National College of Ireland

Configuration Manual

MSc Research Project
Cloud Computing

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Project Submission Sheet
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Configuration Manual

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1 Introduction

The configuration manual explains about the tools/ softwares used in this research with their installation steps .Also, shows the setup to run this project in any iFogSim.

Mahmud and Buyya (2019).

2 Software Tools Used

For this research, I have used following tools :

- iFogSim - Used to simulate fog and cloud environment
- Eclipse IDE - Used for executing the java programs since the project has been done in Java language
- JDK 14.0.1 - In order to execute the java programs, Java libraries are needed.
- Excel- To create the charts for the evaluation

3 Hardware Specification

- Processor - Intel Core above i5
- Operating System - Windows
- RAM - Requires more than 8GB

4 Software Installation

- **Installation of JDK** Download the JDK from below link [1] Then install the required JDK
- **Installation of Eclipse** Doownload the Eclipse from the below link [2] Then install on your system
- **iFogSim Setup in Eclipse** Open the workpace in eclipse , the click the new project and select the iFogSim folder which can be downloaded from the link from the code which has been shared by me.

[1] JDK: `https://www.oracle.com/java/technologies/javase/14-0-1-relnotes.html`

[2] Eclipse: `www.eclipse.org/downloads/packages/release/2020-06/r/eclipse-ide-java-developers`

Figure 1: JDK Download

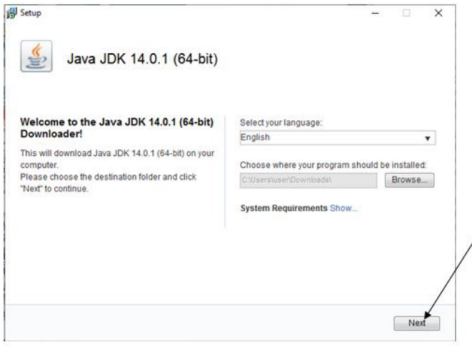

Figure 2: JDK Version

5 Project Setup in iFogSim

Navigate to org.fog.brownout package in eclipse, and select the FogBrownoutMain.java file. The run the file as shown below:

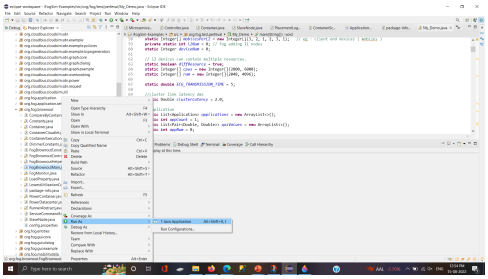

Figure 3: JDK Version

6 Performe Tests

Once the section 5 is completed, now we can test the proposed model, by chnaging the number of container and hosts in BrownoutConstants.java file. Once the values are changed , again execute the step 5, and below output will be displayed as shown below:

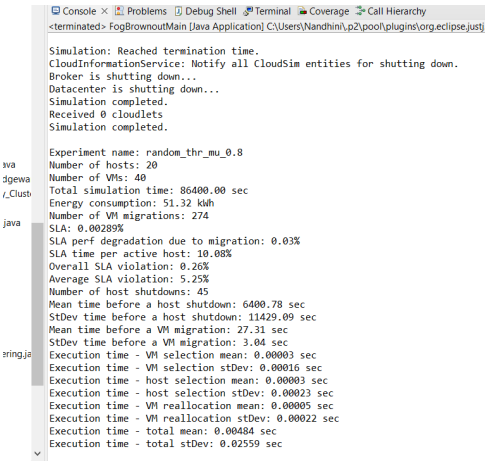

Figure 4: JDK Version

The same can be done by the running My_Demo.java file

7 Conclusion

Thus the the required software's and tools can be installed using this manual. Also, project can be executed using above steps.

References

Mahmud, R. and Buyya, R. (2019). Modelling and simulation of fog and edge computing environments using ifogsim toolkit, *Fog and edge computing: Principles and paradigms* pp. 1–35.