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Avaya Solution & Interoperability Test Lab

Application Notes for Merced Performance Suite with Avaya Call Management System using Historical 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) using the Historical interface. MPS is a web-based application that parses flat files with 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 Avaya CMS historical interface is provided by Avaya Professional Services.

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) using the Historical interface. MPS is a web-based application that parses flat files with 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 Avaya CMS historical interface is provided by Avaya Professional Services.

Avaya CMS generates two flat files consisting of historical split/skill and agent data on a daily basis and stores it in a specified directory. The flat files are then transferred manually to the MPS server, where the flat files are parsed and the data is loaded into the MPS database. MPS can then display the data in reports configured by the user. Sample flat files are displayed 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 parse flat files with historical ACD call center data from Avaya CMS and display the split/skill and agent data in MPS reports.
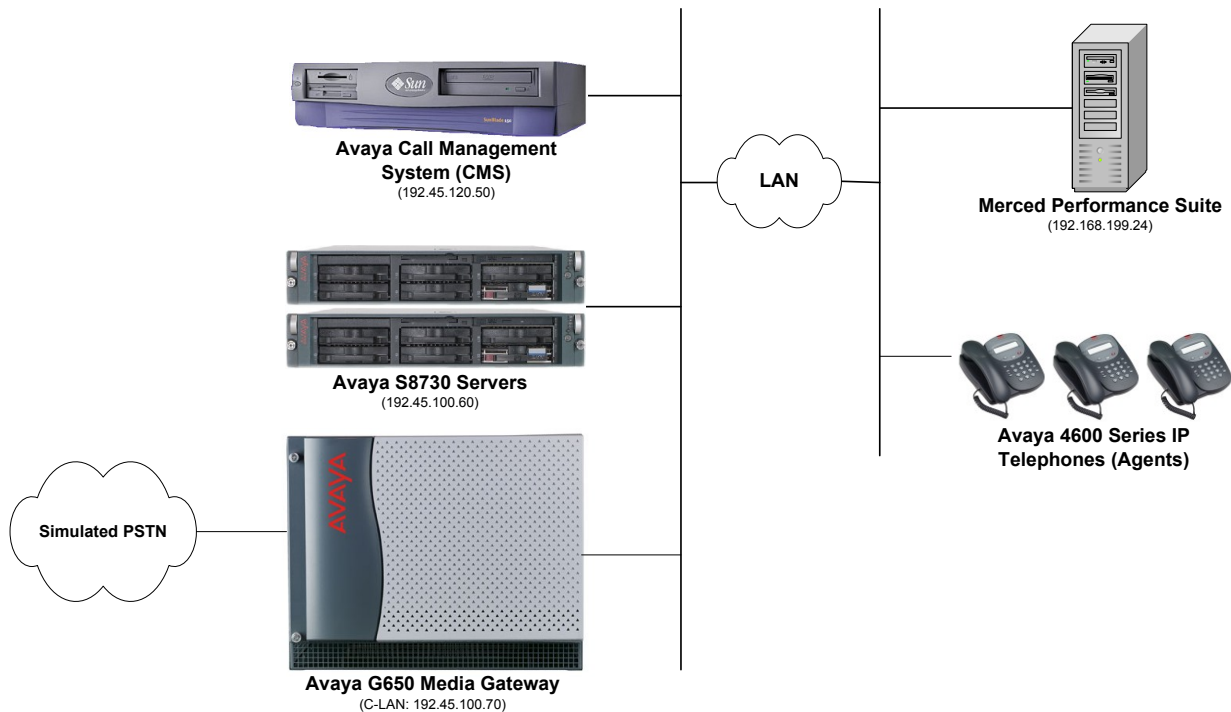
1.2. Support

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. Avaya CMS used the historical interface to generate flat files with agent and split/skill data which was parsed by MPS to display the data in reports.

Avaya Call Management System (CMS)
(192.45.120.50)

LAN

Merced Performance Suite
(192.168.199.24)

Avaya S8730 Servers
(192.45.100.60)

Avaya 4600 Series IP Telephones (Agents)

Simulated PSTN

Avaya G650 Media Gateway
(C-LAN: 192.45.100.70)

Merced Performance Suite with Avaya Call Management System

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SPOC 5/19/2009
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3 of 32
Merced-Hist

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 **Adjunct CMS Release** field to the software release of the Avaya CMS. In this case, "R14" is used to correspond to Avaya CMS software 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          Page   1 of  24
                      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                                           Page   1 of   2
                        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
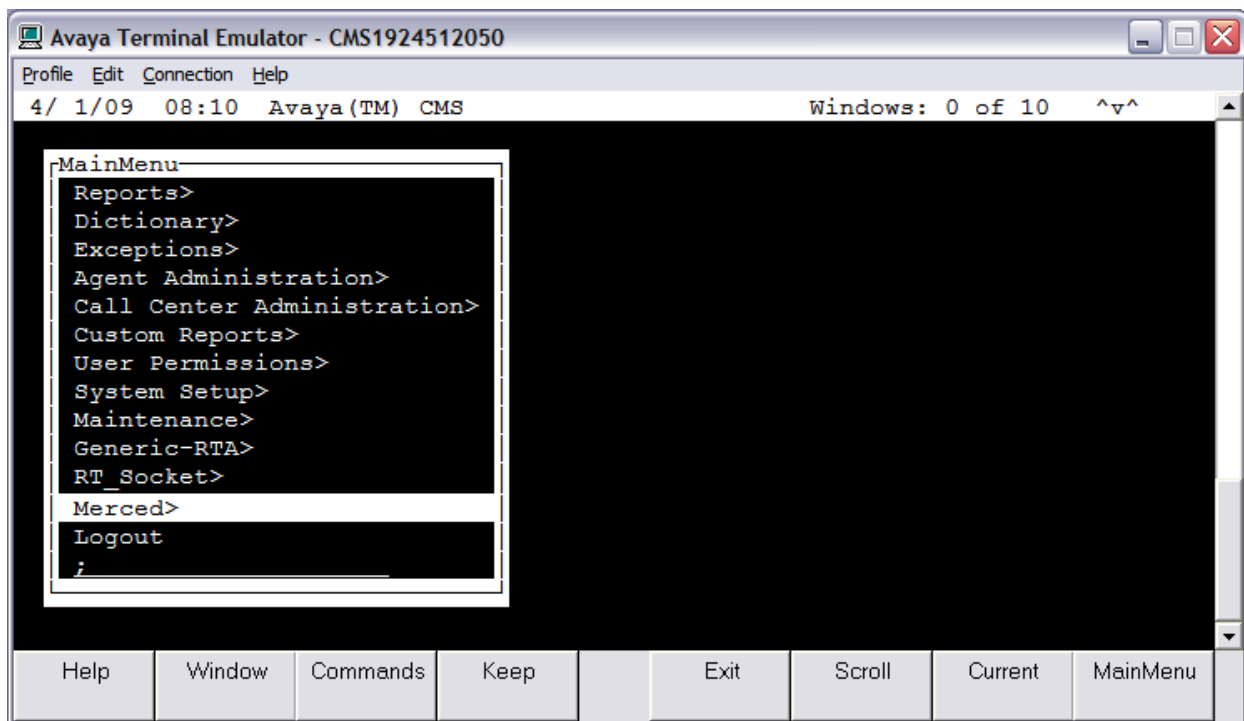
Use the "change hunt-group n" command, where "n" is the extension of the ACD/Skill group number to be measured by Avaya CMS. Set the **Measured** field to "external" or "both" to enable real-time measurement data on the ACD/Skill group and the associated agents to be sent to Avaya CMS. Repeat this step 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

The Merced historical interface is configured by Avaya Professional Services. There is no additional configuration required. The historical interface is always running through the configuration of a cron job that runs once per day. On a daily basis, two flat files containing split and agent data are created and stored in the /export/home/pserv/merced/data directory. These flat files can then be transferred manually to the MPS server, where they are parsed and loaded into the MPS database. This section will describe how to generate the historical flat files on an on-demand basis through the Avaya CMS menu interface.

Use a terminal emulator to connect to the Avaya CMS server, and log in with the appropriate credentials. Enter "cms" at the command prompt to display the **Main Menu** screen shown below. Navigate to the **Merced** option in the **Main Menu** and press the **Enter** key.
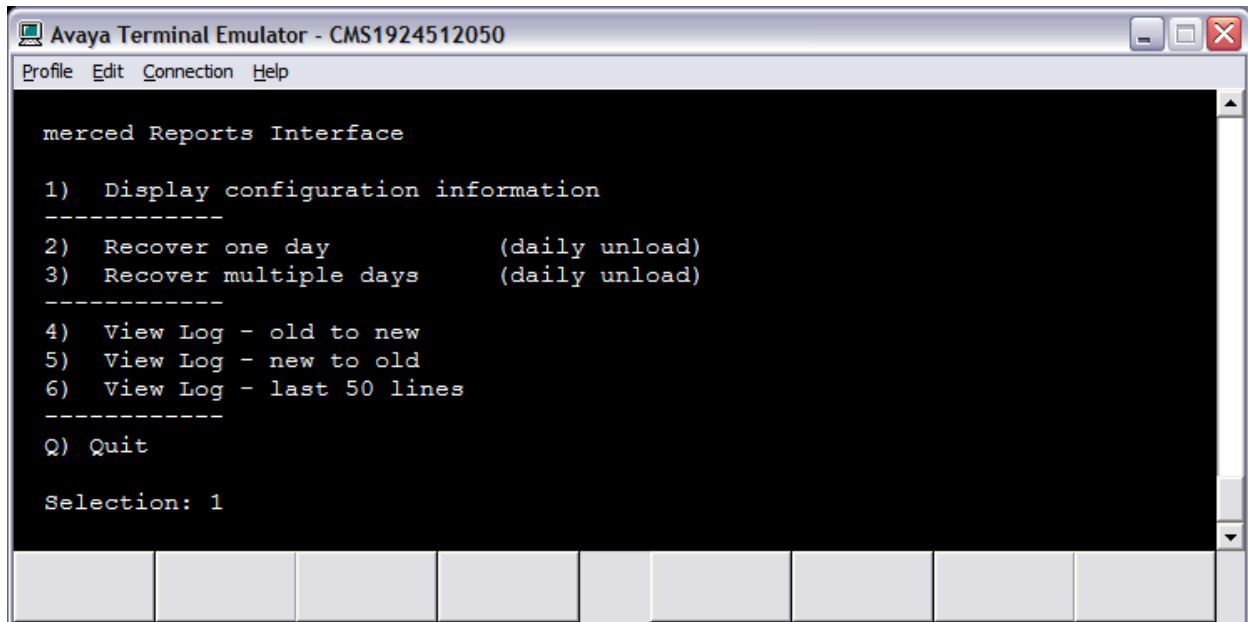
```
Avaya Terminal Emulator - CMS1924512050
Profile  Edit  Connection  Help
 4/ 1/09  08:10  Avaya(TM) CMS                  Windows: 0 of 10   ^v^

  MainMenu
   Reports>
   Dictionary>
   Exceptions>
   Agent Administration>
   Call Center Administration>
   Custom Reports>
   User Permissions>
   System Setup>
   Maintenance>
   Generic-RTA>
   RT_Socket>
   Merced>
   Logout
   ¿



  Help    Window   Commands   Keep        Exit     Scroll    Current   MainMenu
```

From the **Merced Reports Interface** menu, select '1' to view the configuration information.

```
Avaya Terminal Emulator - CMS1924512050                          _ □ X
Profile  Edit  Connection  Help

  merced Reports Interface

  1)  Display configuration information
  ------------
  2)  Recover one day          (daily unload)
  3)  Recover multiple days     (daily unload)
  ------------
  4)  View Log - old to new
  5)  View Log - new to old
  6)  View Log - last 50 lines
  ------------
  Q) Quit

  Selection: 1
```
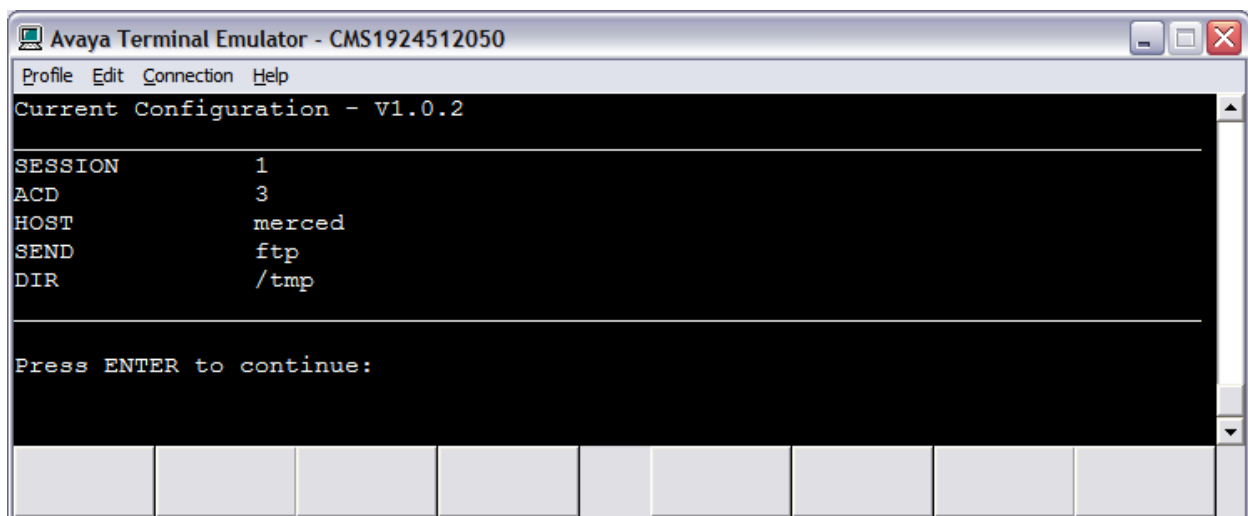
The current configuration is displayed with the **Session** and **ACD** numbers. These steps are described simply to illustrate how to view configuration information for the historical interface. Next, the historical reports will be generated on-demand.

```
Avaya Terminal Emulator - CMS1924512050                          _ □ X
Profile  Edit  Connection  Help
Current Configuration - V1.0.2

SESSION         1
ACD             3
HOST            merced
SEND            ftp
DIR             /tmp


Press ENTER to continue:
```
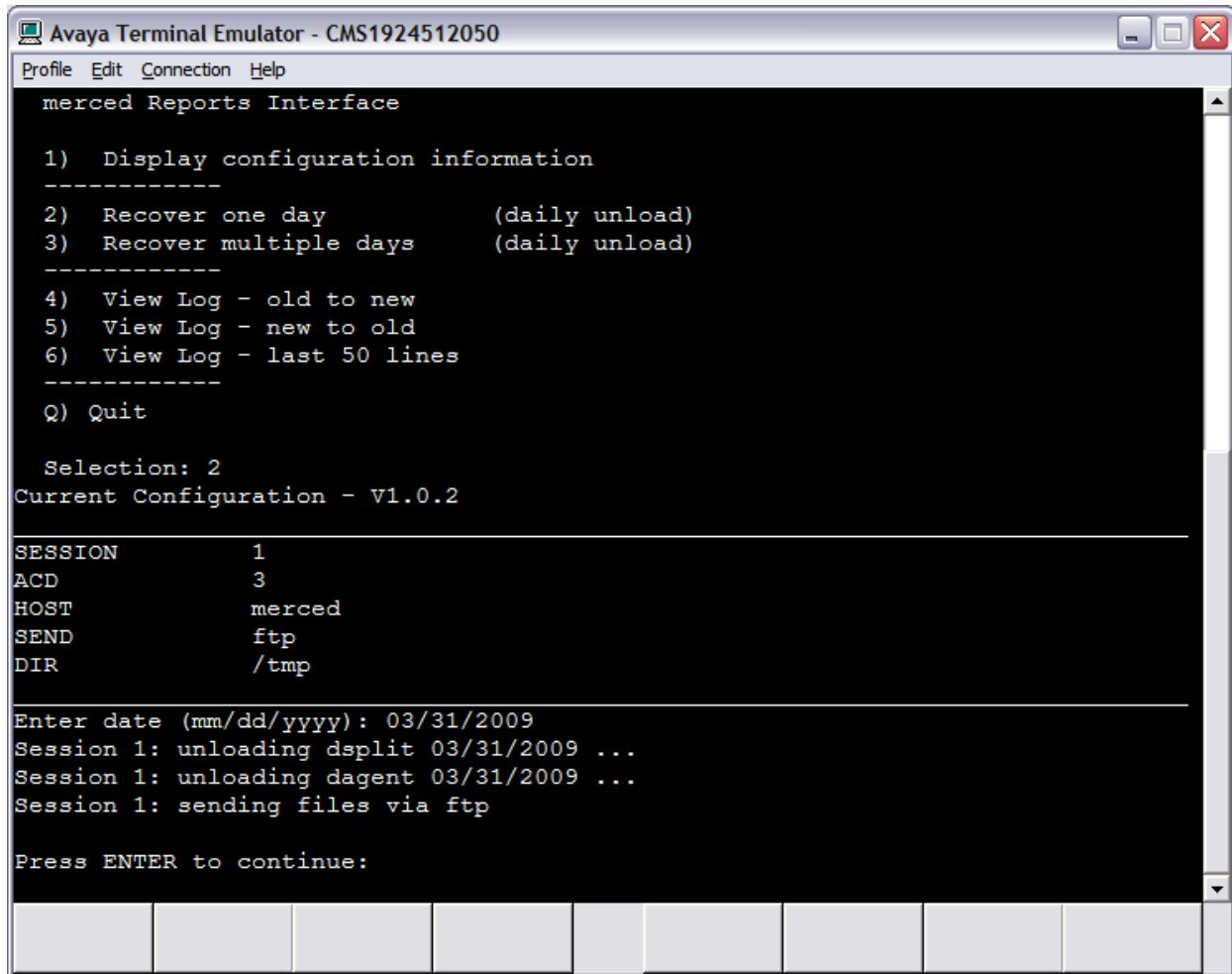
The historical reports are generated automatically once a day. However, the reports can be recovered through the Avaya CMS menu by following these steps. From the **Merced Reports Interface**, select '2' to recover data for a specific date.

```
Avaya Terminal Emulator - CMS1924512050
Profile  Edit  Connection  Help

merced Reports Interface

1)  Display configuration information
------------
2)  Recover one day          (daily unload)
3)  Recover multiple days     (daily unload)
------------
4)  View Log - old to new
5)  View Log - new to old
6)  View Log - last 50 lines
------------
Q) Quit

Selection: 2
```
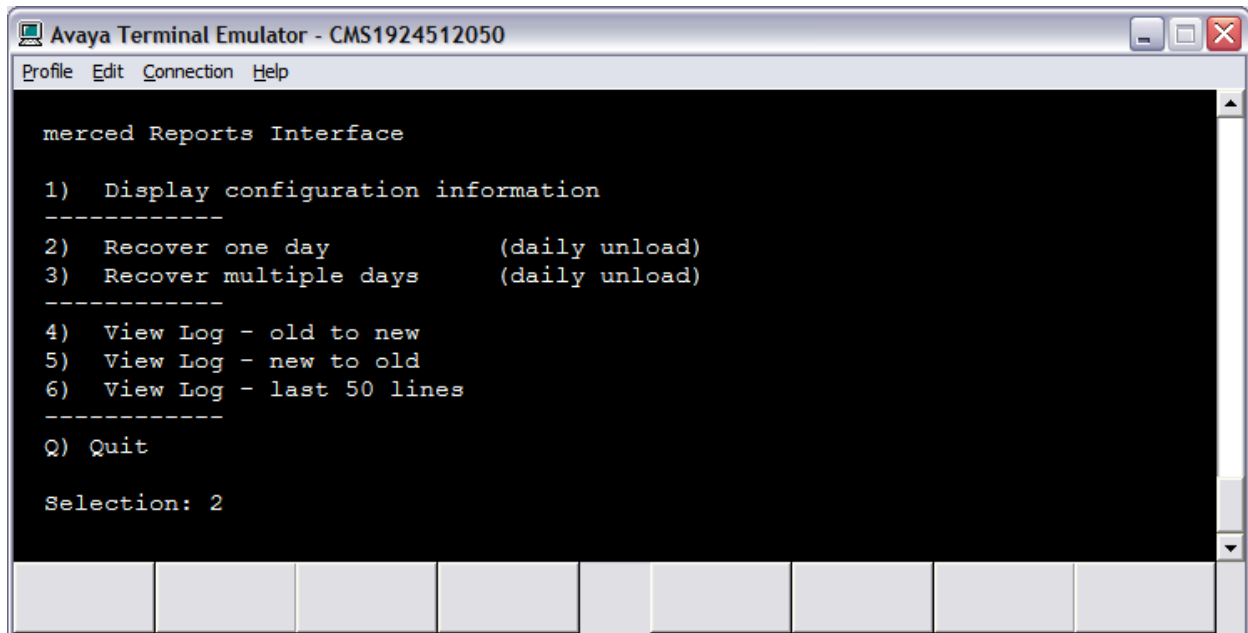
In the following screen, specify the date of the reports to recover. In this example, the reports for 3/31/2009 are recovered. The flat files are stored in the /export/home/pserv/merced/data directory. Note that this directory may vary depending on customer configuration. The flat files can then be transferred manually to the MPS server.

```
Avaya Terminal Emulator - CMS1924512050

Profile  Edit  Connection  Help

   merced Reports Interface

   1)  Display configuration information
   -----------
   2)  Recover one day          (daily unload)
   3)  Recover multiple days     (daily unload)
   -----------
   4)  View Log - old to new
   5)  View Log - new to old
   6)  View Log - last 50 lines
   -----------
   Q) Quit

   Selection: 2
Current Configuration - V1.0.2

SESSION          1
ACD              3
HOST             merced
SEND             ftp
DIR              /tmp

Enter date (mm/dd/yyyy): 03/31/2009
Session 1: unloading dsplit 03/31/2009 ...
Session 1: unloading dagent 03/31/2009 ...
Session 1: sending files via ftp

Press ENTER to continue:
```

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:

- Manually transfer the flat files with split/skill and agent data to MPS
- 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. Transfer the Flat Files to MPS

On a daily basis, the flat files in Avaya CMS can be manually transferred to the MPS server into a directory specified in the **ExtractionSource** properties file discussed in Section 6.3. MPS was configured to access the call center data from this directory.

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.

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.

JAO; Reviewed:
SPOC 5/19/2009
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16 of 32
Merced-Hist
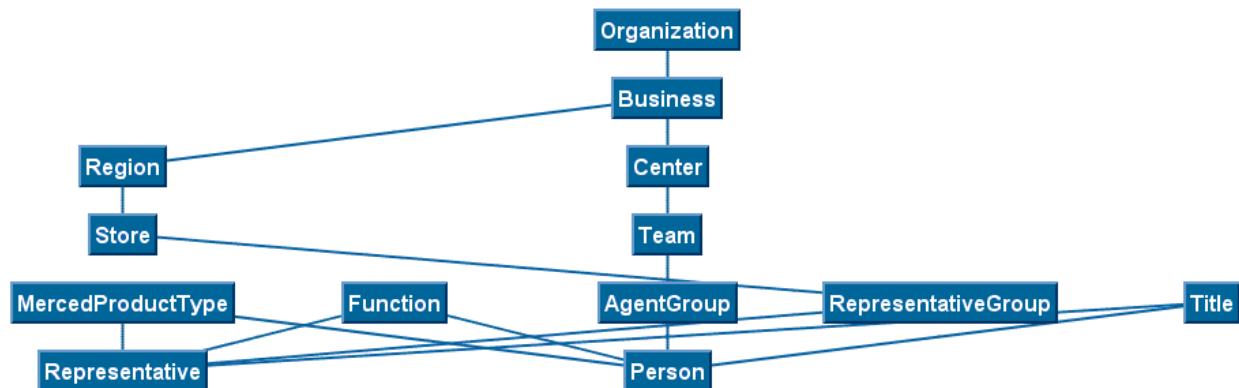
6.2.2. Create Split Hierarchy

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.

JAO; Reviewed:
SPOC 5/19/2009

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17 of 32
Merced-Hist

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.

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.

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

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\aAvaya\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.

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 from flat files 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 flat files as the extraction source and the data items from the flat files to read. Sample flat files are contained 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 parse the flat file with agent data generated by Avaya CMS and load the data in the MPS database. This command captures agent data starting from 3/31/2009.

```
call %MERCED_HOME%\bin\m dice
"(creator:/com/merced/apps/dagent/dice/AvayaCMS1DagentFileConversion)"
--time-range 3/31/2009 eot
```

The following command should be run to parse the flat file with split/skill data generated by Avaya CMS and load the data in the MPS database. This command captures agent data starting from 3/31/2009.

```
call %MERCED_HOME%\bin\m dice
"(creator:/com/merced/apps/dsplit/dice/AvayaCMS1DsplitFileConversion)"
--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.

7. General Test Approach and Test Results

The interoperability compliance test focused on verifying the ability of Merced Performance Suite to parse flat files with historical ACD call center data from Avaya CMS and display the 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                                              Page   1 of   5
                        LINK/PORT STATUS

               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
```
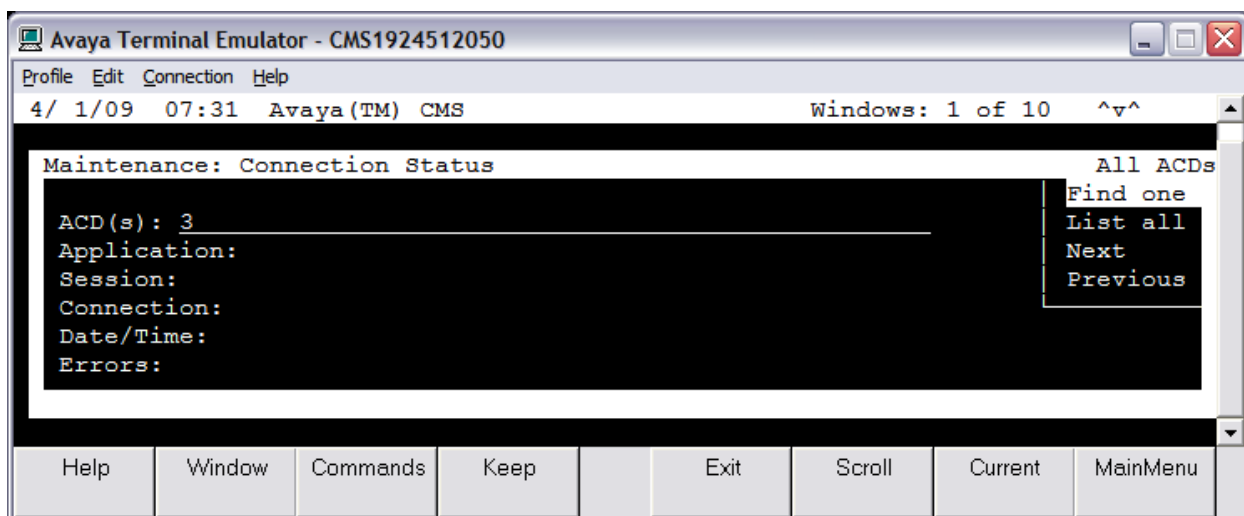
8.2. Verify Avaya Call Management System

From the **MainMenu**, verify the status of the connection to Avaya Communication Manager by selecting **Maintenance** → **Connection Status**, as shown below.
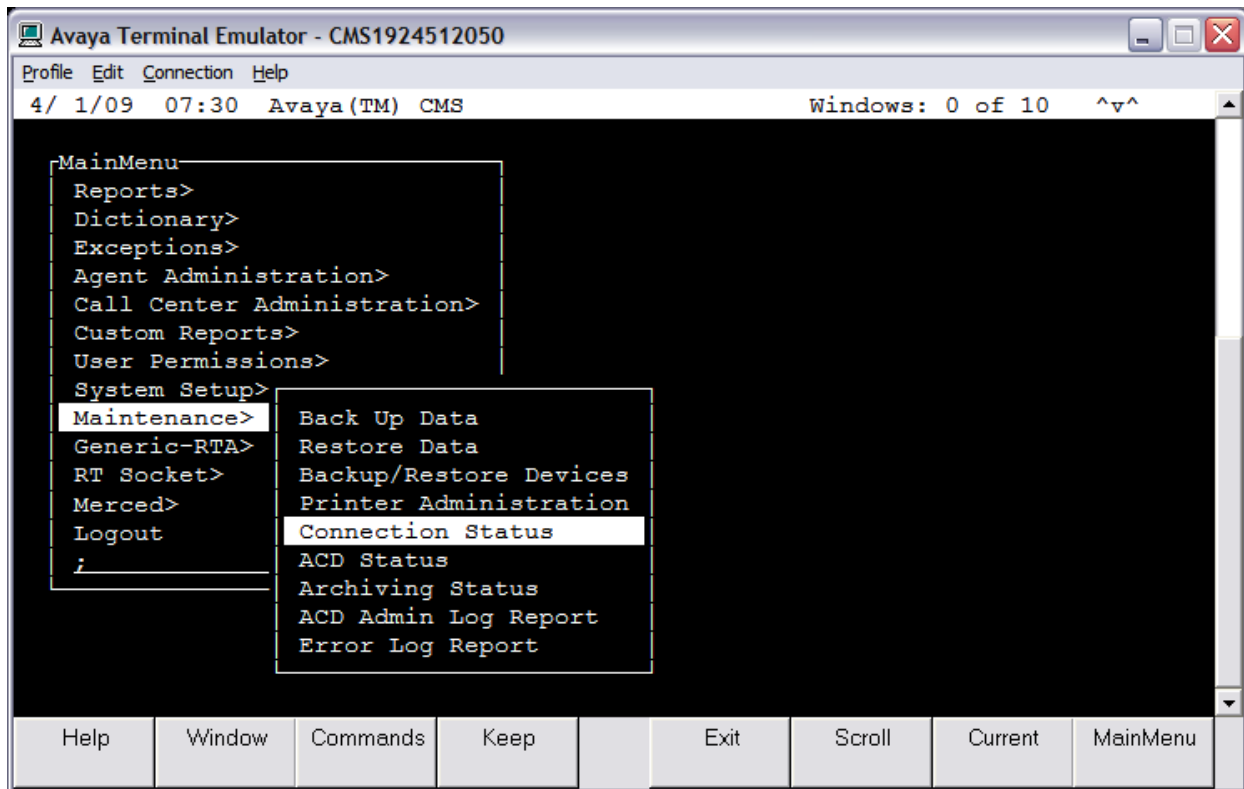
Enter the corresponding **ACD(s)** number. For the compliance testing, the corresponding switch connection is ACD system "3". Tab over to **Find one** and press **Enter**.

JAO; Reviewed:
SPOC 5/19/2009
Solution & Interoperability Test Lab Application Notes
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25 of 32
Merced-Hist

The switch connection status is displayed. Check the status in the **Session** and **Connection** fields, as shown below.
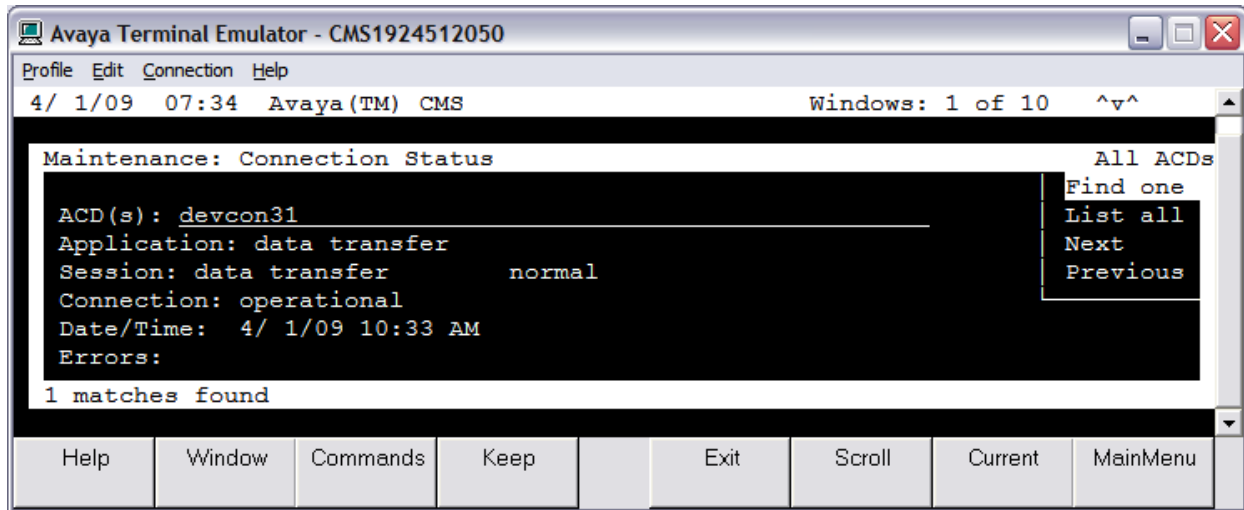
8.3. Verify Merced Performance Suite

This section verifies that MPS can parse flat files with call center data from Avaya CMS and display the data in MPS 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. Note that not all of the data fields are shown in the reports.

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

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

9. Conclusion

These Application Notes describe the configuration steps required for Merced Performance Suite to successfully interoperate with Avaya Communication Manager using the Historical interface of Avaya Call Management System. Flat files containing call center data were parsed successfully by MPS. All 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: Sample Flat Files from Avaya CMS

This Appendix provides sample flat files for the split and agent historical reports. The data items are defined in [4].

The following is a sample flat file containing split data.

```
row_date,acd,split,i_stafftime,i_availtime,i_acdtime,i_acwtime,i_acwouttime,i
_acwintime,i_auxtime,i_auxouttime,i_auxintime,i_othertime,maxstaffed,acwincal
ls,acwintime,auxincalls,auxintime,acwoutcalls,acwouttime,acwoutoffcalls,acwou
tofftime,acwoutadjcalls,auxoutcalls,auxouttime,auxoutoffcalls,auxoutofftime,a
uxoutadjcalls,event1,event2,event3,event4,event5,event6,event7,event8,event9,
assists,inflowcalls,acdcalls,anstime,acdtime,acwtime,o_acdcalls,o_acdtime,o_a
cwtime,acdcalls1,acdcalls2,acdcalls3,acdcalls4,acdcalls5,acdcalls6,acdcalls7,
acdcalls8,acdcalls9,acdcalls10,backupcalls,holdcalls,holdtime,holdabncalls,tr
ansferred,conference,abncalls,abntime,abncalls1,abncalls2,abncalls3,abncalls4
,abncalls5,abncalls6,abncalls7,abncalls8,abncalls9,abncalls10,dequecalls,dequ
etime,busycalls,busytime,disccalls,disctime,outflowcalls,outflowtime,interflo
wcalls,lowcalls,medcalls,highcalls,topcalls,acceptable,servicelevel,period1,p
eriod2,period3,period4,period5,period6,period7,period8,period9,maxinqueue,max
ocwtime,callsoffered,periodchg,svclevelchg,i_ringtime,ringtime,ringcalls,abnr
ingcalls,o_abncalls,o_othercalls,da_acwincalls,da_acwintime,da_acwocalls,da_a
cwotime,noansredir,incomplete,acdauxoutcalls,i_acdaux_outtime,i_acdauxintime,
i_acdothertime,phantomabns,othercalls,othertime,slvlabns,slvloutflows,i_arriv
ed,i_auxtime0,i_auxtime1,i_auxtime2,i_auxtime3,i_auxtime4,i_auxtime5,i_auxtim
e6,i_auxtime7,i_auxtime8,i_auxtime9,i_da_acdtime,i_da_acwtime,i_tavailtime,i_
tauxtime,maxtop
03/31/2009,3,280,67848,66707,192,281,59,29,448,61,43,142,2,2,29,3,43,2,59,0,0
,0,10,61,0,0,0,0,0,0,0,0,0,0,0,0,0,21,41,192,281,0,0,0,21,0,0,0,0,0,0,0,0,0
,0,2,86,1,0,0,4,66,2,1,0,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,9,4,8,0,21,20,10,20,
30,40,50,60,70,80,90,1,36,25,0,0,78,71,24,3,0,0,0,0,0,0,0,0,0,0,0,0,100,0,0,3
,0,25,24,322,102,0,0,0,0,0,0,0,36,0,66707,448,2,
03/31/2009,3,281,20205,19996,27,52,9,14,57,12,15,53,1,1,14,1,15,1,9,0,0,0,1,1
2,0,0,0,0,0,0,0,0,0,0,0,0,0,4,5,27,52,0,0,0,4,0,0,0,0,0,0,0,0,0,0,1,36,0,0,
0,3,14,3,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,4,0,0,0,0,0,0,0,0,0,0,0,0,1,
7,7,0,0,20,19,7,3,0,0,0,0,0,0,0,0,0,0,36,0,0,0,0,0,7,14,0,0,0,0,43,0,0,0,0,
14,0,19996,57,1,
```

The following is a sample flat file containing agent data.

```
row_date,acd,logid,loc_id,extension,split,acdcalls,da_acdcalls,holdtime,i_acw
time,i_acwouttime,i_da_acwtime,acwtime,acdtime,i_acdtime,i_acdothertime,i_acd
aux_outtime,i_acdauxintime,i_da_acdtime,ti_stafftime,da_acdtime,da_acwtime,ti
_availtime,holdcalls,ti_auxtime,ti_auxtime0,ti_auxtime1,ti_auxtime2,ti_auxtim
e3,ti_auxtime4,ti_auxtime5,ti_auxtime6,ti_auxtime7,ti_auxtime8,ti_auxtime9,in
complete,i_auxouttime,i_auxintime,i_othertime,acwincalls,acwintime,auxincalls
,auxintime,acwoutcalls,acwouttime,acwoutoffcalls,acwoutofftime,acwoutadjcalls
,auxoutcalls,auxouttime,auxoutoffcalls,auxoutofftime,auxoutadjcalls,event1,ev
ent2,event3,event4,event5,event6,event7,event8,event9,assists,o_acdcalls,o_ac
dtime,o_acwtime,da_anstime,da_abncalls,da_abntime,holdabncalls,transferred,co
nference,abncalls,abntime,i_ringtime,da_acdtime,da_acwtime,da_othercalls,da_o
thertime,ringcalls,ringtime,ansringtime,ti_othertime,da_acwincalls,da_acwinti
me,da_acwocalls,da_acwotime,da_acwoadjcalls,da_acwooffcalls,da_acwoofftime,no
ansredir,acdauxoutcalls,phantomabns,i_auxtime,holdacdtime,da_release,acd_rele
ase,i_stafftime,i_availtime,i_acwintime
03/31/2009,3,29101,1,24511,280,10,2,62,0,0,0,0,109,109,62,0,0,36,66638,36,0,6
6021,2,357,22,233,102,0,0,0,0,0,0,0,1,41,43,68,0,0,3,43,0,0,0,0,0,3,41,0,0,0,
0,0,0,0,0,0,0,0,0,0,0,0,0,7,2,15,1,0,0,2,21,47,36,0,0,0,14,47,26,68,0,0,0,0,0
,0,0,0,0,0,357,62,1,9,66638,66021,0,
03/31/2009,3,29102,1,24513,280,11,0,68,281,59,0,281,83,83,38,0,0,0,1210,0,0,6
86,2,91,2,89,0,0,0,0,0,0,0,0,1,20,0,38,2,29,0,0,2,59,0,0,0,7,20,0,0,0,0,0,0,0
,0,0,0,0,0,0,0,0,0,2,15,0,0,0,1,9,31,0,0,0,0,12,31,22,38,0,0,0,0,0,0,0,0,0,0,
0,91,38,0,11,1210,686,29,
03/31/2009,3,29103,1,24513,281,4,1,36,52,9,0,52,27,27,36,0,0,14,20205,14,0,19
996,1,57,14,0,0,0,0,43,0,0,0,0,1,12,15,39,1,14,1,15,1,9,0,0,0,1,12,0,0,0,0,0,
0,0,0,0,0,0,0,0,0,1,1,2,0,0,0,3,14,20,14,0,0,0,8,20,6,39,0,0,0,0,0,0,0,0,
0,0,57,36,1,4,20205,19996,14,
```

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SPOC 5/19/2009
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31 of 32
Merced-Hist

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