

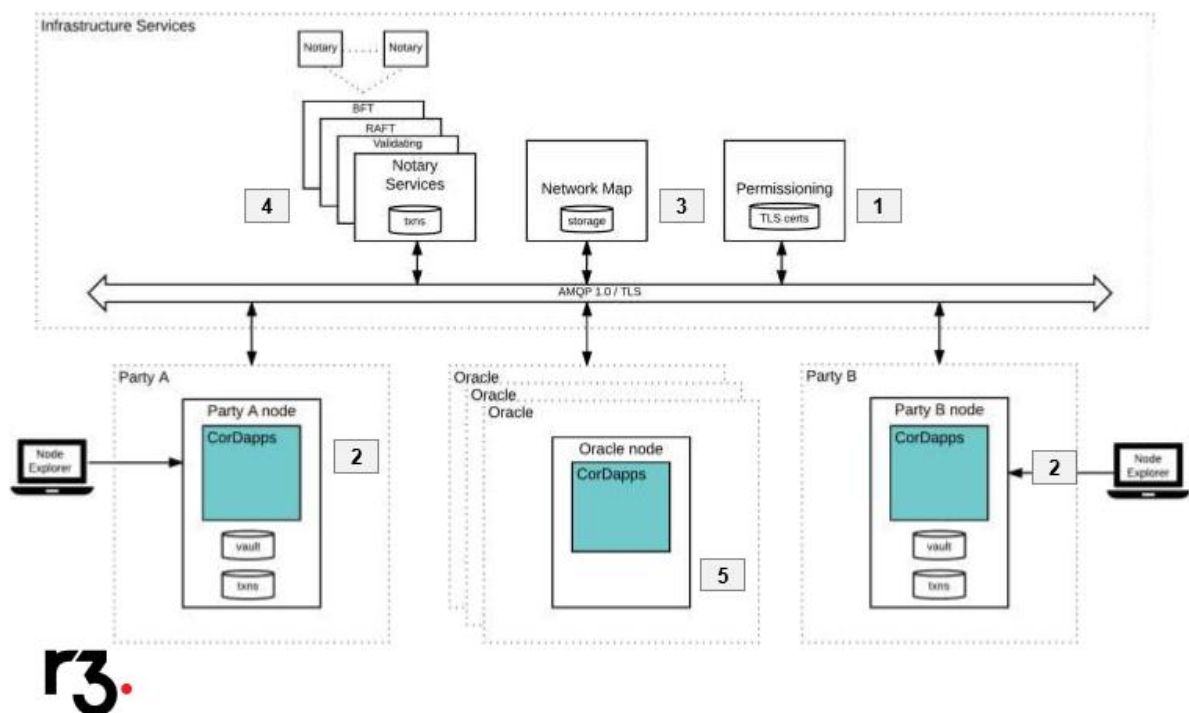
Corda : Distributed Ledger Technology

- Used by businesses, such as financial institutions
- Keep a shared ledger of transactions
- No need to know about each and every transactions
- A Corda network is made up of nodes running Corda and CorDapps
- Communication between nodes is point-to-point, no global broadcasts.
- The network is permissioned, with access controlled by a doorman

Corda Network : Detailed Overview

A Corda Network includes

1. Doorman -: Provide access to eligible nodes with a root-authority-signed TLS certificate.
2. Network Map Service -: Publishes IP addresses through which all nodes can be reached
3. Corda Nodes (2 or more) -: Regular nodes communicate with other nodes, notaries & oracle
4. Notary Nodes (1 or more) -: Attest uniqueness and validity of ledger updates.
5. Oracle Services (0 or more)-: Link ledger to outside world.



Corda Setup (Windows)

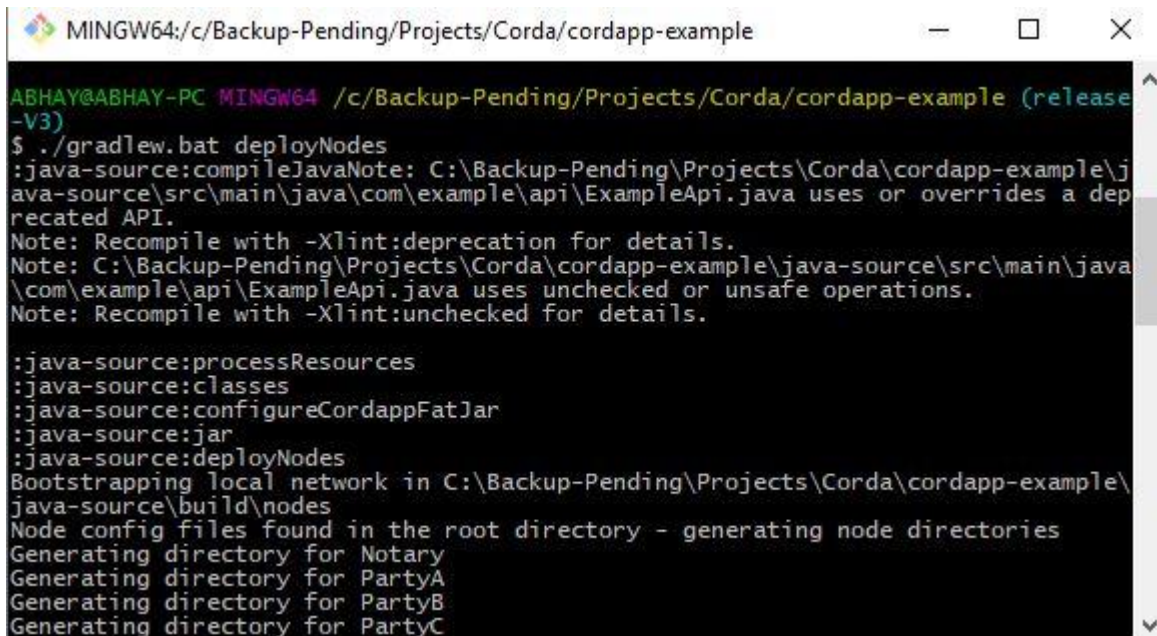
Note -: Use Java JDK version 8 (jdk-8u131-windows-x64)

- Open Gitbash and clone corda tutorial

```
git clone https://github.com/corda/cordapp-tutorial
```

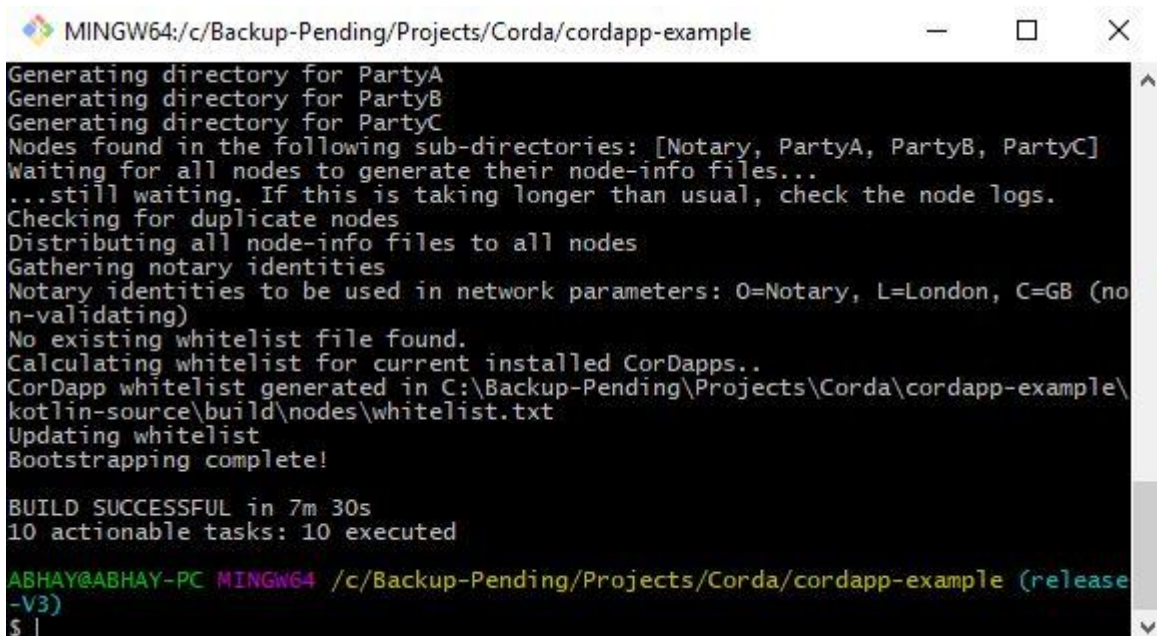
- Open project in IntelliJ IDEA and run the project (Run Example Cordapp-Kotlin)
- In Gitbash go to the root of tutorial CordApp and run below command

```
./gradlew.bat deployNodes
```



```
ABHAY@ABHAY-PC MINGW64 /c/Backup-Pending/Projects/Corda/cordapp-example (release-V3)
$ ./gradlew.bat deployNodes
:java-source:compileJavaNote: C:\Backup-Pending\Projects\Corda\cordapp-example\java-source\src\main\java\com\example\api\ExampleApi.java uses or overrides a deprecated API.
Note: Recompile with -Xlint:deprecation for details.
Note: C:\Backup-Pending\Projects\Corda\cordapp-example\java-source\src\main\java\com\example\api\ExampleApi.java uses unchecked or unsafe operations.
Note: Recompile with -Xlint:unchecked for details.

:java-source:processResources
:java-source:classes
:java-source:configureCordappFatJar
:java-source:jar
:java-source:deployNodes
Bootstrapping local network in C:\Backup-Pending\Projects\Corda\cordapp-example\java-source\build\nodes
Node config files found in the root directory - generating node directories
Generating directory for Notary
Generating directory for PartyA
Generating directory for PartyB
Generating directory for PartyC
```



```
Generating directory for PartyA
Generating directory for PartyB
Generating directory for PartyC
Nodes found in the following sub-directories: [Notary, PartyA, PartyB, PartyC]
Waiting for all nodes to generate their node-info files...
...still waiting. If this is taking longer than usual, check the node logs.
Checking for duplicate nodes
Distributing all node-info files to all nodes
Gathering notary identities
Notary identities to be used in network parameters: O=Notary, L=London, C=GB (non-validating)
No existing whitelist file found.
Calculating whitelist for current installed Cordapps..
Cordapp whitelist generated in C:\Backup-Pending\Projects\Corda\cordapp-example\kotlin-source\build\nodes\whitelist.txt
Updating whitelist
Bootstrapping complete!

BUILD SUCCESSFUL in 7m 30s
10 actionable tasks: 10 executed

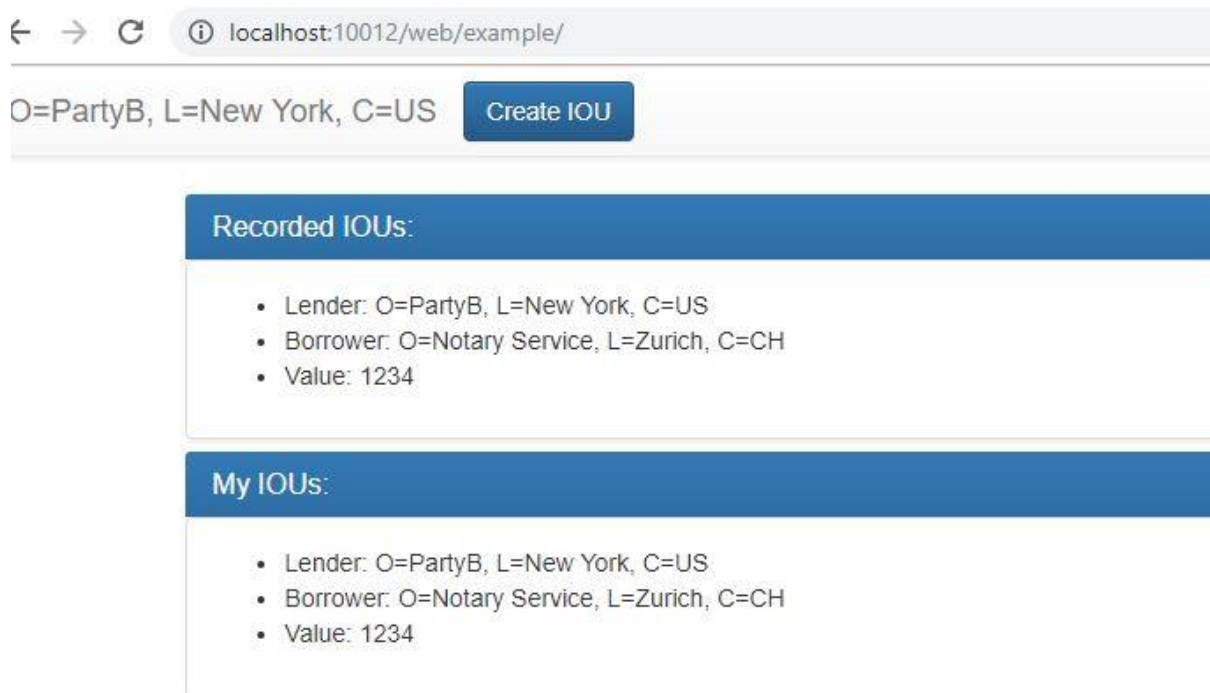
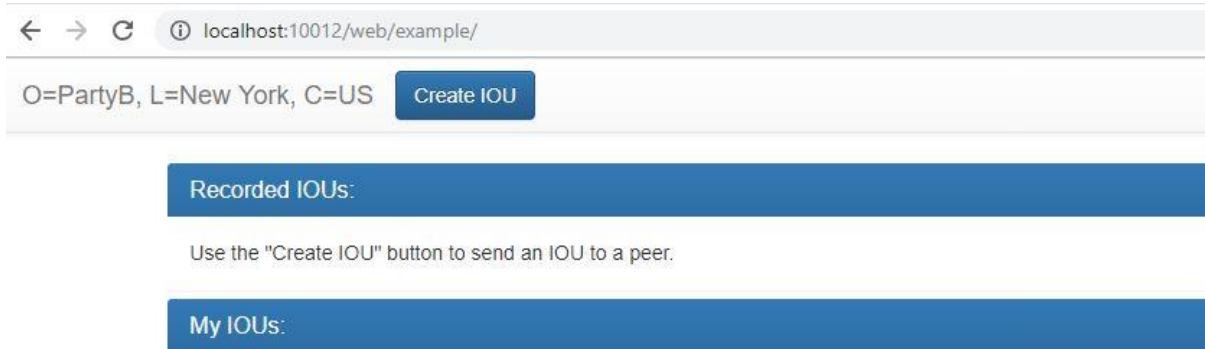
ABHAY@ABHAY-PC MINGW64 /c/Backup-Pending/Projects/Corda/cordapp-example (release-V3)
$ |
```

- Once the nodes are deployed run them by executing below command.

```
kotlin-source/build/nodes/runnodes
```

```
ABHAY@ABHAY-PC MINGW64 /c/Backup-Pending/Projects/Corda/cordapp-example (release-v3)
$ kotlin-source/build/nodes/runnodes
```

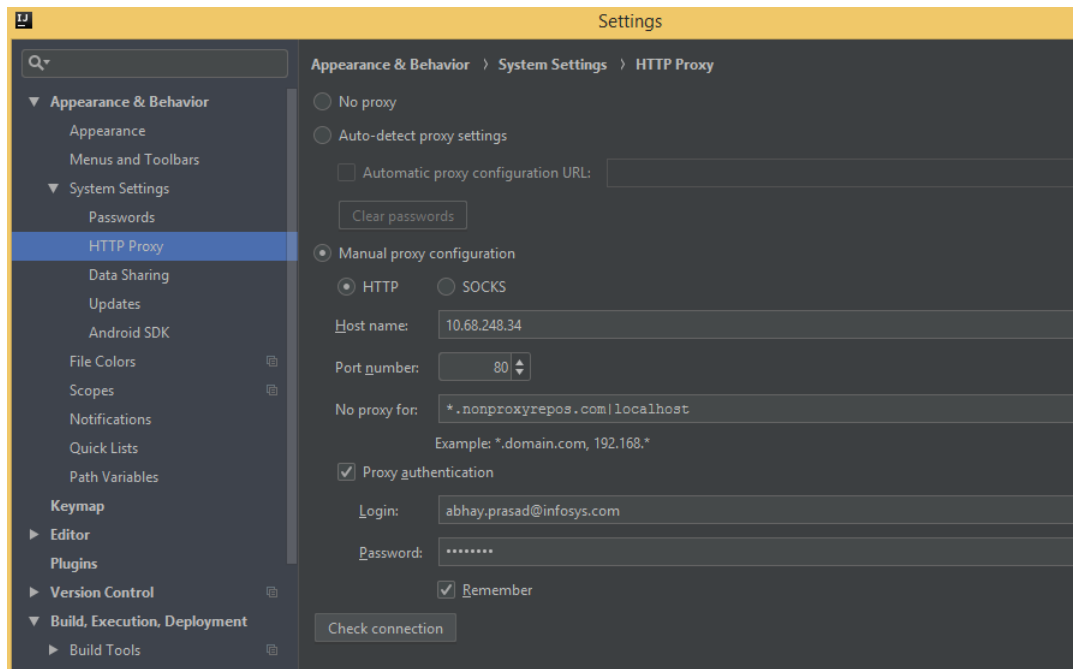
- Above command will start 8 terminal windows (4 nodes + 4 web servers)
- Test that nodes are running correctly by opening a browser and navigating to URL as shown below.



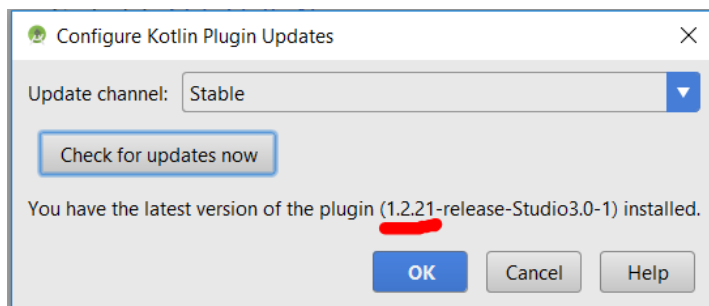
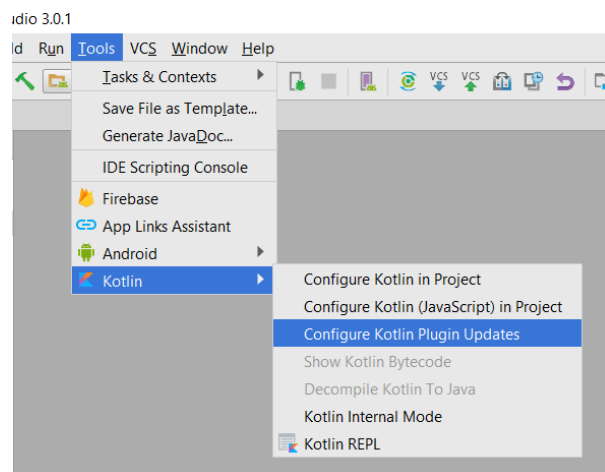
Possible Errors

Proxy error

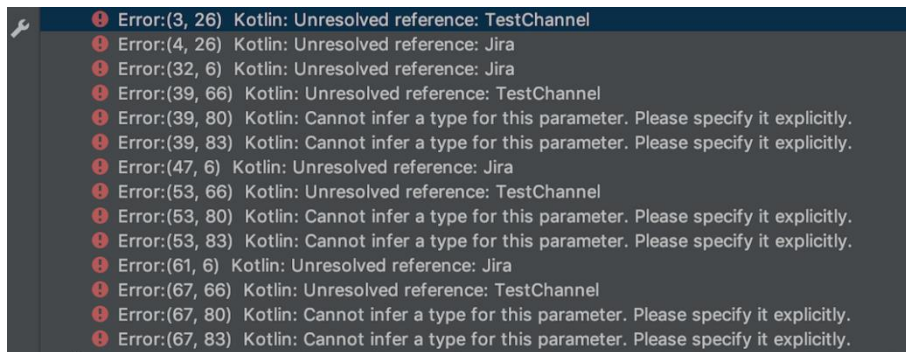
Go to IntelliJ IDEA (File -> Settings) and set the proxy as shown below



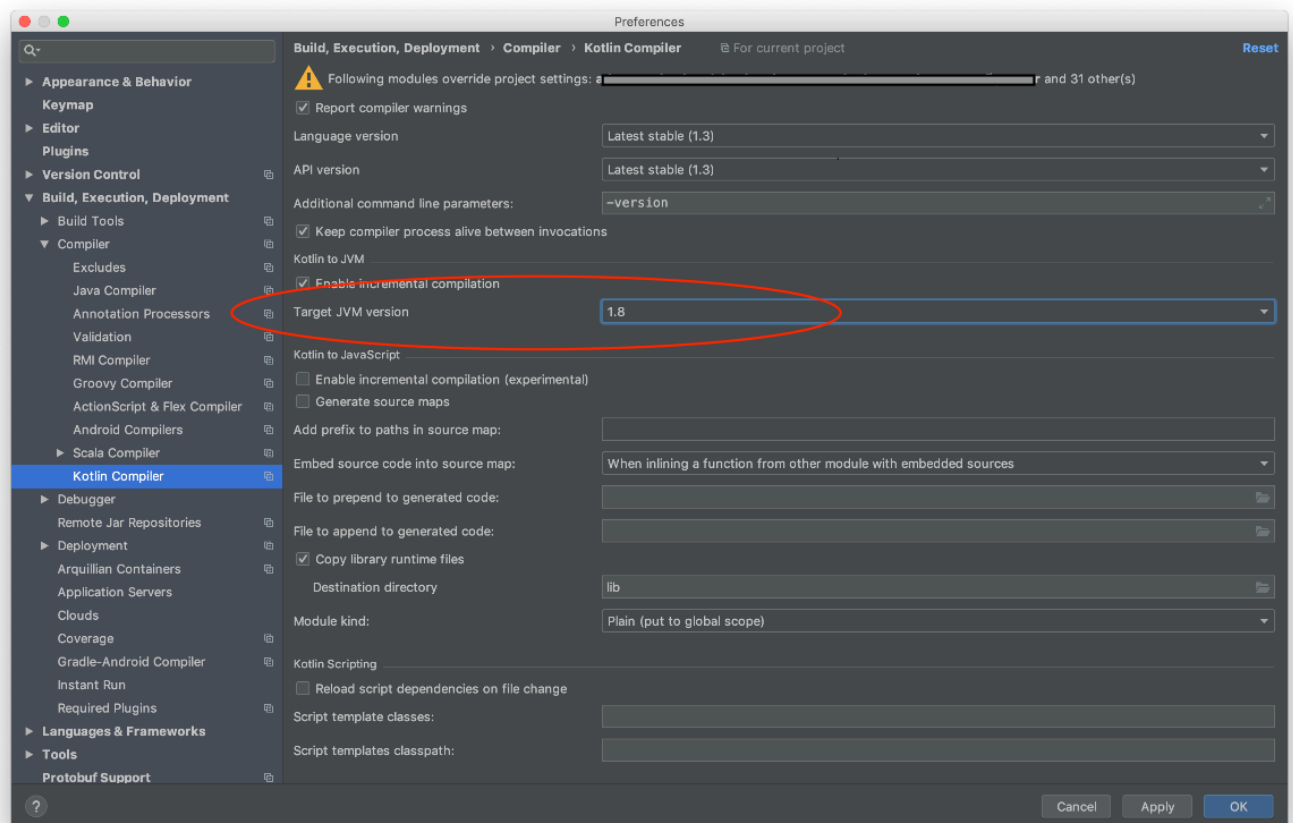
Automatic library version update for Gradle projects is currently unsupported. Please update your build.gradle manually



kotlin unresolved reference core as shown below



Make sure Kotlin compiler Target JVM version is set correctly as shown below



And Java Compiler project bytecode version is 8

