



ONOS Code Walkthrough #2

James Won-Ki Hong, Jian Li, Seyeon Jeong

**Dept. of Computer Science & Engineering
POSTECH**

<http://dpm.postech.ac.kr/~jwkhong>
jwkhong@postech.ac.kr

❖ Native Development (Mac or Linux)

1. Install *IntelliJ* (or *Eclipse*)
2. Install *Oracle JDK 8*
3. Install *apache-maven*
4. Install *apache-karaf*
5. Install *curl*
6. *git clone https://gerrit.onosproject.org/onos*
7. Set up the ONOS *bash_profile*
8. Build onos
9. *git clone https://github.com/Andrea-Campanella/onos-byon-1.11*

```
# cd /usr/local/src
# wget https://archive.apache.org/dist/maven/maven-3/3.3.9/binaries/apache-maven-3.3.9-
bin.tar.gz
# tar xvfz apache-maven-3.3.9-bin.tar.gz -C ./
# mv apache-maven-3.3.9 /usr/local/maven
# vi /etc/profile
export MAVEN_HOME=/usr/local/maven
PATH=$PATH:$MAVEN_HOME/bin
# source /etc/profile
```

Maven installation

❖ Lab Sections

- Lab #1: Basics
 - build skeletal app with a few provided files; build deploy app and test via CLI
- Lab #2: Core manager component
 - implement `NetworkService` methods; build, deploy, test
- Lab #3: Add intents
 - implement `addHost` to submit intents; build, deploy, test
- Lab #4: Remove intents
 - implement `removeHost` to withdraw intents
 - implement `remove-host` CLI command; build, deploy, test
- Lab #5: Distributed store component
 - implement `NetworkStore` using `ConsistentMap` primitive; build, deploy, test

Lab #1: Import & Build BYON App

❖ Follow Lab #1 of the Distributed Tutorial on the ONOS Wiki

<https://goo.gl/5ezwoI>

Lab #1: Import & Build BYON App

❖ Recap

- Imported the BYON project into IDE
- Built app via `mvn`
- Deployed app via `onos-app` command
- Verified functionality via `list-networks` CLI command

```
[sdn@localhost onos]$
```

I

Lab #2: Network Manager & Store

❖ Follow Lab #2 of the Distributed Tutorial on the ONOS Wiki

<https://goo.gl/0SQkP0>

Lab #2: Network Manager & Store

❖ Recap

- Referenced **NetworkStore** component via **@Reference**
- Implemented **NetworkManager** methods to use **NetworkStore** functionality
- Built & re-deployed the app
- Verified that network data is correctly tracked


```
[sdn@localhost byon]$
```