Setup Gateway for Microsoft Azure IoT Hub



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1 Overview

In this guide you will learn about how to set up an IQ Home gateway for Microsoft Azure IoT Hub applications.

2 Creating an Azure IoT Hub

2.1 Create IoT Hub

- 1. Login to the Azure Portal with your account.
- 2. Create a new "IoT Hub" resource.

| Microsoft Azure | | | | | \mathcal{P} Search resources, |
|---------------------|---|--------------------------------|----------|---------|---------------------------------|
| | « | Home > New | | | |
| + Create a resource | | New | | | |
| 🛧 Home | | | | | |
| 🛅 Dashboard | | л IoT | | | × |
| ∃ All services | | loT Hub | | | |
| + FAVORITES | _ | IoT Hub Device Provisioning Se | ervice | | |
| All resources | | Azure Security Center for IoT | | | |
| 😭 Resource groups | | IoT Central Application | | | |
| 🚀 Quickstart Center | | Smart IoT oneM2M network | | | |
| 🔇 App Services | | | | | |
| 🦘 Function App | | Blockchain | E | Web App | |
| 👼 SQL databases | | Compute | | | |

3. Create IoT Hub

| Microsoft Azure | |
|---------------------|--------------------------|
| « | Home > New > IoT Hub |
| - Create a resource | loT Hub |
| 🛧 Home | Microsoft |
| 🗔 Dashboard | IoT Hub 👳 Save for later |
| ∃ All services | Microsoft |
| + FAVORITES | Create |
| All resources | |

2.2 Set up new IoT Hub

- 1. Select resource group or create it
- 2. Name the IoT Hub
- 3. Check the selection

| Home > New > IoT Hub > IoT | hub | |
|--|---|---|
| IoT hub Microsoft | | |
| Basics Size and scale Re | view + create | |
| Create an IoT Hub to help you co | nnect, monitor, and manage billions of your IoT assets. Learn More | 2 |
| PROJECT DETAILS | | |
| Select the subscription to manage folders to organize and manage a | e deployed resources and costs. Use resource groups like all your resources. | |
| * Subscription 🚯 | | ~ |
| * Resource Group 🚯 | 1 (New) iqhome Create new | ~ |
| * Region 🚯 | West Europe | ~ |
| * IoT Hub Name 🚯 | 2 iqhome | ✓ |
| | | |
| | | |
| | | |

| 3 Review + create Next: Size and scale » Automation op | otions |
|--|--------|
|--|--------|

4. Create after review

| IoT hub Microsoft | | | |
|--------------------------|-----------------|-------------|--|
| Basics Size and scale | Review + create | | |
| BASICS | | | |
| Subscription 👩 | | | |
| Resource Group 👩 | | iqhome | |
| Region 🚯 | | West Europe | |
| loT Hub Name 🚯 | | iqhome | |
| SIZE AND SCALE | | | |
| Pricing and scale tier 👩 | | S1 | |
| Number of S1 loT Hub uni | ts 🛛 | 1 | |
| Messages per day 🚯 | | 400,000 | |
| Cost per month | | 21.08 EUR | |

Create

« Previous: Size and scale

Automation options

2.3 Get connection string

- 1. Open "All Resources"
- 2. Select the newly created IoT Hub
- 3. Invoke the "Shared Access Policies".
- 4. Under "Policy", select "iothubowner"
- 5. Copy "Connection string-primary key"



Х

3 Register new device with Device Explorer

3.1 Update connection information

- 1. Paste the copied "Connection string-primary key" into IoT Hub Connection String area
- 2. Copy the hostname part from the connection string and paste into Protocol Gateway HostName
- 3. CLick on "Update" button

🖶 Device Explorer Twin

| Configuration | Management | Data | Messages To Device | Call Method on Device | | |
|--|---|--------|-----------------------|-----------------------|-----------------|--|
| Connection I IoT Hub Cor | nformation nnection String: | | | | | |
| HostName= devices.net FIW3yeTIP1 | qhome.azure- SharedAccessk cSmOU/Q= | (eyNam | e=iothubowner;SharedA | .ccessKey=Xrexa3FXVfG | 6rJYLhi197KyNrg | |
| | | | | | 1 | |
| Protocol Ga | teway HostNam | ie: | | | | |
| 2 iqhome.azur | e-devices.net | | | | | |
| Upda | te | | | | | |

3.2 Create new device

- 1. Click on "Create" button on the Management tab
- 2. Set the name of the new device
- 3. Click on "Create" button in the popup window

| 🛃 Device Explorer Twin | | - 🗆 × |
|--|---|------------------|
| Configuration Management Data Messages To Device Call Method on Device | | |
| Actions Create Refresh Update Delete SAS Token. | | Twin Props. |
| Devices Total: 0 | | |
| Filter: Create Device - | × | |
| Id Id • • | | rir ConnectionSt |
| Auto Generate ID 🛛 Auto Generate Keys | | |
| Device ID: 2 gw1 | | |
| Primary Key: 0JQd1D3Xd+P4L45M1+xxkiaodTWt67Mrw6DXvBuHyYc= | | |
| Secondary Key: Uuf13RgTs2JdMqxnTUNkB7E/Wi8BaMSxuiid6CB5ysI= | | |
| 3 Create Cancel | | |
| | | |

3.3 Create SAS token

- 1. Click on "SAS Token..." button
- 2. Set TimeToLive (TTL) days of the token
- 3. Click on "Generate" button
- 4. Copy the required part for the client

| • | Device | Explorer Twin | | | | | | | | _ | | \times |
|---|-------------------------|------------------|---|--|--|---|-------------------------------------|--------|--------|--------------|------------|------------|
| (| Configur | ration Man | agement Data | Messages To | Device | Call Method o | n Device | | | | | |
| 1 | -Action Cr Device | s reate es | Refresh | Upda | ate | Delete | | SAS To | ken | Tv | vin Props. | |
| | Filter: | Id gw1 | DeviceID DeviceKeys HostName devices.ne sr=iqhome &sig=e4izy | gw1 0JQd1D3Xd+P4L45I 2 TTL (Days) 36 =iqhome.azure- t;DeviceId=gw1;Shar azure-devices.net%2F n6OUw.ZqnE1jXI0;qiA | M1+xxkiaod 5 edAccessSi Fdevices%21 zQfPTZ3oef | TWt67Mrw6DXvBu gnature=SharedAc Fgw1 vV1t0e0nxFA%3D8 | uHyYc= cessSignatu kse=159286 | ure 4 | × × | onStrir [| Connectio | nSt ted |
| | | | , | 3 Generate | | Done | _ | | | | | |

4 Setup MQTT settings of the gateway with LinkIt!

To get started with LinkIt please check the Quick Start Guide or the tutorial videos.

- 1. Go to "Settings" tab
- 2. Go to "Main" settings section
- 3. Enable MQTT
- 4. Set hostname determined in 2.1. Update connection information
- 5. Set Port to 8333
- 6. Set Username by hostname and the name of the device like HostName/DeviceID
- 7. Set Password by paste the copied part of the SAS token from <u>2.3. Create SAS token</u>
- 8. Select Manual Client ID Source
- 9. Set Client ID as DeviceID defined in 2.2. Create new device
- 10. Enable MQTT TLS
- 11. Select "CA Signed server certificates"
- 12. Click on Save button and upload modified settings

| 🔗 IQ Home Link It! - v2.0.2 | | - | |
|-----------------------------|----------------------------------|---|----|
| 🤗 IQ Home Lin | k t! Networks > LAN > GW-3E7000 | 09 | : |
| | Dashboard RF Network | Settings Web Viewer Files Terminal | |
| Gateway Settings | | 1 Advanced mode | 8 |
| Main 2 MQTT Subscribe | MQTT Settings | | 12 |
| Scheduler | Enable MQTT 💡 | o 📢 3 | |
| WWAN | Hostname 😮 | iqhome.azure-devices.net 4 | |
| | Port 😧 | 8883 5 | |
| | Username 🕜 | iqhome.azure-devices.net/gw1 6 | |
| | Password 😮 | SharedAccessSignature sr=iqhome.azure-devices.net%2Fdevices%2Fgw1&sig=umF 7 | |
| | Client ID source select 🕜 | Manual V 8 | |
| | Client ID 😮 | gw1 9 | |
| | MQTT TLS Settings | | |
| | Enable MQTT TLS 💡 | • 💶 10 | |
| | TLS type 💡 | CA signed server certificates V 11 | |
| | CA path 😧 | /etc/ssl/certs | |
| | Verify hostname 🕜 | | |

After successfully saving the new configuration, restart the gateway service.

Acknowledgement

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