HyperLedger Fabric – first network installation

Creating a first hyperledger fabric network through Amazon AWS

1. **create an AWS account**

I created an AWS student account through [www.awseducate.com](http://www.awseducate.com/)

Through your workbench, go to AWS console and create an EC2 instance

Go to Services-> ec2-> launchinstance-> Ubuntu Server 16.04 LTS (HVM), SSD Volume Type-> m4large

Add tag->basicnetwork, Create a new key-pair, Download key pair and click launch instance

1. **Connecting to the instance**

Once the instance has started, you can connect it through Putty

Before connecting, convert the .pem file (key pair) into .ppk file using PuttyGen. This step is required because Putty requires a .ppk file and cannot connect using .pem file

Now add .ppk file to Putty, and connect to the IP of the running AWS instance

1. **Creating first network - installing prerequisites**
   1. **Install cURL**

Type on the terminal cURL command to check if its installed or run cURL --version. If it is not installed you can install it through below command

sudo apt-get install curl

* 1. **Install Docker and Docker Compose**

I followed this article: <https://www.digitalocean.com/community/tutorials/how-to-install-and-use-docker-on-ubuntu-16-04>

and

<https://www.digitalocean.com/community/tutorials/how-to-install-docker-compose-on-ubuntu-18-04>

* 1. **Install GO Programming Language**

Run the command sudo curl -O <https://storage.googleapis.com/golang/go1.9.1.linux-amd64.tar.gz>

Easy article explanation here <https://medium.com/@patdhlk/how-to-install-go-1-9-1-on-ubuntu-16-04-ee64c073cd79>

Don't forget to set the path. Run command export PATH=$PATH:$GOPATH/bin

* 1. **Install Node.js Runtime and NPM**

<https://websiteforstudents.com/install-the-latest-node-js-and-nmp-packages-on-ubuntu-16-04-18-04-lts/>

* 1. **Install Python**

Retrieve the Python version 2.7, which is goof for running Fabric Node.js SDK, by using command sudo apt-get install python

You can also check python version by command "python --version"

You are essentially done for installing the prerequisites. You can refer to detailed installation article here<https://hyperledger-fabric.readthedocs.io/en/latest/prereqs.html>

1. **Installing Sample Binaries and Docker Images**

Once you are ready, and in the directory into which you will install the Fabric Samples and binaries, go ahead and execute the following command: curl -sSL <http://bit.ly/2ysbOFE> | bash -s 1.2.0

then, curl -sSL <http://bit.ly/2ysbOFE> | bash -s curl -sSL <http://bit.ly/2ysbOFE> | bash -s 1.2.0 1.2.0 0.4.10

I faced an issue of Docker permission denied while trying to connect to the Docker daemon socket

I solved the issue with command sudo usermod -a -G docker $USER . Don't forget to completely log out of your account and log back in (if in doubt, reboot!):

Detailed solution at: <https://techoverflow.net/2017/03/01/solving-docker-permission-denied-while-trying-to-connect-to-the-docker-daemon-socket/>

1. **Running first network**

cd fabric-samples/first-network

Ready to give it a go. Run the command: ./byfn.sh generate

This command generates all the certificates. And after this, bring up the network

./byfn.sh up

If you’d like to run through this tutorial with node chaincode, pass the following command instead:

*we use the -l flag to specify the chaincode language*

*forgoing the -l flag will default to Golang*

./byfn.sh up -l node

Bring down the network with the command ./byfn.sh down