



## Avaya Solution & Interoperability Test Lab

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# **Synchronizing Call Center Moves, Adds and Changes between two Avaya Communication Manager ACDs using Consistacom Multi-System Synchronizer - Issue 1.0**

### **Abstract**

These Application Notes describe the configuration steps required for Consistacom Multi-System Synchronizer and Configuration Archive to successfully interoperate with Avaya Communication Manager using Avaya Directory Enabled Management. Successful tests demonstrated that the Multi-System Synchronizer was able to synchronize call center related Moves, Adds, and Changes between the Avaya Communication Manager call center Automatic Call Distribution resources. Configuration Archive was able to archive and retrieve the Moves, Adds, and Changes from Avaya Communication Manager.

# 1. Introduction

These Application Notes describe the configuration steps required for Consistacom Multi-System Synchronizer and Configuration Archive to successfully interoperate with Avaya Communication Manager using Avaya Directory Enabled Management.

The Multi-System Synchronizer automatically provides a copy of all critical Avaya Communication Manager call center resources on one or more fail over Avaya Communication Manager System, by synchronizing the call center management data from one Avaya Communication Manager to all other Avaya Communication Manager Systems. The Multi-System Synchronizer provides a single point of programming for globally defined and utilized resources, such as vectors for call routing and their associated Vector Directory Numbers (VDNs) configured for Avaya Communication Manager. The Configuration Archive captures a complete configuration history of Avaya Communication Manager call center resources, across the entire enterprise of multiple Avaya Communication Manager Systems. Whenever something changes, the new configuration settings are recorded in the archive.

The scope of Avaya Communication Manager call center ACD for Multi-System Synchronizer and Configuration Archive applications is limited to the Expert Agent Selection (EAS) environment; with hunt groups enabled as Skills.

The Multi-System Synchronizer and Configuration Archive communicate with Avaya Directory Enabled Management/Lightweight Directory Access Protocol (LDAP) data store to retrieve call center ACD information and provide synchronization and archiving of the call center ACD Moves, Adds, and Changes (MACs) within the Avaya Communication Manager.

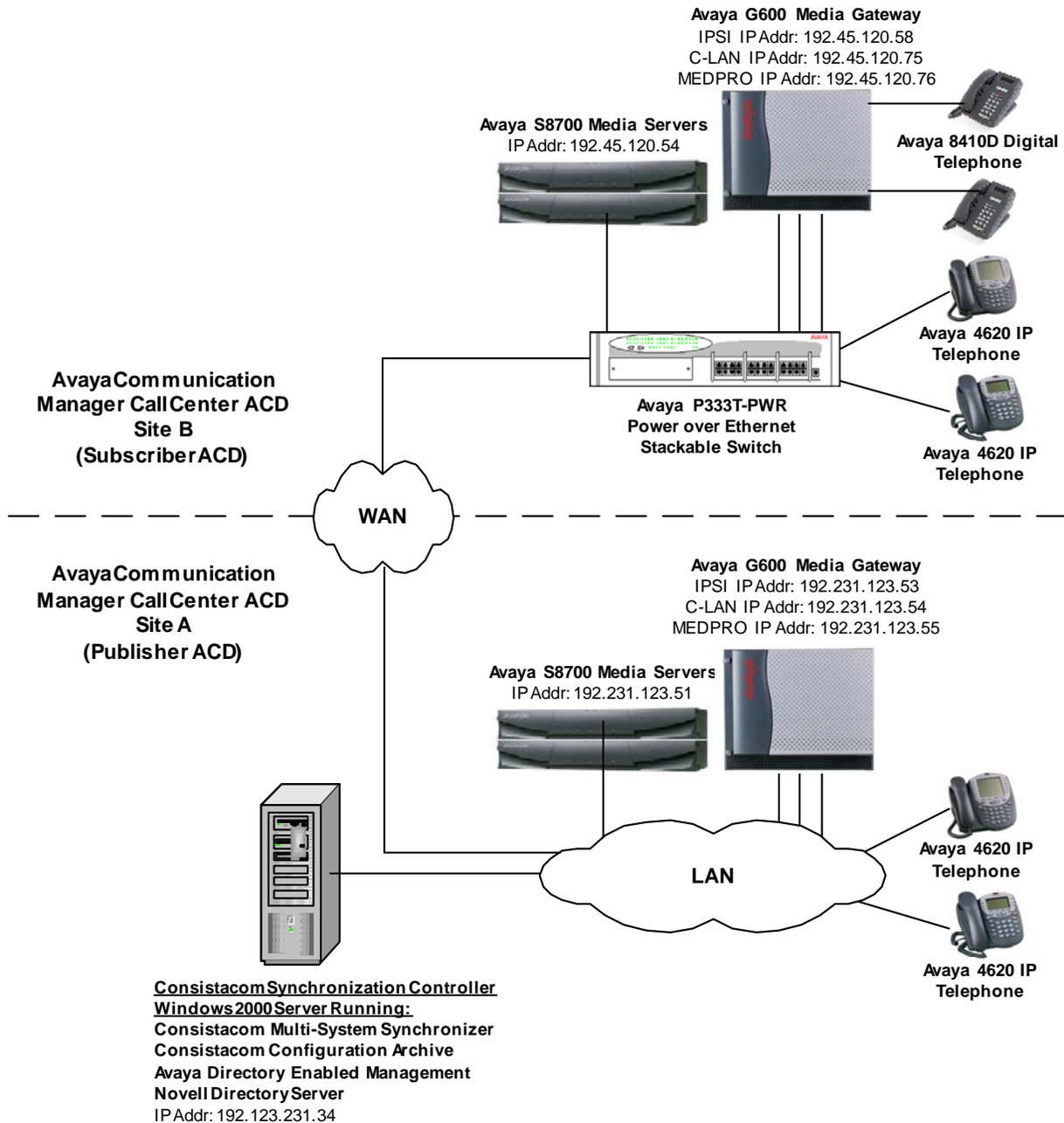
## 1.1. Sample Configuration

The tested configuration is shown in **Figure 1**, which simulated two Avaya Communication Manager call center ACD sites. Consistacom Multi-System Synchronizer uses a “publish and subscribe” metaphor. A publisher ACD is an Avaya Communication Manager call center ACD that publishes and offers resources for replication on all other Avaya Communication Manager call center ACDs. A subscriber ACD is an ACD requesting replication of resources from a publisher ACD to itself. In this configuration site A is a Publisher ACD and site B is a Subscriber ACD. Each ACD site consists of an Avaya S8700 Media Server and Avaya G600 Media Gateway as well as Avaya IP and digital telephones.

Consistacom Multi-System Synchronizer and Configuration Archive are hosted on a Windows 2000 Server, located at the publisher site. Consistacom applications operate in conjunction with Avaya DEM and Novell Directory Server (NDS) for LDAP data store. Both these applications are co-resident on the same Windows 2000 server as Multi-System Synchronizer and Configuration Archive. This Windows 2000 Server running all these applications will be referred as Consistacom Synchronization Controller, for the sake of simplicity. In order to provide Avaya DEM connectivity

to both the Avaya Communication Manager ACDs, this server is connected to Avaya Communication Managers at publisher and subscriber ACD sites via IP links. An Avaya P333T-PWR stackable switch is used to support connectivity between the S8700 Media Server, G600 Media Gateway, and IP telephones.

Note that these configurations are also applicable with other Avaya Media Servers and Media Gateways.



**Figure 1: Network Configuration**

## 2. Equipment and Software Validated

The following equipment and software/firmware were used for the sample configurations provided:

Equipment	Software/Firmware
Avaya S8700 Media Server running Avaya Communication Manager	2.1 (R012x.01.0.411.7) with software patch #7359
Avaya G600 Media Gateway <ul style="list-style-type: none"><li>• TN799DP C-LAN</li><li>• TN2312AP IPSI</li><li>• TN2302AP MedPro</li></ul>	HW01 FW011 HW03 FW009 HW03 FW075
Avaya 4620 IP telephones	2.120
Avaya 8410 Digital telephones	
Avaya Directory Enabled Management	2.0.10.05
Avaya P333T-PWR Power Over Ethernet Stackable Switch	4.0.17
Consistacom Multi-System Synchronizer	R2.0
Consistacom Configuration Archive	R1.2
Novell Directory Server	8.7.3.2
Windows 2000 Server	SP4

## 3. Configure Consistacom Multi-System Synchronizer and Configuration Archive

Consistacom Multi-System Synchronizer and Configuration Archive support the synchronization and archiving of the following Avaya Communication Manager call center ACD resources:

- ACD Agent Login ID
- Announcements
- Skill (Hunt Group marked as a skill)
- Vector Directory Number (VDN)
- Vector
- Class of Service (COS)

This section describes the procedure to enable the synchronization of these resources between the two Avaya Communication Manager call center ACDs.

### 3.1. Multi-System Synchronizer

The Multi-System Synchronizer provides both the real time and scheduled synchronization of the ACD resources via two separate applications. The real time synchronization application **MSSRts** is

the “first line” of synchronization within the Multi-System Synchronizer. Day to day changes are made on the publishing ACD and replicated to the subscribing ACD in near real time. The scheduled synchronization application **MSSAudit** compares the ACD resource administration on subscribing ACD with the publishing ACD at a scheduled time, and the discrepancies are corrected and logged.

Multi-System Synchronizer uses a “publish and subscribe” metaphor coupled with the notions of “Control Points” for selecting and controlling what ACD resources should be synchronized. A Control Point is an ACD resource instance (e.g. an ACD login ID 23001) offered for replication by a publisher ACD. A publisher ACD is an Avaya Communication Manager offering Control Point resources for a subscriber system. A subscriber ACD is an Avaya Communication Manager requesting replication of a Control Point from a publisher ACD to itself.

The ACD resources that will be synchronized between the two ACD systems are configured in the following tables:

- Control point table, which publishes all the resources available for synchronization.
- Subscription table, defining how the published resources will be mapped from a publisher ACD onto a subscriber ACD.

The table contents are configured the same for the MSSRts and MSSAudit applications, but the procedures to configure them are different. The tables for MSSRts are configured in a flat file, whereas the tables for MSSAudit are configured using the Electronic Directory Editor (EdEdit) software tool.

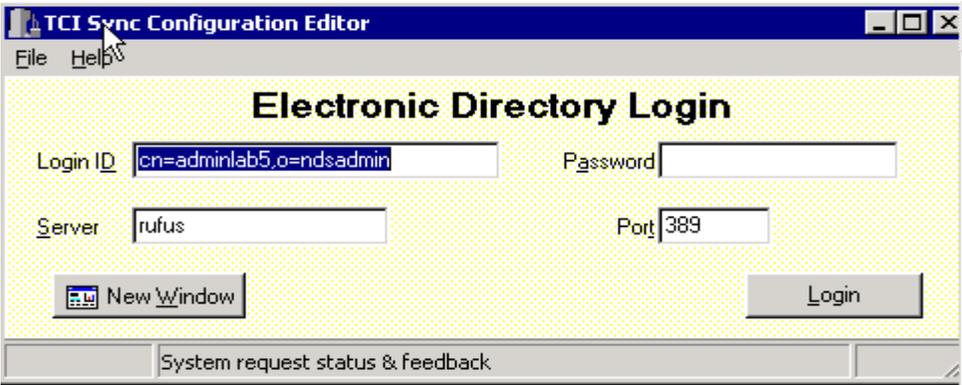
This section describes configuring tables for both the Multi-System Synchronizer applications.

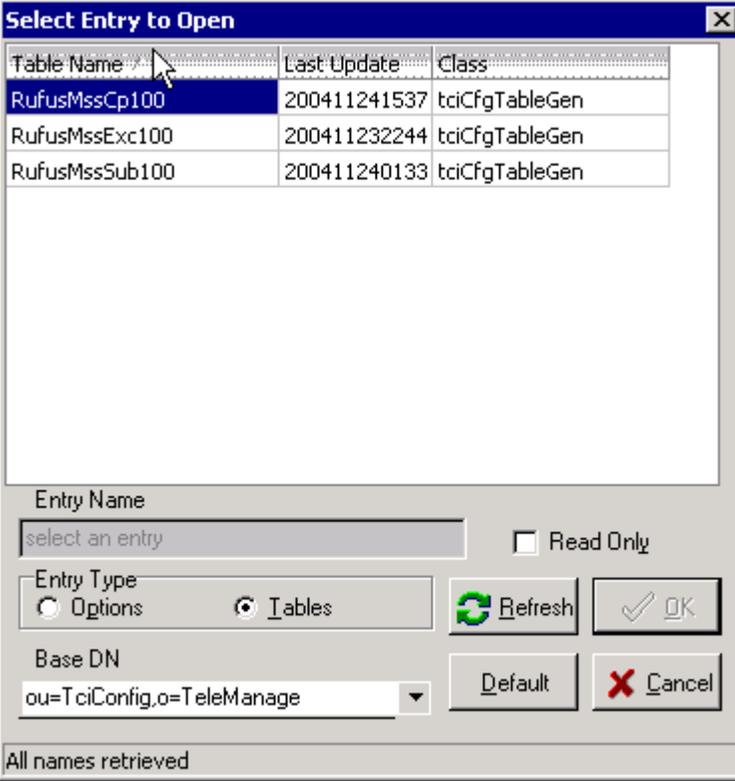
### 3.1.1. MSSRts Configuration

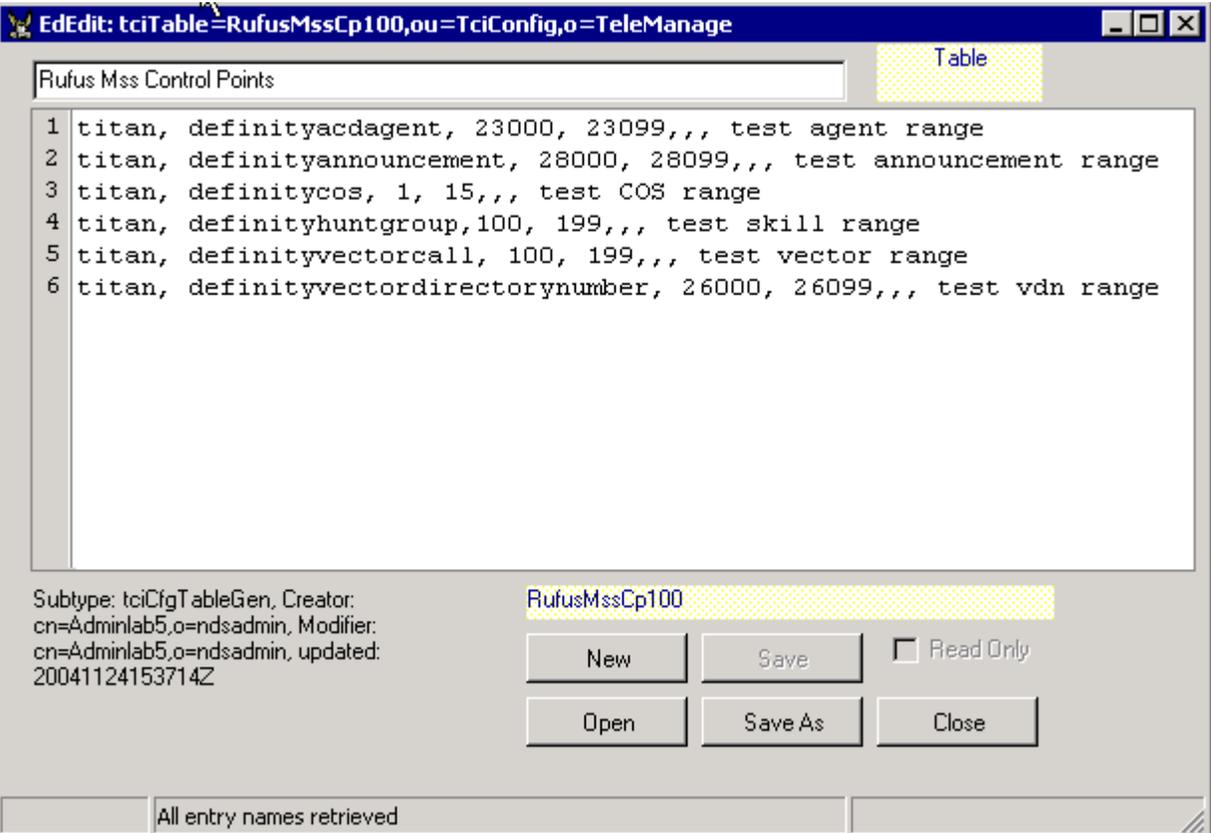
Step	Description
1.	<p><b>Control Points Table</b></p> <p>Locate <b>TCIluTbls.py</b> configuration file in the directory where the MSSRts application is installed, on the Synchronization Controller. Open and edit this file using a text editor. The default ACD resources available for synchronization are predefined in <b>CpluTbl</b> table.</p> <ul style="list-style-type: none"> <li>• Configure the publisher ACD system's <b>name</b> by modifying the first entry in each row.</li> <li>• Configure the <b>range of IDs</b> for the resources available for synchronization by modifying the third and fourth entry in each row.</li> </ul> <p>For complete table format, refer to the Consistacom Installation and User Guide for Multi-System Synchronization <i>Version 2.0</i></p> <p>In the following example, the publisher ACD system name is <b>titan</b>, and the <b>range IDs</b> available for synchronization to the subscriber ACD systems are as follows:</p> <ul style="list-style-type: none"> <li>• ACD Agent Login Ids in the range of extensions 23000-23099,</li> <li>• Vector Directory Numbers (VDNs) in the range of 26000-26099,</li> <li>• Hunt group extensions in the range of 27000-27099,</li> <li>• Announcement extensions in the range of 28000-28099,</li> <li>• Vectors in the range of 100-199, and</li> <li>• Class of Service (COS) in the range of 1-15.</li> </ul> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <pre> <b>CPluTbl</b> = [   ['titan', 'definityacdagent', '23000', '23099', "", "", 'test agent range'],   ['titan', 'definityvectordirectorynumber', '26000', '26099', "", "", 'test vdn range'],   ['titan', 'definityhuntgroup', '27000', '27099', "", "", 'test skill range'],   ['titan', 'definityannouncement', '28000', '28099', "", "", 'test announcement range'],   ['titan', 'definityvectorcall', '100', '199', "", "", 'test vector range']   ['titan', 'definitycosgroup', '1', '15', "", "", 'test COS range'],   ]           </pre> </div>

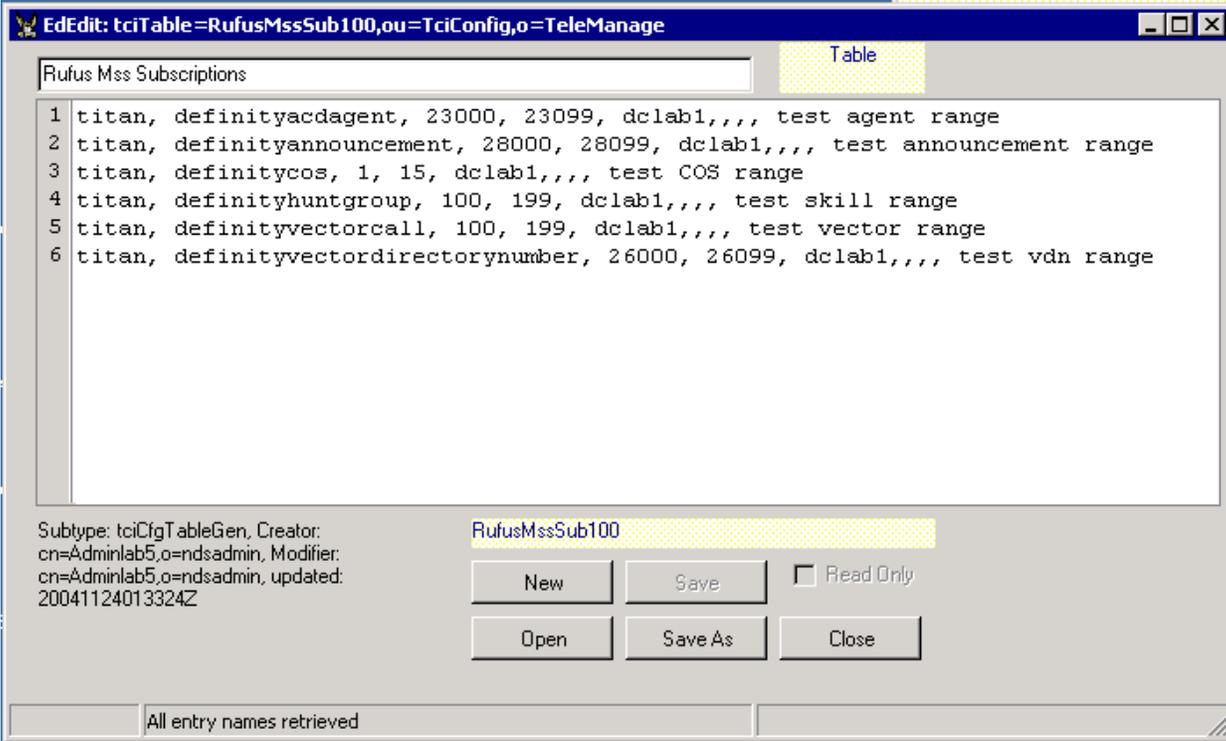
Step	Description
2.	<p><b>Subscriptions Table</b></p> <p>Continue, editing the same <b>TCILuTbls.py</b> configuration file as in Step 1. The ACD resources available for subscription are predefined in <b>SubsLUTbl</b> table.</p> <ul style="list-style-type: none"> <li>• Configure the publisher ACD system's <b>name</b> by modifying the first entry in each row.</li> <li>• Configure the <b>range of IDs</b> for the resources that the subscriber ACD will replicate from the publisher ACD, by modifying the third and fourth entry in each row.</li> <li>• Configure the subscriber ACD system's <b>name</b> by modifying the fifth entry in each row.</li> </ul> <p>The following example shows that the publisher ACD name is <b>titan</b>, and the subscriber ACD name is <b>dclab1</b>. In this example, the subscriber ACD <b>dclab1</b> subscribes to a complete range of resources available from the publisher ACD, as defined in Step 1.</p> <pre data-bbox="285 688 1507 1012">SubsLUTbl = [   ['titan', 'definityacdagent', '23000', '23099', 'dclab1', "", "", 'test agent range'],   ['titan', 'definityvectordirectorynumber', '26000', '26099', 'dclab1', "", "", 'test vdn range'],   ['titan', 'definityhuntgroup', '27000', '27099', 'dclab1', "", "", 'test skill range'],   ['titan', 'definityannouncement', '28000', '28099', 'dclab1', "", "", 'test announcement range'],   ['titan', 'definityvectorcall', '100', '199', 'dclab1', "", "", 'test vector range'],   ['titan', 'definitycosgroup', '1', '15', 'dclab1', "", "", 'test COS range'],   ]</pre>

### 3.1.2. MSSAudit Configuration

Step	Description
1.	<p>Open <b>EdEdit</b> software tool on the Consistacom Synchronization Controller. The <b>Electronic Directory Login</b> screen appears. Enter <b>Login ID</b> and <b>Password</b>. Click <b>Login</b>. When the login is successful, the <b>Login</b> button changes to <b>Logout</b>.</p>  <p>Click <b>New Window</b> button.</p>

Step	Description
2.	<p>The <b>Select Entry to Open</b> screen appears, as follows:</p>  <p>Select and click the row containing <b>RufusMssCp100</b>.</p>

Step	Description
<p><b>3.</b></p>	<p><b>Control Points Table</b></p> <p>The <b>Rufus Mss Control Points</b> screen appears. Modify the fields to the same values as described in Section 3.1.1, Step 1, with the following exception:</p> <p>Modify the range of hunt group resources to the hunt group numbers (<b>100, 199</b>) associated with the hunt group extensions configured in Section 3.1.1, Step 1.</p>  <p>Click <b>Close</b>.</p>

Step	Description
4.	<p><b>Subscriptions Table</b></p> <p>From the <b>Select Entry to Open</b> screen, select and click the row containing <b>RufusMssSub100</b>. The <b>Rufus Mss Subscriptions</b> screen appears. Modify the fields to the same values as described in Section 3.1.1, Step 1, with the following exception:</p> <p>Modify the range of hunt group resources to the hunt group numbers (<b>100, 199</b>) associated with the hunt group extensions configured in Section 3.1.1, Step 1.</p>  <pre> 1 titan, definityacdagent, 23000, 23099, dclab1,,,, test agent range 2 titan, definityannouncement, 28000, 28099, dclab1,,,, test announcement range 3 titan, definitycos, 1, 15, dclab1,,,, test COS range 4 titan, definityhuntgroup, 100, 199, dclab1,,,, test skill range 5 titan, definityvectorcall, 100, 199, dclab1,,,, test vector range 6 titan, definityvectordirectorynumber, 26000, 26099, dclab1,,,, test vdn range </pre>

## 3.2. Configuration Archive

There are no special steps or procedures required for Configuration Archive, beyond the installation of this application. For the procedure to view and verify Configuration Archive reports, see Section 7.1.2

## 4. Configure Avaya Directory Enabled Management

The installation and configuration procedures used to configure Avaya Directory Enabled management for testing Consistacom Multi-System Synchronizer and Configuration Archive applications were taken verbatim from the following document:

*Avaya Directory Enabled Management Release 2.0, Installation and Implementation*

- Follow step-by-step installation outlined in the referenced document to install Release 2.0.
- Install Avaya Directory Enabled Management Release 2.0 Software Update Release 2.00.00.10.03.
- Install Avaya Directory Enabled Management Release 2.0 Software Update Release 2.00.00.10.05. This software update is not cumulative; therefore the software update 2.00.00.10.03 must be installed before the software update 2.00.00.10.05.
- To configure Consistacom relevant changes, follow the instructions outlined in “Consistacom Installation and User Guide for Multi-System Synchronization *Version 2.0*”. This document outlines the modifications to the configuration required for the DEM components, such as maps and Adaptor Data Store Manager, as part of the Consistacom Multi-System Synchronizer installation instructions.

## 5. Configure Avaya Configuration Manager

This section outlines the configuration of call center ACD and DEM login related system management in Avaya Communication Manager relevant to the Consistacom Multi-System Synchronizer and Configuration Archive applications, using the System Access Terminal (SAT). The configuration procedures were taken from the following document:

*Administrator's Guide for Avaya Communication Manager*, Issue 8, June 2004, Document Number 555-233-506.

Follow the instructions in the referenced document for Avaya Communication Manager system management. There are no special steps or procedures required beyond this document. For additional reference to ACD and EAS software guidance, refer the following documents

- *Avaya Communication Manager Call Center Software Automatic Call Distribution (ACD) Guide, Issue 1.0, June 2004, Document Number 07-300185*
- *Avaya Communication Manager Call Center Software Call Vectoring and Expert Agent Selection (EAS) Guide, Issue 1.0, June 2004, Document Number 07-300186*

The following list outlines the configuration procedures in Avaya Communication Manager. Make sure the ACD features and the range of the ACD resources in both the Avaya Communication Manager systems are consistent.

- Enable **Expert Agent Selection (EAS)** feature on the **system-parameter customer-options form**, Page 6.
- Enable **Skills** for the hunt group on **hunt-group** form page 2.
- Add, change or remove ACD resources such as hunt groups/skills, agent ids, announcements, vectors, vector directory numbers, and stations on Avaya Communication Manager. For example, the resources in the following range were administered for the compliance testing:
  - Agent Login Ids in the range of extensions 23000-23099,
  - Vector Directory Numbers (VDNs) in the range of 26000-26099,
  - Hunt Group Extensions in the range of 27000-27099,
  - Hunt Group Numbers in the range of 100-199,
  - Announcement Extensions in the range of 28000-28099,
  - Vectors in the range of 100-199,
  - Class of Service (COS) in the range of 1-15, and
  - Stations with the extensions in the range of 25000-25099.
- Add **login** to be used for Avaya Directory Enabled Management to access Avaya Communication Manager. On the **login** form, set the **Login Type** to **customer**, and set the **Service Level** to **super-user**, and keep the default values for the other fields on the **login** form.

## 6. Interoperability Compliance Testing

The interoperability compliance testing focused on evaluating the capability of Consistacom Multi-System Synchronizer to replicate ACD related Moves, Adds, and Changes (MACs) from a publisher Avaya Communication Manager ACD to a subscriber Avaya Communication Manager ACD. In addition, the capability of Consistacom Configuration Archive to archive and retrieve the ACD related MACs within the Avaya Communication Manager was evaluated.

### 6.1. General Test Approach

The general approach was to make ACD configuration changes on the publisher Avaya Communications Manager, and verify that these configuration changes are replicated on the subscriber Avaya Communication Manager. The main objectives were:

- Using SAT, administer a change in the publisher Avaya Communication Manager, and verify that the resource is changed in the subscriber Avaya Communication Manager.
- Change the resource on the subscriber Avaya Communication Manager, and verify that the resource is not changed in the publisher Avaya Communication Manager.
- Move, Add, and Change of ACD resources on publisher ACD are replicated on the subscriber ACD.
- The MAC changes in subscriber ACD are not replicated on the publisher ACD.
- The following ACD resource were able to synchronize: Agent Login Ids, VDNs, Hunt Groups (Skills), Announcements, Vectors, and Class of Service
- Both the MSSRts and MSSAudit are able to synchronize the ACD resources across the two Avaya Communication Manager ACDs.
- MSSAudit report shows the list of all the synchronization cycles in a specific interval of time and can provide details of a specific synchronization cycle.
- Configuration Archive reports provide summary of all the ACD related configuration changes and can provide the details of a specific configuration change. For example, the details of “add hunt-group 151” can be retrieved and viewed.

### 6.2. Test Results

MAC changes to ACD resources supported by Consistacom were successfully synchronized from publisher to the subscriber Avaya Communication Manager ACD, using MSSRts as well as MSSAudit. The MSSAudit and Configuration Archive reports were able to provide the audit trail and the history of the configuration changes.

The following exceptions were observed:

- Multi-System Synchronizer exceptions:
  - The MSSRts was not able to synchronize changes to Class of Service (COS). The alternative is to use MSSAudit to synchronize COS.
  - The removal of a Skill enabled hunt group or an announcement was not synchronized.
- Configuration Archive exceptions using EEMon:

- The Name and ID were not displayed for the COS and VDN resource.
- The Name and ID were not reported in an archive when a resource was removed.
- The details of COS were not displayed.

## 7. Verification Steps

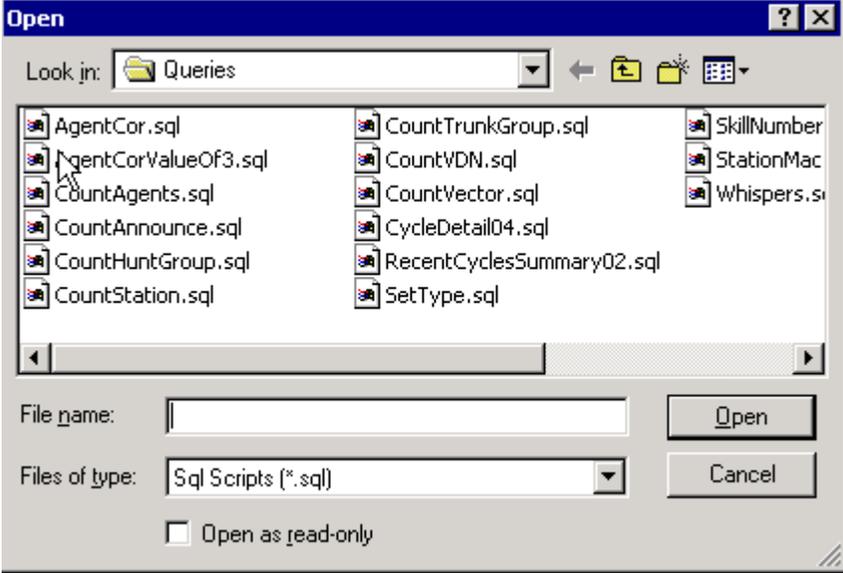
The following steps may be used to verify the configuration and connectivity:

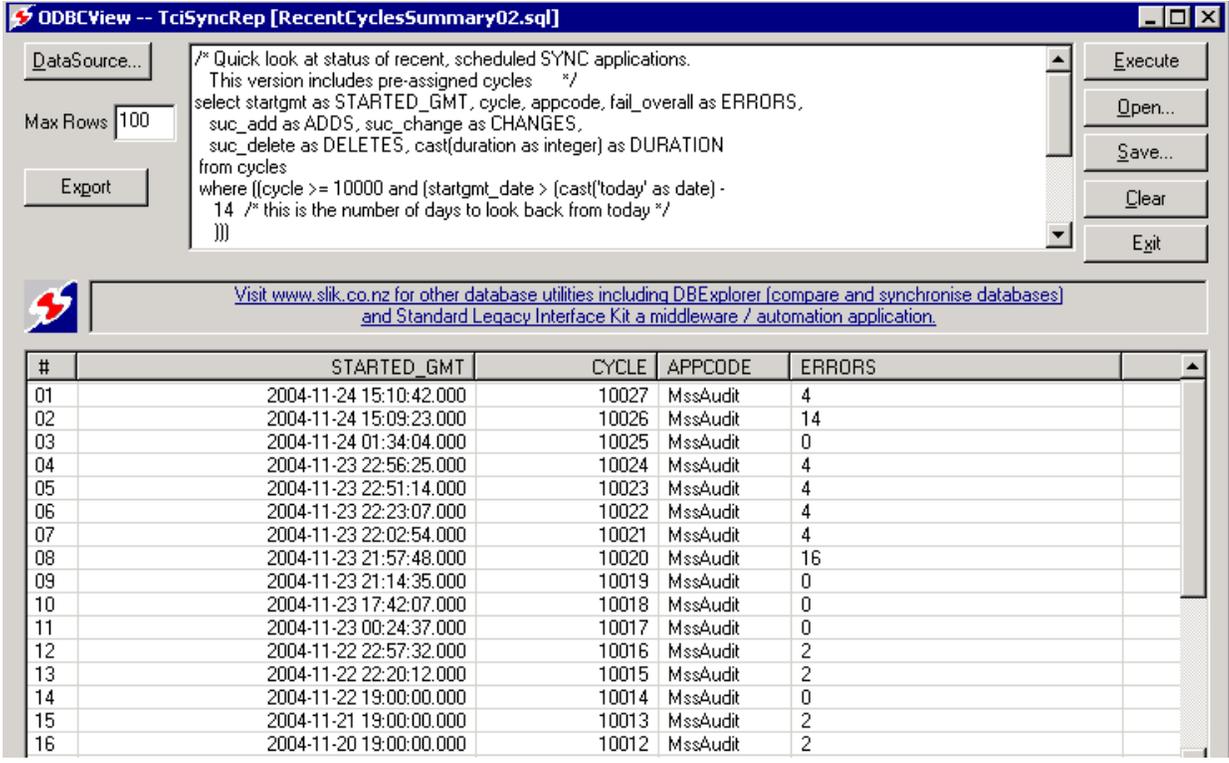
- For each resource type enabled for synchronization (See Section 3),
  - On the publisher Avaya Communication Manager, using SAT, add a new resource in the published range and verify that the resource is added to the subscriber Avaya Communication Manager.
  - Using SAT, administer a change in the publisher Avaya Communication Manager, and verify that the resource is changed in the subscriber Avaya Communication Manager.
  - Change the resource on the subscriber Avaya Communication Manager, and verify that the resource is not changed in the publisher Avaya Communication Manager.
- For each resource type,
  - Make some additional changes to the resources in the publisher Avaya Communication Manager.
  - Manually invoke a run of MSSAudit.
  - Verify that each resource, on the subscriber system has been changed to match the publisher Avaya Communication Manager.
- For each resource type,
  - Remove the resource on the publisher system.
  - Verify that it has been removed on the subscriber system.

When all the above verification is complete, a history of the steps can be viewed in the Sync Reporting Database (using ODBCView) and Configuration Archive (using the EEMon). The following examples illustrate the procedure to view these reports.

### 7.1.1. Synchronization Reports

This section describes the procedure to view synchronization reports showing the synchronization requests made and their results. The audit trail is stored in the Synchronization Reporting Database, or SRD, in the Synchronization Controller. Multi-System Synchronizer applications support ODBC access to the database. Use a third party ad-hoc query utility, such as **SLIK ODBCView**, to query the SRD.

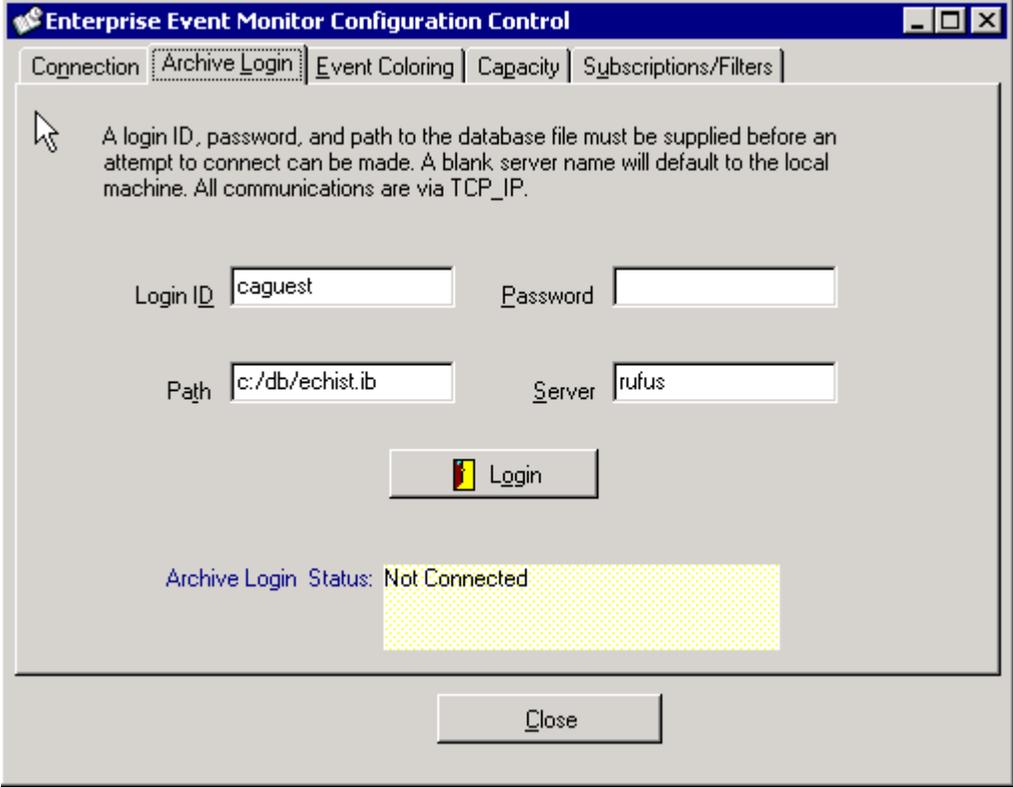
Step	Description
1.	<p>Open ODBCView query utility. Display the ODBCView – TciSyncRep screen (<b>DataSource &gt; File Data Source &gt; TciSyncRep</b>). The screen is not shown here. Click <b>Open</b>. The following screen appears:</p> 

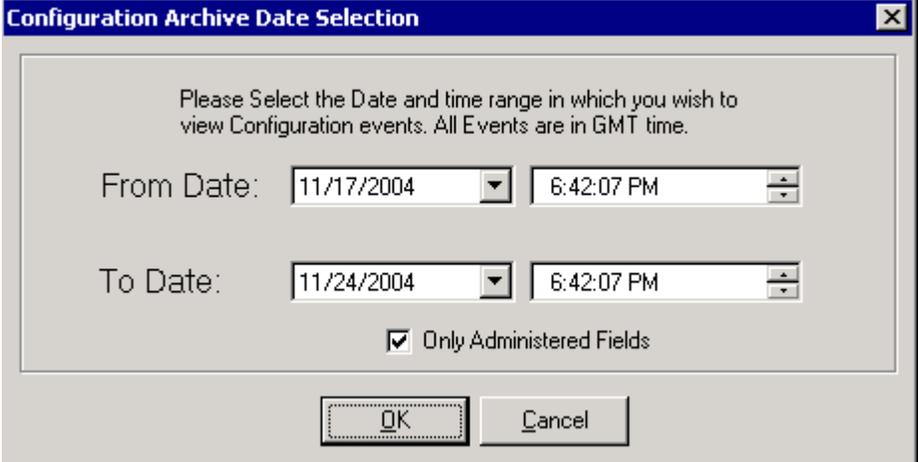
Step	Description																																																																																					
2.	<p data-bbox="282 233 604 268"><b>Synchronization Cycles</b></p> <p data-bbox="282 268 1471 415">From the screen shown in Step 1, open and execute <b>RecentCyclesSummary02.sql</b> query to view the detailed list of Multi-System Synchronizer synchronization cycles. The following example report shows a list of synchronization cycles initiated by <b>MssAudit</b> application. For example,</p> <ul data-bbox="428 422 1500 674" style="list-style-type: none"> <li data-bbox="428 422 1500 527">• The synchronization <b>CYCLE</b> number <b>10025</b> shows that there were no errors during synchronization, implying that all the ACD resources were synchronized successfully.</li> <li data-bbox="428 533 1500 674">• The synchronization cycle <b>10027</b> shows that there were 4 errors, implying that 4 resources were not able to get synchronized. Go to Step 3 to see the details of a specific synchronization cycle and to find out why the resources were not synchronized.</li> </ul> <div data-bbox="282 709 1511 1472">  <pre data-bbox="472 751 1084 953"> /* Quick look at status of recent, scheduled SYNC applications. This version includes pre-assigned cycles */ select startgmt as STARTED_GMT, cycle, appcode, fail_overall as ERRORS, suc_add as ADDS, suc_change as CHANGES, suc_delete as DELETES, cast(duration as integer) as DURATION from cycles where ((cycle &gt;= 10000 and (startgmt_date &gt; (cast('today' as date) - 14 /* this is the number of days to look back from today */ ))) </pre> <table border="1" data-bbox="305 1058 1490 1465"> <thead> <tr> <th>#</th> <th>STARTED_GMT</th> <th>CYCLE</th> <th>APPCODE</th> <th>ERRORS</th> </tr> </thead> <tbody> <tr><td>01</td><td>2004-11-24 15:10:42.000</td><td>10027</td><td>MssAudit</td><td>4</td></tr> <tr><td>02</td><td>2004-11-24 15:09:23.000</td><td>10026</td><td>MssAudit</td><td>14</td></tr> <tr><td>03</td><td>2004-11-24 01:34:04.000</td><td>10025</td><td>MssAudit</td><td>0</td></tr> <tr><td>04</td><td>2004-11-23 22:56:25.000</td><td>10024</td><td>MssAudit</td><td>4</td></tr> <tr><td>05</td><td>2004-11-23 22:51:14.000</td><td>10023</td><td>MssAudit</td><td>4</td></tr> <tr><td>06</td><td>2004-11-23 22:23:07.000</td><td>10022</td><td>MssAudit</td><td>4</td></tr> <tr><td>07</td><td>2004-11-23 22:02:54.000</td><td>10021</td><td>MssAudit</td><td>4</td></tr> <tr><td>08</td><td>2004-11-23 21:57:48.000</td><td>10020</td><td>MssAudit</td><td>16</td></tr> <tr><td>09</td><td>2004-11-23 21:14:35.000</td><td>10019</td><td>MssAudit</td><td>0</td></tr> <tr><td>10</td><td>2004-11-23 17:42:07.000</td><td>10018</td><td>MssAudit</td><td>0</td></tr> <tr><td>11</td><td>2004-11-23 00:24:37.000</td><td>10017</td><td>MssAudit</td><td>0</td></tr> <tr><td>12</td><td>2004-11-22 22:57:32.000</td><td>10016</td><td>MssAudit</td><td>2</td></tr> <tr><td>13</td><td>2004-11-22 22:20:12.000</td><td>10015</td><td>MssAudit</td><td>2</td></tr> <tr><td>14</td><td>2004-11-22 19:00:00.000</td><td>10014</td><td>MssAudit</td><td>0</td></tr> <tr><td>15</td><td>2004-11-21 19:00:00.000</td><td>10013</td><td>MssAudit</td><td>2</td></tr> <tr><td>16</td><td>2004-11-20 19:00:00.000</td><td>10012</td><td>MssAudit</td><td>2</td></tr> </tbody> </table> </div>	#	STARTED_GMT	CYCLE	APPCODE	ERRORS	01	2004-11-24 15:10:42.000	10027	MssAudit	4	02	2004-11-24 15:09:23.000	10026	MssAudit	14	03	2004-11-24 01:34:04.000	10025	MssAudit	0	04	2004-11-23 22:56:25.000	10024	MssAudit	4	05	2004-11-23 22:51:14.000	10023	MssAudit	4	06	2004-11-23 22:23:07.000	10022	MssAudit	4	07	2004-11-23 22:02:54.000	10021	MssAudit	4	08	2004-11-23 21:57:48.000	10020	MssAudit	16	09	2004-11-23 21:14:35.000	10019	MssAudit	0	10	2004-11-23 17:42:07.000	10018	MssAudit	0	11	2004-11-23 00:24:37.000	10017	MssAudit	0	12	2004-11-22 22:57:32.000	10016	MssAudit	2	13	2004-11-22 22:20:12.000	10015	MssAudit	2	14	2004-11-22 19:00:00.000	10014	MssAudit	0	15	2004-11-21 19:00:00.000	10013	MssAudit	2	16	2004-11-20 19:00:00.000	10012	MssAudit	2
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09	2004-11-23 21:14:35.000	10019	MssAudit	0																																																																																		
10	2004-11-23 17:42:07.000	10018	MssAudit	0																																																																																		
11	2004-11-23 00:24:37.000	10017	MssAudit	0																																																																																		
12	2004-11-22 22:57:32.000	10016	MssAudit	2																																																																																		
13	2004-11-22 22:20:12.000	10015	MssAudit	2																																																																																		
14	2004-11-22 19:00:00.000	10014	MssAudit	0																																																																																		
15	2004-11-21 19:00:00.000	10013	MssAudit	2																																																																																		
16	2004-11-20 19:00:00.000	10012	MssAudit	2																																																																																		

Step	Description																																																																																																																																																						
3.	<p><b>Actions in a Synchronization Cycle</b></p> <p>From the screen in shown in Step 1, open and execute <b>CycleDetail04.sql</b> query to view the details of actions taken in a particular synchronization cycle. The following example shows the details of the synchronization cycle <b>10027</b>. For example,</p> <ul style="list-style-type: none"> <li>The row #6 shows that the <b>RES_TYPE</b> Hunt Group with <b>RESID</b> of <b>160</b> (hunt group <b>RESource ID</b> 160) was added (<b>Action A</b> implies <b>Add</b>) to the <b>SUBSCRIBER ACD</b> system <b>dclab1</b> during the synchronization, and the addition was success (the value of <b>RESULT 0</b> implies successful action).</li> <li>The row #5 shows that the <b>RES_TYPE</b> Hunt Group with <b>RESID</b> of <b>154</b> (hunt group <b>RESource ID</b> 154) was changed (<b>Action C</b> implies <b>Change</b>) in the <b>SUBSCRIBER ACD</b> system <b>dclab1</b> as a result of the synchronization, and the change was success (the value of <b>RESULT 0</b> implies successful action). The changes are listed in the <b>CHANGED</b> column.</li> <li>The rows # 1-3 show that the changes (<b>Action C</b> implies <b>Change</b>) to <b>COS 13, 14, and 15</b> in the subscriber system failed (<b>RESULT</b> is non-zero <b>82</b>), and the <b>FEEDBACK</b> column describes the reason for the failed changes.</li> </ul>																																																																																																																																																						
<p>ODBCView -- TrcSyncRep [CycleDetail04.sql]</p> <p>DataSource... Max Rows 100 Export</p> <pre> /* Expanded synchronization detail, in order by processing sequence, for a single cycle */ select distinct a.seq, r.common_name as RES_TYPE, a.comsys as SUBSCRIBER, action_code as ACT, a.resid, a.simulated as sim, a.result_code as result, a.what_changed as CHANGED, a.result_addl as FEEDBACK, a.whengmt from actions a, restypes r where cycle = 10027 and (r.code = a.restype) order by a.seq </pre> <p>Visit <a href="http://www.slik.co.nz">www.slik.co.nz</a> for other database utilities including DBExplorer (compare and synchronise databases) and Standard Legacy Interface Kit a middleware / automation application.</p> <table border="1"> <thead> <tr> <th>#</th> <th>SEQ</th> <th>RES_TYPE</th> <th>SUBSCRIBER</th> <th>A.</th> <th>RESID</th> <th>S.</th> <th>RE.</th> <th>CHANGED</th> <th>FEEDBACK</th> </tr> </thead> <tbody> <tr> <td>01</td> <td>1</td> <td>COS</td> <td>dclab1</td> <td>C</td> <td>13</td> <td>F...</td> <td>82</td> <td>deflyAutomaticExclusions,deflyConsolePerms,deflyDataPri...</td> <td>The transaction failed at the target device. [Extended Cvg/...</td> </tr> <tr> <td>02</td> <td>2</td> <td>COS</td> <td>dclab1</td> <td>C</td> <td>14</td> <td>F...</td> <td>82</td> <td>deflyAutoCallBack,deflyAutomaticExclusions,deflyConsole...</td> <td>The transaction failed at the target device. [Extended Cvg/...</td> </tr> <tr> <td>03</td> <td>3</td> <td>COS</td> <td>dclab1</td> <td>C</td> <td>15</td> <td>F...</td> <td>82</td> <td>deflyAutoCallBack,deflyAutomaticExclusions,deflyDataPriv...</td> <td>The transaction failed at the target device. [Extended Cvg/...</td> </tr> <tr> <td>04</td> <td>4</td> <td>Hunt Group</td> <td>dclab1</td> <td>C</td> <td>152</td> <td>F...</td> <td>0</td> <td>deflyCor,deflyDynamicqueueposition,deflyName,deflySecu...</td> <td></td> </tr> <tr> <td>05</td> <td>5</td> <td>Hunt Group</td> <td>dclab1</td> <td>C</td> <td>154</td> <td>F...</td> <td>0</td> <td>deflyDynamicqueueposition,deflyExpectedcallhandlingtime...</td> <td></td> </tr> <tr> <td>06</td> <td>6</td> <td>Hunt Group</td> <td>dclab1</td> <td>A</td> <td>160</td> <td>F...</td> <td>0</td> <td></td> <td></td> </tr> <tr> <td>07</td> <td>7</td> <td>Hunt Group</td> <td>dclab1</td> <td>C</td> <td>161</td> <td>F...</td> <td>0</td> <td>deflyDynamicqueueposition,deflyName,deflyQueueacd,def...</td> <td></td> </tr> <tr> <td>08</td> <td>8</td> <td>Hunt Group</td> <td>dclab1</td> <td>A</td> <td>162</td> <td>F...</td> <td>0</td> <td></td> <td></td> </tr> <tr> <td>09</td> <td>9</td> <td>VDN</td> <td>dclab1</td> <td>C</td> <td>26001</td> <td>F...</td> <td>0</td> <td>deflyVDNReturnDest</td> <td></td> </tr> <tr> <td>10</td> <td>10</td> <td>VDN</td> <td>dclab1</td> <td>C</td> <td>26002</td> <td>F...</td> <td>82</td> <td>deflyVDNReturnDest</td> <td>The transaction failed because the specified object could n...</td> </tr> <tr> <td>11</td> <td>11</td> <td>VDN</td> <td>dclab1</td> <td>C</td> <td>26003</td> <td>F...</td> <td>0</td> <td>deflyVDNReturnDest</td> <td></td> </tr> <tr> <td>12</td> <td>12</td> <td>VDN</td> <td>dclab1</td> <td>C</td> <td>26004</td> <td>F...</td> <td>0</td> <td>deflyVDNReturnDest</td> <td></td> </tr> <tr> <td>13</td> <td>13</td> <td>VDN</td> <td>dclab1</td> <td>A</td> <td>26050</td> <td>F...</td> <td>0</td> <td></td> <td></td> </tr> <tr> <td>14</td> <td>14</td> <td>Vector</td> <td>dclab1</td> <td>C</td> <td>106</td> <td>F...</td> <td>0</td> <td>deflyVectorSteps</td> <td></td> </tr> </tbody> </table>		#	SEQ	RES_TYPE	SUBSCRIBER	A.	RESID	S.	RE.	CHANGED	FEEDBACK	01	1	COS	dclab1	C	13	F...	82	deflyAutomaticExclusions,deflyConsolePerms,deflyDataPri...	The transaction failed at the target device. [Extended Cvg/...	02	2	COS	dclab1	C	14	F...	82	deflyAutoCallBack,deflyAutomaticExclusions,deflyConsole...	The transaction failed at the target device. [Extended Cvg/...	03	3	COS	dclab1	C	15	F...	82	deflyAutoCallBack,deflyAutomaticExclusions,deflyDataPriv...	The transaction failed at the target device. [Extended Cvg/...	04	4	Hunt Group	dclab1	C	152	F...	0	deflyCor,deflyDynamicqueueposition,deflyName,deflySecu...		05	5	Hunt Group	dclab1	C	154	F...	0	deflyDynamicqueueposition,deflyExpectedcallhandlingtime...		06	6	Hunt Group	dclab1	A	160	F...	0			07	7	Hunt Group	dclab1	C	161	F...	0	deflyDynamicqueueposition,deflyName,deflyQueueacd,def...		08	8	Hunt Group	dclab1	A	162	F...	0			09	9	VDN	dclab1	C	26001	F...	0	deflyVDNReturnDest		10	10	VDN	dclab1	C	26002	F...	82	deflyVDNReturnDest	The transaction failed because the specified object could n...	11	11	VDN	dclab1	C	26003	F...	0	deflyVDNReturnDest		12	12	VDN	dclab1	C	26004	F...	0	deflyVDNReturnDest		13	13	VDN	dclab1	A	26050	F...	0			14	14	Vector	dclab1	C	106	F...	0	deflyVectorSteps	
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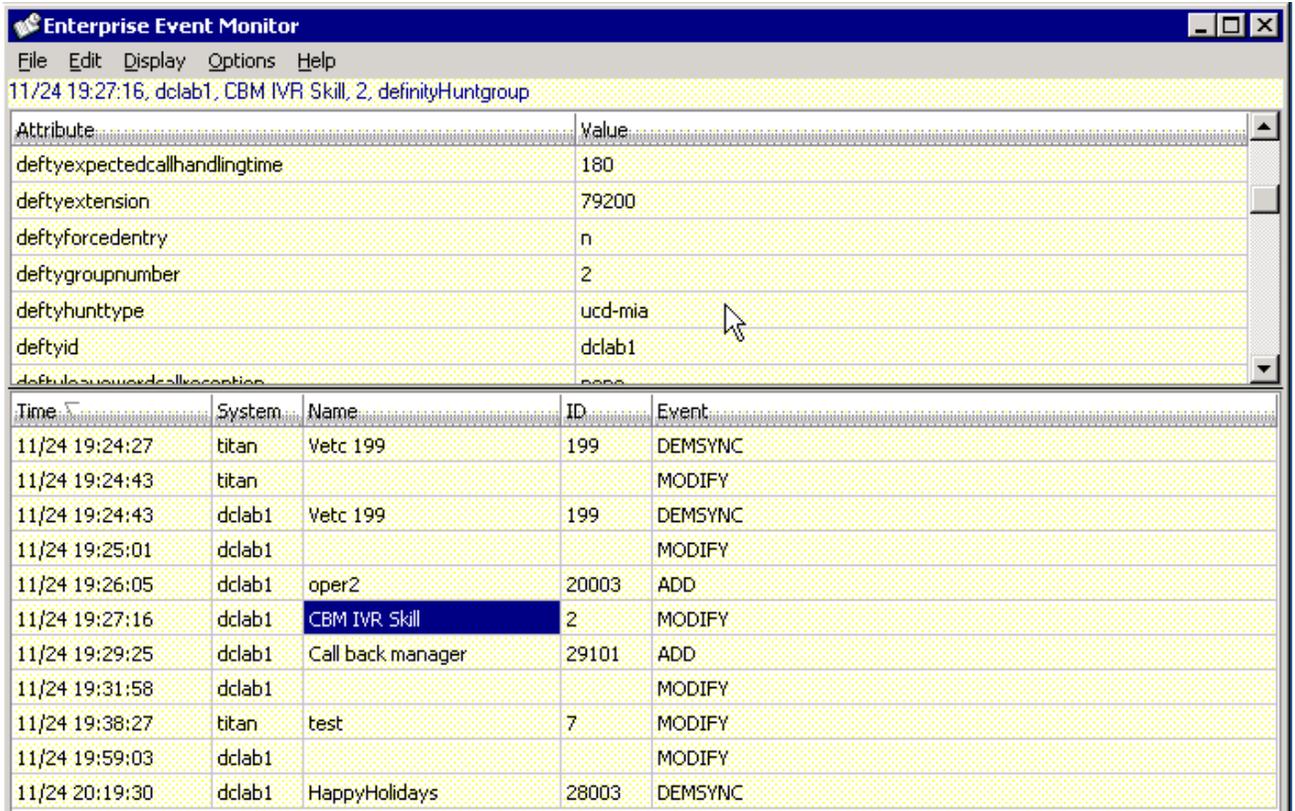
## 7.1.2. Configuration Archive

The Configuration Archive captures a complete configuration history of most Avaya Communication Manager ACD resources, across the entire enterprise of multiple Avaya Communication Manager ACDs. Whenever something changes, the new configuration settings are recorded in the archive. Like Multi-System Synchronizer, the Configuration Archive application supports the Avaya Communication Manager ACD resources listed in Section 3.1. One of the components of Configuration Archive application is the **Enterprise Event Monitor (EEMon)** event display tool. Use EEMon to retrieve the historical events from the Configuration Archive database, following the steps described in this section.

Step	Description
1.	<p>Open <b>EEMon</b> event display tool. To establish an initial connection with the archive database, display the “Archive Login” tab under “Enterprise Event Monitor Configuration Control” screen (<b>File &gt; Configure &gt; Archive Login</b>). Enter <b>Login ID</b> and <b>Password</b> and click on <b>Login</b> button to connect to the database. When the connection is established, the Login button changes to <b>Logout</b>, and the <b>Archive Login Status</b> shows the <b>Connected</b> message. Click on <b>Close</b> to close the window.</p>  <p>The screenshot shows a window titled "Enterprise Event Monitor Configuration Control" with several tabs: "Connection", "Archive Login", "Event Coloring", "Capacity", and "Subscriptions/Filters". The "Archive Login" tab is active. It contains a text box with instructions: "A login ID, password, and path to the database file must be supplied before an attempt to connect can be made. A blank server name will default to the local machine. All communications are via TCP_IP." Below this are four input fields: "Login ID" with the value "caguest", "Password" (empty), "Path" with the value "c:/db/echist.ib", and "Server" with the value "rufus". A "Login" button is centered below these fields. At the bottom, the "Archive Login Status" is displayed as "Not Connected" in a yellow-shaded box. A "Close" button is at the very bottom of the dialog.</p>

Step	Description
2.	<p>Display “Configuration Archive Date Selection” screen (<b>File &gt; Load From &gt; Archive</b>). Request retrieval of events within a certain time interval by setting the range of dates and times, as in the following example:</p> 

Step	Description
3.	<p>Click <b>OK</b> on the screen shown in Step 2. The <b>Enterprise Event Monitor</b> main screen appears with two windowpanes. The bottom pane shows the summary of all the events. Click on <b>Time</b> to sort them by time. Select an event and click on the event to show its details in the top window. The following example shows the summary of events such as <b>MODIFY</b> hunt group <b>ID 2</b>, with the <b>Name</b> as <b>CBM IVR Skill</b> (highlighted) in the ACD system <b>dclab1</b>. Clicking on this event shows the details in the top window, showing the <b>Attribute</b> and its <b>VALUE</b> for all the fields in the hunt group ID 2.</p>



## 8. Support

For technical support on the Consistacom product line, email [supportmss@telecominstitute.com](mailto:supportmss@telecominstitute.com) or contact Consistacom at telephone number 1-866-248-3497.

## 9. Conclusion

These Application Notes describe the configuration steps required for Consistacom Multi-System Synchronizer and Configuration Archive applications to successfully interoperate with Avaya Communication Manager using Avaya Directory Enabled Management. Successful tests demonstrated that the Multi-System Synchronizer was able to synchronize call center ACD related Moves, Adds, and Changes (MACs) from a publisher Avaya Communication Manager to a subscriber Avaya Communication Manager. Configuration Archive was also able to archive and retrieve the MACs between Avaya Communication Manager ACDs.

## 10. Additional References

The following documents are relevant to these Application Notes.

- 1) *Administrator's Guide for Avaya Communication Manager*, Issue 8, June 2004, Document Number 555-233-506.
- 2) *Avaya Communication Manager Call Center Software Automatic Call Distribution (ACD) Guide*, Issue 1.0, June 2004, Document Number 07-300185
- 3) *Avaya Communication Manager Call Center Software Call Vectoring and Expert Agent Selection (EAS) Guide*, Issue 1.0, June 2004, Document Number 07-300186
- 4) *Consistacom Installation and User Guide for Multi-System Synchronization Version 2.0*
- 5) *Consistacom PBX/ACD Configuration Archive User Guide Version C*

Avaya product documentation can be found at <http://support.avaya.com>. For Consistacom product documents, contact Consistacom at telephone number 1-866-248-3497.

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