Lesson-8 Instructions

(MQTT Broker Installation and Configuration)

MQTT: Message Queuing Telemetry Transport.

1) ### Installing MQTT broker on the cloud server
ssh to your cloud server and run the following command to install mosquitto mqtt broker

sudo apt-get install mosquitto
sudo apt-get install mosquitto-clients
sudo pip3 install paho-mqtt

Then start mosquitto service

sudo systemctl start mosquitto
sudo systemctl enable mosquitto

Test if mosquitto broker is working
run the following command to subscribe

mosquitto_sub -h localhost -t test

Then open another terminal to the cloud server and run the following command to publish

mosquitto_pub -h localhost -t test -m "hello world"

You should be seeing "hello world" displayed in the first terminal where you ran the subscriber command
If so, mosquitto broker is ready to go

2) Allow port 1883 on the firewall of your cloud server so that packet to moquitto broker will be allowed

Go to https://console.cloud.google.com/compute
Click on the menu (three lines at the top lest).
Then select VPC Network -> Firewall
Go to Networking -> VPC Network -> Firewall
Then click on 'Create Newfirewall rule' tab at the top
In the form that opens, give any name for this rule
For target, select 'Specified service account'
For source IP range, enter 0.0.0.0/0
For Protocol ports, Check 'Specified protocols and ports'
Then check 'tcp'. Then enter ports a 1883
Leave everything else as default
Then press 'Create'

That will allow incoming tcp ports 1883

3) ### Now setting user name and password for mosquitto mqtt broker
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Run the following command on the server to set username and password for mosquitto.
Make sure to use your own secret password so that nobody else can access your mqtt broker.
Try not to use the password that is used by the instructor in the course as it is public.

sudo mosquitto_passwd -c /etc/mosquitto/passwd <user name>
example:
sudo mosquitto_passwd -c /etc/mosquitto/passwd raman

This creates a file /etc/mosquitto/passwd

Now, create a file default.conf in /etc/mosquitto/conf.d
cd /etc/mosquitto/conf.d
sudo vi default.conf

Then add the following lines and save
allow_anonymous false
password_file /etc/mosquitto/passwd

Now, restart mosquitto
sudo systemctl restart mosquitto

test this now:

To test it, run the following command on one terminal of the cloud server

mosquitto_sub -h localhost -t test -u <username> -P <password>
##example:
mosquitto_sub -h localhost -t test -u raman -P <password>
and on another terminal:
mosquitto_pub -h localhost -t test -m "hello world" - u <username> -P <password>
example:
mosquitto_pub -h localhost -t "test" -m "hello world" -u raman -P <password>

Note: If you want to undo the password settings, remove the file /etc/mosquitto/conf.d/default.conf and restart moquitto.