Steve's Internet Guide

**Practical Guide to MQTT and Mosquitto**

☰

Updated:March 22, 2023 / By steve

Mosquitto MQTT Bridge -Usage and Configuration

A MQTT bridge lets you connect two MQTT brokers together. They are generally used for sharing messages between systems.

A common usage is connect **edge MQTT brokers** to a central or remote MQTT network. The Mosquitto broker (server) can be configured to work as an **MQTT bridge**.

Generally the local edge bridge will only bridge a **subset** of the **local** MQTT traffic.
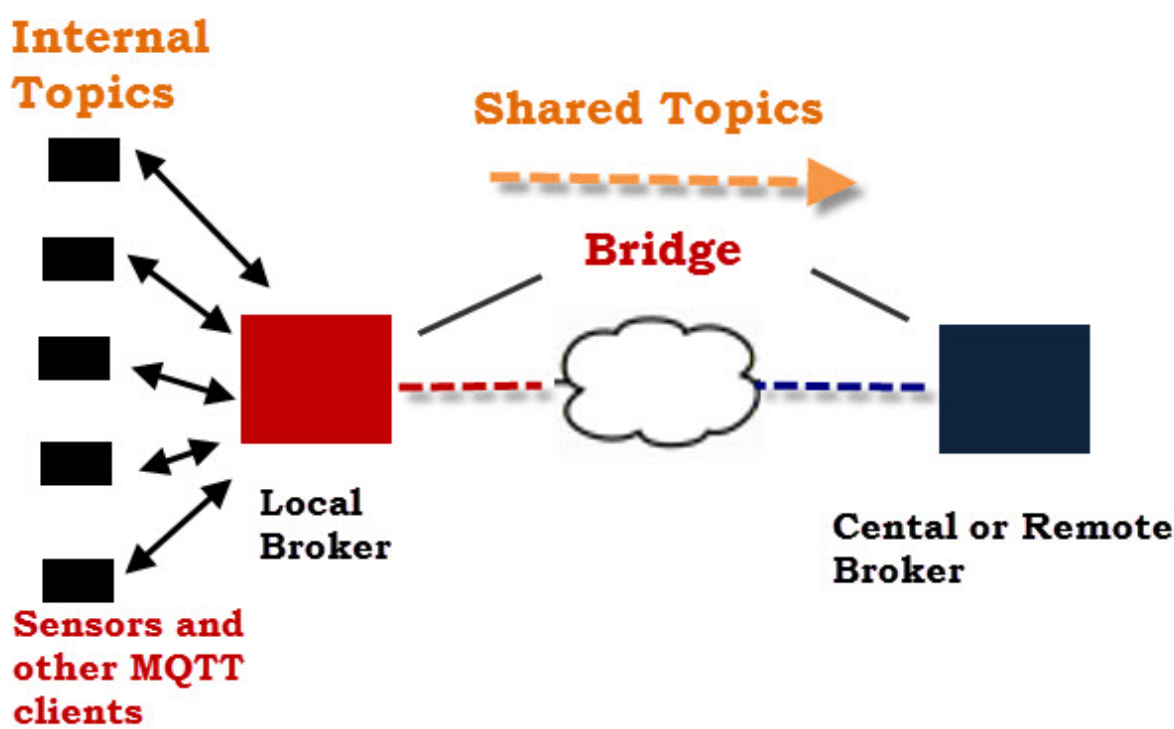
MQTT Bridge Ilustration

In addition you only need to **configure 1 of the brokers** to act as the bridge, the other will act as a normal broker.

How an MQTT Bridge Works

When you configure the mosquitto broker to act as a bridge it becomes an **MQTT client to the remote broker** and **subscribes and publishes** to topics on the other broker just like a normal MQTT client.

MQTT Bridging Schematic

Broker1   Broker2

Publish

Subscribe

Client

Note: **Only one of the brokers needs to be configured to act as a bridge**
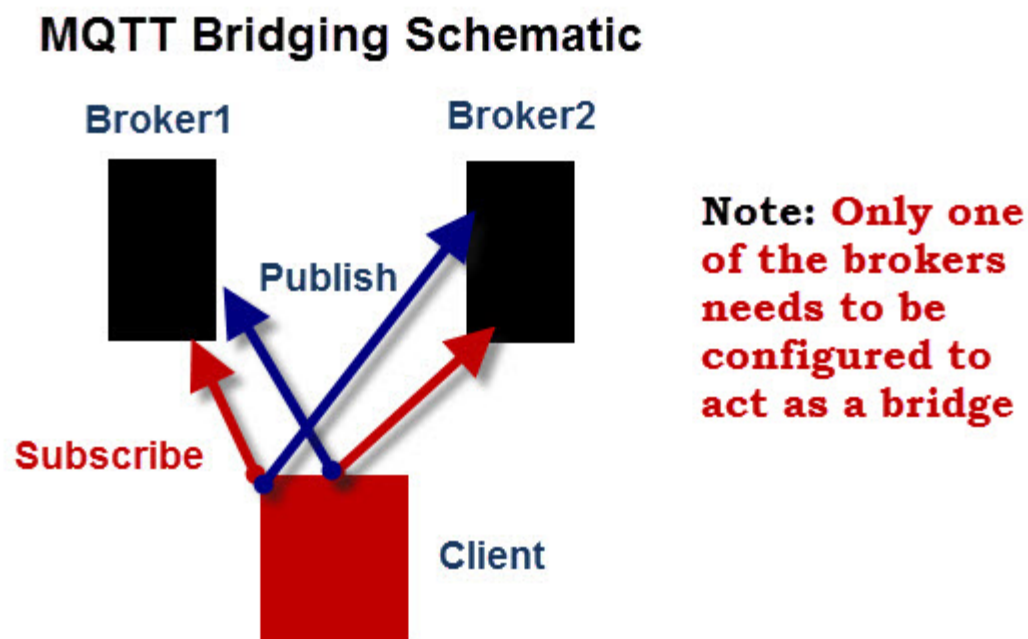
When configuring a bridge on broker 1, for example, you are effectively configuring a client that subscribes to topics on broker 1 and then publishes them to broker 2. It also subscribes to topics on broker 2 and publishes them to broker 1.

Configuring the Broker as a Bridge

You will need to configure

- The Address and port of the remote broker or brokers. – **Address keyword**
- A client name. – **Connection keyword**
- What topics the broker will publish, and which topics it will subscribe to. **-topic keyword**
- Remapping if needed.

Note: You can configure **multiple remote broker addresses** and the broker will switch to another broker if the current broker connection fails.

Topic Bridging

What topics are being bridged, and if they are being remapped is controlled by the topic entry. Wildcards can be used in the topic entry.

The general format is

topic **topic pattern** direction QOS local prefix/remote prefix.

Direction can be **out,in or both.**

out = publish from the broker
in = receive from remote broker
both = publish and receive

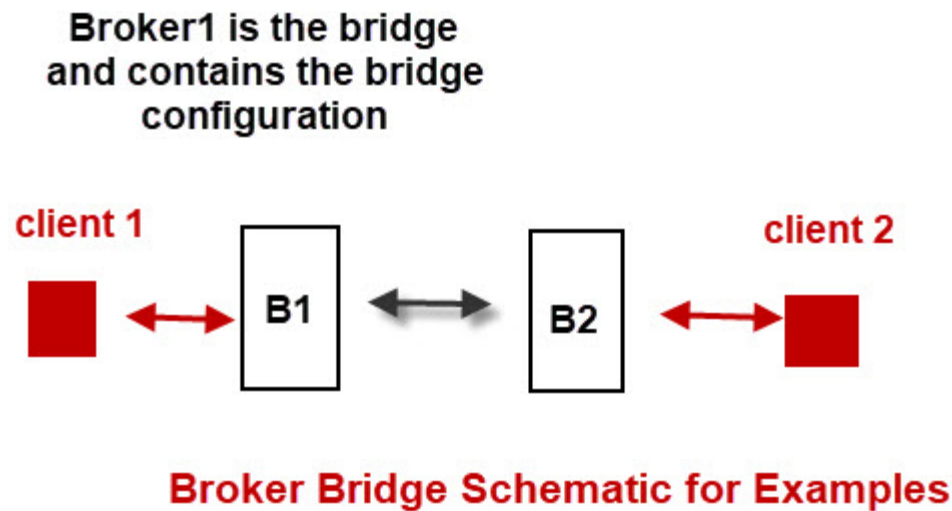**Note:** If you aren't using topic prefixes then you don't need to add them.

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This is best seen in examples using the layout in the schematic below

Broker Bridge Schematic for Examples

Example 1

Configuration file topics

topic house/# out

Result:

client 1 publishes on **house**/sensor1 or house/anything and the message is sent to broker 2

client 1 publishes on **house1**/sensor1 and the message is **not sent** to broker 2

client 2 publishes to any topic and nothing is sent to broker B1.

Example 2

Configuration file topics

topic house/# in

Result:

client1 publishes to any topic and nothing is sent to broker B2.

client 2 publishes on **house**/sensor1 or **house**/anything and the message is sent to broker B1

client 2 publishes on **house1**/sensor1 and the message is **not sent** to broker B1

Example 3

topic house/sensor1 both 0 "" ""

or

topic house/sensor1 both 0

The entries:

topic house/sensor1 in 0 "" ""
topic house/sensor1 out 0 "" ""

Are equivalent to the single entry:

topic house/sensor1 both 0 "" ""

and also

topic house/sensor1 both 0

Result:

client 1 publishes on **house**/sensor1 or **house**/anything and the message is sent to broker B2

client 2 publishes on **house**/sensor1 or **house**/anything and the message is sent to broker B1

client 1 publishes on **house1**/sensor1 and the message is **not sent** to broker B2

client 2 publishes on **house1**/sensor1 and the message is **not sent** to broker B1

The screen shot below shows how to bridge all topics with no remapping.

Mosquitto Bridge Configuration- Simple

```
#connection <name>

connection bridge-01
address 192.168.1.184:1883

topic # out 0
topic # in 0
```

Bridge all topics no remapping

MQTT Topic Bridging and Remapping

This is accomplished using the **local** and **remote** prefixes.

When the bridge on broker1 subscribes to a **topic on broker2** it uses the form

remote_prefix + **topic name** e.g. **b2/house/sensor1**

When the bridge on broker1 subscribes to a **topic on broker1** it uses the form:

local_prefix + **topic name** e.g. **b1/house/sensor1**

The topic prefixes follow the **QOS** entry.

The screen shot below shows a remapping configuration for broker 1:

Mosquitto Bridge Configuration File

```
#connection <name>

connection bridge-01
address 192.168.1.184:1883

topic # out 0
topic # in 0 ""  b2/
```

**Bridge all topics and use a remote
Prefix b2/ and no local prefix**

With the above configuration then:

- When Client1 publishes on any topic that message will be sent to broker 2 with the topic prefix b2/. Example incoming client message to B1 on topic house/sensor1 is published to broker 2 on topic b2/house/sensor1.
- When a client publishes a message to broker2 then messages published on b2/# are sent from broker2 to broker 1 **but without the b2/ prefix**. A message published to broker 2 on house/sensor1 **is not** sent to broker 2 as it doesn't have the **b2/** prefix

Broker 2 Configuration

Broker2 is functioning as a normal broker (not a bridge) and doesn't normally need any extra configuration.

Bridging and Topic Remapping Examples

MQTT Bridging Topic Remapping Example
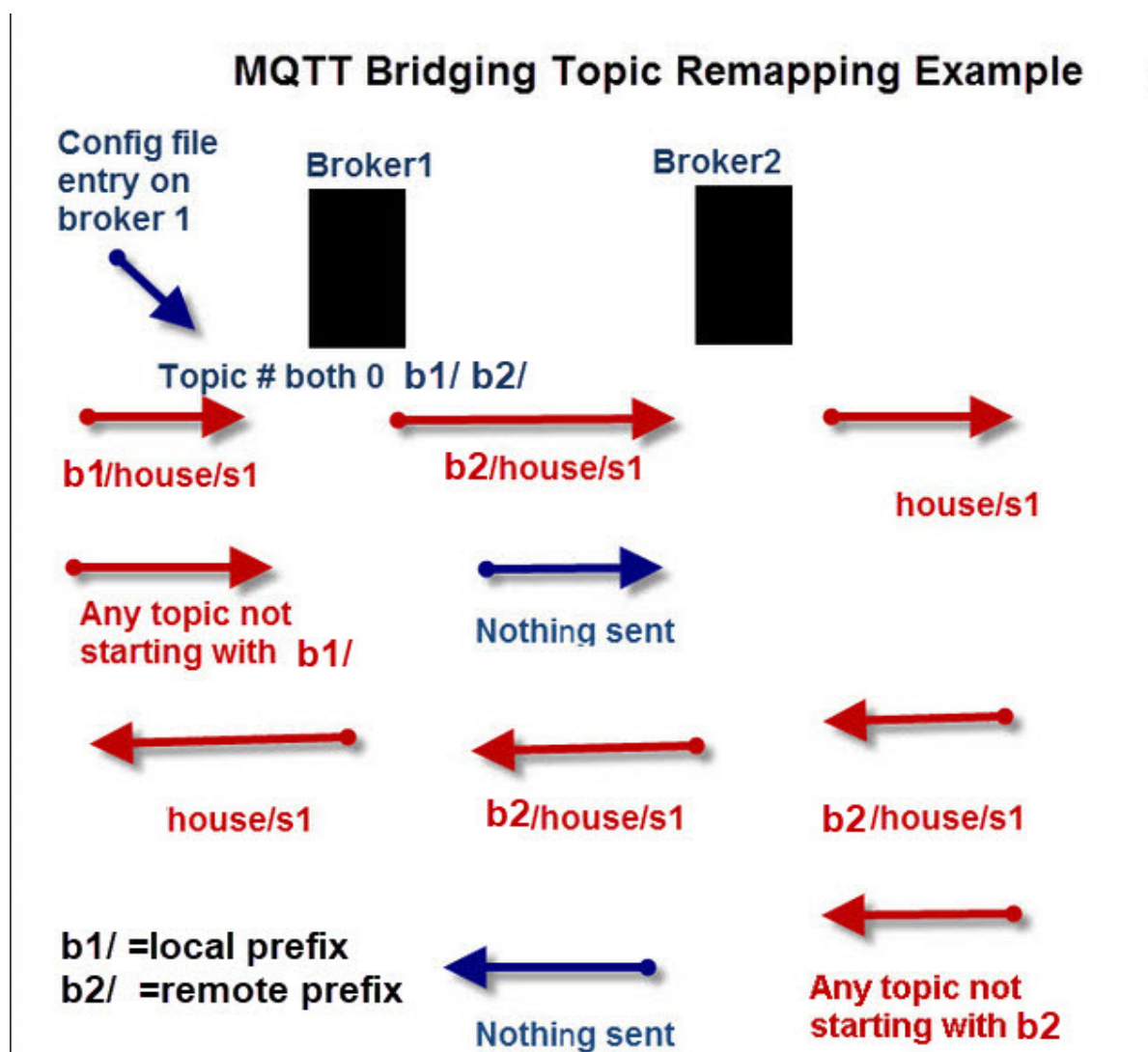
The following examples refer to the schematic above with two brokers Broker1 and B**roker2** . **Broker1** is configured as the bridge.

Normal clients will also be connected to both brokers.

Entry uses remote prefix:

topic house/sensor1 both 0 "" b2/

Equivalent to

topic house/sensor1 out 0
topic house/sensor1 in 0 "" b2/

Result:

Incoming messages from a client connected to **broker 1** on the topic **house/sensor1** are being bridged and will be **remapped** and sent to **broker2** on topic **b2/house/sensor1.**

Incoming messages from a client connected to **broker2** on topic **b2/house /sensor1.** will be sent to **broker**1 on topic **b2/house/sensor1.**

Broker1 **removes the b2 prefix** and will send them to clients subscribed to **house/sensor1 on broker 1.**

Entry uses local and remote prefixes:

topic house/sensor1 both 0 b1/ b2/

this is the same as:

topic house/sensor1 out 0 b1/ ""
topic house/sensor1 in 0 "" b2/

Result:

Incoming messages from a client connected to **broker1** on topic **b1/house /sensor1** are being bridged and will be remapped and sent to **broker2** on the topic **b2**/**house/sensor1.**

Incoming messages from a client connected to **broker2** on the topic **b2**/**house /sensor1.** will be sent to broker1 on topic **b2**/**house/sensor1.**

Broker 1 **removes** the remote prefix (b2/) and then **adds** the local prefix (**b1/**) and will send them to clients subscribed to **b1**/**house/sensor1** on **broker 1**

Working Bridge Example

Using the configuration shown above on B**roker1** I am going to publish a message to Broker1.

Broker1 has the bridge configured to connect to **Broker2** (IP address 192.168.1.157).

The topic bridging entry is:
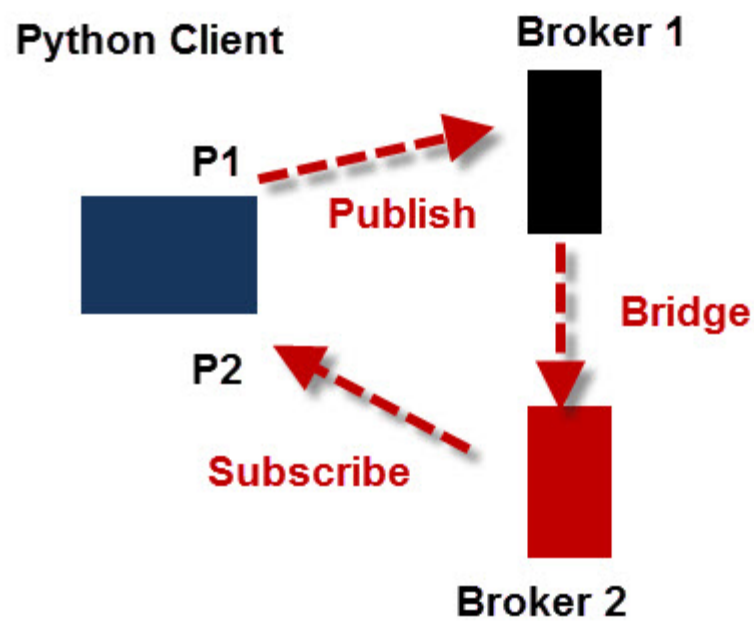
topic # both 0 "" b2/

Broker1 accepts messages and publishes them to Broker2 with a prefix of **b2/**.

Broker1 subscribes to messages from Broker2 on topic **b2/#**

Using a simple python client we will :

- Publish a message to B**roker1** on topic **house**/**sensor1**. Using a client name of P1
- Subscribe to B**roker2** on topic **b2/house/sensor1** -Using client name of P2

Testing the Mosquitto Bridge- Example

When you start the broker on broker 1.

- It connects to broker 2 and subscribes to the topics b2/#.
- Connects to itself and subscribes to topic #

This can be seen from the console log messages:

subscribed to the topic on broker 2

When I run the script this is what I see.

```
>>>
connected to broker 1
connected to broker 2
subscribing to broker 2 topic = b2/#
publishing message to broker1 topic=  house/sensor1
message received on broker 2
topic  b2/house/sensor1 message:  Message1
```

Broker 1 receives message on topic **house/sensor1** and publishes them to broker2 on **b2/house/sensor1.**

Broker2 receives messages on **b2/house/sensor1** from broker1.

Backwards Testing

I can also publish to broker 2 on topic **b2/house/sensor1** and it should be sent to broker 1 and made available as **house/sensor1**.

So now I will alter my script to send to broker 2 on topic **b2/house/sensor1** and subscribe to **house/sensor1** on broker 1.

Here is a screen shot of the results.

```
>>>
connected to broker 1
connected to broker 2
subscribing to broker 1 topic = house/sensor1
publishing message to broker2 topic=  b2/house/sensor1
message received on broker 1
topic  house/sensor1 message:  Message1
>>>
```

Notice the message is received by the client subscribed to broker 1 n the topic **house/sensor1**

Topic Remapping and Topic Republishing

Topic remapping takes an incoming topic and renames it.

E.g A broker would receive messages to topic **sensor1** and remap them to **new_sensor1**.

Currently this form of remapping is not available, but **prefix remapping** is as shown above.

Mosquitto Topic Re-Mapping Illustration
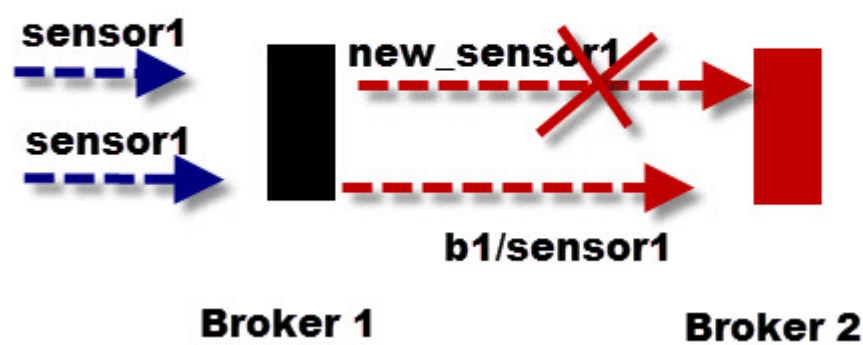
Bridging to Multiple Brokers- Round Robin

It is possible to bridge to another broker in the event of a broker failure.

To do so you need to set multiple **address:port** entries in the address field i.e

address 192.168.1.168:1883, 192.168.1.185:1883

will use broker 192.168.1.185 if the connection to the first broker (192.168.1.168) fails.

The **round robin** setting controls what happens when the original connection is restored. Here is the description taken from the online manual:

```
round_robin [ true | false ]
```

If the bridge has more than one address given in the address/addresses configuration, the round_robin option defines the behaviour of the bridge on a failure of the bridge connection. If round_robin is `false`, **the default value**, then the first address is treated as the **main bridge connection**. If the connection fails, the other secondary addresses will be attempted in turn. **Whilst connected to a secondary** bridge, the bridge will **periodically attempt to reconnect** to the main bridge until successful.

If round_robin is `true`, then all addresses are treated as equals. If a connection fails, the next address will be tried and if successful **will remain connected until it fails.**

Authentication and Encryption

If the remote broker requires a username and password then you need to enter this using the **remote username** and **remote password** options.

```
# Set the username to use when connecting to a broker that requires
# authentication.
# This replaces the old "username" option to avoid confusion. "username"
# remains valid for the time being.
#remote_username

# Set the password to use when connecting to a broker that requires
# authentication. This option is only used if remote_username is also se
# This replaces the old "password" option to avoid confusion. "password"
# remains valid for the time being.
#remote_password
```

You can also encrypt the connection between the brokers.

This is likely to be a common configuration and Is covered in more detail in the Configure Mosquitto Bridge With SSL Encryption- Examples tutorial.

Looping

Publishing and subscribing to the same topic on the broker could result in a loop.

However if you try this you find that a broker detects that another broker sent the message, and doesn't send the message back to it even though the broker has subscribed to that topic.

This confused me at first as looking through the specs I couldn't find any reference for **broker detection.**

I did find this comment from Roger Light on a forum that explains it.

Hi Nick,

> Rather than knowing who sent the message, I was wondering if there was a way
> of telling the broker not to send any of my own messages back to me.

You're quite right, I wasn't thinking straight. Both rsmb and
mosquitto allow clients to declare themselves as bridges by setting
the MSB of the protocol version byte in the CONNECT message - i.e. by
setting it to 0x83 instead of 0x03. This has the effect of not sending
your own messages back to you but also propagating the retain bit on
retained messages. A normal client will only see retain=true on
messages that are not fresh, a bridge client sees retain=true if the
originating client set it.

This isn't something that is part of the current spec, but I expect it
will be at some point.

Cheers,

Roger

This seems to be triggered by the **try private** statement in the configuration file. This is what the config file states:

```
# If try_private is set to true, the bridge will attemp
# remote broker that it is a bridge not an ordinary cli
# means that loop detection will be more effective and
# will be propagated correctly. Not all brokers support
# be necessary to set try_private to false if your brid
# properly.
#try_private true
```

Bridging to Thingspeak Note

I had a request for help regarding bridge configuration on mosquitto when creating a bridge to thingspeak.

If you need to do this you need the following two entries:

notifications false
cleansession true

See this forum comment

Problems Encountered

When configuring bridges you may encounter some issues. Here are some of the errors I've encountered.

Error message on broker –**socket error on client <unknown>disconnecting**

Cause – Configuration file error. In my case it was the PSK setting.

Problem – Remapping not working as it should.

Cause -I forgot the QOS entry

Video -How to configure a bridged connection on the mosquitto mqtt broker

Note: Bridging to Beebotte

If you need to create a bridge to beebotte then you need to use the **try_private** command as shown below:

This mosquitto.conf file works (Note that is not my real user token)

```
#############
port 1888
log_type all
connection bridge-01
address mqtt.beebotte.com
try_private false
cleansession true
topic house/# out 0
topic house/# in 0
remote_clientid broker1
remote_username 5I6IJSjYNFtfcvNhEZXAAZXOpWWGZt6WfgAY
#remote_password ' '
################################
```

Bridging to Reducing TCP/IP connections

MQTT is a connection orientated protocol which means that each MQTT client

has a connection to the broker.

Broker connections are TCP/IP connections which take up memory on the broker as each connection is allocated a memory buffer.

A very effective way of relieving the connection load on a central broker is to use edge brokers configured as bridges.

If you had 1000 clients that needed to connect to a cloud broker then the broker would need to support 1000 connections if they connected directly, but if you connected 200 clients to a gateway broker then the cloud broker would only need to support 5 client connections.

Summary

MQTT bridging on Mosquitto allows you to connect two or more MQTT networks together. MQTT bridging is likely to be used to connect edge networks to a central network. Generally only a subset of the local topics will be bridged.

Bridging Alternatives

You can also use a client to do the bridging rather than the broker.

This means that you don't need to be a broker administrator to do it and your broker doesn't need to support it.

See [Bridging using the python client](#)

Related Articles and Resources:

- [Mosquitto.conf documentation](#)
- [Connecting the last 100 metres](#) –
- [Owntracks -bridging](#)
- [Implementing SSL on the mosquitto broker](#).

Mosquitto Configuration Tutorials

- [Installing The Mosquitto broker on Windows and Linux](#)
- [Quick Guide to The Mosquitto.conf File With Examples](#)
- [MQTT TLS Security – Mosquitto Broker Configuration](#)
- [Configuring and Testing MQTT Topic Restrictions](#)
- [Mosquitto username and Password Authentication Configuration Guide](#)
- [Configuring Logging on The Mosquitto Broker](#)

Please rate? And use Comments to let me know more

⭐⭐⭐⭐☆📊

183 comments

Alex says:

February 13, 2024 at 9:41 pm

Hello Steve.

Thank you very much for all your work. The knowledge you share is priceless.

I have one issue with which I've been struggling for a while. Wondering if you could help me out with it.
I've set my bridge to beebotte. It looks like all messages I publish from my local broker mosquitto are being received at beebotte server. This however does not work the opposite way, so when i publish a test message from beebotte, such a message is not received by my local broker. Of course, in both cases, I publish under the topic homeassistant. It looks like one-way-only communication.

My bridge setting are as follows:

connection bridge-khjhgdfgcbvjhhh623364gfrt
address mqtt.beebotte.com:1883
try_private false
remote_clientid BEEBOTTE
log_type all
cleansession true
topic homeassistant/# in 0
topic homeassistant/# out 0
topic esphome/# in
topic esphome/# out
remote_username DELETED
remote_password DELETED
log_type all
bridge_protocol_version mqttv311
persistence false

Your feedback would be much appreciated.

Reply

steve says:

February 14, 2024 at 4:57 pm

Your config looks to be ok. I tried it on mine but the bridge connection kept disconnecting and reconnecting. Is your connection stable?
rgds
Steve

Reply

Alex says:

February 15, 2024 at 9:06 pm

Hello.

Hymm, not really. I checked my mosquitto logs and I did not really find any disconnections. I do get PINGREQ to beebotte and also PINGRESP back.

Reply

---

steve says:

February 16, 2024 at 9:26 am

Will try using a different version of mosquitto. Are you using the free account or the paid account?
rgds
Steve

Reply

Alex says:

February 16, 2024 at 11:53 am

Hello Steve.

I am using a free account.

Thanks an br

Alex

---

steve says:

February 16, 2024 at 3:44 pm

tks

---

steve says:

February 16, 2024 at 4:14 pm

You are getting further than I am. I can send andreceive using various client but the bridge connects and gets connack but then subscribes and gets disconnected. Is there a beebotte setting I am missing.
Rgds
Steve

---

steve says:

February 16, 2024 at 5:43 pm

Ok
Finally managed I had to use a lam token on the bridge. It now works in both directions. On the client that I use for testing I use a channel token.
Rgds

Steve

Alex says:
February 17, 2024 at 7:28 pm

I've done the same, iam token for the bridge. Nothing moved forward 🙁 still the same. Did you do anything in beebotte account, any settings ie channels etc? Maybe I am doing something wrong in the way i am testing it? But what would be easier than mqttexplorer and publishing messages from one to the other broker?

Thanks in advance for any hints.

---

steve says:
February 17, 2024 at 8:03 pm

When testing you can only send the a channel that you have defined.I subscribed to my local broker and then sent a message direct to beebotte on the channel.
When publishing and subscribing I used the channel token.
Is that what you did?
Rgds
Steve

Alex says:
February 17, 2024 at 8:41 pm

I do it in two different ways:
1) I open two mqtt explorers. In one, I log myself in to my local – mosquitto – broker. In order to publish, I type in "topic field" -> "homeassistant" and in "json field" -> "test from local"
In the second mqttexploer i log myself in by using IAM token (same as in bridge) and I immediately can see the message I have sent from local broker

2) I go to mosquitto addon in my HA. I go to configure and similarly, i set topic to "homeassistant" and publish a "test from local". Again, immediately on mqttexploer that is logget to beebotte i can see such message.

Whenever i publish anything in mqttexplorer that is logged in to beebotte, using same topic – "homeassistant", I do not get the message in either HA mosquitto nor mqttexplorer logged into local broker.

Now, I also checked the "console" tab on beebotte website but there I can not see any messages from my local mosquitto broker nor I can publish anything.

Thanks

Alex

---

steve says:
February 18, 2024 at 3:12 pm

I had no luck with the console either.
Just to clarify when you publish do you use the topic homeassistant or
homeassistant/sensorx
sensorx is just an example.
rgds
Steve

Alex says:
February 18, 2024 at 3:31 pm

Hello Steve.

I just tried by publishing with topic homeassistant and
homeassistant/0x00158d00070b7cd7 where 0x00158d00070b7cd7 is
my real sensor under homeasssistant.

Neither way works

---

steve says:
February 18, 2024 at 3:33 pm

Can you contact me using the ask steve page and we can use email. I will
need your tokens to test it.
Rgds
Steve

---

steve says:
February 19, 2024 at 8:32 pm

Alex
Did you see my last comment. If you want you can try my tokens as I
don't use beebotte for any real work. You will need to contact me on the
ask steve page so I can email you.
Rgds
Steve

Alex says:
February 20, 2024 at 7:16 pm

Hello again Steve.

I tried to send you a messgae via ask steve.
However, after i pressed "submit" i got an error. I've done it twice with the same

outcome.

Please advise how to overcome it.
Thank you
BR
Alex

Reply

steve says:

February 21, 2024 at 4:06 pm

Hi
You should have got an email
Rgds
Steve

Reply

Andreas says:

September 1, 2023 at 10:28 am

Hi Seve, thank you for your very helpful internet guide.
We currently have many MQTT-Clients where wie publisch a state "online" in each
payload and a state "offline" in a LastWill message to a first level broker, similar to
the chapter "MQTT Last Will and Testament Use and Examples". If we bridge the
topics of the clients from the first level broker to an upper level broker, the last will
messages with the state "offline" is delivered from the upper level broker when a
client disconnects, but NOT when the first level broker is stopped. I have the following
question: Is the last will information transmitted over a bridge so that they are
delivered in case of broker failure ?
Many greetings, Andreas

Reply

steve says:

September 1, 2023 at 1:19 pm

Andreas
Don't see why not as it is just like any other message but I will test it and get back.
Rgds
Steve

Reply

steve says:

September 1, 2023 at 4:27 pm

Andreas

I checked it and it works as expected it could be the way you are testing.
The way I test is with a python script and I stop the client loop which eventually triggers a fail on the ping req/response which the broker sees as a bad disconnect and trigger the lwm.
Rgds
Steve

Reply

vanitha says:
March 31, 2023 at 7:33 am

Hi !. Its the great article!.
I'm having a problem like I have one remote address and the two ports. The default 1884 will listens for all the topics messages sent in and out and the another port 2883 is only used to sent a message.
How can I achieve this using paho mqtt in javascript?

Reply

steve says:
March 31, 2023 at 9:47 am

Sorry but can you explain the setup in more detail. Are you trying to bridge or something else.
Rgds
Steve

Reply

Kalyan Swaroop says:
March 22, 2023 at 6:44 pm

Steve, this is a great tutorial for anyone learning about bridges.
I suspect that there is a small error that needs to be fixed. Please consider looking into it.
At the first place you show the remapping , the section of "MQTT Topic Bridging and Remapping"
(The one that uses the image src of http://www.steves-internet-guide.com/wp-content/uploads/mosquitto-bridge-config-remapping-1.jpg).
There's a mismatch between what the image shows the config to be and what the text below it describes it will do.
For the explanation text to be true, the brige config needs to be different.
topic # out 0 b1/ ""
should actually be
topic # out 0 b2/ ""
But actually, I think the topic config is right. You would want the broker to put the right prefix to say what realm the message came from. So, I think you should actually let the config be as is and you should change the first part of the text below the

config to be:

When Client1 publishes on any topic that message will be sent to broker 2 with the topic prefix b1/. Example incoming client message to B1 on topic house/sensor1 is published to broker 2 on topic b1/house/sensor1.

Maybe you should also change the image to say "Bridge all topics and use prefixes appropriately on message I/O to a bridged broker" instead of "Bridge all topics and use a remote prefix b2/ and no local prefix"

Maybe you should say that it would then be functionally equivalent to

topic # both 0 b1/ b2/

Reply

steve says:

March 22, 2023 at 8:05 pm

Tks for pointing that out I've change the diagram so there is no local prefix and that fits the text.

The comment

When Client1 publishes on any topic that message will be sent to broker 2 with the topic prefix b1/. Example incoming client message to B1 on topic house/sensor1 is published to broker 2 on topic b1/house/sensor1.

isn't quite true as the client needs to publish on b1/house/sensor1 and it is sent to b2 as house/sensor1. So a subscriber on broker B would see it on house/sensor1.

I've been meaning to revisit this tutorial for a while and will go through it again and refresh my understanding and hopefully make the tutorial clearer when it comes to remapping.

Please let me know if you find anything else that seems not to make sense.

Rgds

Steve

Reply

Shyam says:

February 20, 2023 at 10:00 am

Hello Steve,

I want to send message using mqtt in linux from one computer to another which are connected on same network.

how can we perform?

Reply

steve says:

February 20, 2023 at 3:59 pm

Take a look at the python tutorials . You can also use the mosquitto_pub and sub tools

http://www.steves-internet-guide.com/mosquitto_pub-sub-clients/

rgds

steve

Reply

Sia says:

November 23, 2022 at 3:01 am

Great tutorial Steve. One question. I have the bridge setup in mosquitto (primary) bridging with my test EMQX broker with:

topic # out 0
topic # in 0

I can see all new messages being delivered from mosquitto to EMQX, however when I publish a test message to my EMQX broker it doesn't make it back to mosquitto. Looking at the EMQX UI I see that the mosquitto connection is not subscribed to anything. Any idea what could be wrong? I assumed the line "topic # in 0" would have handled that.

Reply

steve says:

November 23, 2022 at 1:16 pm

The topic in #
only controls the topics over the connection. The subscribe is done automatically. If you start mosquitto from the command line you should see it subscribe.
rgds
steve

Reply

Sia says:

November 23, 2022 at 8:05 pm

Thanks. That's the odd part. It's not subscribed to any topic. Not sure if you are familiar with EMQX but you can look at all connections and see what topics they are subscribed to. I see the mosquitto bridge connection but no subscription. Which I can confirm as any messages sent to any topic in EMQX don't make it to mosquitto.

Reply

steve says:

November 23, 2022 at 8:17 pm

can you post the mosqquitto.conf file

Reply

Sia says:

November 24, 2022 at 4:55 am

connection mqttbridge
address 192.168.x.x:1883
bridge_protocol_version mqttv50
remote_clientid ha-mosquitto
remote_username xxxxxx
remote_password xxxxxxxxx
topic # out 0
topic # in 0

steve says:

November 24, 2022 at 12:57 pm

I've sent you an email
Rgds
Steve

Jenna Blackwell says:

September 13, 2022 at 9:59 pm

Hello,
Thank you for this article. Is it possible for the remote_password to use a password
file instead?

Reply

steve says:

September 14, 2022 at 1:38 pm

The remote password is the password on the remote broker which uses the
standard password file. The remote broker sees the bridge as just another client.
Does that make sense?
Rgds
Steve

Reply

John says:

August 26, 2022 at 5:48 am

Hi Steve.

Thanks for the great article.

Please help me to solve this problem. It is necessary that the system has 2 equivalent brokers with the same data set, and one of them at one time can be the master to which all devices listen. But if the master fails, then the second broker must have all the relevant information and completely replace it, and all clients must switch to it. It turns out that everything that goes to the master should immediately go to the slave. And the master with the slave, as you understand, can change for certain reasons.

Thanks

John

Reply

steve says:

August 26, 2022 at 4:43 pm

John

There is no master slave in the setup described in the tutorial.

One broker is the bridge and the other is just any broker with no special setup.

With the setup in the tutorial if the bridge fails then there is no switching.

Do you have a scenario in mind?

Rgds

Steve

Reply

Jonatas Prust says:

August 12, 2022 at 12:26 pm

Hi Steve,

Thanks for the explanation, very enlightening.

I am facing an issue which is as follows:

We are serving a customer who already has a central MQTT broker configured, and who receives information about the production of various remote equipment through it. These devices cannot persist the information in the event of an internet outage.

So I came up with the idea of configuring a broker as a bridge at each of these remote points, to store messages from local clients and send them to the central broker as soon as the internet is available. I ask if my concept is correct and if I can do that, because in the tests I did, the central broker receives messages while there is an internet connection, but the bridge ends up not sending messages when the connection drops and returns later. Below is my configuration:

listener 1884 0.0.0.0

allow_anonymous true

persistence true

persistence_location /var/lib/mosquitto/

persistence_file mosquitto.db

autosave_interval 1

autosave_on_changes true

max_queued_messages 0

include_dir /etc/mosquitto/conf.d

connection central

address 192.168.0.176:1883

topic per/# out

keepalive_interval 5

restart_timeout 5 10

cleansession false

remote_username central

remote_password 12345

Reply

---

steve says:

August 12, 2022 at 1:04 pm

Try changing

topic per/# out

to

topic per/# out 1

and retest. You might also want to consider a max for the queued messages.

rgds

steve

Reply

Jonatas Prust says:

August 12, 2022 at 2:35 pm

Thank you for your quick response.

So I did that and I kept losing messages so I added the following to the config

file:

remote_clientid per

topic per/# both 2

And now it seems to be running fine.

Yes i will consider a max of the queued messages, i will consider this when the

application is in use so I can specify an acceptable value.

Now i loose only the last message that was send to the bridge, is there any

change on config to avoid this?

Reply

---

steve says:

August 13, 2022 at 1:50 pm

It should work with qos of 1. 2 is best avoided if possible. Not sure why you should loose last message are you sure it is not a client issue.
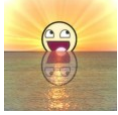
For a client if it looses the broker connection it will start discarding new messages until the connection returns regardless of QOS.

If you still can't get it working then send me a sketch of your setup using ask-steve page to contact me and I will try and simulate it.

Rgds

Steve

[Reply](#)

---

erlende says:

[August 10, 2022 at 3:23 pm](#)

Great guide.

I am in need of a concentrator application that works sort of like a bridge but with multiple brokers in such a way that a client connect to the parent broker and can read and write to the children brokers using prefixes in the parent broker, there are some proprietary solutions for this but they are resource intensive and costly, is there any chance that mosquitto will support a concentrator setup by expanding the bridge functionality?

[Reply](#)

---

steve says:

[August 10, 2022 at 5:17 pm](#)

I think you can do this with a bridge.

the children brokers are bridges and connect to the broker and subscribe to the prefix topic.

Anything published to the parent with a child prefix gets sent to the child broker.

Rgds

Steve

[Reply](#)

Jürgen Grete says:

[July 13, 2022 at 5:43 pm](#)

Hi Steve,

this might be a very dumb question as I'm still a MQTT noob.

If got it right, remapping on the same broker is not possible at this time?

I would like to map an incoming topic to a different topic on the same broker, like:

shellies/PV/PVSchuppen/# –>> Photovoltaic/Schuppen/

Any way to do it? Preferable without having the "shellies/" directory on the broker.

I need this because it seems that there is no way to define the "shellies" prefix.

Regards & sorry if I miss the unmissable…

Jürgen

Reply

---

steve says:

July 14, 2022 at 12:28 pm

The broker can't do that but if you take a look at the python bridge project you can do it with a client

http://www.steves-internet-guide.com/python-mqtt-bridge-project/

By the way you could bridge

Photovoltaic/Schuppen/ to shellies/Photovoltaic/Schuppen

that is you can add a prefix but not remove one.

rgds

steve

Reply

Stefan says:

April 14, 2022 at 12:40 pm

Hy there

I am facing a problem where the plan is to have one mqtt main broker cluster, surrounded and connected to many (>100) mosquitto brige brokers. The setup allows to publish/subscribe messages from a clients on one of those many bridge brokers to another client on another bridge broker. The bridge brokers still work for their connected clients even if there is no connection to the main mqtt broker cluster (which is a benefit, and the transfer is faster and more reliable as well) . The problem now is that the main broker cluster forwards the shared topics to all bridge brokers, even if there is no single subscriber. The amount of data distributed increases with the number of bridge brokers, an this unneeded sending needs to much resources. It seems that a bridge broker does not forward the information of its subscribers to the main broker cluster, which in turn would know to which specific bridge brokers to send the shared topics to. Does anyone has experience or tips for such a setup? Thank you in advance.

Reply

---

steve says:

April 14, 2022 at 5:47 pm

Hi

Even though there is no client subscribed to the bridge broker the bridge broker is a client subscribed to the central broker so is should be send messages on that topic. It doesn't know what clients are subscribed to the bridge broker.

Rgds

Steve

Reply

Jose says:

Hi,

I came across with an issue using mosquitto with QoS = 1 that I want to share with you. I am using a Rpi with the mosquitto broker bridge to AWS IoT Core and a couple of local clients running in the Rpi. The bridge is configured not to clean session and the topics with QoS =1. Everything works fine when internet drops happen. I tried to disconnect the Rpi for 3 minutes and when it connects again to internet, I receive on AWS all the messages published during these 3 minutes. I tried also disconnect de Rpi for 3 minutes and reboot before connecting again (to force the broker to be restarted) and works fine.
However, I lost the messages published when the Rpi boots, mosquitto broker starts but internet is not yet available to connect the bridge. In this time (a few seconds), the messages published from local clients are never received in AWS. It is strange, because the local clients do not have this behavior, if one of them is not connected to mosquitto at start, no matter when it will be connected that it will receive any messages on the subscription topic if any message was published when it was not connected.
It is the normal behavior?

Thank you!

Reply

steve says:

Not quite sure I have understood the problem.When are the messages being published that you don't receive.
Is it while the pi is rebooting?
Rgds
Steve

Reply

gelusi says:

I've been struggling with a problem for a while now and I can't figure it out.
If you can help me or anyone else, I owe you.
My example:
I have 2 clients for whom I can't change the topic in any way
They transmit the data to the same broker.
Customer1 sends:
Inverter / Name: Jhon
Client2 sends:
Inverter / Name: Doe

And so is the rest of the data.
I would like to put the client's name in front of the Inverter topic so that I can differentiate and I will not succeed.
I'm still tormented by mosquitto.conf dar ….
If you have an example ... that would be great.

Thanks in advance for your help

Reply

steve says:

March 6, 2022 at 5:00 pm

is this data going to be sent over a bridged connection?
are the current topics
inverter/jhon
inverter/Doe
or
inverter/Name:Jhon
etc
and do you want
customer1/inverter/Jhon
rgds
steve

Reply

Adam says:

February 10, 2022 at 12:23 pm

Hi Steve,

Thanks a lot for this helpful guide. I have successfully bridged my local Mosquitto broker to a remote Flespi broker. However I have a strange issue whereby it seems to ignore the topic line in my .conf. I have verified this by putting "topic FAKETOPIC/# in" in my bridge config, however using mosquitto_sub pointed at my local broker, I can still subscribe to real, active topics from the remote

Am I misunderstanding how the "topic" line works in the bridge config? My test seems contrary to your Example 2 in the Topic Bridging section of the article, which suggests that my local client would only be able to receive messages from the FAKETOPIC/# topic

Many thanks

Reply

steve says:

February 10, 2022 at 1:12 pm

Yes the remote subscribe should only get messages on faketopic can you send me the conf file

rgds

steve

Reply

Adam says:

February 10, 2022 at 1:32 pm

Thanks for the prompt reply. My config is as follow:

———————————————————————————-

allow remote connections

allow_anonymous true

listener 1883

bridge to remote broker

connection REMOTE

address mqtt.flespi.io:8883

remote_username

bridge_cafile .pem

bridge_tls_version tlsv1.3

bridge_insecure false

try_private false

topic FAKETOPIC/# in

———————————————————————————-

Here are some of the lines from when I turn the broker on. You can see it subscribes to FAKETOPIC/#, however the subsequent line shows a message on the 'flespi/state/mqtt/sessions/2953846/cid' topic.

———————————————————————————-

1644499649: mosquitto version 2.0.14 running

1644499649: Received CONNACK on connection local.DPVW-LOCAL-01.REMOTE.

1644499649: Bridge local.DPVW-LOCAL-01.REMOTEsending SUBSCRIBE (Mid: 2, Topic: FAKETOPIC/#, QoS: 0, Options: 0x00)

1644499649: Received PUBLISH from local.DPVW-LOCAL-01.REMOTE(d0, q0, r0, m0, 'flespi/state/mqtt/sessions/2953846/cid', … (7 bytes))

1644499649: Received PUBLISH from local.DPVW-LOCAL-01.REMOTE(d0, q0, r0, m0, 'flespi/state/mqtt/sessions/2953846/clean', … (5 bytes))

1644499649: Received PUBLISH from local.DPVW-LOCAL-01.REMOTE(d0, q0, r0, m0, 'flespi/state/mqtt/sessions/2953846/client_id', … (25 bytes))

———————————————————————————-

Reply

---

steve says:

February 10, 2022 at 1:42 pm

In a rush at the moment but try

topic FAKETOPIC/# in 0
I seem to remember that is needs a qos value
Let me know what happens and I'll look at it later if need be
rgds
steve

Reply

Adam says:
February 10, 2022 at 3:55 pm

Yep I've given that a go but I'm still seeing the same issue unfortunately. Subscribing directly to a specific topic from the Flespi broker behaves as expected, so the issue seems to be specifically in the mosquitto bridge functionality.

I've then tried setting up a second local broker bridged to the first one (mosquitto to mosquitto) and interestingly that seems to behave as expected, so it appears that the problem lies in bridging mosquitto to Flespi. It's not the most elegant workaround but it at least works, I'll post on here if I find a better solution in case anyone else runs into the issue

Cheers,

Adam

steve says:
February 11, 2022 at 12:34 pm

Tks for letting me know.
Rgds
Steve

gilles says:
January 19, 2022 at 7:51 pm

Hi Steve, and congrats for the great explanation on bridging !

I Tried my mosquitto bridge (B1) with AzurHublot (B2) and it fails, but still , connection and subscription seems OK

Bridge local.device doing local SUBSCRIBE on topic devices/device/messages /events/
Connecting bridge (step 1) bridgetesting (IoTHubPoCGilles.azure-devices.net:8883)
Connecting bridge (step 2) bridgetesting (IoTHubPoCGilles.azure-devices.net:8883)
Bridge mybridge sending CONNECT
Received CONNACK on connection local.device
Bridge local.device sending SUBSCRIBE (Mid: 6, Topic: devices/extracotest/messages /events/, QoS: 0, Options: 0x00)

Received SUBACK from local.device

Client local.device closed its connection. => Can't figure out why

I have a standard MQTT client C1 to subscribe to listner B1, OK

I have another python MQTT client C2 to publish M2 to AZUR B2

But I never catch M2 from C1

did you tried this bridging with AZUR HUB ioT once ?

[Reply](#)

---

steve says:

[January 19, 2022 at 8:53 pm](#)

No I haven't.

[Reply](#)

Stephan says:

[January 12, 2022 at 9:15 pm](#)

Hi Steve.

Great website you have made and very useful indeed

I have an issue with bridging whicgh I cannot seem to get to the bottom of and

perhaps you may be able to shed some light as to what might be wrong

I have a local MQTT mosquitto broker(V1.5.7) in my home network (currently not

password protected whilst I am testing) This runs on a Raspberry Pi

I have a remote Mosquitto broker (V2.0.11) on a Digital Ocean droplet.

I seem unable to bridge from my local mqtt broker to the remote one

In local mosquitto log I see

=== start ===============

Bridge DigitalOcean sending CONNECT

1641937030: Received CONNACK on connection local.DigitalOcean.

1641937030: Connection Refused: not authorised

1641937030: Socket error on client local.DigitalOcean, disconnecting.

=== end ===============

In remote mosquitto log I see

=== start ===============

1641937216: New connection from 2.127.226.147:34904 on port 1883.

1641937216: Client disconnected, not authorised.

=== end ===============

My local mosquitto config is as follows

=== start ===============

log_type all

listener 1883

protocol mqtt

#listener 9001

#protocol websockets

bridge to Hive MQ cloud

connection DigitalOcean

address 68.183.33.88:1883

try_private false

cleansession false

topic mysticWeb/# out 0

topic mysticWeb/# in 0

#bridge_protocol_version mqttv311

remote_clientid DigitalOcean

remote_username MysticIoT

remote_password 'xxxxxxxx'

=== end ================

My remote mosquitto config is as follows

=== start ===============

listener 1883

protocol mqtt

allow_anonymous false

password_file /etc/mosquitto/passwd

=== end =================

From any mqtt client app , I can happily connect to the remote mosquitto broker

From the SSH putty terminal on the RPI I can do the mosquitto-pub command and

that also works quite well

In all cases I can see the mqtt messages appearing.

The bridge connection is the only that fails and I cannot see what is causing this

I have doubled checked that I am using the correct username and password

Thanks in advance Steve

[Reply](#)

---

steve says:

[January 13, 2022 at 12:25 pm](#)

I must admit the files look ok. Have you tried using anonymous access? If you give the username/password details I will try it use the ask steve page to send them to me.

[Reply](#)

---

gilles says:

[January 19, 2022 at 7:55 pm](#)

I stephan

regarding you rline :
remote_password 'xxxxxxxx'

I think you should NOT quote (I had the same with my AZUR HUB IOT) =>

mosquitto_sub needs quote because on shell command, but not in the conf file

Reply

steve says:

January 19, 2022 at 8:54 pm

So it was the password mistake that was stopping you connecting? Is that correct? If so I'm sorry for the error and will correct it.
Rgds
Steve

Reply

vaishnavi says:

October 5, 2021 at 11:50 am

How do i retrieve the bridge connection once it has been disconnected without using restart.
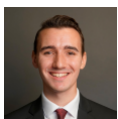
Reply

steve says:

October 5, 2021 at 12:00 pm

It should reconnect automatically. If not check your config file.
Rgds
Steve

Reply

Kenny says:

September 22, 2021 at 1:24 am

Trying to get my apartment server to pull in Owntracks data from the broker I have running at home. The address is correct, I can connect to it with MQTT Explorer, and I see the server resolving the domain, but Mosquitto gives me this error: 0: Warning: Error resolving bridge address: Try again.
Any reason why this would be?

connection bridge-01
address home.example.com:8883
try_private true
cleansession true
topic owntracks/# in 0
remote_clientid broker1
remote_username owntracks
remote_password 'xxx'

Reply

steve says:

September 22, 2021 at 2:33 pm

it looks like this is your problem home.example.com:8883.

Use the IP address instead.

Rgds

Steve

Reply

Daniel says:

August 19, 2021 at 2:52 pm

Hi! How are you?

Greetings from Brazil. I always follow your posts (I'm learning a lot).

I managed to make my bridge with your tutorial between two RPI, but I have the

following problem:

RPI2 bridges to RPI1.

RPI1 is reading messages from RPI2 but cannot write, change switch on RPI

(tasmota+esphome).

Reply

steve says:

August 19, 2021 at 4:07 pm

messages are sent for pi1 to pi2 but not from 2 to 1 Is that correct.

What does you config file look like

rgds

Steve

Reply

Kevin Tarango says:

August 18, 2021 at 3:18 pm

Hi steve, do you know if this option of making a bridge between serveral Mosquitto

instances can distribute the load and increase the currently conections? I have read

some posts and comments in some web pages talking about this posibility but I want

to know from and expert.

Thanks for you time and have a nice day.

Reply

steve says:

August 18, 2021 at 5:57 pm

Yes you can have multiple instances and bridge between them. Take a look at load balancing

https://www.nginx.com/blog/nginx-plus-iot-load-balancing-mqtt/

I'm afraid that my expertise doesn't go that far as I don't have a need for an high load broker.

Rgds

Steve

Reply

V Thirupathi says:

July 29, 2021 at 6:41 am

good morning sir,

can i connect multiple brokers to make as a cluster

Reply

---

steve says:

July 29, 2021 at 11:39 am

There are clusters but I have never created one and I'm not sure what broker they use.

Rgds

Steve

Reply

Lucas Cavalcanti says:

July 8, 2021 at 8:28 pm

Hello,

I did a MQTT bridge using QOS 2 to mirror the message between a local and a remote broker. My idea is to not loose local messages even with internet failures. But, with 10 minutes of disconnection, the bridge sends 20 to 40 old messages and then jumps to the current one.

Do you have any idea why this happens? I was expecting that the bridge will send all the "lost" messages because the bridge is configures with QOS 2.

Reply

---

steve says:

July 9, 2021 at 1:49 pm

Hi

There is a limit to how many messages it will keep which you can change in the

config file. The idea is to cater for a network glitch and not a prolonged outage. If you want to keep all messages then I would use a client to capture them and forward them. Using a client you can store them to disk and then forward them on.

rgds

steve

Reply

Shann Sagouma says:

June 24, 2021 at 1:37 pm

Whaouh, thank you for the details !

Have you already tried to setup a bridge between a local mosquitto broker and AWS IoT Core ? 🙂

Reply

steve says:

June 24, 2021 at 2:00 pm

Sorry but No I haven't.

Rgds

Steve

Reply

David Black says:

May 28, 2021 at 5:41 pm

Hi

Have you ever setup a bridge between a locally installed Mosquito instance and the cloud HiveMQ free service?

I just cant get it to connect – some cert related error I just cannot figure out.

Thanks

Reply

steve says:

May 29, 2021 at 3:55 pm

Have you tried with using ssl?

Reply

David Black says:

June 1, 2021 at 6:17 pm

Yes, just cant get it to connect – using a cert sourced from: openssl s_client -connect :8883 -showcerts /dev/null | sed -n '/BEGIN/,/END/p' > server.pem

Am at point of give up and use beebotte, which works perfectly…..

Reply

steve says:

June 2, 2021 at 8:37 am

It may be that it doesn't support SSL. Are you just using this as a test or do you plan using it for real. If you want to use it for real I would go for beebotte or cloudmqtt as they are commercial services. The hive test broker might be taken down at any time.
I will do some tests on it anyway and let you know.
Rgds
Steve

Reply

Dado says:

May 4, 2021 at 2:26 pm

Hi,

thank you very much for this helpful tutorial.
I have a problem. In my case, if the main broker go down and after several seconds goes up, the client broker does not reconnect.
Example: I have B1 and B2. B2 is connected to B1. If I stop B1 for 30/40 seconds and then I restart it, B2 doesn't reconnect. I have this messages:
B1:
New connection from IP:44300 on port 1883.
Client closed its connection.
B2
Connecting bridge br-me-to-broker0 (IP:1883)
Connecting bridge br-me-to-broker0 (IP:1883)
Connecting bridge br-me-to-broker0 (IP:1883)
….

Could you help me?
thank you very much!

Reply

steve says:

May 4, 2021 at 5:39 pm

I think that B1 is remembering the connection and thinks it has a duplicate client.

If that is the case you should see b2 showing connect and reconnect.

Try to configure the broker connection to use a random client name.

Rgds

Steve

Reply

Dado says:

May 5, 2021 at 6:33 am

Hello Steve,

Thank you for reply.

I have deleted "remote_clientid" from mosquitto.conf. This is my Bridge config:

BRIDGES

connection br-me-to-broker0

address IP:1884

topic # both 0

cleansession false

notifications false

#remote_clientid broker0

start_type automatic

When I start B1 and then B2, I have:

B1:

1620195224: New connection from IPB2:54362 on port 1884.

1620195224: New bridge connected from IPB2:54362 as broker0 (p2, c0, k60).

B2

1620195224: Connecting bridge br-me-to-broker0 (IPB1:1884)

1620195224: mosquitto version 2.0.10 running

if I stop and restart B1:

B1:

1620195561: New connection from IPB2:50568 on port 1884.

1620195621: Client closed its connection.

1620195652: New connection from IPB2:50586 on port 1884.

1620195712: Client closed its connection.

B2:

1620196016: Connecting bridge br-me-to-broker0 (IPB1:1884)

1620196094: Connecting bridge br-me-to-broker0 (IPB1:1884)

1620196172: Connecting bridge br-me-to-broker0 (IPB1:1884)

In your opinion there is a bridge reconnection problem in mosquitto or I have a problem in my configuration?

Thank you very much!

Rgds

Dado

Reply

Dado says:

May 5, 2021 at 6:43 am

Sorry Steve,

I forgot that if I restart B2 manually, B2 reconnects to B1 correctly.

Thank you
Dado

Reply

---

steve says:

May 5, 2021 at 8:08 am

It is I think a client id problem as the broker still thinks the client is connected. Try setting clean sessions to true in the config . I will take another look at possible bridge settings.
Rgds
Steve

Reply

Dado says:

May 5, 2021 at 8:43 am

I tried to setting cleansession to true in the B2 config, but I had same result.
Is there anything that I should add on B1?

Thank you very much!

---

steve says:

May 5, 2021 at 2:56 pm

What version of mosquitto are you running on both brokers.Try adding the try private option to the config file on b2. If that doesn't work try changing the protocol version.
bridge_protocol_version version
Set the version of the MQTT protocol to use with for this bridge. Can be one of mqttv50, mqttv311 or mqttv31. Defaults to mqttv311.

Dado says:

May 5, 2021 at 4:13 pm

I'm using mosquitto 2.0.10 for both brokers.

I tried to add try_private on true and false but I hadn't success.

I tried to change bridge_protocol_version but doesn't work. All the change I made on B2.

B2 config:

allow_anonymous true

BRIDGES

connection br-me-to-broker0

address B2IP:1884

#try_private true

topic # both 0

cleansession true

notifications false

#remote_clientid broker0

start_type automatic

bridge_protocol_version mqttv31

Thanks for your patience!

---

steve says:

[May 5, 2021 at 7:47 pm](#)

Try setting persistence to false. I thought I saw something new in the conf file for duplicate cleint_ids but can't locate it at the moment.

Rgds

Steve

Maayan says:

[April 28, 2021 at 8:25 am](#)

Hello Steve,

First, Thank you for this article, it was very helpful. I have one question:

I am using Linux-CentOS 7, I built the mosquitto-2.0.10.tar.gz (by make and make install).

The mosquitto executable created in /usr/local/sbin. (I run the mosquitto with the command line).

When I run broker on one machine and broker configures as bridge on other machine, there is successful connection. However, I cannot run broker and broker configures as bridge on the same machine. When I am trying to do so I get "Address already in use".

I succeed to run broker and broker configures as bridge on the same machine on Windows, so I know this is possible.

Can you help me? If I am not mistake this is a configuration issue.

Thank you,

Maayan

[Reply](#)

steve says:

April 28, 2021 at 10:54 am

You need to use a different ports use 1883 on broker1 and 1884 on broker 2

Reply

Maayan says:

April 28, 2021 at 12:33 pm

I correct my self –
I did not succeed to run broker and broker configures as bridge on the same
machine on Windows, so I do not know if this is possible.
Is that possible?

Reply

steve says:

May 1, 2021 at 8:11 am

It should be. I will check as I haven't done it myself. Send me a reminder in a
few days if I haven't replied
rgds
steve

Reply

Pascal says:

April 15, 2021 at 9:42 am

Hi Steve,

is it possible to bridge or map an incoming topic to another one?

Following situation:
I am using Home Assistant with Mosquito Broker and a doorstation sends mqtt
messages to the broker.
Home Assistant has an mqtt-autodiscovery but only listens on special topic-syntax.

I want to receive the message vom the doorstation and want to do some mapping to
the special autodiscovery syntax.
After that all relevant topics from doorstation should autocreate things in Home
Assistant.

Is this possible with Mosquito? Or can I map only topics to other brokers?

Reply

steve says:

April 15, 2021 at 11:58 am

No it isn't possible except on a bridge. You need a another client to do that for you
by subscribing to one topic and publishing on another.
I made a start on it using python and node-red but never finished it but it is
possible to do.
Rgds
steve

Reply

Ray says:
March 25, 2021 at 2:37 pm

Hi Steve,

In my scenario of having multiple clients and 2 brokers (1 main and 1 backup).

In order to achieve this scenario of having a backup broker and answering questions
like what happens when a the main broker fails,
should the clients re-subscribe to the topics in the second, etc.,
does bridging come into the picture at all or if it doesn't can you point me in the right
direction?

Regards,
Ray

Reply

---

steve says:
March 25, 2021 at 4:25 pm

A bridge is no help to you here as that becomes a single point of failure.
You can connect the client to two brokers and only publish on one.As soon as you
detect a failure then you publish on the backup.
You will need to subscribe on both brokers.
Rgds
Steve

Reply

Ray says:
March 25, 2021 at 6:12 pm

Thanks a lot Steve. Would you also point me to a reference site for more specific
details?
I tried finding one, but failed to do so.

Thanks,
Ray

Reply

steve says:

March 25, 2021 at 7:59 pm

Details on bridges or dual connections? Are you using python?

Reply

Ray says:

March 25, 2021 at 8:29 pm

The goal is to increase the availability (so that if one broker fails, I want all the clients to automatically use the back up broker.
I'm using JavaScript (MQTT.js library).
1. I was also wondering in the first place if there was a way to transfer all the state (details including subscriptions, topics, etc.) of one broker to another broker
2. If the main broker with an ip:port is down, can the backup broker take the main broker's place (ip:port) ? So that the clients don't have to re-subscribe etc.

steve says:

March 26, 2021 at 3:22 pm

No they would need to resubscribe.
Rgds
Steve

Pierre says:

March 4, 2021 at 9:59 am

Hi Steve,
Thank you for the very informative material provided on this website. I have the following use case: I've got a home equipped with a heating system, which can be monitored and managed remotely (set on/off, set some parameters) through an online interface provided by the manufacturer. I'd like to integrate the data collected/published by the heating system into a more comprehensive and customized dashboard (Grafana based for instance). Assuming the heater do communicate via MQTT with a manufacturer's cloud broker AND I can capture and "decode" this MQTT traffic (which I plan to investigate next time I go on site), what would be the best approach to collect the data published by the heater without compromising its MQTT interactions with the manufacturer's broker? Based on your article, I'm thinking of setting up a local broker as a bridge. As I couldn't change anything on the remote broker side, I would like to have my local bridge behave like a pure pass-though, so that it is perceived as the heater's IOT from the remote broker. Does this make sense? I apologize for any shortcomings, my interest in and knowledge of MQTT and IOTs is very new. Thanks

Reply

steve says:

March 4, 2021 at 3:41 pm

The way MQTT works is ideal for sending data to multiple sources. By adding your client to receive data doesn't affect the data going to the manufacturer.Think of it like TV. If you switch on your TV and tune to a channel it has not affect on the other people already watching their TV on the same channel.
Use a client not broker to collect the data.
Rgds
Steve

Reply

David says:

February 9, 2021 at 11:42 pm

Hi Steve,

Really grateful for your articles on the usage of MQTT. I've hopefully a simple question I'm hoping you can answer to check my understanding before I spend fruitless hours trying to get something to work.

I've a situation where I have a number of sensors distributed into a set of discreet locations. These are primarily responsible for publishing data (don't really need to subscribe). Their connection to the broker, which is used to collect and store the messages in a database, however cannot be guaranteed as the connection isn't totally reliable. It's important to not loose any of the published messages ie when connection is re-established I'd like to put into the database all these messages that failed to send.

Would I be correct in thinking that I can set up a situation as follows using the functionality of bridging.
Sensors 1,2&3 in location A publish from their client to a broker A with QoS set to 1 or 2 to enable queuing.

Broker B is bridged with broker A with client C subscribing to the topics off of broker B.

If connection between broker A and B is lost, the messages will queue (default 100 in mosquito but can be changed) on broker A. Once connection is re-established the x number of queued messages would then be delivered to broker B, where client C could then read them out and store them into the database.

Hope that makes sense and thanks for any clarity/advice you can give

Reply

steve says:

Hi

Depending on the sensor and sensor code I would look at queuing messages locally on the client.

If this can't be changed then I would send them to a local broker and bridge that broker to a central one. the bridge would queue the messages.

You are correct that you need qos of 1 or2 for it to work.

Rgds

Steve

Reply

Esther Yébenes says:

Hi Steve!

Great article! it helped me to set up a "cluster" with 3 front and one back broker who is synchronizing data between the other three; they all are behind a HAproxy pool and it works like a charm! 😉 thanks!!

Now I have a few doubts
– if I shutdown the back broker (a reboot, for example), the synchronization stops; when the service gets up again the synchronization starts as well but the messages are not resend from the front cluster. So those messages are not synchronized. Is there any way to get them?
– As far as you know, is there any way to set a mosquitto cluster with high availability? I have seen other MQTT Brokers like EMQX, Verne or Hive that can do that (I have to say that I hadn't tried any of them, just saw that feature on their webs), but the further I got with Mosquitto is this this design.

Looking forward to get your answer
Happy new Year!

Esther

Reply

---

steve says:

Hi

You are ahead of me there as I've never set up a cluster. However the messages will only be held for sending if the qos of the bridge is 1 or 2 and the messages arriving on the front end brokers is 1 or 2.

You can set the front end brokers to store x messages the default is 100 I believe but you can check the manual

Hope that helps.

Reply

Esther Yébenes says:

December 29, 2020 at 7:21 pm

The QoS is already 2 in all of them, so I will check the storage on the front end brokers

Thank you very much!

Reply

Vid says:

December 28, 2020 at 2:21 pm

Hello,
I want to make a bridge on broker1 to broker2 so when I publish something with client on b2, every client thats subscribed to this topic on b1 gets the message.
My configuration on b1 is:
#connection
connection u0_bridge
address it.pharaon.iotool.io

topic # out 0
topic # in 0

When I run mosquitto on b1 or b2 with "mosquitto -v", I can connect to either of them with any client and publish and subscribe to topics normally, but the bridge won't connect. If i run b2 with same command and run b1 with "mosquitto -c /etc/mosquitto/mosquitto.conf" so that configuration is loaded, the bridge connects to b2 and I can still normally connect with clients on b2, but I can't connect clients to b1. If I try, I get error message:
"Client connection from 178.58.166.83 failed: error:140760FC:SSL routines:SSL23_GET_CLIENT_HELLO:unknwon protocol."
"New connection from 178.58.166.83 on port 1883."
"OpenSSL Error[0]: error:140760FC:SSL routines:SSL23_GET_CLIENT_HELLO: unknown protocol."
"Socket error on client , disconnecting."
And I can't connect to it. What am I doing wrong?

Regards

Reply

---

steve says:

December 28, 2020 at 2:54 pm

It looks like you need to run a listener on port 1883. Not sure of the SSL are you also trying to use encryption. If so disable it and get the bridge to work without it

and add it later.

Reply

Vid says:

December 29, 2020 at 9:20 am

You were right, there were some certificate files that blocked me from connecting to the broker, I disabled them. Now I can connect to both brokers, but I can't publish to b1 (the one with a bridge). There are no topics opened on this broker (not even $SYS, which was otherwise already opened on all the other clients) and if I try to publish a topic, I get an error message "Denied PUBLISH from *my userID*".

Reply

steve says:

December 29, 2020 at 9:43 am

Hi
It looks like you have an ACL that is blocking take a look at the config file for that broker

Reply

Vid says:

December 29, 2020 at 9:59 am

I solved the problem with publishing, it was the ACL file that didn't allow me to publish. Now the bridge works, if I send the message on one broker I get it to the client on the other broker.
Now I have another problem. If I start b2 with "mousquitto -v", that works as described above, but if I want to load conifugration with "mosquitto -c …", I can't connect to b2 either with b1 or clients. I get error "Socket error on client , disconnecting."

Reply

steve says:

December 29, 2020 at 12:23 pm

That sounds like you are trying to connect with a client of the same name

Reply

John says:

December 11, 2020 at 3:41 pm

Can you please share any working example of shared topics in bridge configuration.
So that would be to have two brokers bridged to one single bridge on shared topic so the bridge could load balance.
We are trying to bridge our cluster of two mosquitto brokers (broker1 and broker2) with one bridge (broker3), and we want them to be subscribed to shared topic so the messages could be load balanced.

Is there a solution for this through mosquitto ?

Regards,
John

Reply

steve says:
December 11, 2020 at 7:51 pm

Not done that I will give it some thought. I assume broker 1 and 2 are subscribing to a shred topic on broker 3? is that correct?

Reply

John says:
December 14, 2020 at 8:55 am

Hello,

Correct.
We have tried several options and only one that works is when we set $share/group/service/a in 0
When we try any combination with local/remote prefix we are unable to get any message flow.

Reply

steve says:
December 14, 2020 at 11:51 am

Hi
That makes sense as the $share is a special $share and you almost certainly can't prefix it.

Reply

John says:
December 14, 2020 at 3:01 pm

Okey thank you , so conclusion is that we can't have local/remote

prefixes with bridge shared subscription ?

steve says:

December 14, 2020 at 5:14 pm

That is what I believe.

Aakash says:

May 15, 2021 at 4:35 pm

Hi John,
Were you able to figure out a solution to this? If not, what other approach can we take to achieve shared subscription on bridge configuration.

Reply

Moh says:

October 27, 2020 at 10:13 am

Dear Steve,
I have configured two brokers in two virtual machine instance in the Google cloud. I want to set up a bridge between these two brokers. But the setup is not working . Can you please help me on reasons for not working.

Reply

steve says:

October 27, 2020 at 11:49 am

With cloud instances I would always check firewalls as often they are set up by default.
rgds
steve

Reply

Liviu Suciu says:

October 22, 2020 at 10:45 am

Hi,
Is a bridge configuration valid if the topic is missing? Why?
Thank you.

Reply

steve says:

October 22, 2020 at 5:27 pm

Hi
Can you post your bridge conf file so I can see what you mean

Reply

Mahboob Elahi says:
October 21, 2020 at 9:11 am

Hi Steve,

I have changed my cloud broker from hiveMq to mosquitto and by doing so my problem has been resolved but now my local broker (bridge) does not receive any messages from the cloud Broker and vice versa.
Furthermore, when the client connected to the local broker publishes then on cmd i can see the message "publishing to cloud MQTT broker" but i did not receive that message on the client that is connected to cloud broker and has a subscription for that topic.

Reply

steve says:
October 21, 2020 at 10:34 am

Hi
Post the entire configuration file and I will try it

Reply

Mahboob Elahi says:
October 20, 2020 at 10:12 am

Hi Steve,

I have followed the configurations as you instructed in this tutorial but i could not receive messages from subscribed topics on a public broker?

My Config file setting:

connection bridge-to-HIVEMQ
address broker.hivemq.com:1883
topic automation/station both 0 "" ""
topic sensors/octocopter01/altitude both 0 "" ""

I also run the command that you mentioned and got the following error:
"1603189003: Error: Only one usage of each socket address (protocol/network address/port) is normally permitted."

Reply

steve says:

[October 20, 2020 at 12:47 pm](#)

Hi

Sorry what command do you run?

Does the bridge start up ok?

Do you see messages being sent to hivemq?

Rgds

Steve

[Reply](#)

moh says:

[October 5, 2020 at 9:45 am](#)

Hi,

I have tried to connect two brokers with a bridge. so i gave ,in the config file of broker

1 ,

connection bridge-02

address 192.168.23.24:1883

topic # out 0

topic # in 0

So is the name bridge-02 given after the "connection" is ip address or host / domain

name of broker 2? Do i need to specify that name anywhere in the config file of

broker 2? What is that name actually? I am new to mqtt so please answer this

question.

[Reply](#)

steve says:

[October 5, 2020 at 6:13 pm](#)

No broker 2 sees broker 1 as a client.

Rgds

Steve

[Reply](#)

mohammed says:

[September 15, 2020 at 2:56 am](#)

sir steve, if i want to use arduino to act as client to subscribe and publish messages

should i install mosquitto broker in it or other broker, or what i could do please

[Reply](#)

steve says:

You could use a cloud broker. The advantage of using your own local broker is that it is easier to troubleshoot as you can see the broker console.

Rgds

Steve

Reply

---

mohammed says:

September 15, 2020 at 2:52 am

hi sir i'm just stuck with mqtt and usage of mosquitto broker, do i need to establish the code for clients and broker in the server means in production level, or i could just write the code for clients and connect it to cloud broker, also what's the need of mosquitto

Reply

---

steve says:

September 15, 2020 at 10:39 am

Yes you can use local clients and a cloud broker.

Rgds

Steve

Reply

Chris says:

May 1, 2020 at 9:39 am

Hi Steve,

First of all thank you for your informative homepage.

I have a problem receiving messages when configured bridges cannot be created.
To the setup.
I have a local broker in the production network and bridged the one to several brokers in the plant network.
The configuration on the local broker:
bridge to plant1
connection bridge-172.16.35.11
address 172.16.35.11:1883
topic # in 2 "" ""
topic 172.16.35.11/# out 2 "" ""

bridge_protocol_version mqttv311
notifications true
cleansession true
restart_timeout 5 30

max_inflight_messages 0
round_robin true

bridge to plant2
connection bridge-172.16.35.13
address 172.16.35.13:1883
topic # in 2 "" ""
topic 172.16.35.13/# out 2 "" ""

bridge_protocol_version mqttv311
notifications true
cleansession true
restart_timeout 5 30
max_inflight_messages 0
round_robin true

bridge to plant3
connection bridge-172.16.35.14
address 172.16.35.14:1883
topic # in 2 "" ""
topic 172.16.35.14/# out 2 "" ""

notifications true
bridge_protocol_version mqttv311
cleansession true
restart_timeout 5 30
max_inflight_messages 0
round_robin true

No special configuration is made on the bridged brokers.

The bridges can be created successfully if all brokers running and I can publish
messages back and forth.
Well my problem is, if e.g. Plant 1 and Plant 2 are offline, the local broker can't create
a bridge. This is clear. Plant 3 is online, the bridge is successfully created. If I now
publish messages from Plant 3, e.g. via MQTT-Explorer, the messages arrive on the
local broker with a delay. I have noticed that the delay is caused by the broker while
trying to create the bridge connection on Plant1 and Plant2. If the creation of the
bridge fails, the messages are received from plant 3 (MQTT-Explorer connected to
local broker).

I'm running MQTT Broker version 1.6.9 as a service on Windows 10 (local and remote)

Can you help me?

Best regards,
chris

[Reply](#)

steve says:

[May 1, 2020 at 4:54 pm](#)

Hi

Just to clarify the fail condition.

When you publish from plant 3 with 1and2 offline the message doesn't appear on the local broker until the connection timeout to plants1 and 2 has expired? Is this correct?

What is the delay time?

How about messages going to plant3?

Rgds

Steve

[Reply](#)

Chris says:

[May 4, 2020 at 7:00 am](#)

Hi,

The message from Plant 3 doesn't appear on the local broker while local broker trying to connect to a offline bridge. (plant1)

2020-05-04T08:46:47: Connecting bridge bridge-172.16.35.11

(172.16.35.11:1883)

2020-05-04T08:47:08: Error creating bridge: Unknown error.

After the message "error creating bridge", the message from plant3 appears on local broker.

Trying to connecting bridge takes about 21 seconds.

There is no other delay time configured. Only restart_timeout 5 30.

Same Problem with messages going to plant3.

many thanks!

Chris

[Reply](#)

steve says:

[May 4, 2020 at 1:56 pm](#)

Chris

It looks like the broker is waiting to connection timeout before processing traffic. I need to set it up and test it can you use the ask steve page and send me a quick sketch of the setup and you config files.

Rgds

Steve

[Reply](#)

thangz says:

I need to configure a mosquitto broker as mqtt bridge where the remote broker has many clients that subscribe to same topic

but the messages are mapped to the respective clients with the help of username and password authentication of the end-point(or subscriber client).

Is there any way to route the mqtt-packets to respective clients of remote broker using several passwords and usernames along each mqtt-packets?

There is a manual way to do this using MQTT API, but 'mqtt-bridge' seems easier and automatic to forward messages between two brokers.

The following are the MQTT API for publishing and subscribing the request and responses!

for client1:

mosquitto_pub -h "HOST_URL" -t "REQUEST_TOPIC" -f "REQUEST_MESSAGE" -u USER_NAME1 –

P PASSWORD1

mosquitto_sub -h "HOST_URL" -t "RESPONSE_TOPIC" -u USER_NAME1 –P PASSWORD1

for client2:

mosquitto_pub -h "HOST_URL" -t "REQUEST_TOPIC" -f "REQUEST_MESSAGE" -u USER_NAME2 –

P PASSWORD2

mosquitto_sub -h "HOST_URL" -t "RESPONSE_TOPIC" -u USER_NAME2 –P PASSWORD2

for client3:

………

and so on.

or is there a way to publish same mqtt message on two different brokers (hosts) with same topic?

or any other solutions/suggestions for this problem would be greatly appreaciated.

Looking forward to your kind response.

Regards,

Thangz

Reply

---

steve says:

Not really sure what you are trying to do.

Messages are routed to clients based on the topic they subscribe to and not the username/password.

When you configure the bridge it is configured to send messages to the remote broker based on topic not username/password.
If you use a python client you can easily send the same message to two brokers.
rgds
Steve

Reply

Jackson Lee says:

April 2, 2020 at 8:13 pm

Hi ,
I am not sure I go to the wrong topic or not. I just want to find a solution that can as a client then receive topic data and then restructure it and publish to another MQTT server. Is it the feature of the bridge? Or other solution can fit this feature?

Reply

---

steve says:

April 3, 2020 at 3:55 pm

Hi
No the bridge doesn't restructure it. You need a client App for that. I actually made a start on a Python client tnat does something similar. The Flight logger does this with HTPP to MQTT.
http://www.steves-internet-guide.com/republish-html-data-over-mqtt-flight-arrivals/
What language will you be using?
Rgds
Steve
Rgds
Steve

Reply

Manel says:

August 17, 2021 at 10:01 am

Hello,
Please have you found a solution to restructure MQTT topics because I a struggling with the same issue and I did not found any helpful solution.
Thank you in advance.

Reply

---

steve says:

August 17, 2021 at 5:17 pm

When you say restructure do you have an example

Rgds
Steve

Reply

Younghee Lee says:
March 15, 2020 at 2:59 pm

Hi steve!

Suppose that I need to manage 50 small sensor networks. And each network has
their own broker on Raspberry Pi.
I have two questions.
1. Could I connect 30 local brokers to cloud such as Amazon cloudMQTT or Google
Cloud IoT Core to make one large logical sensor network?
2. What kind of benefits would I get from those cloud? Device management, Data
flow, Machine learning?

Reply

---

steve says:
March 15, 2020 at 6:14 pm

Yes you could send them to cloud broker by bridging the broker.
However you may want to process data locally and only send processed data to
the cloud service. This is especially true of the sensors send lots of redundant
information.
Having access to all 50 networks by sending and receiving messages to 1 or 2
brokers is much easier to implement.
As for machine learning I don't see it makes any difference as long as you get the
data.
rgds
steve

Reply

Greg says:
January 26, 2020 at 7:19 pm

Hey, Steve. Appreciate your site a lot! I've been going nuts with a problem, and
wondering if you have any insights.

I'm trying to bridge a local (Ubuntu-hosted) Mosquitto MQTT instance with Beebotte,
so that I can use Beebotte for connecting with IFTTT etc. and use my local instance for
running Node-RED, Home Assistant, local control exchanges, etc. I've been running
my local instance and connections to Beebotte for some time, and both work fine on
their own (e.g., I can mosquitto_sub and mosquitto_pub to both just fine; I have apps
running Paho that connect fine to both, etc.). So I'm pretty sure that there are no
network connectivity, fundamental authentication, etc. issues in play.

However, when I try to bridge from Mosquitto to Beebotte, I never get a successful connection, and just cycle between (in the logs):
– Connecting Bridge (mqtt.beebotte.com:1833)
– Bridge sending CONNECT
– Socket error on client , disconnecting.

When I sniff the network traffic (tcpdump), I see the connection go through to Beebotte, with the authentication token in the header, and I can see the connection established (netstat) for 30 seconds, after which the connection is dropped.

When I compare the network traffic (tcpdump) to a successful mosquitto_sub or mosquitto_pub to Beebotte from the same machine, the only real difference I see (just eyeballing the packets) is:
– mosquitto_sub/pub appear to send a blank password (two additional bytes past the authenticating user ID); I can't configure a blank password in the Mosquitto bridge configuration, or it throws an error)
– mosquitto_sub/pub follow up the connection with a request, whereas the bridge doesn't.

I've combed the 'Net, and while people talk about bridging to Beebotte, I haven't been able to find any live examples, or any discussion of problems bridging.

Below is my configuration (I've tried every other variant I could think of, as well). Any ideas? Thanks in advance!
—-
connection beeb-from-local
address mqtt.beebotte.com:1883
remote_user
topic topicparta/topicpartb both 0 "" ""
notifications false
cleansession true
—-

[Reply](#)

steve says:
[January 27, 2020 at 4:49 pm](#)

Hi
Never heard of beebotte before it looks a lot like cloudmqtt. I will have to make a note.
I don't see the
remote_username
remote_password
options in the bridge conf

Did you also see this page
https://beebotte.com/docs/mqtt#bridge

Let me know if it helps if note I'll take another look

Rgds
Steve

Reply

---

sami soisalo says:
September 24, 2019 at 7:31 pm

Hi Steve,
Just been using hours on finding any one whom had made a mosquitto bridge to ThingsBoard IOT service. Your guide is the closest I could find. Thank you for it.

Have you done this (bridge to ThingsBoard) successfully and what would the .conf file look like ?

Thanks in Advance, Sami

Reply

---

steve says:
September 25, 2019 at 10:49 am

Hi
Not sure if you can as thingsboard doesn't supply a broker. Why can't you just use a client?
Rgds
Steve

Reply

---

sami soisalo says:
September 26, 2019 at 5:54 pm

Thanks Steve for quick reply. As relative new to MQTT and Mosquitto …. what do you refere as client?

Just back ground what i'm trying to achive. So I have several Nodemcu + DHT11/CO2 sensors around house and logging indoor /outdoor temps and humidity and CO2 levels in house. All connected via LUA scirpt directly to Thingsboard.com. Works perfectly. Then as started to look for the CO2 levels I started work on project that the CO2 levels would be going also to my HVAC unit (connetec to NodemCU and TRIAC unit) and hence the levels would actually control the unit also. Here I managed to create a system in LUA that it send data to both two broker Thingsboard and Mosquitto. I was just looking would it be easier just to send the data to mosquitto and the re-distribute it to Thingsboard and I would not need to send it into two destinations from the NodeMCU's.
Thanks !

Reply

---

steve says:

September 27, 2019 at 5:01 pm

Are you currently using MQTT to send the data to thingsboard or MQTT?

Rgds

Steve

Reply

---

kousher alam says:

January 28, 2020 at 10:06 am

Not working, when bridge between emqx and mosquitto mqtt.

---

steve says:

January 28, 2020 at 1:06 pm

You need to provide more detail if you want any help.

rgds

steve

Garreth says:

November 27, 2019 at 7:48 am

Is it possible to run both local broker and the bridge on the same server, or would I need some fancy manger like docker?

Reply

---

steve says:

November 27, 2019 at 9:28 am

Hi

Yes you can they just need to use different ports. This may help

How to Run Multiple mosquitto brokers on the same machine

https://youtu.be/dHH1kSQLhsU

rgds

steve

Reply

Timothy Malche says:

July 25, 2019 at 1:53 pm

Thanks Steve, It's very informative article.

Reply

Nikolay says:

February 22, 2019 at 4:52 pm

Hi, Steve, I'm beginner here. I try to make the bridge between my local broker and CloudMqtt. Without bridg's section in mosquitto.conf it start ok:

sudo systemctl status mosquitto

● mosquitto.service – LSB: mosquitto MQTT v3.1 message broker

Loaded: loaded (/etc/init.d/mosquitto)

Active: active (running) since Wed 2019-02-20 21:17:03 +05; 1 day 12h ago

Process: 511 ExecStart=/etc/init.d/mosquitto start (code=exited, status=0/SUCCESS)

CGroup: /system.slice/mosquitto.service

└─531 /usr/sbin/mosquitto -c /etc/mosquitto/mosquitto.conf

Feb 20 21:17:03 rsb mosquitto[511]: Starting network daemon:: mosquitto.

Feb 20 21:17:03 rsb systemd[1]: Started LSB: mosquitto MQTT v3.1 message broker.

Feb 20 21:17:03 rsb mosquitto[531]: mosquitto version 1.3.4 (build date 2018-09-28 22:21:32+0000) starting

Feb 20 21:17:03 rsb mosquitto[531]: Config loaded from /etc/mosquitto /mosquitto.conf.

Feb 20 21:17:03 rsb mosquitto[531]: Opening ipv4 listen socket on port 1883.

Feb 20 21:17:03 rsb mosquitto[531]: Opening ipv6 listen socket on port 1883.

Feb 22 08:04:29 rsb mosquitto[531]: Saving in-memory database to /var/lib /mosquitto/mosquitto.db.

And when I add next strinngs in mosquitto.conf:

connection cloudmqtt

address m99.cloudmqtt.com:55555

try_private false

notifications false

start_type automatic

remote_username uuu

remote_password ppp

topic # both

then I get mosquitto stopping:

pi@rsb:~ $ sudo systemctl status mosquitto

● mosquitto.service – LSB: mosquitto MQTT v3.1 message broker

Loaded: loaded (/etc/init.d/mosquitto)

Active: active (exited) since Fri 2019-02-22 09:31:32 +05; 6s ago

Process: 933 ExecStop=/etc/init.d/mosquitto stop (code=exited, status=0/SUCCESS)

Process: 940 ExecStart=/etc/init.d/mosquitto start (code=exited, status=0/SUCCESS)

Feb 22 09:31:32 rsb mosquitto[940]: Starting network daemon:: mosquitto.

Feb 22 09:31:32 rsb systemd[1]: Started LSB: mosquitto MQTT v3.1 message broker.

Uncommenting strings above gives same result.

Help me please. Thanks!

The ping to CloudMqll presents and First the mosquitto starts The contain

Reply

steve says:

February 24, 2019 at 9:13 pm

hi

you need to enable the topic and address lines

rgds

steve

Reply

Nikolay says:

February 28, 2019 at 6:56 pm

Thanks for the answer.

Now my mosquitto.conf contains lines:

connection mybridge

address m99.cloudmqtt.com:55555

try_private false

notifications false

start_type automatic

allow_anonymous false

remote_username nazmosq

remote_password *************

topic # both 0 "" ""

and mosquitto stopped:

pi@rsb:~ $ sudo systemctl status mosquitto

● mosquitto.service – LSB: mosquitto MQTT v3.1 message broker

Loaded: loaded (/etc/init.d/mosquitto)

Active: active (exited) since Thu 2019-02-28 23:29:02 +05; 4s ago

Process: 969 ExecStop=/etc/init.d/mosquitto stop (code=exited, status=0/SUCCESS)

Process: 976 ExecStart=/etc/init.d/mosquitto start (code=exited, status=0/SUCCESS)

Feb 28 23:29:02 rsb mosquitto[976]: Starting network daemon:: mosquitto.

Feb 28 23:29:02 rsb systemd[1]: Started LSB: mosquitto MQTT v3.1 message broker.

Using mqtt-spy for connection with cloud-mqtt with such remote user is ok

What I must do?

/var/log/mosquitto/mosquitto.log is empty

I spent so much time for bridge..:(

Reply

steve says:

March 2, 2019 at 8:30 pm

What version of mosquitto are you using and what OS

rgds

steve

Reply

Nikolay says:

March 2, 2019 at 7:06 pm

Today I passed to remote broker iot.eclipse.org without authentification.
Mosquitto.conf contains lines

connection mybridge

address iot.eclipse.org

notifications false

start_type automatic

topic test001/# both 0 "" ""

But messages from the remote broker are not filtered according to a topic
test001:

1551551860: Bridge rsb.mybridge doing local SUBSCRIBE on topic
""test001/#

1551551860: Connecting bridge mybridge (iot.eclipse.org:1883)

1551551860: Bridge rsb.mybridge sending CONNECT

1551551862: Received CONNACK on connection rsb.mybridge.

1551551862: Bridge rsb.mybridge sending SUBSCRIBE (Mid: 39, Topic:
""test001/#, QoS: 0)

1551551863: Received PUBLISH from rsb.mybridge (d1, q1, r0, m69,
'test001/hum', … (4 bytes))

1551551863: Sending PUBACK to rsb.mybridge (Mid: 69)

1551551863: Received PUBLISH from rsb.mybridge (d1, q1, r0, m70,
'test001/heap', … (5 bytes))

1551551863: Sending PUBACK to rsb.mybridge (Mid: 70)

1551551863: Received PUBLISH from rsb.mybridge (d1, q1, r0, m71,
'test001/tdht', … (4 bytes))

1551551863: Sending PUBACK to rsb.mybridge (Mid: 71)

1551551863: Received PUBLISH from rsb.mybridge (d1, q1, r0, m72,
'test001/heap', … (5 bytes))

1551551863: Sending PUBACK to rsb.mybridge (Mid: 72)

1551551863: Received PUBLISH from rsb.mybridge (d1, q1, r0, m73,
'test001/tdht', … (4 bytes))

1551551863: Sending PUBACK to rsb.mybridge (Mid: 73)

1551551863: Received PUBLISH from rsb.mybridge (d1, q1, r0, m74,
'test001/hum', … (4 bytes))

1551551863: Sending PUBACK to rsb.mybridge (Mid: 74)

1551551863: Received PUBLISH from rsb.mybridge (d1, q1, r0, m75,
'test001/heap', … (5 bytes))

1551551863: Sending PUBACK to rsb.mybridge (Mid: 75)

1551551863: Received PUBLISH from rsb.mybridge (d0, q0, r1, m0,
'/034L2Xe68z/000/time', … (73 bytes))

1551551863: Received PUBLISH from rsb.mybridge (d0, q0, r0, m0,
'GSM_FLOW', … (73 bytes))

1551551863: Received PUBLISH from rsb.mybridge (d0, q0, r1, m0, '/30c216b0ed/0/motion/perc', … (11 bytes))
1551551863: Received PUBLISH from rsb.mybridge (d0, q0, r0, m0, 'fedor', … (100 bytes))
So I get
Socket error on client rsb.mybridge, disconnecting.
Steve, what I must write in line "topic.." ? Thanks!

Reply

steve says:
March 2, 2019 at 8:36 pm

Hi
Can you just give me a brief overview of the bridge you are trying to create.Use the ask steve page and I can respond via email
rgds
steve

Reply

Nikolay says:
March 4, 2019 at 4:50 pm

This my problem is solved. I confused subscribed messages and the messages which are written down in mosquitto.log. For some reason messages come to the mosquitto.log without filtration according to topic. Thanks for your attention!

Nuno says:
February 16, 2019 at 10:42 am

Hello.

Great tutorial, very helpful.

I want to bridge all topics in to my bridge but only some out. Still then, I couldn't find a way of using wildcards to avoid havin to specify every topic individually as out…

My config for in topics is (this works beautifully):
topic # in 0

My doubt is with the out topics, which I wanted to filter (for instance, all that contain word Sonoff or sonoff. Something like:
topic *onoff* out 0
or
topic #onoff# out 0

But it doesn't seem to work properly.

Any ideas on if I can do what I want and what am i doing wrong?

Thanks in advance,
Nuno

Reply

steve says:

February 19, 2019 at 3:07 pm

hi
you cannot use wild card characters as part of a name e.g string
sonof# doesn't work but
sonoff/#
should work
* is invalid

Reply

Bayu says:

November 24, 2018 at 5:41 pm

I tried to make a bridge with test.mosquitto.org with mosquitto version 1.4.14 on
Windows and the results worked. but when I tried it with version 1.5.4 the result
failed, the error statement was "unknown error", this happened when the local
broker tried to connect to the remote broker (test.mosquitto.org)
This works when I make a bridge with a remote broker on the same PC

Reply

steve says:

November 25, 2018 at 9:54 am

Hi
I have had others complain of bridge problems with mosquitto 1.5.4. I haven't had
chance to test it but it is probably nothing you are doing wromg.

Reply

Abishek G says:

November 15, 2018 at 9:05 am

How to establish a TCP Bridge connection.
Trying to TCP Bridge Mosquitto with EMQ.
Included the bridge connection in my mosquitto.conf
connection emq
address 172.22.25.53:2883
topic AB/# both 2

The IP address mentioned above is an IP of a different system. And also setup the port at 2883.

But the very rarely does the connection happen. It fails 95% of the times.

Where am i making a mistake?

Reply

steve says:

November 15, 2018 at 9:34 am

Difficult to say. The mosquitto conf file that you included looks ok but missing a line like

connection bridge-emq

If that doesn't work make sure that you can connect to emq using a normal client as it might have other restriction e.g authentication configured.

Let me know how you get on.

rgds

steve

Reply

Geoge says:

August 26, 2018 at 12:30 pm

Hello This solution can use for enterprise ? Anyone use for enterprise ? George

Reply

Ricoh printer says:

June 29, 2018 at 12:30 am

This is a very good post on MQTT bridge. TYou have given tips Encryption which is very useful for the user. They are able to make a bridge to connect with each other.

Reply

Vicky says:

June 15, 2018 at 11:16 am

Hi steve, can we increase client connection limit from default 1024 to 10,000 in mosquitto?

I don't find a proper solution from internet…so, it would be great for me if you can help in this problem..

Thank you!

☺

Reply

steve says:

June 15, 2018 at 12:40 pm

From what I understand you can use -1 and have unlimited connections but the
docs say that you might hit problems when you go over 1024.
The maximum number of client connections to allow. This is
a per listener setting.
Default is -1, which means unlimited connections.
Note that other process limits mean that unlimited connections
are not really possible. Typically the default maximum number of
connections possible is around 1024.
#max_connections -1

Reply

Murali says:

June 8, 2018 at 11:18 am

I am using Mosquitto MQTT Bridge between local gateway & remote MQTT broker
server. It is working fine but when internet connection down then all topic published
locally will not publish to broker when reconnect to internet even though QOS level is
set to 2 and clean session flag is false so how can I ensure high quality of level
between local MQTT bridge & remote MQTT broker without making retain topics. Is
there any configuration from which local MQTT bridge ensure all topic sends to
remote MQTT broker as or when internet connection resume?

Reply

steve says:

June 8, 2018 at 3:36 pm

It is not just the QOS on the bridge. Yoy need to be publishing to the bridge with a
qos of 1 or 2 and subscribing on the remote broker with a qos of 1 or 2 and it
should work.
You should also note that mosquitto has a limit of 100 messages (default) setting
that it will hold in a queue.

Reply

Prasad says:

June 5, 2018 at 7:13 pm

HI Steve
I added following entry in broker2 mosquitto.conf file

connection Bridge1
address 127.11.0.1:1883
topic # both 0 "" b0/

That's broker-2 as bridge, Broker1 as normal broker

Started normal broker first(broker1) and then bridge broker (broker2) later.

Used mosquitto_pub and mosquitto_sub to verify.

Case 1: Publishing from Broker2
broker2:~# mosquitto_pub -t chassis/PSU0 -m "PSU0 is ON"
broker1:~# mosquitto_sub -t b0/chassis/PSU0
PSU0 is ON

Case 2: Publishing from Broker1
#broker1:~# mosquitto_pub -t chassis/PSU0 -m "PSU0 is ON"
#broker2:~# mosquitto_sub -t chassis/PSU0
PSU0 is ON

Broker2 publishes them to broker1 with a prefix of b0/
Broker2 subscribes to all messages from broker1 with no prefix, is that correct ? I
thought there would be /b0 this case as well.

Please clarify

[Reply](#)

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steve says:
[June 6, 2018 at 4:55 pm](#)

No broker2 should subscribe to broker 1 using the prefix.
When you publish a message to broker1 then any message not beginning with the
prefix b0/ isn't sent to broker2.

When you send a message to broker2 it should send it to broker1 with the prefix.
In this case the prefix is both ways in and out.

[Reply](#)

[June 2, 2018 at 10:25 am](#)

Assume my broker can accept 10k users
If i use bridge,my brokers can 20k users?
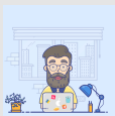Regards

[Reply](#)

---

steve says:
[June 4, 2018 at 10:36 am](#)

The bridge will connect the topics to the other broker and The other broker can

accept 10k users

Reply

Omid Aghakhani says:
June 4, 2018 at 6:14 pm

So i can increase connection to many users with bridge

Thanks

Reply

steve says:
June 4, 2018 at 7:27 pm

Yes but you need multiple brokers

Reply

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