MQTT BRIDGE

INSTALLATION GUIDE

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Document Revision

Revision	Issue Date	Status	Editor	Comments
1.0	October 9, 2019	Released	A.Panchal	Initial draft, mostly taken from customer feedback and internal process review. This MQTT Bridge Installation is intended to enable the customers to utilize the OAM features available on Tektelic NS.
2.0	December 10, 2021	Released	E.Mcmurphy	Updated to include new procedure for gateways with newer BSP's or higher (Micro 3.3.5, Macro 4.3.1, Mega 4.3.2 & Enterprise Gateways)

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1   Introduction

1.1   Overview

This document provides an installation and configuration procedure for Tektelic MQTT Bridge software on Kona Gateway family developed by TEKTELIC Communications Inc.

1.2   Scope

The requirements for installation and configuration of the MQTT Bridge on gateways older than

- Micro BSP 3.3.X
- Micro Outdoor BSP 1.0.X
- Mega BSP 4.3.X
- Macro BSP 4.3.X

are that the gateway is connected via ethernet and the KonaFT tool is installed on a computer belonging to the same network.

For gateways newer or equal to BSPs above, the gateway will need to be connected via ethernet and SSH access to the gateway.

1.3   Install MQTT-Bridge

MQTT Bridge software package isn't installed by default even if the Kona GW is equipped with latest BSP release. For example, the latest BSP release as of November 2021 for Kona Micro GW is v3.3.5 and Kona Macro GW is v4.3.1. Thus, below procedure must be followed to install Tektelic MQTT Bridge software through KonaFT tool.

1) Go to **Board Details** and select **SW Management** tab. Click on "**Read Installable**" and Select **tektelic-mqtt-bridge**.
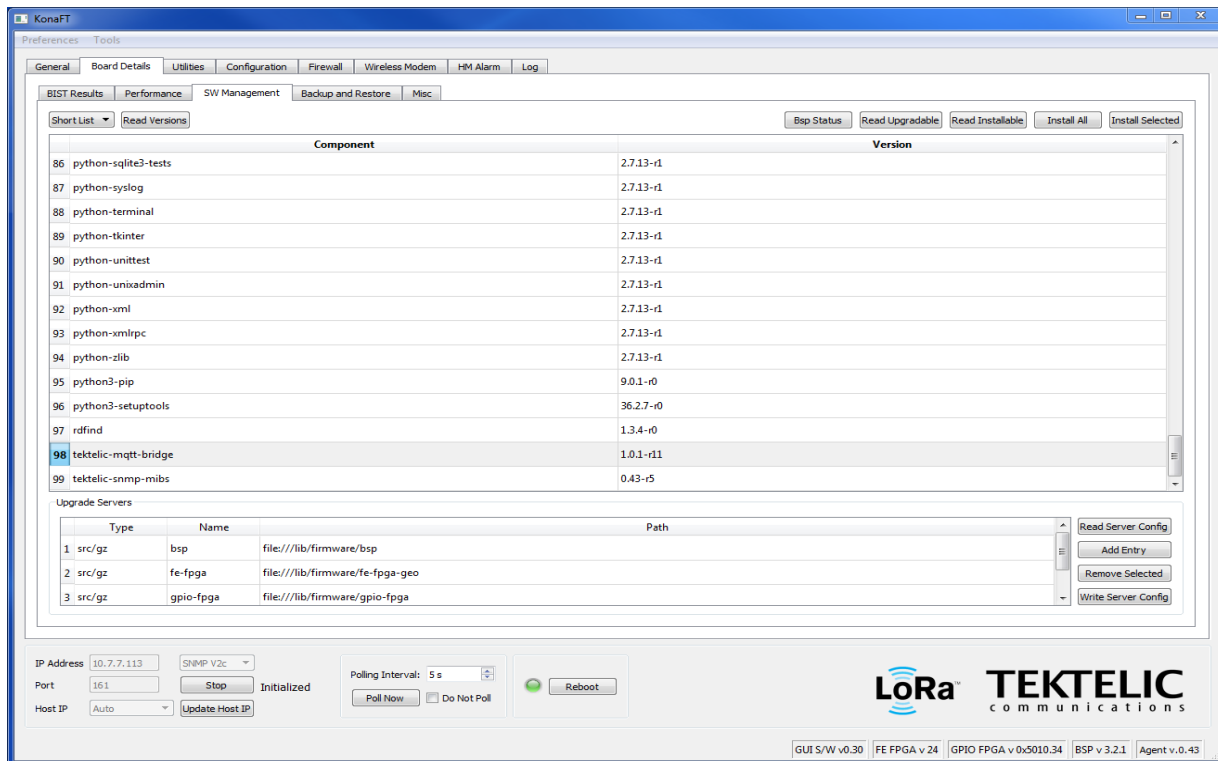
Figure 1-1 Installing tektelic-mqtt-bridge

2) Click "**Install Selected**". The installation takes about 30 seconds.

4 Configure MQTT-Bridge

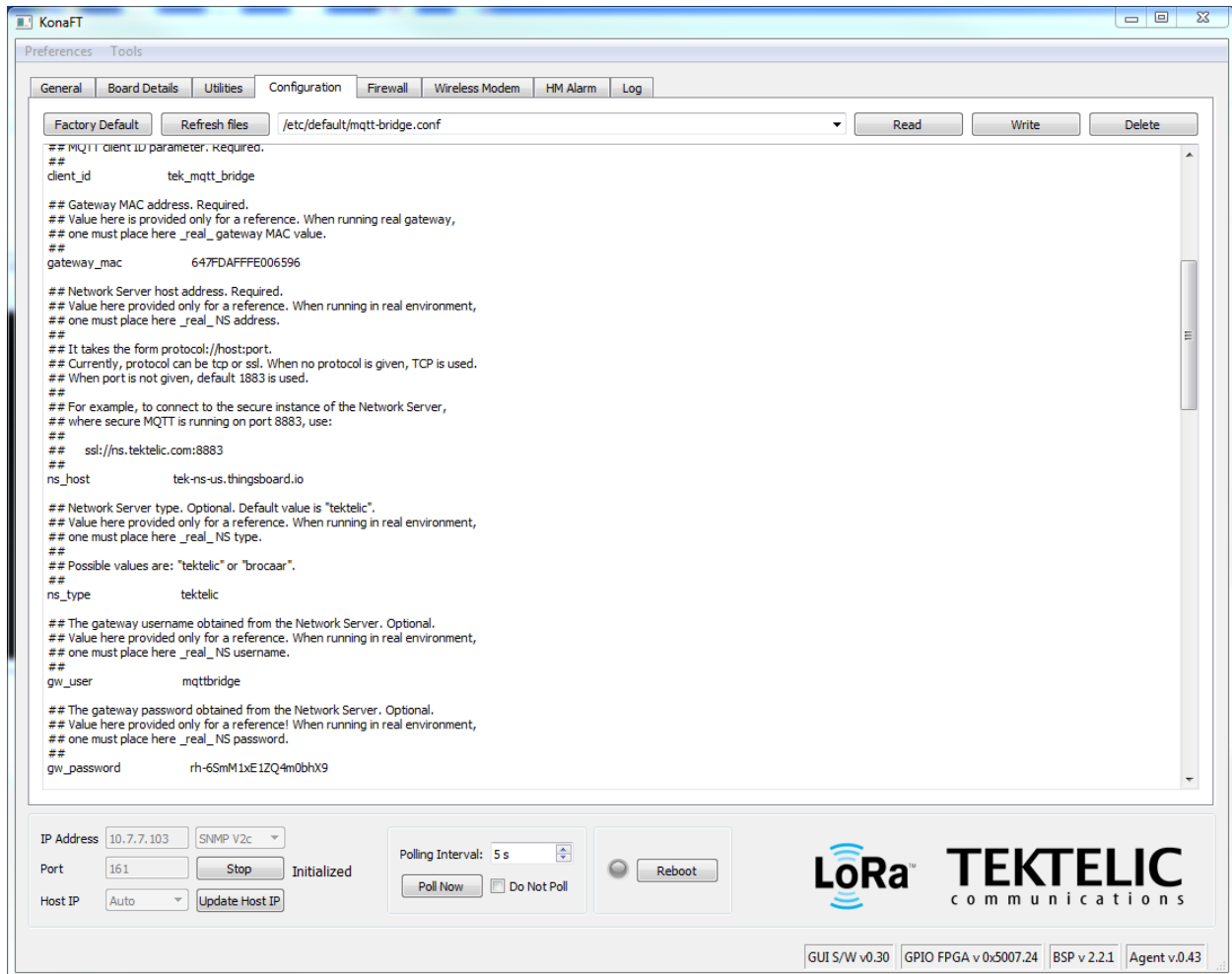For Gateways with BSP's older than the BSP's outlined in the Scope

1) Click on the "**Configuration**" menu of KonaFT and in the window between the "Refresh files" and "Read" buttons type the following:

/etc/default/mqtt-bridge.conf

2) Click the "**Read**" button. Use the window scroll bar to scroll through the text and find **gw_user** and **gw_password**. Record the gw_user and gw_password - this information will be used for configuration on the TEKTELIC network server or TEKTELIC OAM server (if using a different vendor's network server).

*Please note that the OAM server is designed for use with third party network servers and cannot be used in conjunction with the Tektelic NS.

*Please note that unused files should be commented out. For example, if you are using Tektelic NS and are not using Geolocation or OAM, the fields within the mqtt-bridge.conf file should be commented out. These fields are **oam_host**, **gw_oam_user** and **gw_oam_password**.

Figure 1-2 MQTT-Bridge Configuration (Up to 3.0.4 Micro, 4.0.3 Macro and 4.0.2 Mega): Read gw_user and gw_password (B)

For Gateways with BSP's equal to or newer than the BSP's outlined in the scope:

1) Using SSH access, connect to the gateway and navigate to *etc/default.* Here you will find the following configuration files:
   a. **tektelic-bridge.geo.toml** (Geolocation Config File)
   b. **tektelic-bridge.ns.toml** (Network Server Bridge Config File)
   c. **tektelic-bridge.oam.toml** (OAM Config File)
   d. **tektelic-bridge.toml** (Gateway Bridge Config File)

*Please note that the OAM server is designed for use with third party network servers and cannot be used in conjunction with the Tektelic NS.

*Please note that unused files should be commented out. For example, if you are using Tektelic NS and are not using Geolocation or OAM, the fields within **tektelic-bridge.geo.toml** and **tektelic-bridge.oam.toml** should be commented out.

2) Run the command below to view and edit the desired configuration file:
   a. *vi tektelic-bridge.ns.toml* (View & Edit Network Server Bridge Config File)
   b. Scroll through this file and find the **gw_user** and **gw_pass** fields. Record the **gw_user** and **gw_pass** - this information will be used for configuration on the TEKTELIC network server or TEKTELIC OAM server (if using a different vendor's network server).

*Note, Because Tektelic NS is being used, we will not be using OAM server and as such, the **tektelic-bridge.oam.toml** file should be commented out.*

*Note SSH Login credentials for the Enterprise Gateways will use the username "**admin**" instead of "root" as root access is disabled on Enterprise Gateways. "sudo" must be added as a prefix to the vi command.*
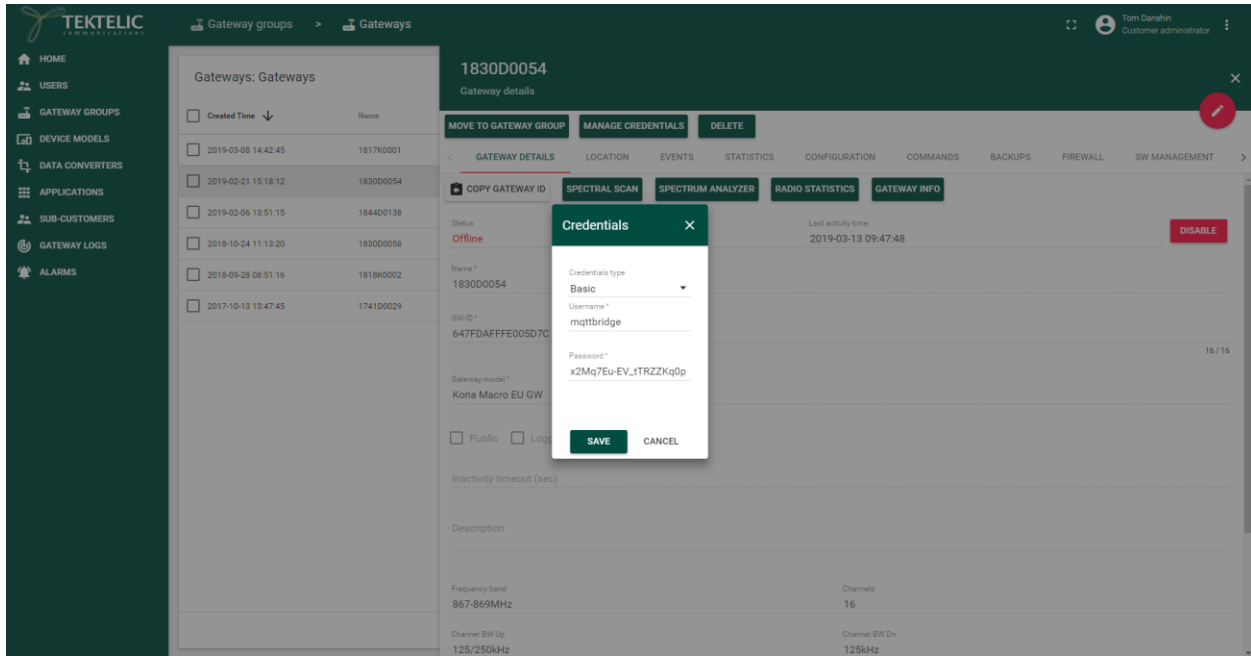

Figure 1-3 MQTT-Bridge Configuration via SSH (equal or newer than BSP outlined in scope)

3) Log in to the TEKTELIC network server (or, alternatively, TEKTELIC OAM server) and select "**Gateways Groups**", and select the gateway group containing the gateway of interest.

4) Click on "**Manage Gateways**" and select the gateway of that you are configuring.

5) Press the "Manage Credentials" button and type in the username and password obtained by looking at the **mqtt-bridge.conf** file on the gateway. For gateway BSP's equal to or

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newer than the BSP'S outlined in the scope as well as Enterprise Gateways, this username and password can be found in the **tektelic-bridge.ns.toml** file.

Figure 1-2 Entering User and Password to Complete MQTT Bridge Configuration

6) Press the "**save**" button.

7) The gateway and network server should now be configured to display gateway OAM information on the network server or OAM server interface. By this time, MQTT Bridge would have been configured on the GW.

8) This step actually verified whether the MQTT Bridge is operating correctly. Wait two minutes and click on the "Gateway Info" button. If the MQTT Bridge is configured correctly, the gateway information should be displayed as shown below.
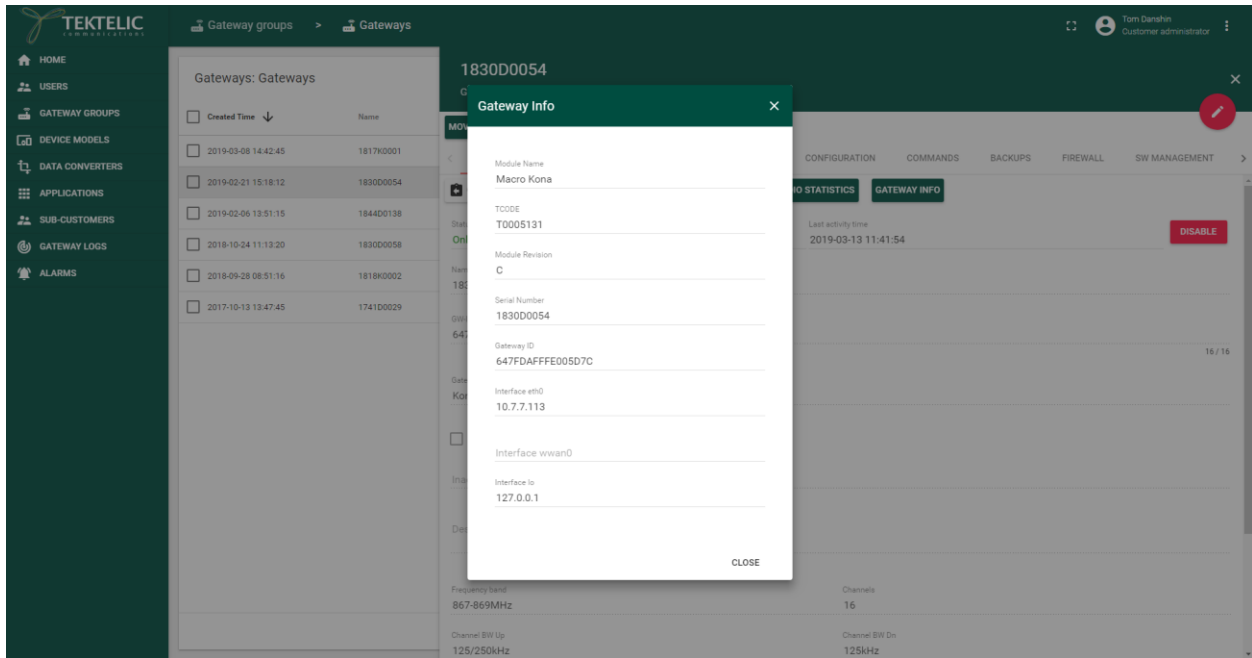
Figure 1-3 Successful MQTT-Bridge Connection