### Knowledge Link Configurator

The Knowledge Link Configurator is a Java application based on Eclipse RCP. The Rich Client is exported with the following folder structure:

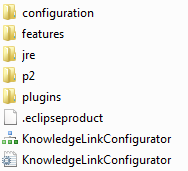


Figure 1 - Knowledge Link Configurator folder structure

All plugins and the java runtime environment necessary to run the application is provided. To deploy the Knowledge Link Configurator, all files and folders needs to be copied into a single folder. The provided *KnowledgeLinkConfigurator.exe* runs the application. The major configuration file named *plugin\_customization.ini* can be found in *“plugins\de.cas.merlin.product.model.vario.pms\_4.2.0.jar\”*. This is where information about platform connectivity needs to be provided, i.e. the information to communicate with the ContextManager and the Knowledge Link Engine:

* HOST  
  The host of the platform (e.g. ‘localhost’)
* CM\_QUEUE  
  The Message Queue for communication with the Context Manager
* KL\_QUEUE  
  The Message Queue for communication with the knowledge link engine
* MESSAGE\_ENCODING  
  The Message Encoding used (e.g. UTF-8)
* BPMN\_SERVER\_ADDRESS  
  The address of the jBpm Server for retrieving Operators (e.g. <http://localhost:8080/jbpm-console/>)
* DEPLOYMENT\_ID  
  The ID of the deployment that contains the Operators to be retrieved (in the form of <group>:<name>:<version>, e.g. osmose.platform:operators:1.0)

When the Knowledge Link Configurator is started, the user is prompted to choose a workspace directory, in which all the rule files will be stored.

After choosing a workspace, knowledge links can be created graphically. Figure 2 shows the user interface of the Knowledge Link Configurator. After successful connection to the Context Manager, the Ontologies can be imported to the workspace and are visualized in the knowledge base view on the top right side of the user interface. New Knowledge Links can be created on the bottom right side via the context menu or the File menu. When a new knowledge link is created and opened, a graphical drawing area is shown in the middle of the user interface. On the left side of this area, operators can be found. These operators are loaded from the jBPM server using the defined deployment ID. Elements from the operator palette and from the knowledge base view can be dragged and dropped on the drawing area to create the demanded knowledge link.

In the example of the Figure 2, a knowledge link is created between the digital and the real world. Camshaft Measurement and Camshaft Set Point are taken from the imported Digital World Ontology, whereas the Deviation is pushed to the Real World.

Via the toolbar on the top of the knowledge link configurator, knowledge links can be checked for syntactical discrepancies or uploaded to the middleware.

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Figure 2 - Knowledge Link Configurator