1. **Run-Time execution installation**

Installation requirements for CIM To MODelica Transformation Tool

1. Make sure you have the latest JAVA runtime installed (JAVA 1.8 or later).
2. Make sure you have installed the Apache JENA and the JAXB libraries. Otherwise, you can download them from the following links:
   1. [Apache JENA](https://jena.apache.org/download/index.cgi)
   2. [JAVA JAXB](https://github.com/javaee/jaxb-v2)

Note: The cim2modelica.jar includes these two libraries. The .jar file should execute without problems, otherwise, check your JAVA installation status.

1. **Tool Set-up**

Create a working folder where to download and place the following required files:

1. The cim2modelica.jar (It contains the necessary libraries to run the code)
2. Create a ./res/ folder, to store the input files and resources:
   1. The folder ***./res/map***, which contains the mapping rules for populating the CIM values into the OpenIPSL component instances.
   2. The folder ***./res/network*** containing the CIM files of the network model
3. Create a ./model/ folder, where the auto generated models will be placed
4. **Using the tool in command line:**

Open a console terminal and go to the working directory where you have downloaded the .jar file. Use the command:

**java -jar –d <model\_name> <relativePath\_FolderCIMFiles>**

1. The option –d indicates that the input for the model input is the folder that contains the CIM profile files.
2. The ./relativePath\_FolderCIMFiles has to contain the following CIM profiles’ files:
   1. *xxx\_EQ.xml*- equipment profile CIM file
   2. *xxx\_TP.xml*- topology profile CIM file
   3. *xxx\_SV.xml*- state variable profile CIM file
   4. *xxx\_DY.xml* - dynamics profile CIM file
3. <model\_name> - name for the resulting Modelica model

As output files, the cim2modelica tool will save into the folder **./model**, the generated Modelica files.



Figure Detail of the resulting Kundur 2-Area [ref] model from CIM profiles. Machines with controllers are stored in the .mo files, under the *./PowerPlant* folder.