Getting Started with Avaya Aura® Orchestration Designer

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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 7.2.3:

- Updated the system requirements to support Orchestration Designer 7.2.3.
- Updated the procedure to install Orchestration Designer 7.2.3.
- Updated the procedure to upgrade Orchestration Designer 7.2.3.

Change history

The following changes are part of this issue:

Issue	Date	Summary of changes
1.1	September 2019	Added a note to the Software requirements table on the latest version of Orchestration Designer to support only 64 bit Eclipse.

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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 Eclipse user interface, click **Help > Help Contents**.

  The Eclipse user interface displays the Eclipse documentation.

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 Eclipse user interface, click **Help > 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, 8.5, or 9.0 go to:

  http://tomcat.apache.org/tomcat-7.0-doc/index.html

  http://tomcat.apache.org/tomcat-8.0-doc/index.html

  http://tomcat.apache.org/tomcat-8.5-doc/index.html

  http://tomcat.apache.org/tomcat-9.0-doc/index.html
- For IBM WebSphere or WebSphere Express, go to:

  http://www.ibm.com/websphere
- For WebLogic, go to:

  http://www.oracle.com/technetwork/middleware/weblogic/documentation/index.html
- 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

  http://java.sun.com/developer/onlineTraining/Database/JDBCShortCourse/jdbc/sql.html
- For Web services, go to:

  http://www.w3.org/TR/wsdl

  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 is a Java-based tool that you can use to create the following:

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

The tool is designed as an Eclipse plug-in, which provides an integrated GUI for the design and implementation of the following:

- 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 the Avaya Aura® Experience Portal system
- Data only applications that can operate with the Avaya Aura® Experience Portal system
- HTML5 applications that can operate with the Avaya Aura® Experience Portal system

Orchestration Designer is also 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. It accelerates service design and deployment, reduces cost, and enhances customer experience.

Orchestration Designer integrates seamlessly with Avaya Breeze® platform. With this integration, the Orchestration Designer application can 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 by using Context Store. The workflow receives data from Orchestration Designer to process the information and complete the transaction.
- Orchestration Designer supports integration of Orchestration Designer SMS and Email applications with Engagement Designer workflow. With this integration, the Orchestration Designer application receives data from Engagement Designer workflow, interacts using one more text messages, and returns the data to the Engagement Designer workflow.
- An Engagement Designer workflow can initiate a new call to the customer and plug Orchestration Designer into the call to provide IVR services.

- An Engagement Designer workflow can also plug Orchestration Designer into an existing call.

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

Multi-Channel Self Service

With the Multi-Channel Self Service (MCSS), you can 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.
- Send response to an inbound SMS and email.
- Send outbound SMS and email from cross channel applications.

  For example, a speech application sending an SMS or email confirmation.
- 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.
- Transfer items to AACC agent for handling with reply using SMS and email.
- Web channel to collect information through HTML5 pages.

Inbound processing of SMS and email adds text channels to Experience Portal. You can build Orchestration Designer applications to process and respond to incoming SMS and email. With the outbound SMS and email, the application on a given channel can provide additional feedback to the user through another channel.

For example, a speech application sends confirmation of a transaction to the user by SMS or email. Items that cannot be handled in Self Service can be transferred to an AACC agent by using a connector.

Features and benefits

Avaya Orchestration Designer provides the following benefits:

- 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 an open Eclipse based framework.
- Integrates with Avaya Breeze® platform 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.
- Supports mobile application with HTML5.
- Provides two-way integration with Avaya Breeze® platform and Avaya Engagement Designer.
- Provides multi-channel support.

Starting with the JTAPI 3.1 driver, the OD CTI (AES) connector can use the Universal Call ID (UCID) to keep track of call IDs. To use this feature, you must enable OD CTI (AES) connector on your switch. This feature is optional, but you can use it to prevent recycling of the call IDs during high call volumes.

System requirements

License requirements

You need a valid license to run Avaya Aura Orchestration Designer applications on the following and other supported VXML platforms:

- Avaya Aura® Experience Portal
- Avaya Voice Portal
- Avaya Interactive Response (IR)
- Avaya Media Processing Server (MPS)

The Orchestration Designer licenses are free, and you can get them from an Avaya sales representative or the channel manager. Avaya partners can log on to Partner Portal to find information about ordering additional licenses.

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® platform. 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.

Related links

WebLM license server installation and configuration on page 18

Hardware requirements

The system that hosts the Avaya Orchestration Designerdevelopment environment must meet the following hardware requirements:

Hardware	Minimum requirement	Preferred value
CPU speed	1 GHz	2 GHz
RAM	1 GB	2 GB
Hard disk drive	40 GB	—
Monitor resolution	1024 x 768 pixels	—

Software requirements

You must install the software required to host Avaya Orchestration Designer development environment before installing and configuring Orchestration Designer.

Software requirements	On ISO image	Notes and links
Install one of the following operating systems: • Microsoft Windows 7 (Professional and Enterprise versions) • Microsoft Windows 10	No	You can install Orchestration Designer on any of these operating systems if you meet all hardware requirements and install all the supporting software packages. For the development environment, Orchestration Designer supports Windows 7, 32 bit and 64 bit. **Note:** From Release 7.2.3 onwards, Orchestration Designer no longer provides the 32-bit Eclipse version. However, the older Eclipse versions, 4.8 and 4.7, which customers already posses, will continue to work.

Table continues…

Software requirements	On ISO image	Notes and links
Install one of the following browsers: • Google Chrome 57 • Mozilla Firefox 43 • Microsoft Internet Explorer 11	No	You must install Google Chrome 57, Microsoft Internet Explorer 11, or Mozilla Firefox 43 for simulation of HTML5 application.
• J2SE Development Kit 7.0 (JDK 7.0) • J2SE Development Kit 8.0 (JDK 8.0) • J2SE Development Kit 9.0 (JDK 9.0) • J2SE 1.10 (OpenJDK 1.10) • Open JDK 11 • Open JDK 12	No	The JDK includes Java Run-Time Environment (JRE) and command-line tools, compilers, and debuggers used in developing applets and applications. Java 7 supports SHA2 certificates. Orchestration Designer 7.2.1 requires Java version 7 or later and is not backward compatible with earlier versions. It supports OpenJDK and the following versions of Oracle JDK: • JDK 7 • JDK 8 • JDK 9
Install one of the following Eclipse versions: • Eclipse-4.5-Prereq-AAOD.zip (Mars) • Eclipse-4.6-Prereq-AAOD.zip (Neon) • Eclipse-4.7-Prereq-AAOD.zip (Oxygen) • Eclipse-4.8-Prereq-AAOD.zip (Photon) • Eclipse-4.11-Prereq-AAOD.zip	Yes	Eclipse is a Java-based open-source integrated development environment (IDE) for software development. Orchestration Designer: • Runs as an Eclipse plug-in • Uses the Eclipse Graphical Editing Framework plug-ins for Eclipse (GEF) for advanced graphical functions. • Includes the support files for Call Control (CCXML) development.
Install one of the following Tomcat versions: • Apache Tomcat 7.0 • Apache Tomcat 8.0 • Apache Tomcat 8.5 • Apache Tomcat 9.0	Yes	• Tomcat generates and serves VoiceXML pages to the Avaya Application Simulator. • You must have administrative privileges when running Tomcat. • If you upgrade to Tomcat 8.x version and your applications have manually configured build paths or resources in common/lib or common/classes, then manually update the build path and point to `<tomcat_installpath>/lib`. You must also place any resources such as libraries, in this folder.

Table continues…

Software requirements	On ISO image	Notes and links
Avaya Breeze® platform 3.3	No	Avaya Breeze® platform 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® platform, see *Deploying Avaya Breeze® platform.*
Avaya Engagement Designer 3.3	No	Avaya Engagement Designer offers business analysts, non-technical resources, and developers the opportunity to write logical business process flows. These process flows can leverage any Avaya Breeze® platform snap-in that have an associated palette of tasks. For more information about Avaya Engagement Designer, see *Avaya Engagement Designer Reference*.
Experience Portal snap-in tasks: • Launch SMS Service • Launch Email Service	No	Experience Portal snap-in tasks start Orchestration Designer SMS and email application. For more information about Experience Portal snap-in tasks, see *Experience Portal Tasks*.
Avaya Context Store Snap-in 3.3	No	Avaya Context Store provides flexible and easy integration among different applications, providing a centralized solution to store context information. For more information about installing Avaya Context Store, see *Avaya Context Store Snap-in Reference.*
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 has Microsoft Speech components installed. If Microsoft SAPI Speech is installed on Windows 7, go to **Control Panel** > **Speech Recognition** > **Text-to-Speech** to verify that the **Speech Recognition** and **Text-to-Speech** tabs are available.
Storm Codec 7.01.19	Yes	You must install Storm Codec 7.01.19 only if you need Third Generation Partnership (3GP) video files for media. To open the Storm Codec installer, see the installation notes available on the ISO image.

Table continues…

Software requirements	On ISO image	Notes and links
Ambulant player 2.1	No	Orchestration Designer uses Ambulant player 2.1 for playing and previewing media files. In Ambulant player 2.1, do not use all menu, toolbar, and controls.
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.
Open the ISO image and use the displayed HTML index page to navigate to the required resources because specific locations on the ISO image are described here. By following these instructions, installation is smoother because the online navigation documentation leads you to the correct installation path. You must follow these instructions to use the ISO image and install the software package efficiently.		

General upgrades	Notes
3.2.1	Before upgrading your application server, you must back up the `tsapi.pro`, `ddconfig.xml`, `trusted_weblm_certs.jksfiles` files. You can then restore the files if they are overwritten by the upgrade.
3.2.2	The Orchestration Designer upgrade process does not change any custom code. The application developer must manually resolve the errors or warnings that occur from version upgrade, such as variable name changes, that affect the custom code.
3.2.3	If you have an existing installation in which you have updated the certificate `trusted_weblm_certs.jks` file, then you must save a copy of the file while reinstalling the runtime support files.
3.2.4	While upgrading applications from Windows XP to Windows 7, the call flow visual representation can experience some issues because of the difference in the graphics layer between the Windows releases. Some corrections are required.
3.2.5	Framework updates occur that can result in Java compilation errors after upgrading. To correct this, regenerate projects reporting errors.

3.2.6	After upgrading, you must ensure that there are no older versions of jar files on the application server. Some examples of jar files are:
	`commons-httpclient-3.1.jar`
	`commons-logging-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`

WebLM license server installation and configuration

If you run the Avaya 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 7.2.3 installation ISO image to install the WebLM license server software.

For WebLM 6.3.11 and later, the WebLM server accepts requests only over TLS 1.0 and later. 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 upgrades WebLM to 6.3.11 and later, then ensure that the product application is configured to send requests only over TLS 1.0 and later.

For information about installing and configuring the WebLM license server software, see *Licensing Installation Instructions for WebLM* 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 7.2.3 installation ISO image at:

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

Related links

License requirements on page 13

Installing Orchestration Designer manually

About this task

Use this procedure to install new Orchestration Designer software only. 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.

Important:

The procedure described in this section is for new installation of the Orchestration Designer software. To upgrade Orchestration Designer, see Orchestration Designer Upgrade.

- Disable the antivirus software and close any open or running applications. The antivirus software can slow down the installation process.
- Extract Java-related files from a compressed archive to install Orchestration Designer.

Procedure

1. Copy the Orchestration Designer installation ISO image to the local drive.
2. Download and install the Open or Oracle JDK installer.

For Oracle JDK 7, see http://www.oracle.com/technetwork/java/javase/downloads/java-archive-downloads-javase7-521261.html.

For Oracle JDK 8, see http://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html.

For Oracle JDK 9, see http://www.oracle.com/technetwork/java/javase/downloads/jdk9-downloads-3848520.html.

3. Install Eclipse along with the prerequisite features. Do the following:
   a. Locate the package file on the Orchestration Designer 7.2.3 ISO image, which is in the following directory: `<absolute path of ISO image>:\Software\Eclipse\`
   b. Extract the `.zip` file to an installation folder.
   c. **(Optional)** Create a shortcut for the Eclipse executable. Eclipse starts the Orchestration Designer software.
4. Install Orchestration Designer software. Do the following:
   a. Locate the `AAOD_7.2.3.XXX.jar` installation archive on the Orchestration Designer 7.2.3 ISO image and copy to a temporary location.

      The installation archive is located in the `<absolute path of ISO image>:\UpdateSites\` directory.
   b. On the Eclipse user 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_7.2.3.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 Eclipse user interface 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**.
   l. Click **OK**.
   m. Click **Restart Now** to restart Eclipse.

5. Install Tomcat. Do the following:
   a. Locate the Tomcat distribution package on the Orchestration Designer 7.2.3 ISO image, which is

      located in the `<absolute path of ISO image>:\Software\Tomcat\` directory.
   b. Extract the `.zip` file to 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 while developing applications.
6. **(Optional)** Install Microsoft Speech API 6.0:
   a. Copy the Orchestration Designer 7.2.3 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. In the Customer Information dialog box, type a user name and the organization name..
   g. Click **Next**.
   h. When prompted, select the default installation folder, or navigate to another, if applicable.
   i. Click **Next**.
   j. Click **Install** to begin the Microsoft SAPI Speech installation.
   k. Click **Finish** when the installation is complete.
7. **(Optional)** Install the Storm Codec 7.01.19. See *Installation Notes* on the ISO image.

Next steps

- 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 information and tips for configuring Eclipse.
- Before you use Orchestration Designer, you must configure the basic settings. For information , see Basic Configuration.

Installing Orchestration Designer using a pre-packaged installation

About this task

The Orchestration Designer ISO image contains a pre-packaged Orchestration Designer installation that contains both the Self Service and Contact Center features, and Tomcat installation.

Install the Java Development Kit.

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 `AAOD7.2.3` folder to `C:\` directory.
3. In the `AAOD7.2.3\eclipse` folder, double-click `eclipse.exe` file to install and open Orchestration Designer.

   Tip:

   To access the Orchestration Designer, you can create a shortcut to `eclipse.exe` and place the shortcut in a convenient location.
4. Open Orchestration Designer and configure the preferences for the location of the Tomcat installation:
   a. On the Eclipse user interface, click **Window** > **Preferences** > **Tomcat**.
   b. In the **Tomcat** section, in the **Tomcat home** field, click **Browse** and select the location for Tomcat installation.

      For example, if you copied the `AAOD7.2.3` folder to your `C:\` drive, then the **Tomcat home** value is `C:\AAOD7.2.3\apache-tomcat-7.0.55`.

Viewing the version number of an installed Orchestration Designer software

Procedure

1. On the Eclipse user interface, click **Help > About Eclipse SDK**.
2. In the About Eclipse SDK dialog box, click **Installation Details**.

   The Eclipse user interface 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 installing all components, you can start Eclipse to access the Orchestration Designer. For easy access to Eclipse, you can create a shortcut of the `eclipse.exe` file on your Windows desktop. The `eclipse.exe` file is located in the folder where Eclipse is installed.

Procedure

1. Right-click the `eclipse.exe` file, and then click **Send To** > **Desktop (create shortcut)**.
2. Double-click the shortcut file to start Orchestration Designer.

   Eclipse displays the Workspace Launcher dialog box.

Configuring the workspace

About this task

When you start Orchestration Designer for the first time, the Eclipse Workspace Launcher dialog box prompts you to specify a workspace location. Specify a directory where you want 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 the shortcut of the `eclipse.exe` file.
2. In the Workspace Launcher dialog box, click **Browse** and select a location.

   The default directory is relative to the installation path of Eclipse. For example, `C:\Eclipse\workspace`.
3. **(Optional)** If you do not want the Workspace Launcher dialog box to prompt for a location, select the **Use this as the default and do not ask again** check box.
4. Click **OK**.

Settings configuration

Configuring the default perspective

About this task

You must configure the preferences the first time that you use Orchestration Designer. On subsequent launches, Orchestration Designer uses these configured preferences.

Procedure

1. On the Eclipse user interface, click **Window > Preferences**.

   The Eclipse user interface displays the Preferences page.
2. In the navigation pane, double-click **General**.
3. Click **Perspectives**.
4. In the **Open a new perspective** area, select **In the same window**.
5. In the **Open the associated perspective when creating a new project** area, select **Prompt**.
6. In the **Available perspectives** pane, click one of the following to set the default perspective:
   - **Speech**
   - **Call Control**
   - **Message**
   - **Web**
7. Click **Make default**.
8. Click **Apply**.
9. Click **Apply and Close**.

Configuring Tomcat Preferences

About this task

Tomcat preferences provide 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. Verify that the Tomcat version, home directory, and contexts directory are appropriate.

Note:

If you are running only Orchestration Designer in your development environment without running deployed applications, the `runtimeconfig` 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 `runtimeconfig` on your ADE. Otherwise, connection timeout exceptions occur. To recover, stop Tomcat, stop Orchestration Designer, restart Orchestration Designer, and change your configuration in Preferences.

Procedure

1. On the Eclipse user interface, click **Window > Preferences**.

   The Eclipse user interface displays the Preferences dialog box.
2. In the 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** and select the directory where Tomcat is installed.
5. In the Context declaration mode area, click **Context files**.
6. In the **Contexts directory** field, click **Browse** and select the context directory.
7. Click **Apply**.
8. Click **Apply and Close**.

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 email 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 25

Enabling an HTTP or HTTPS proxy connection

Procedure

1. On the Eclipse user interface, click **Window > Preferences**.

   The Eclipse user interface displays the Preferences dialog box.
2. In the navigation pane, double-click **Avaya Aura**.
3. Click **Orchestration Designer**.
4. In the Orchestration Designer pane, do one of the following:
   - In the **Proxy Settings** area, configure the HTTP proxy settings.
   - In the **HTTPS Proxy Settings** area, configure the HTTPS proxy settings.
5. Click **Apply**.
6. Click **Apply and Close**.

Related links

Considerations for enabling an HTTP or HTTPS proxy connection on page 24
Orchestration Designer preferences field descriptions on page 27

Configuring a run-time license server

About this task

You can configure a run-time license server for your application. If you run the applications through Application Simulator, you do not need the run-time license.

Note:

Specify a run-time license server only if Avaya Aura® Experience Portal, IR, or MPS accesses your application from the development environment.

Procedure

1. On the Eclipse user interface, click **Window > Preferences**.

   The Eclipse user interface displays the Preferences dialog box.
2. In the navigation pane, double-click **Avaya Aura**.
3. Click **Orchestration Designer**.

4. In the **Runtime License Server** area, in the **Server URI** field, enter the URI of the run-time license server.

   The format of 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 that the system uses to access the license server.

   For example, `http://licenseServer.myCompany.com:8080`.

5. In the **License Check Timeout** field, enter the time in seconds.

   The system must wait for a response from the WebLM license server for the specified time 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**.
7. Click **Apply and Close**.

Related links

Orchestration Designer preferences field descriptions on page 27

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 large number of 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 that are not opened in the current session. This applies only to Orchestration Designer projects that you open and close subsequently.

Procedure

1. On the Eclipse user interface, click **Window > Preferences**.

   The Eclipse user interface displays the Preferences dialog box.

2. In the 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.

Orchestration Designer automatically deletes the corresponding context files when you close the Orchestration Designer projects.

5. Click **Apply**.
6. Click **Apply and Close**.

Related links

Orchestration Designer preferences field descriptions on page 27

Configuring Secure Fetch Port

About this task

You can specify the port number used by the application server 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.

Procedure

1. On the Eclipse user interface, click **Window > Preferences**.

   The Eclipse user interface displays the Preferences dialog box.
2. In the navigation pane, double-click **Avaya Aura**.
3. Click **Orchestration Designer**.
4. In the **Secure Fetch** area, in the **Secure Fetch Port** field, enter the port number that the application server uses.
5. Click **Apply**.
6. Click **Apply and Close**.

Related links

Orchestration Designer preferences field descriptions on page 27

Orchestration Designer preferences field descriptions

Name	Description
Proxy Settings	
Enable HTTP proxy connection	Select to enable HTTP proxy connection if you need a proxy server for Internet access.
Ignore hosts with addresses	Specify the IP address of the HTTP hosts. Orchestration Designer ignores HTTP hosts with these addresses. For multiple addresses, use a comma or semicolon as a separator .

Table continues…

Name	Description
HTTP proxy host address	Specify the full HTTP path or the URL of the proxy server.
HTTP proxy host port	Specify the port that Orchestration Designer can use to access the proxy server.
Copy HTTP settings to HTTPS	Click to copy the configured HTTP settings to HTTPS settings automatically.
HTTPS Proxy Settings	
Enable HTTPS proxy connection	Select to enable HTTPS proxy connection if you need a proxy server for Internet access. Clear the check box if you do not need a proxy server for Internet access. If cleared, Orchestration Designer disables the other options in the HTTPS Proxy Settings area.
Ignore HTTPS hosts with addresses	Specify the IP address of the HTTPS hosts. Orchestration Designer ignores HTTPS hosts with these addresses. For multiple addresses, use a comma or a semicolon as a separator .
HTTPS proxy host address	Specify the full HTTPS path or the URL of the proxy server. If you do not know this address, see the proxy server settings of your Internet browser software.
HTTPS proxy host port	Specify 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. **Note:** These settings are required even if proxy options are set in Microsoft Internet Explorer or any other web browser.
Runtime License Server	

Table continues…

Name	Description
Server URI	Specify the URI of the run-time license server. **Note:** You must specify a run-time license server only if Avaya Aura® Experience Portal, IR, or MPS accesses your application from the development environment. If you run applications through Application Simulator, you do not need a run-time license. The format of 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`.
License Check Timeout	Specify the time in seconds. The system must wait for a response from the WebLM license server for the specified time while attempting to connect to the WebLM license server. The default value is zero seconds. Zero indicates that there is no timeout.
Context Files	
Remove context files on project close	Select 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 this 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. **Note:** This option does not affect the projects that are not opened in the current session. This applies only to Orchestration Designer projects which you open and close subsequently.

Table continues…

Name	Description
Secure Fetch	
Secure Fetch Port	Specify the port number used by the application server. Use this only 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.

Related links

Enabling an HTTP or HTTPS proxy connection on page 25
Configuring a run-time license server on page 25
Removing the context files on closing a project on page 26
Configuring Secure Fetch Port on page 27

Verifying the Java JRE

Procedure

1. On the Eclipse user interface, click **Window > Preferences**.

   The Eclipse user interface displays the Preferences dialog box.
2. In the navigation pane, double-click **Java**.
3. Click **Installed JREs**.
4. Verify that one of the following versions of JRE is selected:
   - **jre7**
   - **jre8**
   - **jre9**
5. **(Optional)** If the required JRE versions do not appear in the list, click **Add** and complete the wizard to add the JRE. For more information, see *Java Development User Guide*.
6. Click **OK**.

Setting the Java JDK compiler compliance level

Procedure

1. On the Eclipse user interface, click **Window** > **Preferences**.

   The Eclipse user interface displays the Preferences page.
2. In the navigation pane, double-click **Java**.

3. Click **Compiler**.
4. In the **JDK Compliance** area, click **Compiler compliance level**.
5. Click **Apply**.
6. Click **Apply and Close**.

Configuring Microsoft Speech API for microphone inputs

About this task

Avaya Aura Orchestration Designer uses the Microsoft Speech API 6.0 (SAPI) to handle ASR input from a microphone during application simulation. To use the Microsoft SAPI for ASR input, you must configure the Microsoft SAPI to use a microphone.

Procedure

1. On the computer where Orchestration Designer is installed, open Control Panel.
2. Click **Speech Recognition** to configure your speech recognition.
3. With a microphone plugged in and volume turned on, speak into the microphone.

   The **Level** indicator in the Microphone Setup Wizard shows whether the system is receiving microphone input. Otherwise, you must rectify the audio input source settings.
4. Follow the wizard steps to further fine tune the microphone settings.
5. Click **OK**.

Installing sample applications

About this task

Avaya Aura 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.

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

Procedure

1. On the Orchestration Designer installation ISO image, navigate to the `/Sample Applications` directory .
2. Locate and double-click the Avaya Aura® Orchestration Designer *[version]* “Sample Applications.doc” file.

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.

Orchestration Designer Upgrade

You can upgrade to Orchestration Designer 7.2.3 from the following versions either by maintaining or without retaining the previous environment:

- Orchestration Designer 7.1
- Orchestration Designer 7.2.0
- Orchestration Designer 7.2.1
- Orchestration Designer 7.2.2

After upgrading Orchestration Designer, you must update to connectors or other dependant libraries on the application server. You must update the connector applications `icconnector.war` and `aesconnector.war`, and run-time support files `runtimeSupport platform.zip` .

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 7.2.3 on page 32
Maintaining the 7.2.0, 7.2.1 or 7.2.2 environment while installing 7.2.3 on page 33
Recommended installation paths for multiple Orchestration Designer and Eclipse versions on page 34
Installing 7.2.3 without retaining the 7.1 environment on page 35
Installing 7.2.3 without retaining the 7.2.0, 7.2.1 or 7.2.2 environment on page 36

Maintaining the 7.1 environment while installing 7.2.3

About this task

Install Avaya Aura Orchestration Designer 7.2.3 in a separate directory to retain Orchestration Designer 7.1 environment. You can retain this environment to maintain applications based on 7.1 .

For information about the recommended installation paths, see Recommended installation paths for multiple Orchestration Designer and Eclipse versions on page 34.

Procedure

1. Save the Orchestration Designer 7.1 projects and workspace, and Eclipse installation.

2. Install the following software to a separate location. For example, `C:\OD7.2.3\`.
   - Orchestration Designer 7.2.3
   - Tomcat 7.0, 8.0, or 8.5

     Upgrading from Tomcat 7.0 to the next supported version of Tomcat is optional. However, Orchestration Designer 7.1 continues to use the previous Tomcat installation.
3. Do the following to upgrade Orchestration Designer 7.1 projects to Orchestration Designer 7.2.3 projects:
   a. Copy the projects from the Orchestration Designer 7.1 workspace to the Orchestration Designer 7.2.3 workspace.

      b. Take a backup of Orchestration Designer 7.1 projects. You can use the backed up projects if there are any issues during the upgrade.

   b. Import the projects to Orchestration Designer 7.2.3.

      Orchestration Designer converts the projects to Orchestration Designer 7.2.3. You cannot open these projects in Orchestration Designer 7.1.
4. **(Optional)** If you use a source control system, save the 7.1 application at a different location or a different branch, so that you can maintain the earlier 7.1 application in future.
5. After creating a new workspace, click **Window** > **Preferences** to configure your preferences before importing the earlier projects.

Related links

Orchestration Designer Upgrade on page 32

Maintaining the 7.2.0, 7.2.1 or 7.2.2 environment while installing 7.2.3

About this task

Install Avaya Aura Orchestration Designer 7.2.3 in a separate directory to retain Orchestration Designer 7.2.0, 7.2.1, or 7.2.2 environment. You can retain this environment to maintain applications based on 7.2.0, 7.2.1, or 7.2.2.

For information about the recommended installation paths, see Recommended installation paths for multiple Orchestration Designer and Eclipse versions on page 34.

Procedure

1. Save the Orchestration Designer 7.2.0, 7.2.1, or 7.2.2 projects and workspace, and Eclipse installation.
2. Install the following software to a separate location. For example, `C:\OD7.2.3\`.
   - Orchestration Designer 7.2.3
   - Tomcat 7.0, 8.0, or 8.5

Upgrading from Tomcat 7.0 to the next supported version of Tomcat is optional. However, Orchestration Designer 7.2.0, 7.2.1, or 7.2.2 continues to use the previous Tomcat installation.

3. Do the following to upgrade Orchestration Designer 7.2.0, 7.2.1, or 7.2.2 projects to Orchestration Designer 7.2.3 projects:
   a. Copy the projects from the Orchestration Designer 7.2.0, 7.2.1, or 7.2.2 workspace to the Orchestration Designer 7.2.3 workspace.

      Take a backup of Orchestration Designer7.2.0, 7.2.1, or 7.2.2 projects. You can use the backed-up projects, if there are any issues during the upgrade.

   b. Import the projects to Orchestration Designer 7.2.3.

      The Orchestration Designer coverts the projects to Orchestration Designer 7.2.3. You cannot open these projects in Orchestration Designer 7.2.0, 7.2.1, or 7.2.2.
4. **(Optional)** If you use a source control system, save the 7.2.0, 7.2.1, or 7.2.2 application at a different location or a different branch, so that you can maintain the earlier 7.2.0, 7.2.1, or 7.2.2 application in the future.
5. After creating a new workspace, click **Window** > **Preferences** to configure your preferences before importing the earlier projects.

Related links

Orchestration Designer Upgrade on page 32

Recommended installation paths for multiple Orchestration Designer and Eclipse versions

Avaya recommends the following installation paths for multiple Avaya Aura Orchestration Designer and Eclipse versions:

- `c:\(base)\OD7.2.3\`

  For any parent directory.

- `eclipse\`

  For Eclipse 4.5 installation with GEF 3.9 SDK, WTP SDK 3.4, emf-xsd 2.8, DTP 1.10, and Orchestration Designer 7.2.3 features.

- `tomcat\`

  Tomcat 7.0, Tomcat 8.0, Tomcat 8.5, or Tomcat 9.0 for running Orchestration Designer 7.2.3 applications.

- `workspace\`

  For Orchestration Designer 7.2.3 projects.

  These installation paths are convenient structures that separately retain the Orchestration Designer 7.2, Orchestration Designer 7.2.1, and Orchestration Designer 7.2.3 environments and the prerequisite software.

Related links

Orchestration Designer Upgrade on page 32

Installing 7.2.3 without retaining the 7.1 environment

Before you begin

Create a backup of the Orchestration Designer 7.1 projects in your workspace.

Procedure

1. To uninstall Orchestration Designer 7.1, do the following:
   a. On the Eclipse interface, click **Windows** > **Preferences**.
   b. In the Preferences dialog box, click **Install/Update**.
   c. In the **Install/Update** area, click the **Uninstall or update** link.

      The Eclipse user interface displays the Eclipse SDK Installation Details dialog box.
   d. In the **Installed Software** tab, click **Avaya Aura Orchestration Designer Developer Guide**.
   e. Click **Uninstall**.

      Depending on the location of your workspace, you can remove your projects by the uninstall process.
   f. Click **Close**.
   g. Click **Apply and Close**.
2. Install Orchestration Designer 7.2.3 and the supporting software.
3. Copy the Orchestration Designer 7.1 projects from the backup into the Orchestration Designer 7.2.3 workspace.

   Keep a copy of your earlier projects.
4. Import the projects to Orchestration Designer 7.2.3.

   The Orchestration Designer converts the projects to Orchestration Designer 7.2.3.
5. **(Optional)** If you use a source control system, create a branch or save the 7.2.3 application in a different location so that you can maintain the earlier 7.1 application in future.
6. After creating a new workspace, click **Window** > **Preferences** to configure your preferences before importing the earlier projects.

Related links

Orchestration Designer Upgrade on page 32

Installing 7.2.3 without retaining the 7.2.0, 7.2.1 or 7.2.2 environment

Before you begin

Create a backup of the Orchestration Designer 7.2.0, 7.2.1, or 7.2.2 projects in your workspace.

Procedure

1. To uninstall Orchestration Designer, do the following:
   a. On the Eclipse interface, click **Windows** > **Preferences**.
   b. In the Preferences dialog box, click **Install/Update**.
   c. In the **Install/Update** area, click the **Uninstall or update** link.

      The Eclipse user interface displays the Eclipse SDK Installation Details dialog box.
   d. In the **Installed Software** tab, select **Avaya Aura Orchestration Designer Developer Guide**.
   e. Click **Uninstall**.

      Depending on the location of your workspace, you can remove your projects by the uninstall process.
   f. Click **Close**.
   g. Click **Apply and Close**.
2. Install Orchestration Designer 7.2.3 and the supporting software.
3. Copy the Orchestration Designer 7.2.0, 7.2.1, or 7.2.2 projects from the backup into the Orchestration Designer 7.2.3 workspace.

   Keep a copy of your earlier projects.
4. Import each project into Orchestration Designer 7.2.3.

   The system converts the projects for Orchestration Designer 7.2.3.
5. **(Optional)** If you use a source control system, create a branch or save the 7.2.3 application in a different location so that you can maintain the earlier 7.2.0, 7.2.1, or 7.2.2 application in future.
6. After creating a new workspace, click **Window** > **Preferences** to configure your preferences before importing the earlier projects.

Related links

Orchestration Designer Upgrade on page 32

Orchestration Designer patch updates

Avaya does not send automatic alerts about the availability of new patches for Orchestration Designer. Therefore, you must periodically check the Avaya support website or use the Eclipse update mechanism to check for available updates.

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

- Prerequisite to install a patch update.
- Installation of patches or updates of a released software, not for upgrading software versions.
- Upgrading of software.

Note:

The procedure described in the Installing an Orchestration Designer patch update on page 37 section is for installing patches or updates of a released software, and not for upgrading software versions completely. For upgrading the software, see Orchestration Designer Upgrade on page 32.

Prerequisite to installing an Orchestration Designer patch update

Before installing a patch update, you must back up all files in the default `/eclipse` installation directory or a subdirectory of `/eclipse`, and in the designated `/workspace` directory.

To continue using the earlier version of the existing applications, perform a clean installation of the new version in a new directory.

Caution:

When you open an application created with an earlier release of Orchestration Designer, the tool prompts you to update the project to a 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 the Eclipse user interface .

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

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 Orchestration Designer Upgrade on page 32.

Procedure

1. On the Eclipse user interface, click **Help > 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.
4. 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 38.
5. **(Optional)** 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.
6. Select the Orchestration Designer patch updates that you want to install.
7. Click **Next**, and then follow the prompts.

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

Adding the website for Orchestration Designer patch updates

About this task

To get Avaya Aura Orchestration Designer patch updates, you must add the Orchestration Designer patch update website to Eclipse.

Procedure

1. On the Eclipse user interface, do one of the following :
   - Click **Help > Install New Software** and then select **All Available Sites**.
   - Click **Window > 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

Title	Description	Audience
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…

Title	Description	Audience
Deploying Avaya Breeze® platform	This document provides information and procedures on deploying the Avaya Breeze® platform services.	• System administrators • Services and Support personnel • Avaya Professional Services • Implementation engineers
Avaya Context Store Snap-in Reference	This document is intended for anyone who wants to install, configure, and administer Context Store.	• Application Developers • Implementation Engineers
Deploying Avaya Analytics™	This document is intended for anyone who wants to deploy Avaya Analytics™.	• Application Developers • Implementation Engineers

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 40
Avaya Documentation Portal navigation on page 41

Finding documents on the Avaya Support website

Procedure

1. Go to https://support.avaya.com.
2. At the top of the screen, type your username and password and click **Login**.
3. Click **Support by Product** > **Documents**.
4. In **Enter your Product Here**, type the product name and then select the product from the list.
5. In **Choose Release**, select an appropriate release number.
6. In the **Content Type** filter, click a document type, or click **Select All** to see a list of all available documents.

   For example, for user guides, click **User Guides** in the **Content Type** filter. The list displays the documents only from the selected category.
7. Click **Enter**.

Related links

Documentation on page 39

Avaya Documentation Portal navigation

Customer documentation for some programs is now available on the Avaya Documentation Portal at https://documentation.avaya.com.

Important:

For documents that are not available on the Avaya Documentation Portal, click **Support** on the top menu to open https://support.avaya.com.

Using the Avaya Documentation Portal, you can:

- Search for content in one of the following ways:
  - Type a keyword in the **Search** field.
  - Type a keyword in **Search**, and click **Filters** to search for content by product, release, and document type.
  - Select a product or solution and then select the appropriate document from the list.
- Find a document from the **Publications** menu.
- Publish a PDF of the current section in a document, the section and its subsections, or the entire document.
- Add content to your collection by using **My Docs** (☆).

  Navigate to the **My Content** > **My Docs** menu, and do any of the following:
  - Create, rename, and delete a collection.
  - Add content from various documents to a collection.
  - Save a PDF of selected content in a collection and download it to your computer.
  - Share content in a collection with others through email.
  - Receive content that others have shared with you.
- Add yourself as a watcher by using the **Watch** icon (👁).

  Navigate to the **My Content** > **Watch list** menu, and do the following:
  - Set how frequently you want to be notified, starting from every day to every 60 days.
  - Unwatch selected content, all content in a document, or all content on the Watch list page.

  As a watcher, you are notified when content is updated or deleted from a document, or the document is removed from the portal.
- Share a section on social media platforms, such as Facebook, LinkedIn, and Twitter.
- Send feedback on a section and rate the content.

Note:

Some functionality is only available when you log in to the portal. The available functionality depends on the role with which you are logged in.

Related links

Documentation on page 39

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.

Course Code	Course Title
4C00095W	Avaya Aura Orchestration Designer for Developers
5C00092V	Avaya Aura Experience Portal, Avaya Aura Orchestration Designer, and Avaya Proactive Outreach Manager Installation, Maintenance and Troubleshooting Essentials
3610C	Avaya Aura Contact Center - Orchestration Designer Scripting
2C00081O	Selling Avaya Aura Orchestration Designer
5C00080E	Knowledge Access: Avaya Aura Contact Center Orchestration Designer Scripting Administration
W: Web (online) course V: Virtual E: Self-paced in virtual campus O: On Demand	

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 https://support.avaya.com/ and do one of the following:
  - In **Search**, type `Avaya Mentor Videos`, click **Clear All** and select **Video** in the **Content Type**.
  - In **Search**, type the product name. On the Search Results page, click **Clear All** and select **Video** in the **Content Type**.

The **Video** content type is displayed only when videos are available for that product.

In the right pane, the page displays a list of available videos.

- To find the Avaya Mentor videos on YouTube, go to www.youtube.com/AvayaMentor and do one of the following:
  - Enter a key word or key words in the **Search Channel** to search for a specific product or topic.
  - Scroll down Playlists, and click a topic name to see the list of videos available for the topic. For example, Contact Centers.

Note:

Videos are not available for all products.

Support

Go to the Avaya Support website at https://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

AACC	Avaya Aura® Contact Center.
AAEP	Avaya Aura® Experience Portal
AAS	Avaya Application Simulator.
ADR	See application detail record (ADR) on page 44.
AMS	Avaya Aura® Media Server.
ANI	See automatic number identification (ANI) on page 44.
API	See application program interface (API) on page 44.
application detail record (ADR)	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.
application program interface (API)	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.
application server	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.
ASR	See automated speech recognition (ASR) on page 44.
automated speech recognition (ASR)	Technology that employs a computer to recognize spoken words and respond appropriately.
automatic number identification (ANI)	A service that provides the originating telephone number of a call coming in to the system.
call flow	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.

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 45.

dialed number identification service (DNIS)

A service that identifies for the receiving system what telephone number was dialed by the caller. In theAvaya 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 45.

DTMF

See dual tone multi-frequency (DTMF) on page 45.

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 46.

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 46.

IDE

See integrated development environment (IDE) on page 46.

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 46.

JDBC

An application program interface (API) on page 44 specification in which programs written in Java connect with and access data contained in database programs using Structured Query Language (SQL) on page 48.

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 47.

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 47.

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 47.

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 47.

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 47.

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 EAP/Wildfly.

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 48.
speech recognition	See automated speech recognition (ASR) on page 44.
speech synthesis	See text-to-speech (TTS) on page 49.
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 48.
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 46.
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 48.
tabbed notebook	See notebook on page 46.
TDD	See Telecommunications Display Device (TDD) on page 48.
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 48.

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 49.

TTY See Telecommunications Display Device (TDD) on page 48.

TUI See telephone user interface (TUI) on page 48.

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 47.

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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