

How to set up a Microsoft-Azure IoT-based system with a Carlo Gavazzi UWP 3.0

This document describes how to connect a Carlo Gavazzi UWP 3.0 gateway to Microsoft Azure IoT.

Following are the main steps:

1. Perform the UWP 3.0 commissioning
Note: for further details, read the [installation manual](#)
2. Connect the UWP 3.0 to Internet.
Notes:
 - For further details, read the [quick guide connection](#)
 - Remember to set the DNS server properly from the **System settings** menu of the controller web app
3. Log into your Microsoft Azure account
4. Activate and configure your Microsoft Azure IoT hub.
Note: click [here](#) for more information about how to set up an Azure IoT hub.
- 5.

If...	Then...
you need to use the Device Provisioning Service (DPS)	<ul style="list-style-type: none"> • Provision your UWP 3.0 on the Device Provisioning Service (DPS) <i>Note:</i> <ul style="list-style-type: none"> ○ Click here for more information about DPS ○ UWP 3.0 supports only the DPS individual enrolment in "Symmetric Key" mode ○ UWP 3.0 can be added to Microsoft Azure as a public endpoint. • Configure the Microsoft Azure IoT Hub service on your UWP 3.0. <i>For further details, go to How to configure Azure IoT Hub service on UWP 3.0 (DPS use case)</i>
you don't need to use the Device Provisioning Service (DPS)	<ul style="list-style-type: none"> • Add a device to the Microsoft Azure IoT hub previously activated. <i>Note: this device represents your controller</i> • Configure the Microsoft Azure IoT Hub service on your UWP 3.0. <i>For further details, go to How to configure Azure IoT Hub service on UWP 3.0 (standard procedure)</i>

Note: UWP 3.0 is compatible with Azure IoT Explorer app which allows you to view the data sent by your device. Click [here](#) for more information about the Azure IoT Explorer app (see the picture below):

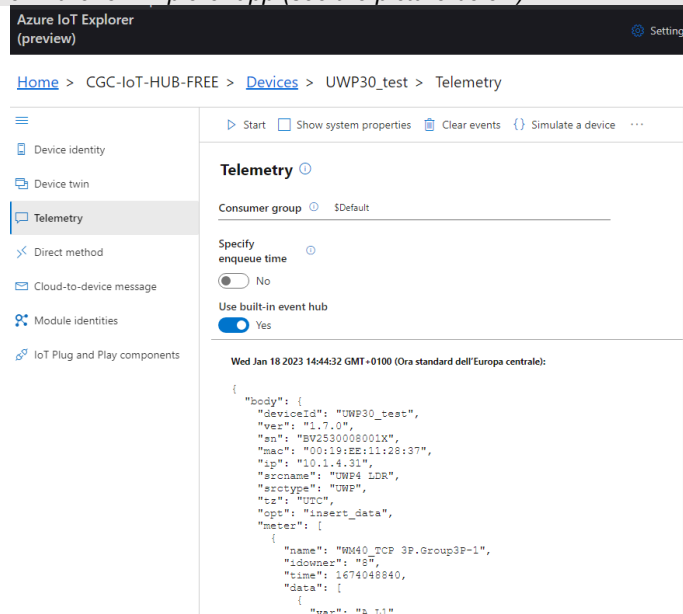
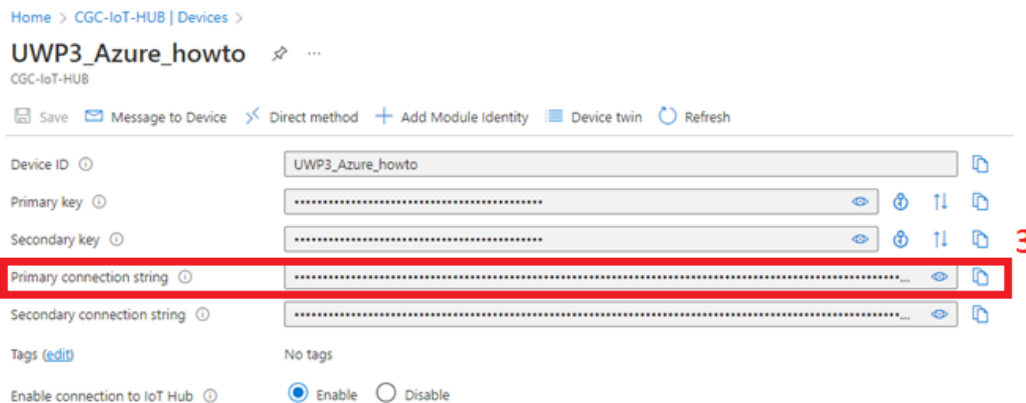


Figure 1: example of UWP 3.0 telemetry message

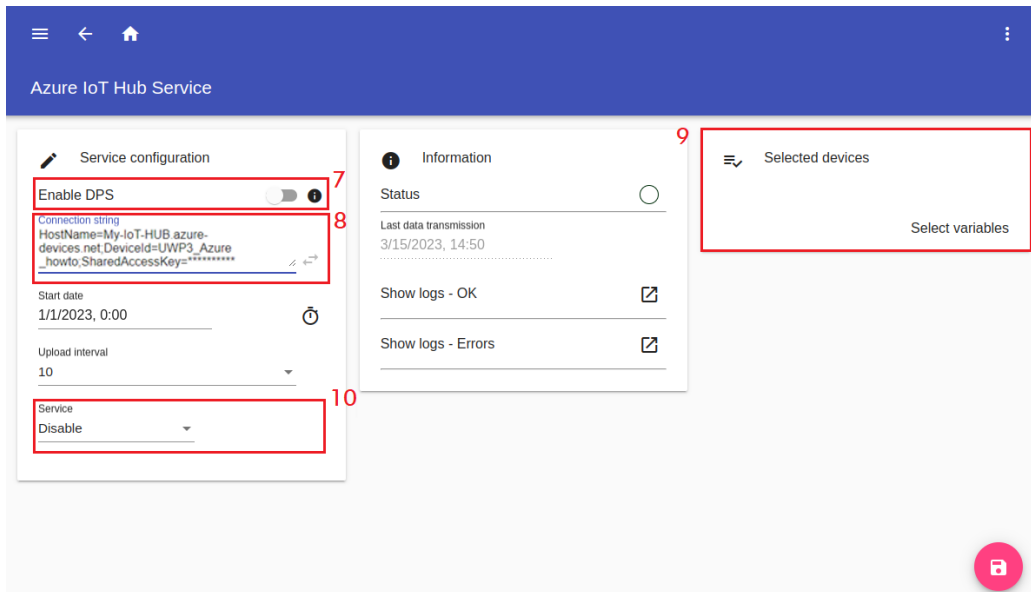
How to configure the Azure IoT Hub service on UWP 3.0 (standard procedure)

You can configure the Azure IoT Hub service on UWP 3.0 if you have activated an Azure IoT Hub and added a device to an Azure IoT Hub.

1. Open your Microsoft Azure IoT hub
2. Go to the **Devices** menu and click on the device that represents your UWP 3.0
3. Copy the **Primary connection string** (see the picture below)




4. Log into the UWP 3.0 Web App
5. Open the main menu clicking ☰
6. Go to **Services > Azure IoT Hub Service**
7. Check that the DPS option is disabled
8. Enter/Type the **Primary connection string** copied in step 3, in the **Connection string** field
9. Click **Select variables** to choose the devices to be considered by the **Data Push** service
*Note: this menu shows the devices that have been enabled to log data in the UWP 3.0 database.
 For more information about how to configure the database, read the [UWP 3.0 Tool manual](#)*
10. From the **Service configuration** tile, enable the service

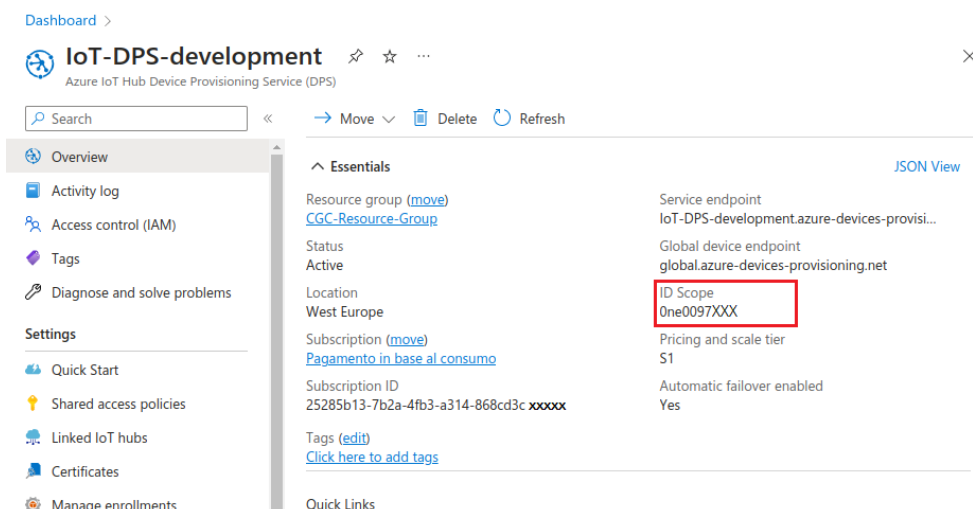


11. Click  to save

The green **Status** icon informs you that the procedure has been completed successfully.
Click **Show logs – OK** to open the list of successfully loaded data.

How to configure the Azure IoT Hub service on UWP 3.0 (DPS use case)

1. Log into the UWP 3.0 Web App
2. Open the main menu clicking 
3. Go to **Services > Azure IoT Hub Service**
4. Enable the **DPS** option
5. Copy the **Scope ID** that you can find in the **Overview** page/tab of your Azure IoT Hub Device Provisioning Service (see the picture below)



6. Copy the **Registration ID** and the **Primary key** that you can find in the **Manage enrollments** page/tab of your Azure IoT Hub Device Provisioning Service (see the picture below)

Dashboard > IoT-DPS-development | Manage enrollments >

reg_ID ...

Enrollment Details

Save Refresh Regenerate keys

i You can view and update the enrollment details for an individual enrollment or remove the registration record for a previously provisioned device

Registration Status

Status: assigned

Assigned hub: CGC-IoT-HUB-FREE.azure-devices.net

Device ID: reg_ID

Last assigned: Fri Mar 17 2023 11:22:43 GMT+0100 (Ora standard dell'Europa centrale)

Delete Registration

Authentication Type

Mechanism: Symmetric Key

Primary Key

NaFGR08y5r5e7ylLv4iP4Tbd2jKi6WqtcYV4BKzYnWTOFXLhid5qZDWWUw5SCUoIMvYYkOHsYjgl/Jc *****

Secondary Key

- From the web app, click **Select variables** to choose the devices to be considered by the service data push
Note: this menu shows the devices that have been enabled to log data in the UWP 3.0 database.
 For more information about how to configure the database, read the [UWP 3.0 Tool manual](#)
- From the **Service configuration** tile, enable the service

Azure IoT Hub Service

Service configuration

Enable DPS 4

Scope ID 5

Registration ID 6

Primary key 6

Connection string
 HostName=CGC-IoT-HUB.azure-devices.net;DeviceId=reg_ID;Protocol=SharedAccessKey;amqp://PNC2ur8a/DKakduOVsHAWjTfjPewwZ0zVYp1BwG9DvHfujp4HWBgy62WpukvBSc8S3bluYfWZ9k1j8Q==

Start date
 1/1/2023, 0:00

Upload interval
 10

Service
 Disable 8

Information

Status 7

Last data transmission
 3/15/2023, 14:50

Show logs - OK

Show logs - Errors

Selected devices

Select variables

- Click  to save

Notes:

- The green **Status** icon informs you that the procedure has been completed successfully.
- The **Connection string** is automatically filled in as soon as the connection procedure has been completed successfully.
- Click **Show logs – OK** to open the list of successfully loaded data.