**Prerequisites:** [Docker and Docker Compose](https://www.docker.com/) must be installed.  
install link : <https://www.docker.com/>

Working Environment: Ubuntu 20.04  
  
  
**Steps:**

**1. unzip the EBRC.rar folder**

2. Run the following commands to install the dependencies for PBFT and **connect to the interactive shell container.**

docker build . -f Dockerfile -t sawtooth-dev-pbft

docker run -v **$(**pwd**)**:/project/sawtooth-pbft -it sawtooth-dev-pbft bash

3. **Build the PBFT project.**

cargo build

4.After the project has finished building, exit the sawtooth-dev-pbft shell container.

5.**Run the PBFT test script** on your host system from the EBRC directory.

bin/run\_docker\_test tests/test\_liveness.yaml

This command builds several Docker images, starts up a network of four Sawtooth nodes with PBFT consensus, then goes through a liveness test of 55 blocks, as defined in the Docker Compose file test\_liveness.yaml. The default log level is INFO, so the test script displays a large amount of information as it executes.  
  
after you run the liveness test of network, next step is to run the genisis node and

6. **start network.**

$ docker-compose -f network-config/EBRC-network.yaml up

7. Connect to the **REST API container** on a node:

user@zee $ docker exec -it sawtooth-rest-api-default-0 bash

root@b10fgsec0#

8. Use the following command **to verify that this component** is running.

root@b10fgsec0# ps --pid 1 fw

PID TTY STAT TIME COMMAND

1 ? Ssl 0:00 /usr/bin/python3 /usr/bin/sawtooth-rest-api

--connect tcp://validator-0:4004 --bind rest-api-0:8008

9. **Confirm Network Functionality**

$docker exec -it sawtooth-shell-default bash

root@b10fgsec0#

10. To check whether **peering has occurred on the network**, submit a peers query to the REST API on the first node. This command specifies the container name and port for the first node’s REST API.

root@b10fgsec0# curl http://sawtooth-rest-api-default-0:8008/peers

output:

{

"data": [

"tcp://validator-4:8800",

"tcp://validator-3:8800",

...

"tcp://validator-2:8800",

"tcp://validator-1:8800"

],

"link": "http://sawtooth-rest-api-default-0:8008/peers"

after that we can perforn transactions.

11**. stop the network**:

$docker-compose -f sawtooth-default-pbft.yaml down