#### download and install docker

sudo apt update

sudo apt install -y docker.io

sudo systemctl start docker

sudo systemctl enable docker

sudo usermod -aG docker $USER

sudo apt install mininet

sudo service openvswitch-switch start

sudo /etc/init.d/openvswitch-switch start

### don’t know what this do so skip

### docker pull onosproject/onos

#### This command will run docker

docker run -d --name onos \

-p 8181:8181 -p 6653:6653 -p 8101:8101 \

onosproject/onos

#### after running docker you can open browser with that link and enter these credentials

[http://localhost:8181/onos/ui](http://localhost:8181/onos/ui" \t "_blank)

* **Username:** onos
* **Password:** rocks

Node : after you enter credential in my not work and redirect you to 404 error – if this happened, sorry bro good luck. Na just kidding, try to give it time than try entering the web page againg, if it still not working go to terminal and write these commands

Docker stop onos

Docker rm docker

And then re lunch the previous command

If it still not working do the next steps

#### in command line enter this command at it will allow you to control ONOS

docker exec -it onos /bin/bash

#### you need to install ssh

apt update

apt install -y openssh-client

ssh -p 8101 onos@localhost

**#### this is ssh pasword**

**Password:** karaf

#### after ssh open write these commands

user-add onos rocks

user-role onos admin

ON LINKS MACHINE DO THIS AFTER START KARAF

ssh -p 8101 karaf@localhost

PASSWORD IS : karaf

app activate org.onosproject.openflow

app activate org.onosproject.fwd

app activate org.onosproject.acl

#### now its working go try and run the mn command

sudo mn --topo tree,2,2 --mac --switch ovs,protocols=OpenFlow13 --controller remote,ip=127.0.0.1:6653

#### this will block pinging from both site (from h1 to h2 and reverse)

curl -X POST -H "Content-Type: application/json" -u onos:rocks \

http://localhost:8181/onos/v1/acl/rules \

-d '{"srcIp": "10.0.0.1/32", "dstIp": "10.0.0.2/32", "action": "DENY"}'

#### List all rules

curl -u onos:rocks http://localhost:8181/onos/v1/acl/rules

#### remove rule

curl -X DELETE -u onos:rocks [http://localhost:8181/onos/v1/acl/rules/{ruleId}](http://localhost:8181/onos/v1/acl/rules/%7bruleId%7d)

using rest api

#### list all devices

curl -u onos:rocks http://localhost:8181/onos/v1/devices

curl -X POST -H "Content-Type: application/json" -u onos:rocks \

http://localhost:8181/onos/v1/acl/rules \

-d '{

"srcIp": "10.0.0.1/32",

"dstIp": "10.0.0.2/32",

"ipProto": "ICMP",

"action": "DENY",

"priority": 40000

}'

curl -X POST -H "Content-Type: application/json" -u onos:rocks \

http://localhost:8181/onos/v1/acl/rules \

-d '{

"srcIp": "10.0.0.2/32",

"dstIp": "10.0.0.1/32",

"ipProto": "ICMP",

"action": "ALLOW",

"priority": 50000

}'