqqqqqqqqqqqqqqqqqqqk
x Reports> x
x Dictionary> x
x Exceptions> x
x Agent Administration> x
x Call Center Administration> x
x Custom Reports> x
x User Permissions> x
x System Setup>lqqqqqqqqqqqqqqqqqqqqk
x Maintenance> x Back Up Data x
x Generic-RTA> x Restore Data x
x RT_Socket> x Backup/Restore Devices x
x ECH Handler> x Printer Administration x
x Logout x Report Administration x
x ; x Connection Status x
mqqqqqqqqqqqqqqqqqqqx ACD Status x
x Archiving Status x
x ACD Admin Log Report x
x Error Log Report x
x Firewall Status x
x License Status x
mqqqqqqqqqqqqqqqqqqqj
```

Enter the corresponding **ACD(s)** number, for the compliance testing, the corresponding switch connection is ACD system “1”. Tab over to **Find one** and press **Enter**. The switch connection status is displayed. Check the status in the **Session** and **Connection** fields, as shown below.

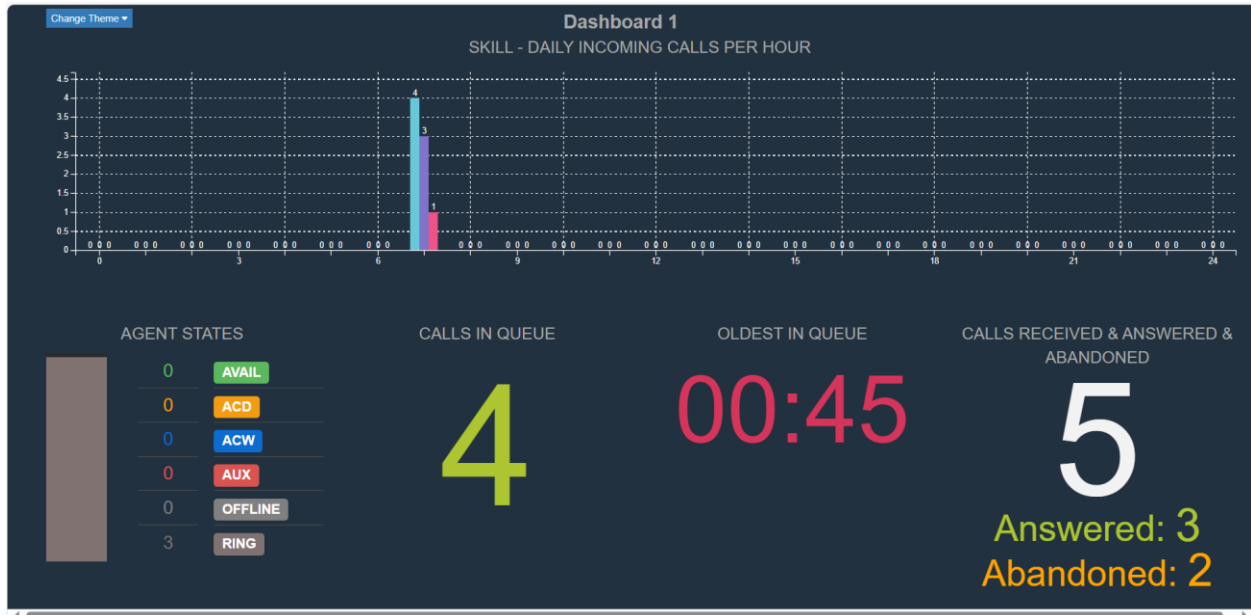
```
Maintenance: Connection Status All ACDs
ACD(s): intercm102 x Find one
Application: data transfer x List all
Session: data transfer normal x Next
Connection: operational x Previous
Date/Time: 1/17/25 2:59 PM mqqqqqqqqqqq
Errors:

1 matches found
```

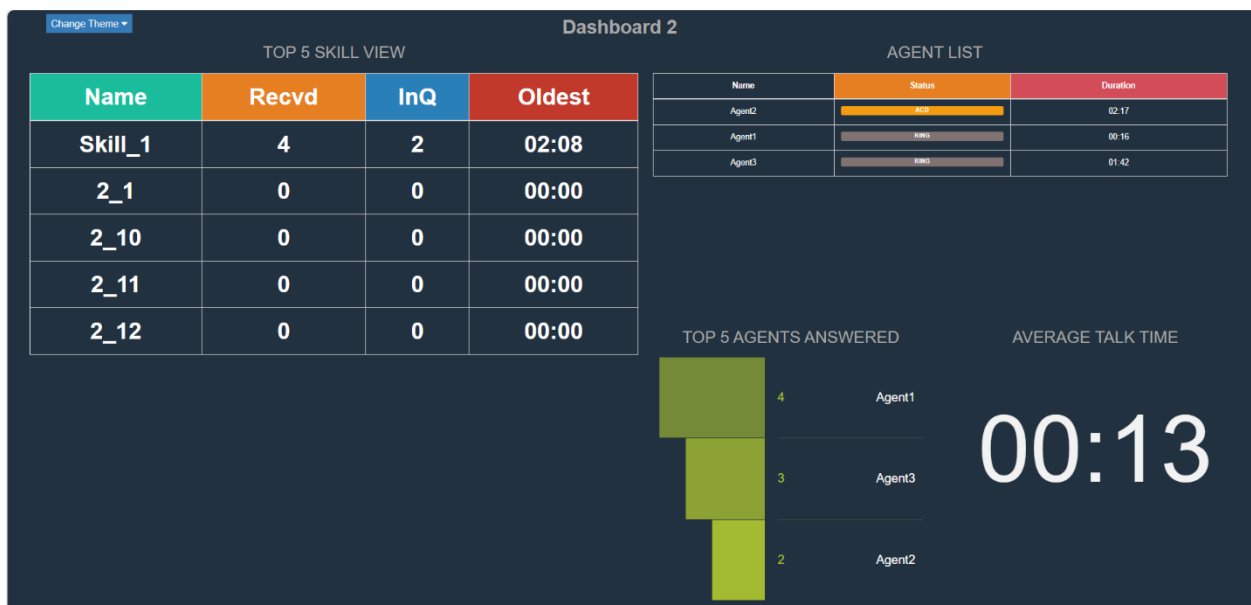
### 8.3. Verify Comstice

To verify Comstice real-time agent, skill and VDN display, place some ACD calls and verify it correctly displays number of calls, agent status, skill status and VDN status.

The historical call reports are also displayed in the chart after the ACD calls are completed.



The real-time Dashboard 2 displays the agent status, average talk time, number ACD calls received and in queue.



## 9. Conclusion

These Application Notes describe the configuration steps required for Comstice Wallboard to successfully interoperate with Avaya Aura® Communication Manager using the Avaya ODBC Historical and Real-time interfaces of Avaya Call Management System. All feature and serviceability test cases were completed successfully.

## 10. Additional References

This section references the product documentation relevant to these Application Notes.

Product documentation for Avaya products may be found at <http://support.avaya.com>.

- [1] Administering Avaya Call Management System, Release 21.0, Issue 2, November 2024
- [2] Avaya Call Management System Call History Interface, Release 21.0, November 2024
- [3] Avaya Call Management System Custom Reports, Release 21.0, November 2024
- [4] Avaya Call Management System Overview and Specification, Release 21.0, Issue 3, November 2024
- [5] Avaya Call Management System and Communication Manager Connections, Administration, and Troubleshooting, Release 21.0, November 2024

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