



Avaya Solution & Interoperability Test Lab

Application Notes for Merced Performance Suite with Avaya Call Management System using ODBC Interface – Issue 1.0

Abstract

These Application Notes describe the configuration steps required to integrate Merced Performance Suite (MPS) with Avaya Call Management System (CMS) via an ODBC connection. MPS is a web-based application that captures ACD call center data from Avaya CMS on a daily basis and presents that data in reports and dashboards. These reports and dashboards provide visibility into employee and operational performance. The call center data includes split/skill and agent activity data and is derived from Avaya Communication Manager.

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

These Application Notes describe the configuration steps required to integrate Merced Performance Suite (MPS) with Avaya Call Management System (CMS) via an ODBC connection. MPS is a web-based application that captures ACD call center data from Avaya CMS on a daily basis and presents that data in reports and dashboards. These reports and dashboards provide visibility into employee and operational performance. The call center data includes split/skill and agent activity data and is derived from Avaya Communication Manager. The split and agent data queried by MPS is listed in the Appendix of these Application Notes.

1.1. Interoperability Compliance Testing

The interoperability compliance test focused on verifying the ability of Merced Performance Suite to import ACD call center data from Avaya CMS using the ODBC interface and displaying split/skill and agent data in MPS reports.

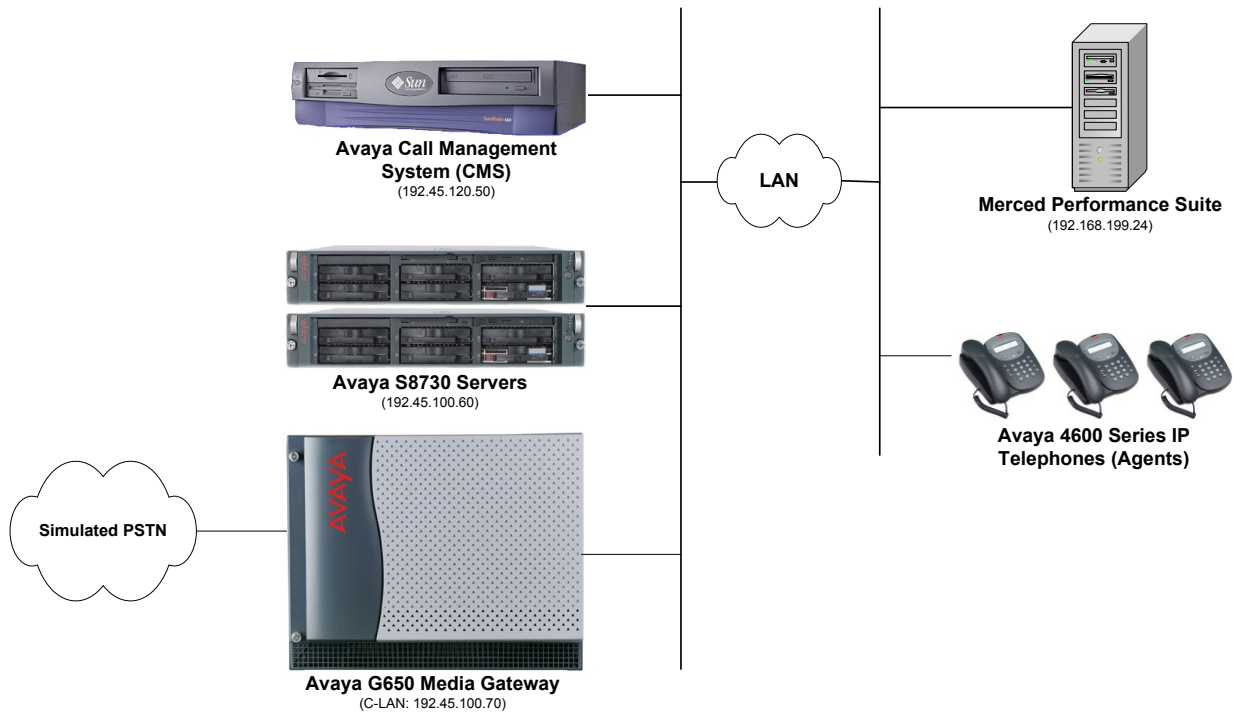
1.2. Support

Contact Merced Systems for technical support via the web, phone, or email.

- **Web:** www.mercedsystems.com and go to Services
- **Phone:** (650) 486-4000
- **Email:** support@mercedsystems.com

2. Reference Configuration

The configuration illustrated below consists of Merced Performance Suite with Avaya Call Management System, Avaya S8730 Servers and G650 Media Gateway running Avaya Communication Manager, and Avaya 4600 Series IP telephones. The ACD call center was configured on Avaya Communication Manager with IP telephones assigned to each agent. The call center data was stored in an Informix database on Avaya CMS which was queried by MPS over an ODBC connection to capture the data to display in reports.



Merced Performance Suite with Avaya Call Management System

3. Equipment and Software Validated

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

Equipment	Software
Avaya S8730 Servers with G650 Media Gateway	Avaya Communication Manager 5.1.1 (R015x.01.1.415.1) with Service Pack 2.01 (Patch 19688)
Avaya Call Management System	r14aa.h
Avaya 4600 Series IP Telephones	2.8 (H.323)
Merced Performance Suite	3.5.3

4. Configure Avaya Communication Manager

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

- Verify Avaya Communication Manager Options.
- Administer adjunct CMS release.
- Administer IP node names for C-LAN.
- Administer IP interface for C-LAN.
- Administer data module for C-LAN.
- 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 Split/Skill, VDN, and Agent data to be sent to Avaya CMS.

4.1. Verify Avaya Communication Manager Software Options

Log into the System Access Terminal (SAT) to verify that the Avaya 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 “V15” on **Page 1**, as shown below.

```
display system-parameters customer-options                               Page 1 of 11
                                OPTIONAL FEATURES

G3 Version: V15                                           Software Package: Standard
  Location: 1                                           RFA System ID (SID): 1
  Platform: 6                                           RFA Module ID (MID): 1

                                USED
                                Platform Maximum Ports: 48000 779
                                Maximum Stations: 36000 261
                                Maximum XMOBILE Stations: 0 0
  Maximum Off-PBX Telephones - EC500: 50 2
  Maximum Off-PBX Telephones - OPS: 50 33
  Maximum Off-PBX Telephones - PBFMC: 0 0
  Maximum Off-PBX Telephones - PVFMC: 0 0
  Maximum Off-PBX Telephones - SCCAN: 0 0

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

Navigate to **Page 6**, and verify that the **Call Center Release** field is set to “5.0”, as shown below.

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

                                Call Center Release: 5.0

                                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? n       Service Observing (Remote/By FAC)? y
                                Business Advocate? y               Service Observing (VDNs)? y
                                Call Work Codes? n                 Timed ACW? y
  DTMF Feedback Signals For VRU? y           Vectoring (Basic)? y
                                Dynamic Advocate? y               Vectoring (Prompting)? y
  Expert Agent Selection (EAS)? y           Vectoring (G3V4 Enhanced)? y
                                EAS-PHD? y                       Vectoring (3.0 Enhanced)? n
  Forced ACD Calls? n                       Vectoring (ANI/II-Digits Routing)? y
                                Vectoring (G3V4 Advanced Routing)? y
                                Lookahead Interflow (LAI)? n       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 (Variables)? n
                                (NOTE: You must logoff & login to effect the permission changes.)
```

4.2. Administer Adjunct CMS Release

Use the “change system-parameters features” command and navigate to **Page 12**. Set the **CMS (appl mis)** field to the software release of the Avaya CMS. In this case, “R14” is used to correspond to Avaya CMS software release R14.0.

change system-parameters features	Page 12 of 17
FEATURE-RELATED SYSTEM PARAMETERS	
AGENT AND CALL SELECTION	
MIA Across Splits or Skills? y	
ACW Agents Considered Idle? y	
Call Selection Measurement: current-wait-time	
Service Level Supervisor Call Selection Override? n	
Auto Reserve Agents: all	
CALL MANAGEMENT SYSTEM	
REPORTING ADJUNCT RELEASE	
CMS (appl mis): R14	
CCR (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	

4.3. Administer IP Node Name for C-LAN

Use the “change node-names ip” command, to add entries for Avaya CMS and the C-LAN that will be used for connectivity. In this case, “cms” and “192.45.120.50” are entered as **Name** and **IP Address** for the Avaya CMS server, and “clan2” and “192.45.100.70” are entered as **Name** and **IP Address** for the C-LAN. The actual node names and IP addresses may vary. Submit these changes.

change node-names ip			Page 1 of 1
IP NODE NAMES			
Name	IP Address	Name	IP Address
clan	192.45 .100.66		. . .
clan-1a05-AES2	192.45 .100.146		. . .
cms	192.45 .120.50		. . .
clan2	192.45 .100.70		. . .

4.4. Administer IP Interface for C-LAN

Add the C-LAN to the system configuration using the “add ip-interface 2a02” command. The actual slot number may vary. In this case, “2a02” is used as the slot number. Enter the C-LAN node name assigned from **Section 4.3** into the **Node Name** field. The **IP Address** field will be populated automatically.

Enter proper values for the **Subnet Mask** and **Gateway Address** fields. In this case, “255.255.255.0” and “192.45.100.1” are used to correspond to the network configuration in these Application Notes. Set the **Enable Ethernet Port** field to “y”. Default values may be used in the remaining fields. Submit these changes.

add ip-interface 2a02		Page 1 of 2
IP INTERFACES		
Type: C-LAN		
Slot: 02A02		
Code/Suffix: TN799 D		
Node Name: clan2		
IP Address: 192.45 .100.70		
Subnet Mask: 255.255.255.0		Link: 2
Gateway Address: 192.45 .100.1		
Enable Ethernet Port? y		Allow H.323 Endpoints? y
Network Region: 1		Allow H.248 Gateways? y
VLAN: n		Gatekeeper Priority: 5
Target socket load and Warning level: 400		
Receive Buffer TCP Window Size: 8320		
ETHERNET OPTIONS		
Auto? y		

4.5. Administer Data Module for C-LAN

Add a new data module using the “add data-module n” command, where “n” is an available extension. Enter the following values, and submit these changes.

- **Name:** A descriptive name.
- **Type:** “ethernet”
- **Port:** Same slot number from **Section 4.4** above and port “17”.
- **Link:** An available link number.

change data-module 24981		Page 1 of 1
DATA MODULE		
Data Extension: 24981	Name: Clan2	
Type: ethernet		
Port: 02A0217		
Link: 2		
Network uses 1's for Broadcast Addresses? y		

4.6. 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:** Link number for data module Ethernet port from **Section 4.5**.
- **Interface Chan:** TCP channel number for Avaya CMS. In this case “5001”.
- **Destination Node:** Avaya CMS server node name from **Section 4.3**.
- **Destination Port:** “0”
- **Session Local:** Corresponding channel number in **Proc Chan** field. In this case “1”.
- **Session Remote:** Corresponding channel number in **Proc Chan** field. 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 default TCP channel number of “5001” was used.

change communication-interface processor-channels									
PROCESSOR CHANNEL ASSIGNMENT									
Proc			Gtwy		Interface		Destination	Session	Mach
Chan	Enable	Appl.	To	Mode	Link/Chan	Node	Port	Local/Remote	IDnp
1:	y	mis		s	2 5001	cms	0	1 1	
2:	n						0		

4.7. 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 38000									
VECTOR DIRECTORY NUMBER									
Extension: 38000									
Name*: Merced VDN 1									
Vector Number: 380									
Meet-me Conferencing? n									
Allow VDN Override? n									
COR: 1									
TN*: 1									
Measured: both									
Acceptable Service Level (sec): 10									
Service Objective (sec): 20									
VDN of Origin Annc. Extension*:									
1st Skill*:									
2nd Skill*:									
3rd Skill*:									
* Follows VDN Override Rules									

4.8. Administer Measured Skill

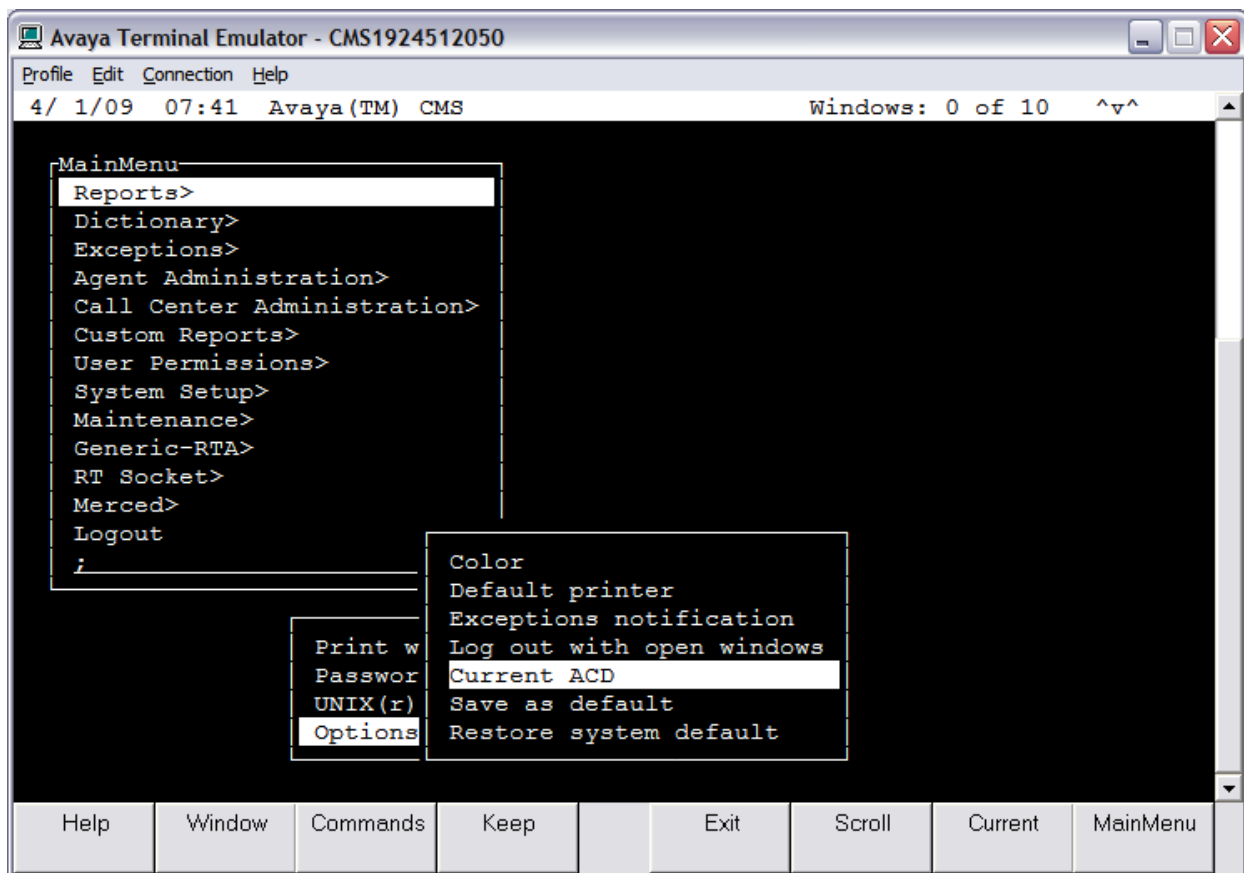
Use the “change hunt-group n” command, where “n” is the extension of the ACD/Skill group number to be measured by Avaya CMS. Set the **Measured** field to “external” or “both” to enable real-time measurement data on the ACD/Skill group and the associated agents to be sent to Avaya CMS. Repeat this step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

change hunt-group 280		Page 2 of 3
HUNT GROUP		
Skill? y	Expected Call Handling Time (sec): 180	
AAS? n	Service Level Target (% in sec): 80 in 20	
Measured: both	Service Objective (sec): 20	
Supervisor Extension:	Service Level Supervisor? y	
	Activate on Oldest Call Waiting? y	
	Call Selection Override? n	
Controlling Adjunct: none	Level 1 Threshold (sec): 50	
	Level 2 Threshold (sec):	
	Dynamic Threshold Adjustment? n	
VuStats Objective:		
Timed ACW Interval (sec):	Dynamic Queue Position? n	
Multiple Call Handling: none		
	Redirect on No Answer (rings):	
	Redirect to VDN:	
	Forced Entry of Stroke Counts or Call Work Codes? n	

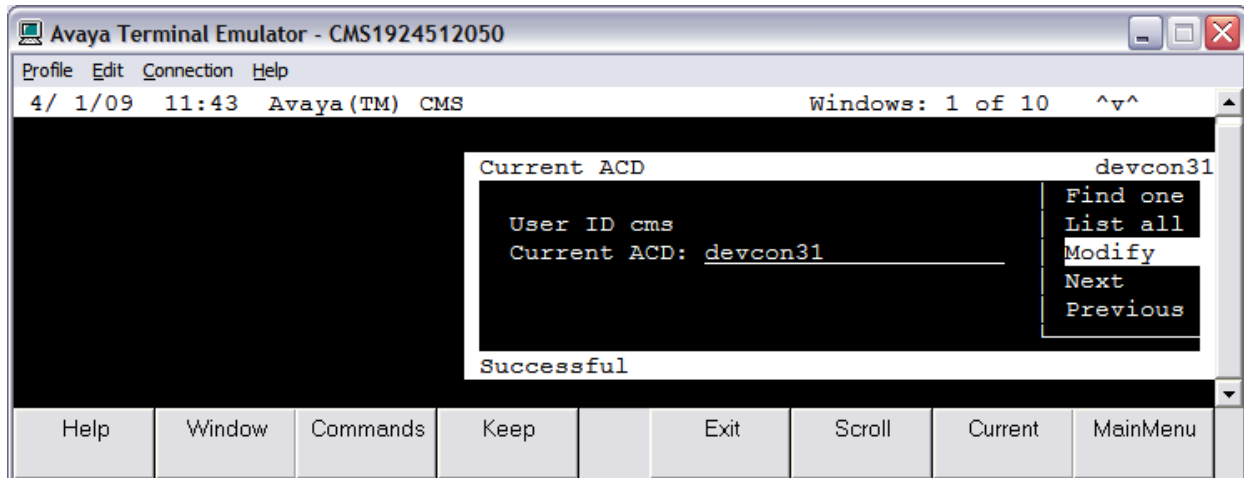
5. Configure Avaya Call Management System

This section covers the configuration of Avaya CMS to support the import of splits/skills, VDN, and agent data from Merced Performance Suite via the ODBC interface.

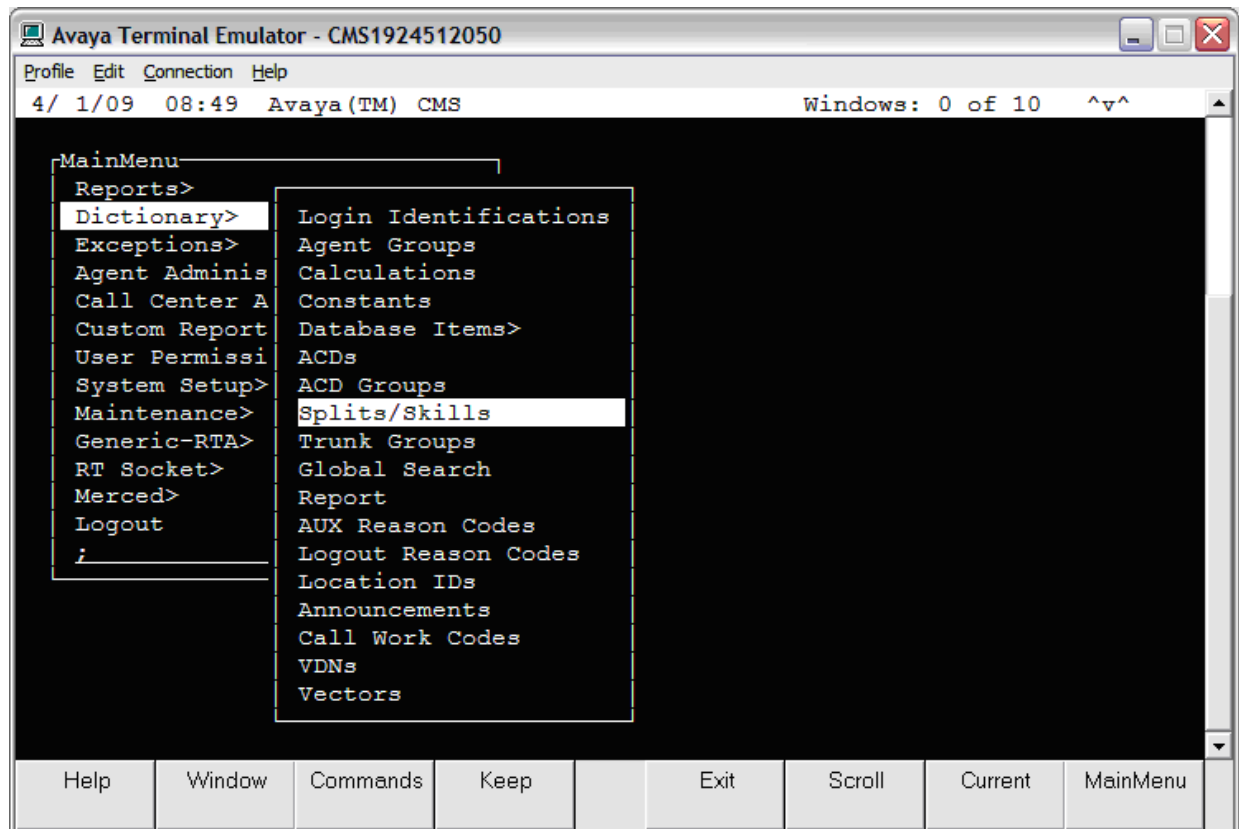
Use a terminal emulator to connect to the Avaya CMS server, and log in with the proper credentials. Enter “cms” at the command prompt to display the **Main Menu** screen. The first step is to configure the **Current ACD**, which in this case is *devcon31*, an ACD name assigned on Avaya CMS. From the CMS terminal emulator click on the **Commands** option button at the bottom of the screen. Navigate to **Options**→**Current ACD** to specify the current ACD and press the **Enter** key.



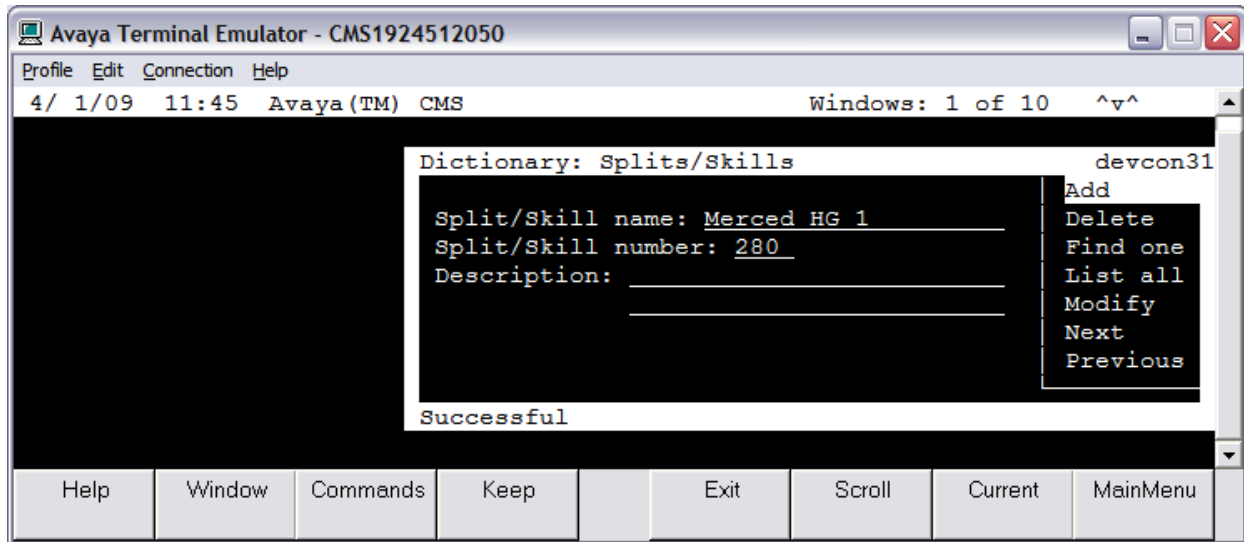
In the following screen, set the **Current ACD** field to *devcon31* (or the corresponding ACD number, which is '3' in this case) and then select **Modify** in the right pane of the screen. Hit the **Enter** key. Upon completion, *Successful* is displayed in the dialog box as shown in the figure below. Click the **Exit** button to return to the CMS main menu.



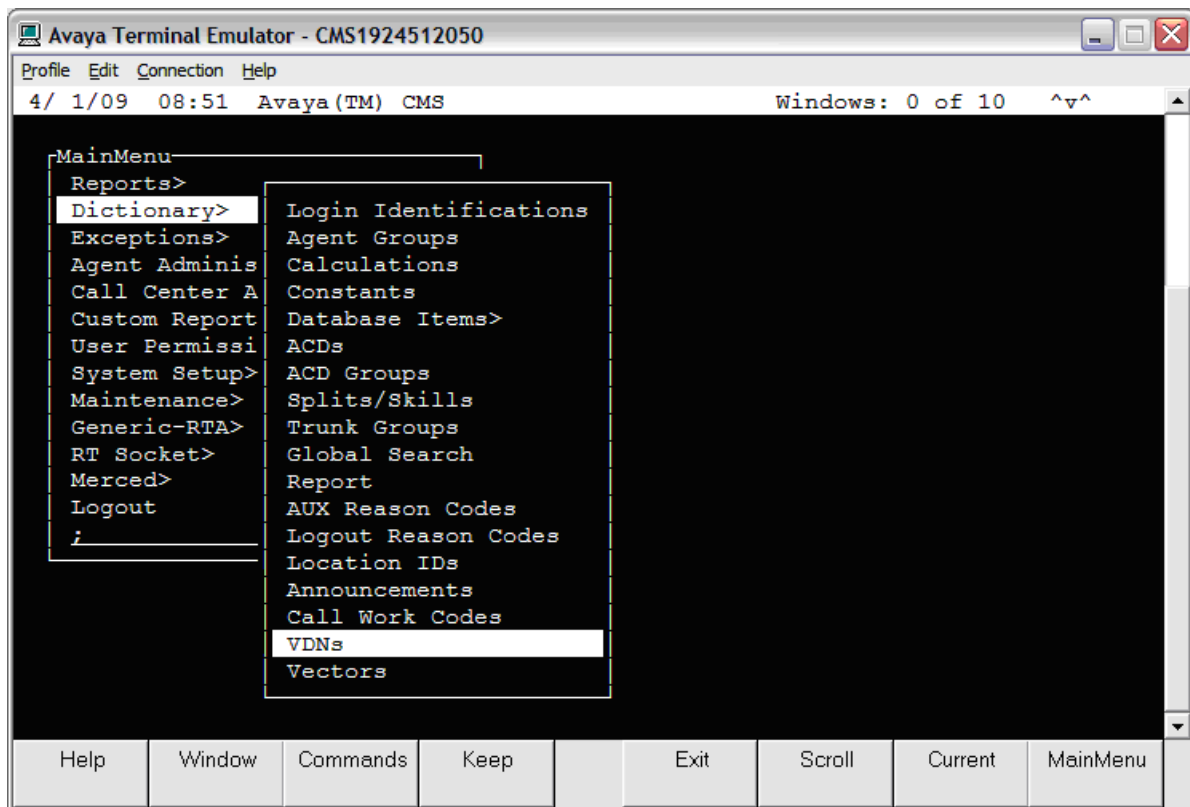
From the CMS main menu, navigate to **Dictionary→Splits/Skills**, as shown below, to configure the splits/skills that will be monitored by MPS. Hit the **Enter** key.



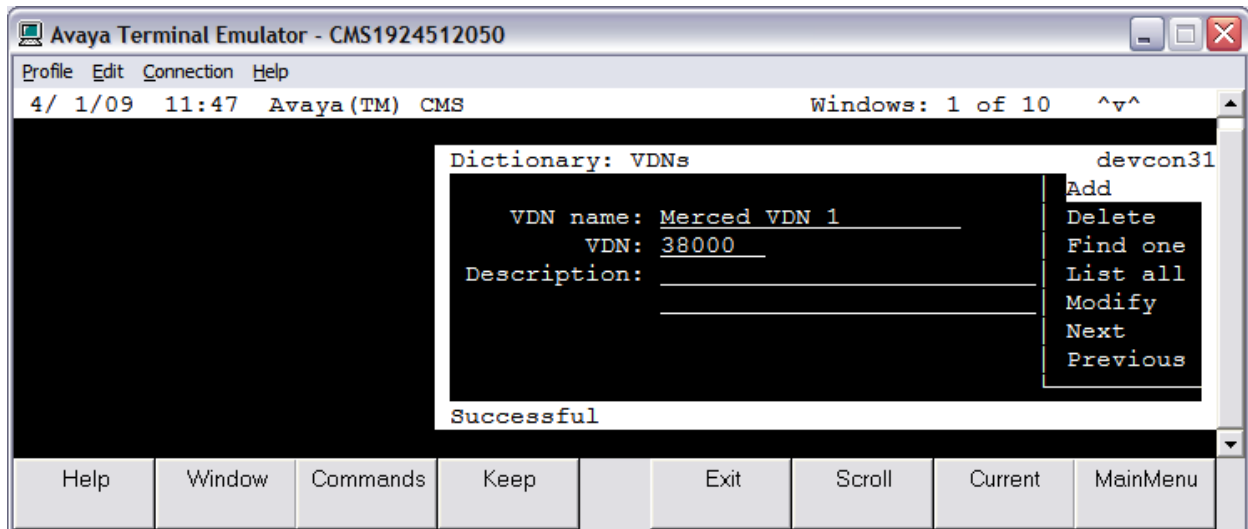
The **Dictionary: Splits/Skills** screen is displayed. Provide a descriptive name for the split/skill and the number assigned to the split/skill in Avaya Communication Manager (see **section 4.8**). Click the **Add** option in the right pane. Repeat this step for each split/skill to be monitored by MPS.



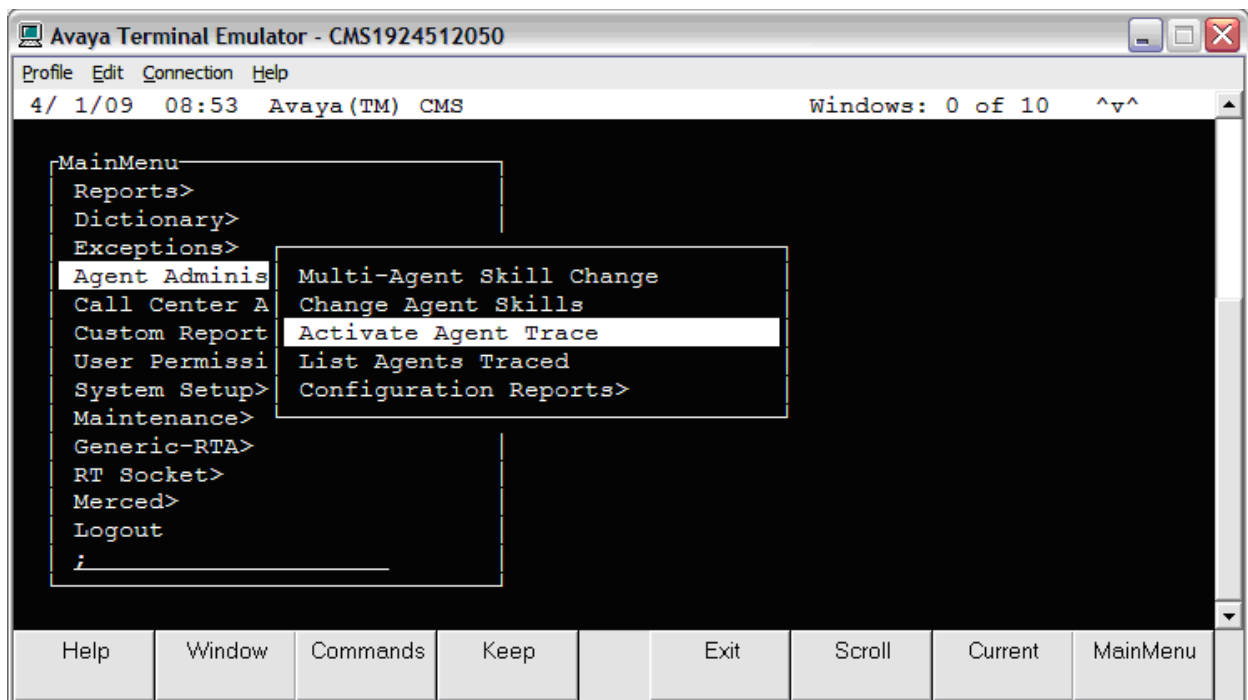
Return to the CMS main menu and navigate to **Dictionary→VDNs** to configure the VDNs to be monitored by MPS.



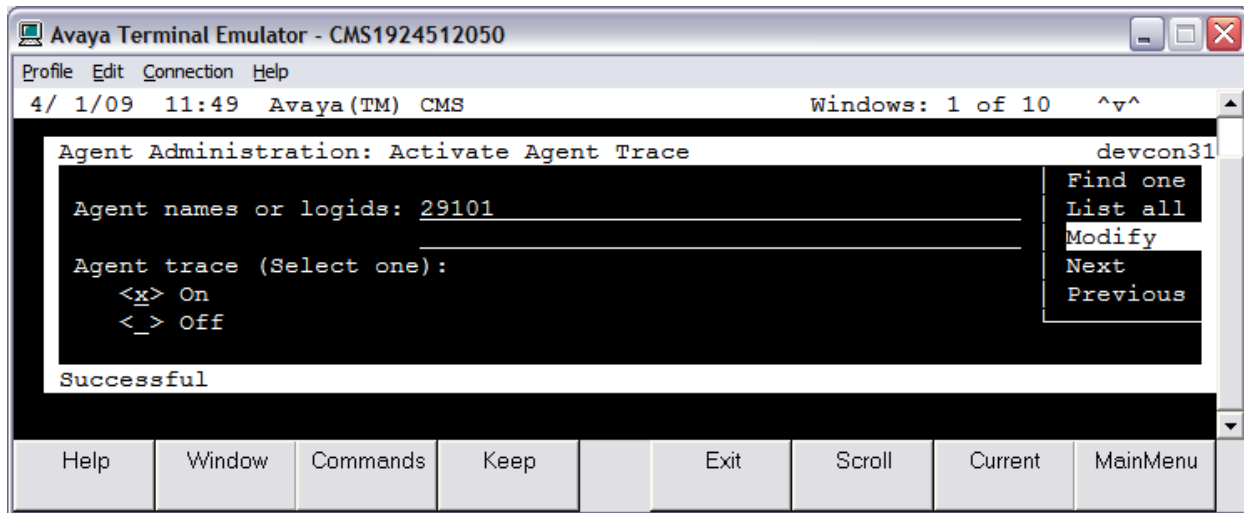
The **Dictionary: VDNs** screen is displayed. Provide a descriptive name for the VDN and the extension assigned to the VDN in Avaya Communication Manager (see **Section 4.7**). Click the **Add** option in the right pane. Repeat this step for each VDN to be monitored by MPS.



Next, agent tracing needs to be enabled for each ACD agent configured in Avaya Communication Manager to make the agent data accessible to MPS over the ODBC interface. From the CMS main menu, navigate to **Agent Administration**→**Activate Agent Trace** and hit the **Enter** key.



From the **Agent Administration: Activate Agent Trace** screen shown below provide the login agent IDs for each agent and set the **Agent trace** field to *on*. Select **Modify** in the right pane. Click the **Exit** button at the bottom of the screen to return to the CMS main menu.



6. Configure Merced Performance Suite

This section provides the procedure for configuring Merced Performance Suite. MPS configuration is performed through the MPS web-based interface and properties files. Some of the procedures are outside the scope of these Application Notes, but they are mentioned in order to provide an overview of the configuration process. The MPS configuration is covered in detail in the Merced documentation listed in the References section. In addition, Merced Client Services can perform the configuration for customers. The procedures fall into the following areas, but are not limited to these areas:

- Configure the ODBC interface to Avaya CMS
- Configure hierarchy containing the organizational structure
- Configure the data conversion to extract the data from Avaya CMS and load it into MPS
- Run the conversion to pull the data from Avaya CMS and store it in MPS
- Create the split and agent reports
- Run the split and agent reports to display the data

Note: The specific names of the properties files mentioned in this section are not provided because they can be different for each customer.

6.1. Configure the ODBC Interface

This section covers the configuration of the ODBC interface to Avaya CMS. A connection to the Avaya CMS Informix database is established using the OpenLink ODBC 5.2 client software installed on the MPS server. The ODBC client software is supplied with the Avaya CMS software. Refer to [3] for additional information.

MPS requires the ODBC connection configuration file shown below containing the database login credentials.

```
#
# $Id:
//eng/YOGI/foundation/cc/acd/avaya/cms/src/com/merced/service/jdbc/config/AVA
YACMS1.properties#1 $
#
$class=com.merced.service.jdbc.config.ExternalJdbcConfiguration
$scope=global

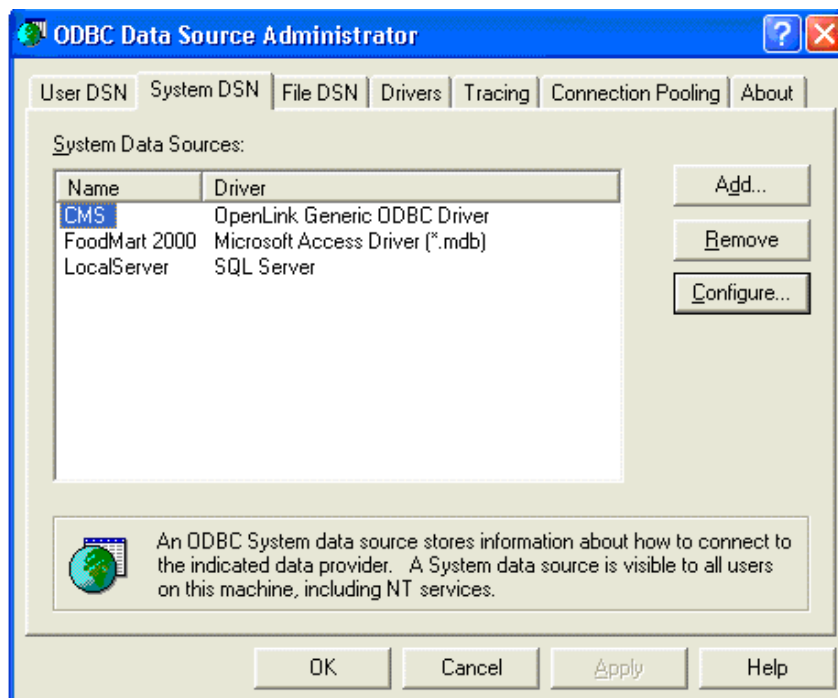
# driverClass
driverClass=sun.jdbc.odbc.JdbcOdbcDriver

# user
user=cms

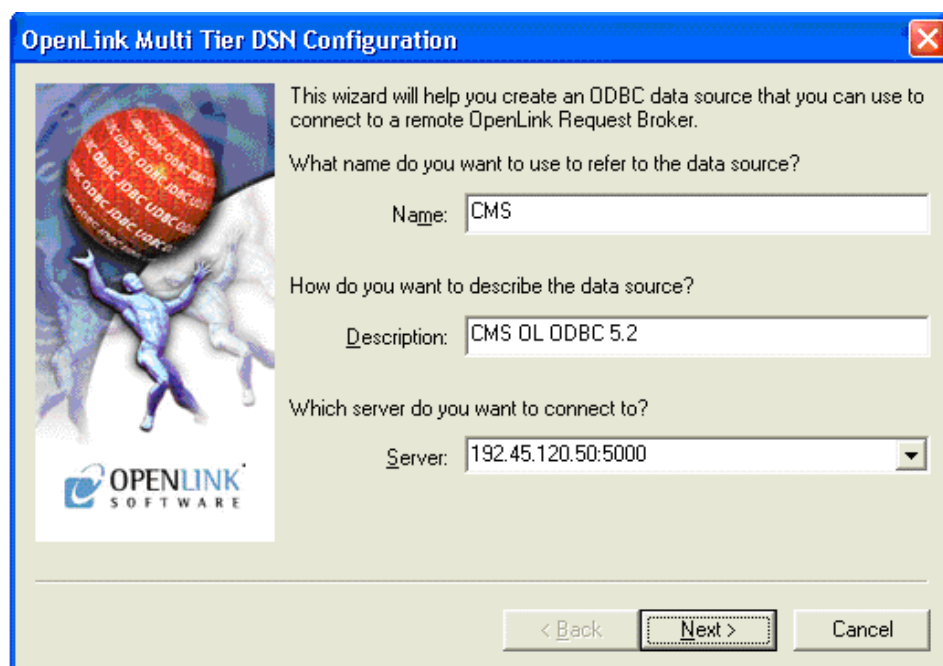
# password
password=*****

# url
url=jdbc:odbc:CMS
```

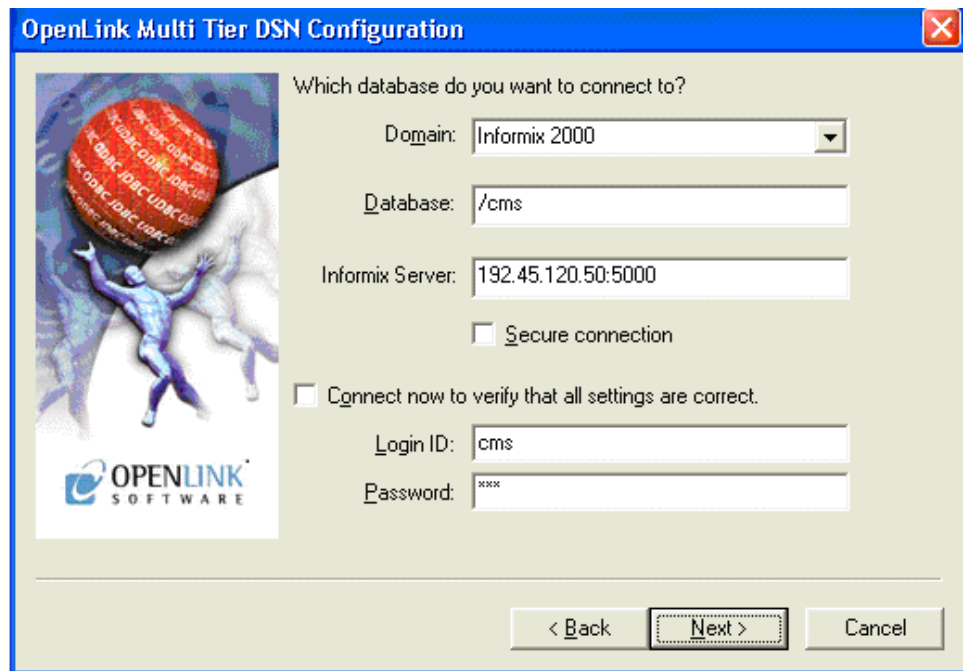
To configure the ODBC interface, navigate to **Administrative Tools→Data Sources (ODBC)** in the Windows control panel of the MPS server. The **ODBC Data Source Administrator** screen is displayed. Note that the following screen lists the ODBC data source for Avaya CMS, which is already configured.



The ODBC data source configuration is shown in the subsequent figures. In the following window, specify a descriptive name for the data source, the CMS IP address, and the port.



In the next window, set the **Domain** field to “Informix 2000”, the **Database** field to “/cms”, and the IP address of the **Informix Server**, which is the same as the Avaya CMS server. In addition, provide the login credentials.

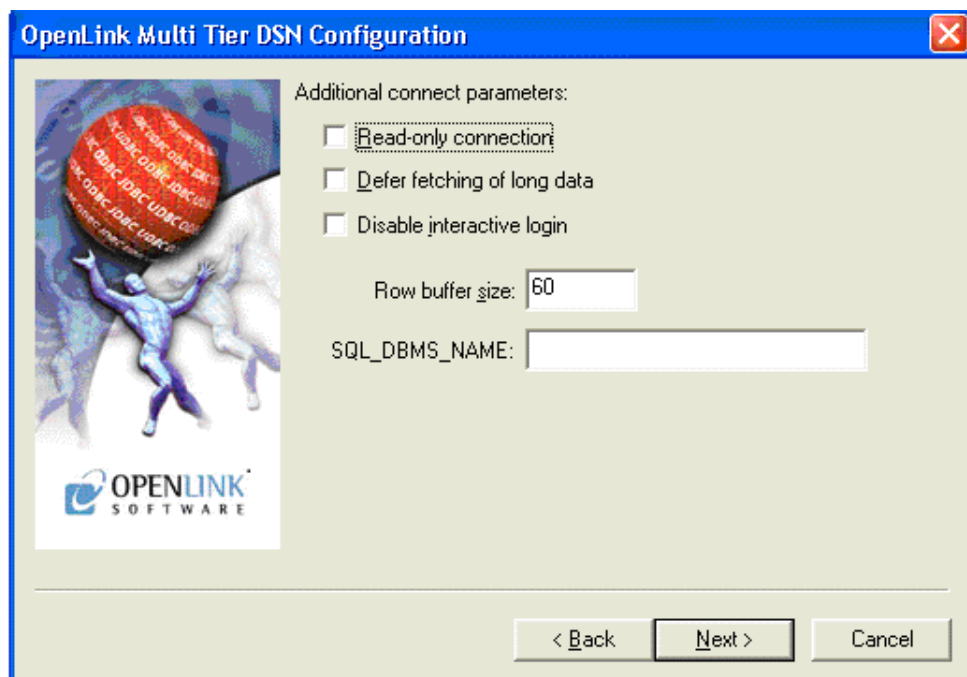


The dialog box is titled "OpenLink Multi Tier DSN Configuration". It features a logo on the left showing a blue figure holding a red sphere with database-related text. The main area contains the following fields and options:

- Question: "Which database do you want to connect to?"
- Domain: Informix 2000 (dropdown menu)
- Database: /cms (text field)
- Informix Server: 192.45.120.50:5000 (text field)
- ☐ Secure connection
- ☐ Connect now to verify that all settings are correct.
- Login ID: cms (text field)
- Password: xxx (text field)

At the bottom are three buttons: "< Back", "Next >", and "Cancel".

Lastly, set the **Row buffer size** field to “60”.

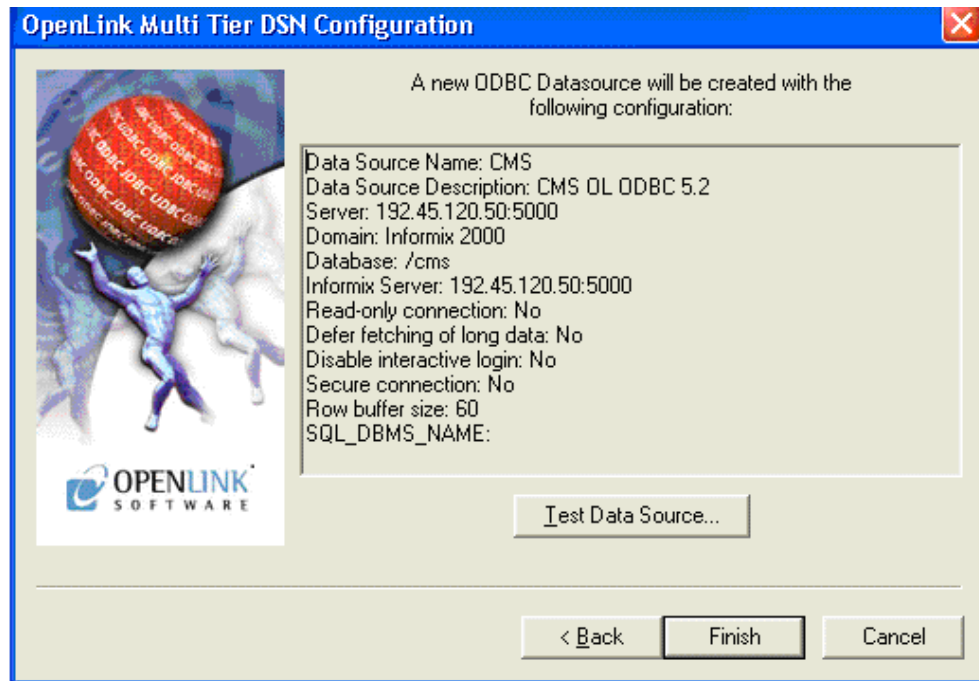


This dialog box is also titled "OpenLink Multi Tier DSN Configuration" and contains the following fields and options:

- Section: "Additional connect parameters:"
- ☐ Read-only connection
- ☐ Defer fetching of long data
- ☐ Disable interactive login
- Row buffer size: 60 (text field)
- SQL_DBMS_NAME: (text field)

At the bottom are three buttons: "< Back", "Next >", and "Cancel".

In the last window, review the configuration information. To test the data source, click on the **Test Data Source** button and then click **Finish**.



6.2. Configure Hierarchy

The MPS configuration described in this section is performed through the MPS application. To launch the application, enter the MPS hostname or IP address and port 4470 in the URL field of a web browser. Log in with the appropriate credentials. The following webpage is displayed. In this example, a sales demo webpage is displayed with the branding of a fictional company, Globe Telecom. The sub-sections proceed with the configuration of the organization, split, and agent hierarchies.

Merced Systems: Home - Windows Internet Explorer

http://localhost:4470/merced/content/home

Welcome **Merced Administrator** [Assume Identity](#) [Logout](#) [Help](#) [Change password](#)

GLOBE TELECOM

Home | Inbox | Incentives | C+ Preview | Admin | Advanced Admin Tools

Powered by

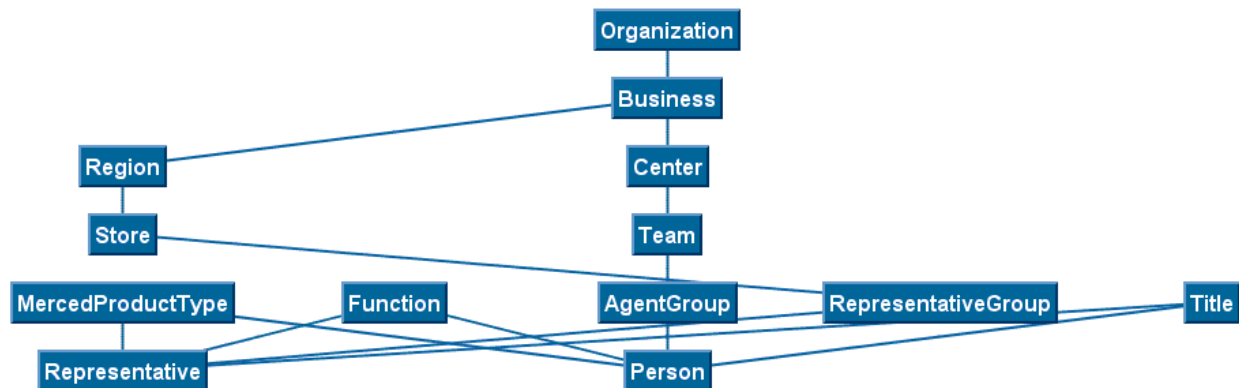
Print view | Create PDF... | Export to Excel

Click on the name below to assume the identity of each demo user, click product name for script

Product	Role	Username	Password	Comment
MPS (Contact Center)	Executive			Sees data across multiple lines business + MI storyline
	Site Director			Call Center Management Reports
	Supervisor (sales)			Sales storyline intraday report
	Supervisor (service)			FCR Storyline Service/Efficiency focus
	Agent (sales)			Sales focus + intraday sales reporting
	Agent (service)			Service storyline FCR Storyline
	Compensation Analyst			Sees compensation reports + MIM Integration
	Sales VP			Retail Sales

6.2.1. Create Organization's Hierarchy

These Application Notes assume that the hierarchy of a company's organization has already been configured. The hierarchy describes the leveled relationships between entity types as those entities are structured in the MPS database. The following figure provides an illustration of a sample hierarchy. Refer to [7] for information on configuring the hierarchy.



6.2.2. Create Split Hierarchy

Merced Client Services will build a model of the split hierarchy in the database and provide the customer with a template in a spreadsheet format. The customer will then fill out the template, including the split groups and split numbers. This spreadsheet is known as the “split seed hierarchy”.

Exporting the organizational data of the split hierarchy is done from the MPS application. Select the **Admin** tab and then navigate to **Data→Hierarchy→Export Hierarchy Data** as shown below. It is assumed that the organizational data already exists in the database; otherwise, if this is the initial setup (i.e., the organizational data needs to be imported), a template is exported and filled out with the split data, as described above.

The screenshot shows the GLOBE TELECOM Admin interface. The top navigation bar includes 'Home', 'Inbox', 'Incentives', 'C+ Preview', 'Admin', and 'Advanced Admin Tools'. The 'Admin' tab is selected. On the left, a sidebar menu shows 'Configurations', 'Portal', 'Roster', and 'Data'. The 'Data' menu is expanded, and the 'Hierarchy' option is highlighted. A context menu is open over 'Hierarchy', showing options: 'Export Hierarchy Data', 'Export Hierarchy Template', 'Import Hierarchy Data', 'New Excel Hierarchy Conversion', and 'New Hierarchy Conversion'. The main content area displays a search bar and a table of search results. The table has columns: 'Actions', 'Name', 'Display Name', 'Module', and 'Type'. The search results show 1280 total results. The table lists various administrative items like 'Administrators', 'AdminLanding', 'AdminLoginLegend', 'adoption', 'AdoptionSummary', 'Agent AllProducts Link', 'Agent CSAT', 'Agent MyIntradaySales', 'Agent MyIntradaySalesByProduct', and 'MySalesBundles'. At the bottom, there is a pagination bar showing 'Page 1 of 128' and a 'Go to Page' field.

Actions	Name	Display Name	Module	Type
	Administrators	Merced Administrators and Administrators	Platform	Policy Profile
	AdminLanding	Admin Home	SD:Walker	Dashboard
	AdminLoginLegend	Demo Login Legend	SD:Walker	Free-Form Text
	adoption	Adoption	Adoption	Module
	AdoptionSummary	Adoption Summary	Adoption	Dashboard
	Agent AllProducts Link	Agent Diagnostic Links - Call	CC Express	Free-Form Text
	Agent CSAT	Customer Experience	SD:Eisler	Dashboard
	Agent MyIntradaySales	My Sales	SD:Eisler	Report
	Agent MyIntradaySalesByProduct	Product Mix	SD:Eisler	Report
	MySalesBundles	Bundles	SD:Leccese	Report

The **Export Hierarchy Data** webpage is displayed. Set the **Export** field to “Entity Data”. To export a template, set the **Export** field to “Template”. Next, set the **Hierarchy** field to “Split”, and highlight “Split Group” and “Split” below the **Hierarchy** field. Configure the remaining fields as shown below. Click the **Export** button at the bottom.

Welcome **Merced Administrator** [Assume Identity](#) [Logout](#) [Help](#) [Change password](#)

[Home](#) [Inbox](#) [Incentives](#) [C+ Preview](#) **Admin** [Advanced Admin Tools](#)

» Admin » Data » Export Hierarchy Data Powered by

Export Hierarchy Data [Return to Search](#)

Export: ☒ Entity Data ☐ Template

Hierarchy: Split

SplitGroup
Split

SplitGroup:

☒ All Properties ☐ All Namespaces

☒ name
☒ splitgroupGUID

Identify SplitGroup Using: splitgroupGUID

Split:

☒ All Properties ☒ All Namespaces

☒ name
☒ splitBaseGoal
☒ splitGroup
☒ splitGUID

☒ Avaya_Split_ID

Identify Split Using: splitGUID

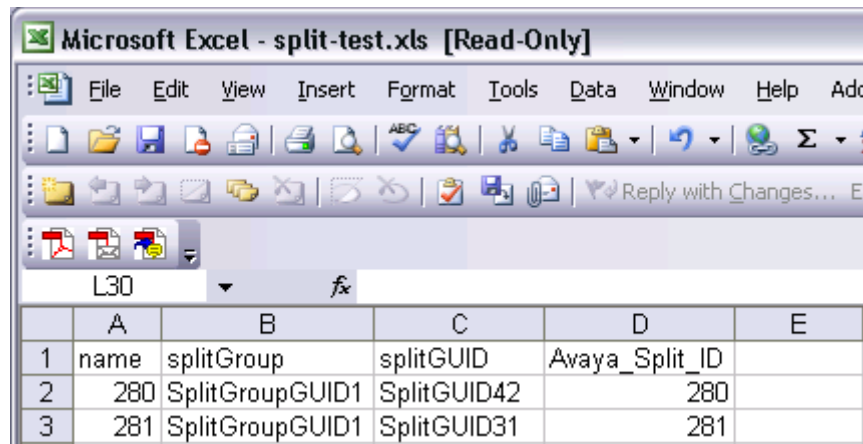
Filters:

Attribute	Relational Operator	Value

[Delete Selected Filters](#)
[Add Filter](#)

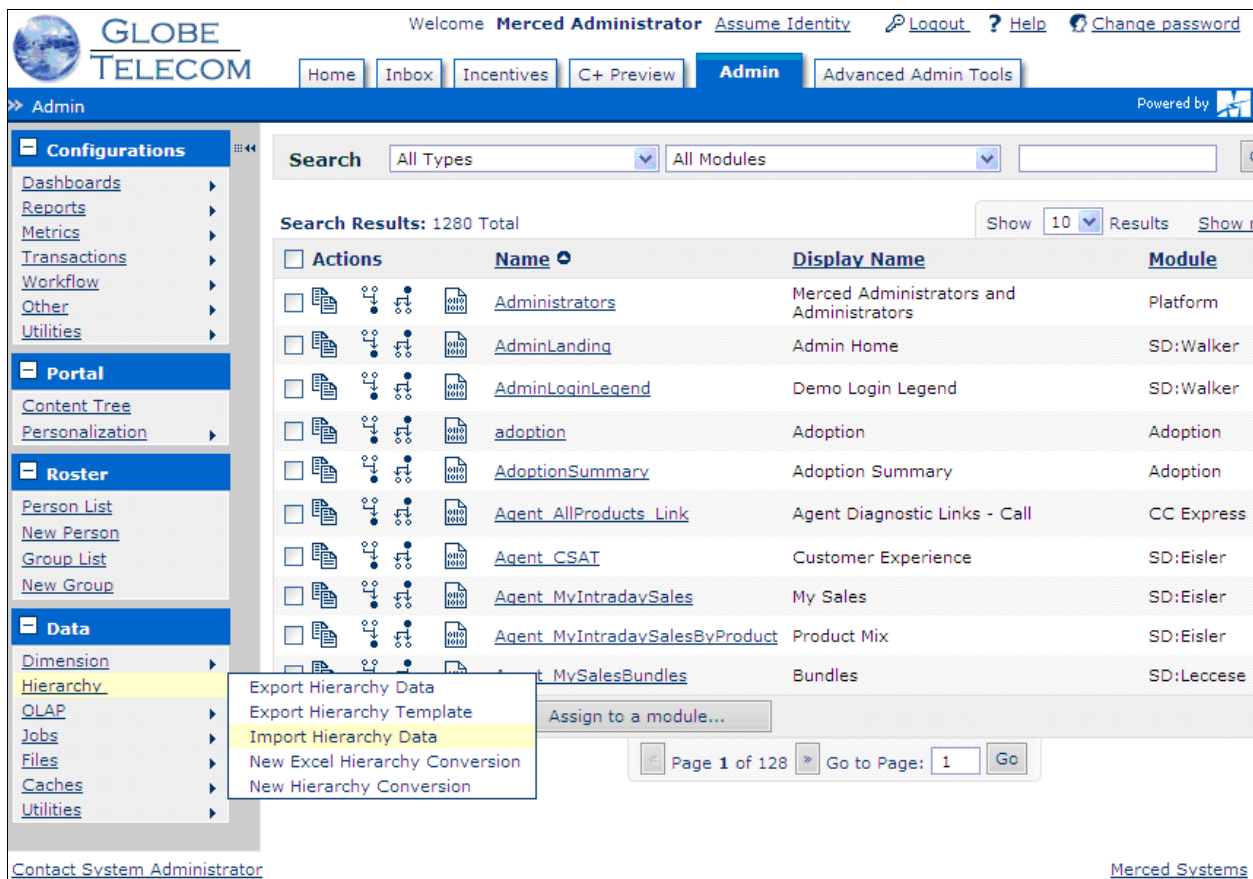
☐ Lock All Identifiers
 ☐ Include Temporal History
 [Export](#)

Once the “split seed hierarchy” with organizational data or template has been exported, it can be changed to include the split numbers used by the organization. The “split seed hierarchy” is a spreadsheet and a sample is displayed below containing the splits used for the compliance testing. In this example, splits 280 and 281 were used. The spreadsheet is called “split-test.xls”. Afterwards, the data can be imported to MPS.



	A	B	C	D	E
1	name	splitGroup	splitGUID	Avaya_Split_ID	
2	280	SplitGroupGUID1	SplitGUID42	280	
3	281	SplitGroupGUID1	SplitGUID31	281	

From the MPS application, navigate to **Data→Hierarchy→Import Hierarchy Data** in the **Admin** tab as shown below.



Search Results: 1280 Total

Actions	Name	Display Name	Module
	Administrators	Merced Administrators and Administrators	Platform
	AdminLanding	Admin Home	SD:Walker
	AdminLoginLegend	Demo Login Legend	SD:Walker
	adoption	Adoption	Adoption
	AdoptionSummary	Adoption Summary	Adoption
	Agent_AllProducts_Link	Agent Diagnostic Links - Call	CC Express
	Agent_CSAT	Customer Experience	SD:Eisler
	Agent_MvIntradaySales	My Sales	SD:Eisler
	Agent_MvIntradaySalesByProduct	Product Mix	SD:Eisler
	MySalesBundles	Bundles	SD:Leccese

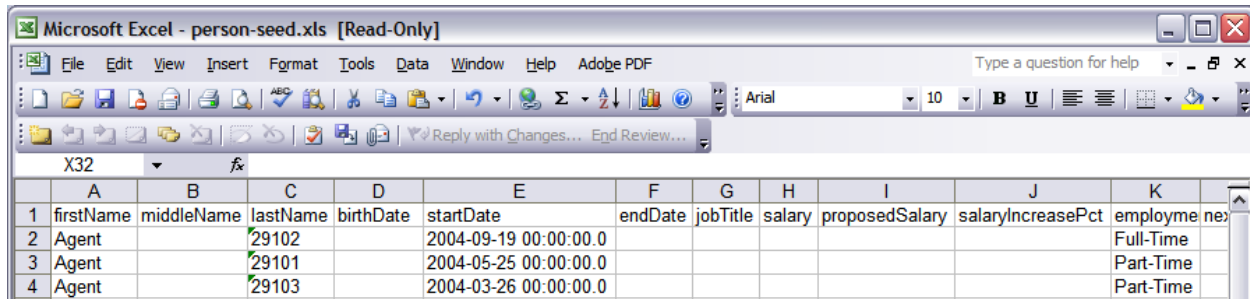
Page 1 of 128 Go to Page: 1 Go

In the **Import Hierarchy Data** window, set the **File** field to the location of the “split-test.xls” file. In the example, the file was stored in C:\Documents and Settings\My Documents\Avaya\split-test.xls, but the directory path may vary.

6.2.3. Create Agent Hierarchy

The procedure for creating the agent hierarchy is similar to creating the split hierarchy described in Section 6.2.2. In the MPS application, navigate to **Data→Hierarchy→Export Hierarchy Template** in the **Admin** tab. The following window is displayed. Click **Export** to generate the template when done.

After completing the “person seed hierarchy” spreadsheet shown below, the file can be imported to MPS by navigating to **Data→Hierarchy→Import Hierarchy Data** in the **Admin** tab.



The screenshot shows a Microsoft Excel window titled "Microsoft Excel - person-seed.xls [Read-Only]". The spreadsheet contains the following data:

	A	B	C	D	E	F	G	H	I	J	K	
	firstName	middleName	lastName	birthDate	startDate	endDate	jobTitle	salary	proposedSalary	salaryIncreasePct	employmentType	
2	Agent		29102		2004-09-19 00:00:00.0						Full-Time	
3	Agent		29101		2004-05-25 00:00:00.0						Part-Time	
4	Agent		29103		2004-03-26 00:00:00.0						Part-Time	

In the **Import Hierarchy Data** window (not shown), specify the “person seed hierarchy” file to import and click the **Import** button.

6.3. Configure Data Conversion

This section describes the procedure for MPS to extract data from Avaya CMS using the ODBC interface and integrate it into the MPS database. This process requires the following steps:

- **Define the source from which data is extracted.**
This is known as the **ExtractionSource** component and is defined by a properties file that specifies the ODBC as the extraction source and the SQL query to pull data from the **dsplit** and **dagent** database tables on Avaya CMS. The data items are listed in the Appendix.
- **Specify the data target.**
This part of the configuration specifies where the extracted data goes – the target. This requires creating two properties files (also called chunk tables or metabeans) for the split and agent reports, which specifies the data items to be extracted from Avaya CMS and each field's data type.
- **Map the extracted data to the target table.**
This is known as the **ExtractMapping** component which maps the data items in the split and agent reports specified in the **ExtractionSource** component to the columns in the corresponding MPS database tables.

The creation of the properties files mentioned above is outside the scope of these Application Notes. The specific filename are not specified since they will vary for each customer. Note that there were two sets of properties files for the split and agent reports. These procedures are described in detail in [7].

6.4. Run Conversion

The conversion is performed from a command prompt window on the MPS server. The command specifies the properties file that specifies the **ExtractionSource** and **ExtractionMapping** properties file to use for the data conversion.

The following command should be run to capture the agent data from Avaya CMS over the ODBC interface. This command captures agent data starting from 3/31/2009.

```
call %MERCED_HOME%\bin\m dice  
" (creator:/com/merced/apps/dagent/dice/AvayaCMS1DagentDBConversion) " -  
-time-range 3/31/2009 eot
```

The following command should be run to capture the split data from Avaya CMS over the ODBC interface. This command captures split data starting from 3/31/2009.

```
call %MERCED_HOME%\bin\m dice  
" (creator:/com/merced/apps/dsplit/dice/AvayaCMS1DsplitDBConversion) " -  
-time-range 3/31/2009 eot
```

6.5. Create Reports

During the compliance testing, two reports were created in MPS, one for the split report and another one for the agent report. These reports were named **Avaya DSplit Report** and **Avaya DAgent Report**. Creating reports are described in [7].

Prior to running the reports, run **CubePop** described in [7] to populate the reports with fresh data.

6.6. Run Reports

Examples of the split and agent reports in MPS are displayed in **Section 8.3.2**.

7. General Test Approach and Test Results

The interoperability compliance test focused on verifying the ability of Merced Performance Suite to import ACD call center data from Avaya CMS using the ODBC interface and displaying split/skill and agent data in MPS reports.

The feature test cases were performed manually. ACD calls were made to the measured skills and routed to agents to generate call center statistics for MPS. The accuracy and proper display of the data were verified.

All test cases were executed and passed.

8. Verification Steps

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

8.1. Verify Avaya 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 4.6**. 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: 2
Link Type: ethernet
Message Buffer Number: 0

Last Failure: None
At: 03/25/09 16:39
```

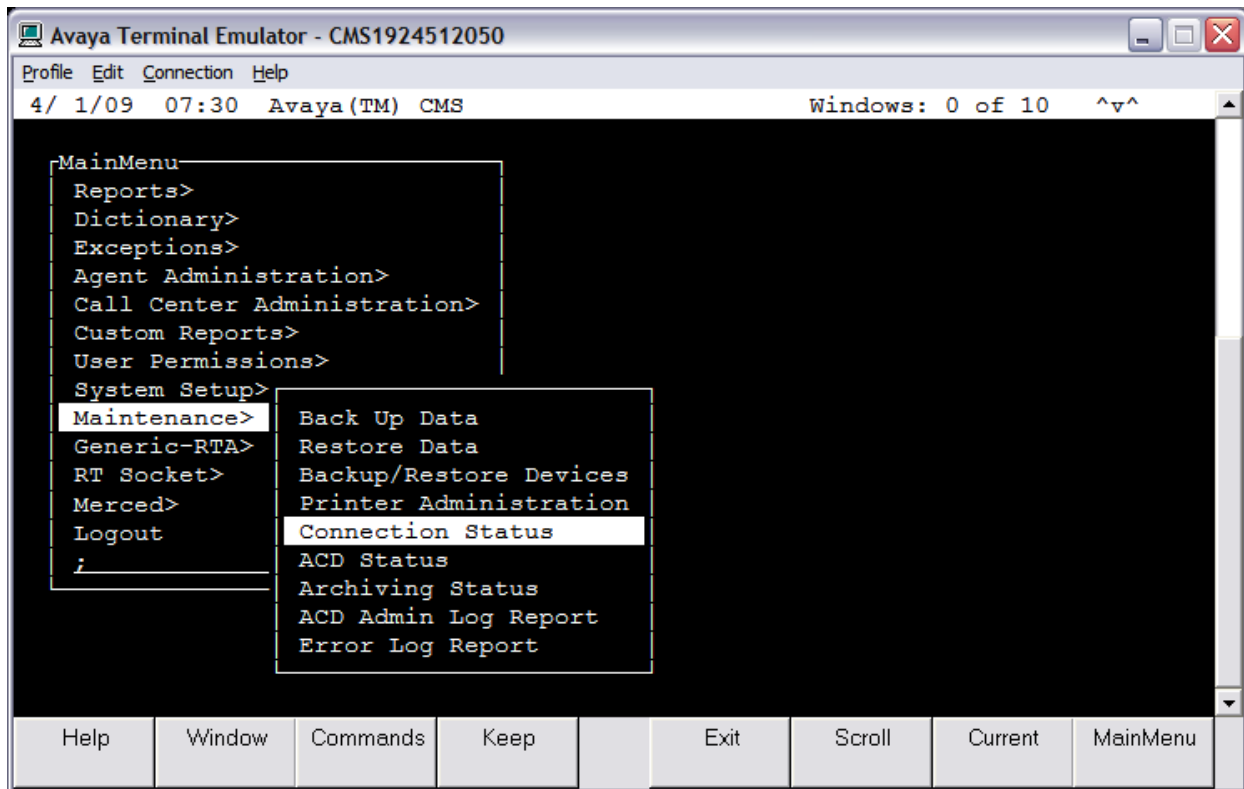
Verify the status of the TCP/IP link number by using the “status link n” command, where “n” is the TCP/IP link number assigned to the C-LAN used to connect to the Avaya CMS server from **Section 4.5**. Verify that the **Link Status** is “connected”, and that the **Service State** is “in-service/active”, as shown below.

```
status link 2
                        LINK/PORT STATUS
Page 1 of 5

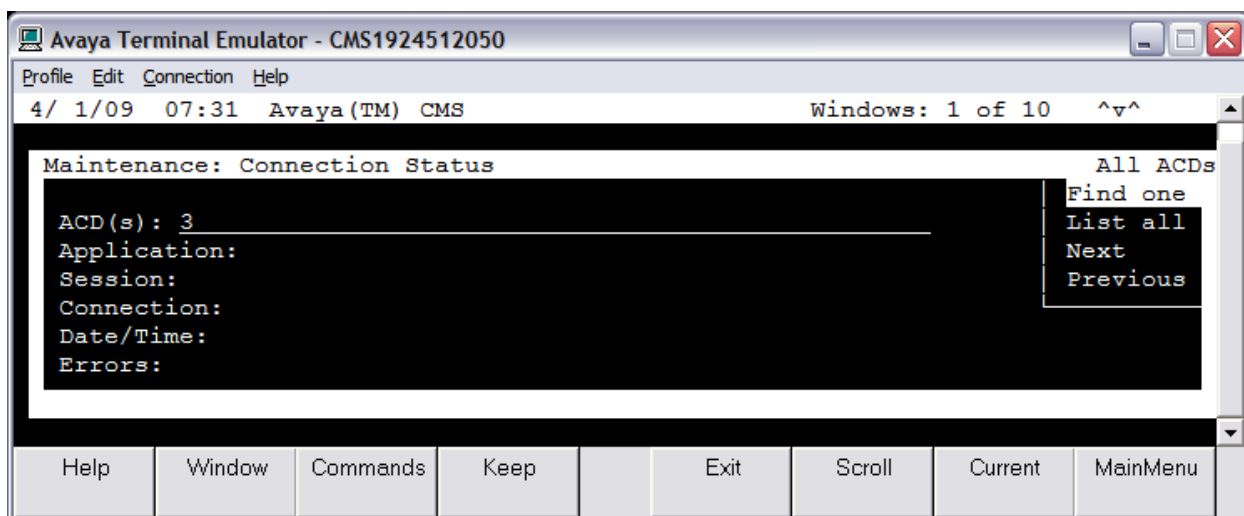
Link Number: 2
Link Status: connected
Link Type: ethernet
Link Name: Clan2
Service Port Location: 02A0217
Service Port Data Extension: 24981
Service State: in-service/active
Node Name: clan2
Source IP Address: 192.45.100.70
Subnet Mask: 255.255.255.0
Broadcast Address: 192.45.100.255
Physical Address: 00:04:0d:4b:28:08
Enabled? yes
Maintenance Busy? no
Active Channels: 2
```

8.2. Verify Avaya Call Management System

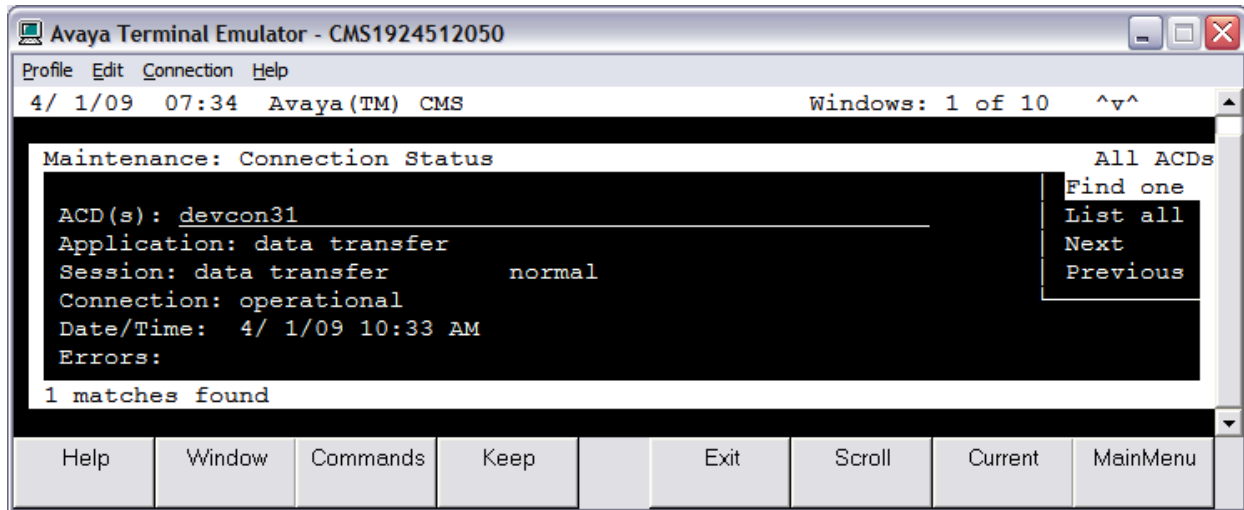
From the **MainMenu**, verify the status of the connection to Avaya Communication Manager by selecting **Maintenance** → **Connection Status**, as shown below.



Enter the corresponding **ACD(s)** number. For the compliance testing, the corresponding switch connection is ACD system "3". 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.

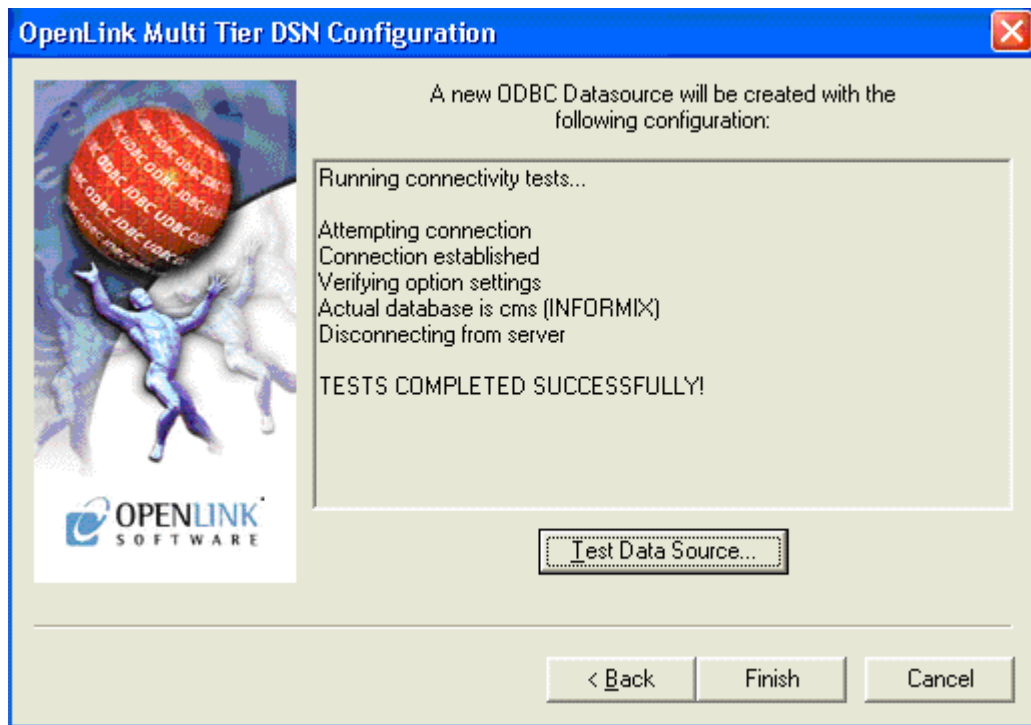


8.3. Verify Merced Performance Suite

This section verifies the ODBC configuration on MPS and that call center data can be captured on displayed in MPS reports.

8.3.1. Verify ODBC Connection

To test the ODBC connection, navigate to **Administrative Tools→Data Sources (ODBC)** in the Windows control panel of the MPS server and step through each window until the following window is displayed. Click on the **Test Data Source** button and verify that the test was successful as shown below.



8.3.2. Run Reports

From the MPS application, run the agent and split reports using the links under **AvayaTestReports** in the left pane. It is assumed that call center activity had occurred and data is available in Avaya CMS. The procedures described in **Section 6.3** are required before reports can be run.

The screenshot displays the GLOBE TELECOM MPS application interface. The top navigation bar includes links for Home, Inbox, Incentives, C+ Preview, Admin, and Advanced Admin Tools. The left sidebar contains several menu items: Coaching Goals Setup, Universal Goals Setup, User Tools, System Feedback, Avaya Call Goals Setup, and AvayaTestReports. The AvayaTestReports section is expanded, showing links for Avaya DAgent Report and Avaya DSplit Report. The main content area features a table with columns for Product, Role, Username, Password, and Comment. The table lists various roles associated with the MPS (Contact Center) product, including Executive, Site Director, Supervisor (sales), Supervisor (service), Agent (sales), Agent (service), Compensation Analyst, and Retail Sales. Each role has a corresponding Username and Password field, and a Comment describing the role's access or function.

Product	Role	Username	Password	Comment
MPS (Contact Center)	Executive			Sees data across multiple lines business + MI storyline
	Site Director			Call Center Management Reports
	Supervisor (sales)			Sales storyline intraday report
	Supervisor (service)			FCR Storyline Service/Efficiency focus
	Agent (sales)			Sales focus + intraday sales reporting
	Agent (service)			Service storyline FCR Storyline
	Compensation Analyst			Sees compensation reports + MIM Integration
	Retail Sales			

Under **AvayaTestReports**, click on **Avaya DAgent Report** to run and display the agent reports shown below.

GLOBE TELECOM Welcome **Merced Administrator** [Assume Identity](#) [Logout](#) [Help](#) [Change password](#)

Home | [Inbox](#) | [Incentives](#) | [C+ Preview](#) | [Admin](#) | [Advanced Admin Tools](#)

» Home » AvayaTestReports » Avaya DSplit Report

Avaya DSplit Report [View](#) [Send As](#) [Export To](#) [Star](#) [Refresh](#)

Time Range: Month (When) - March 2009 to March 2009 [Change...](#)

Available Filters: ☒ Split Filter

Month: **Mar-2009** [Calendar](#) [List](#)

[Metrics](#)

	Staff Time (int)	Available Time (int)	ACD Time (int)	ACW Time (int)	Interval ACW Out Time	Interval ACW In Time	Interval AUX Time	Interval AUX Out Time	Interval AUX In Time
All Splits									
280 t	146:46:20	146:25:07	00:03:18	00:04:41	00:00:59	00:00:29	00:08:28	00:01:01	00:00:41
281 t	05:36:45	05:33:16	00:00:27	00:00:52	00:00:09	00:00:14	00:00:57	00:00:12	00:00:11

X = Data Restricted ? = Calculation Error - = No Data Available

System Feedback [Send Us Your Thoughts](#)

Avaya Call Goals Setup
[Enter Default Goal For Splits](#)
[Override Goals in Split Level](#)
[Avaya Default Goal Management](#)
[Avaya Goal Override Management For Split](#)

AvayaTestReports
[Avaya DAgent Report](#)
[Avaya DSplit Report](#)

Under **AvayaTestReports**, click on **Avaya DSplit Report** to run and display the agent reports shown below. In this example, agent 29103 was not logged into split 280 during the data collection interval.

The screenshot displays the Avaya DAgent Report interface. The left sidebar contains navigation links for Coaching Goals Setup, Universal Goals Setup, User Tools, System Feedback, Avaya Call Goals Setup, and AvayaTestReports. The main content area shows the report title 'Avaya DAgent Report' with options to View, Send As, and Export To. The Time Range is set to March 2009, and the Available Filters include Split Filter. The report shows data for March 2009, with All Splits set to 280. A table of metrics is displayed for three agents: Agent 29101, Agent 29102, and Agent 29103. The table includes columns for ACD Calls, Interval ACW Time, Interval ACW Out Time, ACD Time, Interval ACW Time, Interval ACD Time, Abandoned Calls, and Abandoned Time. Agent 29101 has 12 ACD calls and 2 abandoned calls. Agent 29102 has 11 ACD calls and 1 abandoned call. Agent 29103 has no data available for this split.

Avaya Agents	ACD Calls	Interval ACW Time	Interval ACW Out Time	ACD Time	Interval ACW Time	Interval ACD Time	Abandoned Calls	Abandoned Time
Agent 29101	12	00:00:00	00:00:00	00:01:55	00:00:00	00:01:55	2	00:00:21
Agent 29102	11	00:04:41	00:00:59	00:01:23	00:04:41	00:01:23	1	00:00:09
Agent 29103	-	-	-	-	-	-	-	-

X = Data Restricted ? = Calculation Error - = No Data Available

9. Conclusion

These Application Notes describe the configuration steps required for Merced Performance Suite to successfully interoperate with Avaya Communication Manager using the ODBC interface of Avaya Call Management System. All feature test cases were completed successfully.

10. References

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

- [1] *Administrator Guide for Avaya Communication Manager*, Document 03-300509, Issue 4, January 2008, available at <http://support.avaya.com>.
- [2] *Avaya Call Management System Switch Connections, Administration, and Troubleshooting*, Document ID 07-601582, February 2006, available at <http://support.avaya.com>.
- [3] *Avaya Call Management System Open Database Connectivity Version 5.2*, Document ID 07-601580, December 2007, available at <http://support.avaya.com>.
- [4] *Avaya Call Management System Release 14 Database Items and Calculations*, Document ID 07-601591, February 2007, available at <http://support.avaya.com>.
- [5] *Merced Performance Suite Introduction to Merced Performance Suite*, Software Version 3.5.
- [6] *Merced Performance Suite Setup and Administration Guide*, Software Version 3.5.
- [7] *Merced Performance Suite Data Management Guide*, Software Version 3.5.
- [8] *Merced Performance Suite Application Configuration Guide*, Software Version 3.5.

11. APPENDIX: Data Items in Split and Agent Reports

The following table lists the data items in the **dagent** and **dsplit** extracted by MPS from Avaya CMS using the ODBC interface. These data items are defined in [4].

Data Items in “dagent” Table				
row_date	da_acdtime	acwintime	event8	ringtime
acd	da_acwtime	auxincalls	event9	ansringtime
logid	ti_availtime	auxintime	assists	ti_othertime
loc_id	holdcalls	acwoutcalls	o_acdcalls	da_acwincalls
extension	ti_auxtime	acwouttime	o_acdtime	da_acwintime
split	ti_auxtime0	acwoutoffcalls	o_acwtime	da_acwocalls
acdcalls	ti_auxtime1	acwoutofftime	da_anstime	da_acwotime
da_acdcalls	ti_auxtime2	acwoutadjcalls	da_abncalls	da_acwoadjcalls
holdtime	ti_auxtime3	auxoutcalls	da_abntime	da_acwooffcalls
i_acwtime	ti_auxtime4	auxouttime	holdabncalls	da_acwoofftime
i_acwouttime	ti_auxtime5	auxoutoffcalls	transferred	noansredir
i_da_acwtime	ti_auxtime6	auxoutofftime	conference	acdauxoutcalls
acwtime	ti_auxtime7	auxoutadjcalls	abncalls	phantomabns
acdtime	ti_auxtime8	event1	abntime	i_auxtime
i_acdtime	ti_auxtime9	event2	i_ringtime	holdacdtime
i_acdothertime	incomplete	event3	da_acdtime	da_release
i_acdaux_outtime	i_auxouttime	event4	da_acwtime	acd_release
i_acdauxintime	i_auxintime	event5	da_othercalls	i_stafftime
i_da_acdtime	i_othertime	event6	da_othertime	i_availtime
ti_stafftime	acwincalls	event7	ringcalls	i_acwintime
Data Items in “dsplit” Table				
row_date	event2	holdtime	acceptable	i_acdaux_outtime
acd	event3	holdabncalls	servicelevel	i_acdauxintime
split	event4	transferred	period1	i_acdothertime
i_stafftime	event5	conference	period2	phantomabns
i_availtime	event6	abncalls	period3	othercalls
i_acdtime	event7	abntime	period4	othertime
i_acwtime	event8	abncalls1	period5	slvlabns
i_acwouttime	event9	abncalls2	period6	slvloutflows
i_acwintime	assists	abncalls3	period7	i_arrived
i_auxtime	inflowcalls	abncalls4	period8	i_auxtime0
i_auxouttime	acdcalls	abncalls5	period9	i_auxtime1
i_auxintime	anstime	abncalls6	maxinqueue	i_auxtime2
i_othertime	acdtime	abncalls7	maxocwtime	i_auxtime3
maxstaffed	acwtime	abncalls8	callsoffered	i_auxtime4
acwincalls	o_acdcalls	abncalls9	periodchg	i_auxtime5
acwintime	o_acdtime	abncalls10	svclevelchg	i_auxtime6
auxincalls	o_acwtime	dequercalls	i_ringtime	i_auxtime7
auxintime	acdcalls1	dequetime	ringtime	i_auxtime8
acwoutcalls	acdcalls2	busycalls	ringcalls	i_auxtime9
acwouttime	acdcalls3	busytime	abnringcalls	i_da_acdtime
acwoutoffcalls	acdcalls4	disccalls	o_abncalls	i_da_acwtime
acwoutadjcalls	acdcalls5	disctime	o_othercalls	i_tavailtime
auxoutcalls	acdcalls6	outflowcalls	da_acwincalls	i_tauxtime
auxouttime	acdcalls7	outflowtime	da_acwintime	maxtop
auxoutoffcalls	acdcalls8	interflowcalls	da_acwocalls	
auxoutofftime	acdcalls9	lowcalls	da_acwotime	
auxoutadjcalls	acdcalls10	medcalls	noansredir	
event1	backupcalls	highcalls	incomplete	
	holdcalls	topcalls	acdauxoutcalls	

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