

Broker Setup (Windows 64-bit)

◆ About Mosquitto

Eclipse Mosquitto is an open-source MQTT message broker that supports versions **5.0, 3.1.1, and 3.1** of the protocol. It's lightweight and ideal for Internet of Things (IoT) communication on systems ranging from embedded devices to full servers.

It uses the **publish/subscribe model**, making it highly efficient for real-time data transfer in sensor networks, mobile devices, and embedded systems.

✓ Step-by-Step Installation and Setup

📄 1. Download Mosquitto Installer

Download the latest stable Windows 64-bit installer:

🔗 [mosquitto-2.0.22-install-windows-x64.exe](#)

📁 2. Install Mosquitto

- Run the .exe installer.
- During installation, make sure to select:
 - ✓ Install **service**
 - ✓ Add **PATH** variable (optional but helpful)

🔑 3. Create MQTT Password File

Open **Command Prompt as Administrator** and run the following:

```
cd "C:\Program Files\mosquitto"
```

```
mosquitto_passwd -c passwd.txt mqttuser
```

- Replace mqttuser with your preferred username.
- You will be prompted to enter and confirm the password.

📁 This will create a password file named passwd.txt in the Mosquitto directory.

4. Create Secure Mosquitto Config File

Inside the same folder (C:\Program Files\mosquitto), create a file named:

`secure_mosquitto.conf`

With the following content:

`listener 1883`

`allow_anonymous false`

`password_file passwd.txt`

 This ensures only authenticated clients can connect.


5. Restart Mosquitto with New Config

If Mosquitto is already running, stop it first:

`taskkill /F /IM mosquitto.exe`

Then start Mosquitto with the secure config:

`mosquitto -v -c secure_mosquitto.conf`

 You should now see Listening on port 1883 and password authentication enabled.

6. Allow MQTT Port in Firewall (1883)

To allow external clients to connect, open port **1883** for **TCP** in both inbound and outbound rules:

- Open **Windows Defender Firewall** → **Advanced Settings**
- Go to **Inbound Rules** → **New Rule**
 - Rule Type: **Port**
 - Protocol: **TCP**
 - Port: **1883**
 - Allow the connection
- Repeat for **Outbound Rules**

You're Done!

Your secure MQTT broker is now ready. Clients like **ESP32**, **Node-RED**, or **mosquitto_sub/pub** can connect using:

- **Host:** your PC's IP address
- **Port:** 1883
- **Username:** mqttuser
- **Password:** *your chosen password*