

Application example for the Web-IO Digital

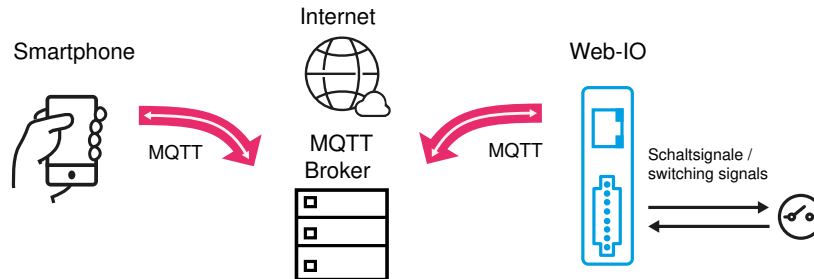
Control Web-IO Digital via MQTT using a smartphone

Product overview

Application overview

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

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

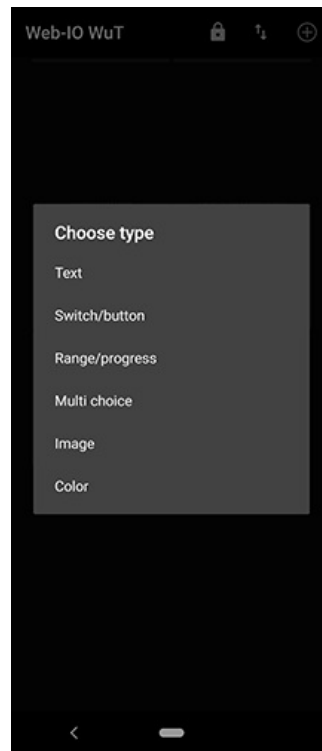
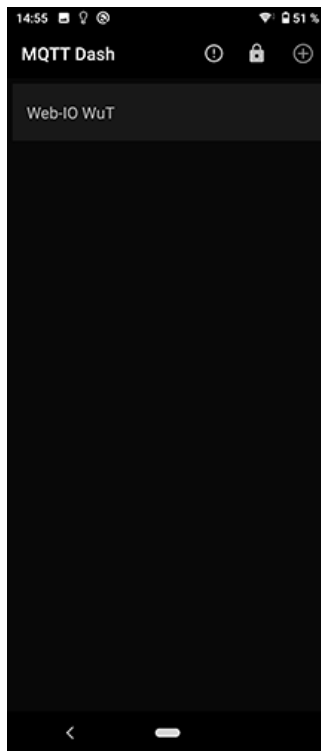
Log in to the web interface of the Web-IO as administrator and in the menu tree select *Communication paths >> MQTT*. Here you can assign the access data for the MQTT broker and enable *Publish and Subscribe with W&T standard topics*

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"/> 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 i <input checked="" type="checkbox"/> Output 1 Quality of Service: i <input type="text" value="QoS 0 - keine Empfangsgarantie"/> v Retain - letzten Wert an neuen Client senden: <input checked="" type="checkbox"/> aktiviert

Install and configure app for MQTT

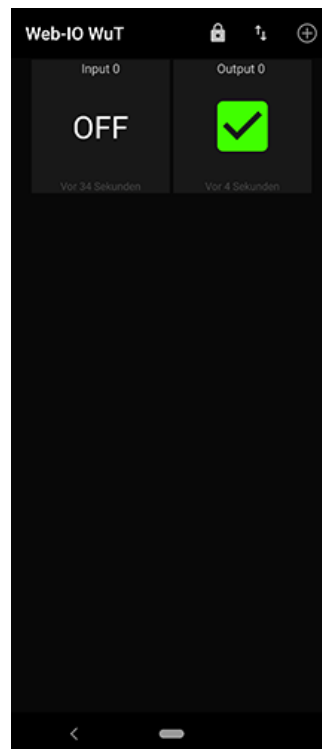
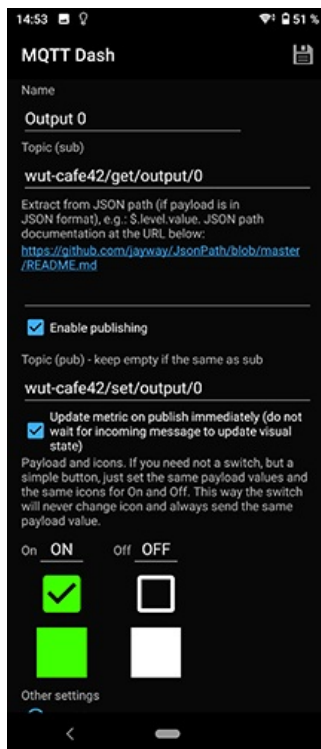
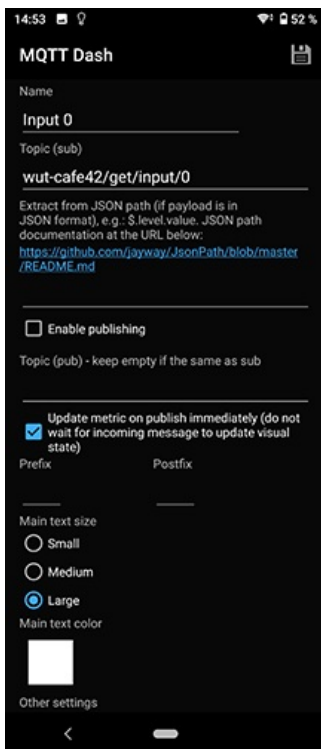
Among the numerous MQTT apps available for smartphones with the Android operating system we have decided on the free MQTT Dash app. MQTT Dash can be easily downloaded and installed from the Google Playstore.

After starting the app you can tap on the "+" symbol at upper right in the display to add an MQTT broker. In the resulting view you must enter the access data. Tapping on the diskette symbol saves the broker configuration and generates a corresponding button.



Tapping on the Broker button takes you to the IO area. Here you can use the "+" symbol to add display fields and control elements for the needed inputs and outputs. For a status display only select "Text" type. TO control your output, select Switch/button type.

As topics you can enter the standard topics of the Web-IO.



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.

An iPhone can of course also be used with MQTT for switching and monitoring.

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



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