



Avaya Orchestration Designer

8.1.2.1101

(Supersedes All Previous Releases)

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1 Release Information

This is the 8.1.2 build 1101 of Orchestration Designer.

ISO: MD5 Checksum:

1.1 Release Overview

The themes of the 8.1.2 release are:

- Upgrade various 3rd party components
- Remove dependency for simplification
- Enhance Dialogflow sample applications

2 Features

This section describes the status of the features that are available in this release.

2.1 *New/Updated Sample Applications*

DefaultDialogflowAppV3.zip
DefaultDialogflowSMSV3.zip

2.2 *New Feature Notes*

2.3 *Requirements not included in this delivery*

☐ None.

2.4 *Features/Requirements with Limitations/Restrictions in this release*

2.5 *Features with Limitations/Restrictions Removed for This Release.*

☐ N/A

2.6 *Features with Changes in This Release*

2.7 *Jiras included in this Release*

Key	Summary	Issue Type	Component/s	Severity
AAOD-653	Upgrade several dependencies - xalan, commons logging etc	Story	General	Medium
AAOD-654	Remove and cleanup the components we don't need	Story	General	Medium
AAOD-655	Upgrade Axis2 to 1.8	Story	General	Medium
AAOD-659	Upgrade FOP components dependency	Story	General	Medium
AAOD-663	Upgrade Wss4j to 2.4.1, xmlsec to 2.3	Story	General	Medium
AAOD-669	The avaya-nlp-languageid component needs upgrade	Story	General	Medium
AAOD-674	Update the weblm client jar just released by the Weblm team	Story	General	Medium
AAOD-671	Review and fix any discrepancy between OD DefaultDialogflowApp and def_dialogflow.vxml	Story	General	Medium
AAOD-649	AOD ISO deliverable should include the build number.	Story	General	Medium
AAOD-673	Review and package the APS SMS app for general distribution	Story	General	Medium

AAOD-676	Need to Test the REST Web Service Connector on HTTPS	Story	General	Medium
AAOD-678	AOD_8.1.2.0601 - Orchestration Designer version is incorrectly displayed	Bug	General	Medium
AAOD-681	Update AES JTAPI client to fix some custom issues	Story	General	Medium
AAOD-627	Update Oracle Weblogic to version 14c or later	Story	General	Medium
AAOD-690	Unwanted blank lines in web.xml	Enhancement	General	Medium
AAOD-694	AOD_8_1_2_1001.iso: Many SMS and Email Applications do not work	Bug	General	Medium

3 Installation and Upgrades

3.1 New Installations (for GA only)

With the first time (new user) installation of Orchestration Design 8,x, an ISO image that has all the pre-requisites and tools is provided. The ISO image file can be either delivered in a traditional DVD or download-able on Avaya distribution website. If the ISO file is downloaded and placed on Windows 8 or 10, it can be easily opened by double-clicking the file or right-clicking and choose “Mount” to mount the image. On older Windows versions, a 3rd-party utility software is required.

For instructions to install Orchestration Designer, please refer to the Getting Started Guide which is provided as a stand-alone document. A fresh installation is recommended for OD 8.1.2

This release requires minimum Java version 8u261 b12 or greater to support TLS v1.3. This version was released on July 14, 2020.

3.2 Upgrades

3.2.1 Upgrading OD 8.1 or earlier

We strongly recommend you use a fresh Tomcat. However if you choose the option of upgrading OD in the existing Eclipse environment without configuring a new Tomcat_Home directory, you will have to manually replace a few jar files in Tomcat/lib. Please following the steps below:

1. Once OD has finished upgrading, use the Export Runtime Support Files wizard to get the runtimeSupportTomcat*.zip package
2. Unzip runtimeSupportTomcat*.zip into the Tomcat directory Eclipse is pointing to.
*either skipping or replacing the existing files in the Tomcat/lib directory is OK.
3. Remove the following files from the Tomcat lib directory.
log4j-1.2.15.jar
VAppLogClient.log4j.properties
VAppLogClient_8.1.1.jar or older
VAppLogClientWS_8.1.1.jar or older
wss4j-1.5.8.jar
xmlsec-1.4.3.jar

4. Move to next step to remove the duplicate Axis2 library files

3.2.2 Upgrading OD 8.1.1 or earlier (if you have performed the step above, you can go straight to the Tomcat/lib and remove the old files listed below)

activation-1.1.jar
activemq-client-5.13.1.jar
axiom-api-1.2.21.jar
axiom-dom-1.2.21.jar
axiom-impl-1.2.21.jar
axis2-adb-1.7.9.jar
axis2-adb-codegen-1.7.9.jar
axis2-codegen-1.7.9.jar
axis2-json-1.7.9.jar
axis2-kernel-1.7.9.jar
axis2-saaj-1.7.9.jar
axis2-transport-http-1.7.9.jar
axis2-transport-local-1.7.9.jar
commons-cli-1.2.jar
commons-codec-1.3.jar
commons-logging-1.1.3.jar
geronimo-stax-api_1.0_spec-1.0.1.jar
httpcore-4.4.6.jar
jettison-1.3.8.jar
mail-1.4.jar
neethi-3.0.3.jar
serializer.jar
wsdl4j-1.6.2.jar
wstx-asl-3.2.9.jar
xalan-2.7.0.jar
xmlschema-core-2.2.1.jar

3.2.3 Upgrading OD 7.2.3 or earlier (if you have performed the step above, you can go straight to the Tomcat/lib and remove the old files listed below)

This version upgrades the Axis2 1.6 to Axis2 1.79. If you are upgrading an existing Eclipse environment, you will have to make a slight change to Tomcat Home in Preferences to trigger the coping of the new Axis2 files into the Tomcat's lib directory after the automatic upgrade is done. You can first change the directory to a bogus one and change it back to trigger the copying process. After the files are copied over, you have to manually remove the old files which are listed below. For the existing app server deployment environment, you also need to remove the old library files manually from the Tomcat's lib directory. The files to be removed are as follow:

axiom-api-1.2.13.jar
axiom-dom-1.2.13.jar
axiom-impl-1.2.13.jar
axis2-adb-1.6.2.jar
axis2-adb-codegen-1.6.2.jar
axis2-codegen-1.6.2.jar
axis2-json-1.6.2.jar
axis2-kernel-1.6.2.jar
axis2-saaj-1.6.2.jar
axis2-transport-http-1.6.2.jar
axis2-transport-local-1.6.2.jar
httpcore-4.0.jar
jettison-1.3.1.jar
neethi-3.0.2.jar

VPAppLogClientWS_7.2.3.jar
VPAppLogClient_7.2.3.jar
woden-api-1.0M9.jar
woden-impl-dom-1.0M9.jar
woden-tool-1.0M9.jar
XmlSchema-1.4.7.jar

3.2.4 Upgrading OD 6.0 Applications

- When upgrading from OD 6.0 to newer OD version web service operation updates sometimes fail. To work around this issue, traverse the project's connectivity -> wsoperations directory in the Navigator, then select the WSOPs Properties menu -> Generate Client, then click on the Generate button and follow the instructions.
- Orchestration Designer upgrade process does not modify any custom code created by the application developer. Any errors or warnings resulting from OD version upgrades (such as variable name changes) that affect the custom code must be manually resolved by the application developer. The fix for wi00954168 (confLow and conf_Low generate the same name in IProjectVariable resulting in duplicate define symbol) resulted in altering the way names are generated in the IProjectVariable file. When upgrading from 6.0 or before you may need to update custom code to account for changes in the generated names.

4 Known Issues

The following section describes any known issues, workarounds, words of caution, etc.

4.1 Limitations, Work Arouns, Tips and Best Practices:

- **Weblogic 14c Support**
 - Add environment variable to the StartWeblogic script:
set JAVA_OPTIONS=%JAVA_OPTIONS% -DUseSunHttpHandler=true
 - Please the *tsapi.pro* file in domain (i.e base_domain) directory if using AES Connector.
- **AES Connector Not Logging**

Due to the upgrade of JTAPI to support Log4j v2, AES Connector might stop logging at the following statement (in italic) in early stage of setting up the AES connection.

CTIConnectorManager.ConfigureFromConfigurationFile: getting provider:xxxxxxxxxxxx

*Note: by default, a version of log4j.xml has also been placed in the WEB-INF/classes directory. This could fix the issue without the following workaround.

When this happens, it is necessary to take the following steps:

- a. Go to the TOMCAT_HOME/webapps/aesconnector/WEB-INF/ directory
- b. Copy the aeslog4j2.xml file into TOMCAT_HOME/lib as log4j.xml
- c. Edit this line to tell aesconnector where to create the log file: <Property name="log-path">
\${log4j:configParentLocation}/../data/log</Property>
Or it will just create the trace.log file in the TOMCAT_HOME/data/log directory as the default

- **AES Connector Does Not Work in FIPS**

Due to the limitation in JTAPI, this release does not support AES Connector running in FIPS mode.
- **Runtime Exception with Invalid License**

If you run a HTML5 app and find that the Start page is blank, you might run into a problem with the license version. The older version of the OD license that you might already have would give you a grace period of 30 days. You would see an exception in the trace.log as well as an alarm in EPM. In that case, you have to get the version 8 license as soon as possible to make sure your OD system continues to operate.
- **Error when Exporting war file for deployment**

When running the Export progress, if you get an error that says, “Error deploying the following project: <project name> \n Check the console and error log for more details on the error”, first check the console for an apparent error. Then take a look at the Error Log viewer. If you see an error like this, “Error writing context.xml to ../temp.folder/metafiles”, re-import the project.

- **Tomcat 8.5, 9.0**

- Jar scanning will emit errors if the serializer.jar is not in the lib directory. You can either place a copy of the serializer.jar in the lib directory or disable jar scanning.
- The configuration of the manager-gui by default in Tomcat 8.5 restricts the manager application to only local host. Alter webapps/manager/META-INF/context.xml and webapps/host-manager/META-INF/context.xml to enable access from machines other than localhost. Change to comment out the RemoteAddrValve.


```
<!--
    <Valve className="org.apache.catalina.valves.RemoteAddrValve"
    allow="127\.d+\.d+\.d+::1|0:0:0:0:0:0:1" /> -->
```

- **JSON Parsing/Building.** This PDC does not contain any documentation in this release. This PDC can be used to extract values from JSON strings, update JSON strings or create JSON strings. The PDC works using a simple XPath notation (a/b/c or a/b[0]/c). Paths allow for variable substitution using the notation _{<variable name>}_ or _{myvariable}_. A path like a/b[_{myvariable}]_/_c at runtime will have the variable reference replaces with the actual value. So at runtime the actual path might be a/b[1]/c, assuming myvariable has a value of 1. The JSONParser supports complex variables and collections. When copying from JSON to an OD complex variable all fields in the JSON object that match fields in the OD complex variable are copied.
- In this release, speech application html mode is configurable. By default it is DISABLED for ALL speech applications in both simulation and deployment. You can use the project properties to enable HTML mode in the development environment. When you export you also have an opportunity to enable or disable this setting. When you enable you are warned “Warning, enabling HTML mode for a speech application can expose your application to cross site scripting attacks. Are you sure you want to enable this?” Note, Avaya recommends to NOT use HTML mode for deployed applications as the application will NOT function properly when accessing platform services (notification, reporting, CAV, and etc.). Furthermore, HTML mode exposes your application to cross site scripting attacks.
- **Local Call.** *As a general rule over use of Local Call is not recommended. It is always best to use a subdialog call* unless you specifically need the functionality of the Local Call, which mainly allows you to pass a complex variable to a module.
- While the Oceanalytics integration (Publish real time event) PDC is present in Orchestration Designer, in the Breeze 3.2, 3.3, and 3.4 release there is no client to consume any events generated. In a future release Breeze will support the handling of events generated from OD.
- Starting with Eclipse Photon 4.8 (4.11 so on), only 64-bit versions are being packaged for distribution. This is compatible with JDK 10.1 (or up) of which only 64-bit is currently available. You would have to use 64-bit Java to run Eclipse 64-bit. JDK 1.8 64-bit is the lowest JDK version tested.
- **ED/Breeze Integration** – When the refresh button is clicked for the ED Administration Instances page, a Null Pointer Exception is logged in the Engagement Designer log file. To work around this issue:

Login to the Breeze machine with the root account, and execute the command below:

```
Psql service=engagementdesigner_workflow -c “delete from bpminstance instance where not exists
(select 1 from wfdsvar svar where instance.process=svar.wfdname and
instance.version=svar.wfdversion)”
```

- **Integration with Breeze/ED Configuration Note - Video Media Processor** option should be selected in AMS for the Make2Party call with ED and EP/OD to work correctly. (New call from ED to EP/OD) Login to your AMS admin page, go to link “System Configuration→Server Profile→General Settings”, check checkbox “**Video Media Processor:**”, then click the Save button
- **REST** – if a restful web service returns a 202 (accepted), the Axis implementation does not read any body accompanying the reply. To work around this the web service needs to return 200, or you need to write java code to invoke the restful webservice.
- **Tomcat** –
 - In the OD design environment, when launching an app or starting up Tomcat manually in simulation, you would encounter the following error:
SEVERE: StandardServer.await: create[localhost:8005]:
java.net.BindException: Address already in use: NET_Bind
That means another application or process in Windows has taken the port (8005). To resolve this issue, you’d have to edit the server.xml file in Tomcat’s conf folder, look for “8005” and change it to something like “8006” or other port number that is not currently being used.
 - On some versions of Tomcat you may encounter problems with Tomcat closing a socket too soon when it sends a redirect; specifically, if there are 2 redirects back to back without a VXML page being returned. To alleviate this, use the *connectionLinger* property in the connector configuration with a minimum value of 1. It is not known if this behavior is exhibited on other application servers.
 - On version 8.0.41 and greater you will get a warning about not being able to scan the serializer.jar. This does not affect any operational aspects of OD. If the warning is bothersome, you can obtain a copy of the serializer.jar from the runtimeconfig.war. Alternatively you can edit the catalina.properties file in the conf directory and add the serializer.jar to the list of jars to skip the first example below, or add *.jar to skip all jar scanning which significantly improves the Tomcat startup time.
 - tomcat.util.scan.StandardJarScanFilter.jarsToSkip=\
 - bootstrap.jar,commons-daemon.jar,tomcat-juli.jar,serializer.jar,\
 - -or-
 - tomcat.util.scan.StandardJarScanFilter.jarsToSkip=\
 - *.jar,bootstrap.jar,commons-daemon.jar,tomcat-juli.jar,,\
- **WebLM** - Post WebLM 6.3.11, WebLM server will accept requests only over TLS 1.0 and above. If the product application is configured to send requests on SSLv2 / v3 then the communication between the product application will fail. Hence, if the product application is upgrading WebLM to 6.3.11 and above, then please ensure that the product application is configured to send requests only over TLS 1.0 & above. Note that certain JRE releases provide support only for SSLv2. Hence, take that into account.
- **Web applications** - When a new web application is created you will see warnings in the “templates” pages in the “custom” folder of your application. Please ignore these warnings. In project properties or preferences you can uncheck “Validate JSP fragments” and the warnings are not displayed.
- **Web applications** - In Firefox, if the OD application start page is accessed from the tomcat manager, a runtime exception occurs on the application start page. To fix the issue, just refresh the index page/start page of the OD application. This error occurs only on the Firefox browser and it is a browser caching issue.
- **Project Documentation** – Sometimes the flow map may not be generated when generating the project documentation. To work around this open the call flow and move a node slightly so the call flow is dirty and then save. Now regenerate the project documentation and the flow map will be present.
- **OSDMs**- In newer versions of tomcat the OSDMs may not load. This has been noticed in OD 7.0 and onwards. The issue is the xml parsing validation expects a numeric value for the load-on-startup tag if present and an empty value is no longer valid. To fix this edit the web.xml file in the OSDM war and remove all occurrences of “<load-on-startup/>” and then redeploy the war file.
- **Application Import** - To avoid errors when importing applications, verify that the Java preferences are correct. The default settings vary between Eclipse versions. Go to Window -> Preferences -> Java Compiler and ensure that the Compiler compliance level is at least 1.7. After projects are imported also verify that the project specific settings do not override the global preference (unless you

specifically need that). Go the project properties -> Java Compiler, the checkbox "Enable Project specific settings" should not enabled and use the default compliance setting should be selected

- **Web Applications** -The latest version Web browsers such as Safari on IOS 10 require https session for the Geolocation to work. This means you would have to run the web app that uses the Location Input element in a secured session (https); otherwise, you would get an error code -2 returned on the browser.
- **Language Detection** - When using the Language detection PDC, the accuracy is a function of the length of the text. So, short texts like “hello world” will have a much higher error rate than “hello world, today is a new day”. At 100 characters or more, the accuracy is in the high 90s for most languages. The Chinese models are not the most accurate in discriminating between Simplified and Traditional forms. Text containing mixed language will return the language code for the most dominant language in the text. The “hint” function works such that the “hinted” language will be returned unless the top scoring language is (a) different and (b) exceeds the score of the “hinted” language by ~2%. If text is in an unsupported language, the recognizer will return one of the known languages.
- **Sample Application** -The web service <http://www.websvcx.net/stockquote.aspx> seems to no longer work. Example applications that use this web service will not work. This web service is used in the stock and weather set of example applications. The get weather functionality remains functional.
- **HTTP Client** - If you encounter the error below remove commons-httpclient-3.1.jar from the WEBINF/lib of the application. **java.lang.IncompatibleClassChangeError: Class com.avaya.ade.common.utils.security.SSLSocketFactoryHTTPClient does not implement the requested interface org.apache.commons.httpclient.protocol.ProtocolSocketFactory**
- **Tomcat** - Note if you are using Tomcat 7 and Java 8, you need at least Tomcat version 7.0.77. Using a lower (earlier version) will result in errors in jsp pages (**java.util.Map\$Entry cannot be resolved**).
 - <http://stackoverflow.com/questions/19243458/unable-to-compile-class-for-jsp-the-type-javautil-mapentry-cannot-be-resolved/21322569>
 - https://bugzilla.redhat.com/show_bug.cgi?id=1080026

5 Version Information

To view the Orchestration Designer version in the product, select Help, About Eclipse, and then click on the Avaya Icon.

6 Hardware Prerequisites

- CPU speed 1GHz (min) 2GHz (recommended)
- RAM 512 MB (min) 1GB (recommended)
- Hard Disk drive 40 GB (min)

7 Software Prerequisites (Supported Versions)

7.1 Design Environment

- Windows 7 (Ultimate/Professional) – 32/64 bit
- Windows 10
- eclipse-SDK-4.7 (Bundled with version compatible GEF, WTP, XML and XSL tools, Javascript Dev, 2.0 Style Plugin Support)
- eclipse-SDK-4.8 (Bundled with GEF SDK, WTP, Eclipse Web Developer Tools)
- eclipse-SDK-4.11 (Bundled with GEF SDK, WTP, Eclipse Web Developer Tools)
- Tomcat versions 7.0, 8.0, 8.5, 9.0.x
- J2SE version 1.7, 1.8 - 32 bit and 64-bit versions, 1.9, 10.1, 11, 12
- Open JDK 1.7, 1.8 - 32 bit versions, 1.9, 10.1, 11, 12 64-bit
- Microsoft Speech SDK 5.1 or 6.0
- Nuance Recognizer 9/10 (MRCPv1) , Nuance 11 (MRCPv2)
- Loquendo Speech Server 7/MRCPv1 Server 7.2 or higher
- Ambulant 2.1

- Apache Axis 1.4 □ Apache Axis 2.0

7.2 *Runtime Environment*

Not all of the components are required for the runtime (E.g. the application server will be either Tomcat; WebSphere or Oracle WebLogic, the OS will be Windows, Solaris or Linux; the platform will be either IR or VP, etc.).

Supported versions are listed, but the vendors supported list of dependencies and combinations should be consulted when setting up the environment). The tested configurations are as listed in the requirements document.

- Windows Server 2016 64 bit
- Linux ES 7.0
- Tomcat versions 7.0, 8.0, 8.5, 9.0
- JBoss Application Server 7.0, 7.1
- Wildfly (up to 20)
- J2SE version 1.8
- J2SE version 1.9
- J2SE version 10.1
- J2SE version 11
- J2SE version 12
- Open JDK 1.8
- Open JDK 1.9
- Open JDK 1.10
- Open JDK 1.11
- Open JDK 1.12
- Apache Axis 1.4
- Apache Axis 2.0
- Nuance 9.0, 10, 11
- Loquendo 7
- Avaya Aura® Experience Portal 7.0 □ Avaya Aura® Experience Portal 7.1
- Avaya Aura® Experience Portal 7.2, Avaya Experience Portal 8.0
- Websphere 8.5.5 application server – comes with Java 7 support
- Websphere 8.5 application server - *comes with Java 6 by default, but has a Java 7 option – see the Websphere documentation for details.
- Websphere 9 with Java 8 support.
- Oracle Weblogic 10.3.6, 11g, 12cR2, 14.1.1
- Sun Solaris 10 on SPARC
- CM version R013x01.2.639.0 or greater, and must have the green feature 7434ND enabled and licensed is required to use the Consultation transfer feature.
- Redirector 1.0.11, available from the Orchestration Designer Export.

7.3 Java License Terms

End User License Terms

1. Java Technology Restrictions. Licensee shall not create, modify, change the behavior of, or authorize licensees of Licensee to create, modify, or change the behavior of, classes, interfaces, or su-packages that are in any way identified as "java", "javax", "sun" or similar convention as specified by Oracle in any naming convention designation. In the event that Licensee creates an additional API(s) which: (a) extends the functionality of a Java Environment; and (b) is exposed to third party software developers for the purpose of developing additional software which invokes such additional API, Licensee must promptly publish broadly an accurate specification for such API for free use by all developers.
2. Trademarks and Logos. This License does not authorize an end user licensee to use any Oracle America, Inc. name, trademark, service mark, logo or icon. The end user licensee acknowledges that Oracle owns the Java trademark and all Java-related trademarks, logos and icons including the Coffee Cup and Duke ("Java Marks") and agrees to: (a) comply with the Java Trademark Guidelines at <http://www.oracle.com/html/3party.html>; (b) not do anything harmful to or inconsistent with Oracle's rights in the Java Marks; and (c) assist Oracle in protecting those rights, including assigning to Oracle any rights acquired by Licensee in any Java Mark.
3. Source Code. Software may contain source code that, unless expressly licensed for other purposes, is provided solely for reference purposes pursuant to the terms of your license. Source code may not be redistributed unless expressly provided for in the terms of your license.
4. Third Party Code. Additional copyright notices and license terms applicable to portions of the Software are set forth in the THIRDPARTYLICENSEREADME.txt file.
5. Commercial Features. Use of the Commercial Features for any commercial or production purpose requires a separate license from Oracle. "Commercial Features" means those features identified in Table 1-1 (Commercial Features In Java SE Product Editions) of the Software documentation accessible at <http://www.oracle.com/technetwork/java/javase/documentation/index.html>"

8 Contact Information

If you continue to have a problem, try using the Devconnect Avaya Aura Orchestration Designer Forum (<https://www.devconnectprogram.com/forums/forums/show/15.page>) or contact Avaya Technical Support:

1. Log in to the Avaya Technical Support Web site <https://support.avaya.com>.
2. Contact Avaya Technical Support at one of the telephone numbers in the Support Directory listings on the Avaya support Web site.

Avaya Global Services Escalation Management provides the means to escalate urgent service issues. For more information, see the Escalation Contacts listings on the Avaya Web site.