Run-Configuration of Tulsa

Step 1: Prerequisites

Install the Epsilon Framework, DICE Profile and EMF to the Eclipse.

- Epsilon: http://www.eclipse.org/epsilon/download/
- DICE Profile: https://github.com/dice-project/DICE-Profiles
- EMF: http://www.eclipse.org/modeling/emf/updates/

Step 2: Import the UML file

Copy the UML file to the folder “AntBuildfile/SourceModel/”.

Step 3: Configure the Ant build file - AntiWorkFlowForTrans.xml

1) Enter the UML file location

wikistats.di | AntiWorkFlowForTrans.xml

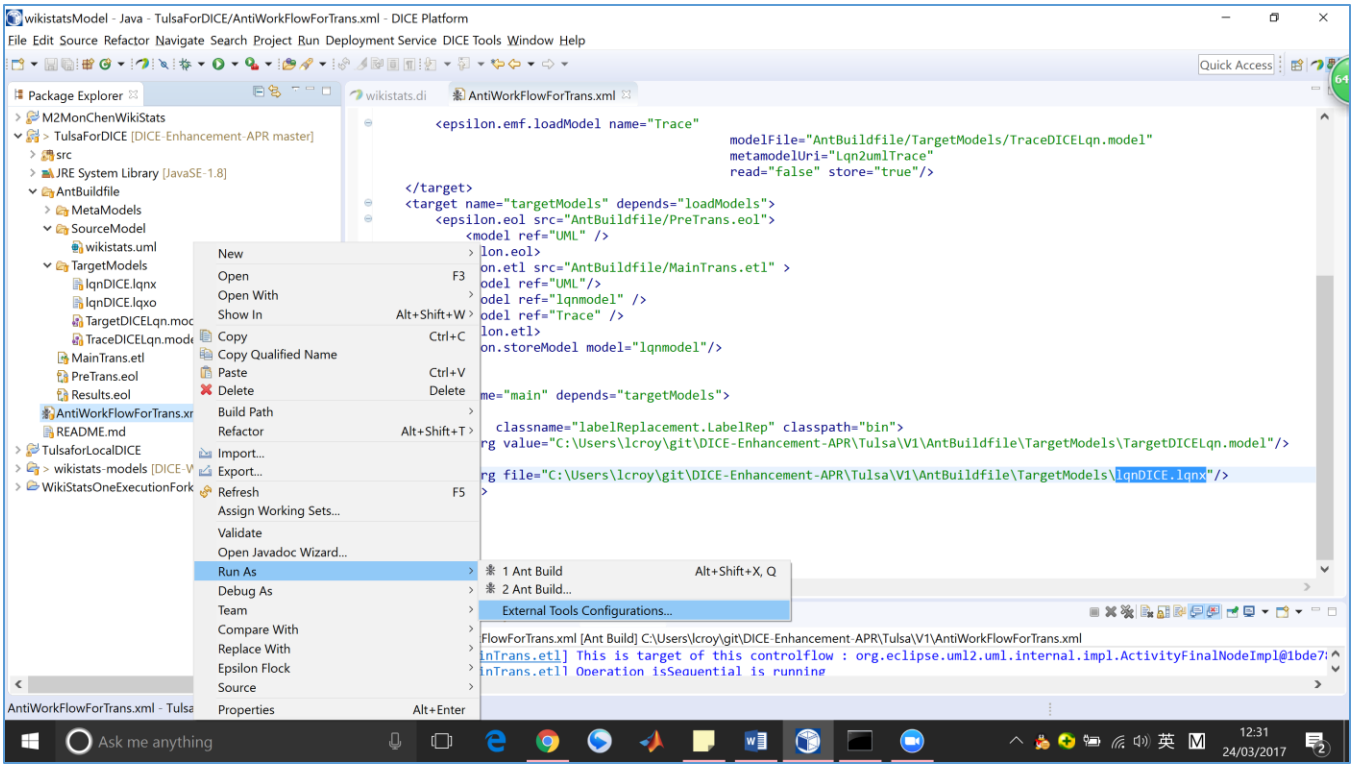
```
<?xml version="1.0"?>
<project default="main" >
    <target name="loadModels">
        <epsilon.emf.loadModel
                        name="UML"
                        modelFile="AntBuildfile/SourceModel/wikistats.uml"
                        metamodelUri="http://www.eclipse.org/uml2/5.0.0/UML"
                        read="true" store="true"/>
        <epsilon.emf.register file="AntBuildfile/MetaModels/lqnmodel.ecore"/>
        <epsilon.emf.register file="AntBuildfile/MetaModels/Lqn2umlTrace.ecore"/>
```

2) Enter the location where LQN model (“TargetDICELqn.model” and “lqnDICE.lqnx”) will be saved

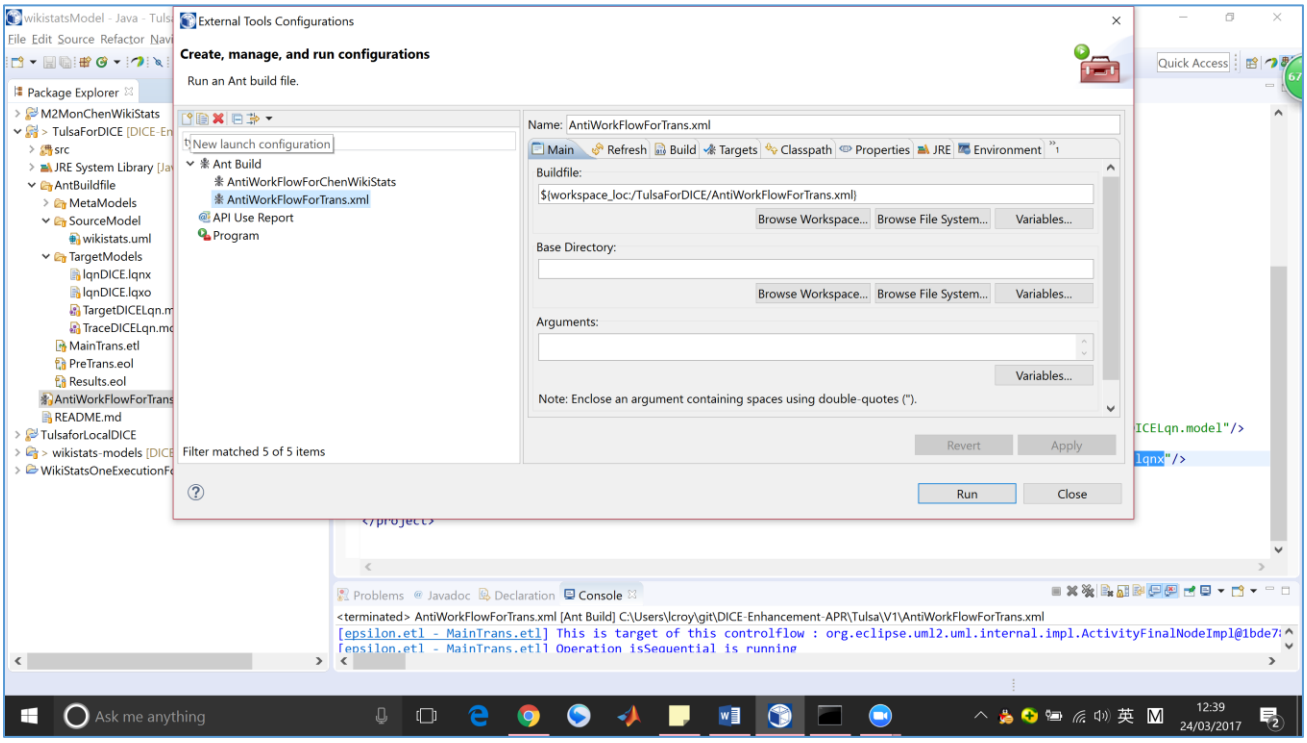
```
<target name="main" depends="targetModels">

    <java   classname="labelReplacement.LabelRep" classpath="bin">
        <arg value="C:\Users\lcroy\git\DICE-Enhancement-APR\Tulsa\V1\AntBuildfile\TargetModels\TargetDICELqn.model"/>

        <arg file="C:\Users\lcroy\git\DICE-Enhancement-APR\Tulsa\V1\AntBuildfile\TargetModels\lqnDICE.lqnx"/>
    </java>
</target>
```

Step 4: Running the Transformation Process

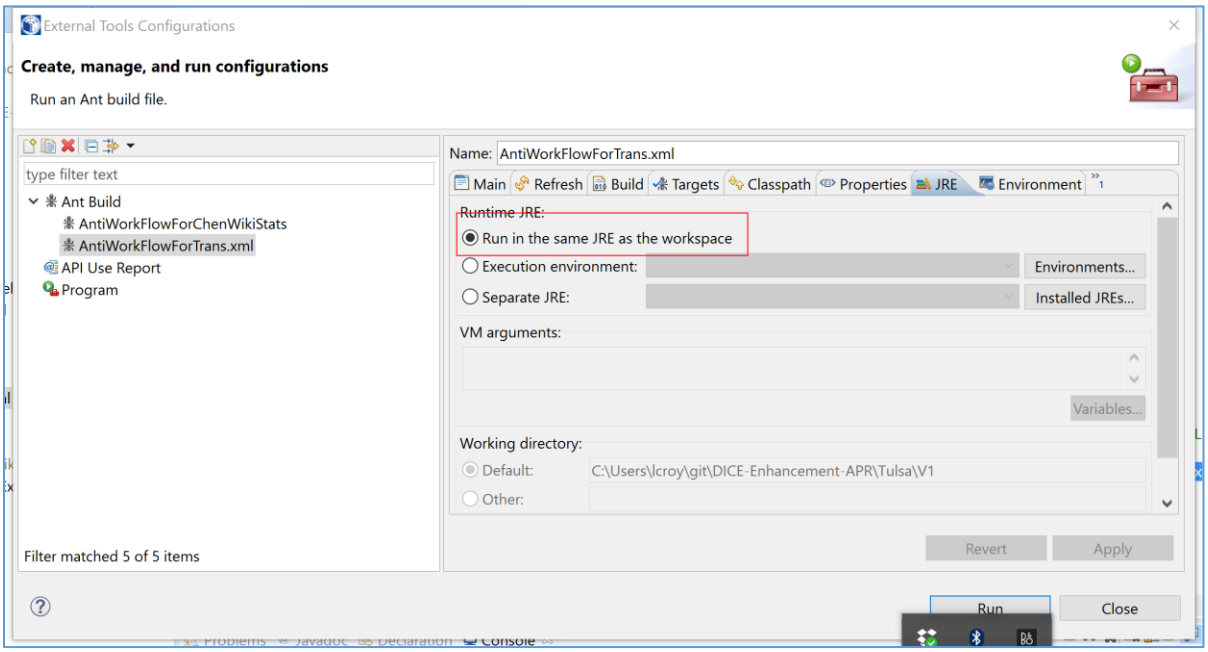
1) Right click the AntiWorkFlowForTrans.xml file: Run AS -> External Tools Configurations



2) Click "New launch configuration" button, and then click "Browse Workspace…" to select the AntiWorkFlowForTrans.xml.

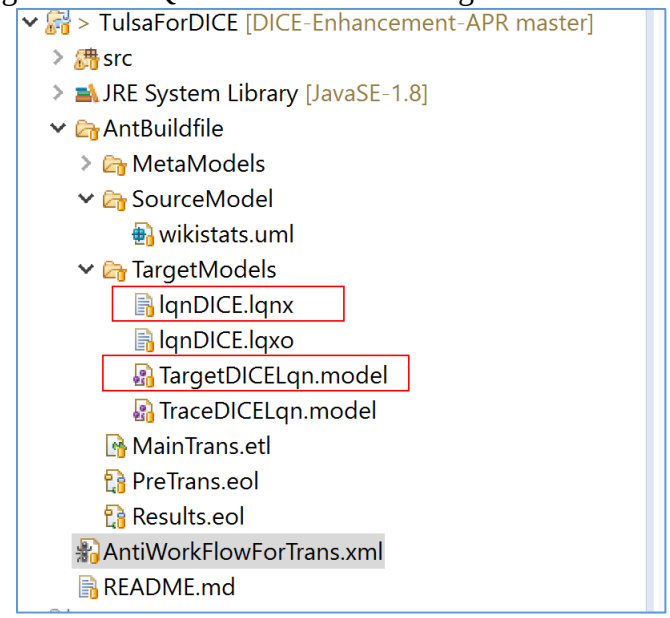


3) When running an ANT workflow that involves Epsilon tasks, please make sure you select the **Run in the same JRE as the workspace** option under the **JRE** tab of your launch configuration, then click the "Run".



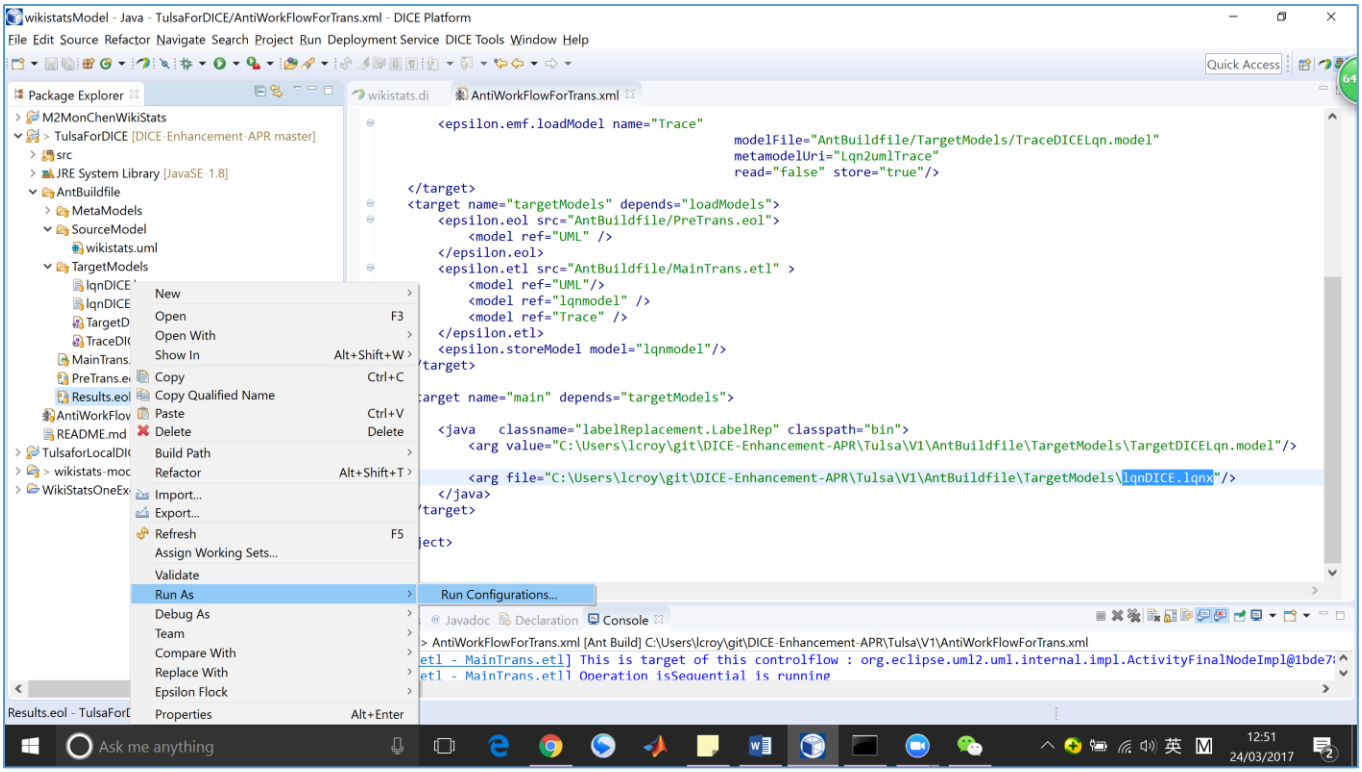
Step 5: Generate the LQN model

The files in the red boxes are generated LQN models after running the Ant build file.

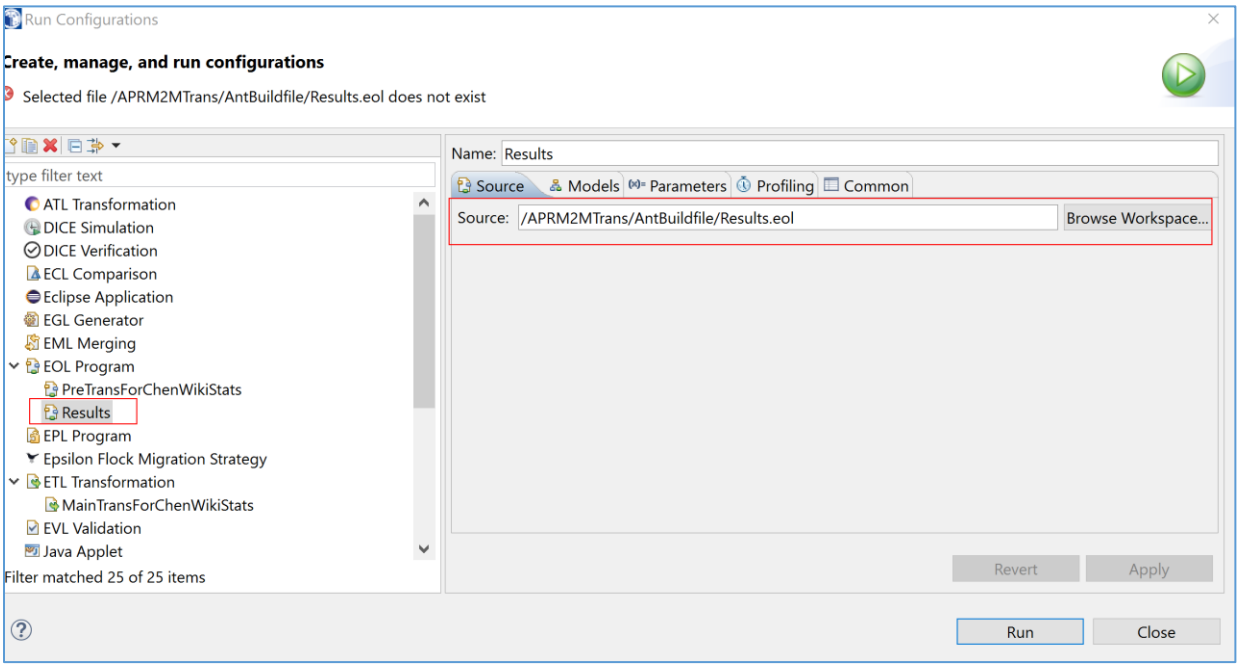


Step 6: Feedback of Performance results to Software Model:

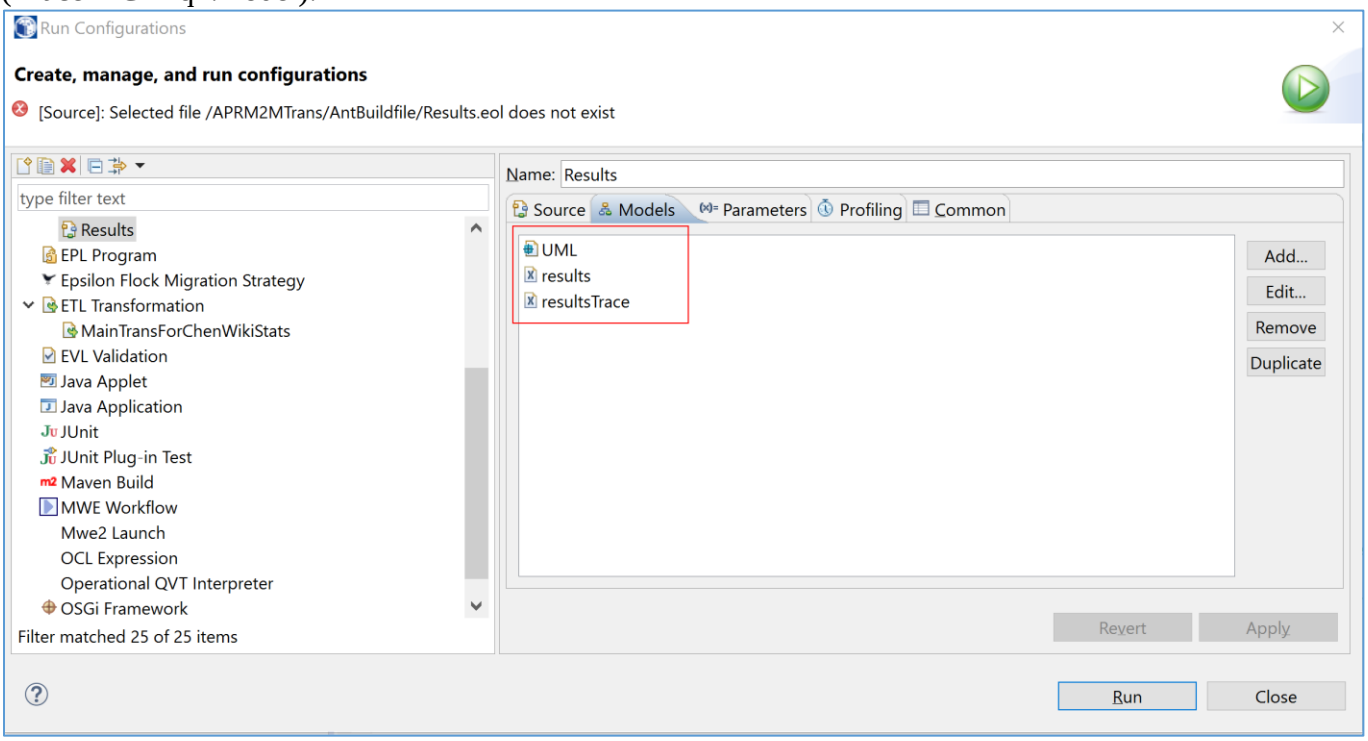
1) Right click on Results.eol (its path /AntBuildfile/Results.eol): Run As -> Run Configuration



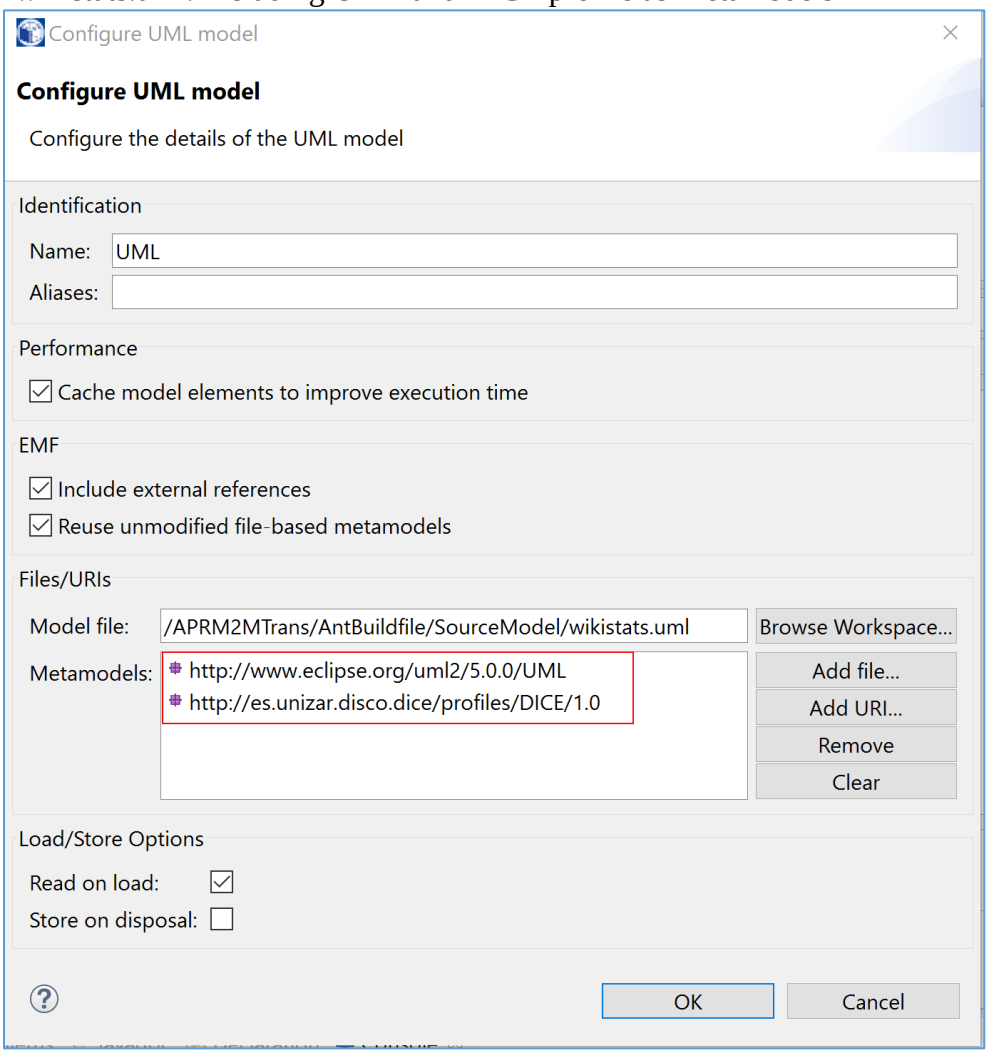
2) Click “New launch configuration” button to import the Results.eol file, and then click “Browse Workspace…” to select the Results.eol.



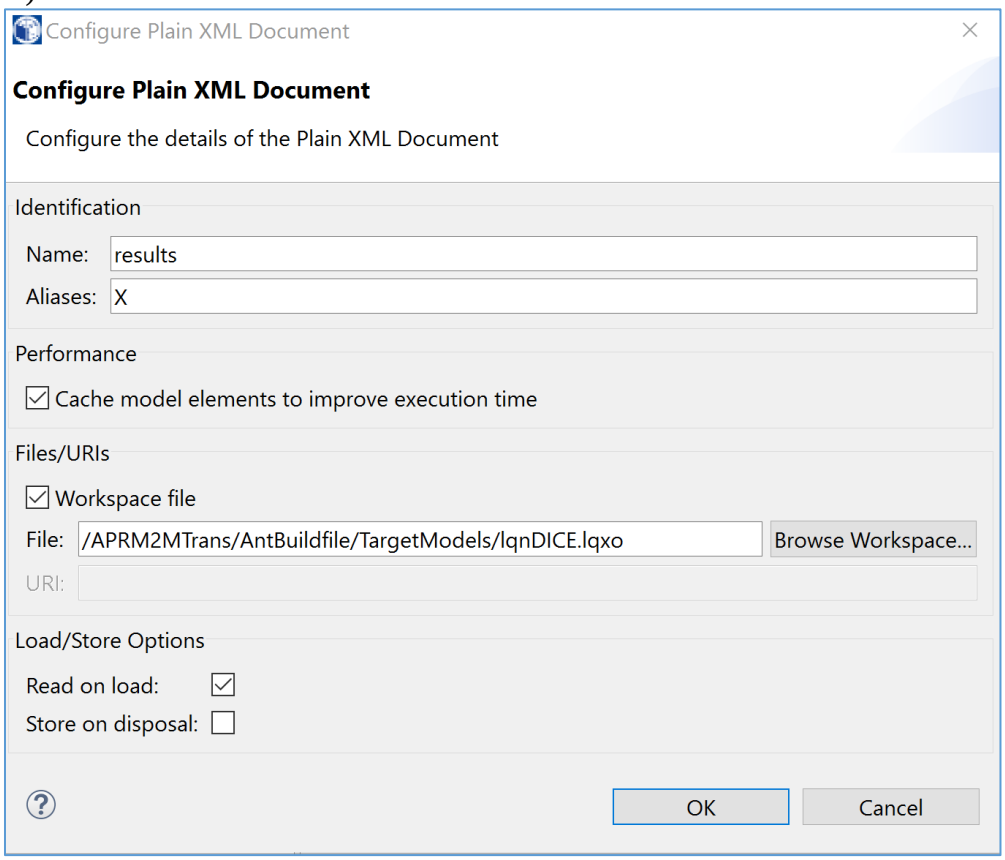
3) In configuration you need to add three files: UML file, Solved file(lqnDICE.lqxo) and Trace file (TraceDICELqn.model).



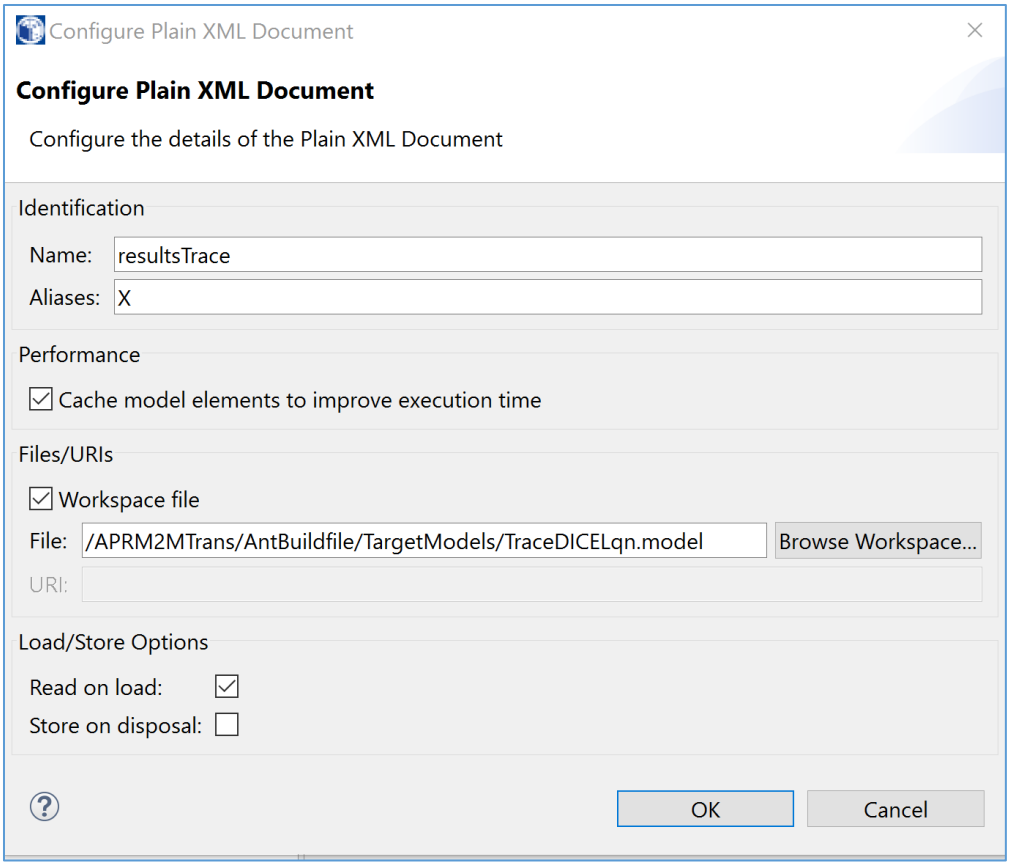
- Add UML file - wikistats.uml. Including UML and DICE profile as Metamodels



- Add a plain xml file for analysis results – lqnDICE.lqxo (LQN performance results after solving it by existing solver)



- Add a plain xml file for trace – TraceDICELqn.model(generated automatically after running the transformation



4) Click “run” button and the results will show at console. The following is an example of the analysis results.