

# Generating FMU - Technology preview

You can generate an FMU (Functional Mock-up Unit) for external co-simulation of dynamic models that enables the exchange of simulation results between different simulation tools. The generated FMU exposes the defined input and output parameters of a model, as specified in a Simulation Configuration. The generated FMU runs the server-side simulation of a particular Simulation Configuration using given inputs and returns the outputs after each time step. FMUs can be generated for two platforms: Linux 64-bit and Windows 64-bit.



## Prerequisites

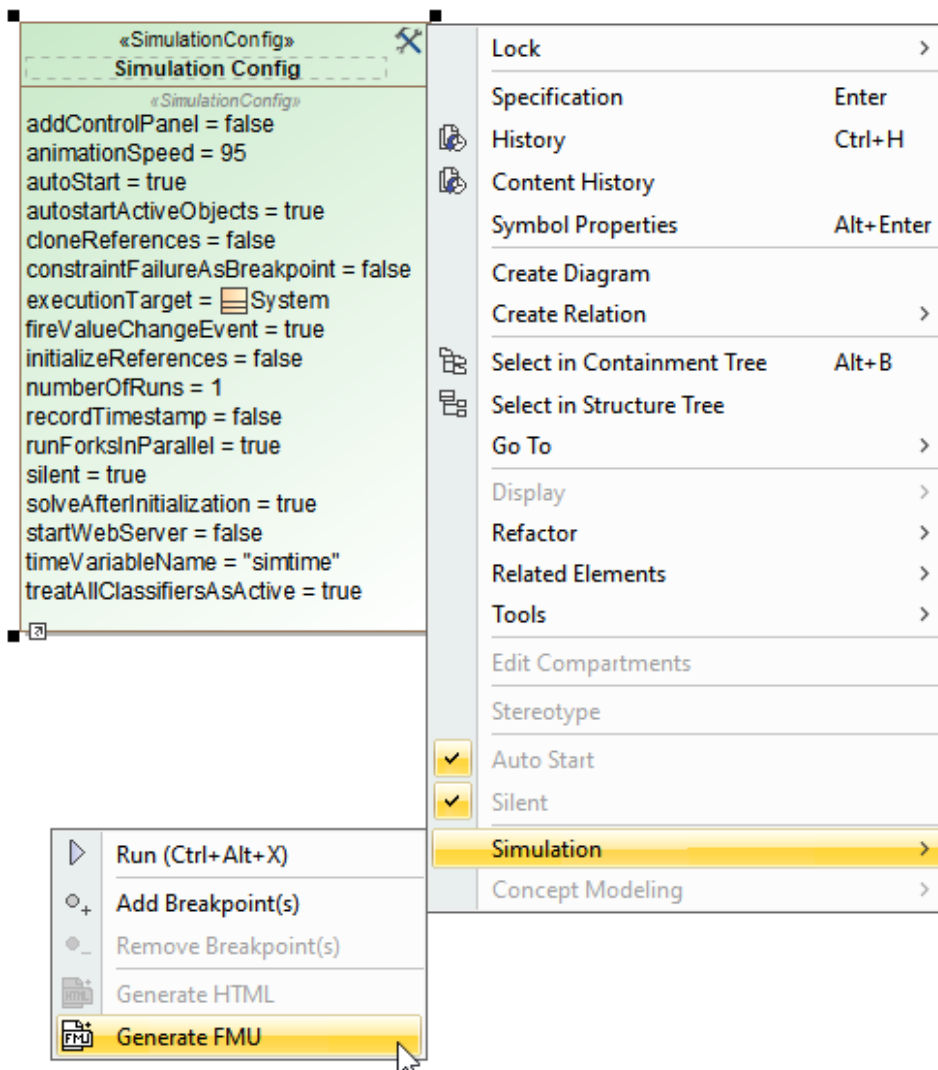
- You must have OpenJDK to generate FMU from the modeling tool.
- You must have a simulation server certificate to co-simulate the generated FMU.
- You must use the generated FMU with tools that use the same JAVA version as the modeling tool; otherwise, you will not be able to run the generated FMU.

FMU generation uses selected Simulation Configuration properties, and can contain the following defined data:

- **Start Time**, **End Time** and **Step Size** property values.
- **Input Parameters** property value: the default values from the defined input parameters will be included in the generated FMU.
- **Output Parameters** property value: the default values from the defined output parameters will be included in the generated FMU.

To generate an FMU

1. Open a Teamwork Cloud project.
2. Right-click a Simulation Configuration and select **Simulation > Generate FMU**.

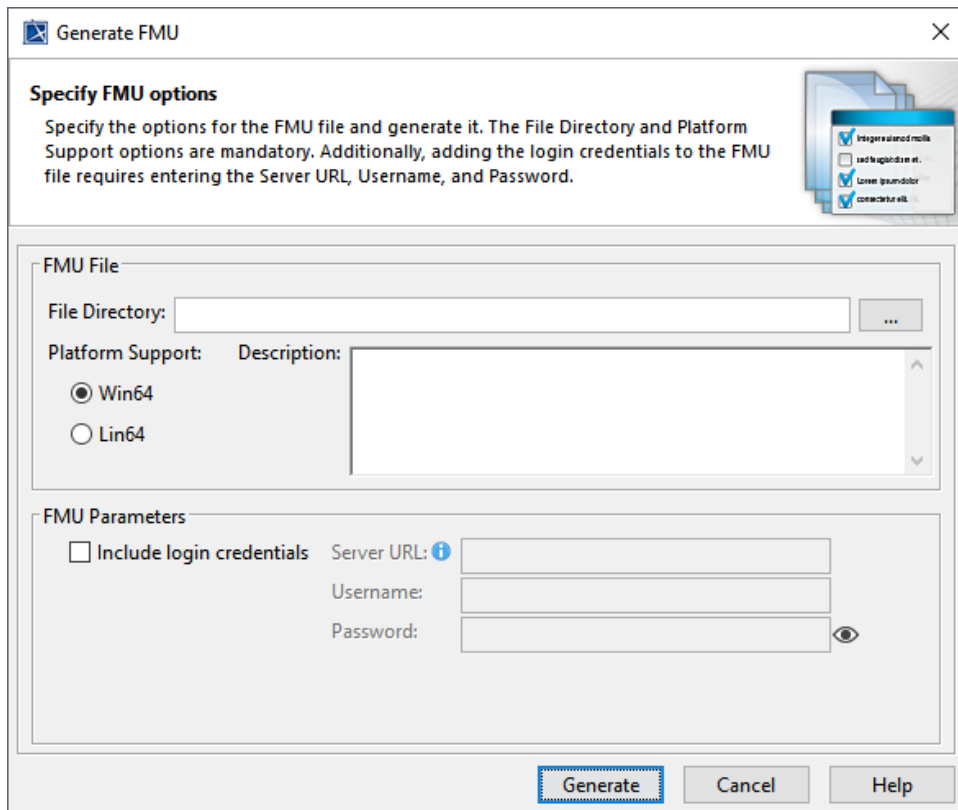


3. In the **Generate FMU** dialog specify the following:

- In the **File Directory** box, specify the location where the generated file should be stored.
- Select the **Win64** or **Lin64** radio button, depending on the platform on which you will run the generated FMU.
- Optionally, select the **Include login credentials** check box and specify a server-side simulation server address and login credentials to be stored in the generated FMU file.



You can leave the **Include login credentials** check box empty and provide the login credentials later as FMU parameters while importing an FMU file. In this case, the credentials will not be stored in the generated FMU file.



The **Generate FMU** dialog box is titled "Specify FMU options". It contains a text box for "File Directory" with a browse button "...". Below this are radio buttons for "Platform Support": "Win64" (selected) and "Lin64". To the right of the radio buttons is a "Description:" text area. Below the platform options is a section for "FMU Parameters" containing a checkbox for "Include login credentials". To the right of this checkbox are three text boxes for "Server URL:", "Username:", and "Password:". The "Password:" box has a toggle icon (an eye) to its right. At the bottom of the dialog are three buttons: "Generate", "Cancel", and "Help". A small inset window in the top right corner shows a list of checked options: "Integrator and tools", "Load the platform driver", "Connect to simulator", and "Connect to host".

4. Click **Generate**.



In the case of an FMU file generation error, see the detailed error message in the log file.