How to Configure edgeGate for Azure IoT Hub

How to Configure *edgeGate* for *Azure IoT Hub*

1. Download *Device Explorer*

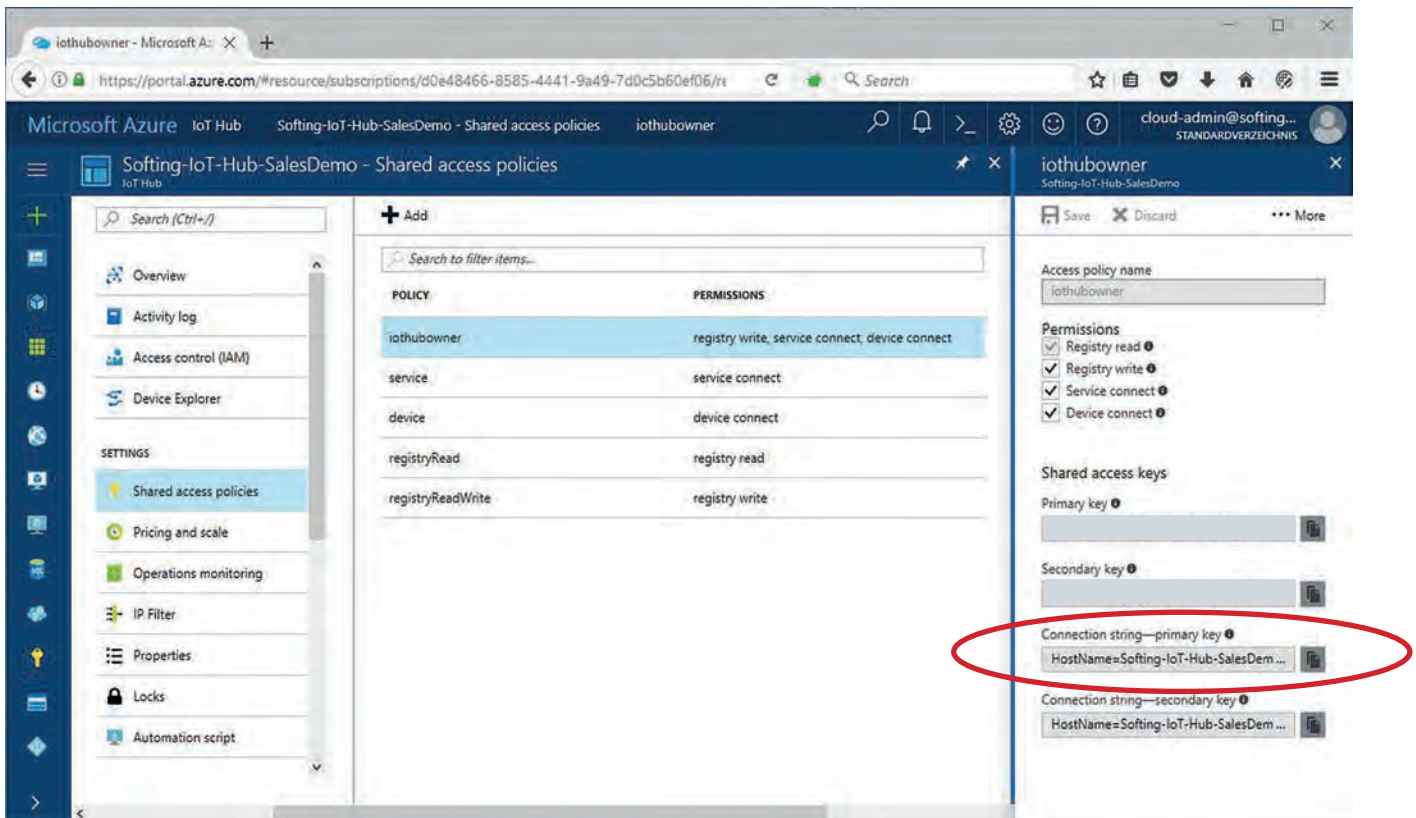If not available yet, download latest **Device Explorer** version from
- https://github.com/Azure/azure-iot-sdk-csharp/releases

2. Copy Connection String from *Azure IoT Hub* to *Device Explorer*
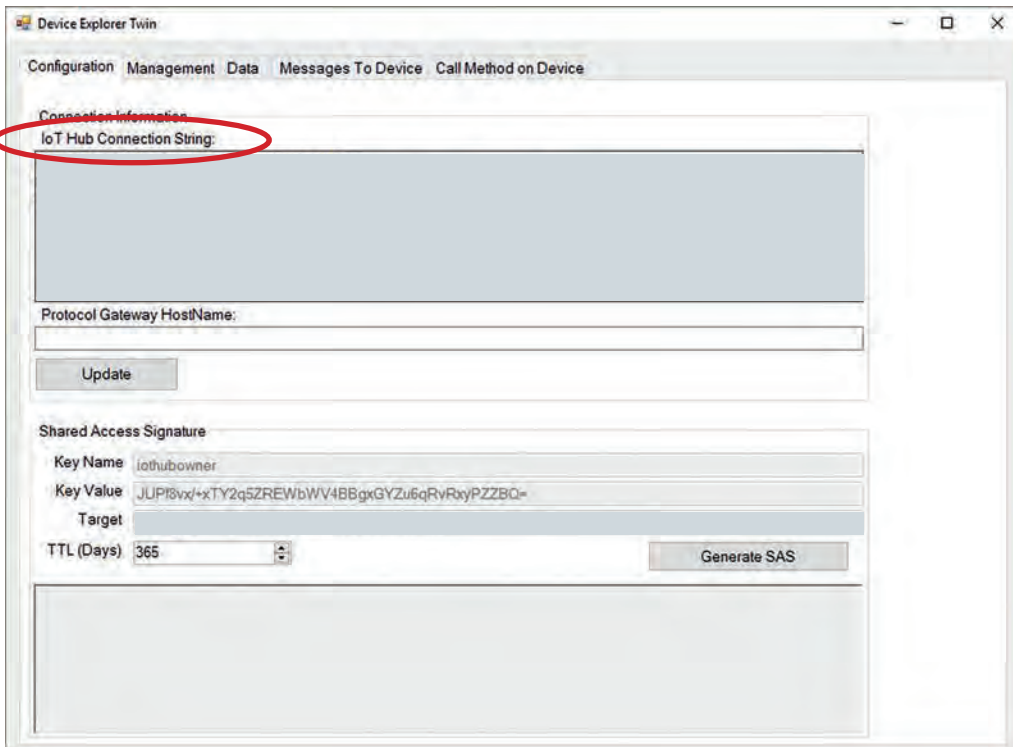
In **Azure IoT Hub**:
- Copy connection string in **Connection string – primary key** field

In *Device Explorer*:
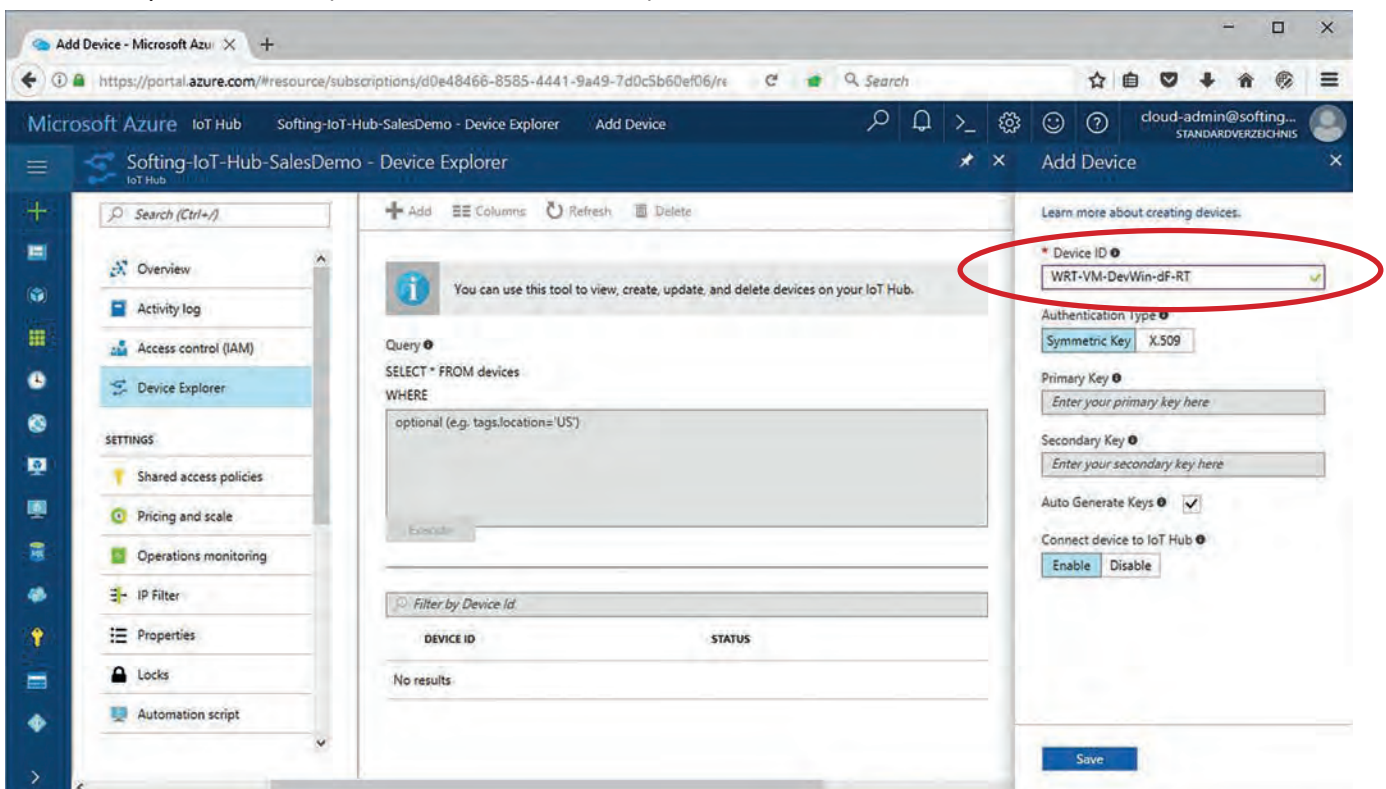- Paste connection string to *IoT Hub Connection String* field

- Press *Update* button

3. Create MQTT Connection in *Azure IoT Hub*

In *Azure IoT Hub*:
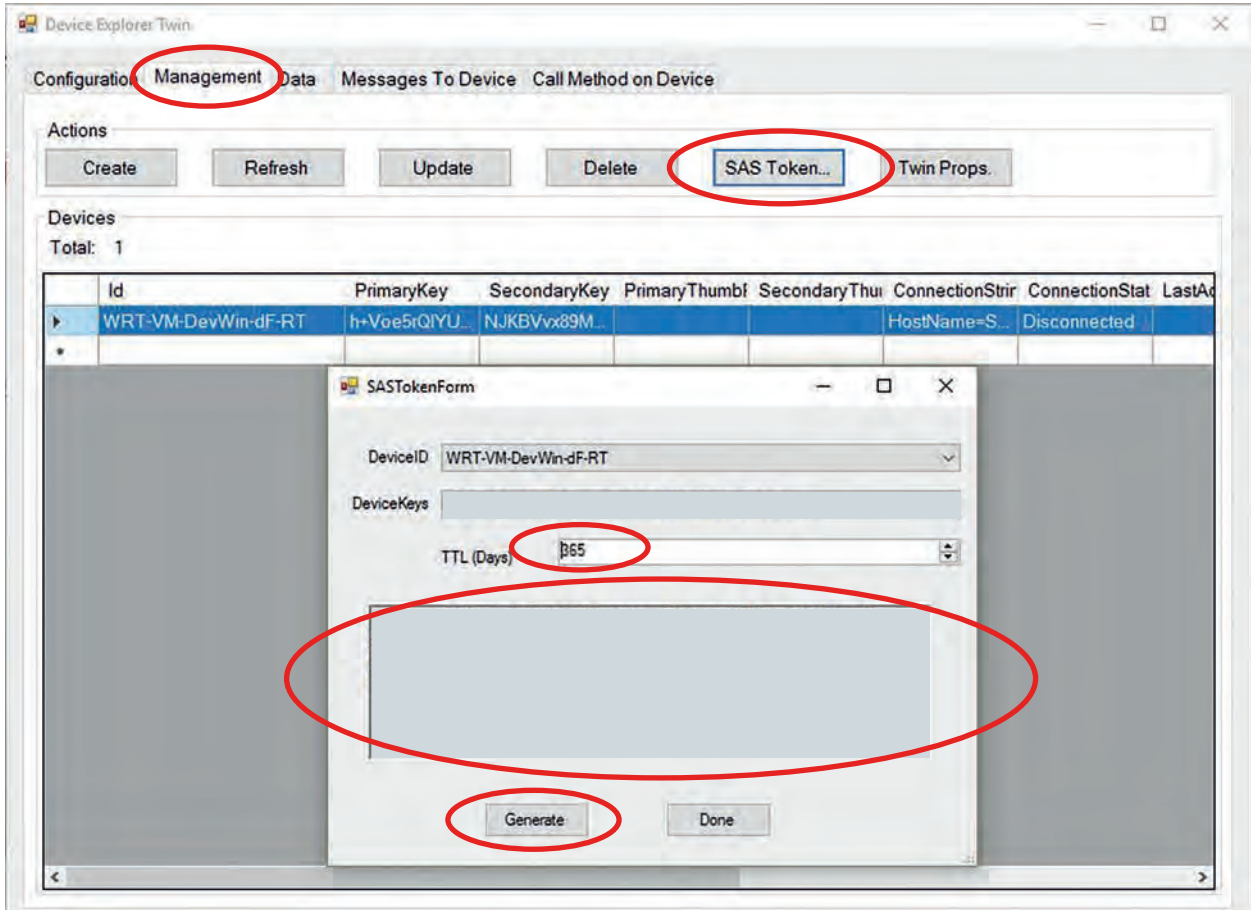- Define unique *Device ID* (23 characters maximum)

- Do not modify default settings for rest of the fields
- Press *Save* button

4. Create SAS for Device in *Device Explorer*
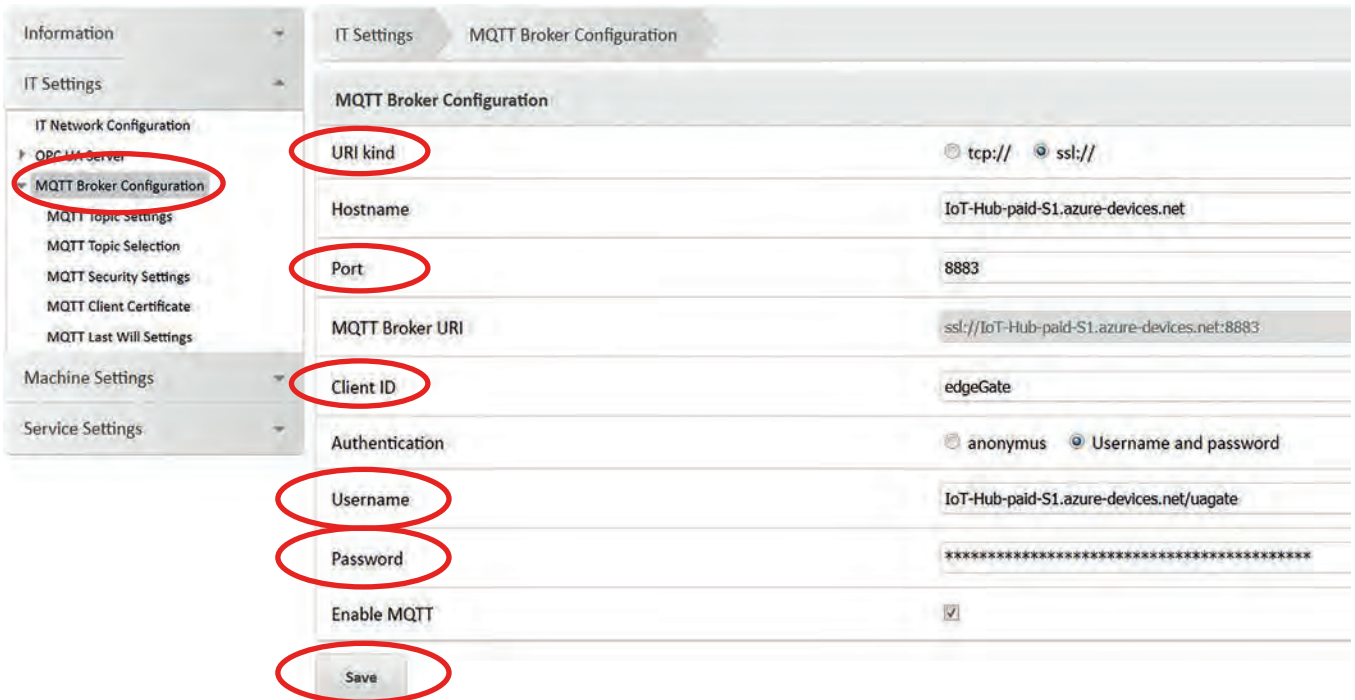
In *Device Explorer*:

• Select *Management* tab.

• Press *SAS Token...* button
• Define SAS duration in *TTL (Days)* field (e.g. to 365 days)
• Copy generated SAS token string for later use
• Press *Generate* button

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5. Create MQTT Broker Connection in e*dgeGate*

In *Internet Browser*:
- Connect to *edgeGate* configuration webpage
- Login as *Administrator* or *ITAdmin*

- Navigate to *MQTT Broker Configuration* page

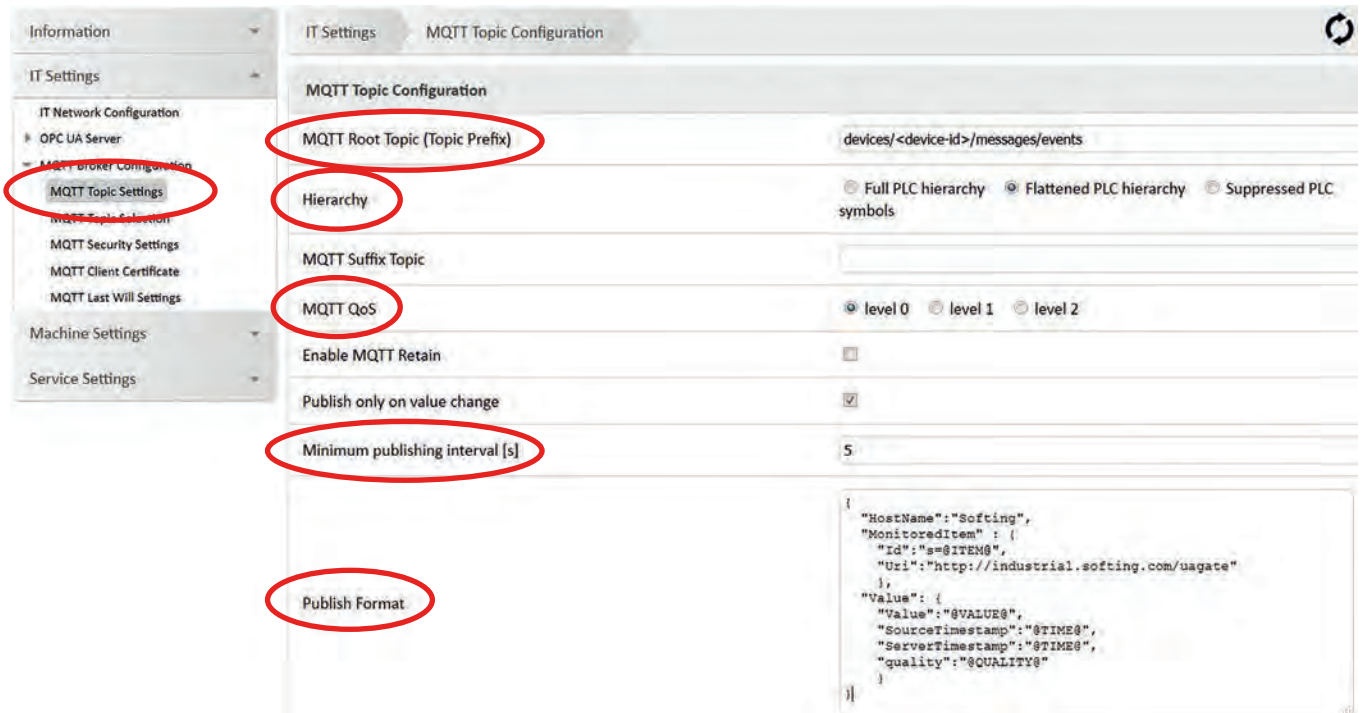- Select appropriate *URI kind* for MQTT connections of *Azure IoT Hub*
- Define *Port* number for secure MQTT connections (port 8883 is standard SSL port)
- Enter *Client ID* of *Azure IoT Hub* device (as generated in *Device Explorer*, see 4.)
- Enter *Azure IoT Hub* name plus string "*.azure-devices.net/*" plus device ID in *Username* field
- Enter SAS token in *Password* field
  (as generated in *Device Explorer*, see 4., just part after string "*SharedAccessSignature=*"is required)
- Write configuration changes to device using *Save* button

- Navigate to *MQTT Topic Settings* page

- Define *MQTT Root Topic (Topic Prefix)* as "*devices/<device-id>/messages/events*"
- Set *Hierarchy* to *Flattened PLC hierarchy*
- Set *MQTT QoS* to *level 0* or *level 1*
- Define *Minimum publishing interval [s]* by sampling interval as needed by application
 **ATTENTION:**
  Sampling the PLC data with the defined rate may cause huge amount of messages sent to *Azure IoT Hub*
- Define *Publish Format* field as

```
{
  "HostName":"Softing",
 "MonitoredItem" : {
   "Id":"s=@ITEM@",
   "Uri":"http://industrial.softing.com/uagate"
  },
 "Value": {
   "Value":"@VALUE@",
   "SourceTimestamp":"@TIME@",
   "ServerTimestamp":"@TIME@",
   "quality":"@QUALITY@"
  }
}
```

- Write configuration changes to device using *Save* button

- Navigate to *MQTT Topic Seection* page
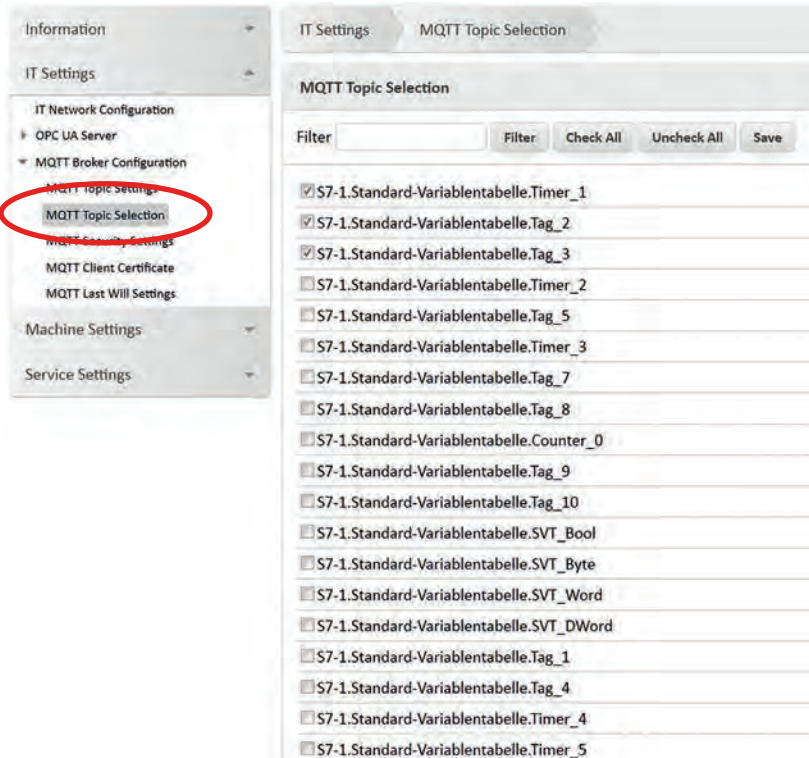
- Select PLC symbols to be sent to *Azure IoT Hub*
- Write configuration changes to device using *Save* button

- Finally, use *Pending settings* button for applying configuration update settings

6. Test MQTT Broker Connection and Data Exchange
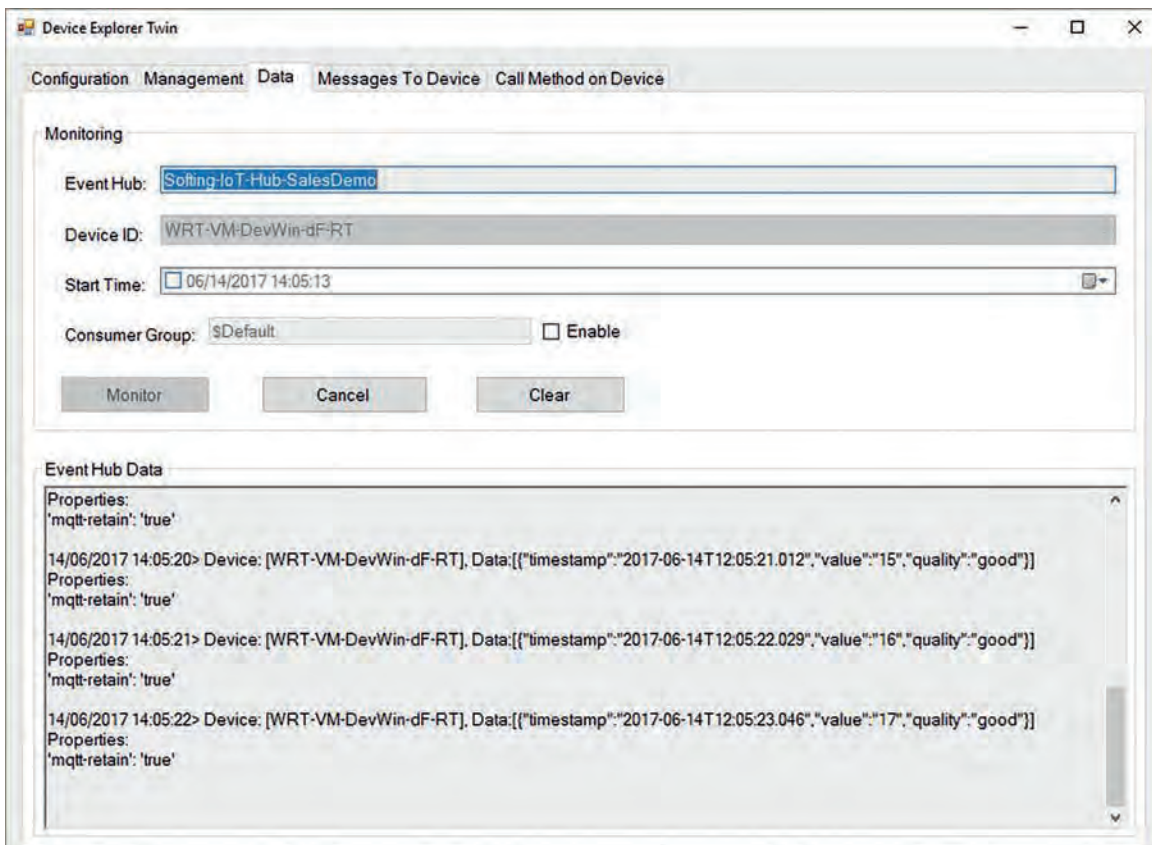
In *Azure IoT Hub*:
- After configuration update, MQTT messages are sent to *Azure IoT Hub*
- Messages received by *Azure IoT Hub* are shown in *Azure IoT Hub* portal
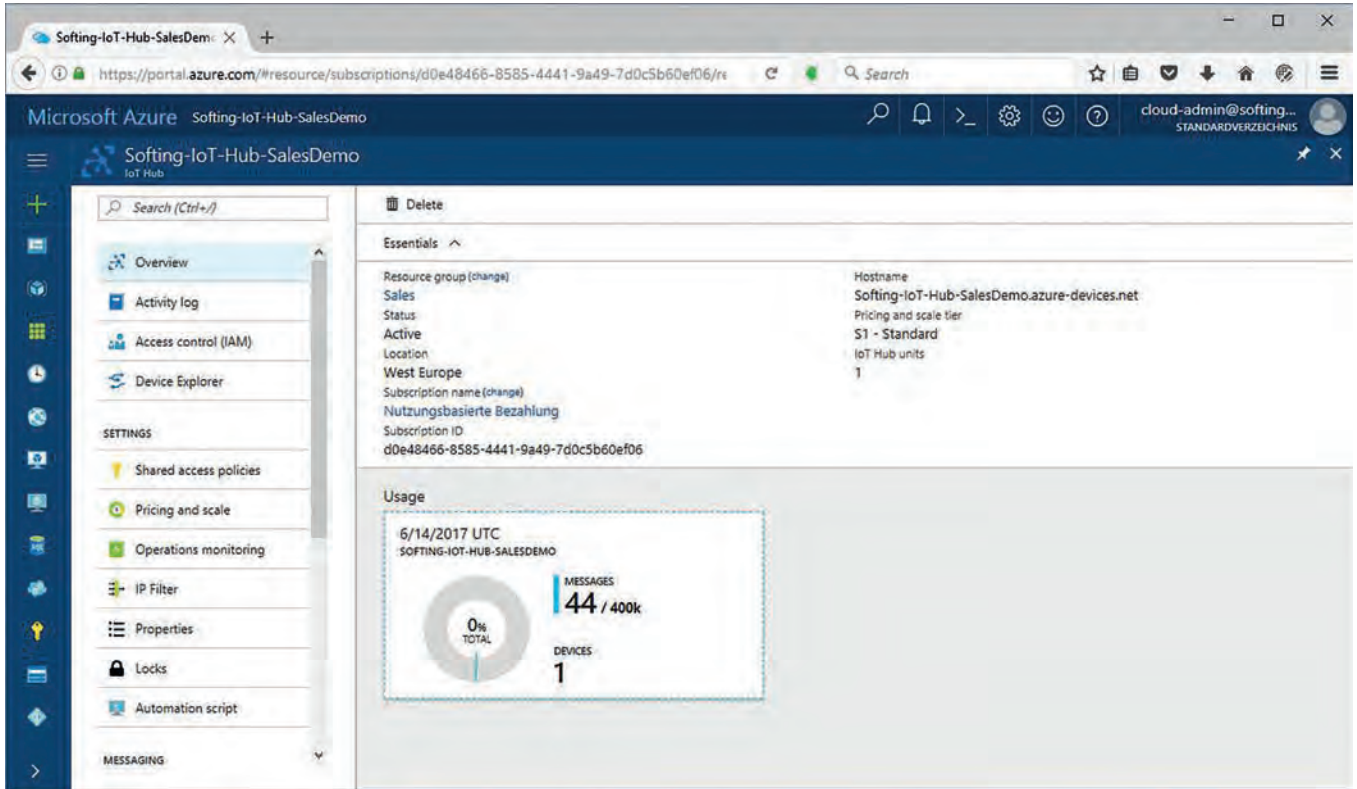
In *Device Explorer*:
- Connect to *Azure IoT Hub* and monitor received data

optimize!
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