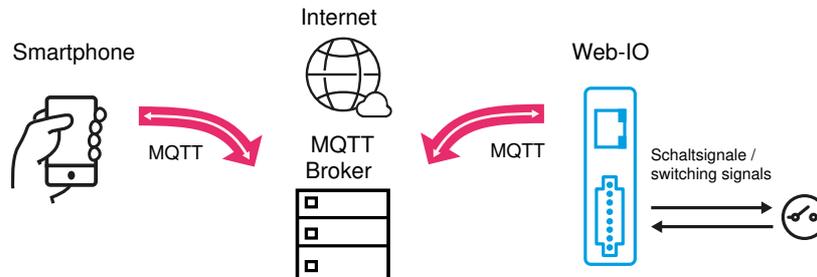


Application example for the Web-IO Digital

Control Web-IO Digital via MQTT using an iPhone

Switch consumers in the local network over the network, barrier-free from the iPhone

Until now triggering switching actions in your own home remotely has been cumbersome. Either the home firewall had to be opened up and configured, or the services of a home automation provider including their cloud access had to be employed



Now there is an alternative with the Web-IO 4.0 Digital models used together with MQTT. In MQTT protocol communication between controlling app and the switching Web-IO is not direct, but rather through any desired broker in the internet. Both communication partners connect from the local network to the broker over the internet. This connecting direction is permitted by most firewalls.

Set up broker access

There are numerous providers of free broker services. In the example shown we have chosen the broker from HiveMQ.

On the web page <https://hivemq.com> you can click in the "Hive MQ Cloud for free" area on "Get started now!". Use "Sign Up Now" to begin configuring access. Here you also provide a user name and password for access.

Set up the Web-IO for switching via MQTT

Preparation

- Provide power to the Web-IO and connect the IOs
- Connect the Web-IO to the network
- Assign IP addresses

Configuration

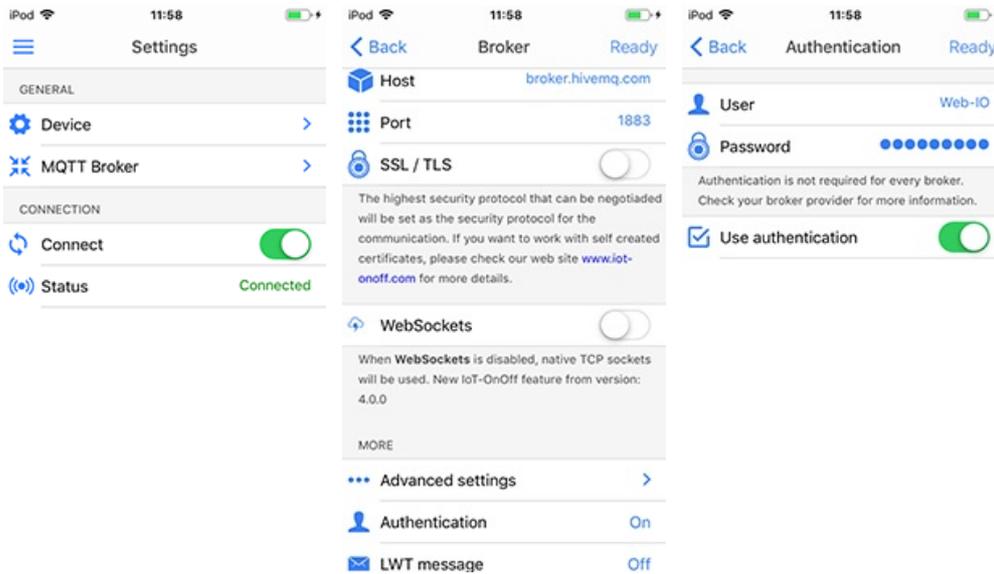
Log in to the web interface of the Web-IO as administrator and in the menu tree select *Communication paths >> MQTT*. Here you can assign the access data for the MQTT broker and enable *Publish and Subscribe with W&T standard topics*.

MQTT - Konfiguration	
MQTT:	<input checked="" type="checkbox"/> aktiviert i User-Name: <input type="text" value="Web-IO"/> Passwort: <input type="password" value="*****"/> Client ID: <input type="text" value="WEBIO00c03dcafe42"/> Broker-IP: i <input type="text" value="broker.hivemq.com"/> <input type="button" value="Q"/> Broker-Port: <input type="text" value="1883"/> Lokaler Port: <input type="text" value="AUTO"/> Verschlüsselte TLS Verbindung benutzen: <input type="checkbox"/> aktivieren Verbindungsprüfung im Intervall von: <input type="text" value="30"/> Sekunden MQTT Last Will: i <input type="checkbox"/> konfigurieren
Publish und Subscribe mit W&T-Standard-Topics:	<input checked="" type="checkbox"/> aktiviert (MQTT muss ebenfalls aktiviert sein) i <Gerätename>: <input type="text" value="wut-cafe42"/> <input checked="" type="checkbox"/> Publish aller Inputs Topic: "<Gerätename>/get/input/<Nr.>", Payload: "ON,OFF" <input checked="" type="checkbox"/> Publish aller Counter Topic: "<Gerätename>/get/counter/<Nr.>", Payload: "dez. Wert" <input checked="" type="checkbox"/> Publish aller Outputs Topic: "<Gerätename>/get/output/<Nr.>", Payload: "ON,OFF" <input checked="" type="checkbox"/> Schalten der Outputs über Subscribe Outputs freigeben: Zum Schalten Publish mit Payload "ON,OFF oder TOGGLE" auf Topic "<Gerätename>/set/output/<Nr.>" <input checked="" type="checkbox"/> Output 0 <input checked="" type="checkbox"/> Output 1 i Quality of Service: i <input type="text" value="QoS 0 - keine Empfangsgarantie"/> <input type="button" value="v"/> Retain - letzten Wert an neuen Client senden: <input checked="" type="checkbox"/> aktiviert

Install and configure app for MQTT

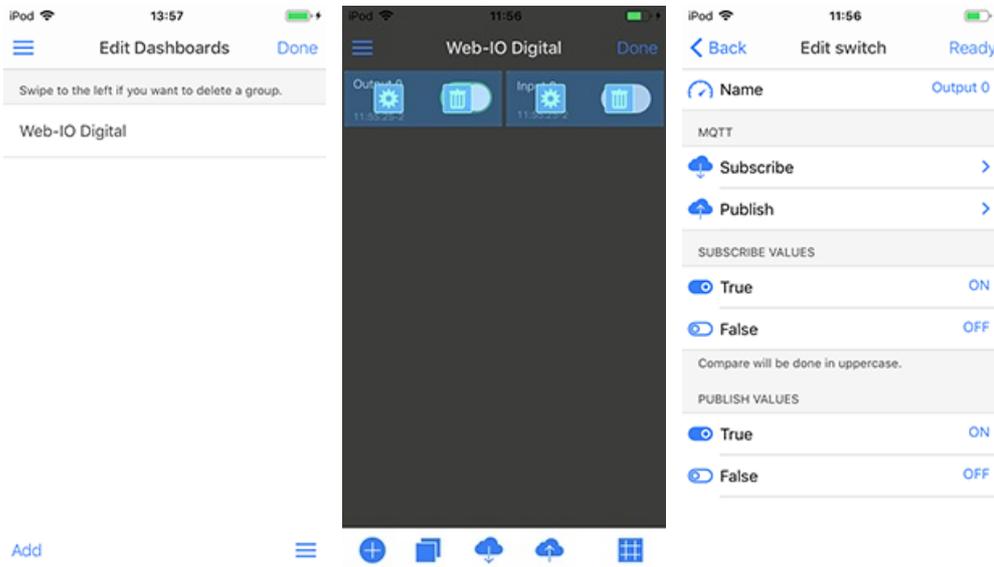
Among the numerous MQTT apps available for the iPhone we have decided on the "IoT ONOFF" app, which can display up to 10 MQTT topics without licensing. "IoT ONOFF" can be simply downloaded and installed from the Appstore.

After starting the app you have the option of viewing several sample visualizations which can be selected in groups. These examples should be deleted for a regulated new configuration. In addition a broker is already pre-configured. Use the menu point *Settings* and *MQTT Broker* to adjust the broker configuration.

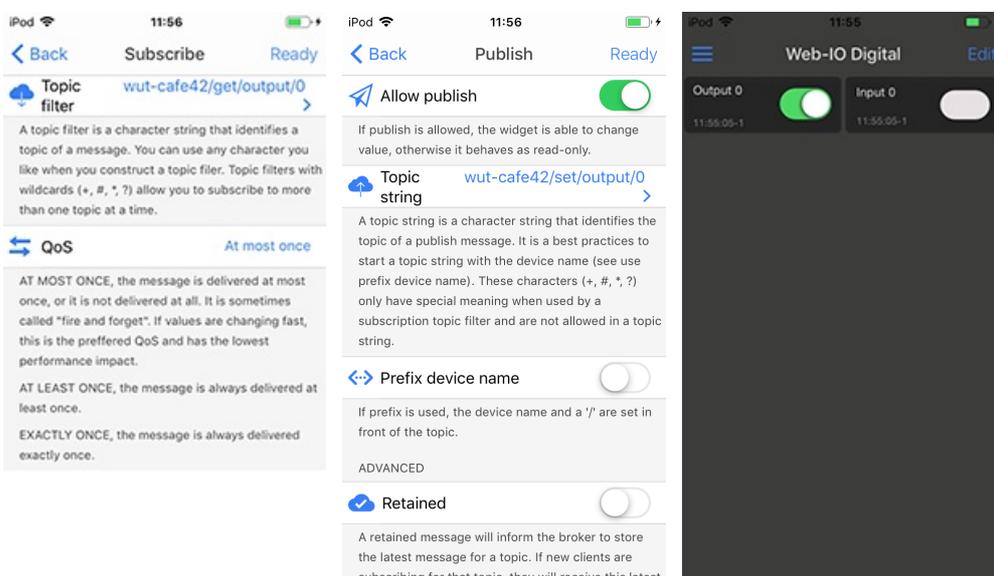


Next create a new visualization in which you can use Edit Mode to tap on *add*. Exit Edit Mode using *Done* and tap on the newly created dashboard entry. By tapping on the "+" symbol new display elements can be added to the dashboard. For an output add the type "Switch". To display an input use "LED".

Switch to Edit Mode. Here you can adjust the properties of the display elements. Assign the respective display element any desired name. It is important that the values for *WAHR* and *FALSCH* are replaced by "ON" and "OFF".



Now the topics for Subscribe and Publish (for the output only) need to be set. Once the configuration is completed, exit Edit Mode using *Done*. The states of the input and output should now be displayed and the output should be switchable from the dashboard.



By adding additional topics, for example a Web-Thermohyrometer, you can also of course monitor other values and

information such as temperature and relative humidity.

You can of course switch and monitor with MQTT using Android smartphones as well.

Products



Web-IO 4.0 Digital
2xIn, 2xOut

Power via PoE also when needed



Web-IO 4.0 Digital
12xIn, 12xOut

12x inputs,
12x outputs



Other Web-IOs

All W&T Web-IO Digital 24V



We are available to you in person:

Wiesemann & Theis GmbH
Porschestra. 12
42279 Wuppertal
Phone: +49 202/2680-110 (Mon.-Fri. 8 a.m. to 5 p.m.)
Fax: +49 202/2680-265
info@wut.de

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