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March 2018

Getting Started with Avaya Aura® Orchestration Designer

Comments on this document? infodev@avaya.com
Chapter 1: Introduction

Purpose
This document describes the methods and the system requirements used to create speech applications that comply with VoiceXML version 2.1, call control applications that comply with CCXML specification and, message applications that comply with TextXML, and mobile applications that comply with the HTML5 specification.

Intended audience
This document is intended for anyone who wants to gain a high-level understanding of the product features, functionality, capacities, and limitations within the context of solutions and verified reference configurations.

New in this release
The following changes are introduced for Orchestration Designer 7.2.1:
- Updated the system requirements to support Orchestration Designer 7.2.1.
- Added the procedure to install Orchestration Designer 7.2.1.
- Added the procedure to upgrade Orchestration Designer 7.2.1.

Warranty
Avaya Inc. provides a 90-day limited warranty on Orchestration Designer. Refer to your sales agreement or other applicable documentation to establish the terms of the limited warranty. In addition, Avaya’s standard warranty language as well as details regarding support for Orchestration Designer, while under warranty, is available on the support website at http://www.avaya.com/support.
Viewing the Eclipse documentation

About this task
The documentation for Eclipse and supporting Eclipse components (GEF and WTP) is available at http://www.eclipse.org/documentation/, and in the form of an online Help.

- On the Help menu > click Help Contents.

Viewing the Orchestration Designer documentation

About this task
The Getting Started with Avaya Aura® Orchestration Designer guide is available on the Orchestration Designer installation ISO image.

You can view the Orchestration Designer documentation on the Avaya support website: http://support.avaya.com

The Orchestration Designer documentation is also available in the form of an online Help.

- On the Help menu, click Help Contents > Avaya Aura® Orchestration Designer - Self Service.

Documentation for related products and technologies

Orchestration Designer depends on the use of several closely related software products and technologies. When using Orchestration Designer, review the documentation of these related products and technologies.

Avaya does not reproduce or package the documentation for these related products and technologies. However, to help locate the appropriate documentation, review the following resources:

**Note:**
The following URLs were valid at the time of publication of this document. Avaya is not responsible if these URLs have changed. For more updated URLs, perform a search operation online.

- For Eclipse and supporting Eclipse components (GEF and WTP), go to:
  
  http://www.eclipse.org/documentation/

  For more information, see Viewing the Eclipse documentation on page 8.

- For the Java SDK (Software Developer’s Kit), go to:
  
  http://docs.oracle.com/javase/8/docs/index.html
  
  http://docs.oracle.com/javase/9/docs/index.html
• For Tomcat 7.0, 8.0, or 8.5, go to:
  http://tomcat.apache.org/tomcat-8.5-doc/index.html
• For IBM WebSphere or WebSphere Express, go to:
  http://www.ibm.com/websphere
• For WebLogic, go to:
• For Redhat JBoss EAP, go to:
  https://developers.redhat.com/products/eap/overview/
• For JBoss Wildfly, go to:
  http://wildfly.org/
• For databases and JDBC implementation, go to:
  http://www.sql.org/
  http://www.firstsql.com/tutor.htm
• For Web services, go to:
  http://www.w3.org/TR/wsd1
  http://www.ws-i.org/Profiles/BasicProfile-1.1-2004-08-24.html
• For the W3C VoiceXML 2.0 Recommendation, go to:
  http://www.w3.org/TR/voicexml20/
• For the W3C VoiceXML 2.1 Recommendation, go to:
  http://www.w3.org/TR/voicexml21/
• For the W3C CCXML 1.0 Recommendation (January 19, 2007), go to:
  http://www.w3.org/TR/ccxml/
• For the Speech Recognition Grammar Specification version 1.0, go to:
  http://www.w3.org/TR/speech-grammar/#AppJ.5
Chapter 2: Installation and configuration

Overview

Avaya Aura® Orchestration Designer (Orchestration Designer) is a Java-based tool that you can use to create:

- Speech applications that comply with VoiceXML version 2.1.
- Call control applications that comply with CCXML version 1.0 January 19, 2007, specification.
- Message applications that comply with TextXML.

Designed as an Eclipse plug-in, Orchestration Designer provides an integrated GUI for the design and implementation of:

- Speech applications that can operate with Interactive Response, Voice Portal, Media Processing Server, and Avaya Aura® Experience Portal systems.
- Message applications that can operate with Avaya Aura® Experience Portal system.
- Data only applications that can operate with Avaya Aura® Experience Portal system.
- HTML5 applications that can operate with Avaya Aura® Experience Portal system.

Orchestration Designer is a suite of self-service products and Avaya Contact Center products, namely, Avaya Aura® Experience Portal, Avaya Interactive Response (IR), Media Processing Server (MPS), and Avaya Aura® Contact Center. As a single tool, you can use Orchestration Designer to design, simulate, and maintain the contact routing scripts with inbound and outbound self-service support. Orchestration Designer accelerates the service design and deployment, reduces the cost, and enhances the customer experience.

Orchestration Designer integrates seamlessly with Avaya Breeze™ and allows an Orchestration Designer application to interact with the Engagement Designer workflows and pass the collected data in several ways:

- Orchestration Designer can start a workflow and pass collected data to that workflow using Context Store. This integration enables the workflow to process the information and complete the transaction using the data that it receives from Orchestration Designer.
- Orchestration Designer supports integration of Orchestration Designer SMS and Email applications with Engagement Designer workflow. The integration enables the Orchestration Designer application to receive data from Engagement Designer workflow, interact using one more text messages and return the data to the Engagement Designer workflow.
- A Engagement Designer workflow can initiate a new call to the customer and plug-in Orchestration Designer into the call to provide IVR services.
• A Engagement Designer workflow can plug-in Orchestration Designer into an existing call.

Orchestration Designer works with widely accepted Eclipse.org development framework. Orchestration Designer provides a drag-and-drop environment for development and maintenance of speech, touchtone, and message applications.

**Multi-Channel Self Service (MCSS)**

The Multi-Channel Self Service (MCSS) primarily allows users to extend the current Experience Portal or Orchestration Designer product capabilities to include channels other than inbound voice (telephony).

Key capabilities of MCSS include:

• Application processing of inbound SMS and Email.
• Sending a response to an inbound SMS and Email.
• Sending outbound SMS and Email from applications (cross channel). A speech application sending an SMS or Email confirmation, for example.
• New application type **Web** in Orchestration Designer.
• Application design palettes specific to a channel.
• Generic message flow with custom xml generation for social media and other channels.
• Transferring items to AACC agent for handling with reply via SMS and Email.
• Web channel to collect information via HTML5 pages

Inbound processing of SMS and Email adds text channels to the Experience Portal. You can build Orchestration Designer applications to process and respond to incoming SMS and Email. In addition the outbound SMS and Email allows an application on a given channel to provide additional feedback to a user via another channel. For example, a speech application might send a confirmation of a transaction to the user via email or SMS. Items that cannot be handled in Self Service can be transferred to an AACC agent via a connector.

---

**Features and benefits**

Orchestration Designer:

• Simplifies development, integration, and reusability of speech and touchtone applications.
• Significantly reduces time and cost of application prototyping and design.
• Provides unprecedented coverage of customer self-service, employee-facing productivity, and advanced call control application areas.
• Ensures consistent and more reliable deployment of voice supporting services and applications.
• Maximizes the use of tooling investments for more rapid deployment of Web-based voice applications through the open Eclipse-based framework.
• Integrates with Avaya Breeze™ and Avaya Context Store Snap-in providing a centralized location to store context information.
• Provides the capability to integrate Orchestration Designer voice, SMS, and Email applications with Engagement Designer and receive and send data to the Engagement Designer workflow.

• Provides support for mobile application with HTML5.

• Provides two-way integration with Avaya Breeze™ and Avaya Engagement Designer Snap-in.

• Provides multi-channel support.

• Starting with the JTAPI 3.1 driver, the OD CTI (AES) connector, can use the UCID (Universal Call ID) to keep track of call ID’s. To use this feature, you must enable OD CTI (AES) connector on your switch.

★ Note:

It is not mandatory to enable OD CTI (AES) connector. However, it will guarantee no call ID’s are recycled which have been problematic in the past with high call volumes.

System requirements

License requirements

You must have a valid license to run Orchestration Designer applications on Avaya Aura® Experience Portal, Avaya Voice Portal, Avaya Interactive Response (IR), Avaya Media Processing Server (MPS), and other supported VXML platforms. Orchestration Designer licenses are free. You can contact an Avaya sales representative or the channel manager to get the license file. Avaya partners can log on to Partner Portal to find information about ordering additional licenses. If yes, source it just like the other product names.

If you run the Orchestration Designer applications on Voice Portal, Avaya Aura® Experience Portal, IR, or other Avaya products that use the WebLM license server, then Orchestration Designer does not require a separate WebLM license server. You must install the Orchestration Designer license on the existing WebLM license server that is installed with Voice Portal, Avaya Aura® Experience Portal, IR, or other Avaya products that use the WebLM license server.

If you run the Orchestration Designer applications on MPS, then you must install the WebLM license server and configure the license information of Orchestration Designer. You must install a separate WebLM license server because the system does not install the WebLM license server during the MPS installation.

You must have a valid license for Context Store and Avaya Breeze™. For more information, see Avaya Context Store Snap-in Reference.

Orchestration Designer license has a grace period of 30 days. If the WebLM license server is unavailable after Orchestration Designer obtains the license from the WebLM license server, Orchestration Designer is available for use for 30 days.

You do not require a license to install or run the Eclipse-based Orchestration Designer development and the simulation environment.
Hardware requirements

The system that hosts the Orchestration Designer development environment must meet the following hardware requirements:

<table>
<thead>
<tr>
<th>Hardware</th>
<th>Minimum requirement</th>
<th>Preferred value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU speed</td>
<td>1 GHz</td>
<td>2 GHz</td>
</tr>
<tr>
<td>RAM</td>
<td>1 GB</td>
<td>2 GB</td>
</tr>
<tr>
<td>Hard disk drive</td>
<td>40 GB</td>
<td></td>
</tr>
<tr>
<td>Monitor resolution</td>
<td>1024 x 768 pixels</td>
<td></td>
</tr>
</tbody>
</table>

Software requirements

The system that hosts the Orchestration Designer development environment must have the following software packages installed. You must install these packages before installing and configuring Orchestration Designer. The software required to host the Orchestration Designer development environment is available on the Orchestration Designer 7.2.1 ISO image.

**Important:**

To upgrade Orchestration Designer, see the following requirements:

<table>
<thead>
<tr>
<th>Software requirement</th>
<th>On ISO image</th>
<th>Notes and links</th>
</tr>
</thead>
<tbody>
<tr>
<td>You must have any one of the following:</td>
<td>No</td>
<td>You can install Orchestration Designer on any of these operating systems if you meet all hardware requirements and install all the supporting software packages.</td>
</tr>
<tr>
<td>• Microsoft Windows 7 (Professional and Enterprise versions)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Microsoft Windows 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Google Chrome 57</td>
<td>No</td>
<td>You must install Google Chrome 57, Microsoft Internet Explorer 11, or Mozilla Firefox 43 for simulation of HTML5 application.</td>
</tr>
<tr>
<td>• Mozilla Firefox 43</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Microsoft Internet Explorer 11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• J2SE Development Kit 7.0 (JDK 7.0)</td>
<td>No</td>
<td>The JDK includes the Java Run-Time Environment (JRE) and command-line tools, compilers, and debuggers used in developing applets and applications. Java 7 supports SHA2 certificates.</td>
</tr>
<tr>
<td>• J2SE Development Kit 8.0 (JDK 8.0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Software requirement</td>
<td>On ISO image</td>
<td>Notes and links</td>
</tr>
<tr>
<td>----------------------------------------------------------</td>
<td>--------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>• J2SE Development Kit 9.0 (JDK 9.0)</td>
<td></td>
<td>Note: Orchestration Designer 7.2.1 requires Java version 7 or later. It is not backward compatible with earlier versions. Orchestration Designer supports JDK 7, JDK 8, and JDK 9 from Oracle and OpenJDK.</td>
</tr>
<tr>
<td>You must have any one of the following:</td>
<td>Yes</td>
<td>Eclipse is a Java-based open-source integrated development environment (IDE) for software development. Orchestration Designer runs as an Eclipse plug-in. Orchestration Designer uses the Eclipse Graphical Editing Framework plug-ins for Eclipse (GEF) for advanced graphical functions. Orchestration Designer also includes the support files for Call Control (CCXML) development.</td>
</tr>
<tr>
<td>• Eclipse-4.5-Prereq-AAOD.zip (Mars)</td>
<td></td>
<td>Tomcat generates and serves VoiceXML pages to the Avaya Application Simulator. Note: You must have administrative privileges when running Tomcat. If you upgrade to Tomcat 8.x, you might need to make small adjustments the first time you run Tomcat. If your applications have manually configured build paths or have resources in common/lib or common/classes, then you must manually update the build path to point to &lt;tomcat_installpath&gt;/lib. You must also put any resources, such as libraries, in that folder.</td>
</tr>
<tr>
<td>• Eclipse-4.6-Prereq-AAOD.zip (Neon)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Eclipse-4.7-Prereq-AAOD.zip (Oxygen)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apache Tomcat 7.0 or Tomcat 8.0 or Tomcat 8.5</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Avaya Breeze™ 3.3</td>
<td>No</td>
<td>Avaya Breeze™ provides a virtualized and secure application platform where Java programmers can develop and dynamically deploy advanced collaboration capabilities. For more information on installing Avaya Breeze™, see Deploying Avaya Breeze™.</td>
</tr>
<tr>
<td>Avaya Engagement Designer Snap-in 3.3</td>
<td>No</td>
<td>Avaya Engagement Designer Snap-in offers business analysts, non-technical resources, and developers the opportunity to write logical business process flows. These process flows can leverage any Avaya Breeze™ snap-in that have an associated palette of tasks. For more information on Avaya Engagement Designer Snap-in, see Avaya Engagement Designer Reference.</td>
</tr>
<tr>
<td>Experience Portal Snap-in tasks:</td>
<td>No</td>
<td>Experience Portal Snap-in tasks to start Orchestration Designer SMS and Email application. For more</td>
</tr>
</tbody>
</table>
### Software requirement

<table>
<thead>
<tr>
<th>Software requirement</th>
<th>On ISO image</th>
<th>Notes and links</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Launch Email Service</td>
<td></td>
<td>information on Experience Portal Snap-in tasks, see <em>Experience Portal Tasks</em>.</td>
</tr>
<tr>
<td>Avaya Context Store Snap-in 3.3</td>
<td>No</td>
<td>Avaya Context Store provides a flexible and easy integration among different applications, providing a centralized solution to store context information. For more information on installing Avaya Context Store, see <em>Avaya Context Store Snap-in Reference</em>.</td>
</tr>
</tbody>
</table>
| Microsoft SAPI Speech 6.0 | Yes | Orchestration Designer uses Microsoft SAPI Speech during application testing to perform automated speech recognition (ASR) and text-to-speech (TTS) functions.  

*Note:* Microsoft Windows 7 already have Microsoft Speech components installed.  
If Microsoft SAPI Speech is installed on Windows 7, verify if the *Speech Recognition* and *Text-to-Speech* tabs are available in *Control Panel > Speech Recognition > Text-to-Speech*. |
| Storm Codec 7.01.19 | Yes | You must install Storm Codec 7.01.19 only if you intend to use 3GP video files for media.  
To open the Storm Codec installer, see the installation notes available on the ISO image. |
| Ambulant player 2.1 | No | Orchestration Designer uses Ambulant player 2.1 for playing and previewing media files.  
Do not use all menu, toolbar, and controls in the Ambulant player 2.1. |
| Nuance Recognizer 9/10 (MRCPv1) | No | You must acquire Nuance Recognizer directly from the vendor. |
| Loquendo Speech Server 7/ MRCPv1 Server 7.2 or higher | No | You must acquire Loquendo Speech Server directly from the vendor. |

Users launch the ISO image, and use the displayed HTML index page to navigate to the required resources as specific locations on the ISO image are described here. By following these instructions, installation is smoother because the online navigation documentation leads you along the correct installation path. Following these instructions is the preferred method for using the ISO image and installing efficiently.

### General Upgrades

<table>
<thead>
<tr>
<th>General Upgrades</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.2.1</td>
<td>Before upgrading your application server, make copies of <em>tsapi.pro</em>, <em>ddconfig.xml</em>, <em>trusted_weblm_certs.jksfiles</em> files, so that you can restore the files, if they are overwritten by the upgrade.</td>
</tr>
</tbody>
</table>

*Table continues…*
<table>
<thead>
<tr>
<th>General Upgrades</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.2.2</td>
<td>The Orchestration Designer upgrade process does not change any custom code. The application developer must manually resolve the errors or warnings resulting from OD version upgrades (such as variable name changes) that affect the custom code.</td>
</tr>
<tr>
<td>3.2.3</td>
<td>If you have an existing installation in which you have updated the certificate file (trusted_weblm_certs.jks), then you must save a copy of the certificates file when reinstalling the runtime support files.</td>
</tr>
<tr>
<td>3.2.4</td>
<td>When upgrading applications from Windows XP to Windows 7, the call flow visual representation might experience some issues because of the difference in the graphics layer between the 2 Windows releases. Some corrections are required.</td>
</tr>
<tr>
<td>3.2.5</td>
<td>Framework updates are there that might result in Java compilation errors after upgrading. To correct this, regenerate projects reporting errors.</td>
</tr>
<tr>
<td>3.2.6</td>
<td>Remove Older Jar files after upgrade. After upgrading, ensure that you do not have old versions of jar files on the application server: Some examples are: commons-httpclient-3.1.jar commons-loging-1.1.1.jar log4j-1.2.15.jar wss4j-1.5.8.jar scertcommon-07.01.08.04.jar scertcommon-07.01.07.01.jar</td>
</tr>
</tbody>
</table>

---

**About the WebLM license server installation and configuration**

If you run the Orchestration Designer applications on MPS, then you must install the WebLM license server and configure the license information of Orchestration Designer. You must install a separate WebLM license server because the system does not install the WebLM license server during the MPS installation.

Use the `WebLM.war` file that is available on the Orchestration Designer 7.2.1 installation ISO image to install the WebLM license server software.
For versions WebLM 6.3.11 and above, the WebLM server accepts requests only over TLS 1.0 and above. If the product application is configured to send requests on SSLv2 or SSLv3, then the communication between the product application fails. So, if the product application is upgrading WebLM to 6.3.11 and above, then ensure that the product application is configured to send requests only over TLS 1.0 and above.

For information about installing and configuring the WebLM license server software, see the Licensing Installation Instructions for WebLM guide and Licensing Release Notes for WebLM.

The WebLM.war file, Licensing Installation Instructions for WebLM guide, and Licensing Release Notes for WebLM are available on the Orchestration Designer 7.2.1 installation ISO image at:

<absolute path of ISO image>:\Software\WebLM\

Related links
License requirements on page 12

---

## Installing Orchestration Designer manually

### Before you begin

Before installing the Orchestration Designer software, temporarily disable the antivirus software and close any open or running applications. Orchestration Designer installation includes extracting Java-related files from a compressed archive and the antivirus software can slow down the installation process.

### About this task

The Orchestration Designer installation ISO image contains the Orchestration Designer distribution executable. Before running the executable, ensure that you meet all system requirements, as mentioned in System requirements on page 12.

**Important:**

The procedure described in this section is for new installations of the Orchestration Designer software. To upgrade Orchestration Designer, see About Orchestration Designer Upgrade on page 30.

### Procedure

1. Copy the Orchestration Designer installation ISO image to the local drive.
2. Download and install the JDK installer (Open or Oracle).
3. Install Eclipse and all other Eclipse prerequisite features:
   a. Locate the package file on the Orchestration Designer 7.2.1 ISO image. This file is
      located in the following directory: `<absolute path of ISO image>:\Software\Eclipse`.
   b. Extract the `.zip` file into an installation folder.
   c. (Optional) Create a shortcut for the Eclipse executable. Eclipse launches
      Orchestration Designer.

4. Install Orchestration Designer software:
   a. Locate the `AAOD_7.2.1.XXX.jar` installation archive on the Orchestration Designer
      7.2.1 ISO image and copy it to a temporary location. The installation archive is located in the
      `<absolute path of ISO image>:\UpdateSites` directory.
   b. On the eclipse interface, click Help > Install New Software.
   c. On the Available software page, click Add.
   d. On the Add Repository page, enter a name and click Archive to specify the location
      of the `AAOD_7.2.1.XXX.jar` file.
   e. Click OK.
   f. Click Select All.
   g. On the Available software page, clear the Contact all update site sites during
      install to find the required software check box and then click Next.
   h. On the Install Details page, click Next.
      The system displays Avaya Software License Agreement.
   i. Review the license agreement and then click I accept the term of the license
      agreement.
   j. Click Finish.
   k. When prompted to trust the certificates, click Select All, and click OK.
   l. Click Restart Now to restart eclipse.

5. Install Tomcat:
   a. Locate the Tomcat distribution package on the Orchestration Designer 7.2.1 ISO
      image. The Tomcat distribution package is located in the `<absolute path of ISO image>:\Software\Tomcat\` directory.
   b. Extract the `.zip` file in a temporary folder.
   c. Review the `RUNNING.txt` file for more installation instructions.
Important:
Do not install Tomcat as an NT service. Orchestration Designer does not support this configuration because Tomcat does not start and stop appropriately when developing applications.

6. (Optional) Install Microsoft Speech API 6.0:
   a. Copy the Orchestration Designer 7.2.1 installation ISO image to the local drive.
   b. Go to `<absolute path of ISO image>` > Software > MSSpeech
   c. Double-click the Setup.exe file.
      The system displays the Microsoft SAPI Speech wizard.
   d. In the Welcome dialog box, click Next.
   e. Accept the license terms and then click Next.
   f. Enter a user name and the organization in the Customer Information dialog box, then click Next.
   g. Accept the default installation folder, when prompted, or navigate to another, if applicable. Then, click Next.
   h. Click Install to begin the Microsoft SAPI Speech installation.
   i. Click Finish when the installation is complete.

7. (Optional) Optionally, install the Storm Codec 7.01.19. To start the Storm Codec 7.01.19, refer the Installation Notes on the ISO image.

Note:
• After you complete the installation procedure, read the Eclipse “readme” file located in the /readme subdirectory where Eclipse is installed. The Eclipse readme file includes valuable information and tips for configuring Eclipse.
• Before you use Orchestration Designer, you must configure the basic settings. For information about configuring your development environment settings, see Basic configuration on page 20.

Installing Orchestration Designer using pre-packaged installation

Before you begin
Before you use the prepackaged Orchestration Designer installation, ensure you have installed the Java Development Kit.
About this task

The Orchestration Designer ISO image contains a prepackaged Orchestration Designer installation that contains both the Self Service and Contact Center features and also a Tomcat installation.

Procedure

1. Copy the Orchestration Designer installation ISO image to the local drive and navigate to the root folder of the ISO image.
2. Copy the AAOD7.2.1 folder to C:\ directory on your computer.
3. Double-click eclipse.exe file in the AAOD7.2.1\eclipse folder to install and open Orchestration Designer.

Tip:

To access the Orchestration Designer, you can create a shortcut to eclipse.exe and make the shortcut in a convenient location.

4. Open Orchestration Designer and perform the following step to configure the preferences for the location of the Tomcat installation:

   Click Window > Preferences > Tomcat and set the Tomcat home value.

   For example, if you copied the AAOD7.2.1 folder to your C:\ drive, then the Tomcat home value is C:\AAOD7.2.1\apache-tomcat-7.0.55.

Viewing the version number of an installed Orchestration Designer software

Procedure

1. On the Help menu, click About Eclipse SDK.
2. In the About Eclipse SDK dialog box, click Installation Details.

   The system displays the Eclipse SDK Installation Details dialog box, which contains the installation and configuration details.

Basic configuration

Before you start creating Orchestration Designer projects, you must perform some basic configurations to ensure that the environment is configured and ready to use.
Creating an Eclipse shortcut

About this task

After you complete installing all installation components, you can start Eclipse to access the Orchestration Designer. For easy access to Eclipse, you can create a Windows desktop shortcut icon to the eclipse.exe Eclipse executable file, which is located where Eclipse is installed.

Procedure

1. To create an Eclipse shortcut, right-click the eclipse.exe Eclipse executable file which is located where Eclipse is installed, and then click Send To > Desktop (create shortcut).
2. Double-click the shortcut file to start Orchestration Designer.
   The system displays the Workspace Launcher dialog box.

Setting up the workspace

About this task

After you start Orchestration Designer, through Eclipse, for the first time, the Eclipse Workspace Launcher dialog box prompts you to specify a workspace location. Specify a directory to save all Orchestration Designer project files.

Important:

If you are configuring a new version of Orchestration Designer, back up all files in the original installation directory before configuring a new directory.

Procedure

1. Double-click eclipse.exe.
   For more information, see Creating an Eclipse shortcut on page 21.
2. In the Workspace Launcher dialog box, click Browse to navigate to the location to set as the workspace location.
   The default directory is relative to the installation path of Eclipse. For example, C:\Eclipse\workspace.
3. Click OK.
   Note:
   To stop the Workspace Launcher dialog box from prompting for this directory with every start of Eclipse, select the Use this as the default and do not ask again check box, and then click OK.
Settings configuration

Configuring the default perspective

About this task

You must configure the preferences for the first time you use Orchestration Designer. Orchestration Designer uses these configured preferences on subsequent launches.

Procedure

1. On the Window menu, click Preferences.
2. In the Preferences dialog box, in the left navigation pane, double-click General.
3. Click Perspectives.
4. In the Open a new perspective area, click In the same window.
5. In the Fast Views area, click Within the perspective.
6. In the Open the associated perspective when creating a new project area, click Prompt.
7. In the Available perspectives pane, perform one of the following actions:
   • Click Speech to set the Speech perspective as the default perspective.
   • Click Call Control to set the Call Control perspective as the default perspective.
   • Click Message to set the Message perspective as the default perspective.
   • Click Web to set the Web perspective as the default perspective.
8. Click Make default.
9. Click Apply, and then click OK.

Configuring Tomcat preferences

About this task

Tomcat preferences provides settings that determine how Orchestration Designer works with the Apache Tomcat servlet engine during simulations.

If you install Tomcat with the default settings, Tomcat preferences are already configured and you do not have to configure Tomcat preferences again.

Verify that the appropriate Tomcat version, home directory, and Contexts directory are populated.

Note:

If you are running only Orchestration Designer in your development environment, that is, if you are not running deployed applications, you do not have to install the runtimeconfig to your
local Tomcat. This file is installed automatically. You only have to set up your production system when you are deploying and running live applications.

⚠️ Important:
Do not run the runtimeconfig on your ADE. If you do, connection timeout exceptions occur. To recover, stop Tomcat, stop Orchestration Designer, restart Orchestration Designer, and change your configuration in preferences.

Procedure
1. On the Window menu, click Preferences.
   The system displays the Preferences dialog box.
2. In the left navigation pane, click Tomcat.
3. In the Tomcat version area, click the Tomcat version that is installed on your computer.
4. In the Tomcat home field, click Browse to navigate to and select the directory where Tomcat is installed.
5. In the Context declaration mode area, click Context files.
6. In the Context directory field, click Browse to navigate to and select the context directory.
7. Click Apply, and then click OK.

Orchestration Designer preferences management

Considerations for enabling an HTTP or HTTPS proxy connection
The Orchestration Designer Preferences panel includes a setting to enable an HTTP or HTTPS proxy connection.
Proxy settings are required when all of the following conditions are true:
- The system where Orchestration Designer is installed is behind a firewall.
- Access is required to resources that reside outside the firewall for your Orchestration Designer speech projects. These resources can include Web services, databases, or other outside resources.
- Access to these resources requires the use of either an HTTP or HTTPS proxy server.

When these conditions are true, proxy settings for Orchestration Designer must be configured, even if proxy settings are already configured for your Internet browser or e-mail client. If you have a proxy server configured for your Internet browser, use the same proxy settings for Orchestration Designer. For more information, see Admin (ddadmin) Web application configuration in the Avaya Aura® Orchestration Designer Developer’s Guide.
Related links

Enabling an HTTP or HTTPS proxy connection on page 24

Enabling an HTTP or HTTPS proxy connection

Procedure
1. On the Window menu, click Preferences.
2. In the Preferences dialog box, in the left navigation pane, double-click Avaya Aura.
3. Click Orchestration Designer.
4. In the Orchestration Designer pane, perform one of the following actions:
   • In the Proxy Settings area, configure the HTTP proxy settings.
   • In the HTTPS Proxy Settings area, configure the HTTPS proxy settings.
5. Click Apply, and then click OK.

Related links
Considerations for enabling an HTTP or HTTPS proxy connection on page 23
Orchestration Designer preferences field descriptions on page 26

Configuring the run-time license server

About this task

★ Note:
Specify a run-time license server only if you have Avaya Aura® Experience Portal, IR, or MPS accessing your application from the development environment.

Run-time license to run applications using the Application Simulator is not needed.

Procedure
1. On the Window menu, click Preferences.
2. In the Preferences dialog box, in the left navigation pane, double-click Avaya Aura.
3. Click Orchestration Designer.
4. In the Orchestration Designer pane, in the Runtime License Server area, in the Server URI field, type the URI of the run-time license server if you have Avaya Aura® Experience Portal, IR, or MPS accessing your application from the development environment.

The format for this URI is http://webServerName:port, where:

- webServerName is the fully qualified host name or IP address of your WebLM license server.
- port is the number of the HTTP/HTTPS port the system uses to access the license server.
For example, http://licenseServer.myCompany.com:8080

5. In the License Check Timeout field, type the time in seconds that the system must wait for a response from the WebLM license server while attempting to connect to the WebLM license server.

   The default value is zero seconds. Zero indicates that there is no timeout.

6. Click Apply, and then click OK.

Related links
Orchestration Designer preferences field descriptions on page 26

Removing the context files on closing a project

About this task
Tomcat opens the context files of all projects each time you simulate a project. Therefore, Orchestration Designer performance can degrade if you have several workspaces with a huge number of projects.

If you select the Remove context files on project close check box, Orchestration Designer automatically deletes the corresponding context files when you close the Orchestration Designer projects.

Orchestration Designer recreates the context file when a project is reopened. This improves the performance by controlling the size of the workspaces.

Note:
This option does not affect the projects which are not opened in the current session. This applies only to Orchestration Designer projects which you open and close subsequently.

Procedure
1. On the Window menu, click Preferences.
2. In the Preferences dialog box, in the left navigation pane, double-click Avaya Aura.
3. Click Orchestration Designer.
4. In the Orchestration Designer pane, in the Context Files area, select the Remove context files on project close check box.
5. Click Apply, and then click OK.

Related links
Orchestration Designer preferences field descriptions on page 26
Configuring the fetch secure port

About this task
To use HTTPS to get and post data from form nodes, such as prompt and collect, announce, menu, record, and transfer, you can specify the port number used by the application server. If you are using Tomcat, the default port is 8443.

Procedure
1. On the Window menu, click Preferences.
2. In the Preferences dialog box, in the left navigation pane, double-click Avaya Aura.
3. Click Orchestration Designer.
4. In the Orchestration Designer pane, in the Secure Fetch area, in the Secure Fetch Port field, specify the port number used by the application server.
5. Click Apply, and then click OK.

Related links
Orchestration Designer preferences field descriptions on page 26

Orchestration Designer preferences field descriptions

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proxy Settings</td>
<td></td>
</tr>
<tr>
<td>Enable HTTP proxy connection</td>
<td>Check box to enable HTTP proxy connection if you need a proxy server for Internet access.</td>
</tr>
<tr>
<td>Ignore hosts with addresses</td>
<td>The IP addresses. Orchestration Designer ignores HTTP hosts with these addresses. For multiple addresses, use either a comma or semicolon as a separator character.</td>
</tr>
<tr>
<td>HTTP proxy host address</td>
<td>The full HTTP path or the URL of the proxy server.</td>
</tr>
<tr>
<td>HTTP proxy host port</td>
<td>The port that Orchestration Designer can use to access the proxy server.</td>
</tr>
<tr>
<td>Copy HTTP settings to HTTPS</td>
<td>To copy the configured HTTP settings to HTTPS settings automatically.</td>
</tr>
<tr>
<td>HTTPS Proxy Settings</td>
<td></td>
</tr>
<tr>
<td>Enable HTTPS proxy connection</td>
<td>Check box to enable HTTPS proxy connection if you need a proxy server for Internet access. If you do not need a proxy server for Internet access, clear this check box. If cleared,</td>
</tr>
<tr>
<td>Name</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Orchestration Designer disables the other options in this area.</td>
<td>The IP addresses. Orchestration Designer ignores HTTPS hosts with these addresses. For multiple addresses, use either a comma or a semicolon as a separator character.</td>
</tr>
<tr>
<td>Ignore HTTPS hosts with addresses</td>
<td>The full HTTPS path or the URL of the proxy server. If you do not know this address, see the proxy server settings for your Internet browser software.</td>
</tr>
<tr>
<td>HTTPS proxy host address</td>
<td>The port that Orchestration Designer can use to access the HTTPS proxy server. If you do not know the URI, contact the Avaya technical service representative.</td>
</tr>
<tr>
<td>HTTPS proxy host port</td>
<td>Note: These settings are required even if proxy options are set in Microsoft Internet Explorer or any other Web browser.</td>
</tr>
<tr>
<td>Runtime License Server</td>
<td>The URI of the run-time license server if you have Avaya Aura Experience Portal, IR, or MPS accessing your application from the development environment.</td>
</tr>
<tr>
<td>License Check Timeout</td>
<td>Note: You must specify a run-time license server only if you have Avaya Aura Experience Portal, IR, or MPS accessing your application from the development environment. You do not need a run-time license to run applications using the Application Simulator.</td>
</tr>
<tr>
<td></td>
<td>The format for this URI is <a href="http://webServerName:port">http://webServerName:port</a> where:</td>
</tr>
<tr>
<td></td>
<td>• webServerName is the fully qualified host name or IP address of your WebLM license server.</td>
</tr>
<tr>
<td></td>
<td>• port is the number of the HTTP/HTTPS port the system uses to access the license server.</td>
</tr>
<tr>
<td>Name</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Context Files</td>
<td></td>
</tr>
<tr>
<td><strong>Remove context files on project close</strong></td>
<td>Check box to automatically delete corresponding context files when you close Orchestration Designer projects. Orchestration Designer recreates the context file when a project is reopened. This improves the performance by controlling the size of the workspaces. If you clear the <strong>Remove context files on project close</strong> check box, Tomcat opens the context files of all projects each time you simulate a project. Therefore, Orchestration Designer performance can degrade if you have several workspaces with a huge number of projects.</td>
</tr>
<tr>
<td>Secure Fetch</td>
<td></td>
</tr>
<tr>
<td><strong>Secure Fetch Port</strong></td>
<td>The port number used by the application server if you want to use HTTPS to get and post data from form nodes, such as prompt and collect, announce, menu, record, and transfer. If you are using Tomcat, the default port is 8443.</td>
</tr>
</tbody>
</table>

**Related links**

- [Enabling an HTTP or HTTPS proxy connection](#) on page 24
- [Configuring the run-time license server](#) on page 24
- [Removing the context files on closing a project](#) on page 25
- [Configuring the fetch secure port](#) on page 26

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**Verifying the Java JRE**

**Procedure**

1. On the **Window** menu, click **Preferences**.
2. In the Preferences dialog box, in the left navigation pane, double-click **Java**.
3. Click **Installed JREs**.
4. Verify that jre7, jre8, or jre9 is selected. If jre7, jre8, or jre9 does not appear in the list, perform the following action:
   • Click Add to add the JRE. For more information, see the Java Development User Guide.
5. Click OK.

---

**Setting the Java JDK compiler compliance level**

**Procedure**
1. On the Window menu, click Preferences.
2. In the Preferences dialog box, in the left navigation pane, double-click Java.
3. Click Compiler.
4. In the JDK Compliance area, select the Compiler compliance level.
5. Click Apply, and then click OK.

---

**Configuring Microsoft SAPI Speech for microphone input**

**About this task**
Orchestration Designer uses the Microsoft Speech API 6.0 to handle ASR input from a microphone during application simulation. To use the Microsoft SAPI Speech for ASR input, you must configure the Microsoft SAPI Speech to use a microphone.

**Procedure**
1. On the system where Orchestration Designer is installed, open Control Panel.
2. Go to the speech recognition configuration.
3. With a microphone plugged in and turned on, speak into the microphone. The Level indicator in the Microphone area must show that the system is receiving microphone input. If Level indicator does not show, rectify the audio input source settings.
4. Follow the wizard steps to further tune the microphone settings.
5. Click OK.
Installing sample applications

About this task
Orchestration Designer includes numerous sample applications. You can use these sample applications to understand how finished applications work and operate, and how the features of Orchestration Designer work.

Procedure

1. Navigate to the /Sample Applications directory on the Orchestration Designer installation ISO image.
3. Follow the instructions in this file to install and configure Orchestration Designer sample applications.

This file also contains detailed information about each sample application.

⚠️ Important:

You can use included sample applications as technical samples for reference only, and not production-ready applications.

About Orchestration Designer Upgrade

You can upgrade to Orchestration Designer 7.2.1 from following versions:

- Orchestration Designer 7.1
- Orchestration Designer 7.2.0

You can upgrade to Orchestration Designer 7.2.1 either by maintaining the previous environment or without retaining the previous environment.

🌟 Note:

Upgrades to Orchestration Designer might require updates to connectors or other dependant libraries on the application server. Avaya recommends that you update the connector applications icconnector.war and aesconnector.war and run-time support files (runtimeSupport platform.zip) after upgrading Orchestration Designer.

For more information about installing the run-time support files and connectors, see Prerequisite files on the application server in Avaya Aura® Orchestration Designer Developer’s Guide.

Related links

- Maintaining the 7.1 environment while installing 7.2.1 on page 31
- Maintaining the 7.2.0 environment while installing 7.2.1 on page 32
- Recommended installation paths for multiple Orchestration Designer and Eclipse versions on page 33
Maintaining the 7.1 environment while installing 7.2.1

About this task
To retain the Orchestration Designer 7.1 environment, you can install Orchestration Designer 7.2.1 into a separate directory. You can retain the Orchestration Designer 7.1 environment for reasons such as maintenance of 7.1 based applications.

For information about the recommended installation paths, see Recommended installation paths for multiple Orchestration Designer and Eclipse versions on page 33.

Procedure

1. Save the Orchestration Designer 7.1 and Eclipse installation and workspace. Orchestration Designer 7.1 continues to use the previous Tomcat installation.

2. Install Orchestration Designer 7.2.1, and Tomcat 7.0, Tomcat 8.0, or Tomcat 8.5 (Tomcat upgrade is optional) to a separate location. For example, C:\OD7.2.1\.

   ✷ Note:
   You must install Tomcat under the Orchestration Designer 7.2.1 installation location to keep it separate.

3. Upgrade Orchestration Designer 7.1 projects to Orchestration Designer 7.2.1 projects. Perform the following actions:
   a. Copy the projects from the Orchestration Designer 7.1 workspace to the Orchestration Designer 7.2.1 workspace. Keep a copy of the projects in the 7.1 workspace to ensure that you have a backup if upgrading problems.
   b. Import the copied projects into Orchestration Designer 7.2.1.
      The system converts the projects for Orchestration Designer 7.2.1. You cannot open these projects in Orchestration Designer 7.1.

4. If you use a source control system, store the 7.1 application in a different location or a different branch, so that you can maintain the old 7.1 application in the future.

   ✷ Note:
   After creating a new workspace during an upgrade, click Window > Preferences to configure your preferences before importing old projects.

Related links
About Orchestration Designer Upgrade on page 30
Maintaining the 7.2.0 environment while installing 7.2.1

About this task

To retain the Orchestration Designer 7.2.0 environment, you can install Orchestration Designer 7.2.1 into a separate directory. You can retain the Orchestration Designer 7.2.0 environment for reasons such as maintenance of 7.2.0 based applications.

For information about the recommended installation paths, see Recommended installation paths for multiple Orchestration Designer and Eclipse versions on page 33.

Procedure

1. Save the Orchestration Designer 7.2.0 and Eclipse installation and workspace. Orchestration Designer 7.2.0 continues to use the previous Tomcat installation.
2. Install Orchestration Designer 7.2.1, and Tomcat 7.0, Tomcat 8.0, or Tomcat 8.5 (Tomcat upgrade is optional) to a separate location. For example, C:\OD7.2.1\.

   Note:
   
   You must install Tomcat under the Orchestration Designer 7.2.1 installation location to keep it separate.
3. Upgrade Orchestration Designer 7.2.0 projects to Orchestration Designer 7.2.1 projects. Perform the following actions:
   a. Copy the projects from the Orchestration Designer 7.2.0 workspace to the Orchestration Designer 7.2.1 workspace. Keep a copy of the projects in the 7.2.0 workspace to ensure that you have a backup if upgrading problems.
   b. Import the copied projects into Orchestration Designer 7.2.1.

      The system converts the projects for Orchestration Designer 7.2.1. You cannot open these projects in Orchestration Designer 7.2.0.
4. If you use a source control system, store the 7.2.0 application in a different location or a different branch, so that you can maintain the old 7.2.0 application in the future.

   Note:
   
   After creating a new workspace during an upgrade, click Window > Preferences to configure your preferences before importing old projects.

Related links

About Orchestration Designer Upgrade on page 30
Recommended installation paths for multiple Orchestration Designer and Eclipse versions

The following example installation paths are recommended for multiple Orchestration Designer and Eclipse versions. In these paths, (base) means any parent directory.

- c:\(base)\OD7.2.1\
- eclipse\ (Eclipse 4.5 install, with GEF 3.9 SDK, WTP SDK 3.4, emf-xsd 2.8, DTP 1.10 Orchestration Designer 7.2.1 features)
- tomcat\ (Tomcat 7.0, Tomcat 8.0, or Tomcat 8.5 for running Orchestration Designer 7.2.1 applications)
- workspace\ (Orchestration Designer 7.2.1 projects)

These paths are convenient installation structure that retains the Orchestration Designer 7.2 and Orchestration Designer 7.2.1 environments and the prerequisite software separate.

Related links

- About Orchestration Designer Upgrade on page 30

Installing 7.2.1 without retaining the 7.1 environment

Procedure

1. Before uninstalling Orchestration Designer 7.1, create a backup copy of the projects in your workspace.
2. To uninstall Orchestration Designer, perform the following steps:
   a. Go to Windows > Preferences > Install/Update.
   b. In Install/Update wizard, click on Uninstall or update link.
   c. In Installed Software tab, select Avaya Aura Orchestration Designer Developer Guide.
   d. Click Uninstall.
   Depending on the location of your workspace, you can remove your projects by the uninstall process.
3. Install Orchestration Designer 7.2.1 and the supporting software.
4. Copy the Orchestration Designer 7.1 projects from the backup into the Orchestration Designer 7.2.1 workspace.
   Keep copies of your old backups in the event stating the errors while upgrading.
5. Import each project into Orchestration Designer 7.2.1.
   The system converts the projects for Orchestration Designer 7.2.1.
6. If you use a source control system, create a branch or store the 7.2.1 application in a different location so that you can maintain the old 7.1 application in the future.

Note:
After creating a new workspace during an upgrade, click Window > Preferences to configure your preferences before importing the old projects.

Related links
About Orchestration Designer Upgrade on page 30

Installing 7.2.1 without retaining the 7.2.0 environment

Procedure

1. Before uninstalling Orchestration Designer 7.2.0, create a backup copy of the projects in your workspace.

2. To uninstall Orchestration Designer, perform the following steps:
   a. Go to Windows > Preferences > Install/Update.
   b. In Install/Update wizard, click on Uninstall or update link.
   c. In Installed Software tab, select Avaya Aura Orchestration Designer Developer Guide.
   d. Click Uninstall.

   Depending on the location of your workspace, you can remove your projects by the uninstall process.

3. Install Orchestration Designer 7.2.1 and the supporting software.

4. Copy the Orchestration Designer 7.2.0 projects from the backup into the Orchestration Designer 7.2.1 workspace.

   Keep copies of your old backups in the event stating the errors while upgrading.

5. Import each project into Orchestration Designer 7.2.1.

   The system converts the projects for Orchestration Designer 7.2.1.

6. If you use a source control system, create a branch or store the 7.2.1 application in a different location so that you can maintain the old 7.2.0 application in the future.

Note:
After creating a new workspace during an upgrade, click Window > Preferences to configure your preferences before importing the old projects.

Related links
About Orchestration Designer Upgrade on page 30
About Orchestration Designer patch updates

At this time, Avaya does not automatically alert you about the availability of new patches for Orchestration Designer. Therefore, periodically check the Avaya support website for the availability of patches. Or, as an alternative, use the Eclipse update mechanism to check for available updates.

The following sections describe the steps for installing Orchestration Designer patches:

• Before installing an Orchestration Designer patch update on page 35
• Installing an Orchestration Designer patch update on page 35

Note:

The procedure described in the Installing an Orchestration Designer patch update on page 35 section is for installing patches or updates to a released software, and not for upgrading software versions completely. For upgrading the software, see About Orchestration Designer Upgrade on page 30.

Before installing an Orchestration Designer patch update

Before installing a patch update, back up all files in the default /eclipse installation directory, and in the designated /workspace directory (if not a subdirectory of /eclipse). Backing up your files helps you to revert an update.

To continue using the older version for existing applications, perform a “clean installation” of the new version in a new directory.

Caution:

When opening an application created with an earlier release of Orchestration Designer, Orchestration Designer prompts you to update the project to the new version. For project conversion considerations, see the Release Notes.

Installing an Orchestration Designer patch update

About this task

Avaya Support website releases Orchestration Designer patch updates. You can gain access to these updates from within the Eclipse user interface (UI).

Note:

The procedure described in this section is for installing patches or updates to a released software, and not for upgrading software versions completely. For upgrading the software, see About Orchestration Designer Upgrade on page 30.
Procedure

1. On the Help menu, click Install New Software.
2. In the Install dialog box, clear the Contact all update sites during install to find required software check box.
3. In the Work with field, click the Orchestration Designer patch update website name that you specified.

**Note:**
Ensure that the Orchestration Designer patch update website is added to Eclipse. For more information, see Adding the website for Orchestration Designer patch updates on page 36.

**Note:**
If you cannot connect to the update website, ensure that you have correctly configured the proxy settings. The system automatically checks for the Orchestration Designer patch updates. If patches or updates are found, the search mechanism returns the results.

4. In the middle pane, select the Orchestration Designer patch updates that you want to install, click Next, and then follow the prompts.

**Caution:**
You can use the Eclipse Install New Software mechanism for features besides Orchestration Designer. To ensure that you install compatible features, Avaya recommends that you update only the Orchestration Designer features.

If you are unsure which updates to install or if you have questions about the installation procedure, contact Avaya Support at http://support.avaya.com.

---

Adding the website for Orchestration Designer patch updates

**About this task**
To get Orchestration Designer patch updates, you must add the Orchestration Designer patch update website to Eclipse.

**Procedure**

1. Perform one of the following actions:
   - On the Help menu, click Install New Software, and then click the Available Software Sites link.
   - On the Window menu, click Preferences.
2. In the Preferences dialog box, double-click Install/Update.
3. Click Available Software Sites.
4. In the Available Software Sites pane, click **Add**.

5. In the Add Site dialog box, in the **Name** field, type a name for the Orchestration Designer patch update website. For example, AAOD.

6. In the **Location** field, type `http://support.avaya.com/OrchestrationDesigner/SS/Updates/`.

7. Click **OK**.
## Chapter 3: Resources

### Related resources

#### Documentation

The following table lists the documents related to this product. Download the documents from the Avaya Support website at [http://support.avaya.com](http://support.avaya.com)

<table>
<thead>
<tr>
<th>Title</th>
<th>Description</th>
<th>Audience</th>
</tr>
</thead>
</table>
| Getting Started with Avaya Aura® Orchestration Designer | This PDF document contains the information needed to install and configure Orchestration Designer for initial use, and to understand the basics of Orchestration Designer graphical user interface (GUI). | • Application Developers  
• Implementation Engineers |
| Avaya Aura® Orchestration Designer Developer’s Guide | This PDF document contains the same information as available in the online Help, but you can view or print the document using Adobe Acrobat Reader. | Application Developers    |
| Avaya Aura® Orchestration Designer online Help | The online Help provides detailed information and procedures for using Orchestration Designer features and options to create speech, message, and call control applications.  
When installing Orchestration Designer, the system installs the online Help as an additional Eclipse plug-in. | • Application Developers  
• Implementation Engineers |
| Programmer Reference Guide           | This online documentation is designed for the programmers of Orchestration Designer. This documentation includes:  
• A Constants (Quick reference) guide.  
• A Class Hierarchy reference guide.  
• An API Reference guide. | Application Developers     |

*Table continues…*
For information about viewing the Orchestration Designer documentation, see Viewing the Orchestration Designer documentation on page 8.

Related links
Finding documents on the Avaya Support website on page 39

Finding documents on the Avaya Support website

About this task
Use this procedure to find product documentation on the Avaya Support website.

Procedure
1. Use a browser to navigate to the Avaya Support website at http://support.avaya.com/.
2. At the top of the screen, enter your username and password and click Login.
3. Put your cursor over Support by Product.
4. Click Documents.
5. In the Enter your Product Here search box, type the product name and then select the product from the drop-down list.
6. If there is more than one release, select the appropriate release number from the Choose Release drop-down list.
7. Use the Content Type filter on the left to select the type of document you are looking for, or click Select All to see a list of all available documents.

For example, if you are looking for user guides, select User Guides in the Content Type filter. Only documents in the selected category will appear in the list of documents.
8. Click **Enter**.

**Related links**

[Documentation](#) on page 38

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## Training

The following courses are available on the Avaya Learning website at www.avaya-learning.com. After logging into the website, enter the course code or the course title in the **Search** field and click **Go** to search for the course.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>4C00095W</td>
<td>Avaya Aura Orchestration Designer for Developers</td>
</tr>
<tr>
<td>5C00092V</td>
<td>Avaya Aura Experience Portal, Avaya Aura Orchestration Designer, and Avaya Proactive Outreach Manager Installation, Maintenance and Troubleshooting Essentials</td>
</tr>
<tr>
<td>3610C</td>
<td>Avaya Aura Contact Center - Orchestration Designer Scripting</td>
</tr>
<tr>
<td>2C00081O</td>
<td>Selling Avaya Aura Orchestration Designer</td>
</tr>
<tr>
<td>5C00080E</td>
<td>Knowledge Access: Avaya Aura Contact Center Orchestration Designer Scripting Administration</td>
</tr>
</tbody>
</table>

W: Web (online) course  
V: Virtual  
E: Self-paced in virtual campus  
O: On Demand

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### Viewing Avaya Mentor videos

Avaya Mentor videos provide technical content on how to install, configure, and troubleshoot Avaya products.

**About this task**

Videos are available on the Avaya Support website, listed under the video document type, and on the Avaya-run channel on YouTube.

**Procedure**

- To find videos on the Avaya Support website, go to [http://support.avaya.com](http://support.avaya.com) and perform one of the following actions:
  - In **Search**, type Avaya Mentor Videos to see a list of the available videos.
  - 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.

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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.
## Glossary

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AACC</strong></td>
<td>Avaya Aura® Contact Center.</td>
</tr>
<tr>
<td><strong>AAEP</strong></td>
<td><em>Avaya Aura® Experience Portal</em></td>
</tr>
<tr>
<td><strong>AAS</strong></td>
<td><em>Avaya Application Simulator.</em></td>
</tr>
<tr>
<td><strong>ADR</strong></td>
<td>See [application detail record (ADR)] on page 42.</td>
</tr>
<tr>
<td><strong>AMS</strong></td>
<td><em>Avaya Aura® Media Server.</em></td>
</tr>
<tr>
<td><strong>ANI</strong></td>
<td>See [automatic number identification (ANI)] on page 42.</td>
</tr>
<tr>
<td><strong>API</strong></td>
<td>See [application program interface (API)] on page 42.</td>
</tr>
<tr>
<td><strong>application detail record (ADR)</strong></td>
<td>Data records which contain historical information about an application used as part of a session. These records include information such as the session ID number, a timestamp, and a “friendly name” string determined by the developer who created the application.</td>
</tr>
<tr>
<td><strong>application program interface (API)</strong></td>
<td>A set of routines, protocols, and tools for building software applications. A good API makes it easier to develop a program by providing all the building blocks.</td>
</tr>
<tr>
<td><strong>application server</strong></td>
<td>A computer on which the Orchestration Designer speech application resides and runs. This computer is also where the Orchestration Designer run-time libraries are installed, thus making it possible to run Orchestration Designer applications on that server. The IVR system must be configured to start the speech application from this location.</td>
</tr>
<tr>
<td><strong>ASR</strong></td>
<td>See [automated speech recognition (ASR)] on page 42.</td>
</tr>
<tr>
<td><strong>automated speech recognition (ASR)</strong></td>
<td>Technology that employs a computer to recognize spoken words and respond appropriately.</td>
</tr>
<tr>
<td><strong>automatic number identification (ANI)</strong></td>
<td>A service that provides the originating telephone number of a call coming in to the system.</td>
</tr>
<tr>
<td><strong>call flow</strong></td>
<td>As implemented in speech applications, the call flow determines how a call is handled when it enters an interactive voice response system, based on options offered to callers and their responses to those options.</td>
</tr>
</tbody>
</table>
| **CCXML** | Call Control eXtensible Markup Language.  
An emerging XML specification, being developed to work in conjunction with VoiceXML and which addresses some of the technical limitations of VoiceXML. It enables the processing of asynchronous events, filtering and routing of incoming calls, and placement of outbound calls. Note that it is not intended to replace VoiceXML but rather to supplement it. See Ian Moraes's excellent article, “VoiceXML, CCXML, SALT: Architectural Tools for Enabling Speech Applications,” on the Internet. |
| **Computer Telephony Integration (CTI)** | Software technology that integrates the use of telephones and computers without the need for special telephones, connectors, computer circuit packs, or other specialized hardware. |
| **CTI** | See Computer Telephony Integration (CTI) on page 43. |
| **dialed number identification service (DNIS)** | A service that identifies for the receiving system what telephone number was dialed by the caller. In the Avaya Aura® Experience Portal system this is often used to direct the call to a particular speech application, which is identified with that dialed number. |
| **DNIS** | See dialed number identification service (DNIS) on page 43. |
| **DTMF** | See dual tone multi-frequency (DTMF) on page 43. |
| **dual tone multi-frequency (DTMF)** | The system used by touchtone telephones, DTMF assigns a specific frequency (consisting of two separate tones) to each telephone key on the keypad, so that it can easily be identified by a microprocessor. |
| **Eclipse** | A Java-based open-source extensible IDE (integrated development environment) that provides application developers a feature-rich interface to develop their applications. Orchestration Designer is designed as a set of Eclipse plug-in modules that make it possible for application developers to design and build speech applications without having to write the code manually. |
| **gateway** | A network point that acts as an entry point to another network. In the context of Orchestration Designer and VoIP applications, a gateway is the entry point, often associated with one or more switches, to the interactive voice response (IVR) system application environment. See interactive voice response (IVR) system on page 44. |
| **grammar** | Elements that recognize the input received through inbound voice calls and messages.  
In the context of IVR or speech applications, a grammar is a predefined set of words or DTMF tones that a speech application uses in conjunction with automated speech recognition (ASR) technology to interpret and respond to caller inputs. That is, grammars are lists of possible responses that callers make when responding to prompts by using spoken replies. |
Grammars define which words or phrases the ASR engine can recognize and respond to.

In the context of text-based applications, a grammar is a predefined set of words in a message application that a text-processing system can use to interpret and respond to an inbound SMS or email message. The text-processing system collects and recognizes the input from inbound SMS and email messages and uses this input to direct the flow of a message application.

**H.323** A hierarchical, IP-based telephony standard for connecting IP telephones and speech applications to switches.

**IC** See [Interaction Center (IC)] on page 44.

**IDE** See [integrated development environment (IDE)] on page 44.

**integrated development environment (IDE)** A software application that usually provides a GUI environment, a text and/or code editor, a compiler and/or interpreter, and a debugger. This environment means that application or web developers can develop, test, and build their applications or Web sites within a single integrated space.

**Interaction Center (IC)** A multichannel contact management platform that enables businesses to align real-time contact center operations with business objectives.

**interactive voice response (IVR) system** A system, such as Avaya Aura Experience Portal or Avaya IR, in which callers interact with a self-service application to get information, conduct transactions, or help with problems.

**IVR system** See [interactive voice response (IVR) system] on page 44.

**JDBC** An [application program interface (API)] on page 42 specification in which programs written in Java connect with and access data contained in database programs using [Structured Query Language (SQL)] on page 46.

**localization** The process of modifying an application to operate and be understood in a different language, or locale. This usually involves modifying any phrases, prompts, and grammars associated with an application.

**MPS** Media Processing Server.

**MRCP** Media Resource Control Protocol.

**NDM** See [Nuance Dialog Module (NDM)] on page 45.

**notebook** (Also known as a tabbed or stacked notebook) In the Eclipse context, a notebook is a set of views "stacked" on top of one another as a space saving measure. The views in the notebook are accessible by clicking
tabs arranged along the top of the notebook. See the Eclipse documentation.

**Nuance Dialog Module (NDM)**

Speech application modules produced by Nuance software products, similar to speech application modules created by using Orchestration Designer. You can use NDMs in the Orchestration Designer speech applications. Orchestration Designer supports NDM version 5.0 and later.

Before version 5.0, Nuance Dialog Module (NDM) was known as Open Speech Dialog Module (ODSM).

See [Open Speech Dialog Module (OSDM)](#) on page 45.

**Open Speech Dialog Module (OSDM)**

Speech application modules produced by Nuance software products, similar to application modules created with Orchestration Designer. OSDMs can be used in Orchestration Designer applications. (Orchestration Designer supports the following OSDM versions: Address OSDM 2.0.3, Core OSDM 2.0.4, and Name OSDM 2.0.1.)

OSDM is renamed to Nuance Dialog Module (NDM) from version 5.0 and later.

**OSDM**

See [Open Speech Dialog Module (OSDM)](#) on page 45.

**palette**

In the Orchestration Designer Editor views, this is the pane to the left of the view, in which editor options are displayed and selected.

**Real-time Transfer Protocol (RTP)**

A protocol for transmitting “real-time” data, such as audio or video data, across the Internet. This protocol does not guarantee “real-time” delivery of such data, but it does provide mechanisms to support data “streaming.”

**RTP**

See [Real-time Transfer Protocol (RTP)](#) on page 45.

**RTSP**

The Real Time Streaming Protocol, serves as a control protocol, and as a jumping off point for negotiating transports, such as RTP, multicast and unicast, and negotiating codecs off of servers in a file format independent way.

**SCE**

See [service creation environment (SCE)](#) on page 45.

**service creation environment (SCE)**

A set of software tools used to develop, test, and debug speech applications. Orchestration Designer is an SCE.

**servlet**

A small program that runs on a server, often Java-based.

**servlet engine**

A program that coordinates the overall operation and integration of a number of servlets. In the context of Orchestration Designer, the supported servlet engines are Apache Jakarta Tomcat, IBM WebSphere/WebSphere Express, Oracle WebLogic, and JBoss AS7.
Glossary

**Session Initiation Protocol (SIP)**
A signaling protocol for the Internet that makes it possible to set up conferencing, telephony, events notification, and instant messaging. Within a VoIP framework, it initiates call setup, routing, authentication, to endpoints within an IP domain.

**SIP**
See [Session Initiation Protocol (SIP)] on page 46.

**speech recognition**
See [automated speech recognition (ASR)] on page 42.

**speech synthesis**
See [text-to-speech (TTS)] on page 47.

**speech user interface (SUI)**
Any software interface in which the user interacts with the system using speech commands and audio prompts.

**SQL**
See [Structured Query Language (SQL)] on page 46.

**SSL**
Secure Sockets Layer.
A protocol for transmitting private data securely over the Internet. By convention, URLs that use SSL require a connection using the HTTPS protocol, rather than just HTTP.

**SSML**
Speech Synthesis Markup Language.
A W3C standard designed to provide an XML-based markup language for assisting with the generation of synthetic speech in Web and other applications. The essential role of the markup language is to provide authors of synthesizable content a standard way to control aspects of speech such as pronunciation, volume, pitch, rate, and so forth, across different synthesis-capable platforms.

**stacked notebook**
See [notebook] on page 44.

**Structured Query Language (SQL)**
A standard interactive and programming language for getting data to and from a database.

**SUI**
See [speech user interface (SUI)] on page 46.

**tabbed notebook**
See [notebook] on page 44.

**TDD**
See [Telecommunications Display Device (TDD)] on page 46.

**Telecommunications Display Device (TDD)**
Sometimes designated as a teletypewriter (TTY) device, a telephone equipped with a keyboard and display, used by hearing- or speech-impaired callers to send and receive typed messages.

**telephone user interface (TUI)**
Any software interface in which the user interacts with the system using a telephone or similar device.

**teletypewriter (TTY) device**
See [Telecommunications Display Device (TDD)] on page 46.
text-to-speech (TTS)  Technology by which information in text format is rendered as audio output using a speech synthesis engine to simulate human speech.

TTS  See text-to-speech (TTS) on page 47.

TTY  See Telecommunications Display Device (TDD) on page 46.

TUI  See telephone user interface (TUI) on page 46.

vector  A user-defined sequence of functions that may be performed, such as routing the call to a destination, giving a busy signal, or playing a recorded message.

VoiceXML  (Sometimes presented as VXML) Voice eXtensible Markup Language.

A specification which provides for a user to interact with Internet-based resources using voice recognition technology. Instead of a typical Web browser that requires a combination of HTML, keyboard, and mouse device, VoiceXML relies on an Internet voice browser and/or telephone. Using VoiceXML, the user interacts with the Web “page” by listening to audio outputs (either pre-recorded or using a technology such as TTS) and by submitting input in the form of the user’s natural speaking voice and/or manual responses, such as telephone key presses.

Web service  A standardized way of offering Web-based applications or services. Because Web services are Web-based and standards-based applications, delivered over the Internet, Web services make it possible for organizations to communicate and share data that use different file formats and programming languages.

workspace  In Orchestration Designer, the area within the Editor view used to build the functionality for the selected editor. For example, in the Call Flow Editor, this is the space to the right of the palette, in which you drag the nodes that represent application functions.

See palette on page 45.

WSDL  Web services Description Language.

An XML-formatted language used to describe a Web service’s capabilities.

XML  eXtensible Markup Language.

A specification for the presentation of Internet documents, one which expands on the capabilities of HTML. A pared-down version of SGML (Standard Generalized Markup Language), XML makes it possible for designers to create their own customized tags, which in turn makes it possible to do things over the Internet that cannot be done using simple HTML.
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