Set-up an AWS Cloud LightSail server with IoT Tools

AWS LightSail is the "ightweight" IAAS offering from AWS. Compared to EC2, LightSail has a flat monthly cost, and comparatively lower resources in terms of RAM and cores. There are less number of configurations that the user can change on LightSail (compared to EC2). This can be a good thing (if all you want to do is set-up & just start using it, or a not so good thing, if you want to explore and finely tune a number of Linux/Infra/Securty configurations.

However, for small loads (even production loads) and certainly dev/test instaces, LightSail is perfect.

LightSail allows you to set-up a blank Linux/other OS server (IAAS), or also to set-up with a pre-installed server stack (Python/Django, JodeJS, etc - many options) (PAAS).

You will need:

- An AWS Account
- PuTTy SSH terminal - https://www.putty.org/
- MQTTBox (IoT Message Simulator) - **Optional** - https://mqttbox.en.softonic.com/

Installations steps:

1. Create an AWS Account (if you don't already have one):

https://aws.amazon.com/free/?trk=ps_a134p000003yhmGAAQ&trkCampaign=acq_paid_search_brand&sc_chann

el=ps&sc_campaign=acquisition_IN&sc_publisher=google&sc_category=core&sc_country=IN&sc_geo=APAC&sc_outcome=Acquisition&sc_detail=create%20aws%20account&sc_content=Account_e&sc_matchtype=e&sc_segment=453325184854&sc_medium=ACQ-P|PS-GO|Brand|Desktop|SU|AWS|Core|IN|EN|Text&s_kwcid=AL!4422!3!453325184854!e!!g!!create%20aws%20account&ef_id=CjwKCAjw-e2EBhAhEiwAJI5jg9if__dcg3Zctyy9SKBiCDyyFg3yOBFrhUtaruwaFGWs2Ft-ix9fYxoCx8AQAvD_BwE:G:s&s_kwcid=AL!4422!3!453325184854!e!!g!!create%20aws%20account&all-free-tier.sort-by=item.additionalFields.SortRank&all-free-tier.sort-order=asc&awsf.Free%20Tier%20Types=*all&awsf.Free%20Tier%20Categories=*all

2. Create an AWS Account (if you don't already have one):

https://lightsail.aws.amazon.com/ls/docs/en_us/articles/how-to-create-amazon-lightsail-instance-virtual-private-server-vps

Suggested: Start with a bank Ubuntu instance

3. Install IoT Tools:

Once you are able to login to your LightSail Ubuntu Instance, install the following IoT T ools, to be able to build your IoT solutions entirely on the Cloud:

a. MQTT Broker - Message broker to allow devices to communicate with the Cloud
(Only Step#1 in this article is essential to start using MQTT)
https://www.digitalocean.com/community/tutorials/how-to-install-and-secure-the-mosquitto-mqtt-messaging-broker-on-ubuntu-16-04

b. Node Red - Visual Programming tool for IoT middleware - **NoCode/Low-Code**
(Only first 2 steps in this article are essential to start using Node Red)
https://www.arubacloud.com/tutorial/how-to-install-node-red-on-ubuntu-20-04.aspx

c. MySQL Database - RDBMS
https://www.digitalocean.com/community/tutorials/how-to-install-mysql-on-ubuntu-18-04
(Before setting up MySQL Users, It is advisable to be familiar with how user privileges in MySQL work)

d. NginX - Optional - Web Server/Proxy/Reverse Proxy
(Not required for IoT, but good to have if you are planning to host web pages)
(Only Step#1 is essential to start using NginX)

https://www.digitalocean.com/community/tutorials/how-to-install-nginx-on-ubuntu-20-04

More documentation can be found on nginx.com

For more information, please contact iot@copperCloud.in, or your Engieering Lead at CopperCloud..

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