DEPARTMENT OF INFORMATICS

TECHNISCHE UNIVERSITÄT MÜNCHEN

Master Practical Course
Computer Network Simulation

11.01.2023

Assignment 3
Part 2 - Guide

Group 2

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The following steps are required to make the project run:

1. Make sure that you have OMNeT++ installed correctly and it is ready to use.
2. Make sure that you have INET Framework installed correctly and it is ready to use.
3. Start OMNeT++.
4. Select "File > Import..."
5. Select "General > Existing Projects into Workspace"
6. Select "bunker-net-sim" folder you extracted as the root directory.
7. Check "bunker-net-sim" project and click "Finish".
8. Open project properties of "bunker-net-sim".
9. Open "Project References", check "inet4.4" and click "Apply and Close".
10. Open project properties of "bunker-net-sim".
11. Open "OMNeT++ > Makemake", select "src:makemake..." and click "Options".
12. Switch to "Preview" tab on top.
13. You should see "-pINET -I$(INET4_4_PROJ)/src/ -linet –meta:recurse –meta:export-library –meta:use-exported-libs" in preview. If you do not, paste this there.
14. Click "Ok" and "Apply".
15. Open "C/C++ General > Paths and Symbols", select "src:makemake..." and click "Options".
16. Switch to "Includes" tab and click "Add...".
17. Check "Add to all configurations" and "Add to all languages".
18. Select "inet4.4/src" of your INET Framework installation and click "Ok".
19. Switch to "Library Paths" tab and click "Add...".
20. Check "Add to all configurations" and "Add to all languages".
21. Select "inet4.4/src" of your INET Framework installation and click "Ok".
22. Click "Apply".
23. Open "C/C++ General > Preprocessor Include Paths, Macros etc.", select "debug" Configuration and select GNU C++ Language.
24. Select "CDT User Setting Entries" and click "Add...".
25. Select "Include Directory", select "inet4.4/src" of your INET Framework installation and click "Ok".
26. Click "Add" again, select "Library Path", select "inet4.4/src" of your INET Framework installation and click "Ok".
27. Do the last three steps also for "release" Configuration.
28. Click "Apply and Close".
29. "Clean Local" of "bunker-net-sim" project.
30. Build "bunker-net-sim" project.
31. Run "bunker-net-sim" project.

The following steps are required to run the data collection pipeline:

1. Make sure that you have completed the previous steps and got the project running.
2. You need a Python 3 installation (tested with Python 3.9.13).
3. Make sure that your INET 4.4 installation is located under the "samples" folder of your OMNeT++ installation (e.g. "omnetpp-6.0.1/samples/inet4.4")
4. You need to load the required environment variables and configurations for OMNeT++ (use the "source setenv" command in the OMNeT++ root directory) since the pipeline also uses these settings to locate the required tools.
5. Run the "pipeline.py" script with python (e.g. "python3 pipeline.py").
6. Wait until the script completes to run the simulations.
7. You can find the generated data files in the "results" folder and the plot files in the "plots" folder.

Bunker-Net-Sim Pipeline v2

1. It requires OMNeT++ 6.0.1.
2. It requires INET Framework 4.4.1.
3. It requires Simu5G Framework 1.2.1.
4. You need a Python 3 installation (tested with Python 3.9.13).
5. You need to load the required environment variables and configurations for OMNeT++ (use the "source setenv" command in the OMNeT++ root directory) since the pipeline also uses these settings to locate the required OMNeT++ tools.
6. You can run the pipeline with "python3 pipeline.py".
7. You must select the B. Build the project option before you run configurations if you didn't build the project before.".
8. To see available CLI arguments, use "python3 pipeline.py -h".
9. The plots and data files will be generated in the "simulations/results" folder after each simulation run.