1. Record Nr. UNINA9910814901603321

Autore	Hillar Gaston C.
Titolo	Hands-On MQTT programming with python : work with the lightweight IoT protocol in python / / Gaston C. Hillar
Pubbl/distr/stampa	Birmingham ; ; Mumbai : , : Packt Publishing, , 2018
ISBN	1-78913-781-0
Edizione	[1st edition]
Descrizione fisica	1 online resource (1 volume) : illustrations
Disciplina	005.133
Soggetti	Python (Computer program language)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia

Sommario/riassunto

Explore the features included in the latest versions of MQTT for IoT and M2M communications and use them with modern Python 3. About This Book Make your connected devices less prone to attackers by understanding security mechanisms Take advantage of MQTT features for IoT and Machine-to-Machine communications The only book that covers MQTT with a single language, Python Who This Book Is For This book is for developers who want to learn about the MQTT protocol for their IoT projects. Prior knowledge of working with IoT and Python will be helpful. What You Will Learn Learn how MQTT and its lightweight messaging system work Understand the MQTT puzzle: clients, servers (formerly known as brokers), and connections Explore the features included in the latest versions of MQTT for IoT and M2M communications Publish and receive MQTT messages with Python Learn the difference between blocking and threaded network loops Take advantage of the last will and testament feature Work with cloud-based MQTT interfaces in Python In Detail MQTT is a lightweight messaging protocol for small sensors and mobile devices. This book explores the features of the latest versions of MQTT for IoT and M2M communications, how to use them with Python 3, and allow you to interact with sensors and actuators using Python. The book begins with the specific vocabulary of MQTT and its working modes, followed by installing a Mosquitto MQTT broker. You will use different utilities and diagrams to understand the most important concepts related to MQTT.

You will learn to make all the necessary configuration to work with digital certificates for encrypting all data sent between the MQTT clients and the server. You will also work with the different Quality of Service levels and later analyze and compare their overheads. You will write Python 3.x code to control a vehicle with MQTT messages delivered through encrypted connections (TLS 1.2), and learn how leverage your knowledge of the MQTT protocol to build a solution based on requirements. Towards the end, you will write Python code to use the PubNub cloud-based real-time MQTT provider to monitor a surfing competition. In the end, you will have a solution that was built from scratch by analyzing the requirements and then write Python code that will run on water-proof IoT boards connected to multiple sensors in surfboards. Style and approach This book shows you what MQTT is, and how to install and secure an MQTT server. You will write Python...