ONOS Code Walkthrough #3

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Lab #3: Adding Intents

❖ **Follow Lab #3 of the Distributed Tutorial on the ONOS Wiki**

https://goo.gl/Xhe5SE

Lab #3: Adding Intents

❖ **Recap**

- Referenced `IntentService` component via `@Reference`
- Enhanced `NetworkManager addHost` method to create and submit required `HostToHostIntents`
- Built & re-deployed the app
- Verified that intent is properly installed
- Verified that connectivity is established between hosts

DEMO


```
[sdn@localhost byon]$ ls
LICENSE   pom.xml   README.md   src   startmn.sh   target   topos
[sdn@localhost byon]$ cd src/
main/ test/
[sdn@localhost byon]$ cd src/
main/ test/
[sdn@localhost byon]$ cd src/
main/ test/
[sdn@localhost byon]$ cd src/main/
java/       resources/
[sdn@localhost byon]$ cd src/main/
java/       resources/
[sdn@localhost byon]$ cd src/main/java/org/onos/byon/
[sdn@localhost byon]$ vi NetworkManager.java
[sdn@localhost byon]$ vi NetworkManager.java
[sdn@localhost byon]$ cd
[sdn@localhost ~]$ ls
byon   onos
[sdn@localhost ~]$ cd byon
[sdn@localhost byon]$
```

Lab #4: Removing Intents

❖ **Follow Lab #4 of the Distributed Tutorial on the ONOS Wiki**

https://goo.gl/ZIjQlU

Lab #4: Removing Intents

❖ Recap

- Enhanced `NetworkManager removeHost` method to withdraw all required `HostToHostIntents`
- Enhanced `NetworkManager removeNetwork` method to withdraw all required `HostToHostIntents`
- Implemented and registered CLI commands
- Built & re-deployed the app
- Verified that intent is properly withdrawn
- Verified that connectivity is severed between hosts

DEMO

```
[sdn@localhost byon]$ ls
cli                          NetworkManager.java   NetworkStore.java
DistributedNetworkStore.java NetworkService.java
[sdn@localhost byon]$
```

Lab #5: Distributed Store

❖ **Follow Lab #5 of the Distributed Tutorial on the ONOS Wiki**

https://goo.gl/wx10vS

Lab #5: Distributed Store

❖ **Recap**

- Enhanced `DistributedNetworkStore` to use ONOS `ConsistentMap` distributed primitive
- Built & re-deployed the app
- Verified that intent is properly distributed to other ONOS instances in the cluster

DEMO

ONOS Tutorial Recap

❖ **Final Recap**

- Imported project into IDE
- Used `mvn` to build and `onos-app` to deploy app
- Used `@Reference` to get reference to other components
- Controlled connectivity between hosts via `IntentService`
- Created a distributed store using `ConsistentMap` primitive
- Implemented CLI commands

References

1. ONOS Tutorial: https://wiki.onosproject.org/display/ONOS/Distributed+ONOS+Tutorial

2. BYON App: https://github.com/Andrea-Campanella/onos-byon-1.11

3. Karaf: http://karaf.apache.org/