MONASH UNIVERSITY
DEPARTMENT OF ELECTRICAL & COMPUTER SYSTEMS ENGINEERING
ECE4045/ECE5045 Network Performance

Getting Started with OMNeT++ IDE in 10 Steps

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1 Objectives

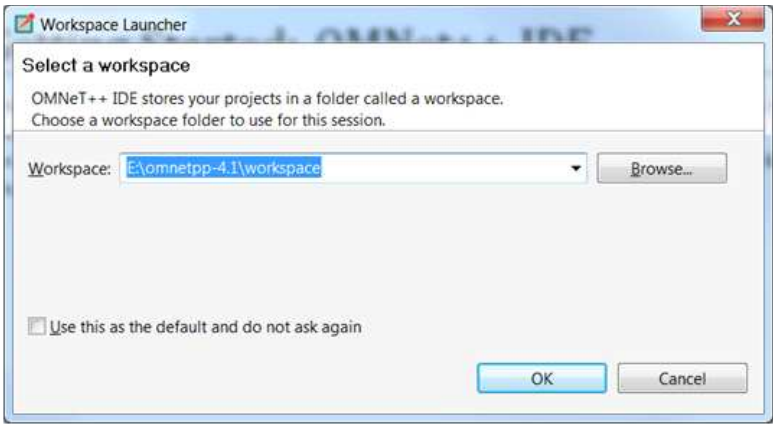
This short tutorial aims to help you for setting up and running a simple OMNeT++ simulation project through its IDE (Integrated Development Environment).

2 Procedure

OMNeT++ IDE is based on Eclipse[1] and works both in Windows and Linux environments. Further details can be found in the installation guide[2]. Here are the 10 steps for running your first simulation through the OMNeT++ IDE:

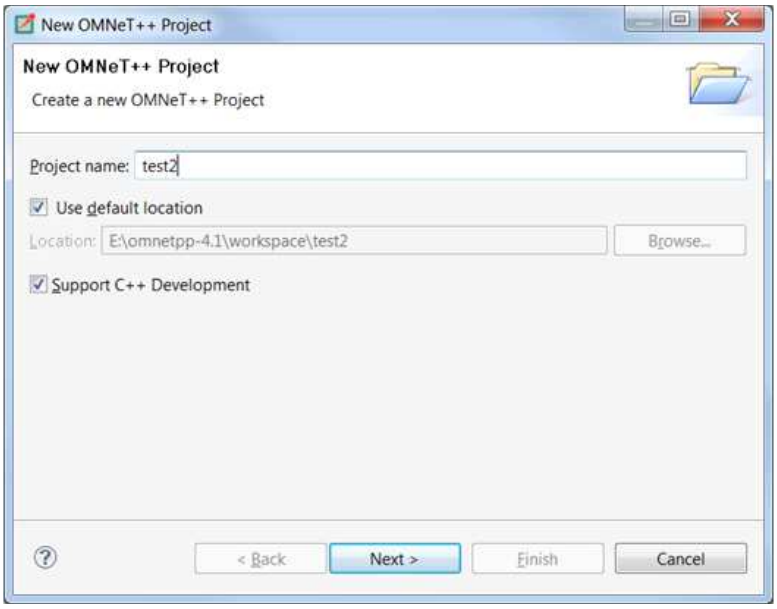
1. Start the OMNeT++ IDE via the terminal through this command:
   `omnetpp`
   (here, we assume that you are using the Linux environment)

2. Select a workspace to store your OMNeT++ projects. Note that, you must select a directory with no spaces in the path (for example, do not use the Desktop on Windows). You can use the same workspace for multiple projects.

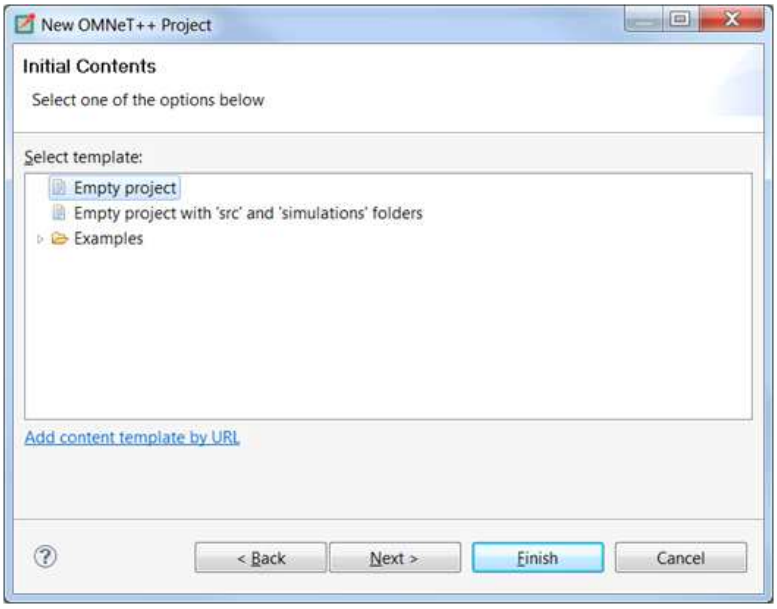


3. Start a new OMNeT++ project in your workspace from the **File** menu by selecting **File** → **New** → **OMNeT++ Project**. Choose a name for your project and click **Next**.

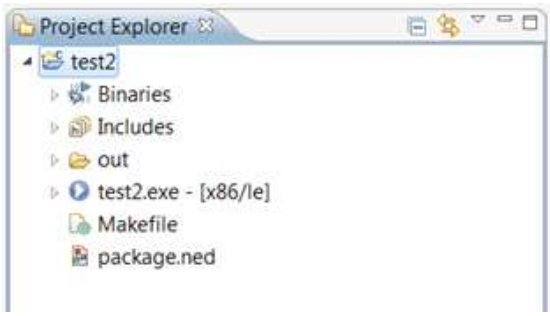
[1] http://eclipse.org/home/newcomers.php
[2] http://omnetpp.org/doc/omnetpp41/InstallGuide.pdf



On the next screen choose **Empty Project**. You may then choose **Finish** or click **Next** to examine the additional options.

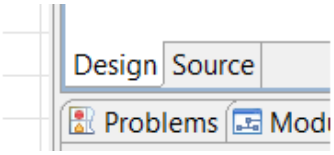


4. Double click on your project in the **Project Explorer** to expand the project files as shown below



Note: To more closely follow the "Tic Toc" tutorials online, you may delete the file `package.ned` in your project and create a new file (see Step 5) or you may directly edit this file. However this will introduce some minor differences to the files given in the tutorial websites.

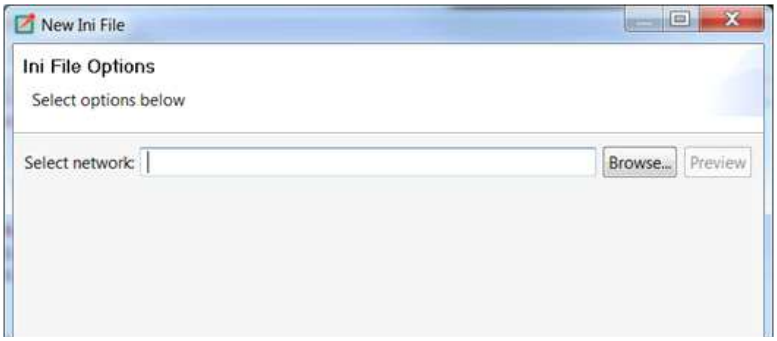
5. To create a new NED file choose **File** → **New** → **Network Description File (NED)** then select your project folder and give the new file a name, for example `tictoc2.ned`. On the next screen select **Empty NED file** and choose **Finish**. By default this will bring up an empty screen with the NED file in "Design" Mode. You can modify the code directly by switching to "Source" Mode at the bottom of the pane:



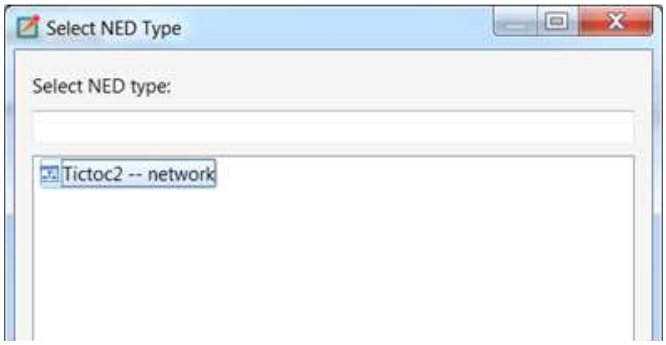
Paste the NED code from one of the online tutorials or write your own code into this file.

6. To create a new C++ file, choose **File** → **New** → **File** and again as in Step 5, select your project folder and give the file a name, for example `txc2.cc`. Be sure to use the `.cc` extension so that OMNeT++ recognizes this as a C++ class file. Paste the C++ code from one of the online tutorials or write your own code in this file.

7. Finally, you need to create an "ini" file for your project. Choose **File** → **New** → **Initialization File (ini)**. This file must be called `omnetpp.ini` and use the **Empty Ini File** template. When asked to select a network choose **Browse...**.



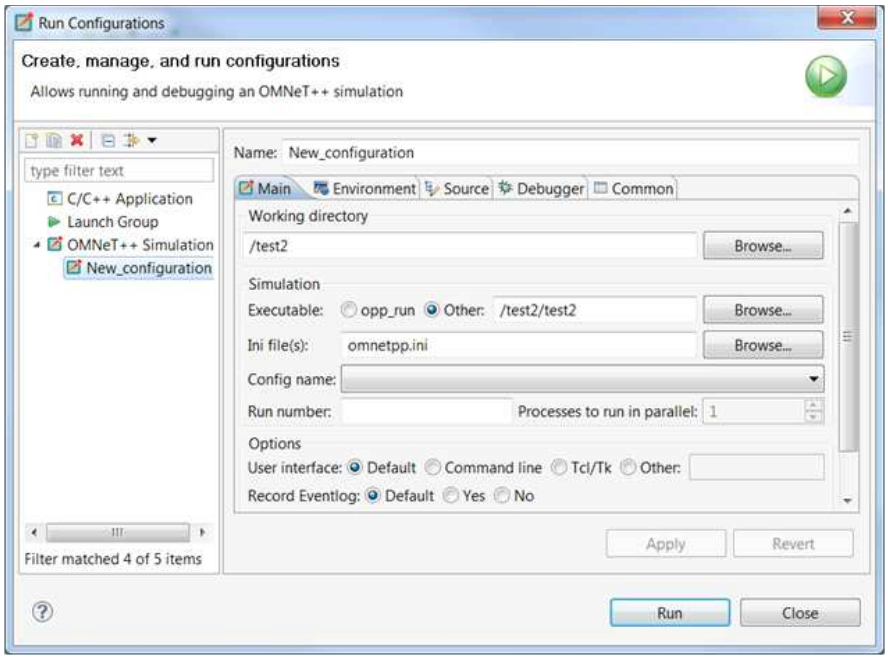
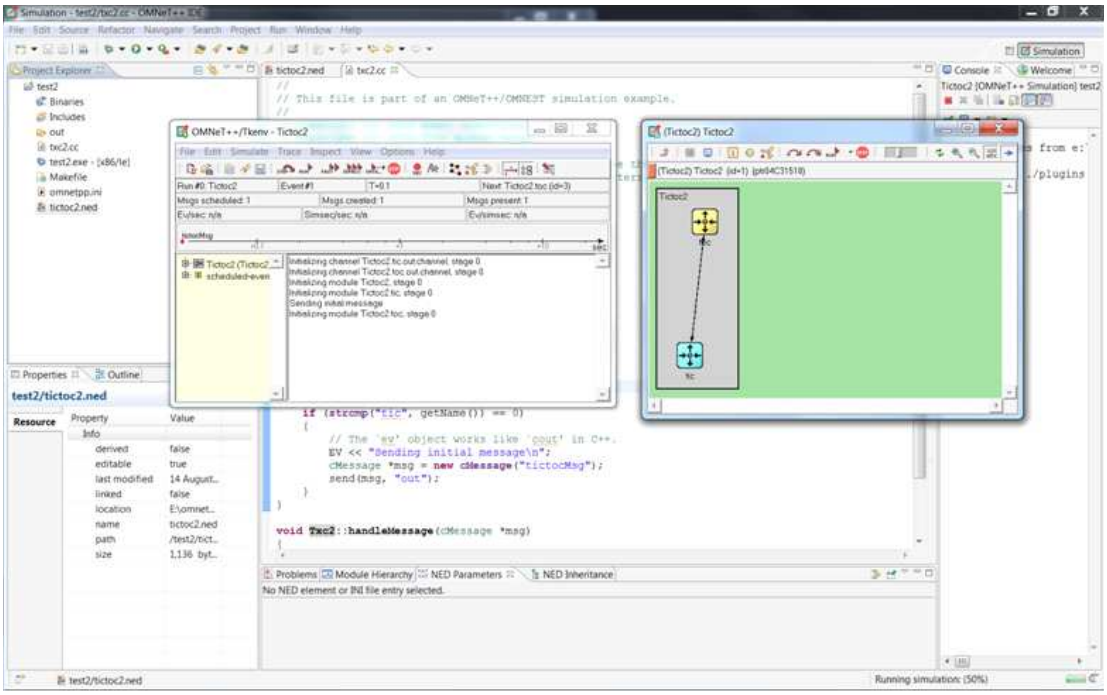
The network specified in your NED file should then be automatically detected. Make sure it is correct and then select it and click 'Ok'.



Then, click **Finish** to complete the wizard.

8. Your Project is now ready to be compiled. Choose **Project** → **Build All** from the toolbar. Observe that the compilation completes without any errors. *If there are any errors in your project you need to correct them before proceeding*.

9. Create a run configuration for your project by choosing **Run** → **Run Configurations**. Double click on **OMNeT++ Simulation** in the left pane and then choose **Run**.



10. If there are no errors in your project the OMNeT++ GUI will load your project ☺