OpenCDS RunTime Installation Guide

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- Document Version History
  - 8/28/2011
    - Created by Kensaku Kawamoto based on configuration instructions for OpenCDS alpha release
    - Changes include:
      - Use of Drools and Guvnor 5.2 instead of 5.1.1
      - More information on 64-bit OS configuration
      - Use of newest releases of software components
  - 11/8/2011
    - Updated by Kensaku Kawamoto, with verification on 32-bit and 64-bit Windows OSs
    - Use of Drools 5.3.0 instead of 5.2.0
  - 11/9/2011
    - Updated by Kensaku Kawamoto to include use of SilkSVN for 32-bit OSs as well
  - 11/10/2011
    - Updated by Kensaku Kawamoto to note need to use latest Tortoise SVN version
  - 11/16/2011
    - Updated by Kensaku Kawamoto to include preliminary Guvnor/Designer installation instructions and to make additional note regarding Tortoise SVN
  - 11/29/2011
    - Updated by David Shields to include solution to failed installation of JBoss Application Server in a path including "Program Files (x86)".
  - 12/16/2011
    - Updated by David Shields to include alternate installation paths, 2.0 version of JBoss Designer, alternate ports for JBoss, and availability of OpenCDS 1.0 binaries.
  - 12/17/2011
    - Updated by David Shields to include information on extended default timeout for JBoss AS 7.0.2
  - 11/14/2012
    - Major update by David Shields to reflect latest versions of all components, including Drools 5.4, JBPM Designer 5.3, and JBoss 7.1.x
  - 1/11/2013
    - Updated to reflect Drools 5.5, Designer 5.4
  - 5/21/2013
    - Removed developer setup, and Guvnor setup instructions to create new RunTime Installation Guide

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Note: If you have Windows User Access Control turned on, you may need to disable it in order to complete the installation properly.

We also have reports that OpenCDS has been successfully installed on Linux and Macintosh machines, by users who are experts in those environments.

Also note: these instructions do not encompass setting up an Apelon DTS terminology service instance. Setting up such an instance is not required for use of OpenCDS. Documentation on setting up an Apelon DTS instance can be found at http://apelon-dts.sourceforge.net/.

NOTE: we have created a common, publicly accessible Apelon DTS instance for maintaining a central set of concepts for use by the OpenCDS community. Software to access this is included in the OpenCDS source distribution.

I. Installation and Setup of Infrastructure Components

A. Install Java

1) **Install Java SE SDK version 6**
   a) Download appropriate 32-bit or 64-bit Java SE SDK from http://www.oracle.com/technetwork/java/javase/downloads/index.html.
   b) Run executable, install using default options
      i) You can use a non-default installation directory if desired
   c) Control Panel → System → Advanced → Environment Variables → System Variables
      i) Set JAVA_HOME to Java SE SDK location
         (1) E.g., C:\Program Files\Java\jdk1.6.0_26
      ii) Add %JAVA_HOME%\bin to Path
         (1) In this example, was added to beginning of Path

B. Install Tomcat

1) **Download latest Tomcat** using "32-bit/64-bit Windows Service Installer" from relevant download page at http://tomcat.apache.org/
   a) OpenCDS has been tested using both Apache Tomcat versions 6 and 7, and it can be built to run on either, but **the public download is built for Tomcat version 6**.
      i. Note: OpenCDS will not deploy on JBoss without making some changes to the included libraries
   b) Accept defaults
   c) Installation directory may be changed if desired
   d) Set Tomcat Administrator Login to something secure
      i. You may even prefer to remove the administrator login if you have physical access to the server.
2) Control Panel → System → Advanced → Environment Variables → System Variables
   a) Set CATALINA_HOME to, e.g., "`C:\Program Files\Apache Software Foundation\Tomcat 6.0`"
   b) Add %CATALINA_HOME%\bin to Path
      i. In this example, was added to beginning of Path

C. Install OpenCDS Sample Knowledge Repository

1) Download opencds-knowledge-repository-data.zip from the OpenCDS website | Members | Binary Downloads | at http://develop.opencds.org/OpenCDSDemo/latest/opencds-knowledge-repository-data.zip
2) Unzip it to a location on the same machine where you will be running Tomcat.
   a) NOTE: you won't have to change any configuration settings if you unzip it into "C:/OpenCDS".
   b) NOTE: There is a configuration file named "opencds-decision-support-service-config.xml" that you will need to update if you have located the sample KR somewhere other than "C:/OpenCDS". This file is found inside the exploded war file at

<servletContainerPath>/opencds-decision-support-service/WEB-INF/classes and it specifies a default path of "C:/OpenCDS/opencds-knowledge-repository-data/resources_v1.1".

D. Install OpenCDS RunTime WAR file

1) Download latest OpenCDS RunTime war file from the OpenCDS website | Members | Binary Downloads | OpenCDS11 at http://www.opencds.org/Members/BinaryDownloads/OpenCDS11.aspx.
2) Rename the file to "opencds-decision-support-service.war" (this step is not absolutely necessary, but will make your runtime match other instructions in our documentation, and so it is probably a good idea unless you know what you are doing).
3) Stop Tomcat
4) Copy the opencds-decision-support-service.war file into the %CATALINA_HOME%\webapps folder
5) Restart Tomcat

E. Test the Installation

1) Open a web browser on the same machine that you installed Tomcat on, and go to http://localhost:8080/opencds-decision-support-service/evaluate?wsdl
   a) The browser should display the WSDL.
   b) If it is installed on a different machine, or you changed the default port to something different than 8080, make the appropriate changes to the URL above.

2) To interact with the DSS, a convenient program to use for testing and demo is the oXygen XML editor (http://www.oxygenxml.com). We use the Academic/Non-Commercial version, and a free trial license is available at http://www.oxygenxml.com/register.html).

3) Other tools are available, and some are open-source, such as SoapUI at http://www.soapui.org , or the FireFox addon at https://addons.mozilla.org/en-US/firefox/addon/soa-client, for those of you who want to experiment.

4) You can also use the open-source MirthConnect software to test rules, as well as in a production environment, because it includes support for web services. The software can be found at http://www.mirthcorp.com/products/mirth-connect. We have some sample channels available in the Demo folder.

5) If you are using oXygen, go to Tools --> WSDL SOAP Analyzer --> Saved SOAP request, and use the sample .wssc files available `from the OpenCDS website | Members | Binary Downloads | OpenCDS11`. Hitting the "Send" button will interact with the DSS. Note that a base64 converter for reading base64 payloads is available at http://ostermiller.org/calc/encode.html or http://www.opinionatedgeek.com/DotNet/Tools/Base64Encode/default.aspx .