

Huawei IoT Certification Training

# HCIA-IoT

## Huawei Certified ICT Associate-Internet of Things Lab Environment Setup Guide

ISSUE: 2.5



**HUAWEI**

Huawei Technologies Co., Ltd.

**Copyright © Huawei Technologies Co., Ltd. 2020. All rights reserved.**

No part of this document may be reproduced or transmitted in any form or by any means without prior written consent of Huawei Technologies Co., Ltd.

## **Trademarks and Permissions**



and other Huawei trademarks are trademarks of Huawei Technologies Co., Ltd.

All other trademarks and trade names mentioned in this document are the property of their respective holders.

## **Notice**

The purchased products, services and features are stipulated by the contract made between Huawei and the customer. All or part of the products, services and features described in this document may not be within the purchase scope or the usage scope. Unless otherwise specified in the contract, all statements, information, and recommendations in this document are provided "AS IS" without warranties, guarantees or representations of any kind, either express or implied.

The information in this document is subject to change without notice. Every effort has been made in the preparation of this document to ensure accuracy of the contents, but all statements, information, and recommendations in this document do not constitute a warranty of any kind, express or implied.

# **Huawei Technologies Co., Ltd.**

Address: Huawei Industrial Base Bantian, Longgang Shenzhen 518129  
People's Republic of China

Website: <http://e.huawei.com>

# About This Document

---

## Overview

This document provides guidance for candidates to configure the lab environment for the HCIA-IoT exercises based on the *HCIA-IoT Lab Guide*.

## Experiment Environment Overview

### Device Introduction

To meet the needs of the exercises, the following lab environment configurations are recommended:

The following table lists the devices required.

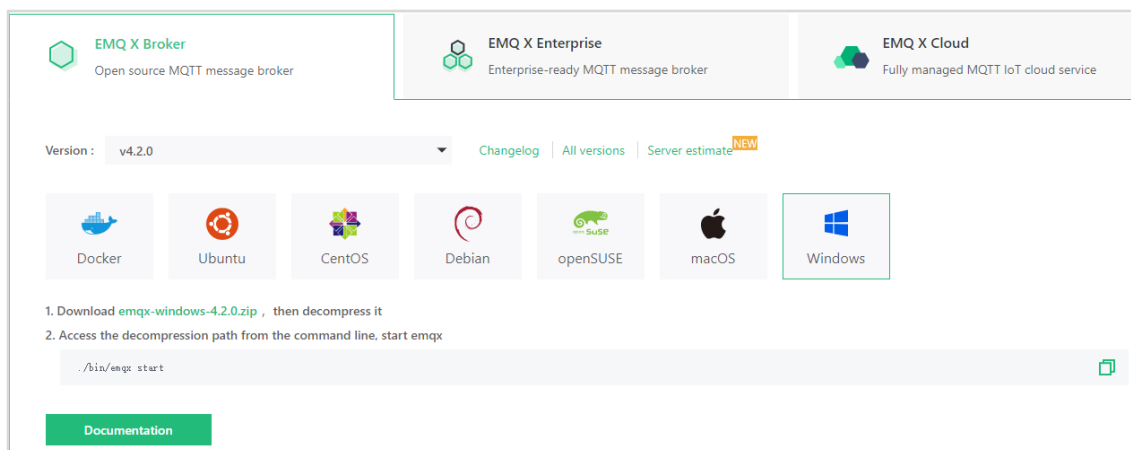
Device Name	Device model
IoT development board suite	BearPi development board suite: 1. BearPi-IoT motherboard 2. Communications expansion boards: NB-IoT and Wi-Fi 3. Case expansion boards: smart agriculture, smart smoke detector, smart logistics, and smart street lamp
MQTT Broker	EMQ X Broker
Programming tool	LiteOS Studio Java IDE

## 1.1 Installing MQTT Broker

### 1.1.1 Downloading MQTT Broker

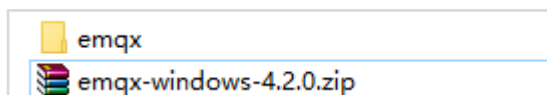
Download link: <https://www.emqx.io/downloads#>

Download the Windows latest version.



### 1.1.2 Decompressing the Installation Package

Decompress the ZIP file to any disk directory.



### 1.1.3 Installing and Starting the EMQ

Run Windows Power Shell and go to the **emqx\bin** directory.

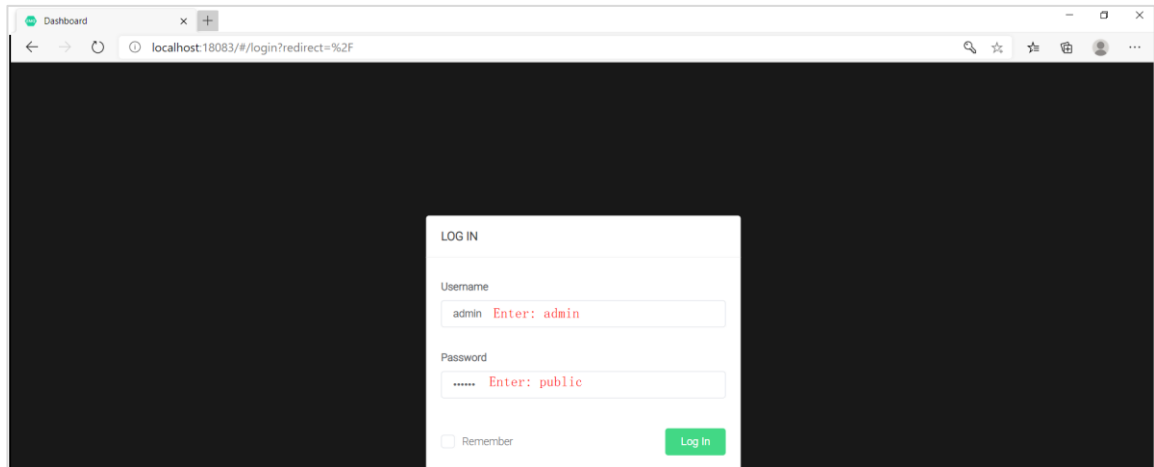
Run the **./emqx start** command to start the EMQ.



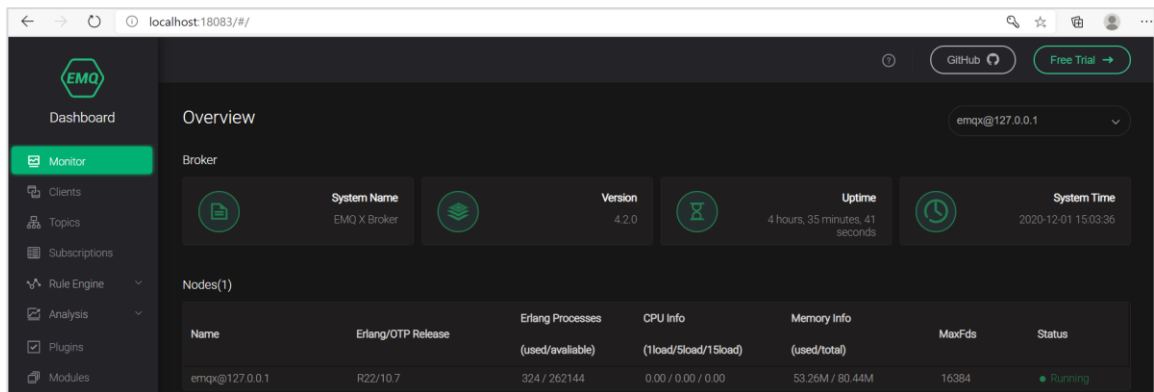
### 1.1.4 Logging In to the EMQ

Enter **localhost:18083** in the address box of the browser to access the login page.

The default username is admin and the password is public.



Then the EMQ Dashboard can be logged in and as shown below:

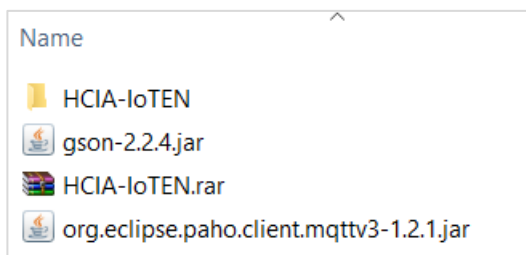


## 1.2 Downloading the LiteOS Code and Java Program Code

- HCIA-IoT-Application **Java Code**
- LiteOS\_Lab\_HCIA **LiteOS Code**

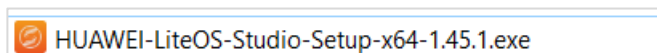
## 1.3 Importing the Java Program

1. Install the JDK.
2. Install the Java IDE.
3. Import **HCIA-IoTEN** to the IDE.
4. Import the **gson-2.2.4.jar** and **org.eclipse.paho.client.mqttv3-1.2.1.jar** files to the project.



## 1.4 Downloading and Installing LiteOS Studio

Download **Huawei-LiteOS-Studio-Setup-x64-1.45.1.exe** and install it as prompted.



## 1.5 Downloading Common Tools and Extensions of LiteOS Studio

1. Decompress the Make builder **build.rar** to **C:\Users\<UserName>\.huawei-liteos-studio\tools\build**.
2. Decompress the burner **openocd-0.10.0.rar** to **C:\Users\<UserName>\.huawei-liteos-studio\tools\openocd-0.10.0**.
3. Decompress the compiler **arm-none-eabi.rar** to **C:\Users\<UserName>\.huawei-liteos-studio\tools\arm-none-eabi**.

