Installing Avaya Aura® Call Center Elite Multichannel

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Contents

Chapter 1: Introduction

Purpose

This document provides information about the installation, configuration, and licensing requirements of Avaya Aura® Call Center Elite Multichannel. This document also lists the supported products of Call Center Elite Multichannel.

Before you start installing Call Center Elite Multichannel, you must have an understanding of the following components:

- Avaya Communication Manager
- Application Enablement Services (AES)
- WebLM Server
- Microsoft SQL Server
- Internet Information Services (IIS)
- Microsoft Exchange Server
- Avaya Contact Recorder (ACR) Server
- Microsoft Dynamics CRM

Intended audience

This document is intended for solution engineers, Avaya Professional Services personnels, business partners, and system administrators who want to install Call Center Elite Multichannel on a system.

Document changes since last issue

The following changes have been made to this document since the last issue:

- Added information about bandwidth requirements for Call Center Elite Multichannel.
- Updated the port number for XML Client.

- Added information about the collation supported with Call Center Elite Multichannel.

Related resources

Documentation

The following table lists the related documents for the Avaya Aura® Call Center Elite Multichannel product. You can download the documents from the Avaya Support website at http://support.avaya.com/.

Title	Description	Audience
Avaya Aura® Call Center Elite Multichannel Call Routing Server User Guide	Provides an overview of Call Routing Server that enables intelligent call routing for inbound calls in Call Center Elite Multichannel.	• Sales engineers • Solution architects • Implementation engineers • System administrators
Avaya Aura® Call Center Elite Multichannel Configuration Client Developer Guide	Provides information about the Configuration Client Developer application, which is a control that facilitates an application to transparently access the configuration information from any location.	• Programmers
Administering Avaya Aura® Call Center Elite Multichannel	Provides information about how to manage databases, configure Call Center Elite Multichannel services, and administer Avaya Aura® Communication Manager.	• Sales engineers • Solution architects • Implementation engineers • System administrators
Avaya Aura® Call Center Elite Multichannel Overview Guide	Provides an overview of the Call Center Elite Multichannel features.	• Sales engineers • Implementation engineers • System administrators
Avaya Aura® Call Center Elite Multichannel Desktop User Guide	Provides information about Call Center Elite Multichannel Desktop and describes how to use Call Center Elite Multichannel Desktop to receive, view, and respond to voice and multimedia work items.	• Sales engineers • Solution architects • Implementation engineers • System administrators • End users

Table continues…

Title	Description	Audience
Avaya Aura® Call Center Elite Multichannel Application Management Service User Guide	Provides information about how to install and administer Application Management Service in Call Center Elite Multichannel.	• Sales engineers • Solution architects • Implementation engineers
Avaya Aura® Call Center Elite Multichannel Upgrade and Migration Guide	Provides information about how to upgrade or migrate Avaya Aura® Call Center Elite Multichannel from Release 6.2.x or 6.3.x to Release 6.4. The Upgrade Sequence section in the respective upgrading chapters provides a high-level overview of the process.	• Implementation engineers • Solution architects
Avaya Aura® Call Center Elite Multichannel Reporting User Guide	Provides information about the reports for Agents, Customers, Interaction, Program and Schedule, Skills, and VDNs. This guide also provides information about historical reports and real-time reports.	• Sales engineers • Solution architects • Implementation engineers
Avaya Aura® Call Center Elite Multichannel TTrace User Guide	Provides information about TTrace and its components, helps you to understand the TTraceConsole and TTraceConfig user interfaces, and explains the operations that you can perform using TTraceConsole and TTraceConfig.	• Sales engineers • Solution architects • Implementation engineers

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Course code	Course title
5C00092W	Avaya Aura® Call Center Elite Multichannel Overview
10C00010E	Knowledge Access: Avaya Aura® Call Center Elite Multichannel Implementation
10C00094V	Avaya Aura® Call Center Elite Multichannel Implementation and Maintenance

Table continues…

Course code	Course title
4302	Avaya Aura® Call Center Elite Multichannel Implementation Test
0C00060E	Knowledge Collection Access: Avaya Aura® Call Center Elite Portfolio
E: Self-paced in virtual campus W: Web (online) course V: Virtual	

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About this task

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Procedure

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  - In **Search**, type the product name. On the Search Results page, select **Video** in the **Content Type** column on the left.
- To find the Avaya Mentor videos on YouTube, go to www.youtube.com/AvayaMentor and perform one of the following actions:
  - Enter a key word or key words in the Search Channel to search for a specific product or topic.
  - Scroll down Playlists, and click the name of a topic to see the available list of videos posted on the website.

Note:

Videos are not available for all products.

Support

Go to the Avaya Support website at http://support.avaya.com for the most up-to-date documentation, product notices, and knowledge articles. You can also search for release notes, downloads, and resolutions to issues. Use the online service request system to create a service request. Chat with live agents to get answers to questions, or request an agent to connect you to a support team if an issue requires additional expertise.

Chapter 2: Overview

Call Center Elite Multichannel is a Microsoft Windows-based software suite. Companies can use this software suite to turn one-dimensional call centers into powerful multimedia contact centers.

Call Center Elite Multichannel uses the phantom call capability of Communication Manager and facilitates customers to make contact through phone, email, text message, or instant message.

Whether your customers prefer text messaging on mobile, sending emails, or chatting over the Internet, their method of communication is treated as a phone call. The phone call is placed in a priority queue and distributed to an agent with relevant skills and knowledge. The agent can also reply using the same method of communication.

Easy to implement and simple to use, Call Center Elite Multichannel also delivers:

- Out-of-the-box desktop applications for supervisors
- Framework applications including intelligent routing, interaction data, and centralized configuration
- Automated or agent-initiated outbound preview dialing
- Powerful application development tools for complete customization and integration
- Simple and fast wizards for desktop screen pops and routing rules

The following are the major categories of the Call Center Elite Multichannel components:

- **Desktop components:** Call Center Elite Multichannel Desktop, Call Center Elite Multichannel Reporting, and Call Center Elite Multichannel Control Panel.
- **Server components:** Application Management Service, Call Routing Server, Configuration Server, Email Media Store, License Director, Task Director, Media Director, Media Proxy, Preview Contact Media Store, Voice Media Store, Simple Messaging Media Store (AOL-ICQ Instant Messenger Gateway, MSN Messenger Gateway, Short Message Service Gateway, Web Chat Gateway, XMPP Gateway, and Communicator Gateway), Virtual Agent, XML Server, Experience Portal Config Service, Call Recording Config Service, Trace System, Interaction Data Service (Interaction Data Server - Voice and Presence, Interaction Data Server - Multimedia, and Interaction Data Server - View), and Plug-ins (Rules Plug-in, Script Plug-in, SOAP Plug-in, and SQL Plug-in).
- **Developer components:** Call Center Elite Multichannel Developer.

Installation options

Installation on a physical server

To install Call Center Elite Multichannel Release 6.4 on a physical server, download the Call Center Elite Multichannel Release 6.4 ISO image from the Avaya Licensing and Delivery System website, https://www.plds.avaya.com.

Supported languages

In Call Center Elite Multichannel Release 6.4, all applications are available only in English. Support for the following languages will be provided in Call Center Elite Multichannel Release 6.4.1.

- English
- Chinese (Simplified)
- French
- German
- Italian
- Portuguese (Brazilian)
- Russian
- Spanish (Colombian)
- Japanese
- Korean

In the Call Center Elite Multichannel configuration, if you select a language other than English, some of the labels might display in English. The translations of such labels will be provided in Call Center Elite Multichannel Release 6.4.1.

XML server failover

The applications such as Media Director and Call Center Elite Multichannel Desktop support the XML server failover.

If the primary XML server fails and you have a secondary XML server configured for any of these applications, the application automatically connects to the secondary XML server and continues to deliver the work items. This process does not require restarting the application.

The time that the application takes to connect to the secondary XML server depends on the number of configured phantom stations. For each phantom station, the application takes about 0.1 seconds.

If the primary XML server fails and you do not have a secondary XML server configured for any of these applications, the application tries to recover the connection with primary XML server after

every 60 seconds. After the connection recovers, Media Director continues to deliver work items and Call Center Elite Multichannel Desktop starts receiving the work items.

Upgrade to Release 6.4

For more information about how to upgrade to Call Center Elite Multichannel Release 6.4, see *Avaya Aura® Call Center Elite Multichannel Upgrade and Migration Guide*.

Installation requirements

Requirements for the Desktop components

Hardware

- 2.4 GHz processor (32-bit or 64-bit)
- 2 GB RAM
- 10 GB free hard disk space
- DVD drive

Note:

The above hardware requirements are also applicable for setting up a virtual machine.

Software

- One of the following operating systems:
  - Microsoft Windows 8.1 Pro or Enterprise (32-bit or 64-bit)
  - Microsoft Windows 8.0 Pro or Enterprise (32-bit or 64-bit)
  - Microsoft Windows 7 SP1 Professional, Enterprise, or Ultimate (32-bit or 64-bit)
  - Microsoft Windows Vista SP2 Business or Enterprise (32-bit or 64-bit)
- Microsoft Windows Terminal Services (32-bit)
- Microsoft Internet Explorer 8.0, 9.0, 10.0, or 11.0
- Microsoft .Net Framework 3.5 SP1

Note:

The installation file for Microsoft .Net Framework 3.5 SP1 is placed in the `Utilities\Microsoft .Net Redistributable` folder in the installer package of Call Center Elite Multichannel.

Requirements for the Server components

Hardware

- 2.4 GHz processor with minimum 2 processor cores
- 4 GB RAM
- 40 GB free disk space
- DVD drive

Note:

The above hardware requirements are also applicable for setting up a virtual machine.

Software

- One of the following operating systems:
  - Microsoft Windows Server 2012 Standard
  - Microsoft Windows Server 2012 R2 Standard
  - Microsoft Windows Server 2008 SP1 Enterprise or Standard (32-bit or 64-bit)
  - Microsoft Windows Server 2008 R2 SP1
- Internet Information Services (IIS) 7 with IIS 6 Management Compatibility components
- Microsoft Internet Explorer 8.0, 9.0, 10.0, or 11.0
- Microsoft .Net Framework 3.5 SP1
- Application Enablement Services TSAPI client 5.2, 6.1, 6.2, or 6.3

  Note:

  - You must install and configure the AES TSAPI client on the core server. To install the AES TSAPI client, see *Installing Application Enablement Services TSAPI client*.
  - For Microsoft Windows Server 2012, you must have AES TSAPI Client release 6.3.3.
- One dedicated server to install the following:
  - License Director
  - XML Server
  - Configuration Server
  - Application Management Director
  - Media Director
  - Media Stores and Gateways
  - Call Routing Server
  - Virtual Agent
  - Task Director
  - Experience Portal Config Service

- Call Recording Config Service
- Interaction Data Service

Note:

If the agent count is high, it is encouraged that you install Interaction Data Service on a separate server.

- One server for emails:
  - Microsoft Exchange Server 2007, 2010, or 2013

Note:

Only POP3 and SMTP protocols (secure/unsecure) are supported for emails.

- One dedicated server to deploy the following:
  - ACS (Configuration Server) Database
  - ASMSControl Database
  - ASMSData{x} Database
  - ASContact Database

The server must have Microsoft SQL Server 2008 or 2012 Standard, Enterprise, or Express installed with Reporting Services.

Note:

- Interaction Data Server uses ASMSControl Database and ASMSData{x} Database and does not support or require Active Interaction Database.
- For the limitations of Microsoft SQL Server Express, such as database size, refer to the Microsoft website.

Requirements for the Developer components

Software

- One of the following operating systems:
  - Microsoft Windows 8.1 Pro and Enterprise (32-bit or 64-bit)
  - Microsoft Windows 8.0 Pro and Enterprise (32-bit or 64-bit)
  - Microsoft Windows 7 SP1 Professional, Enterprise, or Ultimate (32-bit or 64-bit)
  - Microsoft Windows Server 2012 Standard
  - Microsoft Windows Server 2012 R2 Standard
  - Microsoft Windows Server 2008 Enterprise or Standard (32-bit or 64-bit)
  - Microsoft Windows Server 2008 R2
- Microsoft Internet Explorer 7.0, 8.0, 9.0, 10.0, or 11.0
- Microsoft .Net Framework 3.5 SP1
- Application Enablement Services TSAPI client software release 5.2, 6.1, 6.2, or 6.3

Note:

For Microsoft Windows Server 2012, you must have AES TSAPI Client release 6.3.3.

Chapter 3: Supported products

Supported Avaya products

Call Center Elite Multichannel Release 6.4 supports multiple Avaya products. For the latest and most accurate compatibility information, go to http://support.avaya.com/CompatibilityMatrix/Index.aspx.

Supported non-Avaya products

Call Center Elite Multichannel Release 6.4 supports the following non-Avaya products:

Non-Avaya Products	Desktop	Server
Microsoft Windows 8.1 Pro and Enterprise (32-bit or 64-bit)	✔	
Microsoft Windows 8.0 Pro and Enterprise (32-bit or 64-bit)	✔	
Microsoft Windows 7 SP1 Professional, Enterprise, and Ultimate (32-bit and 64-bit)	✔	
Microsoft Windows Vista SP2 Business and Enterprise (32-bit and 64-bit)	✔	
Microsoft Windows Server 2012 Standard		✔
Microsoft Windows Server 2012 R2 Standard		✔
Microsoft Windows Server 2008 SP2 (32-bit and 64-bit)		✔
Microsoft Windows Server 2008 SP1 (64-bit)		✔
Microsoft Exchange Server 2007, 2010, and 2013		✔
Microsoft Office 365 (Exchange only)[1]		✔

Table continues…

Non-Avaya Products	Desktop	Server
Microsoft SQL Server 2008 Standard, Express, and Enterprise (32-bit and 64-bit)		✔
Microsoft SQL Server 2008 R2 (64-bit)		✔
Microsoft SQL Server 2012 Standard, Express, and Enterprise (32-bit and 64-bit)		✔
Microsoft Internet Explorer 7.0, 8.0, 9.0, 10.0, and 11.0	✔	
Microsoft Dynamics CRM 4.0		✔
Microsoft Dynamics CRM 2011		✔
Citrix XenApp 6.5 and 7.5		✔
VMware vMotion 5.0 and 5.1		✔
VMware software components: • ESXi Host 5.0, 5.1, and 5.5 • vSphere Client 5.0 and 5.1 • vCenter Server 5.0 and 5.1		✔
VMware Horizon View 5.3	✔	

Secure Access Link

Secure Access Link (SAL) is the preferred mode for accessing the Avaya services remotely. Call Center Elite Multichannel leverages the remote access functionality of SAL.

SAL uses the existing Internet connectivity of the customer to provide the remote support. The entire communication is outbound from the customer environment using encapsulated HTTPS. SAL requires an upload bandwidth of at least 90 KB/s (720 KB/s) with maximum round trip latency of 150 ms.

[1] • The **Use Reply Email Address for Agent Initiated Emails** feature is not supported with Microsoft Office 365.

For information about this feature, see *Administering Avaya Aura® Call Center Elite Multichannel*

• The number of emails polled from Microsoft Office 365 depends on the connection between the Call Center Elite Multichannel server and Microsoft Office 365.

• Call Center Elite Multichannel supports Microsoft Office 365 only with secure connections.

For remote access functionality, you can use one of the following methods:

- Web conferencing
- Remote Desktop Protocol (RDP)
- Third Party applications, such as GoTo Meeting

Customers must deploy SAL in their network.

For more information, see the *SAL implementation guide*.

Chapter 4: Installing and configuring the Desktop components

Call Center Elite Multichannel Desktop installation

Call Center Elite Multichannel Desktop runs on various Microsoft Windows operating systems, such as Windows Vista, Windows 7, Windows 8, and Windows 8.1.

To install all the features and functionalities of Call Center Elite Multichannel Desktop, you must use the `Avaya Aura Call Center Elite Multichannel Desktop.msi` installer.

The following components are installed when you run this installer:

- Call Center Elite Multichannel Desktop
- Media Proxy Service

An administrator can also send this installer to the agent machines using a distribution tool, such as Microsoft SCCM.

Note:

You must have the administrator privileges to install Call Center Elite Multichannel Desktop on Microsoft Windows Vista, Microsoft Windows 7, Microsoft Windows 8, or Microsoft Windows 8.1.

Installing Call Center Elite Multichannel Desktop silently

You can silently install Call Center Elite Multichannel Desktop through the command prompt. For more information, see Performing silent install on page 175.

Installing Call Center Elite Multichannel Desktop manually

Procedure

1. Close all open applications.
2. Run the `Avaya Aura Call Center Elite Multichannel Desktop.msi` installer.
3. On the Avaya Aura Call Center Elite Multichannel Desktop welcome screen, click **Next**.

4. On the License Agreement screen, select the **I accept the terms in the license agreement** option and click **Next**.
5. On the Edit Data screen, perform one of the following actions:
   - To source the configuration information from the local .ini file, perform the following actions:
     a. Keep the **Use default CC Elite Multichannel Desktop INI file for configuration information** check box selected and click **Next**.
     b. On the Configure CC Elite Multichannel Desktop screen, enter appropriate values in the fields and click **Next**.

        For information about the fields, see Configure CC Elite Multichannel Desktop field descriptions on page 27.
   - To source the configuration information from Configuration Server, clear the **Use default CC Elite Multichannel Desktop INI file for configuration information** check box, enter values in the fields, and click **Next**.

     For more information about the fields, see Edit Data field descriptions on page 26.
6. On the Choose Destination Location and Shortcut Option screen, perform the following actions:
   a. To install Call Center Elite Multichannel Desktop without a shortcut on the system desktop, clear the **Include the Avaya Aura Call Center Elite Multichannel Desktop shortcut on the desktop** check box.
   b. Select a location for the installation files.
   c. Click **Next**.
7. On the Ready to Install the Program screen, click **Install**.
8. Click **Finish**.

Edit Data field descriptions

Name	Description
Application Name	The name of the application for which Configuration Client requests the configuration information.
Server Name or IP Address	The name or IP address of Configuration Server where Configuration Client connects for the configuration information.
Port Number	The port number that must be used for communication between Configuration Server and Configuration Client if you do not want to use the TCP/IP port number. The default port number is 29091.

Table continues…

Name	Description
Configuration Filters	The configuration filter works with the application name to find a unique user and the configuration information of the user from Configuration Server. You can use the user name, machine name, or both as a configuration filter: • To use the network login name of the user as a configuration filter, type %%U in the **User** field. • To use the name of the system as a configuration filter, type %%M in the **Machine Name** field.

Configure CC Elite Multichannel Desktop field descriptions

Name	Description
Media Director IP	The IP address for Media Director.
Media Director Port	The port number for Media Director. The default port number for Media Director is 29087.
XML Server IP	The IP address for XML Server.
XML Server Port	The port number for XML Server. The default port number for XML Server is 29096.
License Director IP	The IP address for License Director. **Note:** When you enter the IP address for License Director, the Connect License Director parameter in the configuration file of the application changes from False to True.
License Director Port	The port number for License Director. The default port number for License Director is 29095.
Call Recording Service IP	The IP address for Call Recording Service.
Call Recording Service Port	The port number for Call Recording Service. The default port number for Call Recording Service is 29120.

Call Center Elite Multichannel Desktop configuration

After you install Call Center Elite Multichannel Desktop, you can start Call Center Elite Multichannel Desktop and configure various parameters through the Options dialog box.

Some parameters are unavailable in the Options dialog box and must be configured in the `ASGUIHost.ini` file. The default location of the `ASGUIHost.ini` file is `C:\Program Files \Avaya\Avaya Aura CC Elite Multichannel\Desktop\CC Elite Multichannel Desktop`.

Related links

Call Center Elite Multichannel Desktop configuration on page 136

Configuring Media Director

Procedure

1. Start Call Center Elite Multichannel Desktop.
2. Click **Tools** > **Options**.
3. In the Options dialog box, click the **Media Director** tab.
4. On the **Media Director** tab, configure the fields.
5. Click **Apply** and then click **OK**.

Media Director field descriptions

Name	Description
Media Director IP	The IP address for Media Director.
Media Director port	The port number for Media Director. The default port number for Media Director is 29087.
Media Proxy IP	The IP address for Media Proxy. The default IP address for Media Proxy is `localhost`.
Media Proxy port	The port number for Media Proxy. The default port number for Media Proxy is 29079.
Enable connection to Media Director	You can select this check box to make the multimedia functionality available within Call Center Elite Multichannel Desktop. **Note:** If you do not select this check box, you can use Call Center Elite Multichannel Desktop only for receiving the voice work items.
Connect to Media Director when agent logs in	You can select this check box to connect Call Center Elite Multichannel Desktop to Media Director when an agent logs into Avaya Communication Manager.

Table continues…

Name	Description
	Note: If you do not select this check box, Call Center Elite Multichannel Desktop automatically connects to Media Director immediately after Call Center Elite Multichannel Desktop starts.
Login to Media Director	If you select this check box, an agent automatically logs in to Media Director.
Channel Type	The communication channel that Media Director uses. The default communication channel is gtcp.

Configuring Presence

About this task

Using the **Presence** tab, you can view the activity and work status of an agent. To view the activity of an agent, specify the Station DN and Agent ID of the agent.

If you configure the fields on the **IDS View Client** tab, Call Center Elite Multichannel Desktop automatically displays a list of stations that Interaction Data Server - View monitors. Call Center Elite Multichannel Desktop also displays the agents logged into the switch that Interaction Data Server - View monitors.

Procedure

1. Start Call Center Elite Multichannel Desktop.
2. Click **Tools** > **Options**.
3. In the Options dialog box, click the **Presence** tab.
4. Click the **General** tab and configure the fields.
5. Click the **Update Intervals** tab and configure the fields.
6. Click **Apply** and then click **OK**.

Presence field descriptions

Name	Description
General Tab	
Enable error logging	You can select this check box to write the plug-in error information to an error log file.
Group name	The name of the group that you want to monitor. You must set the group names in ASContact Database.
Presence Display Mode	• Normal: This mode displays the normal statistical data.

Table continues…

Name	Description
	• Supervisor: This mode displays the detailed statistical data, which is unrelated to the everyday activities of an agent.
Station DN	The station number of the agent.
Agent ID	The unique identifier of the agent.
Maximum tabbed groups	The maximum number of tabs that you want to view. The default value is 20.
Maximum group members	The maximum number of group members that you want to view. The default value is 50.
Alternate line color in display window	The display color for the alternate lines in the presence window.
Time Display Style	• Seconds only: The time is displayed in seconds. • Minutes and seconds: The time is displayed in minutes and seconds.
Update Intervals Tab	
Update Last State Time Interval	The time after which the Presence window must refresh the information. This information includes the agent state in the Presence plug-in.
Contact Synchronize Interval	The time after which the contacts in the ASContact database must synchronize with the Presence window.

Configuring Session Notes

Procedure

1. Start Call Center Elite Multichannel Desktop.
2. Click **Tools** > **Options**.
3. In the Options dialog box, click the **Session Notes** tab.
4. On the **Session Notes** tab, configure the fields.
5. Click **Apply** and then click **OK**.

Session Notes field descriptions

Name	Description
File location	The path for saving and retrieving the session notes. The session notes are .rtf files. The default location for saving and retrieving the session notes is the `My Documents` folder of the logged in agent.

Table continues…

Name	Description
Enable automatic saving	The time after which the contents of the session notes are automatically saved to the specified path.
Spell check as you type	You can select this check box to enable the spelling check while typing the text.
Enable error logging	You can select this check box to write the plug-in error information to an error log file.

Configuring Telephony

Procedure

1. Start Call Center Elite Multichannel Desktop.
2. Click **Tools** > **Options**.
3. In the Options dialog box, click the **Telephony** tab.
4. On the **Telephony** tab, configure the fields.
5. Click **Apply** and then click **OK**.

Telephony field descriptions

Name	Description
Station DN	The phone number of the agent. Call Center Elite Multichannel Desktop associates with the phone number that you specify in this field.
Enable error logging	You can select this check box to write the plug-in error information to an error log file.
XML Server IP	The IP address for XML Server.
XML Server port	The port number for the primary XML Server. The default port number for the naming service is 29096.
Link	The XML interface link that Call Center Elite Multichannel Desktop can use to connect to Avaya Telephony Server and Avaya Communication Manager. You can click the ellipses (...) button next to this field and select the XML interface link from a list of configured XML interfaces.
Poll Agent status	You can select this check box to enable polling of the agent status.

Table continues…

Name	Description
Polling interval	The time after which Call Center Elite Multichannel Desktop polls the status of an agent. To reduce the network traffic, you must keep the polling interval as high as possible.
Poll Send All Calls status	You can select this check box to enable polling of the status of all calls that an agent sends.
Poll Call Forward status	You can select this check box to enable polling of the status of all calls that an agent forwards.
Poll Message Waiting status	You can select this check box to enable polling of the status of the waiting message at an agent station.
Polling interval	The time after which Call Center Elite Multichannel Desktop polls the status of an agent station. To reduce the network traffic, you must keep the polling interval as high as possible.
Enable trace	You can select this check box to send application error information to the Debug window.
Reconnect interval	The time for which the Telephony plug-in waits before retrying to connect to XML Server. The default value for this time is 15 seconds.

Configuring User

Procedure

1. Start Call Center Elite Multichannel Desktop.
2. Click **Tools** > **Options**.
3. In the Options dialog box, click the **User** tab.
4. Click the **General** tab and configure the fields.
5. Click the **Reason Codes** tab and configure the fields.
6. Click **Apply** and then click **OK**.

User field descriptions

Name	Description
General Tab	
Toolbar Position	• Top first: The first toolbar from the top. • Top second: The second toolbar from the top.

Table continues…

Name	Description
	• Bottom: The toolbar at the bottom of the screen.
Enable error logging	You can select this check box to write the plug-in error information to an error log file.
Use advanced login style	You can select this check box to force an agent to change the login from the **User** toolbar.
Agent ID	The login ID of the agent as configured in Avaya Communication Manager.
Agent password	The password associated with the login ID of the agent.
Login mode	The work mode that automatically sets to an agent after the agent logs into Call Center Elite Multichannel Desktop. • Auxiliary: This mode makes an agent unavailable to receive calls, so that the agent can complete the work unrelated to a call. For example, tea break. • After Call Work: This mode makes an agent unavailable to receive calls, so that the agent can complete the after call work. For example, filling a form or updating customer details. • Available: This mode makes an agent available to receive calls.
Available mode	The mode in which the system puts an agent after the current call ends. • Auto-In: The system automatically puts an agent in the Available mode after the current call ends. • Manual-In: The system automatically puts an agent in the After Call Work mode after the current call ends. To further receive calls, the agent must manually change the work mode to Available.
Voicemail DN	The phone number where the system must send all incoming calls when the **Send All Calls** button on the **User** toolbar is enabled. This DN connects the caller to the voice mail of the agent.
Display ACW button	If you select this check box, the **After Call Work (ACW)** button is displayed on the Call Center Elite Multichannel Desktop interface. **Note:** If you do not select this check box, the agent cannot use the ACW functionality.

Table continues…

Name	Description
Display AUX button	If you select this check box, the **AUX** button is displayed on the Call Center Elite Multichannel Desktop interface. **Note:** If you do not select this option, the agent cannot use the Auxiliary mode.
Disable ACW button when in After Call Work mode	If you select this check box, the **ACW** button on the Call Center Elite Multichannel Desktop interface disables when an agent is in the ACW mode. This option prevents an agent to extend the time spent in the ACW mode.
Disable AUX button when in Auxiliary mode	If you select this check box, the **AUX** button on the application interface disables when an agent is in the AUX mode. This option prevents an agent from changing the reason code selected while changing the work mode to Auxiliary.
Allow user-selected work mode	If you select this check box, the agent can select the Auto-In or Manual-In work mode while in the Available mode. **Note:** If you do not select this check box, Call Center Elite Multichannel Desktop automatically uses the default work mode that you set on the **General** tab.
Force reason code selection when changing to Auxiliary mode	If you select this check box, an agent is forced to select a reason code while changing to AUX mode. **Note:** If you do not select this check box, an agent can select a reason code. The agent can also click the **AUX** button and use the default reason code specified in the configuration file of the application.
Force reason code selection when logging out	If you select this check box, an agent is forced to select a reason code while logging out from the application. **Note:** If you do not select this check box, an agent can select a reason code. The agent can also click the **Logout** button and use the default reason code specified in the configuration file of the application.

Table continues…

Name	Description
Reason Codes Tab	
Mode	• For Logout Reason Codes, this field provides options to disable the reason codes or to use the reason codes when logging out. • For AUX Reason Codes, this field provides options to disable the reason codes or to use the reason codes when changing to AUX mode.

Adding Logout reason codes

Procedure

1. Start Call Center Elite Multichannel Desktop.
2. Click **Tools** > **Options**.
3. In the Options dialog box, click the **User** tab.
4. Click the **Reason Codes** tab.
5. In the **Logout Reason Codes** section, click the **Mode** arrow and select **Use reason codes when logging out**.
6. Click **Add**.
7. On the Add Reason Code dialog box, perform the following actions:
   a. In the **Reason code ID** field, enter a unique identifier for the reason code.
   b. In the **Reason code description** field, enter the description for the reason code.
   c. Click **OK**.
8. Repeat the steps 5 to 6 to add more Logout reason codes.

Note:

You can change a Logout reason code by clicking **Edit** and remove a Logout reason code by clicking **Remove**.

Adding Auxiliary reason codes

Procedure

1. Start Call Center Elite Multichannel Desktop.
2. Click **Tools** > **Options**.
3. In the Options dialog box, click the **User** tab.
4. Click the **Reason Codes** tab.
5. In the **Auxiliary Reason Codes** section, click the **Mode** arrow and select **Use reason codes when changing to Auxiliary**.

6. Click **Add**.
7. On the Add Reason Code dialog box, perform the following actions:
   a. In the **Reason code ID** field, enter a unique identifier for the reason code.
   b. In the **Reason code description** field, enter the description for the reason code.
   c. Click **OK**.
8. Repeat the steps 5 to 6 to add more Auxiliary reason codes.

Note:

You can change an Auxiliary reason code by clicking **Edit** and remove an Auxiliary reason code by clicking **Remove**.

Configuring Voice

Procedure

1. Start Call Center Elite Multichannel Desktop.
2. Click **Tools** > **Options**.
3. In the Options dialog box, click the **Voice** tab.
4. On the **Voice** tab, configure the fields.
5. Click **Apply** and then click **OK**.

Voice field descriptions

Name	Description
Toolbar Position	• Top first: The first toolbar from the top. • Top second: The second toolbar from the top. • Bottom: The toolbar at the bottom of the screen.
Enable error logging	You can select this check box to write the plug-in error information to an error log file.
Make call active when work item tab clicked	You can select this check box to activate a voice call when you click the tab for a voice work item. If you select this check box, an agent can answer an alerting call and resume a call that is on hold.

Table continues…

Name	Description
	Note: If you do not select this check box, an agent can click the **Work Item** tab and then click the **Answer** or **Unhold** button on the toolbar.
Automatically hold active call on dial	You can select this check box to automatically put the current call on hold when an agent dials another call.
Lock window layout	You can select this check box to lock the layout of your voice work item tabs and restrict an agent to change the size and position of a tab.
Bring forward work item if call answered by other means	You can select this check box to make a phone call that an agent answers from a physical phone or any other method outside this application active within Call Center Elite Multichannel Desktop.
Drop phantom call(s) when application closes	You can select this check box to drop the phantom calls from the physical phone of an agent when the agent closes Call Center Elite Multichannel Desktop.
Enable Smart Dial	You can select this check box to enable the Smart Dial functionality.
Dial local area code	You can select this check box to force Smart Dial to use the local area code specified in the phone number. **Note:** Smart Dial uses the local area code specified in the phone number even when it recognizes the same code.
Dial outside line access code	You can select this check box to force Smart Dial to use the outside line access code for all external phone calls. Selecting this option overrides any contradictory behavior set in a switch.
International access code	The code required to make an international call.
Long distance access code	The code required to make an international call.
Outside line access code	The code required to dial an outside line.
Minimum length for outside call	The minimum number of digits required to make an outside call.
Local exchange codes that require long distance access code	The local exchange codes that you want Smart Dial to automatically precede with the long distance access code. You can specify multiple exchange codes, provided you separate the exchange codes by a comma and a space.

Table continues…

Name	Description
	For example, 23, 27, 31.
Local country code	Your local country code.
Local area codes	Your local area code. If applicable, you can specify multiple local area codes, provided you separate the area codes by a comma and a space. For example, 9, 3, 4.
Call Recording Server IP	The host name or IP address for Call Recording Server.
Call Recording Server Port	The port number for Call Recording Server.

Configuring IDS View Client

Procedure

1. Start Call Center Elite Multichannel Desktop.
2. Click **Tools** > **Options**.
3. In the Options dialog box, click the **IDS View Client** tab.
4. On the **IDS View Client** tab, configure the fields.
5. Click **Apply** and then click **OK**.

IDS View Client field descriptions

Name	Description
Enable trace	You can select this check box to send the application error information to the Debug window.
Receive by multicast	You can select this check box to disable the IDS View Client for receiving data from the Interaction Data Server - View by multicasting.
Multicast IP	The IP address to multicast between applications. The default IP address is 239.29.9.67. When Call Center Elite Multichannel Desktop starts, it joins the multicast address and receives the packet information from Interaction Data Server - View.
Multicast port	The port number to multicast between applications. The default port number is 29084.
IDS View URL	The URL for connecting to Interaction Data Server - View. The URL must use the following format:

Table continues…

Name	Description
	`gtcp://localhost:29076/InteractionDataServiceView.rem`.
Enable error logging	You can select this check box to write the plug-in error information to an error log file.

Configuring Directory

Procedure

1. Start Call Center Elite Multichannel Desktop.
2. Click **Tools** > **Options**.
3. In the Options dialog box, click the **Directory** tab.
4. On the **Directory** tab, configure the fields.
5. Click **Apply** and then click **OK**.

Directory field descriptions

Name	Description
Database server name	The name of the server that contains ASContact Database.
Database name	The name of the database.
Database user name	The user name of the user whom you want to give access to the database. Before encryption, the default user name is CCEUser0.
Database user password	The password for the database user name.
Column display ID	The ID of the column that displays in the Directory window. The IDs that you get by clicking the **Get Column Display IDs** button indicate the column headings set in ASContact Database.
Enable initial default search	You can select this check box to force the application to display the contents based on the search criteria that an agent has used earlier. If an agent has not specified the search criteria in the last search, the Directory window displays all available contacts when the application starts.
Default search criteria	The search criteria that the application must use.

Configuring Enhanced Dial

About this task

Using the Enhanced Dial component, you can add agent information in a new outbound call or transfer call. Using this component, you can also conference a call. This component enhances the dialing so that the customer or another agent can get brief information about the caller.

Procedure

1. Start Call Center Elite Multichannel Desktop.
2. Click **Tools** > **Options**.
3. In the Options dialog box, click the **Enhanced Dial** tab.
4. In the **Before Dial** section, perform the following actions:
   a. Select the **Insert data only if existing UUI is empty** check box.

      This action adds the user-to-user information to a call when the UUI for the call is empty.

   b. Click the ellipses (...) button next to the **UUI Format** field to specify the call related information in the **UUI Format** field.

      The system displays the UUI Format Options dialog box containing a list of options.

      Note:

      The system displays the call related information when an agent makes an outbound call.

   c. Select an appropriate option from the list.
5. In the **Before Transfer** section, perform the following actions:
   a. Select the **Insert data only if existing UUI is empty** check box.

      This action adds the user-to-user information to a call when the UUI for the call is empty.

   b. Click the ellipses (...) button next to the **UUI Format** field to specify the call related information in the **UUI Format** field.

      The system displays the UUI Format Options dialog box containing a list of options.

      Note:

      The system displays the call related information when an agent transfers a call.

   c. Select an appropriate option from the list.
6. In the **Before Conference** section, perform the following actions:
   a. Select the **Insert data only if existing UUI is empty** check box.

This action adds the user-to-user information to a call when the UUI for the call is empty.

b. Click the ellipses (...) button next to the **UUI Format** field to specify the call related information in the **UUI Format** field.

The system displays the UUI Format Options dialog box containing a list of options.

Note:

The system displays the call related information when an agent conferences a call.

c. Select an appropriate option from the list.

Note:

The system displays the information specified in the **UUI Format** field when an agent transfers a call or conferences a call.

7. Click **Apply** and then click **OK**.

Configuring Quick Dial

About this task

Using the Quick Dial component, you can create quick dial buttons that the Desktop interface displays to an agent. An agent can click the quick dial buttons to quickly dial a contact. A quick dial button saves the time to type a phone number or search a contact in directory.

Note:

Clicking a quick dial button inserts the phone number of a contact in the **Dial** field. An agent can click the **Dial** button or press `Enter` key to begin the call.

Procedure

1. Start Call Center Elite Multichannel Desktop.
2. Click **Tools** > **Options**.
3. In the Options dialog box, click the **Quick Dial** tab.
4. On the **Quick Dial** tab, configure the fields.
5. Click **Apply** and then click **OK**.

Quick Dial field descriptions

Name	Description
Toolbar Position	• Top first: The first toolbar from the top.

Table continues…

Name	Description
	• Top second: The second toolbar from the top. • Bottom: The toolbar at the bottom of the screen. • Left: The toolbar at the left of the screen. • Right: The toolbar at the right of the screen.
Current Quick Dials	The list of quick dial buttons that are currently active.
Number	The phone number of the contact for which you want to create a quick dial button. If the Smart Dial functionality is enabled: • Do not use PSTN, STD, or IDD access codes in the phone numbers. • Use a single space, hyphen, or parentheses to separate area codes from the local number. For example, 3 4770576, 3-4770576, (3) 4770576, or (3)4770576. • Prefix all country codes with a plus (+) symbol. For example: +64 3 4770576, +64-3-4770576, +64 (3) 4770576 or +64(3)4770576. If the Smart Dial functionality is disabled: • Enter the phone numbers exactly the way the numbers need to be dialed. • Use PSTN, STD, or IDD access codes, the country codes, and the area codes in the phone numbers. For example: 14770576, 103 4770576 or 10064 3 4770576.
Name	The name of the contact for which you want to create a quick dial button.
UUI	The User to User Information (UUI) format option. Using the ellipses (...) button next to **UUI** field, you can select a format option from the **UUI Format Options** field. For more information, see Configuring Enhanced Dial on page 40.

Adding a new quick dial

About this task

Use this procedure to add a new quick dial through the Add New Quick Dial section on the **Quick Dial** tab.

Procedure

1. Start Call Center Elite Multichannel Desktop.

2. Click **Tools** > **Options**.
3. In the Options dialog box, click the **Quick Dial** tab.
4. Click the **Quick Dial** tab.
5. In the **Add New Quick Dial** section, enter appropriate values in the **Number**, **Name**, and **UUI** fields.

   For information about these fields, see Quick Dial field descriptions on page 41.
6. Click **Add**.

   The details of the new quick dial are added to the **Current Quick Dials** list.
7. Repeat the steps 4 to 5 to add more quick dial buttons.

Configuring Custom Buttons

About this task

Using the Custom Buttons component, you can create custom buttons on Call Center Elite Multichannel Desktop. When an agent clicks a custom button, the system executes the rule associated with the button. The Custom Buttons plug-in works with the Rules plug-in.

Procedure

1. Start Call Center Elite Multichannel Desktop.
2. Click **Tools** > **Options**.
3. In the Options dialog box, click the **Custom Buttons** tab.
4. On the **Custom Buttons** tab, configure the fields.
5. Click **Apply** and then click **OK**.

Custom Buttons field descriptions

Name	Description
Toolbar Position	• Top first: The first toolbar from the top. • Top second: The second toolbar from the top. • Bottom: The toolbar at the bottom of the screen.
Current Custom Buttons	The list of the custom buttons that are currently active.
Event name	The name of the event that the system runs when you click the custom button.

Table continues…

Name	Description
	In the Rules window, the event name displays in the **When** field. The format for the event name is `CustomButton.event_name`.
Button text	The text that you want to display on the custom button.
Icon name	The icon name for the custom button and the location of the icon file. The icon file must be copied to the main directory of Call Center Elite Multichannel. The icon that you specify in this field replaces the default icon of the custom button.

Adding a new custom button

Procedure

1. Start Call Center Elite Multichannel Desktop.
2. Click **Tools** > **Options**.
3. In the Options dialog box, click the **Custom Buttons** tab.
4. Click the **Custom Buttons** tab.
5. In the **Add New Custom Button** section, enter appropriate values in the **Event name**, **Button text**, and **Icon name** fields.

   For information about these fields, see Custom Buttons field descriptions on page 43.
6. Click **Add**.

   The details of the new custom button are added to the **Current Custom Buttons** list.
7. Repeat the steps 4 to 5 to add more custom buttons.

   Note:

   To create a rule and associate the rule with a custom button, see Rules management on page 64.

Configuring Email

Procedure

1. Start Call Center Elite Multichannel Desktop.
2. Click **Tools** > **Options**.
3. In the Options dialog box, click the **Email** tab.

4. On the **Email** tab, configure the fields.
5. Click **Apply** and then click **OK**.

Email field descriptions

Name	Description
Toolbar Position	• Top first: The first toolbar from the top. • Top second: The second toolbar from the top. • Bottom: The toolbar at the bottom of the screen.
Enable error logging	You can select this check box to write the plug-in error information to an error log file.
Always open attachments	You can select this check box to enable opening an attachment in an email. **Note:** If you select this check box, the system does not display the Save dialog box to save the attachment before opening it.
Enable external application	You can select this check box to enable opening an external application when you receive an email work item.
External application file name	The executable file name of the application that you want to open.
XML file name	The name of the XML file for sharing the work item information with the external application. For more information about the External Application Execute plug-in, see the *Avaya Aura® Call Center Elite Multichannel Desktop User Guide*.

Configuring Simple Messaging

Procedure

1. Start Call Center Elite Multichannel Desktop.
2. Click **Tools** > **Options**.
3. In the Options dialog box, click the **Simple Messaging** tab.
4. On the **Simple Messaging** tab, configure the fields.
5. Click **Apply** and then click **OK**.

Simple Messaging field descriptions

Name	Description
Spell check as you type	You can select this check box to enable the spelling check while typing a message.
Close disconnected work items	You can select this check box to close the disconnected simple messaging work items.
Delay seconds	The delay interval in seconds.
Activate window on work item accepted	
Enable error logging	You can select this check box to write the plug-in error information to an error log file.
Document Activity Indication	You can select the **Scroll** or **Fade** options to indicate the document activity.
Indication Interval msec	The indication interval in milliseconds.
Enable external application	You can select this check box to enable opening an external application when you receive an email work item.
External application file name	The executable file name of the application that you want to open.
XML file name	The name of the XML file for sharing the work item information with the external application. For more information about the External Application Execute plug-in, see the *Avaya Aura® Call Center Elite Multichannel Desktop User Guide*.
Agent Specific Welcome Message	The welcome message that you want to display to the customer. The system displays the welcome message to the customer when an agent accepts the work item from the customer.

Configuring HTML Editor

Procedure

1. Start Call Center Elite Multichannel Desktop.
2. Click **Tools** > **Options**.
3. In the Options dialog box, click the **HTML Editor** tab.
4. Select the **Enable error logging** check box to write the plug-in error information to an error log file.
5. Click **Apply** and then click **OK**.

Configuring Language

About this task

Using the Language component, you can change the language for the Call Center Elite Multichannel Desktop interface.

Procedure

1. Start Call Center Elite Multichannel Desktop.
2. Click **Tools** > **Options**.
3. In the Options dialog box, click the **Language** tab.
4. In the **Language** field, select a language for the Call Center Elite Multichannel Desktop interface.

   Note:

   You must restart Call Center Elite Multichannel Desktop to apply the selected language.
5. Click **Apply** and then click **OK**.

Configuring Wallboard

About this task

The information on the Wallboard plug-in depends on a connection to IDS View Client. Therefore, you must configure the IDS View Client before configuring the Wallboard plug-in. For more information, see Configuring IDS View Client on page 38.

Procedure

1. Start Call Center Elite Multichannel Desktop.
2. Click **Tools** > **Options**.
3. In the Options dialog box, click the **Wallboard** tab.
4. Click the **General** tab and configure the fields.

   These fields let you configure the look and feel of Wallboard.
5. Click the **Agent** tab and configure the fields.

   These fields let you configure the agent information that Wallboard displays for an agent.

   Note:

   If you have configured the IDS View Client, you can view a list of agents which are logged into Avaya Communication Manager and are monitored by Interaction Data Server - View.
6. Click the **VDN** tab and configure the fields.

These fields let you configure the VDN information that Wallboard displays for a particular VDN.

Note:

If you have configured the IDS View Client, you can view a list of VDNs which are monitored by Interaction Data Server - View.

7. Click the **Queue** tab and configure the fields.

   These fields let you configure the information for a particular skill, split group, or multimedia queue.

   Note:

   If you have configured the IDS Voice and Presence, you can view a list of split groups, skills, and queues which are monitored by Interaction Data Server - Voice and Presence.

8. Click the **Alerts** tab and configure the fields.

   These fields let you configure the Wallboard notifications. These notifications display an alert message on reaching a numeric threshold level related to the numeric data variables in the **Agent**, **VDN**, or **Queue** tab.

9. Click **Apply** and then click **OK**.

Wallboard field descriptions

Name	Description
General Tab	
Marquee Style	• Right to Left: To scroll information from right to left. • Left to Right: To scroll information from left to right. • Still: To display information without moving from left to right or right to left.
Marquee Speed	The speed for scrolling the information on the Wallboard. You can reduce the scrolling speed by moving the slider to the left and increase the scrolling speed by moving the slider to the right.
Display text size	The size of the text that displays on the Wallboard.
Text color	The color of the text that displays on the Wallboard.
Background color	The background color for the Wallboard window.
Time Display Style	• Seconds only: The time is displayed in seconds. • Minutes and seconds: The time is displayed in minutes and seconds.

Table continues…

Name	Description
Enable error logging	You can select this check box to write the plug-in error information to an error log file.
Connect to IDS View	You can select this check box to connect Wallboard to IDS View Client for getting the information.
Suppress IDS connection messages	You can select this check box to disable displaying the messages when Wallboard connects to IDS View Client.
Agent Tab	
Agent list	The list of agents for which you want to display information on Wallboard. After you select an agent, you must configure the agent display information in the table for list of agent details. For more information, see Agent details on page 50.
Agent ID	The ID of the agent whom you want to add to the agent list.
Display always	You can select this check box to display the agent information on startup. **Note:** If you do not select this check box, the system displays the agent information on Wallboard after startup.
VDN Tab	
VDN list	The list of VDNs for which you want to display the information on Wallboard. After you select a VDN, you must configure the VDN display information in the table for list of VDN details. For more information, see VDN details on page 51.
Display always	You can select this check box to display the VDN information on startup. **Note:** If you do not select this check box, the system displays the VDN information on Wallboard after startup.
Queue Tab	
Queue list	The list of queues (skill, split group, or multimedia queue) for which you want to display the information on Wallboard. After you select a queue, you must configure the queue display information in the table for list of

Table continues…

Name	Description
	queue details. For more information, see Queue details on page 52.
Queue ID	The ID of the queue that you want to add to the queue list.
Display always	You can select this check box to display the queue information on startup. **Note:** If you do not select this check box, the system displays the queue information on Wallboard after startup.
Alerts Tab	
Current alerts	The list of active alerts.
Alert name	The name for the alert.
Level	A value that sets the numeric threshold to activate an alert. For example, you can enter a value 10 to display an alert for 10 incoming calls.
Weight	A value that sets a relative importance of the alerts that you set. The higher value indicates more importance to an alert.
Text color	The color for the text on an alert.
Background color	The background color for the alert window.
Marquee Style	The scrolling effect for the text on the alert.

Agent details

Name	Description
Agent ID	The ID of the agent.
Agent name	The name of the agent.
Station DN	The station number of the agent.
Split / skill	The skill or split groups where the agent is logged in.
Agent state	The current state of the agent, such as Auto in, Manual in, Logged out, Auxiliary (AUX), and After Call Work (ACW). **Note:** If the agent is on phone, Wallboard displays the agent state as On call.

Table continues…

Name	Description
Agent work mode	The current work mode of the agent, such as Auto in, Manual in, Logged out, AUX, and ACW.
Agent talk state	The current talk state of the agent, such as Idle or On call.
Reason code	The last reason code that the agent used.
Pending work mode	The pending work mode of the agent.
Calls per hour	The total number of calls that the agent received during the current statistical interval.
Average talk time	The average length of time that the agent spent in a call during the current statistical interval.
Average AUX time	The average length of time that the agent spent in the Auxiliary mode during the current statistical interval.
Average Available time	The average length of time in seconds that the agent spent in Available mode during the current statistical interval.
Average ACW time	The average length of time that the agent spent in the After Call Work (ACW) mode during the current statistical interval.
Shift average AUX time	The average length of time that the agent spent in the Auxiliary mode during a shift.
Shift average Available time	The average length of time that the agent spent in the Available mode during a shift.
Shift average ACW time	The average length of time that the agent spent in the After Call Work (ACW) mode during a shift.
Shift average talk time	The average length of time that the agent spent in a call during a shift.
Shift total calls	The total number of calls that the agent handled during a shift.

VDN details

Name	Description
VDN number	The extension number of the VDN.
VDN name	The name of the VDN.
Calls waiting	The number of calls waiting for a specific VDN.
Longest call	The length of time for which the first call waits in a queue.

Table continues…

Name	Description
Average talk time	The average length of time during the current statistical interval for which an agent talks to a caller on a specific VDN.
Average wait time	The average length of time during the current statistical interval for which a caller calling to a VDN waits before getting answer to the call.
Abandoned calls	The number of calls coming to a VDN abandoned during the current statistical interval.
Average abandon time	The average length of time during the current statistical interval for which a caller calling to a VDN waits before the call abandoned.
Shift abandoned calls	The number of calls coming to a VDN abandoned during a shift.
Shift average abandon time	The average length of time during a shift for which a caller calling to a VDN waits before the call abandoned.
Shift average talk time	The average length of time during a shift for which an agent logged into a VDN talks to a caller.
Shift average wait time	The average length of time during a shift for which a caller calling to a VDN waits before getting answer to the call.
Shift service level	The percentage of calls coming to a VDN answered within the service level time specified in Interaction Data Server - Voice and Presence.
Shift total calls	The number of calls made to a VDN during a shift.

Queue details

Name	Description
Queue ID	• Queue: The unique identifier of a multimedia queue. • Split/skill: The extension number of a skill or a split group.
Queue name	• Queue: The name of a multimedia queue. • Split/skill: The name of a skill or a split group.
Agents staffed	• Split/skill: The total number of agents logged into a skill or a split group. This parameter is not applicable for multimedia.
Agents available	• Split/skill: The number of agents logged into a skill or a split group that are available to take calls.

Table continues…

Name	Description
	This parameter is not applicable for multimedia.
Interactions waiting	• Queue: The total number of work items that are to be processed by a queue and the work items that are suspended by an agent. • Split/skill: The total number of interactions waiting at a skill or a split group.
Oldest interaction	• Queue: The length of time for which the oldest work item waited for a service. This length of time does not include work items that the agent suspends for processing in future. This parameter is not applicable for splits and skills.
Total interactions in progress	• Queue: The total number of work items delivered to agents for processing. This number includes work items that an agent has not yet accepted. This parameter is not applicable for splits and skills.
Total interactions arrived this shift	• Queue: The total number of new work items arrived at a queue during a shift. This parameter is not applicable for splits and skills.
Total interactions arrived this interval	• Queue: The total number of new work items arrived at a queue during the current statistical interval. • Split/skill: The total number of calls made to a split group or a skill during the current statistical interval.
Total interactions arrived this hour	• Queue: The total number of new work items arrived at a queue in a current hour. This parameter is not applicable for splits and skills.
Total interactions arrived last hour	• Queue: The total number of new work items arrived at a queue in a last hour. **Note:** The last hour is an hour earlier than the current hour. For example, if the current hour is 9 am to 9.37 am, the previous hour is 8 am to 9am.

Table continues…

Name	Description
	This parameter is not applicable for splits and skills.
Total interactions suspended	• Queue: The total number of work items suspended for a queue during the shift defined in IDS Multimedia. This parameter is not applicable for splits and skills.
Total interactions suspended this interval	• Queue: The total number of work items suspended for a queue during the current statistical interval. This parameter is not applicable for splits and skills.
Average wait time	• Queue: The average length of time during the shift defined in IDS Multimedia for which work items arrived to this queue wait before being answered. This time does not include the length of time in which a work item suspends. • Split/skill: The average length of time during the current statistical interval for which callers calling to a skill or a split group wait before getting answer to the calls.
Average handle time	• Queue: The average length of time during the shift defined in IDS Multimedia for which work items arrived to a queue are active at an agent desktop before being closed. This time does not include work items that are open. • Split/skill: The average length of a call to a split group or a skill during the current statistical interval.
Total abandoned interactions	• Queue: The number of work items that arrived to a queue during the shift defined in IDS Multimedia and got abandoned before processing. This value is valid only for session-based media stores. For example, Web chat and MSN. • Split/skill: The total number of calls that arrived to a skill or a split group during the current statistical interval and got abandoned.
Average abandon time	• Queue: The average length of time during the shift defined in IDS Multimedia for which work items arrived to a queue wait before getting abandoned.

Table continues…

Name	Description
	This value is valid only for session-based media stores. For example, web chat and MSN. • Split/skill: The average length of time during the current statistical interval for which callers calling to a skill or a split group wait before the calls get abandoned.
Shift abandoned calls	• Split/skill: The total number of calls that arrived to a skill or a split group during the shift defined in IDS Voice and Presence and got abandoned. This parameter is not applicable for multimedia.
Shift average abandoned time	• Split/skill: The average length of time during the shift defined in IDS Voice and Presence for which callers calling to a skill or a split group wait before the call get abandoned. This parameter is not applicable for multimedia.
Shift average talk time	• Split/skill: The average length of time during the shift defined in IDS Voice and Presence for which an agent logged into a skill or a split group talks to callers. This parameter is not applicable for multimedia.
Shift average wait time	• Split/skill: The average length of time during the shift defined in IDS Voice and Presence for which callers calling to a split group or a skill wait before the call is answered. This parameter is not applicable for multimedia.
Shift service level	• Split/skill: The percentage of calls to a split group or a skill that are answered within the service level time specified in the IDS Voice and Presence. This parameter is not applicable for multimedia.
Shift total calls	• Split/skill: The total number of calls made to a skill or a split group during the shift defined in IDS Voice and Presence. This parameter is not applicable for multimedia.

Activating an alert

Procedure

1. Start Call Center Elite Multichannel Desktop.
2. Click **Tools** > **Options**.
3. In the Options dialog box, click the **Wallboard** tab.
4. On the **Wallboard** tab, click the appropriate tab to set an alert.

5. From the Agent, VDN, or Queue list, select an ID.
   a. From the corresponding details list, select a field to which you want to apply an alert.
   b. Click **Add Alert**.
   c. Click the **Alert name** arrow and select an alert name.
   d. Click **OK** to apply the selected alert.

      Note:

      You cannot add an alert to the non-numeric fields.

      Any alert value that you apply to a time-related field, defines the threshold only in seconds. For example, you must set the level to 180 seconds to set 3 minutes.

Configuring Microsoft Dynamics CRM

Procedure

1. Close all open applications.
2. **(Optional)** Open the `ASGUIHost.ini` file in a text editor, such as Notepad.
3. **(Optional)** In the **Plug In Assembly List** section, remove the semicolon from the text `;Microsoft Dynamics CRM Gui Plugin`.
4. **(Optional)** Save and close the `ASGUIHost.ini` file.
5. Start Call Center Elite Multichannel Desktop.
6. Click **Tools** > **Options**.
7. In the Options dialog box, click the **Microsoft Dynamics CRM Connector** tab.
8. Click the **Main** tab and configure the fields.

   These fields let you configure the options to connect to your Microsoft Dynamics CRM environment.
9. Click the **Identification** tab and configure the fields.

   These fields let you specify ASContact Database that Call Center Elite Multichannel Desktop can search after you receive a work item.

   If you select an ASContact Database, you must transfer or synchronize the contact and the account data from your Microsoft Dynamics CRM database to ASContact Database. Using the **Identification** tab, you can also control the types of work items that Call Center Elite Multichannel Desktop can search to match the details with an existing database record.

   To search a Microsoft Dynamics CRM customer record, you can use the **Directory** tab in the Call Center Elite Multichannel Desktop interface. The **Directory** tab offers more benefits over the Microsoft Dynamics CRM database. In the **Directory** tab, you can search customer records by many data types, such as name, phone number, and email address. However, in

Microsoft Dynamics CRM, you can only search by name. The record search in ASContact Database is faster than the record search in the Microsoft Dynamics CRM database.

10. Click the **Contact DB** tab and configure the fields.

    These fields let you define an action that Call Center Elite Multichannel Desktop performs when the details of an inbound work item match with the details of a single or multiple contacts in ASContact Database.

    Using this tab, you can also define an action that Call Center Elite Multichannel Desktop performs when the details of an inbound work item do not match with any of the records in ASContact Database. In such case, you can define not to perform any action or open a blank account record or contact record.

    Note:

    You can view this tab only if you select ASContact Database in the **Identification** tab.

11. Click the **Microsoft Dynamics CRM** tab and configure the fields.

    These fields let you select the options to search the Microsoft Dynamics CRM accounts, Microsoft Dynamics CRM contacts, or both when an inbound work item arrives.

    Note:

    You can view the **Microsoft Dynamics CRM** tab only if you select the **MS CRM Directly** option in the **Identification** tab.

12. Click the **Synchronization** tab and configure the fields.

    These fields let you synchronize the entire data of your Microsoft Dynamics CRM database with ASContact Database that Call Center Elite Multichannel Desktop uses to store contact information.

    After the synchronization, the Microsoft Dynamics CRM Phonebook Synchronizer application synchronizes the changes in the Microsoft Dynamics CRM accounts with the records in ASContact Database.

13. Click **Apply** and then click **OK**.

Microsoft Dynamics CRM field descriptions

Name	Description
Main Tab	
Name	The name of the Microsoft Dynamics CRM server.
Domain	The domain in which the Microsoft Dynamics CRM server is present.
CRMService URL	The URL of the file where the CRM service file is available.
MetadataService URL	The URL of the file where the metadata service file is available.

Table continues…

Name	Description
Login using default credentials	You can select this check box to use the default user name and password to access Microsoft Dynamics CRM server.
User name	The user name to access the Microsoft Dynamics CRM server.
Password	The password to access the Microsoft Dynamics CRM server.
Identification Tab	
Inbound Contact Identification	The following are the contact identification options: • Contact Database • Microsoft Dynamics CRM Directly • Disable, only use Rules
Enable Identification Channels	The channels for which you want to search the database when you receive a work item. The following are the available options: • Inbound email • Inbound preview contact • Inbound simple messaging • Inbound voice
Contact DB Tab	
Server	The name of the database server.
Name	The name of the database. The default name is ASContact.
User name	The user name to access the database.
Password	The password to access the database.
Test Connection	You can click **Test Connection** to test whether Call Center Elite Multichannel Desktop successfully connects to the specified database server.
No Match Action	An action that must be performed when the details from a work item do not match with any of the contact records in the database.
Single Match Action	An action that must be performed when the details from a work item matches with a contact in the database.
Multiple Match Action	An action that must be performed when the details from a work item matches with multiple contacts in the database.
MS CRM Tab	

Table continues…

Name	Description
Look MS CRM Account	Using this field, you can add the fields for the CRM accounts. When you receive a work item, the details of the work item are matched with the details in the Microsoft Dynamics CRM account fields that you added. You must select an account field and configure values for the following fields: • No Match Action • Single Match Action • Multiple Match Action
Look MS CRM Contact	Using this field, you can add the fields for the CRM contacts. When you receive a work item, the details of the work item are matched with the details in the Microsoft Dynamics CRM contact fields that you added. You must select a contact field and configure values for the following fields: • No Match Action • Single Match Action • Multiple Match Action
Synchronization Tab	
Synchronize now	When you click this button, the system starts the synchronization. The time required for synchronizing depends on the number of records available in the Microsoft Dynamics CRM database. For example, synchronizing 70,000 records can take up to 20 minutes.

Configuring DMCC

Procedure

1. Start Call Center Elite Multichannel Desktop.
2. Click **Tools** > **Options**.
3. In the Options dialog box, click the **DMCC Settings** tab.
4. On the **DMCC Settings** tab, configure the fields.
5. Click **Apply** and then click **OK**.

DMCC field descriptions

Name	Description
Toolbar Position	• Top first: The first toolbar from the top. • Top second: The second toolbar from the top. • Bottom: The toolbar at the bottom of the screen. • Left: The toolbar at the left of the screen. • Right: The toolbar at the right of the screen.
IP Address	The IP Address for AES Server.
Port	The port number for AES Server.
User name	The user name for logging in to AES Server.
Password	The password for logging in to AES Server.
Use secure communications	You can select this check box for a secured link to connect to AES Server.
Ignore certificate errors	You can select this check box to ignore the AES Certificate errors for secure link connection.
Name	The name of the Communication Manager from TLink.
IP Address	The IP address for Communication Manager.
Media mode	The following are the available media modes: • None • Telecommuter • Client Mode • Server Mode
RTP IP Address	The IP address for the local system.
RTP Port	The port number for the local system. **Note:** The **RTP IP Address** and **RTP Port** fields are enabled only if you select Client Mode in the **Media mode** field.
Telecommute number	The station number for Telecommuter.
Dependency mode	One of the DMCC modes.
Number	This field remains disabled.
Password	The password configured in Communication Manager for the station.
Add Vu Stats data to wallboard	You can click this check box to provide statistics from DMCC interface of AES Server.

Table continues…

Name	Description
Add Queue data to wallboard	You can click this check box to provide statistics of DMCC interface for Queue data of AES Server.

.Net Remote Connection

The Call Center Elite Multichannel applications and services that use .Net remote connection automatically uses the `ASGUIHost.exe.config` configuration file to control the remote connection. This file specifies the gtcp channel and the default port number.

Note:

You must not change any information in this file.

Language customization

The custom language control uses the `StringDataDoc.txt` file. This file is a sample text file that contains strings in English. Call Center Elite Multichannel uses the strings from this file.

By default, the `StringDataDoc.txt` file is placed at `C:\Program Files\Avaya\Avaya Aura CC Elite Multichannel\Desktop\CC Elite Multichannel Desktop`.

The following files are placed at this location:

- StringDataDoc.txt (English)
- StringDataDocCh.txt (Chinese: Simplified)
- StringDataDocFr.txt (French)
- StringDataDocGm.txt (German)
- StringDataDocIta.txt (Italian)
- StringDataDocJp.txt (Japanese)
- StringDataDocKr.txt (Korean)
- StringDataDocPort.txt (Portuguese: Brazilian)
- StringDataDocRu.txt (Russian)
- StringDataDocSp.txt (Spanish: Castilian)
- StringDataDocSpCol.txt (Spanish: Colombian)
- StringDataDocTradCh.txt (Chinese: Traditional)

You can use any of these files to create your custom language.

Creating a custom language

Procedure

1. Browse to the folder containing the text file that you want to use for creating your customized language.
2. Perform one of the following actions:
   - To use the strings from the English language, open the `StringDataDoc.txt` file.
   - To use the strings from a language other than English:
     a. Rename the `StringDataDoc.txt` file to some other name, such as `StringDataDocEng.txt`.
     b. Rename the text file of your selected language to `StringDataDoc.txt`.

        For example, if you have selected the `StringDataDocRu.txt` file, rename this file to `StringDataDoc.txt`.
     c. Open the renamed `StringDataDoc.txt` file.

        Note:

        When you open the `StringDataDoc.txt` file, you can view the order of parameters as LANGUAGE, LOCALE, FONT1 to FONT4, and strings.
3. In the LANGUAGE parameter, replace the existing language name with the new language name.

   Note:

   If you are modifying an existing language to suit your dialect, do not change the language name.
4. In the LOCALE parameter, change the locale appropriately to suit your new language.

   Note:

   You can specify the locale in Hex format. For example, you can use 0 x 0409 for 1033. When you change the locale, ensure that your system has appropriate operating system and character sets for that language to work.
5. Change the fonts appropriately.

   Note:

   You must specify at least one font. The application ignores more than four fonts.
6. Change the strings appropriate to your language and locale.

Note:

In the file, you must change the strings only for the existing numbers. The language control does not recognize the new numbers and strings that you add in the file.

7. Save the file.

Selecting a custom language for an agent

Procedure

1. Start Call Center Elite Multichannel Desktop.
2. Click **Tools** > **Options**.
3. In the Options dialog box, click the **Language** tab.
4. Click the **Language** arrow and perform one of the following actions:
   - If the option for your custom language is available in the list, select the option and click **OK**.
   - If you see the **Custom Unknown** option in the list, check for the errors in the text file.

   The following are the possible errors in the text file:
   - The text file does not have a language name or you have deleted the language keyword.
   - The text file does not have the name `StringDataDoc.txt`.
   - The text file is not at the correct location where the application executable is available.
   - The text file is not in the correct format.

Customizing a language for Call Center Elite Multichannel Desktop

Procedure

1. Open the `ASGUIHost.ini` configuration file in a text editor, such as Notepad.
2. Specify your custom language in the Language Parser parameter.

   You must precede the language name with the word `Custom`. For example: `Custom Japanese` for the Japanese language.
3. Restart Call Center Elite Multichannel Desktop to display the text on the interface in the new language.

   If Call Center Elite Multichannel Desktop does not display the fonts appropriately, verify that your system has the appropriate operating system and character sets for your language to work.

Rules management

In Call Center Elite Multichannel Desktop, you can use the Rules window to create the rules to perform actions on the call events that meet specified criteria. For example, you can create a rule to transfer the calls coming from a specific phone number to the voice mail.

When you create a rule by specifying different parameters, Call Center Elite Multichannel Desktop understands that rule as a complete statement. For example, when a certain event occurs and a call property matches with the mentioned value, you must perform the mentioned action and continue the rules processing, go to another rule, or stop. The configuration file of Call Center Elite Multichannel Desktop stores the rules as simple text strings.

In the Rules window, you can create multiple rules for a call event. Rules Plug-in processes the rules in an order in which the rules are listed in the Rules window. After a correct match, the specified action is performed and no further rules are processed. You can change the processing order anytime.

This rule functionality is similar to the email rules functionality in Microsoft Outlook.

For example:

- Rule1: When an agent receives an external phone call, the following rule forces the application to create an inbound Microsoft Dynamics CRM phone call activity and to display the activity.

```
When Voice.WIDelivered And CallerDN > Nothing And CallerDN > 99999 Do
ReturnEvent MSCRM.CreateThenScreenpop,phonecall,description|directioncode|
from|phonenumber|subject|to,%UserEnteredCode%|0|%CallerDN%|%CallerDN%|%UUI
%|%CalledDN% Then Continue
```

- Rule2: When an agent receives an external phone call, the following rule forces the application to look up a contact in the contact directory, try to match the phone number, and to display a message on the screen.

```
When Voice.WIDelivered And CallerDN > Nothing and CallerDN > 99999 Do
ReturnEvent MSCRM.LookupThenScreenpop,contact,mobilephone|telephone1|
telephone2|telephone3,%CallerDN%,1,1,2,1 Then CONTINUE.
```

For more information about how to create rules using keywords and events available in the Rules window, see *Avaya Aura® Call Center Elite Multichannel Desktop User Guide*.

Creating a rule

Procedure

1. Start Call Center Elite Multichannel Desktop.
2. Click **Tools** > **Rules**.
3. In the Rules window, click **New**.

4. Create a trigger.

   Click the **When** arrow and select an event for which you want to execute the rule.

5. Create a filter.

   a. Select the **Always** check box if you do not want to set a condition for executing the rule for a selected event.

      The system disables the **And** field. Selecting the **Always** check box also indicates that the rule you select is always executed when the selected event occurs.

   b. Clear the **Always** check box to set a condition for executing the rule when a selected event occurs.

   c. In the **And** field, enter a condition for the rule or click the ellipses (...) button to select a condition from the **Possible rule conditions** field.

      When you select a condition, the system displays a key and value pair for the selected condition in the **And** field. The system compares the keys with the literal strings or the keyword Nothing.

      In the **And** field, you can add multiple conditions and combine them with the And clause.

      For example: `CallerDN = 4567 And UUI > Nothing`.

      Note:

      If you enter an invalid condition, the system displays an error icon on the button next to the **And** field.

   d. To compare a key with literal string, enter the required literal string after the keyword operator.

      For information about keys, values, and keyword operators, see *Avaya Aura® Call Center Elite Multichannel Desktop User Guide*.

6. Set an action for selected event and conditions.

   a. Click the **Do** arrow and select an action.

      The system performs the selected action when the selected event and conditions are satisfied.

      Based on an action you select, the application displays the related text fields to provide supporting attributes to an action. Some actions have a single attribute and some actions have multiple attributes.

      For example:

Action	Attribute 1	Attribute 2
Open	Target: Enter a file or application that you want to open.	Command Line Arguments: Enter the command line arguments.
Alert	Caption: Enter the text that displays on the title bar of the Alert dialog box.	Message: Enter the text that displays on the Alert dialog box.

b. Enter the appropriate values in the respective text fields.

7. Set the work that a rule must do after performing an action.
   a. Click the **Then** arrow and select an appropriate action for the rule to perform when the selected conditions are matched.

      The available options are: Continue, GotoRule, Stop.

      The **Warning** tab at the bottom of the Rules window displays warning messages when you select an option, which is invalid for the rule you select.

   b. Click the **Else** arrow and select an appropriate action for a rule to perform when the selected conditions does not match.
8. Click **OK**.

   Ensure that the application creates a valid rule. The **Warning** tab at the bottom of the Rules window displays the warning messages if you create an invalid rule.

   A valid rule displays in the left panel of the Rules window.
9. Repeat the procedure to create more rules.
10. Select a rule and click **Up** and **Down** buttons to change the sequence in which the application searches the rules.

    Note:

    Rules Plug-in processes the rules in an order in which the rules are listed in the Rules window. After finding a match, a rule is executed and no further rules are processed.
11. Select a rule and click **Delete** to delete a rule.

Rule storage

The configuration file of Call Center Elite Multichannel Desktop stores a rule that you create in Rules window.

The configuration file stores each rule on a separate line. Rules Plug-in accesses the configuration file to execute the rule that matches the specified criteria.

Note:

You must enter the event parameters with appropriate uppercase and lowercase letters and without spaces between the words. For more information about the event parameters, see *Avaya Aura® Call Center Elite Multichannel Desktop User Guide*.

Device Media Call Control (DMCC)

DMCC overview

Call Center Elite Multichannel Desktop connects to the Communication Manager deskphone so that the feature buttons of both products are synchronized. To connect to the Communication Manager deskphone, Call Center Elite Multichannel Desktop uses DMCC.

For example, EC500 pushed on Avaya H323 or the DCP deskphone configured on Communication Manager appears on Call Center Elite Multichannel Desktop.

You can put the DMCC buttons on the standard top or bottom toolbar or on the left or right toolbar. The DMCC plug-in can provide Vu-Stats and Queue information to the Wallboard plug-in. Using Communication Manager, you can configure the **Feature** button assignments for each station.

When you use DMCC, a media stream goes to multiple clients. DMCC registers a client application to control the deskphone and get the media at the same time without unregistering the physical phone.

DMCC modes

Main mode

The Main mode implies that the other endpoints can register with Communication Manager using the same extension. The Main endpoint is not dependent on the registration of any other IP endpoints using the same extension. After the endpoint joins the call, the endpoint can perform all related functions, such as Talk and Listen. You can associate only one Main registrant with an extension.

If the IP endpoint goes through a link bounce, Communication Manager can view the call-present flag only from the Main mode during registration. If you implement the **share-talk** button, the Main mode can block other registrants from taking over the talk-time slot. The Main registrant can also take over the talk-time slot from the endpoints registered in the DEPENDENT/INDEPENDENT dependency mode.

Independent mode

In the Independent mode, the endpoints can perform the following functions even when the Main IP endpoint is not registered:

- Receive call
- Make call

- Talk
- Listen

In the Independent mode, the endpoint has the capabilities of the Main registrant until the Main endpoint registers. When the Main mode registers or re-registers, the independent registrant is put in the Listen-only mode and the Main mode gets the talk privilege. The Main mode has precedence over the Independent mode. The Independent mode is enforced even if the user is in a call.

Note:

If you enable the **share-talk** button, the talk-time slot remains with the Independent registrar if the registrar activates the **share-talk** button. If the Main mode wants to take over the talk-time slot, then the Main mode must activate this button.

Using the Independent mode, the IP endpoints can specify when the endpoints want to make or receive calls even if the main endpoint is unavailable in the event of a network failure. The Independent mode is useful when a call recording application uses the service observing feature with two registrations for high availability. One registration registers in the Main mode, and the other registration registers in the Independent mode. In this example, the registrant uses Communication Manager to either answer calls or make calls after registering.

Dependent mode

In the Dependent mode, an IP endpoint can register only when another endpoint is registered to Communication Manager using the same extension in the Main mode. IP endpoints can register if the extension is with a DCP phone and the DCP phone is in service. During a call, the IP endpoint is always in the Listen-only mode.

DMCC features

Call Center Elite Multichannel supports the following DMCC features:

- EC500
- Malicious call trace activation
- Malicious call trace controller
- Send all calls
- Call forward
- Auto dial
- Stroke count
- Work codes
- Account
- Vu-Stats
- Headset
- Supervisor Assist

- Busy indicator
- User-to-user information
- VDN of origin repeat
- Mute far-end
- Hunt group night service
- Queued calls
- Oldest queued time
- Bridged appearance

Microsoft Dynamics CRM integration

As a Microsoft Business Solutions CRM user, you must configure the following plug-ins to use the multimedia functionality of Call Center Elite Multichannel, so that you can distribute Microsoft Dynamics CRM activities to your call center agents:

- Microsoft Dynamics CRM Gui Plug-in of Call Center Elite Multichannel Desktop
- Microsoft Dynamics CRM Svc Plug-in of Preview Contact Media Store

For more information, see Configuring Microsoft Dynamics CRM on page 56.

For information about how to configure Microsoft Dynamics CRM Svc Plug-in and set up a program for Microsoft Dynamics CRM activities, see *MS CRM GUI Plug-in User Guide*.

For information about how to customize Microsoft Dynamics CRM Server and install Microsoft Dynamics CRM Phonebook Synchronizer, see *MS CRM GUI Plug-in User Guide*. The customization of Microsoft Dynamics CRM Server is required for displaying the dial buttons on the Microsoft Dynamics CRM web pages.

Integrating IronPython script

About this task

Using Python Breakout Plug-in, developers can invoke IronPython scripts when Call Center Elite Multichannel Desktop events trigger. Using this procedure, you can map an IronPython script to a Call Center Elite Multichannel Desktop event.

Procedure

1. Close all open applications.
2. **(Optional)** Open the `ASGUIHost.ini` file in a text editor, such as Notepad.

3. **(Optional)** In the **Plug In Assembly List** section, remove the semicolon from the text `;Python Breakout Section=Python Breakout`.
4. **(Optional)** Save and close the `ASGUIHost.ini` file.
5. Click **Tools** > **Python Breakout** > **View by Event**.

   The system displays a list of events belonging to all plug-ins registered to Call Center Elite Multichannel Desktop.
6. Select an event from the list and click **Add**.
7. On the Event Mapping screen, type a unique name for your event mapping.
8. Click **Browse** and locate your IronPython script.
9. If required, type the name of a function in your script that acts as a starting point when you run the script.

   The name of the function must match the name specified in the event/script mapping definition. You must supply the parameters in the order - sender, eventArgs, PIMBroker.

   sender This parameter is passed through the event handler arguments. The specific type of this object is determined by the generator of the event. IronPython casts this parameter to the correct type for you. To figure the members and methods of this parameter, you must know the definition of the object.

   eventArgs This parameter is passed through the second argument of the event handler. The specific type of this object is determined by the generator of the event, however, this parameter is derived from the .Net EventArgs class. IronPython casts this parameter to the correct type for you. To figure the members and methods of this parameter, you must know the definition of the object.

   PIMBroker This parameter is a class of type IASPIMBroker, which is the PIMBroker object used by the ASPythonBreakoutPlugin executing the Python script. You can access any public method or member within this class.

   An example function definition is: def EntryFunction (sender, eventArgs, PIMBroker).

   If you do not enter the script through a function, three global variables are supplied, namely sender, eventArgs, and PIMBroker.
10. Select the option to run the scripts in dynamic or precompiled manner.
    - Dynamic: The scripts are recompiled every time you execute the scripts. This method is slower, but can be used to modify the scripts and execute new scripts without having to restart Call Center Elite Multichannel Desktop.
    - Precompiled: The scripts are compiled on startup. This method improves script performance, but requires restarting Call Center Elite Multichannel Desktop before showing the script changes.

11. Select the option to run the scripts synchronously or asynchronously.
    - Synchronously: If the event that triggered the event reoccurs during the execution of the script, the script for the second event is executed until the first event completes the execution.
    - Asynchronously: Specify the maximum number of concurrent scripts that might be executed for a specific event/script mapping in the **Thread pool size** text box. Any numbers of requests beyond this number are queued. If the queue exceeds the number specified by the maximum queued requests, all subsequent requests to execute scripts for that event/script mapping are ignored. After the number of queued requests falls below the maximum queued requests limit, a new event is queued again.
12. Click **Save**.

    Note:

    You can also use the **CC Elite Multichannel Desktop Events** tab to change or delete the event-to-script mappings.
13. Click **Tools** > **Python Breakout** > **View by Mapping Name** from to view the IronPython scripts that are already mapped to the Call Center Elite Multichannel Desktop events.

    You can add, change, or delete the event-to-script mappings in the Script Mapping Names pane.

    For more information about Python, see www.python.org and for more information about IronPython, see www.codeplex.com/Wiki/View.aspx?ProjectName=IronPython.

Call Center Elite Multichannel Reporting installation

Call Center Elite Multichannel Reporting runs on various Microsoft Windows operating systems, such as Microsoft Windows Vista, Microsoft Windows 7, Microsoft Windows 8, and Microsoft Windows 8.1.

Note:

You must have the administrator privileges to install Call Center Elite Multichannel Reporting on Microsoft Windows Vista, Microsoft Windows 7, Microsoft Windows 8, or Microsoft Windows 8.1.

Requirements for Call Center Elite Multichannel Reporting

In addition to the requirements listed for the Desktop components, the following are the requirements for Call Center Elite Multichannel Reporting:

- Microsoft SQL Server with Reporting Services must be installed on the system and configured with the client accounts.

Important:

Installation of SQL Server with Reporting Services is required for leveraging the reporting capabilities within Call Center Elite Multichannel suite.

For information about Microsoft SQL Server Reporting Services, see Microsoft SQL documentation.

Installing Call Center Elite Multichannel Reporting

Procedure

1. Close all open applications.
2. Run the `setup.exe` file.
3. On the Trace System Server Dialog screen, perform the following actions:
   a. In the **Server** field, enter the host name or IP address for Trace System Server.
   b. In the **Port** field, enter the port number for Trace System Server.
   c. Click **Next**.
4. Click **Desktop** > **CC Elite Multichannel Reporting**.
5. On the Avaya Aura® Call Center Elite Multichannel Reporting welcome screen, click **Next**.
6. On the License Agreement screen, click **Yes** to agree with the licensing agreement.
7. On the Experience Portal Service Dialog screen, perform the following actions:
   a. In the **Server** field, enter the host name or IP address for the Experience Portal Server.
   b. In the **Port** field, enter the port number for the Experience Portal Server.
   c. Click **Next**

   Important:

   To enable the Experience Portal Express menu on the menu bar of Call Center Elite Multichannel Reporting, you must specify the correct IP address or hostname of the Experience Portal Server. You can specify the IP address or hostname in the Experience Portal Service IP configuration key of the **Plugin** section on Configuration Server.
8. On the Edit Data screen, perform one the following actions:
   - To source the configuration information from the local .ini file, keep the **Use default CC Elite Multichannel Reporting INI file for configuration information** check box selected and click **Next**.
   - To source the configuration information from Configuration Server, clear the **Use default CC Elite Multichannel Reporting INI file for configuration information** check box, enter the values in the fields, and click **Next**.

   For more information, see Edit Data field descriptions on page 26.

9. On the Choose Destination Location screen, select a location for the installation files and click **Next**.
10. On the Configure CC Elite Multichannel Reporting screen, enter appropriate values in the fields and click **Next**.

    For information about these fields, see Configure CC Elite Multichannel Reporting field descriptions on page 73.
11. To install Call Center Elite Multichannel Reporting without a shortcut on the system desktop, clear the **Include the Avaya Aura Call Center Elite Multichannel Reporting shortcut on the desktop** check box and click **Next**.
12. Review the installation settings and click **Next**.
13. **(Optional)** If you receive an `Add Provider` error message during installation, click **OK**.
14. Click **Finish**.
15. **(Optional)** If the installation prompts you to restart the system, click **Yes, I want to restart my computer now**.

    The installation prompts you to restart the system if the application components need updating or registering.

Configure CC Elite Multichannel Reporting field descriptions

Name	Description
Media Director IP	The IP address for Media Director.
Media Director Port	The port number for Media Director. The default port number for Media Director is 29087.
XML Server IP	The IP address for XML Server.
XML Server Port	The port number for XML Server. The default port number for XML Server is 29096.
License Director IP	The IP address for License Director. **Note:** When you enter the IP address for License Director, the Connect License Director parameter in the configuration file of the application changes from False to True.
License Director Port	The port number for License Director. The default port number for License Director is 29095.

Verifying SQL Server Reporting Services

Procedure

1. From the Windows **Start** menu, click **All Programs** > **Microsoft SQL Server** > **Configuration Tools** > **Reporting Services Configuration Manager**.
2. Select the correct system name and instance name.
3. Click **Connect**.
4. **(Optional)** Start the report services if the report services stop.
5. In the left pane, click **Report Manager URL** and verify the Report Manager Site Identification.
6. In the left pane, click **Web Service URL** and verify the following:
   - Report Server Web Service Virtual Directory
   - Report Server Web Service Site Identification
   - Report Server Web Service URLs
7. In the left pane, click **Database** and verify the following:
   - Current Report Server Database
   - Current Report Server Database Credential
8. Click **Exit**.

Media Proxy installation

This installation helps you if you have developed your own contact center software using Developer's multimedia components and the software relies on Media Proxy to run.

Important:

You do not need to install Media Proxy for the operations of Call Center Elite Multichannel Desktop and Call Center Elite Multichannel Reporting.

Media Proxy can be installed manually through a separate installer or automatically during the installation of Call Center Elite Multichannel Desktop or Call Center Elite Multichannel Reporting.

The default location where Media Proxy is installed is `C:\Program Files\Avaya\Avaya Aura CC Elite Multichannel\Desktop\Media Proxy Service`.

If you install Media Proxy manually and uninstall it at a later time, Call Center Elite Multichannel Desktop and Call Center Elite Multichannel Reporting stop working. If Media Proxy is installed automatically, you cannot uninstall Media Proxy through **Add or Remove Programs** option in Control Panel.

Media Proxy runs on Microsoft Windows operating systems, such as Windows Vista, Windows 7, Windows 8, and Windows 8.1.

To install Media Proxy, the system must have Microsoft .Net Framework 3.5 SP1 and Microsoft Internet Explorer.

Installing Media Proxy

About this task

This task describes how to install Media Proxy using separate Media Proxy installer.

Procedure

1. Close all open applications.
2. Run the `setup.exe` file.
3. On the Trace System Server Dialog screen, perform the following actions:
   a. In the **Server** field, enter the host name or IP address for Trace System Server.
   b. In the **Port** field, enter the port number for Trace System Server.
   c. Click **Next**.
4. Click **Desktop** > **Media Proxy**.
5. On the Media Proxy Service welcome screen, click **Next**.
6. On the License Agreement screen, click **Yes** to agree with the licensing agreement.
7. Review the installation settings and click **Next**.
8. Click **Finish**.
9. **(Optional)** If the installation prompts you to restart the system, click **Yes, I want to restart my computer now**.

   The installation prompts you to restart the system if the application components need updating or registering.

Chapter 5: Installing the Server applications

Requirements for installing the Server applications

To install Call Center Elite Multichannel Server applications, you must install and configure the following:

- Avaya WebLM
- Avaya Aura® Communication Manager
- Avaya Aura® Application Enablement Services
- A supported Microsoft SQL Server
- Gateways
  - AOL-ICQ Instant Messenger Gateway
  - Communicator Gateway
  - MSN Messenger Gateway
  - Short Message Service Gateway
  - Web Chat Gateway
    - Web Chat for IIS
  - XMPP Gateway
- Application Enablement Services TSAPI client 5.2, 6.1, 6.2, or 6.3

  Note:

  - You must install and configure the AES TSAPI client on the core server. To install the AES TSAPI client, see *Installing Application Enablement Services TSAPI client*.
  - For Microsoft Windows Server 2012, you must have AES TSAPI Client release 6.3.3.
- The services which are required for the various configurations, such as Voice only configuration, Email only configuration, and Messaging configuration.

For more information on the requirements, see Requirements for the Server components on page 19

Installing and Configuring IIS

Installing and configuring IIS on Microsoft Windows Server 2008

Procedure

1. On the server desktop, right-click **My Computer** and click **Manage**.
2. On the Server Manager window, right-click **Roles** and click **Add roles**.
3. On the Before You Begin screen, click **Next**.
4. On the Select Server Roles screen, select **Web Server (IIS)** and click **Next**.
5. On the Introduction to Web Server (IIS) screen, click **Next**.
6. On the Select the Role Services to install for Web Server (IIS) screen, perform the following steps:
   a. In **Common HTTP Features** section, select the following components:
      - Static Content
      - Default Document
      - Directory Browsing
      - HTTP Errors
      - HTTP Redirection
   b. In **Application Development** section, select the following components:
      - ASP.NET
      - .NET Extensibility
      - ASP
      - CGI
      - ISAPI Extensions
      - ISAPI Filters
      - Server Side Includes
   c. In **Health and Diagnostics** section, select the following components:
      - HTTP Logging
      - Logging Tools
      - Request Monitor
      - Tracing
   d. In **Security** section, select the following components:
      - Basic Authentication
      - Windows Authentication

- Request Filtering

e. In **Performance** section, select the Static Content Compression component.

f. In **Management Tools** section, select the following components:

- IIS Management Console
- IIS 6 Management Compatibility

g. In **IIS 6 Management Compatibility** section, select the following components:

- IIS 6 Metabase Compatibility
- IIS 6 WMI Compatibility
- IIS 6 Scripting Tools
- IIS Management Console

7. Click **Next**.
8. On the Confirm Installation Selections screen, click **Install**.
9. Click **Close**.
10. Exit the Server Manager.
11. Restart the server.
12. Start Internet Information Services (IIS) Manager and configure Web Chat for IIS.

    For information about the configuration, see Configuring Web Chat through IIS Manager on page 105.

Installing and configuring IIS on Microsoft Windows Server 2012

Procedure

1. On the server desktop, click **Server Manager** > **Dashboard**.
2. On the WELCOME TO SERVER MANAGER screen, click **Add roles and features**.
3. On the Before you begin screen, click **Next**.
4. On the Select installation type screen, select **Role-based or feature-based installation** and click **Next**.
5. On the Select destination server screen, click **Select a server from the server pool**.
6. In the **Server Pool** section, select the server and click **Next**.
7. On the Select server roles screen, select **Web Server IIS** and click **Next**.
8. On the Select features screen, select **.NET Framework 3.5 Features** and click **Next**.
9. On the Web Server Role (IIS) screen, click **Next**.
10. On the Select role services screen, perform the following steps:

    a. In **Common HTTP Features** section, select the following components:

    - Default Document

- Directory Browsing
- HTTP Errors
- Static Content
- HTTP Redirection

b. In **Health and Diagnostics** section, select the following components:
   - HTTP Logging
   - Logging Tools
   - Request Monitor
   - Tracing

c. In **Performance** section, select the Static Content Compression component.

d. In **Security** section, select the following components:
   - Request Filtering
   - Basic Authentication
   - Windows Authentication

e. In **Application Development** section, select the following components:
   - .NET Extensibility 3.5
   - .NET Extensibility 4.5
   - Application Initialization
   - ASP.NET 3.5
   - ASP.NET 4.5
   - CGI
   - ISAPI Extensions
   - ISAPI Filters
   - Server Side Includes
   - WebSocket Protocol

f. In **Management Tools** section, select the following components:
   - IIS Management Console
   - IIS 6 Management Compatibility

g. In **IIS 6 Management Compatibility** section, select the following components:
   - IIS 6 Metabase Compatibility
   - IIS Management Console
   - IIS 6 Scripting Tools
   - IIS 6 WMI Compatibility

h. In **IIS 6 WMI Compatibility** section, select the IIS Management Scripts and Tools component.

11. On the Confirm installation selections screen, click **Install**.
12. After the installation is complete, click **Finish**.
13. Start Internet Information Services (IIS) Manager and configure Web Chat for IIS.

    For information about the configuration, see Configuring Web Chat through IIS Manager on page 105.

Call Center Elite Multichannel core services

You must install and configure the following core services before configuring the Voice, Email, and Web Chat services:

- License Director
- XML Server
- Application Management Service
- Configuration Server, if centralized configuration is used
- IDS Services for reporting, if reporting feature is used
- Task Director, if reporting feature is used
- Trace System
- Media Director for multimedia interactions

Services for the Voice only configuration

You must install and configure the following services to set up the Voice system for Call Center Elite Multichannel:

- Call Center Elite Multichannel core services
- Voice Media Store
- Call Recording Config Service, if voice configuration is integrated with Avaya Aura® Work Force Optimization
- Experience Portal Config Service, if Experience Portal is integrated with Call Center Elite Multichannel

Services for the Email only configuration

You must install and configure the following services to set up the Email system for Call Center Elite Multichannel:

- Call Center Elite Multichannel core services
- Email Media Store

Services for the Messaging configuration

You must install and configure the following services to set up the Messaging system for Call Center Elite Multichannel:

- Call Center Elite Multichannel core services
- Simple Messaging Media Store
- Media gateways such as Web Chat gateway and SMS gateway

Using the Messaging system, you can support Web Chat, SMS, and various other gateways. For information about various Messaging gateways, see *Avaya Aura® Call Center Elite Multichannel Overview guide*.

Services for the Call Routing configuration

You must install and configure the following services to set up the Call Routing system:

- Call Center Elite Multichannel core services
- Call Routing Server

Services for the Outbound (Preview or Progressive) configuration

You must install and configure the following services to set up the Outbound service (Preview or Progressive):

- Call Center Elite Multichannel core services
- Preview Contact Media Store

Installation of the Server applications

Installing License Director

Before you begin

Ensure that WebLM is installed on the system.

About this task

You can install License Director on Telephony Server or a system running the Call Center Elite Multichannel server applications.

Procedure

1. Close all open applications.
2. Run the `setup.exe` file.
3. On the Trace System Server Dialog screen, perform the following actions:
   a. In the **Server** field, enter the host name or IP address for Trace System Server.
   b. In the **Port** field, enter the port number for Trace System Server.
   c. Click **Next**.
4. Click **Server** > **License Director**.
5. On the License Director welcome screen, click **Next**.
6. On the License Agreement screen, click **Yes** to agree with the licensing agreement.
7. On the Choose Destination Location screen, select a location for the installation files and click **Next**.
8. On the Configure License Director screen, perform one of the following steps and click **Next**:
   - To use a remote WebLM Server, enter the WebLM URL.
   - To use WebLM Server that you have installed, accept the default of https://localhost:52233/WebLM/LicenseServer.
9. Review the installation settings and click **Next**.
10. Click **Finish**.
11. **(Optional)** If the installation prompts you to restart the system, click **Yes, I want to restart my computer now**.

    The installation prompts you to restart the system if the application components need updating or registering.
12. Start the Windows Services application by performing the following actions:
    a. Click **Start** > **Run**.
    b. In the Run dialog box, type `services.msc`.

c. Click **OK**.

13. In the Services window, verify that the **AS License Director** service is running.

Installing Call Routing Server

About this task

Call Routing Server is always installed on C Drive.

Note:

Call Routing Server is an optional component.

Procedure

1. Close all open applications.
2. Run the `setup.exe` file.
3. On the Trace System Server Dialog screen, perform the following actions:
   a. In the **Server** field, enter the host name or IP address for Trace System Server.
   b. In the **Port** field, enter the port number for Trace System Server.
   c. Click **Next**.
4. Click **Server** > **Call Routing Server**.
5. On the Call Routing Server welcome screen, click **Next**.
6. On the License Agreement screen, click **Yes** to agree with the licensing agreement.
7. On the Choose Destination Location screen, select a location for the installation files and click **Next**.
8. On the Configure Call Routing Server screen, enter the configuration information.

   For more information, see Configure Call Routing Server field descriptions on page 84.

   Note:

   You can skip this step if you want to add the configuration information in the .ini file at a later time.
9. Click **More** and configure the routing and monitored VDNs.

   For more information, see Configuring the routing and monitored VDNs on page 85.
10. Click **Next**.
11. On the Select Features screen, perform one of the following actions:
    - To install all plug-ins, keep the **Plug-ins** check box selected.
    - To install particular plug-ins:
      a. Click **Change**.

b. On the Select Subfeatures dialog box, clear the check boxes for the plug-ins that you do not want to install.

Note:

Script Host Plug-in does not install the scripting engines as a part of the installation.

c. Click **Continue**.

12. Click **Next**.
13. Clear the **Include sample applications with installation** check box if you do not want to install the sample applications.

    The sample applications show how to integrate Call Routing Server with the Call Center Elite Multichannel plug-ins.
14. Click **Next**.
15. Review the installation settings and click **Next**.
16. Click **Finish**.
17. **(Optional)** If the installation prompts you to restart the system, click **Yes, I want to restart my computer now**.

    The installation prompts you to restart the system if the application components need updating or registering.
18. Start the Windows Services application by performing the following actions:
    a. Click **Start** > **Run**.
    b. In the Run dialog box, type `services.msc`.
    c. Click **OK**.
19. In the Services window, verify that the **AS Call Routing Server** service is running.

Configure Call Routing Server field descriptions

Name	Description
Primary Link Name	The name of the primary link that Call Center Elite Multichannel uses to connect to Avaya Telephony Server and Avaya Communication Manager. For example: `AVAYA#ONEXCM82#CSTA-S#APCAES` **Note:** Call Routing Server exits if you leave this field blank. For Named Licensing, you must use the secure TLink of the type CSTA-S.

Table continues…

Name	Description
Primary User Name	The user name required for accessing the primary link.
Primary User Password	The password for the primary user name. By default, Call Center Elite Multichannel encrypts the password. For more information, see Commands on page 179.
Secondary Link Name	The name of the secondary link that Call Center Elite Multichannel uses to connect to Avaya Telephony Server and Avaya Communication Manager.
Secondary User Name	The user name required for accessing the secondary link.
Secondary User Password	The password for the secondary user name. By default, Call Center Elite Multichannel encrypts the password. For more information, see Commands on page 179.

Configuring the routing and monitored VDNs

About this task

When you install Call Routing Server, you can configure the routing and monitored VDNs.

Procedure

1. In the **Routing VDN List** field, enter the VDN number for which Call Routing Server must issue the Route Request events.
2. Click **Add**.
3. In the **Monitored VDN List** field, enter the VDN number for which Call Routing Server must issue the monitor request commands.
4. Click **Add**.
5. Select a VDN from the list and click **Delete** to delete a VDN number from the list.
6. Click **Exit** to return to the Configure Call Routing Server screen.

Installing Configuration Server

Install script for Configuration Server

The install script for Configuration Server provides options to install Configuration Server and Configuration Manager.

The option to install Configuration Server includes:

- Related database scripts for Configuration Server
- Startup application for Configuration Server
- Configuration Server Manager

To install Configuration Server, ensure that your system is running Windows Installer 4.5. Otherwise, the installer automatically runs an install script.

Requirements for Configuration Server

The following are the requirements for Configuration Server:

- Microsoft Management Console (MMC) 3.0 must be installed on the system where you want to install Configuration Server.
- Configuration Server must be installed on a system running on one of the server operating systems mentioned in Requirements for the Server components on page 19.

  Note:

  Configuration Server is always installed on C Drive.
- Microsoft SQL Server must be installed on a dedicated server.

  Note:

  Microsoft SQL Server must have the mixed mode authentication and not the Windows only authentication. The mixed mode authentication specifies that you have configured SQL Server for Windows and SQL Server.

Installing Configuration Server and Configuration Manager

About this task

You can install Configuration Manager on a system where Configuration Server is installed. You can also install Configuration Manager separately on a client computer.

Procedure

1. Close all open applications.
2. Run the `setup.exe` file.
3. On the Trace System Server Dialog screen, perform the following actions:
   a. In the **Server** field, enter the host name or IP address for Trace System Server.
   b. In the **Port** field, enter the port number for Trace System Server.
   c. Click **Next**.
4. Click **Server** > **Configuration Server**.
5. On the Configuration Server welcome screen, click **Next**.
6. On the License Agreement screen, click **Yes** to agree with the licensing agreement.

7. On the Choose Destination Location screen, select a location for the installation files and click **Next**.
8. Keep the **Configuration Manager** and **Configuration Server** check boxes selected and click **Next**.

   Note:

   Configuration Server Manager is the startup application of Configuration Server.
9. Review the installation settings and click **Next**.
10. Click **Finish**.
11. **(Optional)** If the installation prompts you to restart the system, click **Yes, I want to restart my computer now**.

    The installation prompts you to restart the system if the application components need updating or registering.

Next steps

After you install Configuration Server and Configuration Manager, you must create Configuration Server (ACS) Database and perform some configuration steps. For more information, see *Administering Avaya Aura® Call Center Elite Multichannel*.

Installing Task Director

About this task

Task Director enables the Reporting plug-in to schedule reports.

Procedure

1. Close all open applications.
2. Run the `setup.exe` file.
3. On the Trace System Server Dialog screen, perform the following actions:
   a. In the **Server** field, enter the host name or IP address for Trace System Server.
   b. In the **Port** field, enter the port number for Trace System Server.
   c. Click **Next**.
4. Click **Server** > **Task Director**.
5. On the Task Director welcome screen, click **Next**.
6. On the License Agreement screen, click **Yes** to agree with the licensing agreement.
7. On the Choose Destination Location screen, select a location for the installation files and click **Next**.
8. On the Task Director Configuration screen, enter the values in the fields and click **Next**.

   For more information, see Task Director Configuration field descriptions on page 88.

Note:

The task is configured against the Windows user account.

9. Review the installation settings and click **Next**.
10. Click **Finish**.
11. **(Optional)** If the installation prompts you to restart the system, click **Yes, I want to restart my computer now**.

    The installation prompts you to restart the system if the application components need updating or registering.
12. Start the Windows Services application by performing the following actions:
    a. Click **Start** > **Run**.
    b. In the Run dialog box, type `services.msc`.
    c. Click **OK**.
13. In the Services window, verify that the **AS Task Director** service is running.

Task Director Configuration field descriptions

Name	Description
Domain Name	The domain name of the Windows account.
Domain User	The user name of the Windows account.
Password and Confirm Password	The password of the Windows account.

Configuring Task Director

Procedure

1. Start the Windows Services application by performing the following actions:
    a. Click **Start** > **Run**.
    b. In the Run dialog box, type `services.msc`.
    c. Click **OK**.
2. Right-click the **AS Task Director** service and click **Properties**.
3. Add a Domain user account for the service and click **OK**.

Next steps

After you complete the installation, you must change the user.

Installing Interaction Data Server

Before you begin

Install AES TSAPI client.

About this task

The install script for Interaction Data Server installs the following services:

- Interaction Data Server - Voice and Presence
- Interaction Data Server - Multimedia
- Interaction Data Server - View

Procedure

1. Close all open applications.
2. Run the `setup.exe` file.
3. On the Trace System Server Dialog screen, perform the following actions:
   a. In the **Server** field, enter the host name or IP address for Trace System Server.
   b. In the **Port** field, enter the port number for Trace System Server.
   c. Click **Next**.
4. Click **Server** > **Interaction Data Server**.
5. On the Interaction Data Server welcome screen, click **Next**.
6. On the License Agreement screen, click **Yes** to agree with the licensing agreement.
7. On the Choose Destination Location screen, select a location for the installation files and click **Next**.
8. On the Configure Interaction Data Server - Voice and Presence screen, enter the configuration information.

   For more information, see Configure Interaction Data Server - Voice and Presence field descriptions on page 90.

   Note:

   You can skip this step if you want to add the configuration information in the .ini file at a later time.
9. Click **More** and configure the switch information.

   For more information, see Configuring switch information on page 91.
10. Click **Next**.
11. On the Configure Database Connectivity screen, enter the configuration information for Interaction Data Server Database and CMS Database.

    For more information, see Configure Database Connectivity field descriptions on page 91.

Note:

The configuration information for CMS Database is required only for Interaction Data Server - Multimedia.

12. Click **Next**.
13. Clear the **Include sample applications with installation** check box if you do not want to install the sample applications.

    The sample applications show how to use Interaction Data Server.
14. Review the installation settings and click **Next**.
15. Click **Finish**.
16. **(Optional)** If the installation prompts you to restart the system, click **Yes, I want to restart my computer now**.

    The installation prompts you to restart the system if the application components need updating or registering.
17. Start the Windows Services application by performing the following actions:
    a. Click **Start** > **Run**.
    b. In the Run dialog box, type `services.msc`.
    c. Click **OK**.
18. In the Services window, verify that the following services are running:
    - AS Interaction Data Server - Multimedia
    - AS Interaction Data Server - Voice
    - AS Interaction Data Server - Voice and Presence

Note:

Only the Voice skills are monitored in Interaction Data Server-Voice and Presence. However, Interaction Data Server - Multimedia Server provides the Multimedia Queue details.

Configure Interaction Data Server - Voice and Presence field descriptions

Field	Description
Interaction Data Server ID	A unique number that identifies Interaction Data Server Voice and Presence.
Interaction Data Server Port	The port number that Interaction Data Server - Voice and Presence uses to accept connections from clients and other servers. The default port number is 29090.

Table continues…

Field	Description
Switch ID	The ID number of Avaya Communication Manager to which Interaction Data Server - Voice and Presence is connected. This ID number must be a unique number. The switch ID is important in complex configurations such as a network of the Interaction Data Server - Voice and Presence servers that receives information from multiple Avaya switches.
Primary Link Name	The name of the primary link that Call Center Elite Multichannel uses to connect to Avaya Telephony Server and Avaya Communication Manager. For example: `AVAYA#ONEXCM82#CSTA-S#APCAES` **Note:** For Named Licensing, you must use the secure TLink of the type CSTA-S.
Primary User Name	The user name required for accessing the primary link.
Primary User Password	The password for the primary user name. By default, the Call Center Elite Multichannel application encrypts the password. For more information, see Commands on page 179.

Configure Database Connectivity field descriptions

Database	Field	Description
Interaction Data Server Database	Database Server Name	The name of the SQL Server.
AvayaCall Management System (CMS) Database	Database Server Name	The name or the TCP/IP address of the server where the CMS Informix database is located. The CMS plug-in for Interaction Data Server - Multimedia uses this information.
	Database User Name	The user name for the CMS Informix database.
	Database User Password	The password for the database user name.

Configuring switch information

About this task

When you install Interaction Data Server, you can configure switch information.

Procedure

1. In the **VDN** field, enter the VDN number that Interaction Data Server - Voice and Presence must monitor.
2. Click **Add**.
3. In the **ACD Split/Skill** field, enter the hunt group extension that Interaction Data Server - Voice and Presence must monitor.
4. Click **Add**.
5. In the **Station** field, enter the extension that Interaction Data Server - Voice and Presence must monitor.
6. Click **Add**.
7. In the **Trunk Group** field, enter the trunk group number that Interaction Data Server - Voice and Presence must monitor.
8. Click **Add**.
9. Click **Delete** to remove an item from a list.
10. Click **Exit** to return to the Configure Interaction Data Server - Voice and Presence screen.

Installing Trace System

Before you begin

Ensure that you enable the Windows Firewall service.

About this task

Trace System receives logs or traces from the Call Center Elite Multichannel applications, such as Media Director, Voice Media Store, and Email Media Store and stores the logs or traces on a central server. Trace System consists of the TTrace Server, TTraceConsole, TTraceConfig, and TTraceLogToZip components. You can use these components to view, configure, and archive the logs or traces.

Procedure

1. Close all open applications.
2. Run the `setup.exe` file.
3. On the Trace System Server Dialog screen, perform the following actions:
   a. In the **Server** field, enter the host name or IP address for Trace System Server.
   b. In the **Port** field, enter the port number for Trace System Server.
   c. Click **Next**.
4. Click **Server** > **Trace System**.
5. Click **Next**.

6. On the End-User License Agreement screen, select the **I accept the terms in the license agreement** option and click **Next**.
7. On the Choose Setup Type screen, perform one of the following actions:
   - Click **Complete** to install all components of Trace System.
   - Click **Custom** and select the components that you want to install.
8. Click **Install**.
9. Click **Finish**.
10. **(Optional)** If the installation prompts you to restart the system, click **Yes, I want to restart my computer now**.

    The installation prompts you to restart the system if the application components need updating or registering.
11. Start the Windows Services application by performing the following actions:
    a. Click **Start** > **Run**.
    b. In the Run dialog box, type `services.msc`.
    c. Click **OK**.
12. In the Services window, verify that the **Avaya Trace Server** service is running.

Installing TTrace Server without setup

Procedure

1. Create a folder on your system.
2. From the folder containing the installation files for Call Center Elite Multichannel, copy the `tt_srv.exe` file to the newly created folder.
3. Run the command prompt.

   Important:

   You must have the administrator privileges for the command prompt.
4. In the command prompt, navigate to the folder containing the `tt_srv.exe` file.
5. Type `tt_srv.exe -install` and press **Enter**.

Installing Call Recording Config Service

About this task

To use the call recording features in Call Center Elite Multichannel, you must install Call Recording Config Service. Call Recording Config Service provides options for agents to record and replay the conversations with the customer. For more information about the call recording features, see *Avaya Aura® Call Center Elite Multichannel Desktop User Guide* and *Administering Avaya Aura® Call Center Elite Multichannel*.

Procedure

1. Close all open applications.
2. Run the `setup.exe` file.
3. On the Trace System Server Dialog screen, perform the following actions:
   a. In the **Server** field, enter the host name or IP address for Trace System Server.
   b. In the **Port** field, enter the port number for Trace System Server.
   c. Click **Next**.
4. Click **Server** > **Call Recording Config Service**.
5. Click **Next**.
6. On the End-User License Agreement screen, select the **I accept the terms in the license agreement** option and click **Next**.
7. On the Choose Setup Type screen, perform one of the following actions:
   - Click **Complete** to install all components of Call Recording Config Service.
   - Click **Custom** and select the components that you want to install.
8. On the General Settings screen, perform the following actions:
   a. In the **Hostname of Trace System Service** field, enter the host name or IP address for Trace System Server.
   b. In the **Port** field, enter the port number for Trace System Server.
   c. Click **Next**.
9. Click **Install**.
10. Click **Finish**.
11. **(Optional)** If the installation prompts you to restart the system, click **Yes, I want to restart my computer now**.

    The installation prompts you to restart the system if the application components need updating or registering.
12. Start the Windows Services application by performing the following actions:
    a. Click **Start** > **Run**.
    b. In the Run dialog box, type `services.msc`.
    c. Click **OK**.
13. In the Services window, verify that the **Avaya Call Recording Config Service** service is running.

Installing Experience Portal Config Service

About this task

To use the features of Experience Portal in Call Center Elite Multichannel, you must install Experience Portal Config Service. For more information about Experience Portal, see *Administering Avaya Aura® Call Center Elite Multichannel* and *Avaya Aura® Call Center Elite Multichannel Reporting User Guide*.

Procedure

1. Close all open applications.
2. Run the `setup.exe` file.
3. On the Trace System Server Dialog screen, perform the following actions:
   a. In the **Server** field, enter the host name or IP address for Trace System Server.
   b. In the **Port** field, enter the port number for Trace System Server.
   c. Click **Next**.
4. Click **Server** > **Experience Portal Config Service**.
5. Click **Next**.
6. On the End-User License Agreement screen, select the **I accept the terms in the license agreement** option and click **Next**.
7. On the Choose Setup Type screen, perform one of the following actions:
   - Click **Complete** to install all components of Experience Portal Config Service.
   - Click **Custom** and select the components that you want to install.
8. On the General Settings screen, perform the following actions:
   a. In the **Hostname of Trace System Service** field, enter the host name or IP address for Trace System Server.
   b. In the **Port** field, enter the port number for Trace System Server.
   c. Click **Next**.
9. Click **Install**.
10. Click **Finish**.
11. **(Optional)** If the installation prompts you to restart the system, click **Yes, I want to restart my computer now**.

    The installation prompts you to restart the system if the application components need updating or registering.
12. Start the Windows Services application by performing the following actions:
    a. Click **Start** > **Run**.
    b. In the Run dialog box, type `services.msc`.

c. Click **OK**.

13. In the Services window, verify that the **Avaya Experience Portal Config Service** service is running.

Installing XML Server

Before you begin

Ensure that the Avaya Application Enablement Services TSAPI client software is installed.

Procedure

1. Close all open applications.
2. Run the `setup.exe` file.
3. On the Trace System Server Dialog screen, perform the following actions:
   a. In the **Server** field, enter the host name or IP address for Trace System Server.
   b. In the **Port** field, enter the port number for Trace System Server.
   c. Click **Next**.
4. Click **Server** > **XML Server**.
5. On the XML Server welcome screen, click **Next**.
6. On the License Agreement screen, click **Yes** to agree with the licensing agreement.
7. On the Choose Destination Location screen, select a location for the installation files and click **Next**.
8. Review the installation settings and click **Next**.
9. Click **Finish**.
10. **(Optional)** If the installation prompts you to restart the system, click **Yes, I want to restart my computer now**.

    The installation prompts you to restart the system if the application components need updating or registering.
11. Start the Windows Services application by performing the following actions:
    a. Click **Start** > **Run**.
    b. In the Run dialog box, type `services.msc`.
    c. Click **OK**.
12. In the Services window, verify that the **AS XML Server** service is running.

Installing Media Director

Before you begin

Ensure that Microsoft .Net Framework 3.5 SP1 is installed and XML Server is running on the system.

Procedure

1. Close all open applications.
2. Run the `setup.exe` file.
3. On the Trace System Server Dialog screen, perform the following actions:
   a. In the **Server** field, enter the host name or IP address for Trace System Server.
   b. In the **Port** field, enter the port number for Trace System Server.
   c. Click **Next**.
4. Click **Server** > **Media Director**.
5. On the Media Director welcome screen, click **Next**.
6. On the License Agreement screen, click **Yes** to agree with the licensing agreement.
7. On the Choose Destination Location screen, select a location for the installation files and click **Next**.
8. Review the installation settings and click **Next**.
9. Click **Finish**.
10. **(Optional)** If the installation prompts you to restart the system, click **Yes, I want to restart my computer now**.

    The installation prompts you to restart the system if the application components need updating or registering.
11. Start the Windows Services application by performing the following actions:
    a. Click **Start** > **Run**.
    b. In the Run dialog box, type `services.msc`.
    c. Click **OK**.
12. In the Services window, verify that the **AS Media Director** service is running.

Installing Virtual Agent

Before you begin

Ensure that Microsoft IIS 7 is installed and configured on the system.

Procedure

1. Close all open applications.
2. Run the `setup.exe` file.
3. On the Trace System Server Dialog screen, perform the following actions:
   a. In the **Server** field, enter the host name or IP address for Trace System Server.
   b. In the **Port** field, enter the port number for Trace System Server.
   c. Click **Next**.
4. Click **Server** > **Virtual Agent**.
5. On the Virtual Agent welcome screen, click **Next**.
6. On the License Agreement screen, click **Yes** to agree with the licensing agreement.
7. On the Choose Destination Location screen, select a location for the installation files and click **Next**.
8. Keep the **Virtual Agent** and **Virtual Agent Web Service** check boxes selected and click **Next**.
9. On the Configure Virtual Agent Web Service screen, enter the port number and remote IP address that the Virtual Agent Web service uses to connect to Virtual Agent Service
10. Click **Next**.
11. Review the installation settings and click **Next**.

    If the installer does not find ASP Net 2.0 Web Service Extension installed on the system, the installer prompts you to install Web Service Extension. The system requires Web Service Extension for the Virtual Agent Web Service Worker plug-in.
12. Click **OK**.
13. Review the installation settings and click **Next**.
14. Click **Finish**.
15. **(Optional)** If the installation prompts you to restart the system, click **Yes, I want to restart my computer now**.

    The installation prompts you to restart the system if the application components need updating or registering.
16. Start the Windows Services application by performing the following actions:
    a. Click **Start** > **Run**.
    b. In the Run dialog box, type `services.msc`.
    c. Click **OK**.
17. In the Services window, verify that the **AS Virtual Agent** service is running.

Installing Media Stores

Before you begin

Ensure that Microsoft SQL Server with Reporting Service is installed and configured on the system.

About this task

The install script for each media store installs the media store and the related database scripts.

Procedure

1. Close all open applications.
2. Run the `setup.exe` file.
3. On the Trace System Server Dialog screen, perform the following actions:
   a. In the **Server** field, enter the host name or IP address for Trace System Server.
   b. In the **Port** field, enter the port number for Trace System Server.
   c. Click **Next**.
4. Click **Server** > **Media Stores**.
5. Click one of the following options based on your requirement:
   - Preview Contact Media Store
   - Simple Messaging Media Store
   - Email Media Store
   - Voice Media Store
6. On the welcome screen, click **Next**.
7. On the License Agreement screen, click **Yes** to agree with the licensing agreement.
8. On the Choose Destination Location screen, select a location for the installation files and click **Next**.
9. Review the installation settings and click **Next**.
10. Click **Finish**.
11. **(Optional)** If the installation prompts you to restart the system, click **Yes, I want to restart my computer now**.

    The installation prompts you to restart the system if the application components need updating or registering.
12. Start the Windows Services application by performing the following actions:
    a. Click **Start** > **Run**.
    b. In the Run dialog box, type `services.msc`.
    c. Click **OK**.

13. Perform the following steps to verify the TSAPI Link connection:
    a. Go to the location where you have installed XML Server.
    b. From the `XML Server Test` folder, run `XMLServerTest.exe`.

       The system displays the XML Server Test dialog box.
    c. In the **XML Server IP** field, enter the IP address for XML Server.
    d. In the **XML Server Port** field, enter the port number for XML Server.
    e. Click the ellipses (...) button next to **TLink** field.
    f. From the **TLink** drop-down list, select the appropriate link.
    g. Click **Connect**.
14. In the Services window, verify that the service for the installed media store is running.

Installing Application Management Service

About this task

The install script for Application Management Service installs Application Management Director and Call Center Elite Multichannel Control Panel.

Important:

You must install Application management Director, Call Center Elite Multichannel Control Panel and the Call Center Elite Multichannel Desktop components on the same system.

Procedure

1. Close all open applications.
2. Run the `setup.exe` file.
3. On the Trace System Server Dialog screen, perform the following actions:
    a. In the **Server** field, enter the host name or IP address for Trace System Server.
    b. In the **Port** field, enter the port number for Trace System Server.
    c. Click **Next**.
4. Click **Server** > **Application Management Service**.
5. On the Application Management Service welcome screen, click **Next**.
6. On the License Agreement screen, click **Yes** to agree with the licensing agreement.
7. Keep the **Application Management Director** and **CC Elite Multichannel Control Panel** check boxes selected and click **Next**.
8. To install Call Center Elite Multichannel Control Panel without a shortcut on the system desktop, clear the **Include the Avaya Aura Call Center Elite Multichannel Control Panel shortcut on the desktop** check box and click **Next**.

9. On the Edit Data screen, perform one of the following actions:
   - To source the configuration information from the local .ini file, keep the **Use default CC Elite Multichannel Control Panel INI file for configuration information** check box selected and click **Next**.
   - To source the configuration information from Configuration Server, clear the **Use default CC Elite Multichannel Control Panel INI file for configuration information** check box, enter the values in the fields, and click **Next**.

   For more information, see Edit Data field descriptions on page 26.
10. On the Choose Destination Location screen, select a location for the installation files and click **Next**.
11. Review the installation settings and click **Next**.
12. Click **Finish**.
13. **(Optional)** If the installation prompts you to restart the system, click **Yes, I want to restart my computer now**.

    The installation prompts you to restart the system if the application components need updating or registering.
14. Start the Windows Services application by performing the following actions:
    a. Click **Start** > **Run**.
    b. In the Run dialog box, type `services.msc`.
    c. Click **OK**.
15. In the Services window, verify that the **AS Application Management Director** service is running.

Chapter 6: Installing Media Gateways

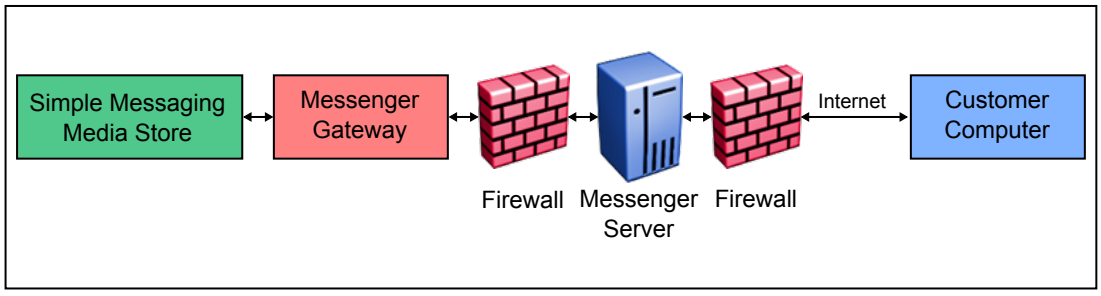
Gateways

In the business-to-business and customer-to-business environments, instant messaging, text messaging, and web chatting are becoming the principle mechanisms for communication.

Call Center Elite Multichannel broadens the customer service capability of your contact center by allowing you to blend with the following gateways with inbound telephone calls:

- AOL or ICQ Instant Messenger Gateway: Customers or business associates who use the Internet can communicate with you through AOL or ICQ Instant Messenger and receive the same treatment as telephone callers.
- Communicator Gateway: Enables communication with any number of the Office Communicator clients.
- MSN Messenger Gateway: Customers or business associates who use the Internet can communicate with you through MSN Messenger and receive the same treatment as telephone callers
- Short Message Service Gateway: Customers or business associates who use mobile texting can communicate with you through Short Message Service Gateway and receive the same treatment as telephone callers
- XMPP Gateway: XMPP Gateway is a server application that provides conversion from Extended Messaging and Presence Protocol (XMPP) to Simple Messaging Media Store.
- Web Chat Gateway: Customers or business associates who use the Internet can communicate with you through web chat and receive the same treatment as telephone callers.

The following diagram depicts the location of Messenger Gateway:



Checklist for installing Web Chat Gateway

Step	Task	Reference	✔
1	Install the Web Chat web service on IIS Web Server	Installing Web Chat for IIS on page 103 **Note:** In this process, you create a password-protected user account for the Web Chat web service.	
2	Install Web Chat Gateway on a system that has a server operating system	Installing Media Gateways on page 106	
3	Configure Web Chat through IIS Manager	Configuring Web Chat through IIS Manager on page 105	
4	Configure Web Chat Gateway using Call Center Elite Multichannel Control Panel	Configuring Media Gateways on page 107 **Note:** When you create remote service accounts, you must specify the password that you created during the installation of the Web Chat web service.	
5	Install Web Chat ASP application on IIS Web Server	Web Chat ASP application is installed during the installation of WebChat IIS and WebChat Gateway. **Note:** You must specify the names and IDs of the remote service accounts that you created during the configuration of Web Chat Gateway.	

Note:

You must install the Web Chat web service and Web Chat ASP application on the same IIS Web Server.

Installing Web Chat for IIS

Before you begin

IIS Web Server must have Microsoft Windows Server 2008, Microsoft IIS 7, Microsoft .Net Framework 3.5 SP1, and Microsoft Internet Explorer.

About this task

The install script for Web Chat for IIS installs the Web Chat Web service on IIS Web Server.

Procedure

1. Close all open applications.
2. Run the `setup.exe` file.
3. On the Trace System Server Dialog screen, perform the following actions:
   a. In the **Server** field, enter the host name or IP address for Trace System Server.
   b. In the **Port** field, enter the port number for Trace System Server.
   c. Click **Next**.
4. Click **Server** > **Media Gateways** > **Web Chat for IIS**.
5. On the Web Chat for IIS welcome screen, click **Next**.
6. On the License Agreement screen, click **Yes** to agree with the licensing agreement.
7. On the Choose Destination Location screen, select a location for the installation files and click **Next**.
8. Keep the **Web Chat ASP** and **Web Chat Web Service** check boxes selected and click **Next**.
9. On the Configure Web Chat for IIS screen, perform the following actions:
   a. In the **Service Name** field, enter a name for the remote service.
   b. In the **Service ID** field, enter a unique service identifier for the remote service.

      Note:

      The name and service identifier pair must match with a Remote Service Name and Remote Service ID combination configured in Web Chat Gateway. You can configure the Remote Service Name and Remote Service ID combination in Web Chat Gateway through Call Center Elite Multichannel Control Panel.

   c. Click **Add to list** to add the name and service identifier pair in a list.

      Note:

      You can also add the name and service identifier pair in the `web.config` file at a later time. The default location of this file is `C:\Program Files\Avaya\Avaya Aura CC Elite Multichannel\Server\Media Gateways\Web Chat For IIS\WebChatASP`.

   d. Click **Next**.
10. On the Edit Data screen, perform the following actions to create a password-protected user account for the Web Chat web service:
    a. In the **User Name** field, enter a user name for your account.

       The default user name is WCUser.

b. In the **User Password** and **Confirm User Password** fields, enter a password for your account.

The default password is CCEUser0.

Note:

The user name is saved in the `web.config` file for the Web Chat web service. The user name and password are saved as a legitimate Windows user account.

11. Review the installation settings and click **Next**.
12. Click **OK** to enable ASP .Net Web Service Extension.

Note:

If you enter the remote service names and IDs during the installation of the Web Chat ASP, you do not need to change the default configuration data in the `web.config` file of the application.

13. Click **Finish**.
14. **(Optional)** If the installation prompts you to restart the system, click **Yes, I want to restart my computer now**.

The installation prompts you to restart the system if the application components need updating or registering.

Configuring Web Chat through IIS Manager

About this task

After you install IIS and Web Chat for IIS, you must configure Web Chat through IIS Manager.

Procedure

1. Click **Start** > **Administrative Tools** > **Internet Information Services (IIS) Manager**.
2. In the left pane, click **Application Pool**.
3. In the list of application pools, select **DefaultAppPool**.
4. In the Actions pane, click **Advanced Settings**.
5. In the Advanced Settings dialog box, perform the following steps:
   a. Perform one of the following steps:
      - For Windows Server 2008, in the **.NET Framework Version** field, click **v2.0**.
      - For Windows Server 2012, in the **.NET CLR Version** field, click **v2.0**.
   b. In the **Enable 32-bit Applications** field, click **True**.
   c. In the **Managed Pipeline Mode** field, click **Integrated**.
   d. Click **OK**.

6. In the left pane, expand **Sites** > **Default Web Site**.
7. Click **WebChatASP** and perform the following steps:
   a. In the WebChatASP Home screen, double-click **Directory Browsing**.
   b. In the Actions pane, click **Enable**.
8. In the left pane, click **WebChatWebService** and perform the following steps:
   a. In the WebChatWebService Home screen, double-click **Directory Browsing**.
   b. In the Actions pane, click **Enable**.
9. Open a web browser.
10. In the address bar, type `http://localhost/webchatasp`.

    The system displays the Avaya Web Chat page.

Installing Media Gateways

Before you begin

The system must have Microsoft .Net Framework 3.5 SP1 and Microsoft Internet Explorer.

About this task

Using this procedure, you can install the following gateways:

- AOL or ICQ Instant Messenger gateway
- MSN Messenger gateway
- Communicator gateway
- Short Message Service gateway
- XMPP gateway
- Web Chat gateway

Procedure

1. Close all open applications.
2. Run the `setup.exe` file.
3. On the Trace System Server Dialog screen, perform the following actions:
   a. In the **Server** field, enter the host name or IP address for Trace System Server.
   b. In the **Port** field, enter the port number for Trace System Server.
   c. Click **Next**.
4. Click **Server** > **Media Gateways**.
5. Click one of the following options based on your requirement:
   - AOL or ICQ Instant Messenger gateway

- MSN Messenger gateway
- Communicator gateway
- Short Message Service gateway
- XMPP gateway
- Web Chat gateway

6. On the welcome screen, click **Next**.
7. On the License Agreement screen, click **Yes** to agree with the licensing agreement.
8. On the Choose Destination Location screen, select a location for the installation files and click **Next**.
9. Review the installation settings and click **Next**.
10. Click **Finish**.
11. **(Optional)** If the installation prompts you to restart the system, click **Yes, I want to restart my computer now**.

    The installation prompts you to restart the system if the application components need updating or registering.
12. Start the Windows Services application by performing the following actions:
    a. Click **Start** > **Run**.
    b. In the Run dialog box, type `services.msc`.
    c. Click **OK**.
13. In the Services window, verify that the service for the installed gateway is running.

Configuring Media Gateways

About this task

For more information about how to configure media gateways, see *Administering Avaya Aura® Call Center Elite Multichannel*.

Chapter 7: Installing the Developer components

Requirements for installing the Developer components

To develop a contact center application using Call Center Elite Multichannel Developer, you must install the toolkit on a client computer having Microsoft development environment, such as Visual Basic and Visual C#. To build a contact center application using Microsoft Visual Studio .Net, your system must have Microsoft Internet Explorer.

The following are the requirements to run an application developed using Call Center Elite Multichannel Developer:

- The client system must have Avaya Aura® Application Enablement Services TSAPI client software.
- The client system must have Microsoft .Net Framework 3.5 SP1 and Microsoft Internet Explorer if the application is built using .Net.
- License Director must be installed on a dedicated Call Center Elite Multichannel server.

Note:

Call Center Elite Multichannel Developer does not require separate licensing. Any investment that you make in applications developed with Call Center Elite Multichannel Developer is protected by the Call Center Elite Multichannel run-time licenses.

Call Center Elite Multichannel Developer installation

When you install Call Center Elite Multichannel Developer, the installer installs XML Client, Multimedia common libraries, and Plug-in common libraries.

XML Client

XML Client encompasses the XML Client and CSTA Schemas components. For the XML Client component, the ASXMLClient object contains the ASXMLClient, ASXMLRouting, ASXMLStation, and ASXMLVDN classes in the AgileSoftware.Developer namespace.

Note:

XML Client is installed only when you install the AES TSAPI client.

Multimedia common libraries

Multimedia common libraries encompass the components that interact with Media Director and Media Stores.

Plug-in common libraries

Plug-in common libraries encompass the components that you use for developing custom plug-ins. You can use the custom plug-ins with the AS GUI Host plug-in architecture, such as Call Center Elite Multichannel Desktop, Call Center Elite Multichannel Reporting, or Call Center Elite Multichannel Control Panel.

Installing Call Center Elite Multichannel Developer

Procedure

1. Close all open applications.
2. Run the `setup.exe` file.
3. On the Trace System Server Dialog screen, perform the following actions:
   a. In the **Server** field, enter the host name or IP address for Trace System Server.
   b. In the **Port** field, enter the port number for Trace System Server.
   c. Click **Next**.
4. Click **Developer**.
5. On the Developer welcome screen, click **Next**.
6. On the License Agreement screen, click **Yes** to agree with the licensing agreement.
7. Keep the **Error Logging**, **XML Client**, **Multimedia Common Libraries**, and **Plugin Common Libraries** check boxes selected and click **Next**.
8. On the Choose Destination Location screen, select a location for the installation files and click **Next**.
9. Review the installation settings and click **Next**.
10. Click **Finish**.
11. **(Optional)** If the installation prompts you to restart the system, click **Yes, I want to restart my computer now**.

    The installation prompts you to restart the system if the application components need updating or registering.

Chapter 8: Installing SQL Server

SQL Server installation

Call Center Elite Multichannel supports the express, standard, and enterprise editions of Microsoft SQL Server 2008 and Microsoft SQL Server 2012. Based on your operating system, you can install SQL Server as a 32-bit or 64-bit application. For more information about prerequisites and installation of Microsoft SQL, see Microsoft documentation at http://msdn.microsoft.com/en-us/library/bb545450.aspx.

Note:

Call Center Elite Multichannel is supported only with the SQL_Latin1_General_CP1_CI_AS collation. Therefore, you must use the SQL_Latin1_General_CP1_CI_AS collation while installing Microsoft SQL Server.

SQL Server configuration

Configuring SQL Server

Procedure

1. From the Windows **Start** menu, click **All Programs** > **Microsoft SQL Server** > **Configuration Tools** > **SQL Server Configuration Manager**.
2. In the right pane, right-click **Named Pipes** and click **Enable**.
3. In the right pane, right-click **TCP/IP** and click **Enable**.
4. Right-click **TCP/IP** and click **Properties**.
5. Click the **IP Addresses** tab.
6. Enable all IP addresses and click **OK**.
7. Start Microsoft SQL Server Management Studio.
8. Click **Connect**.
9. In the left pane, right-click the SQL Server name and click **Facets**.

10. In the View Facets window, click the **Facet** arrow and select **Surface Area Configuration**.
11. In the **Facet properties** list, set the **XPCmdShellEnabled** property to True.
12. Click **OK**.

Configuring the database settings for SQL Server

Before you begin

You must create ASMSControl and ASContact databases. For information on how to create these databases, see *Administering Avaya Aura® Call Center Elite Multichannel*.

About this task

Using this procedure, you can configure the database settings for Microsoft SQL Server to attain the specified capacity.

Procedure

1. Start Microsoft SQL Server Management Studio.
2. In Object Explorer, expand the **Databases** node.
3. Right-click **ASMSControl** and click **Properties**.
4. In the Database Properties - ASMSControl window, click **Options**.
5. In the **Automatic** section, set the value of the **Auto Shrink** field to False.
6. Click **OK**.
7. In Object Explorer, right-click **ASMSData1** and click **Properties**.
8. In the Database Properties - ASMSData1 window, click **Files**.
9. In the **Databases files** section, perform the following actions for the **ASMSData1** row:
    a. In the **Initial Size (MB)** field, set the value to `10000`.
    b. In the **Autogrowth** field, click the ellipses (...) button.
    c. In the Change Autogrowth for ASMData1 window, set the value of the **File Growth in Megabytes** field to `2000`.
10. Click **OK**.
11. In the **Databases files** section, perform the following actions for the **ASMSData1_log** row:
    a. In the **Initial Size (MB)** field, set the value to `2000`.
    b. In the **Autogrowth** field, click the ellipses **(...)** button.
    c. In the Change Autogrowth for ASMSData1_log window, set the value of the **File Growth in Megabytes** field to `500`.
12. Click **OK**.
13. In the Database Properties - ASMSData1 window, click **Options**.

14. In the **Automatic** section, set the value of the **Auto Shrink** field to False.
15. Click **OK**.

Chapter 9: Installing utilities

WebLM installation

WebLM Server is a web application that manages the licenses for Call Center Elite Multichannel and other Avaya products. Call Center Elite Multichannel supports WebLM Server 6.3. To install WebLM Server 6.3, follow the instructions mentioned in this section.

You can also install WebLM Server 6.3 by deploying the OVA for WebLM Server 6.3. To download the OVA for WebLM Server 6.3, go to the Avaya Aura® System Manager downloads section on the Avaya Support website, http://support.avaya.com.

You can install the required Call Center Elite Multichannel licenses on WebLM Server. From WebLM Server, you can also check the licenses whenever required. For more information, see *Administering Avaya Aura® Call Center Elite Multichannel*.

Note:

The version of the WebLM Server must be compatible with the operating system on which you install WebLM Server.

Prerequisites for WebLM Server

The following are the prerequisites for WebLM Server:

- Microsoft Windows Server 2008 R2 SP1 64-bit.
- Oracle Java Runtime Environment (JRE) 1.7.0_17 64-bit.
- Tomcat 7.0.55 installed as a Windows service.

  The user who installs Tomcat must have read/write permissions for the `C:\temp` folder.
- The system that deploys WebLM Server must have an entry for the local host IP address in the `hosts` file.

  For example, on a system running Microsoft Windows, the location of the `hosts` file is `C:\Windows\System32\drivers\etc`. The entry in this file must have `<Localhost_IP_address> localhost` format.

Checklist for installing WebLM Server

The following checklist outlines the series of steps that you must perform to install WebLM Server.

No.	Task	Description	✔
1	Install Oracle Java Runtime Environment (JRE)	See Installing Oracle Java Runtime Environment (JRE) on page 114	
2	Set the JAVA_HOME environment variable	See Setting the JAVA_HOME environment variable on page 115	
3	Install Tomcat	See Installing Tomcat on page 115	
4	Set the PATH environment variable	See Setting the PATH environment variable on page 116	
5	Set the CATALINA_HOME environment variable	See Setting the CATALINA_HOME environment variable on page 116	
6	Stop the Tomcat service	See Stopping the Tomcat service on page 116	
7	Install WebLM Server	See Installing WebLM Server on page 117	

Installing Oracle Java Runtime Environment (JRE)

About this task

You must install JRE 1.7.0_17 on the system where you want to deploy WebLM Server. The version of JRE must be compatible with the operating system of the system where you want to deploy WebLM Server.

Procedure

1. Run the `jre-7u17-windows-x64.exe` file from the `<DVD drive path>\Utilities\WebLM` folder.
2. On the Java Setup - Welcome screen, click **Install**.
3. On the Java Setup - Progress screen, wait until the installer completes the installation process.
4. On the Java Setup - Complete screen, click **Close**.

Setting the JAVA_HOME environment variable

About this task

After installing JRE, you must set the JAVA_HOME environment variable.

Procedure

1. Right-click **My Computer** and click **Properties**.
2. Click **Advanced system settings**.
3. On the System Properties dialog box, click **Environment Variables**.

   The system displays the Environment Variables dialog box.
4. In the System variables list, click **New**.
5. On the New System Variable dialog box, perform the following steps:
   a. In the **Variable name** field, type `JAVA_HOME`.
   b. In the **Variable value** field, type the install location of JRE 1.7.0_17.

      For example, `C:\Program Files\Java\jre1.7.0_17`.
   c. Click **OK**.

Installing Tomcat

About this task

You must install Tomcat 7.0.55 on the system where you want to deploy WebLM Server. The version of Tomcat must be compatible with the operating system of the system where you want to deploy WebLM Server.

Procedure

1. Run the `apache-tomcat-7.0.55.exe` file from the `<DVD drive path>\Utilities\WebLM` folder.
2. On the welcome screen, click **Next**.
3. On the License Agreement screen, click **I Agree**.
4. On the Choose Components screen, perform the following steps:
   a. Expand the **Tomcat** node and select the **Service Startup** and **Native** check boxes.
   b. Select the **Host Manager** check box
   c. Click **Next**.
5. **(Optional)** On the Configuration screen, enter a user name and a password.
6. Click **Next**.
7. On the Java Virtual Machine screen, select the install location of the JRE and click **Next**.
8. On the Choose Install Location screen, click **Install**.
9. On the completion screen, click **Finish**.

Setting the CATALINA_HOME environment variable

About this task

After installing Tomcat, you must set the CATALINA_HOME environment variable.

Procedure

1. Right-click **My Computer** and click **Properties**.
2. Click **Advanced system settings**.
3. On the System Properties dialog box, click **Environment Variables**.

   The system displays the Environment Variables dialog box.
4. In the System variables list, click **New**.
5. On the New System Variable dialog box, perform the following steps
   a. In the **Variable name** field, type `CATALINA_HOME`.
   b. In the **Variable value** field, type the install location of Tomcat 7.0.55.

      For example, `C:\Program Files\Apache Software Foundation\Tomcat 7.0`.
   c. Click **OK**.

Setting the PATH environment variable

About this task

After installing Tomcat, you must set the PATH environment variable

Procedure

1. Right-click **My Computer** and click **Properties**.
2. Click **Advanced system settings**.
3. On the System Properties dialog box, click **Environment Variables**.

   The system displays the Environment Variables dialog box.
4. In the System variables list, select the PATH environment variable and click **Edit**.
5. On the Edit System Variable dialog box, perform the following steps:
   a. In the **Variable value** field, type a semicolon after the existing value and then type `%JAVA_HOME%\bin`.
   b. Click **OK**.

Stopping the Tomcat service

Procedure

1. Start the Windows Services application by performing the following actions:
   a. Click **Start** > **Run**.
   b. In the Run dialog box, type `services.msc`.

c. Click **OK**.

2. In the Services window, right-click the Tomcat service and click **Stop**.

Installing WebLM Server

Procedure

1. Copy the `WebLM.war` file from the `<DVD drive path>\Utilities\WebLM` folder to the `webapps` folder in the Tomcat installation directory.
2. In the `webapps` folder, create a folder named `WebLM`.
3. Open the `WebLM.war` file with WinZip and extract the contents of the `WebLM.war` file to the newly created `WebLM` folder.
4. Enable HTTPS.

   This step is mandatory to access WebLM. This step requires editing the `<tomcat_installation_dir>\conf\server.xml` file. For more information, see Enabling HTTPS on page 117.
5. Update the properties of WebLM Server.

   WebLM Server has the default values set in the configuration file. If required, update the properties before starting Tomcat. For more information, see WebLM configuration on page 118.
6. Fix the security vulnerabilities that might exist within Tomcat.

   For more information, see Fixing the security vulnerabilities on page 120.

Enabling HTTPS

Procedure

1. Perform the following steps to verify if the Tomcat installation has Apache Portable Runtime (APR) enabled:
   a. Click **Start** > **Run**.
   b. In the Run dialog box, type `%CATALINA_HOME%\bin`.
   c. Verify if the `tcnative-1.dll` file is present.

      If the `tcnative-1.dll` file is present, APR is supported for the Tomcat installation. For more information about APR, see http://tomcat.apache.org/tomcat-6.0-doc/apr.html.
2. From the `<DVD drive path>\Utilities\WebLM` folder, open the sample `server.xml` file in a text editor, such as Notepad, and perform one of the following steps:
   - If APR is supported for the Tomcat installation, copy the following Connector tag from the sample `server.xml` file:

```
    <Connector acceptCount="100" clientAuth="false" disableUploadTimeout="true" enableLookups="false"
SSLPassword="password" SSLEnabled="true" maxHttpHeaderSize="8192" maxSpareThreads="75" maxThreads="150"
minSpareThreads="25" port="52233" scheme="https" secure="true" sslProtocol="TLS" SSLCipherSuite="ALL:!ADH!RC4
-IDEA:!LOW:!SSLv2:!EXPORT40!EXPORT56" SSLCertificateFile="${catalina.base}/webapps/WebLM/WEB-INF/weblm.crt"
SSLCertificateKeyFile="${catalina.base}/webapps/WebLM/WEB-INF/weblm.key"/>
```

- If APR is not supported for the Tomcat installation, copy the following Connector tag from the sample `server.xml` file:

```
    <Connector acceptCount="100" clientAuth="false" disableUploadTimeout="true" enableLookups="false"
keystoreFile="${catalina.base}/webapps/WebLM/WEB-INF/weblmserver.p12" keystorePass="password"
SSLEnabled="true" keystoreType="PKCS12" maxHttpHeaderSize="8192" maxSpareThreads="75" maxThreads="300"
minSpareThreads="25" port="52233" scheme="https" secure="true" sslProtocol="TLS"
ciphers="TLS_ECDH_ECDSA_WITH_3DES_EDE_CBC_SHA,TLS_ECDH_RSA_WITH_3DES_EDE_CBC_SHA,TLS_ECDHE_ECDSA_WITH_3DES_ED
E_CBC_SHA,TLS_ECDHE_RSA_WITH_3DES_EDE_CBC_SHA,TLS_RSA_WITH_AES_128_CBC_SHA,TLS_RSA_WITH_AES_256_CBC_SHA,TLS_E
CDH_ECDSA_WITH_AES_128_CBC_SHA,TLS_ECDH_ECDSA_WITH_AES_256_CBC_SHA,TLS_ECDH_RSA_WITH_AES_128_CBC_SHA,TLS_ECDH
_RSA_WITH_AES_256_CBC_SHA,TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA,TLS_ECDHE_ECDSA_WITH_AES_256_CBC_SHA,TLS_ECDHE
_RSA_WITH_AES_128_CBC_SHA,TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA,TLS_KRB5_WITH_3DES_EDE_CBC_SHA"/>
```

Note:

The Connector tags are for the port `52233`. This port is used for the HTTPS communication with WebLM Server.

3. From the `<tomcat_installation_dir>/conf` folder, open the `server.xml` file in a text editor and paste the copied Connector tag in the end of the file.

Important:

- Add the Connector tag before the element the `</Service>` tag as shown in the sample `server.xml` file.

4. For the connectors on the ports `8080` and `8009`, update the value of the attribute `redirectPort` from `8443` to `52233`.

WebLM configuration

WebLM Server configuration is defined in the `weblmserver.properties` file. The location of this file is `<tomcat_installation_dir>/webapps/WebLM/data`. To make any changes to the `weblmserver.properties` file, you must restart Tomcat, so that the changes can take effect.

The following table lists and describes the properties:

Property name	Description	Default value
WebLM.LicenseAllocation.Backup.FileSize	This property specifies the size of the license allocation backup file in MB. Ensure to allocate an integer to this property. A decimal value such as 1.5 is invalid.	10 MB
WebLM.Usages.MaxUsageCount	This property specifies the maximum count of the usage query results that WebLM can maintain. The property must be set to an integer value. A decimal value such as 1.5 is invalid.	5
WebLM.Usages.UsageCount	This property specifies the count of the usage query results that WebLM maintains. The property must be set to an integer value within a	1

Table continues…

Property name	Description	Default value
	range of 1 to the value of the WebLM.Usages.MaxUsageCount property. A decimal value such as 1.5 is invalid. This property is also configurable from the WebLM UI.	

WebLM Server logging configuration is defined in the `log4j.properties` file. The location of this file is`<tomcat_installation_dir>/webapps/WebLM/WEB-INF/classes`.

To make any changes to the `log4j.properties` file, you must restart Tomcat, so that the changes can take effect.

The following table lists and describes the important properties of the `log4j.properties` file:

Property Name	Logger Type	Default Value	Description
log4j.appender.weblmDebugAppender.File	Debug	${catalina.home}/webapps/WebLM/data/log/weblmserverdebug.log	Using this property, a WebLM user can specify a location to save the log files. • `C:\\folder\ \weblmserver.log`
log4j.appender.weblmOperationalAppender.File	Operational	${catalina.home}/webapps/WebLM/data/log/weblmserveroperational.log	
log4j.appender.weblmAuditAppender.File	Audit	${catalina.home}/webapps/WebLM/data/log/weblmserveraudit.log	
log4j.appender.weblmSecurityAppender.File	Security	${catalina.home}/webapps/WebLM/data/log/weblmserversecurity.log	
log4j.appender.weblmDebugAppender.threshold	Debug	ERROR	Using this property, a WebLM user can specify the log level. The log files contain the log messages of the levels specified for this property and the above properties. You can set the log levels in the increasing order of granularity. For example, FATAL, ERROR, WARN, INFO, and DEBUG. To change the log levels, you must change the value of this property and the log level mentioned at the respective logger level.
log4j.appender.weblmOperationalAppender.threshold	Operational	ERROR	
og4j.appender.weblmAuditAppender.threshold	Audit	INFO	
log4j.appender.weblmSecurityAppender.threshold	Security	WARN	
log4j.appender.weblmDebugAppender.MaxFileSize	Debug	10 MB	Using this property, a WebLM user can specify the maximum log file size before rolling over.

Table continues…

Property Name	Logger Type	Default Value	Description
log4j.appender.weblmOperationalAppender.MaxFileSize	Operational		
log4j.appender.weblmAuditAppender.MaxFileSize	Audit		
log4j.appender.weblmSecurityAppender.MaxFileSize	Security		
log4j.appender.weblmDebugAppender.MaxBackupIndex	Debug	5	Using this property, a WebLM user can specify the number of log files that can be backed up after the log file reaches the maximum size as specified in the log4j.appender.<APPENDER>.MaxFileSize property.
log4j.appender.weblmOperationalAppender.MaxBackupIndex	Operational	3	
log4j.appender.weblmAuditAppender.MaxBackupIndex	Audit	3	
log4j.appender.weblmSecurityAppender.MaxBackupIndex	Security	3	

Fixing the security vulnerabilities

Procedure

1. Delete sample applications from Tomcat.

   To resolve the security vulnerabilities from the Tomcat sample applications, delete the following folders from the `<tomcat_installation_dir>\webapps` folder:

   - docs
   - examples
   - host-manager
   - manager

2. Delete the Tomcat users if you find any user after installing Tomcat.

   a. From the `<tomcat_installation_dir>/conf/` folder, open the `tomcat-users.xml` file in a text editor and search for the element `<user>` defined as `<user username="tomcat" password="tomcat" roles="tomcat"/>`.

   b. Delete all user elements from the `tomcat-users.xml` file.

Note:

After performing these actions, you cannot manage the applications deployed in Tomcat using Tomcat Management console. However, these actions are important because:

- Tomcat user file stores the Tomcat user password in clear text. Using the credentials, someone can get access to the Manager web application for the remote Tomcat server. A remote attacker can leverage this issue to install a malicious application on the affected server and run a code using Tomcat privileges.
- The sample applications of Tomcat might help attackers to uncover information about the remote Tomcat install or host. These applications might themselves contain vulnerabilities, such as cross-site scripting issues.

Accessing WebLM Server

About this task

For products that write installers or use RPMs, if you deploy WebLM Server in a Tomcat container where you have already deployed some other application, the `log4j jar` can be present at two locations. For example, `<tomcat_installation_dir>/shared/lib` and `<tomcat_installation_dir>/webapps/WebLM/WEB-INF/lib`.

The presence of the `log4j jar` at two locations might cause some errors. To avoid errors, you must remove the `log4j jar` from the `<tomcat_installation_dir>/webapps/WebLM/WEB-INF/lib` folder.

Procedure

1. Start Tomcat.
2. In the web browser, enter the URL of WebLM Server in the `https://<IP_Address>:<HTTPS_port>/WebLM/index.jsp` format.

   The default value for the HTTPS port is `52233`.
3. On the Certificate dialog box, click **Yes** to accept the certificate.

   The dialog box indicates that the application is running over HTTPS.
4. Log in to WebLM Server.

   Note:

   After configuring WebLM Server, you must restart License Director.

Installing Application Enablement Services TSAPI client

About this task

You must install AES TSAPI client on the system where the Call Center Elite Multichannel Server components are installed.

For more information about installing the AES TSAPI client with custom certificates, see *Avaya Aura® AES TSAPI and CVLAN Client and SDK Installation Guide* available on the Avaya Support site at http://support.avaya.com.

Important:

To install AES TSAPI client on Windows Server 2012, you must download the AES TSAPI client 6.3.3 installer from the Avaya Support site at http://support.avaya.com.

Procedure

1. Close all open applications.
2. Run the `setup.exe` file.
3. On the Trace System Server Dialog screen, perform the following actions:
   a. In the **Server** field, enter the host name or IP address for Trace System Server.
   b. In the **Port** field, enter the port number for Trace System Server.
   c. Click **Next**.
4. Click **Utilities** > **Avaya AES Client**.
5. On the Avaya AES TSAPI Client welcome screen, click **Next**.
6. On the AES Server Configuration screen, perform the following actions:
   a. In the **Host Name or IP Address** field, enter the host name or IP address for the AES server that you want to add.
   b. In the **TCP Port** field, enter the port number for the AES server that you want to add.
   c. Click **Add to List**.
   d. Repeat step a to c to add all TSAPI services.
7. Click **Next**.
8. Click **Install**.
9. Click **Finish**.
10. **(Optional)** If the installation prompts you to restart the system, click **Yes, I want to restart my computer now**.

    The installation prompts you to restart the system if the application components need updating or registering.

Quick Installer - Server Edition

Quick Installer - Server Edition is a quick and easy way to install the Call Center Elite Multichannel Server components. Instead of installing each Server component individually through Main Installer, you can run the Quick Installer - Server Edition to collectively install all the Server components.

Important:

Do not use Quick Installer for the upgrade procedures.

When you install the Server components through the Main Installer, you see several common screens, such as the license agreement screen. To save time, Quick Installer - Server Edition displays the common screens only once. Quick Installer - Server Edition installs the Server components based on the installation complexity.

Note:

Trace System, Call Recording Config Service, and Experience Portal Config Service are always installed on the C: drive even if you specify a location other than C: drive.

Before installing the first Server component, Quick Installer - Server Edition checks the prerequisites for all the Server components. For example, Microsoft .Net Framework 3.5 SP1, AES TSAPI client, and Microsoft IIS.

If Microsoft .Net Framework 3.5 SP1 or AES TSAPI client is not installed, Quick Installer - Server Edition automatically launches these installs before proceeding with the installation of the first Server component. If you do not have Microsoft IIS installed on the server, the Server components that require IIS are removed from the install list.

After the install process starts, the only way to cancel the installation is through Windows Task Manager.

Installing the Call Center Elite Multichannel Server components using Quick Installer - Server Edition

Before you begin

To run Quick Installer - Server Edition, your system must be running Windows Installer 4.5. If Windows Installer 4.5 is not running, this install automatically runs an install script for that application. After you install Windows Installer 4.5, you must restart your system before restarting Quick Installer - Server Edition.

About this task

You can run Quick Installer - Server Edition (setup.exe) directly from the `Utilities` folder. The `Utilities` folder is available at the installed location of Call Center Elite Multichannel. You can also run Quick Installer - Server Edition (setup.exe) through the **Utilities** option in the Main Installer.

Procedure

1. Close all open applications.

2. Run the `setup.exe` file.
3. On the Trace System Server Dialog screen, perform the following actions:
   a. In the **Server** field, enter the host name or IP address for Trace System Server.
   b. In the **Port** field, enter the port number for Trace System Server.
   c. Click **Next**.
4. Click **Utilities** > **Quick Installer - Server Edition**.
5. On the QuickInstaller welcome screen, click **Next**.
6. On the License Agreement screen, click **Yes** to agree with the licensing agreement.
7. On the Choose Destination Location screen, select a location for the installation files and click **Next**.
8. Select the servers that you want to install and click **Next**.

Important:

During installation, you must configure the Server components listed in **Attended Installations** and need not configure the Server components listed in **Unattended Installations**.

Warning:

Select the required servers carefully. After the quick install process starts, you can stop the process only through Windows Task Manager.

Experience Portal Application Updater

In Call Center Elite Multichannel, you can use the Experience Portal Application Updater (EPAU) utility to install or update the Experience Portal applications.

Important:

Before you use the EPAU utility, ensure that the Tomcat server is installed on a target system where you want to install or update Experience Portal applications.

This utility installs or updates the Experience Portal applications on a target system by downloading the applications from a source server, which contains the applications.

When you install this utility on a system, the system installs the following important files on a system:

Sample.Update.xml	This file contains the sample information about Experience Portal applications. You can use this file to create the `update.xml` on a source server. You must update the `update.xml` file with the correct information about the Experience Portal applications available on the source server.

Update.xsd	This file contains the schema for the `update.xml` file. You must add this file on the source server with the `update.xml` file.
VPAUpdate.ini	This file contains the URL of the server that contains the `update.xml` and `update.xsd` files. The Experience Portal Application Updater utility downloads the applications from the server that you mention in the **BaseUrl** parameter in the `update.xml` file.
UpdaterUI.exe	This program is the utility program that you must run. This utility displays a list of new applications and applications that you must update.

When you run the Experience Portal Application Updater utility on a system for the first time, this utility creates the `update.xml` file on a system. Initially, the update.xml file does not contain information about Experience Portal applications.

The Experience Portal Application Updater utility compares the `update.xml` on a system, where you installed this utility with the `update.xml` file on a source server. If the `update.xml` file on the source server contains updated information about the Experience Portal applications, the utility displays those application information in a list. In this applications list, you can select an application and update it on a target system.

Installing Experience Portal Application Updater

Procedure

1. Close all open applications.
2. Run the `setup.exe` file.
3. On the Trace System Server Dialog screen, perform the following actions:
   a. In the **Server** field, enter the host name or IP address for Trace System Server.
   b. In the **Port** field, enter the port number for Trace System Server.
   c. Click **Next**.
4. Click **Utilities** > **Experience Portal Application Updater**.
5. Click **Next**.
6. On the End-User License Agreement screen, select the **I accept the terms in the license agreement** option and click **Next**.
7. On the Choose Setup Type screen, perform one of the following actions:
   - Click **Complete** to install all components of Trace System.
   - Click **Custom** and select the components that you want to install.
8. Click **Install**.
9. Click **Finish**.

10. **(Optional)** If the installation prompts you to restart the system, click **Yes, I want to restart my computer now**.

    The installation prompts you to restart the system if the application components need updating or registering.

Installing the Experience Portal applications

Procedure

1. From the Windows **Start** menu, click **All Programs** > **Avaya Aura CC Elite Multichannel** > **Utilities** > **Experience Portal Application Updater** > **Experience Portal Application Updater**.
2. In the **Destination Server** field, enter the URL of the system where you want to install or update the Experience Portal applications.
3. In the **Username** and **Password** field, enter the user name and the password to access the Tomcat server.
4. Click **Login**.

   After successful login, the system displays the list of Experience Portal applications. In the list, each application indicates the status as New, Skip, and Update.

   Note:

   The Experience Portal Application Updater utility indicates the status of the installed or updated application as **Skip**. You can either skip updating this application or forcefully update that application.
5. In the applications list, select the application that you want to install or update.
6. Click **Update**.

   After you install or update the Experience Portal Application Updater utility, the system indicates the application name in a list with green color.

   If an error occurs while installing or updating the application, the system displays an error message. The system also indicates the application name in a list with red color.

Microsoft Dynamics CRM Server implementation

To set up your Call Center Elite Multichannel solution to use Microsoft Dynamics CRM, see Microsoft Dynamics CRM Integration Implementation Guide located in the `Utilities\Microsoft Dynamics CRM Server Customizations` folder available with the Call Center Elite Multichannel installer.

Microsoft Dynamics CRM Server customization

If your Microsoft Dynamics CRM database is synchronized with ASContact Database, you must install Microsoft Dynamics CRM Phonebook Synchronizer on Microsoft Dynamics CRM Server. Microsoft Dynamics CRM Phonebook Synchronizer ensures that the ongoing changes are applicable to the Microsoft Dynamics CRM account. This component also ensures that the contact records are automatically updated in ASContact Database.

If you are integrating Call Center Elite Multichannel Desktop with Microsoft Dynamics CRM, you can add dial buttons to Microsoft Dynamics CRM web pages that contain one or more phone numbers.

To add dial buttons to Microsoft Dynamics CRM web pages, you must run the `ASMSCRMServerCustomizationsInstall.exe` file.

In the folder containing the installation files of Call Center Elite Multichannel, the location of the `ASMSCRMServerCustomizationsInstall.exe` file is `Utilities\Microsoft Dynamics CRM Server Customizations`.

Note:

Microsoft Dynamics CRM Phonebook Synchronizer does not install any component on the system.

Installing Microsoft Dynamics CRM Phonebook Synchronizer on Microsoft Dynamics CRM Server

Procedure

1. If you are already using a customization, copy the `callout.config.xml` file to another location.
2. Copy all files from the `Utilities\MS CRM Server Customizations\Realtime Phonebook Synchronizer` folder in the Call Center Elite Multichannel installer to the `C:\Program Files\Microsoft Dynamics CRM\Server\bin\assembly` folder on your Microsoft Dynamics CRM Server.
3. In the folder containing the installation files of Call Center Elite Multichannel, copy all files from the `Utilities\MS CRM Server Customizations\Realtime Phonebook Synchronizer` folder to the `C:\Program Files\Microsoft Dynamics CRM\Server\bin\assembly` folder on your Microsoft Dynamics CRM Server.
4. After you complete step 1, copy any new entries from the latest `callout.config.xml` file into your original `callout.config.xml` file and copy the updated file back into the folder on your Microsoft Dynamics CRM Server.
5. Update the `ASMSCRMPhonebookSynchronizer.ini` file.

   You must set the AS Contact Database Connection String to ASContact Database.

Chapter 10: Inventory of Call Center Elite Multichannel

Inventory of Call Center Elite Multichannel

Call Center Elite Multichannel Release 6.4 has a utility to collect the inventory of the Call Center Elite Multichannel components and the hardware of the system where the components are installed.

The inventory contains the following types of information:

- Hardware:
  - OEM ID
  - Number of processors
  - Processor type
  - Active processor mask
  - OS Major Version
  - OS Minor Version
  - OS Build Number
  - OS Platform ID
  - OS Version Info
- Network:
  - Machine time
  - Machine host name
  - Current user name
  - Found machine IP address
- Registry key for Avaya:
  - HK_LOCAL_MACHINE\Software
- Call Center Elite Multichannel components:
  - File location
  - File version
  - File date and time

The Call Center Elite Multichannel installation kit contains the command line utility `ASFileDetailCheck.exe`. In the installation kit, you can find all the related files for this utility in the `Utilities\FileDetailCheck` folder.

Collecting the Call Center Elite Multichannel inventory

Procedure

1. Copy the `FileDetailCheck` folder to a system from which you want to collect the inventory.
2. From the `FileDetailCheck` folder, run the `CCE50_FileCheck.bat` batch file.

   When you run this batch file, the `ASFileDetailCheck` utility collects the information of the Call Center Elite Multichannel components and stores the information in the `CCE50_Details.txt` file.

   Important:

   This utility collects Call Center Elite Multichannel inventory only from the system on which you are running the utility. To collect Call Center Elite Multichannel inventory from multiple systems, you must run this utility separately on each system.
3. Open the `CCE50_Details.txt` file to view the collected inventory.

Result

The following are some of the commands in the `CCE50_FileCheck.bat` batch file:

```
%echo off
del CCE50_Details.txt > Null 2>&1
asfiledetailcheck /SYSTEM >> CCE50_Details.txt
asfiledetailcheck /NETWORK >> CCE50_Details.txt
asfiledetailcheck /LMREGISTRY Avaya >> CCE50_Details.txt
asfiledetailcheck /CCEMODULES CCEComponentList.txt >> CCE50_Details.txt
ASFileDetailCheck  ASWINDOWSSYSTEM32 ActEntConfigClient.dll >> CCE50_Details.txt
ASFileDetailCheck /PID ACC23.ConfigItem.1 >> CCE50_Details.txt
ASFileDetailCheck /PID ACC23.ConfigItem >> CCE50_Details.txt
ASFileDetailCheck /PID ACC23.ConfigList.1 >> CCE50_Details.txt
ASFileDetailCheck /PID ACC23.ConfigList >> CCE50_Details.txt
ASFileDetailCheck /PID ACC23.SectionItem.1 >> CCE50_Details.txt
ASFileDetailCheck /PID ACC23.SectionItem >> CCE50_Details.txt
```

The following is a sample inventory:

```
Start: Printing system information
Hardware information:
OEM ID: 0
Number of processors: 2
Page size: 4096
Processor type: 586
Minimum application address: 10000
Maximum application address: 7ffeffff
Active processor mask: 3
OS Major Version : 5
```

```
OS Minor Version : 1
OS Build Number  : 2600
OS Platform ID   : 2
OS Version Info  : Service Pack 2
Memory load                          : 58
Available extended virtual memory  : 0
Available page file memory           : 2649792512
Available physical memory           : 891330560
Available virtual memory             : 2128175104
Total page file memory               : 4118532096
Total physical memory                : 2136887296
Total virtual memory                 : 2147352576
```

Chapter 11: User authentication in Call Center Elite Multichannel

In Call Center Elite Multichannel, you can provide the access permissions to the users so that they can use various Desktop applications, such as Call Center Elite Multichannel Desktop, Call Center Elite Multichannel Control Panel, and Call Center Elite Multichannel Reporting.

If a user attempts to access these applications without the appropriate access permissions, the system displays an error message.

In the standard installation of Call Center Elite Multichannel, the user authentication is disabled. To enable user authentication, you must configure the Active Directory (AD).

Important:

To administer AD, you must have the required skills.

As an administrator, you must create the user groups called Organizational Units (OUs). You must also grant the permissions to OUs to access the specific applications using the group policies or administrative templates.

Note:

The settings that you do for an OU overrides the settings of the parent OUs.

To enable the user authentication in a domain, you can also use a central switch on the domain level.

For more information, see the Avaya Products Security Handbook. You can also access the Avaya support website http://support.avaya.com/security to find the information about the known vulnerability policies in Avaya products.

Enabling the user authentication in a domain

About this task

When you enable the user authentication in a domain, the users can access the Call Center Elite Multichannel applications only with the explicit access permissions.

Procedure

1. From the default installation folder, open the `Utilities\Administrative Templates` folder.

   This folder contains the `CCE_User_Authentication.adm` and `CCE_Applications.adm` files. The `CCE_User_Authentication.adm` file is used to enable the user authentication and the `CCE_Applications.adm` file contains the settings for the Call Center Elite Multichannel Desktop applications.

2. Install the `CCE_User_Authentication.adm` administrative template on a domain level.

   This template creates a new folder **Computer Configuration** > **Administrative Templates** > **Avaya Contact Center Express** in Group Policy Object Editor. This new folder contains the new user authentication settings.

3. Change the **User Authentication** setting to **Enabled**.

   The system enables the user authentication for Call Center Elite Multichannel Desktop applications for all computers and users in this domain.

Enabling the user authentication for the users

About this task

The user authentication for the users is effective only when you enable the user authentication in a domain. For example, if you disable the access to Call Center Elite Multichannel Control Panel for a particular user, the user is restricted to access Call Center Elite Multichannel Control Panel only when you enable the user authentication in a domain.

Procedure

1. From the default installation folder, open the `Utilities\Administrative Templates` folder.

   This folder contains the `CCE_User_Authentication.adm` and `CCE_Applications.adm` files. The `CCE_User_Authentication.adm` file is used to enable the user authentication and the `CCE_Applications.adm` file contains the settings for the Call Center Elite Multichannel Desktop applications.

2. Create appropriate OUs to enable the user authentication for Call Center Elite Multichannel Desktop applications.

3. Install the `CCE_Applications.adm` administrative template in the group policy of each OU.

   This template creates a new folder **User Authentication** > **Administrative Templates** > **Avaya Contact Center Express** in Group Policy Object Editor. This new folder contains the new user authentication settings for each Desktop application.

4. Change the setting for an application to **Enabled**, **Disabled**, or **Not Configured**.

The system enables or disables the selected user authentication for the specified OUs.

Note:

If you select the **Not Configured** setting, the system uses the settings of the parent OU. If the parent OU does not have any settings, the system uses the default setting as **Disabled**.

Chapter 12: Agent event notification

Enable the agent event notification

Call Center Elite Multichannel takes the advantage of agent state events that Avaya Aura®™ Communication Manager generates.

Requirements for enabling the agent events

To receive the agent state events that Avaya Aura®™ Communication Manager generates, you need:

- Avaya Aura® CM Server
- Application Enablement Services
- License Director
- Call Center Elite Multichannel application that uses the agent state events:
  - Call Center Elite Multichannel Desktop application or any other application built using Call Center Elite Multichannel Developer
  - Interaction Data Server - Voice and Presence

Configuration for enabling agent events

The only configuration required is in the Communication Manager. When you configure the CTI link, you must set `Type = ADJ-IP` and make the following configurations:

- System parameters features:
  - Create Universal Call ID (UCID)
  - UCID Network Node ID: <a number must be entered>
  - Send UCID to ASAI
- Enable system parameters customer options:
  - Computer Telephony Adjunct Links
  - Agent States

  This option is enabled by an Avaya Aura® CM license.

Note:

To support SIP endpoints, the TSAPI link version must be `5`. For more information, see *Avaya Aura® Application Enablement Services Administration and Maintenance Guide.*

Operations for enabling the agent events

You do not need to change the operation or configuration of Call Center Elite Multichannel applications because the applications are auto-negotiating.

For the use in Call Center Elite Multichannel Developer, the changes in the agent state are indicated by invoking the **`QueryAgentStateReturn`** event. This method to indicate the changes ensures backward compatibility and capability to operate in both the polling and event modes.

Troubleshooting for enabling the agent events

Procedure

1. Verify that the Application Enablement Services service is running.
2. In the Avaya Communication Manager, type `list crm-features`.

   The **CRM Central** column must indicate a *y* next to the CTI Link that has the agent events enabled. This specifies that Application Enablement Services has negotiated the agent states with Avaya Communication Manager. If the expected CTI Link does not indicate the agent states enabled, contact your Avaya sales representative.
3. Start TS Spy on the system running the Call Center Elite Multichannel application.
4. In the station that the application is monitoring, change Agent State to AUX Work or ACW.

   If you find **`ReadyEvent`**, **`WorkNotReadyEvent`**, or **`NotReadyEvent`** event in the trace within TS Spy, then it indicates that you are receiving the agent state events from the Avaya Communication Manager to that application.

Appendix A: Call Center Elite Multichannel Desktop configuration

In Call Center Elite Multichannel Desktop, some parameters cannot be configured through the Options dialog box. You must configure such parameters through Configuration Server or by editing the configuration file.

Parameter configuration through Configuration Server

For information, see *Administering Avaya Aura® Call Center Elite Multichannel*.

Parameter configuration through the configuration file

To configure parameters in the configuration file, you must browse to the location `CCEM_INSTALL_DIR\Avaya\Avaya Aura CC Elite Multichannel\Desktop\CC Elite Multichannel Desktop` and configure the parameters in the `ASGUIHost.ini` file.

Important:

In the `ASGUIHost.ini` file, do not change section names or parameter names. You must only change the values for the parameters.

Appendix B: Parameters in the configuration file

General parameters

Parameter name	Description
Language	The language for the Call Center Elite Multichannel Desktop interface. The language options are English, French, German, Italian, Spanish, Spanish Colombian, Portuguese, Russian, Korean, Japanese, Traditional Chinese, and Simplified Chinese. The amount of space on the interface might limit the number of characters that you can display. **Note:** Call Center Elite Multichannel provides a custom language option. You can use the custom language option to change an existing language to suit the company-specific practices or a local dialect. You can also use the custom language option to translate all strings and create a new language. By altering the strings, you can customize the names of the buttons, labels, tabs, panels, text boxes, menus, instructions, and error messages. To use the custom language, you must create a text file containing the custom language name and the words of your choice. You must also specify this text file in the configuration.
Server Instance ID	A unique identifier for the Server application. The unique identifier is automatically created when the application runs for the first time.
Minimize to System Tray	A value that determines whether Call Center Elite Multichannel Desktop must display in the notification area or on the task bar when you minimize Call

Table continues…

Parameter name	Description
	Center Elite Multichannel Desktop. The default value is False.
Window Title	The title for Call Center Elite Multichannel Desktop that displays on the title bar.
Window Icon	The filename and path of the icon that displays on the title bar. If you keep this field blank, Call Center Elite Multichannel Desktop uses the default icon file from the current working folder.
Product ID	A number that identifies Call Center Elite Multichannel Desktop. **Note:** You must not change the default value.
Enable Options Menu	A value that determines whether an agent can access the Options dialog box. An administrator can enable or disable the access of the Options dialog box for an agent. The default value is True.
Enable Slide Tool Window	A value that enables or disables sliding the tool windows.

Error Logging parameters

Parameter name	Description
Error Log Level	A value that determines the log level of the error information. Call Center Elite Multichannel Desktop supports the following log levels: • 0=No error logging occurs • 1=Logs fatal, major, minor errors and trace error information • 2=Logs fatal, major, and minor errors • 4=Logs fatal and major errors • 8=Logs fatal errors only In addition to these default log levels, you can create a custom log level to diagnose Call Center Elite Multichannel Desktop. When the size of a log file reaches the maximum specified size, the custom log

Table continues…

Parameter name	Description
	level creates multiple log files. The custom log level does not overwrite the earlier log file. You can create the custom log level by adding 128 to one of the default log levels. For example, if you specify the error log level as 129, the system creates the new error log files for Call Center Elite Multichannel Desktop. The new error log files contain the fatal, major, minor errors, and trace error information. You must use the custom log level only for the diagnostic purpose.
Error Log File Path	A path to save the log files. By default, this field is blank. Keeping this field blank automatically saves the log files to the current working folder of Call Center Elite Multichannel Desktop.
Error Log File Extension	An extension added to the filename of an error log file. This extension consists of a file name and a file type extension. The system automatically precedes the default extension with a day of the week when the system creates an error log file. For example, the name of the log file is `MonASGUIHost.Log` if the file is created on Monday.
Maximum Error Log File Size KB	The maximum size of the error log file. The default value is 10000 KB. The minimum size that you can set is 100 KB. After the log file reaches to the maximum size limit, the system archives the log file and creates a new error log file. **Note:** Each archive stores only one error log file. Therefore, when the next error log file reaches the maximum size limit, the system overwrites the archived file with a new file. However, if you set the custom error log level, the system creates a new error log file with a new name every time the maximum size limit is reached.
Error Log Mode	A value that indicates the logging mode for Call Center Elite Multichannel Desktop.

Table continues…

Parameter name	Description
	The following are the logging modes: • 1 - Enables Classic logging • 2 - Enables TTrace logging • 3 - Enables both the Classic and TTrace logging The default value is 1.
Error Log TTrace Host	The host name of TTrace Server.
Error Log TTrace Port	The port number to access TTrace Server. The default port number is 10400.
Error Log use old Log Format	A value that determines whether to store the log in the new Avaya Common Logging format or the old logging format. The default value is False.

License Director parameters

Parameter name	Description
Primary License Director IP	The IP address of the primary License Director through which Call Center Elite Multichannel Desktop requests and releases the licenses.
Primary License Director Port	The port number of the primary License Director. The default value is 29095.
Secondary License Director IP	The IP address of the secondary License Director IP through which Call Center Elite Multichannel Desktop requests and releases the licenses.
Secondary License Director Port	The port number of the secondary License Director. The default value is 29095.
Connect License Director	This field must be set to False.
Enable Debug Trace	A setting that you can use to troubleshoot Call Center Elite Multichannel Desktop using tools such as DebugView. True=enabled, False=disabled.

Windows layout parameters

Parameter name	Description
Left Position	A value that indicates the position of the application window from the left side of the screen. If you change the position of the window, the position is automatically updated in the configuration.
Top Position	A value that indicates the position of the application window from the top side of the screen. If you change the position of the window, the position is automatically updated in the configuration.
Window Width	A value that indicates the width of the application window. If you change the width of the window, the width is automatically updated in the configuration.
Window Height	A value that indicates the height of the application window. If you change the height of the window, the height is automatically updated in the configuration.
Maximized	A value that opens the Call Center Elite Multichannel Desktop window maximized when set to True. If you set this value to False, the Call Center Elite Multichannel Desktop window opens with the specified width and height.
Layout File Folder	The XML file path that stores information about the layout of the Call Center Elite Multichannel Desktop windows. The `ASGUIHostLayout_username.xml` file stores the size and positioning of each window. If you keep this field blank, Call Center Elite Multichannel Desktop searches the file in the folder where the Call Center Elite Multichannel Desktop executable is present.

Plug In Assembly List

The list of generic plug-ins that loads when Call Center Elite Multichannel Desktop starts.

Each entry has the format `Friendly name=Plug-in section name`. The plug-in section name points to the file that contains the configuration data for the plug-in.

For example:

Auto Text Section = Auto Text

CallInfo.A Section = CallInfo.A

;CallInfo.B Section = CallInfo.B

;CallInfo.C Section = CallInfo.C

;CallInfo.D Section = CallInfo.D

Close Suspend Work Item Section = Close Suspend Work Item

Customized Forms Section = Customized Forms

Desktop Utility Section = Desktop Utility

Directory Section = Directory

Email Section = Email

External Application Container Section = External Application Container

External Application Execute Section = External Application Execute

IDS View Client Section = IDS View Client

Media Controller Section = Media Controller

Presence Section = Presence

Preview Contact Section = Preview Contact

Printing Section = Printing

Rules = Rules

Session Notes Section = Session Notes

Simple Messaging Plugin Section = Simple Messaging

Spell Checker Section = Spell Checker

Telephony Section = Telephony

User Section = User

Voice Section = Voice

Wallboard = Wallboard

Work Item Alert Section = Work Item Alert

Work Item History Section = Work Item History

Work Item Notes Section = Work Item Notes

;Microsoft Dynamics CRM Gui Plugin = Microsoft Dynamics CRM Gui Plugin

Work Item Creation Section = Work Item Creation

ASTimeInAUXDisplay = ASTimeInAUXDisplay

ASDialEnhancement = ASDialEnhancement

ASQuickDial = ASQuickDial

Contact Management Section = Contact Management

Save Close Document Window Section = Save Close Document Window

ASCustomRulesButtons = ASCustomRulesButtons

Html Editor Provider Section = Html Editor Provider

Template Section = Template

ASCalculator Section = ASCalculatorPlugin

ASWorldClock Section = ASWorldClock

ASDMCCPlugin = ASDMCCPlugin

ASImageLibraryPlugin = ASImageLibraryPlugin

Dashboard Section = Dashboard

Supervisor Section = Supervisor

Communicator = ASCommunicator

;RTC Plugin=RTC Plugin

;Python Breakout Section=Python Breakout

Spell Checker parameters

Parameter name	Description
Assembly File Name	The name of the Spell Checker plug-in file. Specify the file path if the Spell Checker plug-in is not located at the default file path. The default file path is the same folder where the Call Center Elite Multichannel Desktop executable is stored. For the Spell Checker plug-in, use the name `ASSpellCheckerPlugin.dll`.
Enable Error Log	A setting that enables Call Center Elite Multichannel Desktop to write the plug-in specific error information to the error log files. True=enabled, False=disabled.
User Dictionary File	A path of the dictionary file that Call Center Elite Multichannel Desktop uses. By default, Call Center Elite Multichannel Desktop uses the dictionary from the `Dict` folder within the

Table continues…

Parameter name	Description
	application directory. The following are the available dictionaries: • de-DE.dic (German) • en-AU.dic (Australian English) • en-CA.dic (Canadian English) • en-GB.dic (UK English) • en-US.dic (US English) • es-ES.dic (Spanish Castilian) • es-MX.dic (Spanish Colombian) • fr-FR.dic (French) • it-IT.dic (Italian) • pt-BR.dic (Portuguese Brazilian).
Toolbar Position	The position of the toolbar on the Call Center Elite Multichannel Desktop interface. The following are the toolbar positions: • The first toolbar from the top of the screen • The second toolbar from the top of the screen • The toolbar at the bottom of the screen

Directory parameters

Except the following parameters, you can configure all Directory parameters through the Options dialog box in Call Center Elite Multichannel Desktop.

Parameter name	Description
Assembly File Name	The name of the Directory plug-in file. Specify the file path if the Directory plug-in is not located at the default file path. The default file path is the same folder where the Call Center Elite Multichannel Desktop executable is stored. For the Directory plug-in, use `ASDirectoryPlugin.dll`.
Enable Error Log	A setting that enables Call Center Elite Multichannel Desktop to write the plug-in specific error information to the error log files.

Table continues…

Parameter name	Description
	True=enabled, False=disabled.
Column Caption	The name of each column in the directory. The system displays the column names in the order you specify. The system also saves the order in the configuration after the column names are adjusted in Call Center Elite Multichannel Desktop.
Column Width	The width of each column in the directory. The system saves the column widths in the configuration after the column names are adjusted within Call Center Elite Multichannel Desktop.
Enable Smart Search	An option that you can set to enable the Smart Search feature in the Directory window. True=enabled, False=disabled.
Match Rating	A parameter that controls the matching of the search criteria with the information in the directory. The default value is 1.

Work Item History parameters

The Work Item History plug-in relies on a connection to IDS View Client to get historical information. Therefore, you must also configure the [IDS View Client] section in this file for the Work Item History plug-in to work.

Parameter name	Description
Assembly File Name	The name of the Work Item History plug-in file. Specify the path if the Work Item History plug-in is not located in the default file path. The default file path is the same folder where the Call Center Elite Multichannel Desktop executable is stored. For the Work Item History plug-in, use `ASWorkItemHistoryPlugin.dll`.
Retrieve Conversation History	A setting that enables Call Center Elite Multichannel Desktop to retrieve the conversation history of an agent. True=enabled, False=disabled.
Retrieve Interaction History	A setting that enables Call Center Elite Multichannel Desktop to retrieve the interaction history of an agent.

Table continues…

Parameter name	Description
	True=enabled, False=disabled.
Retrieve History Days Old	A number that defines how old work items you want to search on the **Customer History** tab. The default value is 30 days.
Allow Search Other Agents	A setting that enables Call Center Elite Multichannel Desktop to retrieve and display the history of the work items that another agent has handled. The default value is False. True=enabled, False=disabled.
Search Agent History Days Old	A number that defines how old work items you want to search on the **Agent History** tab. The default value is 1 day.

Preview Contact parameters

Parameter name	Description
Assembly File Name	The name of the Preview Contact plug-in file. Specify the file path if the Preview Contact plug-in is not located in the default file path. The default file path is the same folder where the Call Center Elite Multichannel Desktop executable is stored. For the Preview Contact plug-in, use `ASPreviewContactPlugin.dll`.
Enable Error Logging	A setting that enables Call Center Elite Multichannel Desktop to write the plug-in specific error information to the error log files. True=enabled, False=disabled.
Enable External Application	A setting that enables Call Center Elite Multichannel Desktop to start an external application when the preview contact work items are received. True=enabled, False=disabled.
External Application File Name	The filename and path of the external application that you want to start. If you keep this field blank, Call Center Elite Multichannel Desktop starts the application defined for the **External Application File Name** parameter

Table continues…

Parameter name	Description
	in the External Application Execute section of this .ini file.
XML File Name	The name of the XML file that External Application Execute Plug-in creates to source the work item-related information to the external application. If you keep this parameter blank, Call Center Elite Multichannel Desktop uses the name defined for the **XML File Name** parameter in the External Application Execute section of this .ini file. By default, the XML file is stored at the path defined for the XML File Path in the same External Application Execute section.
Top Panel Height	The height of the top panel in a preview contact work item. The top panel contains the customer information, whereas the bottom panel contains the campaign information.
Allow Value Editing	If you set this value to True, you can change the data that you previously saved in the **Additional Information** panel of the preview contact work item.

Email parameters

Parameter name	Description
Assembly File Name	The name of the Email plug-in file. Specify the file path if the Email plug-in is not located at the default file path. The default file path is the same folder where the Call Center Elite Multichannel Desktop executable is stored. For the Email plug-in, use `ASEmailPlugin.dll` .
Enable Error Logging	A setting that enables Call Center Elite Multichannel Desktop to write the plug-in specific error information to the error log files. True=enabled, False=disabled.
Always Open Attachments	If you set this field to True, the setting prevents the appearance of the dialog box that prompts the agent whether to save an attachment before opening it.

Table continues…

Parameter name	Description
Enable External Application	A setting that enables or disables opening an external application when the email work items are received. True=enabled, False=disabled.
External Application File Name	The filename and path of the external application that you want to open. If you keep this field blank, Call Center Elite Multichannel Desktop uses the application defined by the **External Application File Name** parameter in the External Application Execute section of this .ini file.
XML File Name	The name of the XML data file that External Application Execute Plug-in creates to supply the work item-related information to the external application. If you keep this field blank, Call Center Elite Multichannel Desktop uses the name defined by the **XML File Name** parameter in the External Application Execute section of this .ini file. By default, the XML file is stored at the location defined by the **XML File Name** in the External Application Execute section.
Toolbar Position	The position of the toolbar on the Call Center Elite Multichannel Desktop interface. The following are the toolbar positions: • The first toolbar from the top of the screen • The second toolbar from the top of the screen • The toolbar at the bottom of the screen
Preferred Character Encoding	The character set that the email work items try to use when a reply is sent to the customer. If the user-entered characters cannot be encoded in the specified encoding, then Email Media Store can override this setting. The default is us-ascii.
Reply Font Name	The name of the font used in the reply field. If this font is unavailable, then the default system font is used. The default value is Times New Roman.
Reply Font Size	The size of the font used in the reply field. The default value is 12.
Active Window on Work Item Accepted	A setting that automatically makes an email work item active when the agent answers the call. True=enabled, False=disabled.

Work Item Notes parameters

Parameter name	Description
Assembly File Name	The name of the Work Item Notes plug-in file. Specify the file path if the Work Item Notes plug-in is not located in the default file path. The default file path is the same folder where the Call Center Elite Multichannel Desktop executable is stored. For the Work Item Notes plug-in, use `ASWorkItemNotesPlugin.dll`.
Enable Error Logging	A setting that enables Call Center Elite Multichannel Desktop to write the plug-in specific error information to the error log files. True=enabled, False=disabled.
Enable Check As Type	If set to True, this setting activates the automatic checking of any text typed into the Work Item Notes window.

Voice parameters

Except the following parameters, all Voice parameters are configured through the Options dialog box in Call Center Elite Multichannel Desktop.

Parameter name	Description
Assembly File Name	The name of the Voice plug-in file. Specify the file path if the Voice plug-in is not located in the default file path. The default file path is the same folder where the Call Center Elite Multichannel Desktop executable is stored. For the Voice plug-in, use `ASGUIHVoicePlugin.dll`.
Top Left Width	The width of the upper left voice work item.
Top Left Height	The height of the upper left voice work item.
Top Right Width	The width of the upper right voice work item.
Top Right Height	The height of the upper right voice work item.
Bottom Left Width	The width of the lower left voice work item.
Bottom Left Height	The height of the lower left voice work item.
Bottom Right Width	The width of the lower right voice work item.

Table continues…

Parameter name	Description
Bottom Right Height	The height of the lower right voice work item.
Maximum Items In Dialed Numbers List	The maximum count of the numbers that display in the drop-down list of previously dialed phone numbers.
Dialed Numbers List	The list of previously dialed phone numbers.Call Center Elite Multichannel Desktop retains the list for reuse after the application is closed.
Use Inbound UUI On Conference	If you set this field to True, then the user-to-user information received from a call is forwarded with the call when that call is conferenced. The default is value False.
Use Inbound UUI On Transfer	If set to True, this setting ensures that any user-to-user information received with a call is forwarded with the call if that call is transferred. The default value is False.
Enable External Application	A setting that enables or disables opening an external application when the voice work items are received. True=enabled, False=disabled.
External Application File Name	The filename and path of the external application that you want to open.
XML File Name	The name of the XML data file that External Application Execute Plug-in creates to supply the work item-related information to the external application.
Clear Number On Dial	If set to True, this setting removes the phone number from the **Dial** text box after you make a call. If set to False, the number remains in the text box for reuse.
Close Voice Work Item Window On Call Dropped	If set to True, this setting closes the voice work item when a call ends. If set to False, the agent must manually close the work item. **Note:** This parameter only works when Call Center Elite Multichannel Desktop is integrated with Voice Media Store.

CallInfo.A parameters

Parameter name	Description
Assembly File Name	The name of the plug-in file. Specify the file path if the plug-in is not located in the default file path. The default file path is the same folder where the Call Center Elite Multichannel Desktop executable is stored.
Enable Error Logging	A setting that enables Call Center Elite Multichannel Desktop to write the plug-in specific error information to the error log files. True=enabled, False=disabled.
Panel Position	A value that determines the position of this plug-in within the four-item grid. The default value is 1, which positions the item in the upper left of the grid.

CallInfo.B parameters

Parameter name	Description
Assembly File Name	The name of the plug-in file. Specify the file path if the plug-in is not located in the default file path. The default file path is the same folder where the Call Center Elite Multichannel Desktop executable is stored.
Enable Error Logging	A setting that enables Call Center Elite Multichannel Desktop to write the plug-in specific error information to the error log files. True=enabled, False=disabled.
Panel Position	A value that determines the position of this plug-in within the four-item grid. The default value is 2, which positions the item in the upper right of the grid.

CallInfo.C parameters

Parameter name	Description
Assembly File Name	The name of the plug-in file.

Table continues…

Parameter name	Description
	Specify the file path if the plug-in is not located in the default file path. The default file path is the same folder where the Call Center Elite Multichannel Desktop executable is stored.
Enable Error Logging	A setting that enables Call Center Elite Multichannel Desktop to write the plug-in specific error information to the error log files. True=enabled, False=disabled.
Panel Position	A value that determines the position of this plug-in within the four-item grid. The default value is 3, which positions the item in the lower left of the grid.

CallInfo.D parameters

Parameter name	Description
Assembly File Name	The name of the plug-in file. Specify the file path if the plug-in is not located in the default file path. The default file path is the same folder where the Call Center Elite Multichannel Desktop executable is stored.
Enable Error Logging	A setting that enables Call Center Elite Multichannel Desktop to write the plug-in specific error information to the error log files. True=enabled, False=disabled.
Panel Position	A value that determines the position of this plug-in within the four-item grid. The default value is 4, which positions the item in the lower right of the grid.

Work Item Alert parameters

Parameter name	Description
Assembly File Name	The name of the Work Item Alert plug-in file. Specify the file path if the Work Item Alert plug-in is not located in the default file path. The default file path is the same folder where the Call Center Elite Multichannel Desktop executable is stored.

Table continues…

Parameter name	Description
	For the Work Item Alert plug-in, use `ASWorkItemAlertPlugin.dll`.
Enable Error Logging	A setting that enables Call Center Elite Multichannel Desktop to write the plug-in specific error information to the error log files. True=enabled, False=disabled.
Display Seconds	The length of time for which the work item alert displays to inform the agent about an incoming work item.
Display When Host Visible	Using this parameter, you can set the alert behavior if Call Center Elite Multichannel Desktop is visible on the agent screen. True = If Call Center Elite Multichannel Desktop is visible, the alert displays. False = If Call Center Elite Multichannel Desktop is visible, the alert does not display.
Display When Host Invisible	Using this parameter, you can set the alert behavior if Call Center Elite Multichannel Desktop is not visible on the agent screen. True = If Call Center Elite Multichannel Desktop is not visible, the alert displays. False = If Call Center Elite Multichannel Desktop is not visible, the alert does not display.
Left Position	The distance of Call Center Elite Multichannel Desktop from the left side of the screen at startup. The distance is automatically saved in the configuration after it is adjusted within Call Center Elite Multichannel Desktop.
Top Position	The distance of Call Center Elite Multichannel Desktop from the top of the screen at startup. The distance is automatically saved in the configuration after it is adjusted within Call Center Elite Multichannel Desktop.
Enable Alert	If you have this setting, you can add a sound to the visual alert. If set to True, the `.wav` file specified in the **Alert File** parameter is used. True=enabled, False=disabled.
Alert File	The name of the alert file. For example, `Notify.wav`.

Telephony parameters

Except the following parameters, you can configure all Telephony parameters through the Options dialog box in Call Center Elite Multichannel Desktop.

Parameter name	Description
Assembly File Name	The name of the Telephony plug-in file. Specify the file path if the Telephony plug-in is not located in the default file path. The default file path is the same folder where the Call Center Elite Multichannel Desktop executable is stored. For the Telephony plug-in, use `ASGUIH Telephony Plugin.dll`.
Fire Call Cleared Event For Transfer	If set to True, this setting fires the Call Cleared event to the Rules plug-in when a call is transferred. You can use the Call Cleared event to create customized rules. The default value is False.
Fire Call Cleared Event For Conference	If set to True, this setting fires the Call Cleared event to the Rules plug-in when a call is conferenced. You can use the Call Cleared event to create customized rules. The default value is False.

User parameters

Except the following parameters, you can configure all User parameters through the Options dialog box in Call Center Elite Multichannel Desktop.

Parameter name	Description
Assembly File Name	The name of the User plug-in file. Specify the file path if the User plug-in is not located in the default file path. The default file path is the same folder where the Call Center Elite Multichannel Desktop executable is stored. For the User plug-in, use `ASGUIHUserPlugin.dll`.
Default Logout Reason Code	The reason code which is automatically selected when the agent logs out.
Default AUX Reason Code	The reason code which is automatically selected when the agent changes to Auxiliary mode.
Agent ID History	A list of the login IDs that the agents use. The list follows the following format: *3233* | *3234* | *3235*.

Table continues…

Parameter name	Description
On Request MCH Enabled	A parameter to enable the Multiple Call Handling (MCH) functionality. By default, this parameter is set to False. If you set this parameter to True, an agent can receive multiple work items at the same time. **Note:** • After you install Call Center Elite Multichannel Desktop on your computer, you must start and close Call Center Elite Multichannel Desktop to view the **On Request MCH Enabled** parameter in the .ini file. • For the MCH functionality to work correctly, you must also configure the same MCH setting in Call Center Elite.

Media Controller parameters

Except the following parameters, you can configure all Media Controller parameters through the Options dialog box in Call Center Elite Multichannel Desktop.

Parameter name	Description
Assembly File Name	The name of the Media Controller plug-in file. Specify the file path if the Media Controller plug-in is not located in the default file path. The default file path is the same folder where the Call Center Elite Multichannel Desktop executable is stored. For the Media Controller plug-in, use `ASMediaController.dll`.
Enable Error Log	A setting that enables Call Center Elite Multichannel Desktop to write the plug-in specific error information to the error log files of the application. True=enabled, False=disabled.
Media Store List	Using this parameter Call Center Elite Multichannel Desktop can directly connect to one or more media stores without connecting to Media Director and without consuming a Call Center Elite Multichannel license.
Multimedia license	Using this parameter, the users can retrieve the work items from the Work Item History database without a

Table continues…

Parameter name	Description
	license. Media stores are separated in the list by semicolons. The list must follow the format: Media Store*List=MediaType1|ServerIntanceID1|RemotingURL1;MediaType2|ServerIntanceID2|RemotingURL2*. For example: *Media Store List=1|aaaa4001-61db-4a2a-a21b-aa7647cbf3f4|gtcp://Test11:29097/EmailMediaStore.rem*.

Simple Messaging parameters

Parameter name	Description
Assembly File Name	The name of the Simple Messaging plug-in file. Specify the file path if the Simple Messaging plug-in is not located in the default file path. The default file path is the same folder where the Call Center Elite Multichannel Desktop executable is stored. For the Simple Messaging plug-in, use `ASSimpleMessagingPlugin.dll`.
Enable Error Logging	A setting that enables Call Center Elite Multichannel Desktop to write the plug-in specific error information to the error log files. True=enabled, False=disabled.
Active Window On Work Item Accepted	A setting that automatically makes a simple messaging work item active when the agent answers the call. True=enabled, False=disabled.
Enable External Application	A setting that enables or disables opening an external application when the simple messaging work items are received. True=enabled, False=disabled.
External Application File Name	The filename and path of the external application that you want to open. If left blank, Call Center Elite Multichannel Desktop uses the application defined by the **External Application File Name** parameter in the External Application Execute section of this .ini file.
XML File Name	The name of the XML data file that External Application Execute Plug-in creates to supply the

Table continues…

Parameter name	Description
	work item-related information to the external application. If left blank, Call Center Elite Multichannel Desktop uses the name defined by the **XML File Name** parameter in the External Application Execute section of this .ini file. By default, the XML file is stored using the path defined by the **XML File Name** parameter in the same External Application Execute section.
Close Simple Message Window Interval Seconds	The length of time in seconds for which a simple messaging work item remains open after a customer ends the conversation from the simple message interface. If set to 0, the work item does not close until the agent manually closes the work item.
Spell Check As You Type	A setting that forces Call Center Elite Multichannel Desktop to automatically check the spelling of words as you type the text inside the simple messaging work items. True=enabled, False=disabled.

External Application Container parameters

Parameter name	Description
Assembly File Name	The name of the External Application Container plug-in file. Specify the file path if the External Application Container plug-in is not located in the default file path. The default file path is the same folder where the Call Center Elite Multichannel Desktop executable is stored. For the External Application Container plug-in, use `ASExternalApplicationContainer.dll`.
External Application Sections	The section names that contain the configuration settings to open the external applications. You must separate the section names by commas.
Incoming Call Default Application Section	You can use this parameter to specify the external application that you want to open when you have an incoming call whose DistributingVDN parameter does not match with any of the values specified in the **Incoming Call VDN List** parameter. To specify

Table continues…

Parameter name	Description
	the external application, state the name of the section containing the configuration settings.

External Application 1 and External Application 2 parameters

Parameter name	Description
External Application Name	The name of the external application that you want to display within Call Center Elite Multichannel Desktop. If you do not want to display an external application, leave this field blank.
External Application Command Line	The command line that Call Center Elite Multichannel Desktop uses to open the external application.
Title Text	The text that displays in the **Windows** tab when you use a document window or title bar.
Display Delay Interval Seconds	The length of time that the external application takes to display within Call Center Elite Multichannel Desktop. The delay gives the external application enough time to fully display before it changes its parent window to Call Center Elite Multichannel Desktop.
Allow To Close	A value that enables the user to close the external application. True=enabled, False=disabled.
Display In Tool Window	A value that determines whether Call Center Elite Multichannel Desktop displays the external application within a tool window or a document window. A tool window is a flexible window that you can move around the screen and a document window is a fixed window that you cannot move. True=application displays in a tool window, False=application displays in a document window.
Allow Tool Window To Dock Left	If the **Display In Tool Window** parameter is enabled and this parameter is set to True, you can dock the external application at the left of the screen.
Allow Tool Window To Dock Bottom	If the **Display In Tool Window** parameter is enabled and this parameter is set to True, you can dock the external application at the bottom of the screen.

Table continues…

Parameter name	Description
Allow Tool Window To Dock Right	If the **Display In Tool Window** parameter is enabled and this parameter is set to True, you can dock the external application at the right of the screen.
Allow Tool Window To Dock Top	If the **Display In Tool Window** parameter is enabled and this parameter is set to True, you can dock the external application at the top of the screen.
Launch Application When Host Started	If this parameter is set to True, the external application starts in a window within Call Center Elite Multichannel Desktop.
Incoming Call VDN List	A comma-separated list of VDN extensions that triggers the external application to start. If an agent receives an incoming call and the DistributingVDN parameter of the call delivered event matches one of the VDNs in the list, the window associated with this application opens.
Icon File Full Path	The name and file path to the icon that displays on the application title bar. If left blank, Call Center Elite Multichannel Desktop automatically uses a default icon located in the current working folder of the application.
Tool Window Key	If the external application is set to display in a tool window, this setting records the position of the window when Call Center Elite Multichannel Desktop closes and displays the window at the same position when the application restarts.
Focus Application When Window Selected	If the external application is set to display in a document window and this parameter is set to True, the external application gets focus when you click the window tab of the application. If set to False, the user must manually click inside the application window to enable this functionality. The default value is False.

Auto Text parameters

The Auto Text plug-in controls the activation of the AutoText and Work Codes functionalities within Call Center Elite Multichannel Desktop.

Parameter name	Description
Assembly File Name	The name of the Auto Text plug-in file.

Table continues…

Parameter name	Description
	Specify the file path if the Auto Text plug-in is not located in the default file path. The default file path is the same folder where the Call Center Elite Multichannel Desktop executable is stored. For the Auto Text plug-in, use `ASAutoTextPlugin.dll`.
AutoText Toolbar Position	The position of the AutoText toolbar in Call Center Elite Multichannel Desktop. The following are the toolbar positions: • The first toolbar from the top of the screen • The second toolbar from the top of the screen • The toolbar at the bottom of the screen
Work Codes Toolbar Position	The position of the Work Codes toolbar in Call Center Elite Multichannel Desktop. The following are the toolbar positions: • The first toolbar from the top of the screen • The second toolbar from the top of the screen • The toolbar at the bottom of the screen
Voice Work Code File Name	The full path to the .txt or .csv file that the AutoText plug-in uses to generate the work codes for the voice work items.
Enable Auto Text Preview	Setting this parameter to True enables the agent to preview the values assigned to all the auto text and work code keys.
Auto Text Preview Delay Seconds	If you enable the auto text preview, this parameter controls the time for which the agent must rest the mouse on the key, so that the value assigned to the key can be viewed. The minimum length of time that you can specify is 2 seconds.

Printing parameters

Parameter name	Description
Assembly File Name	The name of the Printing plug-in file. Specify the file path if the Printing plug-in is not located in the default file path. The default file path is

Table continues…

Parameter name	Description
	the same folder where the Call Center Elite Multichannel Desktop executable is stored. For the Printing plug-in, use `ASPrintingPlugin.dll`.
Toolbar Position	The position of the toolbar in Call Center Elite Multichannel Desktop. The following are the toolbar positions: • The first toolbar from the top of the screen • The second toolbar from the top of the screen • The toolbar at the bottom of the screen

External Application Execute parameters

Using the External Application Execute plug-in, you can transfer the information from an incoming work item to another application. This plug-in copies information from the incoming work item and stores the information in an XML file. The XML file is then sourced by the external application. The application launches independently of the Call Center Elite Multichannel Desktop interface.

Parameter name	Description
Assembly File Name	The name of the External Application Execute plug-in file. Specify the file path if the External Application Execute plug-in is not located in the default file path. The default file path is the same folder where the Call Center Elite Multichannel Desktop executable is stored. For the External Application Execute plug-in, use `ASExternalApplicationExecutePlugin.dll`.
Enable Error Logging	A setting that enables Call Center Elite Multichannel Desktop to write the plug-in specific error information to the error log files. True=enabled, False=disabled.
Enable External Application	A setting that enables or disables opening an external application when the work items are received. True=enabled, False=disabled.
External Application File Name	The filename and path of the external application that you want to open.

Table continues…

Parameter name	Description
	Note: If a different external application is configured to open for a specific work item type, the application you specify is ignored for that work item type.
XML File Name	The name of the XML file that External Application Execute Plug-in creates to supply the work item-related information to the external application. **Note:** If a different XML file name is configured for a specific work item type, the name that you specify is ignored for that work item type.
XML File Path	The full path where External Application Execute Plug-in stores the XML file and the external application sources the XML file. The default path is `C:\Program Files\Avaya \Avaya Aura CC Elite Multichannel \Desktop\CC Elite Multichannel Desktop \WorkItemXML`.
Delete XML Files On Exit	A setting that forces the External Application Execute Plug-in to delete the XML file when Call Center Elite Multichannel Desktop closes. True=enabled, False=disabled.

Session Notes parameters

You can configure all Session Notes parameters through the Options dialog box in Call Center Elite Multichannel Desktop.

Parameter name	Description
Assembly File Name	The name of the Session Notes plug-in file. Specify the file path if the Session Notes plug-in is not located in the default file path. The default file path is the same folder where the Call Center Elite Multichannel Desktop executable is stored. For the Session Notes plug-in, use `ASSessionNotesPlugin.dll`.

Presence parameters

You can configure all Presence parameters through the Options dialog box in Call Center Elite Multichannel Desktop.

Note:

The Presence plug-in relies on a connection to IDS View Client to source information on station activity. Therefore, for this plug-in to work, you must also configure the [IDS View Client] section of this file.

Parameter name	Description
Assembly File Name	The name of the Presence plug-in file. Specify the file path if the Presence plug-in is not located in the default file path. The default file path is the same folder where the Call Center Elite Multichannel Desktop executable is stored. For the Presence plug-in, use `ASPresencePlugin.dll`.

Close Suspend Work Item parameters

Parameter name	Description
Assembly File Name	The name of the Close Suspend Work Item plug-in file. Specify the file path if the Close Suspend Work Item plug-in is not located in the default file path. The default file path is the same folder where the Call Center Elite Multichannel Desktop executable is stored. For the Close Suspend Work Item plug-in, use `ASWorkItemCloseSuspendPlugin.dll`.
Toolbar Position	The position of the toolbar in Call Center Elite Multichannel Desktop. The following are the toolbar positions: • The first toolbar from the top of the screen • The second toolbar from the top of the screen • The toolbar at the bottom of the screen

IDS View Client parameters

Except the following parameters, you can configure all IDS View Client parameters through the Options dialog box in Call Center Elite Multichannel Desktop.

Parameter name	Description
Assembly File Name	The name of the IDS View Client plug-in file. Specify the file path if the IDS View Client plug-in is not located in the default file path. The default file path is the same folder where the Call Center Elite Multichannel Desktop executable is stored. For the IDS View Client plug-in, use `ASGUIHIDSViewClientPlugin.dll`.
Server Instance ID	A unique identifier for the Server application. The unique identifier is automatically created when the application runs for the first time.

Rules parameters

Parameter name	Description
Assembly File Name	The name of the Rules plug-in file. Specify the file path if the Rules plug-in is not located in the default file path. The default file path is the same folder where the Call Center Elite Multichannel Desktop executable is stored. For the Rules plug-in, use `ASRulesPlugin.dll`.
Rules Engine File Name	The file path to Rules Engine. By default, it searches for the control in the working folder of Call Center Elite Multichannel Desktop.
Show Rules Option On Tools Menu	When set to False, the Rules interface option is unavailable through the Tools menu.

Desktop Utility parameters

Parameter name	Description
Assembly File Name	The name of the Desktop Utility plug-in file. Specify the file path if the Desktop Utility plug-in is not located in the default file path. The default file

Parameter name	Description
	path is the same folder where the Call Center Elite Multichannel Desktop executable is stored. For the Desktop Utility plug-in, use `ASDesktopUtilityPlugin.dll`.

Wallboard parameters

You can configure all Wallboard parameters through the Options dialog box in Call Center Elite Multichannel Desktop.

Note:

The Wallboard plug-in relies on a connection to IDS View Client to source statistical information. Therefore, for this plug-in to work, you must also configure the [IDS View Client] section of this file.

Parameter name	Description
Assembly File Name	The name of the Wallboard plug-in file. Specify the file path if the Wallboard plug-in is not located in the default file path. The default file path is the same folder where the Call Center Elite Multichannel Desktop executable is stored. For the Wallboard plug-in, use `ASWallboardPlugin.dll`.

GN8120 Headset parameters

Parameter name	Description
Assembly File Name	The name of the GN8120 Headset plug-in file. Specify the file path if the GN8120 Headset plug-in is not located in the default file path. The default file path is the same folder where the Call Center Elite Multichannel Desktop executable is stored. For the GN8120 Headset plug-in, use `ASGN8120HeadSetPlugin.dll`.

Customized Forms parameters

Using the Customized Forms plug-in, you can add one or more work forms to multimedia work items. These work forms are accessible through the additional tabs on the side of a work item created through Call Center Elite Multichannel Control Panel. For more information, see *Administering Avaya Aura® Call Center Elite Multichannel*.

Parameter name	Description
Assembly File Name	The name of the Customized Forms plug-in file. Specify the file path if the Customized Forms plug-in is not located in the default file path. The default file path is the same folder where the Call Center Elite Multichannel Desktop executable is stored. For the Customized Forms plug-in, use `ASCustomizedFormsPlugin.dll`.

Work Item Creation parameters

These plug-in parameters are reserved for future use.

Parameter name	Description
Assembly File Name	The name of the Work Item Creation plug-in file. Specify the file path if the Work Item Creation plug-in is not located in the default file path. The default file path is the same folder where the Call Center Elite Multichannel Desktop executable is stored. For the Work Item Creation plug-in, use `ASWorkItemCreation.dll`.
New Work Item Toolbar Position	Reserved for future use.

Time In AUX Display parameters

The Time In AUX Display plug-in adds a time counter to the status bar of Call Center Elite Multichannel Desktop. The time counter displays how long the agent spends in any of the three work modes: Auxiliary, Available, and After Call Work. When an agent changes the mode, the counter resets.

Parameter name	Description
Assembly File Name	The name of the Time In AUX Display plug-in file.

Parameter name	Description
	Specify the file path if the Time In AUX Display plug-in is not located in the default file path. The default file path is the same folder where the Call Center Elite Multichannel Desktop executable is stored. For the Time In AUX Display plug-in, use `ASTimeInAUXDisplay.dll`.

Enhanced Dial parameters

You can configure all Enhanced Dial parameters through the Options dialog box in Call Center Elite Multichannel Desktop.

Parameter name	Description
Assembly File Name	The name of the Enhanced Dial plug-in file. Specify the file path if the Enhanced Dial plug-in is not located in the default file path. The default file path is the same folder where the Call Center Elite Multichannel Desktop executable is stored. For the Enhanced Dial plug-in, use `ASDialEnhancement.dll`.

Quick Dial parameters

You can configure all Quick Dial parameters through the Options dialog box in Call Center Elite Multichannel Desktop.

Parameter name	Description
Assembly File Name	The name of the Quick Dial plug-in file. Specify the file path if the Quick Dial plug-in is not located in the default file path. The default file path is the same folder where the Call Center Elite Multichannel Desktop executable is stored. For the Quick Dial plug-in, use `ASQuickDial.dll`.

Contact Management parameters

Parameter name	Description
Assembly File Name	The name of the Contact Management plug-in file. Specify the file path if the Contact Management plug-in is not located in the default file path. The default file path is the same folder where the Call Center Elite Multichannel Desktop executable is stored. For the Contact Management plug-in, use `ASContactManagementPlugin.dll`.
User Defined Fields Group Text	The text that you want to display as the heading for your customized section of the contact fields.
User Defined Field Selector Visible 1	If this parameter is set to True, the agent can use a drop-down list to assign another field name to this field. If this parameter is set to False, the drop-down option does not display.
User Defined Field Selector Visible 2	If this parameter is set to True, the agent can use a drop-down list to assign another field name to this field. If this parameter is set to False, the drop-down option does not display.
User Defined Field Selector Visible 3	If this parameter is set to True, the agent can use a drop-down list to assign another field name to this field. If this parameter is set to False, the drop-down option does not display.
User Defined Field Selector Visible 4	If this parameter is set to True, the agent can use a drop-down list to assign another field name to this field. If this parameter is set to False, the drop-down option does not display.
User Defined Field Selector Visible 5	If this parameter is set to True, the agent can use a drop-down list to assign another field name to this field. If this parameter is set to False, the drop-down option does not display.
User Defined Field Selector Visible 6	If this parameter is set to True, the agent can use a drop-down list to assign another field name to this field. If this parameter is set to False, the drop-down option does not display.
User Defined Field Selector Visible 7	If this parameter is set to True, the agent can use a drop-down list to assign another field name to this field. If this parameter is set to False, the drop-down option does not display.
User Defined Field Text 1	The name for your first customized contact field.
User Defined Field Text 2	The name for your second customized contact field.
User Defined Field Text 3	The name for your third customized contact field.

Table continues…

Parameter name	Description
User Defined Field Text 4	The name for your fourth customized contact field.
User Defined Field Text 5	The name for your fifth customized contact field.
User Defined Field Text 6	The name for your sixth customized contact field.
User Defined Field Text 7	The name for your seventh customized contact field.

Save Close Document Window parameters

You can configure all Save Close Document Window parameters through the Options dialog box in Call Center Elite Multichannel Desktop.

Parameter name	Description
Assembly File Name	The name of the Save Close Document Window plug-in file to be loaded. Specify the file path if the Save Close Document Window plug-in is not located in the default file path. The default file path is the same folder where the Call Center Elite Multichannel Desktop executable is stored. For the Save Close Document Window plug-in, use `ASSaveClosePlugin.dll`.

Python Breakout parameters

Except the following parameters, you can configure all Python Breakout parameters through Call Center Elite Multichannel Desktop.

Parameter name	Description
Assembly File Name	The name of the Python Breakout plug-in file. Specify the file path if the Python Breakout plug-in is not located in the default file path. The default file path is the same folder where the Call Center Elite Multichannel Desktop executable is stored. For the Python Breakout plug-in, use `ASPythonBreakoutPlugin.dll`.
Python Library Path	The path to the Python 2.4.3 library routines. If you have selected a non-default path to install Python, then replace the default path of this parameter (c:

Table continues…

Parameter name	Description
	\Python24\lib) with the path to the library files of your Python installation.
Show IronPython Option On Tools Menu	A setting that determines whether the Python Breakout integration is part of the Call Center Elite Multichannel Desktop Tools menu.

Custom Rules Buttons parameters

You can configure all Custom Buttons parameters through the Options dialog box in Call Center Elite Multichannel Desktop.

Parameter name	Description
Assembly File Name	The name of the Custom Rules Buttons plug-in file. Specify the file path if the Custom Rules Buttons plug-in is not located in the default file path. The default file path is the same folder where the Call Center Elite Multichannel Desktop executable is stored. For the Custom Rules Buttons plug-in, use `ASCustomRulesButtons.dll`.

Microsoft Dynamics CRM GUI Plugin parameters

You can configure all Microsoft Dynamics CRM GUI Plug-in parameters through the Options dialog box in Call Center Elite Multichannel Desktop.

Parameter name	Description
Assembly File Name	The name of the Microsoft Dynamics CRM GUI plug-in file. Specify the file path if the Microsoft Dynamics CRM GUI plug-in is not located in the default file path. The default file path is the same folder where the Call Center Elite Multichannel Desktop executable is stored. For the Microsoft Dynamics CRM GUI plug-in, use `ASMSCRMGuiPlugin.dll`.

Appendix C: Command line parameters

Parameters

Using command line parameters, you can install the Call Center Elite Multichannel applications that use Configuration Client. These applications are Call Center Elite Multichannel Desktop, Call Center Elite Multichannel Control Panel, and Call Center Elite Multichannel Reporting.

The following are the possible configuration data sources:

- Configuration Server
- Local configuration file
- System registry

The application passes the information taken from the command line directly into Configuration Client. If a parameter exists in the command line, the value of that parameter overrides the information set within the container application. If a command line contains multiple entries for the same parameter, only the first entry is used.

Application Name /z

Application Name is the name of the application (as configured in Configuration Server), which Configuration Client requests configuration information for.

Primary Server Name /s

Primary Server Name is the name of the primary Configuration Server that Configuration Client connects to for configuration information. This value can be the name of the server or the IP address of the server.

To retrieve configuration information from the system registry, you can set **Server Name** to:

- **HKEY_LOCAL_MACHINE.** Configuration Client retrieves information from the local machine system registry.
- **HKEY_CURRENT_USER.** Configuration Client retrieves information from the local user system registry.

Primary Server Port /p

Primary Server Port is the primary TCP/IP port used for communication between the Configuration Server and the Configuration Client. When this port is absent from the command line, the default port, 29091, is used. The Server Port parameter enables you to override the default port.

Secondary Server Name /s2

Secondary Server Name is the name of the backup Configuration Server that Configuration Client connects to for configuration information. This value can be the name of the server or the IP address of the server.

Secondary Server Port /p2

Secondary Server Port is the backup TCP/IP port used for communication between the Configuration Server and the Configuration Client.

Configuration Filter /a

Configuration Filter is a compulsory parameter to source configuration information from the Configuration Server.

A configuration filter is a name/value pair using which, you can identify and retrieve a user and the configuration profile of the application from the Configuration Server database.

In the command line, a configuration filter is defined using a name=value format. The pairs are separated by semicolons:

```
Name1=Value1;Name2=Value2
```

Your command line can contain M=%%M or U=%%U. The M=%%M and U=%%U are optional filters built into Configuration Server. When Configuration Client recognizes this text, it replaces %%M with the name of the system running the application and %%U with the user's network login name. When the user is in the database, these base filters are enough to locate their data.

M (Machine Name) and U (User Network Login Name) are not compulsory filters. However, you can also design and add any other filter to a database to locate the user. For example, you can design and add a filter named Pswd with the user's password as the value.

You do not require a Configuration Filter when you work with the system registry or local configuration file.

File Name /f

File Name is the name of the local file that contains configuration information. If you specify a full file path, Configuration Client points directly to the file. If you only specify the file name, Configuration Client looks for the file in the default directory where the application is running.

The File Name and Server Name command line parameters are not mutually exclusive. If both parameters are present in the command line, the Server Name parameter takes precedence. Configuration Client attempts to extract information from the specified configuration file if the server cannot be contacted.

Logging State /t

You can enable the Error logging for Configuration Client by setting the Logging State parameter to true (/t True). Logged errors are sent to a file in the application's directory under the name 'ConfigErrorLog.txt'. When the Logging State parameter is absent from the command line, error logging is disabled.

Password Encryption /pwd

The automatic encryption on data associated with configuration parameter names that contain the (case insensitive) strings Password or Passwd can be turned off by setting the Password Encryption parameter to false (/pwd false). In this case, configuration data must be explicitly encrypted by the user inserting %%ENCRYPT commands. The /pwd parameter must be lowercase.

Command Line Format

Command lines must follow a set format using spaces and quotation marks only where shown. Parameters are set in their own quotation marks and are preceded by the /z argument, which modifies the shortcut.

Example 1

This example retrieves configuration data from Configuration Server based on the local system name. The IP address of Configuration Server is `148.147.170.191`.

```
"C:\Program Files\Avaya\Avaya Aura CC Elite Multichannel\Desktop\CC Elite Multichannel Desktop\ASGUIHost.exe" /z CC Elite Multichannel Desktop /s 148.147.170.191 /p 29091/a M=%%M
```

Note:

The /z argument (as opposed to the Application Name /z parameter) is only present in command lines used during installation.

Example 2

This example retrieves configuration data from Configuration Server based on the user network login name.

```
"C:\Program Files\Avaya\Avaya Aura CC Elite Multichannel\Desktop\CC Elite Multichannel Desktop\ASGUIHost.exe" /z CC Elite Multichannel Desktop /s 148.147.170.191 /p 29091/a U=%%U
```

Example 3

This example retrieves configuration data from Configuration Server named Mickey on the TCP/IP port number 29095 using the configuration filter Machine01.

```
"C:\Program Files\Avaya\Avaya Aura CC Elite Multichannel\Desktop\CC Elite Multichannel Desktop\ASGUIHost.exe" /z CC Elite Multichannel Desktop /s Mickey /p 29095/a M=Machine01
```

Example 4

This example retrieves configuration data from a configuration file placed on a shared network.

```
"C:\Program Files\Avaya\Avaya Aura CC Elite Multichannel\Desktop\CC Elite Multichannel Desktop\ASGUIHost.exe" /F "\\148.147.170.191\Configuration Data\ASGUIHost.ini"
```

If you store multiple configuration files in the same network folder, then you can name the files in such a way that the files can be easily identified. For example, ASGUIHost_Sales.ini. and ASGUIHost_Services.ini.

Note:

Ensure that you use the command line format from the examples without removing any spaces and quotation marks.

Changing Data Source from .ini to Configuration Server

About this task

Using this procedure, you can instruct an installed application to retrieve the configuration data from Configuration Server.

This procedure is useful if an agent is sourcing the configuration data from Configuration Server and you want Agent Administrator to point to the same data location. This procedure ensures that the configuration changes made through Agent Administrator are saved to Configuration Server and not the local .ini file. This procedure is important in contact centers where agents maintain personal phonebook.

Procedure

1. Right-click the CC Elite Multichannel Desktop shortcut and click **Properties**.

2. In the **Target** field, add the command line details of your Configuration Server.
   - This example retrieves configuration data from Configuration Server based on the local system name. The IP address of Configuration Server is `148.147.170.191`.

```
"C:\Program Files\Avaya\Avaya Aura CC Elite Multichannel\Desktop\CC Elite Multichannel Desktop\ASGUIHost.exe" /z CC Elite Multichannel Desktop /s 148.147.170.191 /p 29091/a M=%%M.
```

   - This example retrieves configuration data from Configuration Server based on the user network login name.

```
"C:\Program Files\Avaya\Avaya Aura CC Elite Multichannel\Desktop\CC Elite Multichannel Desktop\ASGUIHost.exe" /z CC Elite Multichannel Desktop /s 148.147.170.191 /p 29091/a U=%%U
```

Note:

Ensure that you use the command line format from the examples without removing any spaces and quotation marks.

Performing silent install

About this task

Using this procedure, you can silently install a Call Center Elite Multichannel application following some pre-defined selection options.

Procedure

1. Create a folder on your system or shared network server.
2. From the folder containing the installation files for Call Center Elite Multichannel, copy the `Avaya Aura Call Center Elite Multichannel Desktop.msi` file to the newly created folder.
3. Run the command prompt.

   Important:

   You must have the administrator privileges for the command prompt.
4. In the command prompt, navigate to the folder containing the `Avaya Aura Call Center Elite Multichannel Desktop.msi` file.
5. Type `msiexec /i "Avaya Aura Call Center Elite Multichannel Desktop.msi" /qn` and press **Enter**.

Note:

If you have installed Call Center Elite Multichannel Desktop through this procedure, then you cannot uninstall Media Proxy through Add or Remove Programs option in Control Panel.

Supported command line parameters to perform silent install

The following table lists and describes the command line parameters that you can use to set the values during a fresh installation of Call Center Elite Multichannel Desktop.

Parameter	Description
INSTALLDIR	Target location where the product needs to be installed.
BUSEINI[2]	A value that determines whether the configuration information is sourced from the .ini file. The following are the possible values: • 0 - The configuration information is not sourced from the .ini file. • 1 - (Default) The configuration information is sourced from the .ini file.
CRSIPADDRESS	The IP address for Call Recording Service.
CRSPORTNUMBER	The port number for Call Recording Service. The default port number is 29120.
LDIPADDRESS	The IP address for License Director.
LDPORTNUMBER	The port number for License Director. The default port number is 29095.
MDIPADDRESS	The IP address for Media Director.
MDPORTNUMBER	The port number for Media Director Port Number. The default port number is 29087.
XMLSIPADDRESS	The IP address for XML Server.
XMLSPORTNUMBER	The port number for XML Server. The default port number is 29096.
CS_APPNAME	The name of the application for which Configuration Client requests the configuration information.
CS_MACHINEIP	The name or IP address of Configuration Server where Configuration Client connects for the configuration information.

Table continues…

[2] To point Call Center Elite Multichannel Desktop to a Configuration Server, you must set the BUSEINI parameter to 0 on the command line along with the other applicable parameters.

Parameter	Description
CS_PORTNUM	The port number that must be used for communication between Configuration Server and Configuration Client if you do not want to use the TCP/IP port number. The default port number is 29091.
CS_MACHINENAME	The name of the Configuration Server system.
CS_USER	The network login name of the user.
BDESKTOPICON	A value that determines whether the installer creates a shortcut of the system desktop. The following are the possible values: • 0 - The installer does not create a shortcut on the system desktop. • 1 - (Default) The installer creates a shortcut on the system desktop.

Note:

- Do not use these parameters during a fresh installation in the UI mode or during any mode of upgrade.
- You can use the `Avaya Aura Call Center Elite Multichannel Desktop.msi` installer with SCCM with the command line parameters mentioned this section.

For information on command line installation, see the Microsoft's Msiexec (command line options) library.

Appendix D: Configuration data commands

Overview

Configuration data commands send information to Configuration Client that further processes the configuration data. When Configuration Client loads configuration data from the specified source, Configuration Client performs a further processing step before making the data available to the controlling application.

The processing of Configuration data commands occurs at client level. Therefore, these commands are available regardless of whether the location of data is a configuration file, system registry, or Configuration Server.

To use these commands, you must install and configure Configuration Server. For information about how to configure Configuration Server, see *Administering Avaya Aura® Call Center Elite Multichannel*.

Token delimiter

The default token “%%” identifies the Configuration data that must be processed further. You can change the token value from “%%” to something else through the command line.

This token can appear at any point within the configuration data. Text that follows the token identifies the action (command) required by Configuration Client and the parameters for that action. Multiple commands can appear in a single configuration data item (see Nested Commands on page 184). Commands are resolved from right to left.

A limited number of keywords, which give access to system-specific variables, support Configuration data commands.

The text that displays before the token and after the item identifier is considered as a string literal.

In the following example, DeviceName takes the configuration value “Minnie And Mickey”

[MainData]

DeviceName = Minnie %%STRCAT(“And”, “Mickey”)

Commands

Configuration Client supports the following configuration data commands. Command names are case sensitive.

When an unknown command is discovered, the result is an empty string, (“”). If you use this command to determine data used as the input for another calculation, an empty string is used.

All commands have parameters enclosed by an open/close pair of brackets.

LOOKUP

The LOOKUP command retrieves a matching value from another section within the current configuration set. This allows including a section within the configuration set that lists dynamic data to replace a static configuration value. For example, allowing a single configuration set to serve an entire call center for an application such as Agent. Each user who logs on to the system has the MyDN data item modified based on the name of the computer the agent is using.

Syntax

```
%%LOOKUP(SECTION, ITEM)
```

In this case, SECTION specifies the section within the current configuration data that holds the match for the data specified by the ITEM variable. The SECTION and ITEM parameters can be either a string literal or a keyword.

Example 1

The following example results in the station parameter having the value 8572:

```
[MainData]
Station = %%LOOKUP(“Lookupdata”, “SomeStationData”)
[Lookupdata]
SomeStationData = 8572
```

Example 2

The following example results in the station parameter having the value 8572 when the configuration data is loaded on the BAGLEYACER system:

```
[MainData]
Station = %%LOOKUP(“Lookupdata”, COMPUTERNAME)
[Lookupdata]
BAGLEYACER = 8572
```

Example 3

The following example results in the station parameter having the value 8572 when the configuration data is loaded on a system that has an environment variable named MyEnvironmentVariable equal to the value BAGLEYACER.

[

```
MainData]
```

```
Station = %%LOOKUP("Lookupdata",WINENV("MyEnvironmentVariable"))
[Lookupdata]
BAGLEYACER = 8572
```

WINENV

The WINENV command retrieves a matching value from the Windows system environment.

Syntax

```
%%WINENV( VARIABLENAME)
```

Where VARIABLENAME is the name of the system environment variable. The section parameter can be either a string literal or a keyword.

Example

The following example results in the station parameter having the value contained in the environment variable MyEnvironmentVariable.

```
[MainData]
Station = %%WINENV("MyEnviornment Variable")
```

ENCRYPT

The ENCRYPT command allows Configuration Client to encrypt or decrypt a part of configuration data. If the data cannot be decrypted when the configuration file is loaded, the data is presented to the user in encrypted state.

The ENCRYPT command can also be included as part of any configuration data value. This command considers that the data following this command is non-encrypted. Hence, this command automatically encrypts the data while writing the configuration data.

Important:

By default, Configuration Client automatically inserts and uses the ENCRYPT command on the data associated with all configuration names that contain the (case insensitive) strings Password or Passwd. The command line parameter /PWD can turn off this default behavior. After the default behavior is turned off, all sensitive configuration data must be explicitly encrypted by the user by inserting the ENCRYPT commands.

Syntax

```
%%ENCRYPT(ENCRYPTEDDATA)
```

Example

The following example results in the user password being filled with the unencrypted data specified.

```
[MainData]
UserPassword = %%ENCRYPT("9385d3fa18f4e2a1")
```

ENCRYPTED

The ENCRYPTED command indicates that the data is encrypted and decrypted as needed by the Call Center Elite Multichannel application. However, the data always remains encrypted in the configuration file.

Syntax

```
%
%ENCRYPTED("2D93DB9A3F5030832492A9280E691D4009E5E152AED457324CE05C825C8DB
490F28472EE55CF4334D4B63F03DE4ECAE26CE5")
```

Note:

Data can be entered in any configuration source, such as ini file, registry, or Configuration Server.

STRCAT

The STRCAT command joins two pieces of data together to form a single piece of data.

Syntax

%%STRCAT(DATA1,DATA2)

The result is the string sum of DATA1 and DATA2.

Example

The following example results in the PersonalPhonebook configuration data being dynamically produced from some static text and the name of the logged in user.

```
[MainData]
PersonalPhoneBook = %%STRCAT("c:\phonebooks\",USERNAME)
```

SUBSTR

The SUBSTR command extracts a piece of text from another, longer, piece of text.

Syntax

%%SUBSTR(DATA,START,COUNT)

The resultant data is a part of the string DATA starting from the character START and including COUNT characters. If START is a number greater than the length of DATA or is a negative value, the result is an empty string. If the value of START + COUNT is greater than the length of DATA, the result is a part of the string DATA from the position START to the end of DATA.

Example

The following example results in the configuration data “The” being dynamically produced from the static text “The Rain In Spain”. The first parameter is the string from which the text is extracted. The second parameter is the start position and the third parameter is the number of characters selected.

```
temp1 = %%SUBSTR(“The Rain In Spain”,“0”,“3”)
```

Keywords

Keywords are place holders to string literal values. Configuration Client replaces these keywords when the data is passed. Keywords are case sensitive.

Keywords can be used by themselves in the configuration data set or as parameters to valid commands. When the keywords are used alone, they must be preceded by the token delimiter. Invalid keywords are treated as empty strings.

```
[MainData]
MyMachine = %%COMPUTERNAME
```

COMPUTERNAME

Configuration Client replaces the COMPUTERNAME keyword with the value of the network system name. If the system is unnamed, this field is empty.

IPADDRESS

Configuration Client replaces the IPADDRESS keyword with the value of the IP Address retrieved from the network configuration. If the system is multi-homed, the first network setting is used.

USERNAME

Configuration Client replaces the USERNAME keyword with the value of the logged-in user name. In absence of any logged-in user, this field is empty.

TIME

Configuration Client replaces the TIME keyword with the current system time. This time is resolved to seconds and is formatted in accordance with the configured locale.

DATE

Configuration Client replaces the DATE keyword with the current system date. This date is formatted in accordance with the configured locale.

CWD

The CWD keyword is replaced with the current working directory for the loading module.

WINDIR

The WINDIR keyword is replaced with the Windows directory.

WINSYSDIR

The WINSYSDIR keyword is replaced with the Windows System directory.

WINTEMPDIR

Configuration Client replaces the WINTEMPDIR keyword with the Windows temporary directory.

Call Center Elite Multichannel uses the GetTempPath function to get the temporary path from the system. The GetTempPath function checks for the temporary path in the following order:

- The path specified by the TMP environment variable.
- The path specified by the TEMP environment variable.
- The path specified by the USERPROFILE environment variable.
- The Windows directory.

The GetTempPath function uses the first path that it finds.

Literal Data Support

The data within the quotation marks (“”) is treated as literal data. This data is not processed further. The literal values can be accepted as parameters to all commands.

Nested Commands

Configuration Client allows putting multiple commands on a single configuration item. Configuration commands are separated at runtime and processed in a right to left manner.

A configuration item that includes invalid command data has resultant data set to an empty string.

Example

The following example builds a DeviceName configuration variable made from the environment variables: user name and computer name joined by the “@” symbol.

```
[MainData]
DeviceName = %%STRCAT(WINENV(“USERNAME”), STRCAT(“@”,COMPUTERNAME))
```

Recursive Loop Protection

When a configuration token passes, the token might refer to itself causing an unending loop. The loop can exist in a simple direct relationship or it can exist many layers deep. To prevent these loops occurring, no resolution sequence must make more than a fixed number of jumps to other configuration items. This constraint is placed on the LOOKUP command.

Single level loops are easy to detect and avoid.

Example

```
[MainData]
UserPassword = %%LOOKUP(“MainData”, “UserPassword”)
```

Resolution Precedence/Reentrancy

A configuration item undergoing resolution can refer to another configuration item that requires resolution. Also, the configuration item that requires resolution can refer to another configuration item that also requires resolution.

This pattern can result in many levels of indirection until a static node is reached. Configuration Client supports up to 20 levels.

Configuration set command resolution starts from the root node and works progressively through all sub nodes.

Include Directive

You might need to import other files with configuration data into the main configuration set. For example, in a hot-seating environment, a local configuration set might include a list of system names/phone number combinations that are used in a lookup command. This list can be stored in a common location such as a network drive.

This functionality is enabled using a directive “include”.

Syntax

#include c:\temp\computerlist.dat

Rules for Use

The directive can exist anywhere in the base configuration set.

Multiple include directives are supported in the base configuration set.

Nested “includes” are not supported. For example, an included file cannot include another file.

The include files are processed after the base configuration is loaded. Also, these files are processed in the order they are listed.

Configuration data commands are processed after the included files are added to the data set.

Configuration data loaded from included files is not saved to the original file or with the base configuration set when the Save method is called. Changes to configuration data key/value pairs made by the application are lost when the application exits.

Included files must follow the same key/value pair format expected for configuration data.

INCLUDE_CONFIGURATION

To call a file from within Configuration Server, a key is required and the value must be the location of the file.

Appendix E: Default port numbers

Default Port Numbers

Many Call Center Elite Multichannel applications rely on TCP/IP for communication between servers and clients or between different servers. The port numbers in this appendix are included in the default configuration set installed with those applications.

For multimedia applications, these port numbers are used by the .Net remoting gtcp channel.

The Call Center Elite Multichannel port range is 29070 to 29099. Developers are free to choose free ports within this range or that fall outside this range.

Advanced Microsoft Dynamics CRM Connector

The Realtime Phonebook Synchronizer component installed on the Microsoft Dynamics CRM Server uses multicasting to send Contact and Account updates to all Call Center Elite Multichannel Desktops. This multicasting allows the cached phonebook to be up-to-date in real-time. If your network does not support multicasting, disable multicasting in Call Center Elite Multichannel Desktop so that the cached phonebook can be refreshed every hour by default.

Multicast group address	239.29.9.67
Multicast group port	29027

AOL-ICQ Instant Messenger Gateway

AOL-ICQ Instant Messenger Gateway interfaces remote media services to Simple Messaging Media Store. This interfacing creates a .Net remoting channel using the following predefined port:

.Net Remoting connections	29065

Application Management Service

Application Management Service uses multicasting to locate and identify Call Center Elite Multichannel applications that are running on the network. All applications join the multicast group at the specified IP address/port. Application Management Service broadcasts the IP address and port

number. This port can be specified by the administrator can specify this port, however, this port defaults to the value specified.

Multicast group address	239.29.9.67
Multicast group port	29075
Remoting object	29074

Configuration Server

Configuration Server receives inbound client connections for configuration data.

Client connections (inbound)	29091

Email Media Store

Email Media Store accepts remoting connections on the following predefined port.

.Net Remoting connections	29097

Interaction Data Service

Interaction Data Server - Voice and Presence

Interaction Data Server - Voice and Presence receives connections from various Call Center Elite Multichannel applications and Media Director. Through these connections, Interaction Data Server - Voice and Presence receives data that allows voice calls to be reported on.

Client/server connections (inbound)	29090
Remoting object for management	29068

Interaction Data Server - Multimedia

Interaction Data Server - Multimedia accepts inbound connections from Media Director and various media stores and gateways. Through these connections, Interaction Data Server - Multimedia receives data that allows the flow of media tasks to be reported on.

Client connections (inbound)	29081

Table continues…

Multicast group port	29078
Remoting object for management	29077

Interaction Data Server - View

Interaction Data Server - View is a single point of connection for applications that need to extract data from the Interaction Data Server - Voice and Presence and Interaction Data Server - Multimedia. Initial connection is made through the client connection port, however, data that is being consumed through multiple clients might be distributed through the multicast functionality.

Multicast group address	239.29.9.67
Multicast group port	29084
Client connections (inbound)	29083
Remoting object for management	29076

License Director

License Director receives client connections on a single port for licensing.

Client connections (inbound)	29095
Remoting object for management	29073

Media Director

Media Director accepts .Net remoting connections from both clients and media stores. Both the connections require the following port number:

.Net Remoting connections	29087

Media Proxy

Media Proxy runs at the agent desktop to distribute remoting information from the Media Director to the various client applications. Client applications connect to the Media Proxy on the local system through the following port number.

.Net Remoting connections	29086

Media Proxy (Windows Service)

Media Proxy runs at the agent desktop to distribute remoting information from the Media Director to the various client applications. Client applications connect to the Media Proxy on the local system through the following port number. This performs the same function as the Media Proxy, but runs as a Windows Service.

.Net Remoting connections	29079

MSN Messenger Gateway

MSN Messenger Gateway interfaces remote media services to Simple Messaging Media Store. This interface creates a .Net remoting channel using the following predefined port:

.Net Remoting connections	29066

Preview Contact Media Store

Preview Contact Media Store accepts remoting connections on the following predefined port.

.Net Remoting connections	29098

Short Message Service Gateway

Short Message Service Gateway interfaces remote media services to Simple Messaging Media Store. This interface creates a .Net remoting channel using the following predefined port:

.Net Remoting connections	29064

Simple Messaging Media Store

Simple Messaging Media Store accepts connections from Call Center Elite Multichannel gateways.

.Net Remoting connections	29085

Virtual Agent

Virtual Agent accepts remoting connections on the following predefined port.

.Net Remoting connections	29056

Voice Media Store

Voice Media Store accepts remoting connections on the following predefined port.

.Net Remoting connections	29072

Web Chat Gateway

Web Chat Gateway interfaces remote media services to Simple Messaging Media Store. This interface creates a .Net remoting channel using the following predefined port:

.Net Remoting connections	29063

XML Server

XML Server uses one port and is assigned to an XML naming service to operate in a similar manner to the current Avaya AES naming service on port 450. Clients connect to this port to receive a list of real IP Address/Port combinations that can be connected to for service.

The telephony connections represent connections to an Avaya AES stream. These connections have a single IP Port (XML Client Port) for each Avaya AES Stream. These connections are ideally taken from the OS free pool on server startup. These port numbers are dynamic in the 49152-65535 range. Information on the correct (current) port is provided to the client through the static naming service port. In this manner, the connection in the client can be name-based and not rely on a static IP Address/IP Port. This naming facility also allows there to be a discovery process to locate services on a specific system.

Optionally, you can define XML Client Port to a fix value.

Name Service connections	29096
Remoting object for management	29069
XML Client Port	49152-65535

WebLM Server

WebLM server accepts remote connections on the following SSL port.

SSL	52233

Experience Portal Server

The Experience Portal service exposes a remoting port for management purposes.

Remoting Object for Management	29110

Call Recording

The Call recording Config Service exposes a remoting port for management purposes.

Remoting Object for Management	29120

TTrace Server

TTrace Server uses a Socket port for the connection of an application to the TTrace Server.

The second Socket Port is used for the connection of the TTrace Console to TTrace Server and the third port is used for data connection.

Application connection	10400
TTrace Console connection	10401
TTrace Data connection	10403

SQL Server

Microsoft SQL Server uses the SQL Server port.

Default Port Number	1433

Appendix F: Configuring Avaya Call Recorder

To configure Avaya Call Recorder, you must configure the following:

- Avaya Aura® Communication Manager
- Avaya Aura® Application Enablement Services
- Avaya Aura® Contact Recorder

Configuring Avaya Aura® Communication Manager

Checklist for configuring Avaya Aura® Communication Manager

Step	Task	Reference	✔
1	Verify Avaya Aura® Communication Manager License	Verifying Avaya Aura® Communication Manager License on page 193	
2	Obtain CLAN IP address	Obtaining CLAN IP address on page 193	
3	Administer CTI Link for TSAPI	Administering CTI Link for TSAPI on page 193	
4	Administer System Parameters Features	Administering System Parameters Features on page 193	
5	Administer Class of Restriction	Administering Class of Restriction on page 194	
6	Administer Agent Stations	Administering Agent Stations on page 194	
7	Administer Codec Set	Administering Codec Set on page 194	
8	Administer Network Region	Administering Network Region on page 194	

Table continues…

Step	Task	Reference	✔
9	Administer Virtual IP Softphones	Administering Virtual IP Softphones on page 195	
10	Assign Virtual IP Softphones to Network Region	Assigning Virtual IP Softphones to Network Region on page 195	

Verifying Avaya Aura® Communication Manager License

Procedure

1. Log in to the System Access Terminal (SAT) to verify that Communication Manager license has proper permissions for features illustrated in these Application Notes.
2. Execute the "**`display system-parameters customer-options`**" command and verify that the **Computer Telephony Adjunct Links** customer option is set to "**y**" on **Page 3**.
3. Navigate to **Page 4** and verify that the **Enhanced Conferencing** customer option is set to "**y**".

Note:

If any option specified in this section does not have a proper value, contact the Avaya sales team or BusinessPartner for a proper license file.

Obtaining CLAN IP address

Procedure

1. Get administered CLANs IP addresses using the "**`list ip-interface clan`**" command.
2. Make a note of CLANs IP addresses, as you use these values later while configuring **Avaya AES H.323 Gatekeeper**.

Administering CTI Link for TSAPI

Procedure

1. Add a CTI link using the "**`add cti-link n`**" command.
2. Perform the following actions:
   a. In the **Extension** field, enter an available extension number.
   b. In the **Type** field, enter "**`ADJ-IP`**".
   c. In the **Name** field, enter a descriptive name.
   d. In all other fields, keep the default values.

Administering System Parameters Features

Procedure

1. Execute the "**`change system-parameters features`**" command and enable **Create Universal Call ID (UCID).**
2. Enter an available node ID in the **UCID Network ID** field on **Page 5**.

This node ID is prepended to all UCID's generated by Communication Manager.

3. Navigate to **Page 13** and set the **UCID to ASAI** parameter to **y**.

   This parameter allows sending the universal call ID to Avaya Aura® Contact Recorder.

Administering Class of Restriction

Procedure

1. Execute the "**`change cor n`**" command.

   In this case, "**`n`**" is the class of restriction (COR) number to be assigned to the target stations and virtual IP softphones.

2. Set the **Calling Party Restriction** field to "**none**".

Administering Agent Stations

Procedure

1. Change each physical station used by the Elite Multichannel agents.

   Changing the physical station helps you to involve the station in an outbound call by using the COR defined in Administering Class of Restriction on page 194.

2. Execute the "**`change station n`**" command and set the **COR** field to "**`5`**".

   In this case, "**`n`**" is the station extension.

3. Ensure that the **Name** field is populated with the name of the station. Otherwise, Avaya Aura® Contact Recorder reports an error and no recording occurs.

4. Repeat this section for all agent stations.

   In the interoperability test, two physical agent stations "0085" and "0099" were modified.

Administering Codec Set

Procedure

1. Execute the "**`change ip-codec-set n`**" command.

   In this case, "**`n`**" is the codec set for the virtual IP softphones.

2. In the **Audio Codec** field, enter the values "**`G.711MU`**" and "**`G.729A`**".

   The entry of G.729A is essential because Avaya Aura® Contact Recorder uses G.729A recording format in the test configuration.

3. In the **Frames Per Pkt** field, enter the value "**`6`**".

4. In all other fields, keep the default values.

Administering Network Region

Procedure

1. Execute the "**`change ip-network-region n`**" command.

In this case, "**n**" is the network region to which the virtual IP softphones belong.

2. Set the "**Codec Set**" field to the codec set value administered in Administering Codec Set on page 194.
3. Set "**Intra-region IP-IP Direct Audio**" and "**Inter-region IP-IP Direct Audio**" fields as "**no**".
4. Set "**IP Audio Hairpinning?**" field to "**n**".
5. Go to **Page 4** and associate network region **1** which is used for Agent stations configured in Administering Agent Stations on page 194 with this network region.
6. Enter Codec set value as configured in Administering Codec Set on page 194 and set "**Direct WAN**" field value to "**y**".

Administering Virtual IP Softphones

About this task

Avaya Aura® Contact Recorder uses Virtual IP Softphones to conference into calls involving target stations and to capture media.

Procedure

1. Execute the "**add station n**" command and add a virtual IP softphone.

   In this case, "n" is an available extension number.
2. Perform the following actions:
   a. In the **Type** field, enter "**4624**"
   b. In the **Name** field, enter a descriptive name.
   c. In the **Security Code** field, enter a value of your choice.
   d. Set the **COR** field to "**5**".
   e. Set the **Ip SoftPhone** field to "**y**".
   f. In all other fields, keep the default values.
3. Navigate to **Page 4** and enter button type "**conf-dsp**" to the **Button 4** field.
4. Remove the value in the **Button 3** field.
5. Repeat this section to administer multiple virtual IP softphones which have sequential extension numbers and same security code.

Assigning Virtual IP Softphones to Network Region

Procedure

1. Execute the "**change ip-network-map**" command.
2. Add the IP address of the Avaya AES server "10.0.1.225" to network region "51" administered in Administering Network Region on page 194.

As all virtual IP softphones register through the Avaya AES server, all virtual IP softphones are automatically assigned to that network region.

Configuring Avaya Aura® Application Enablement Services

Checklist for configuring Avaya Aura® Application Enablement Services

Step	Task	Reference	✔
1	Launch Avaya Aura® Application Enablement Services Console	Launching Avaya Aura® Application Enablement Services Console on page 196	
2	Verify DMCC and TSAPI Licenses	Verifying DMCC and TSAPI Licenses on page 197	
3	Administer TSAPI Link	Administering TSAPI Link on page 197	
4	Obtain H.323 Gatekeeper IP Address	Obtaining H.323 Gatekeeper IP Address on page 197	
5	Disable Security Database	Disabling Security Database on page 198	
6	Restart TSAPI Service	Restarting TSAPI Service on page 198	
7	Administer Avaya Aura® Contact Recorder User for DMCC	Administering Avaya Aura® Contact Recorder User for DMCC on page 198	
8	Administer Avaya Aura® Contact Recorder User for TSAPI	Administering Avaya Aura® Contact Recorder User for TSAPI on page 198	

Launching Avaya Aura® Application Enablement Services Console

Procedure

1. Access Avaya AES Web-based interface using the URL “https://ip-address” in an Internet browser window.

   In this case, “ip-address” is the IP address of the Avaya AES server.

2. On the Welcome to Avaya Application Enablement Services screen, click **Continue to Login**.

   The system displays the Login screen.

3. In the **Username** field, enter the user name for the Avaya AES server.
4. In the **Password** field, enter the password for the Avaya AES server.
5. Click **Login**.

The system displays Welcome to OAM screen.

Verifying DMCC and TSAPI Licenses

About this task

Avaya Aura® Contact Recorder always has unrestricted access to the DMCC and TSAPI interfaces. Therefore, you do not need additional **Device Media and Call Control** and **TSAPI Simultaneous Users** licenses for DMCC and TSAPI access.

Administering TSAPI Link

Procedure

1. Login to the AES web application as an Administrator.
2. Select **AE Services** > **TSAPI** > **TSAPI Links** from the left pane.
3. On the TSAPI Links screen, click **Add Link**.

   The system displays the Add TSAPI Links screen.
4. Set the **Link** field to any available number.

   The **Link** field is only local to the Avaya AES server.
5. In the **Switch Connection** field, select the relevant switch connection from the list.

   The default switch connection is **CCCM**.
6. In the **CTI Link Number** field, select the CTI link number configured in Obtaining CLAN IP address on page 193.
7. Keep the default values in the remaining fields and click **Apply Changes**.

   Note:

   Refer to "*Application Notes to Integrate Avaya Aura®Communication Manager 6.0.1, Avaya Aura®Application Enablement Services 6.1 and Avaya Aura®Contact Recorder 10.1 using Single Step Conferencing – Issue 1.0*" to administer switch connection and corresponding configurations on Communication Manager.

Obtaining H.323 Gatekeeper IP Address

Procedure

1. Login to the AES web application as an Administrator.
2. Select **Communication Manager Interface** > **Switch Connections** from the left pane.

   The Switch Connections screen shows a listing of the existing switch connections.
3. Locate the Connection Name associated with the relevant Communication Manager and select the corresponding option.
4. Click on **Edit H.323 Gatekeeper** button.

   The system displays the Edit H.323 Gatekeeper screen.

5. Add CLANs IP address obtained from Obtaining CLAN IP address on page 193 as H.323 gatekeeper.

Disabling Security Database

Procedure

1. Login to the AES web application as an Administrator.
2. Select **Security** > **Security Database** > **Control** from the left pane.

   The system displays the SDB Control for DMCC, TSAPI, JTAPI and Telephony Web Services screen in the right pane.
3. Uncheck **Enable SDB for DMCC Service** and **Enable SDB TSAPI Service, JTAPI and Telephony Service** fields.
4. Click **Apply Changes**.

Restarting TSAPI Service

Procedure

1. Login to the AES web application as an Administrator.
2. Select **Maintenance** > **Service Controller** from the left pane.

   The system displays the Service Controller screen in the right pane.
3. Check the **TSAPI Service** check box.
4. Click **Restart Service** button.

Administering Avaya Aura® Contact Recorder User for DMCC

Procedure

1. Login to the AES web application as an Administrator.
2. Select **User Management** > **User Admin** > **Add User** from the left pane.

   The system displays the Add User screen in the right pane.
3. Enter the required values in the **User Id**, **Common Name**, **Surname**, **User Password**, and **Confirm Password** fields.
4. Click the **CT User** arrow and select **Yes**.
5. Keep the default values in the remaining fields.
6. Click **Apply** at the bottom of the screen.

Administering Avaya Aura® Contact Recorder User for TSAPI

About this task

Use the same procedure specified in Administering Avaya Aura® Contact Recorder User for DMCC on page 198 to configure a user for TSAPI service access.

Although Avaya Aura® Contact Recorder can use different users to log in to the DMCC and TSAPI services, the same user also can be used to achieve the same result as done on this test effort.

Configuring Avaya Aura® Contact Recorder

Checklist for configuring Avaya Aura® Contact Recorder

Step	Task	Reference	✔
1	Launch Avaya Aura® Contact Recorder	Launching Avaya Aura® Contact Recorder on page 199	
2	Administer Recorder Information	Administering Recorder Information on page 199	
3	Administer Contact Center Information	Administering Contact Center Information on page 200	
4	Administer Bulk Recording	Administering Bulk Recording on page 201	
5	Add EMC server IP address	Adding EMC server IP address on page 202	
6	Verify Avaya Aura® Contact Recorder Recording Playback	Verifying Avaya Aura® Contact Recorder Recording Playback on page 202	
7	Configure the EMC Call Recording Server	Configuring the EMC Call Recording Server on page 202	

Launching Avaya Aura® Contact Recorder

Procedure

1. Access Avaya Aura® Contact Recorder Web-based interface using the URL “http://ip-address:8080” in an Internet browser window.

   In this case, “ip-address” is the IP address of Avaya Aura® Contact Recorder.
2. In the **Username** field, enter the user name for Avaya Aura® Contact Recorder.
3. In the **Password** field, enter the password for Avaya Aura® Contact Recorder.
4. Click **Login**.

Administering Recorder Information

Procedure

1. Login to the Avaya Aura® Contact Recorder web application.

2. Click **General Setup**.
3. On the **General Setup** tab, click **Recorder Interface** tab.
4. Click the **Edit** button next to **IP Address on this server to use for recordings (RTP, screen content etc.)** field.
5. Enter the IP address of Avaya Aura® Contact Recorder.

Administering Contact Center Information

Procedure

1. Login to the Avaya Aura® Contact Recorder web application.
2. In the Avaya Aura® Contact Recorder web application, click **General Setup**.
3. On the **General Setup** tab, click **Contact Center Interface** tab.
4. Enter appropriate value in the fields on the **Contact Center Interface** tab.

Contact Center Interface field description

Name	Description
Avaya Communication Manager Name	The name of the Switch Connection which is configured on Avaya AES server. For more information, see Obtaining H.323 Gatekeeper IP Address on page 197.
AE Server Address(es)	The IP address of the Avaya AES server.
DMCC Username	The user Id configured in Administering Avaya Aura® Contact Recorder User for DMCC on page 198.
DMCC Password	The user password configured in Administering Avaya Aura® Contact Recorder User for DMCC on page 198.
IP Station Security Code	The security code configured in Administering Virtual IP Softphones on page 195.
AES TSAPI Server(s)	The IP address of the Avaya AES server.
AES TSAPI Service Login ID	The user Id configured in Administering Avaya Aura® Contact Recorder User for TSAPI on page 198.
AES TSAPI Service password	The user password configured in Administering Avaya Aura® Contact Recorder User for DMCC on page 198.
Agent Skill group(s) to Observer via TSAPI	The skills (hunt group extension) administered on Communication Manager to observe for call recording.
VDN(s) to Observe	The VDN(s) extension(s) configured in Communication Manager to observe for call call recording.
Address of the Communication Manager	The IP address of Communication Manager.

Table continues…

Name	Description
Tag Calls with which VDN	The first or Last VDN, as this VDN is used to tag a call recording if a call goes through multiple VDNs.
Record with Passive IP taps	Keep the default value No as you are using Single Step Conferencing recording mode.
Extensions assigned to recorder	Use Add Port(s) (not shown here) to add the virtual IP softphone extensions configured in Administering Virtual IP Softphones on page 195.

Administering Bulk Recording

Procedure

1. Login to the Avaya Aura® Contact Recorder web application.
2. In the Avaya Aura® Contact Recorder web application, click **Operations**.
3. On the **Operations** tab, click **Bulk Recording**.
4. On Bulk Recording page, click **Add address(es)**.

   The system displays a new window.
5. In the new window, click **Advanced**.
6. Enter appropriate value in the fields on the **Advanced** tab.
7. Click **Enter and Close**.

Advanced field description

Name	Description
Lowest (or only) Address to record (station, agent, skill or VDN)	The lowest station, VDN, Agent, or Skill that you want to record.
Highest Station Number (if more than 1)	The highest station, VDN, Agent, or Skill that you want to record.
Recording Internal Calls	Select “As specified for this recording mode as a whole”.
Recording Control	• In Trigger on alerting, select “As specified for this recording mode as a whole”. • In “Start recording automatically at start of call” select “No”. • In “Follow the call”, select “Yes”. • In “Allow user/external start/restart” select “Yes”. • In “Allow user/external stop”, select “Yes”. • In “Allow user/external delete”, select “Yes”. • In “Retain ONLY if requested by user/external”, select “No”

Adding EMC server IP address

Procedure

1. Login to the Avaya Aura® Contact Recorder web application.
2. In the Avaya Aura® Contact Recorder web application, click **General Setup**.
3. On the General tab, under **Recorder**, click the **Edit** button next to **URL(s) of external port(s) to connect to**.

   A webpage displays.
4. In the **URL(s) of external port(s) to connect to field, type the "IP address of the EMC Core server:PortNumber".**

   The default EMC Core server port number is 1415.
5. Click **Enter**.

Verifying Avaya Aura® Contact Recorder Recording Playback

Procedure

1. Login to the Avaya Aura® Contact Recorder web application.
2. In the Avaya Aura® Contact Recorder web application, click **Replay**.
3. In the left pane, under **Search Filters**, select the required **Call Start Range**.
4. Click **Search**.
5. In the right pane, under Results, you can find the list of recording. Verify that the recording entries reflect the calls that are to be recorded and displayed.
6. Click an option to select an entry and click the Play button (green triangle) to listen to the playback. Verify that the content of the recording matches the content of the call.

Configuring Call Center Elite Multichannel Call Recording Server

Procedure

1. Start the Call Center Elite Multichannel Control Panel application.
2. In the left Control Panel pane, in **Call Recorders**, right-click **Controllers** and click **Edit**.
3. In the right pane, in **Avaya Call Recorder URL Configuration**, specify the server IP address and port number for Avaya Aura® Contact Recorder as `8080`.
4. Right-click and select **Save and Close**.

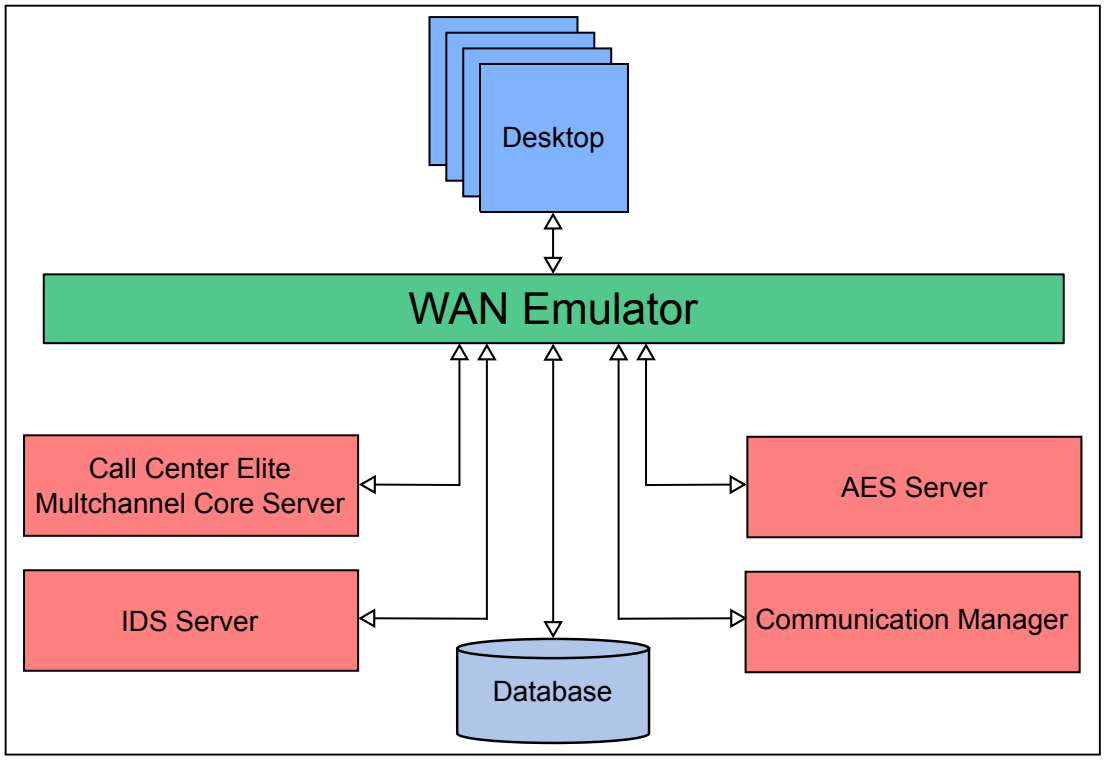
Appendix G: Network recommendations for Call Center Elite Multichannel Agent Desktop

Introduction

This section provides bandwidth requirements for a single Call Center Elite Multichannel Desktop. The statistics in this section are based on the testing performed in a simulated WAN environment.

Lab Setup

The following diagram depicts the architecture of the lab setup used for bandwidth testing.



No.	Server	Components Installed
1	WAN Emulator	WAN Emulator
2	Call Center Elite Multichannel Core Server	XML Server, License Director, Configuration Server, Application Management Director, Call Center Elite Multichannel Control Panel, Media Director, and Email Media Store
3	IDS Server	IDS Suite
4	Database	MS – SQL
5	Application Enablement Services	AES
6	Communication Manager	CM
7	Desktops	Call Center Elite Multichannel Desktop

Bandwidth test results

Test results for the Desktop components

The following table lists the bandwidth results for various scenarios.

Important:

All the values in the table are for Multicast.

No.	Test scenario	Average bandwidth for Desktop	Peak bandwidth for Desktop	Maximum delay**
1	No Load – Vanilla System with a single agent logged in performing no activity	75 kbps	100 kbps	300 ms
2	Agent Login	300 kbps	400 kbps	300 ms
3	Agent Logout	30 kbps	50 kbps	300 ms
4	Agent State Change	30 kbps	50 kbps	300 ms
5	Single Voice Call	300 kbps	400 kbps	300 ms
6	Single Email (Size - 2 Kb)	300 kbps	350 kbps	300 ms
7	Single Email (Size - 5 Mb)	5 Mbps*	8 Mbps*	300 ms

Table continues…

No.	Test scenario	Average bandwidth for Desktop	Peak bandwidth for Desktop	Maximum delay**
8	History Search (Parameters -100 Max Records Returned, All Interaction Types)	200 kbps	350 kbps	300 ms
9	History Search (Parameters - 999 Max Records Returned , All Interaction Types)	300 kbps	350 kbps	300 ms
10	Wallboard Monitoring 10 Agents	200 kbps	250 kbps	300 ms
11	Wallboard Monitoring 50 Agents	300 kbps	350 kbps	300 ms
12	Presence Monitoring 10 Agents	200 kbps	250 kbps	300 ms
13	Presence Monitoring 50 Agents	300 kbps	350 kbps	300 ms
* For a 5 MB email sent over the T-1 bandwidth (1.544 Mbps), a delay of 4 to 5 seconds is observed for downloading the complete email on the Desktop. A delay of up to 10 seconds is considered acceptable for the tests conducted. ** A delay of 30 ms is recommended for best user experience.				

The tests mentioned in the table are performed at least 10 times by setting the following WAN bandwidths:

- T-1, DS-1 - 1.544 Mbps
- Thin Ethernet - 10 Mbps
- T-3, DS-3 - 44.736 Mbps
- LAN - 100 Mbps

A single agent must have an average bandwidth of 300 kbps with maximum delay of 300 ms. However, a delay of 30 ms is recommended for best user experience. Also, the minimum total bandwidth of 6 Mbps is required if the Email channel configured to support email with a size up to 10 Mb. The total bandwidth of 6 Mbps is adequate only if 2% of 100 agents are receiving email with a size of 10 Mb. The acceptable delay for email to arrive to the agent after the phantom call is 30 seconds.

Network administrators must design a network based on the bandwidth requirements documented in the above table for various scenarios.

Note:

If the total bandwidth is less than 6 Mbps, Desktop might freeze for a few seconds during download of an email with size more than 5 Mb.

Key observations and recommendations

The following are the observations and recommendations:

- If you reduce the bandwidth limits and increase latency, you might see performance issues, such as high processing time.
- The round trip latency between XML Server and AES must not exceed 30 ms.
- The round trip latency between IDS - Voice and Presence and AES must not exceed 30 ms.
- For optimal performance, the server components must be collocated and must connect over a LAN with the minimum speed of 100 Mbps.
- Desktops are preferred over LAN.
- Multicast is preferred over .Net Remoting.
- For better performance, create a new ASMSData Database periodically.

Index

Special Characters

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