Signals Technical Note

Monnit Gateways

date	min. ver.	desc
2 Dec 2020	2.28	Initial Version
28 Apr 2023		Section 2.3 - Adding devices to gateway via gateway UI

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1.0 Introduction

This document describes how to configure a Monnit Ethernet Gateway for use with ICON Signals. Operating assumptions are:

- The device is an Ethernet Gateway 4
- Firmware version is 1.0.6.6
- ICON Signals 2.28 or later
- DHCP is available on the gateway network

We have not tested a procedure to set up a gateway without DHCP. Monnit technical support may be able to help, but it is not covered in this technical note.

1.1 Terminology

Throughout this technical note we will use the following terminology.

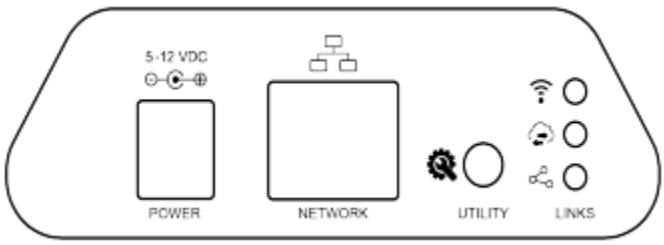
`Gateway`	Monnit Ethernet Gateway

`Utility`	'Utility' button on the back of the Monnit gateway
`Application Server`	ICON Signals server
`Local Interface`	HTTP interface of the Monnit gateway

1.2 Operations

There are two physical “operations” involved in setting up a Monnit gateway. Both involve pressing and holding the ‘Utility’ button on the device.

The back of the gateway will look like the diagram below.



`Networking-Reset`

This operation resets the networking information for the gateway, but retains the sensor list.

`Local-Interface-Enable`

This operation enables the local HTTP server embedded in the gateway device. *Note that this interface will only be available for a short time after it is enabled.*

2.0 Gateway Setup

In order to communicate with an Application Server (e.g. ICON Signals), a Monnit gateway must first be "unlocked" with a license key obtained from ICON. These instructions assume an unlock key has already been applied to your Monnit gateway. If this is not the case, then order from ICON using part number MNA-GW-UL and we will unlock the gateway for you.

2.1 Network Reset Operation

[1] With the Gateway powered on, press and hold the Utility button until the LEDs are solid red (5 seconds).

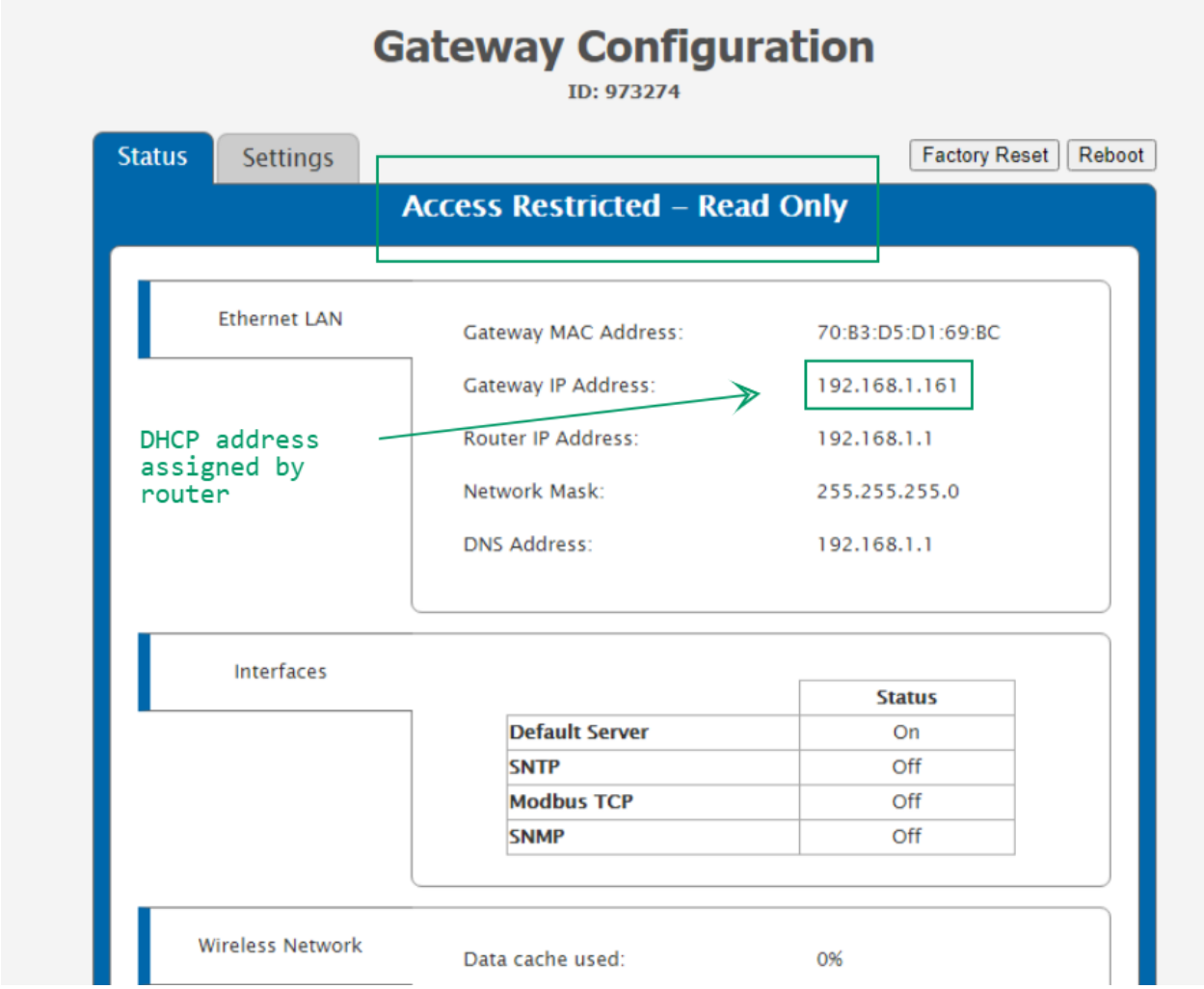
The gateway will reboot and have a dynamic IP address.

[2] Find the dynamic IP address assigned to the gateway.

Monnit gateway MACs start with 70B3D5.

[3] Browse to the dynamic IP address.

You will see a read-only version of the gateway's Local Interface as shown below.



2.2 Local Interface Enable Operation

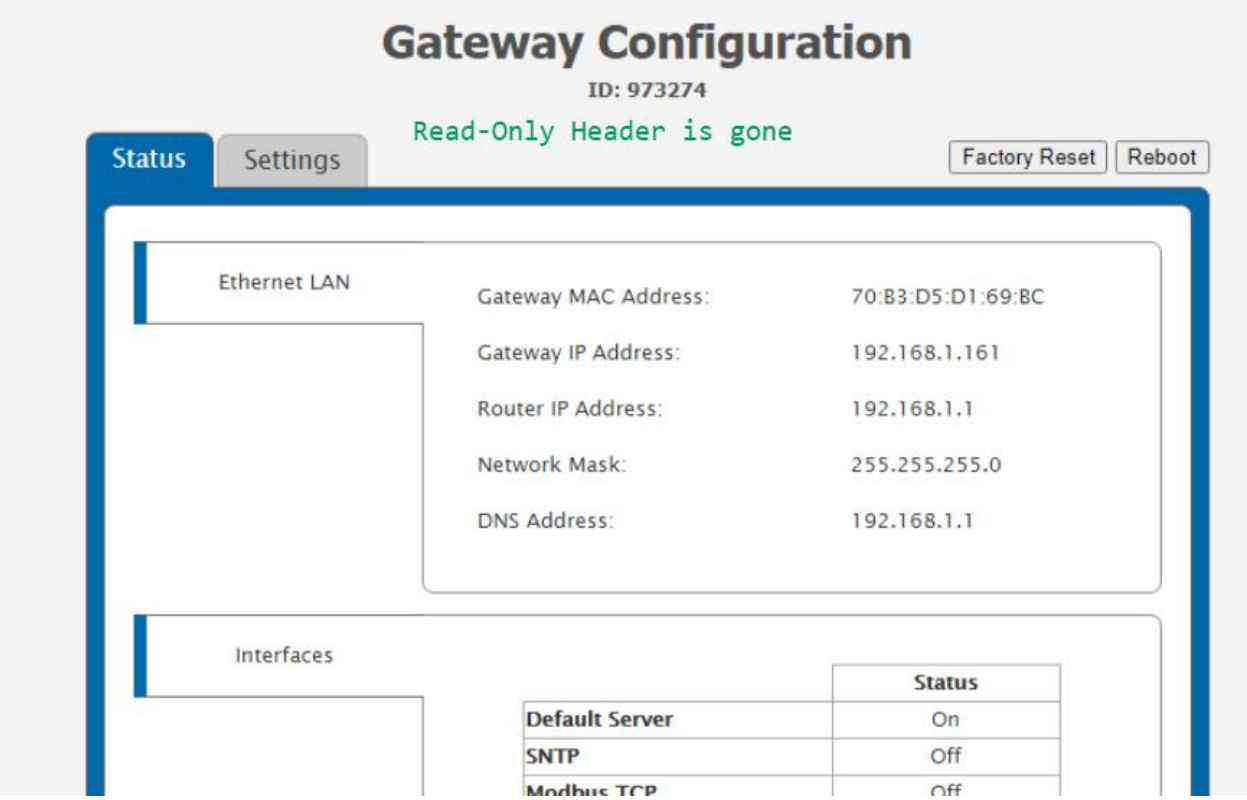
[1] Power off the POE gateway by disconnecting the network cable.

[2] Press and hold Utility.

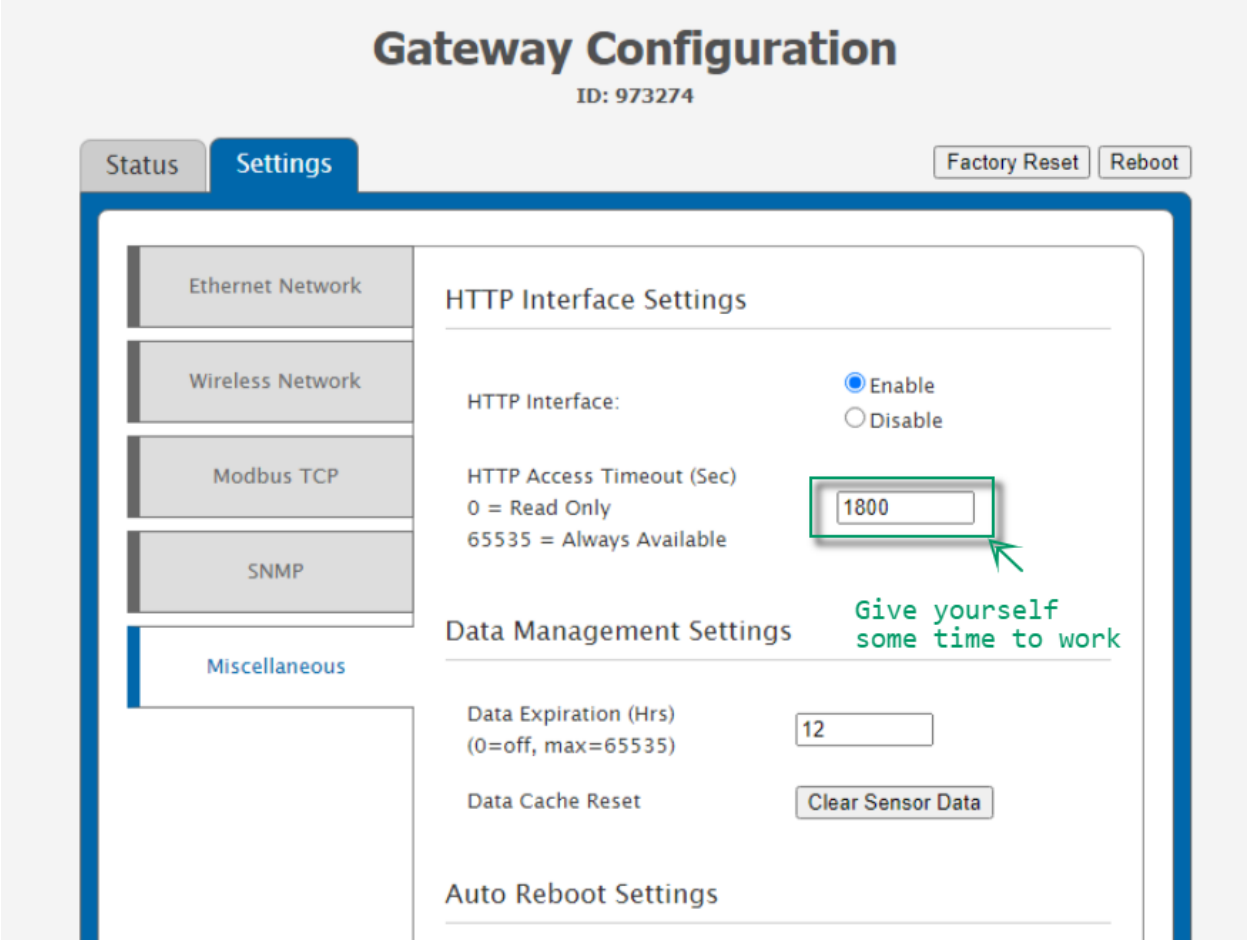
[3] While continuing to hold Utility, power on the PoE gateway by plugging in the network cable.

[4] Wait for 3 solid red LEDs (5 seconds).

Unless the HTTP Access Timeout has been set, the gateway local interface will be accessible **for only one or two minutes**.



[5] Immediately click the Settings tab and then the Miscellaneous tab and change the HTTP Access Timeout to give yourself more time to work.



[6] Then click 'Save Changes' at the bottom of the page.

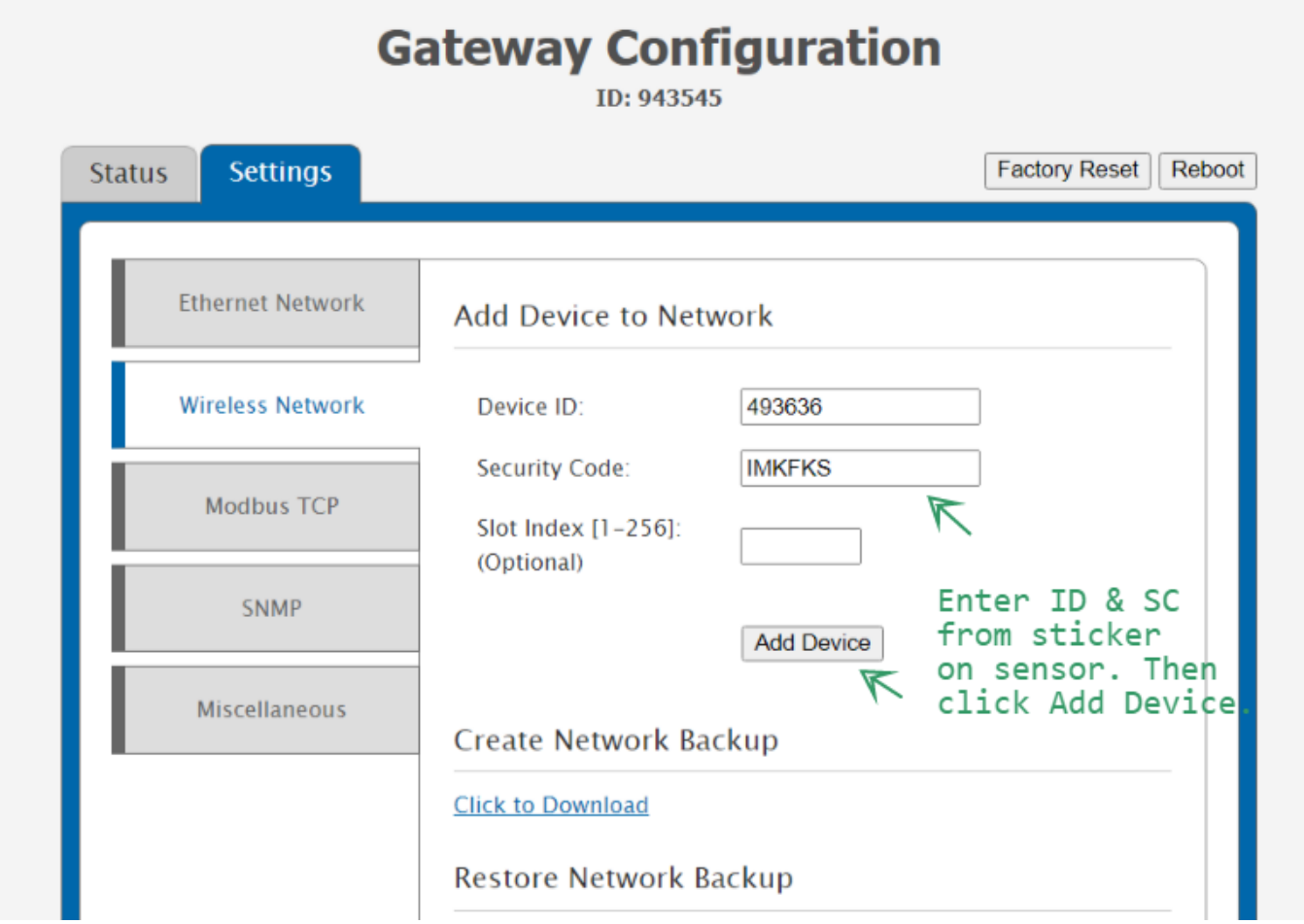
The gateway will reboot and the interface will come back up.

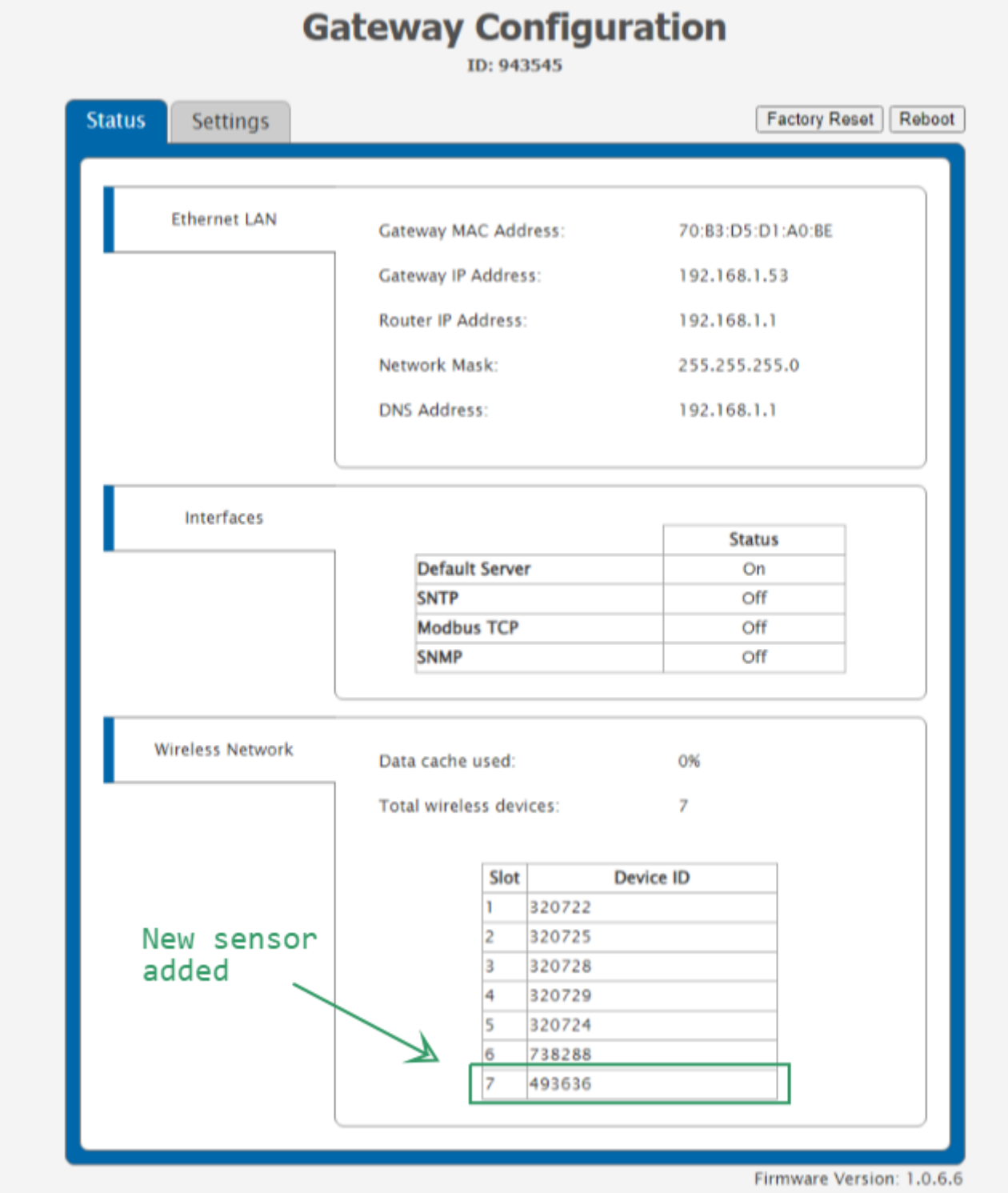
[7] When the Gateway Configuration page returns, click the Settings tab again.

2.3 Add Sensors

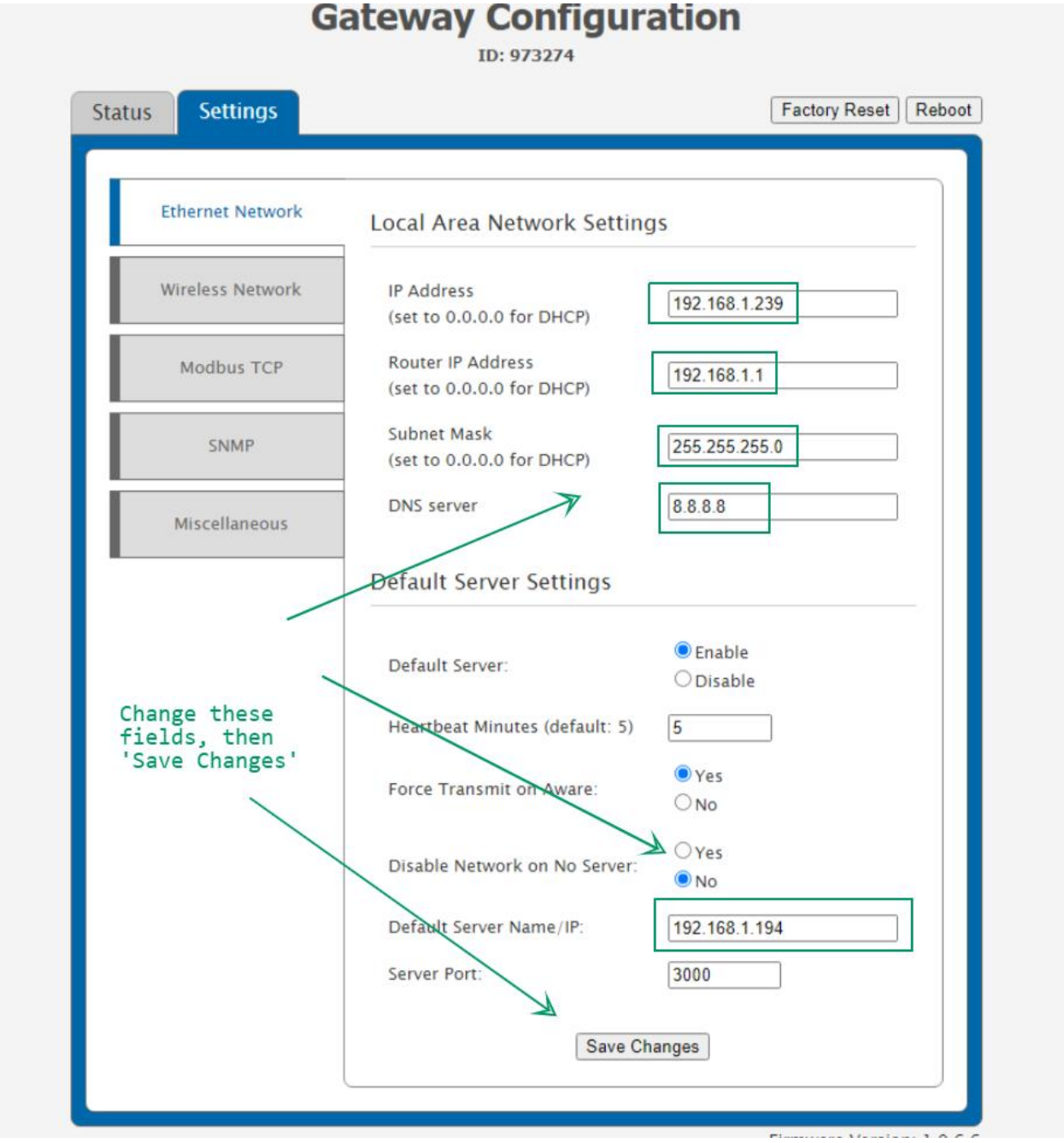
On the Settings tab, click 'Wireless Network' and add the ID and Security Code for each device to be added to the local gateway.

- There is no need to enter a Slot Index
- Do not clear out old devices from the gateway




Gateway Configuration
ID: 943545
Status
Settings
Factory Reset
Reboot
Ethernet LAN
Gateway MAC Address: 70:B3:D5:D1:A0:BE
Gateway IP Address: 192.168.1.53
Router IP Address: 192.168.1.1
Network Mask: 255.255.255.0
DNS Address: 192.168.1.1
Interfaces
Status
Default Server On
SNTP Off
Modbus TCP Off
SNMP Off
Wireless Network
Data cache used: 0%
Total wireless devices: 7
Slot Device ID
1 320722
2 320725
3 320728
4 320729
5 320724
6 738288
7 493636
New sensor added
Firmware Version: 1.0.6.6

2.4 Enter IP Address Information



[1] Fill in the Gateway IP Address information and the Application Server address. Default Server Name/IP is the address of the application server (i.e. Signals). In this example, the Signals server IP address is 192.168.1.194.

[2] Click 'Save Changes' when done.

When it comes back online, the gateway will have the assigned static IP address and will send data to the Application Server (Signals).

At this point, **you can no longer access the Local Interface.** However, accessing the gateway's local interface is not needed unless the gateway static IP address changes or the ICON Signals server address changes.

The next section covers adding the Gateway and Sensors within the Signals user interface.

3.0 Configuration in Signals

The next task is to enable processing of messages from the Monnit gateway by:

- Enabling the Monnit interface (if not done already)
- Adding the new Monnit gateway
- Adding Monnit sensors to the gateway

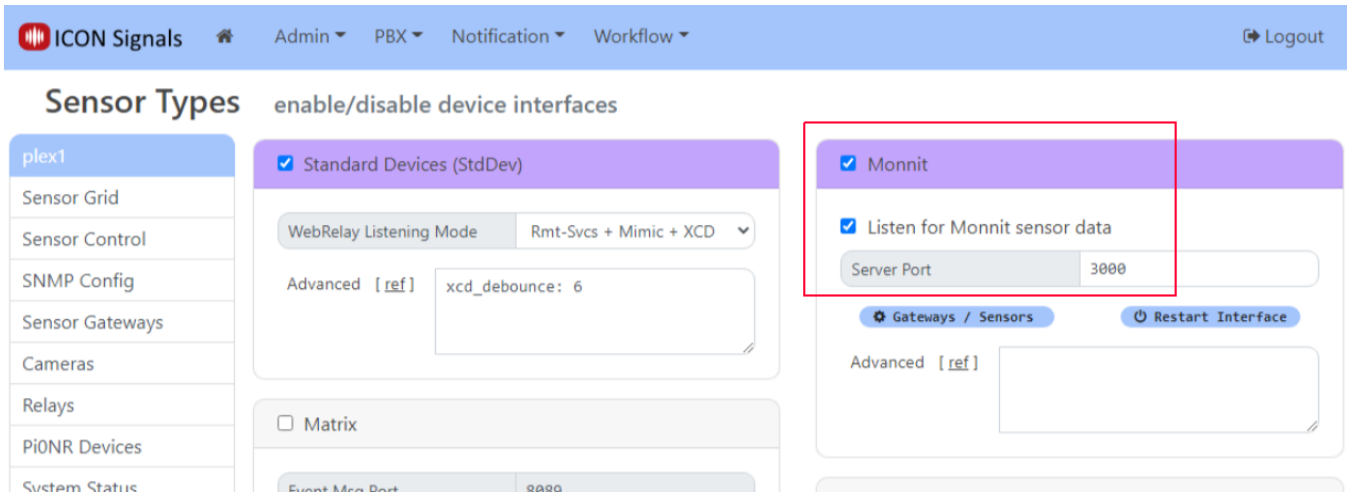
3.1 Enabling the Monnit Interface

[1] Login to ICON Signals and browse to Workflow > Sensor Types

[2] Check the checkbox in the Monnit section.

[3] Check the 'Listen for Monnit sensor data' checkbox.

[4] Set the server port number to 3000 (default value).

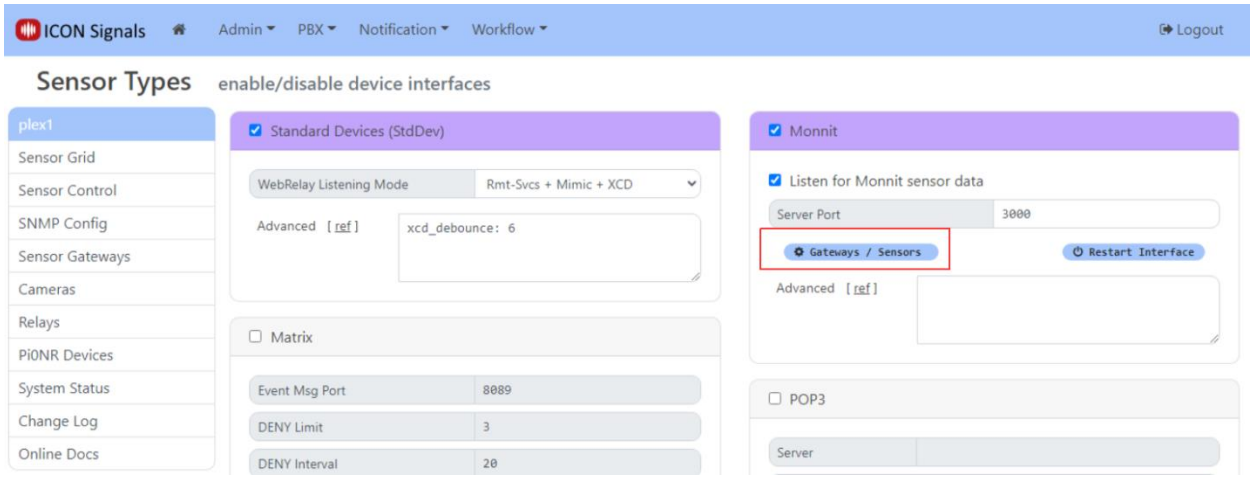


[5] Scroll to the bottom of the page and click 'Save Changes'.

3.2 Adding the Gateway

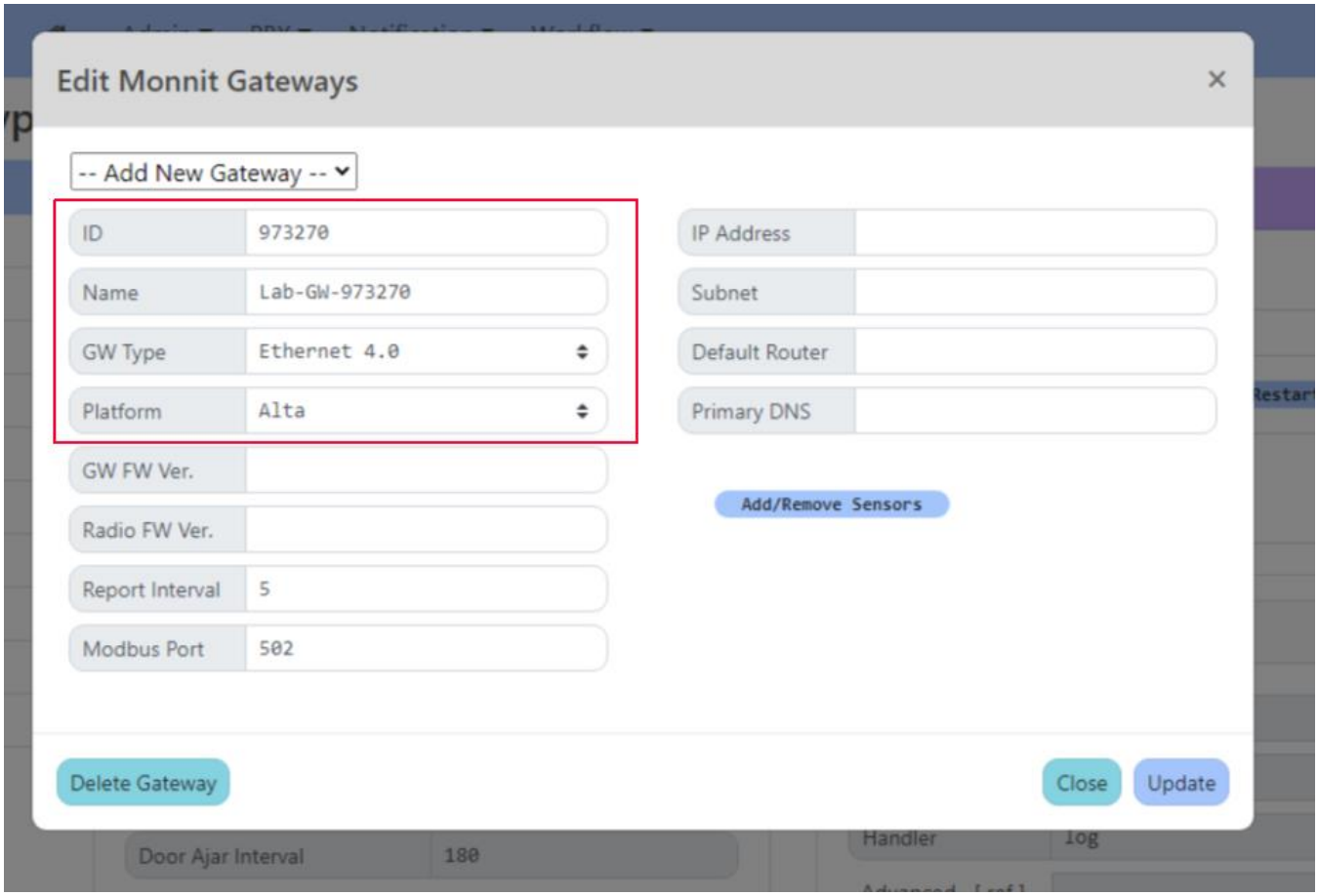
[1] Browse to Workflow > Sensor Types.

[2] Click the ‘Gateways / Sensors’ button in the Monnit section.



[3] Enter data for the first four fields in the upper left corner of the dialog box as shown below.

[4] Click the ‘Update’ button.

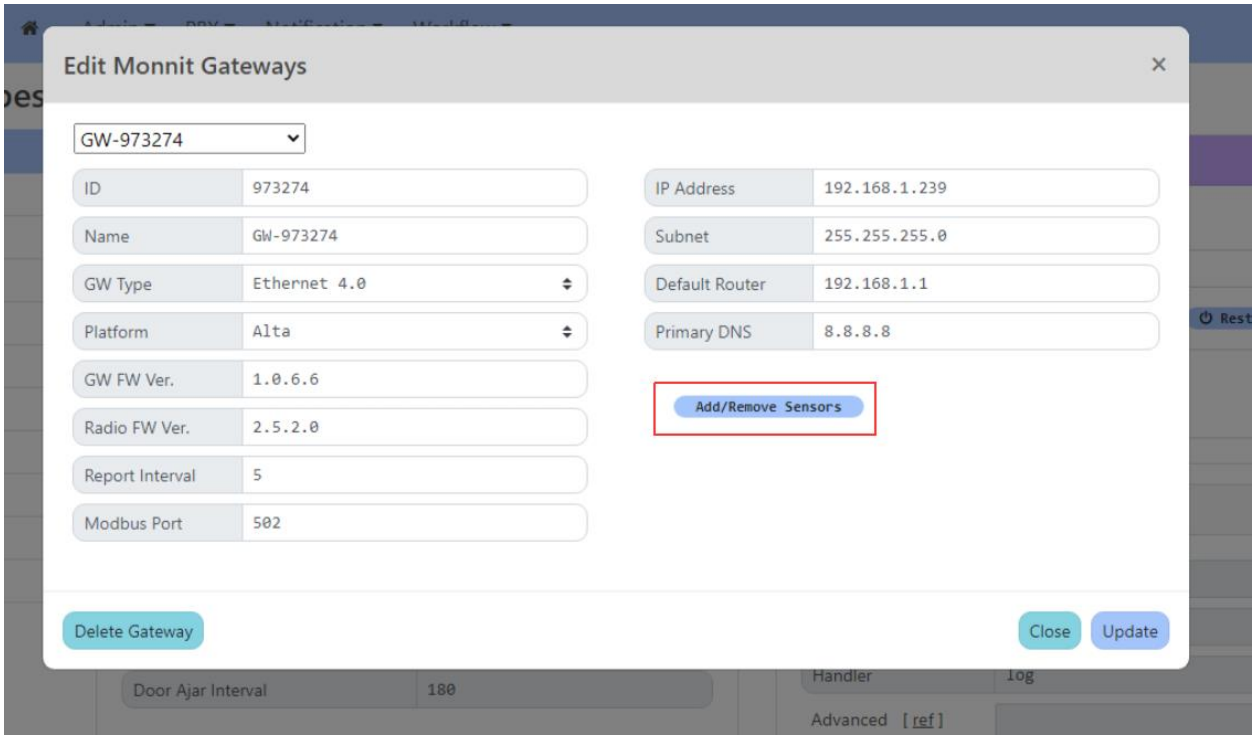

Edit Monnit Gateways
-- Add New Gateway --
ID
973270
Name
Lab-GW-973270
GW Type
Ethernet 4.0
Platform
Alta
GW FW Ver.
Radio FW Ver.
Report Interval
5
Modbus Port
502
IP Address
Subnet
Default Router
Primary DNS
Add/Remove Sensors
Delete Gateway
Close
Update
Door Ajar Interval
180
Handler
log

3.3 Adding Sensors to the Gateway

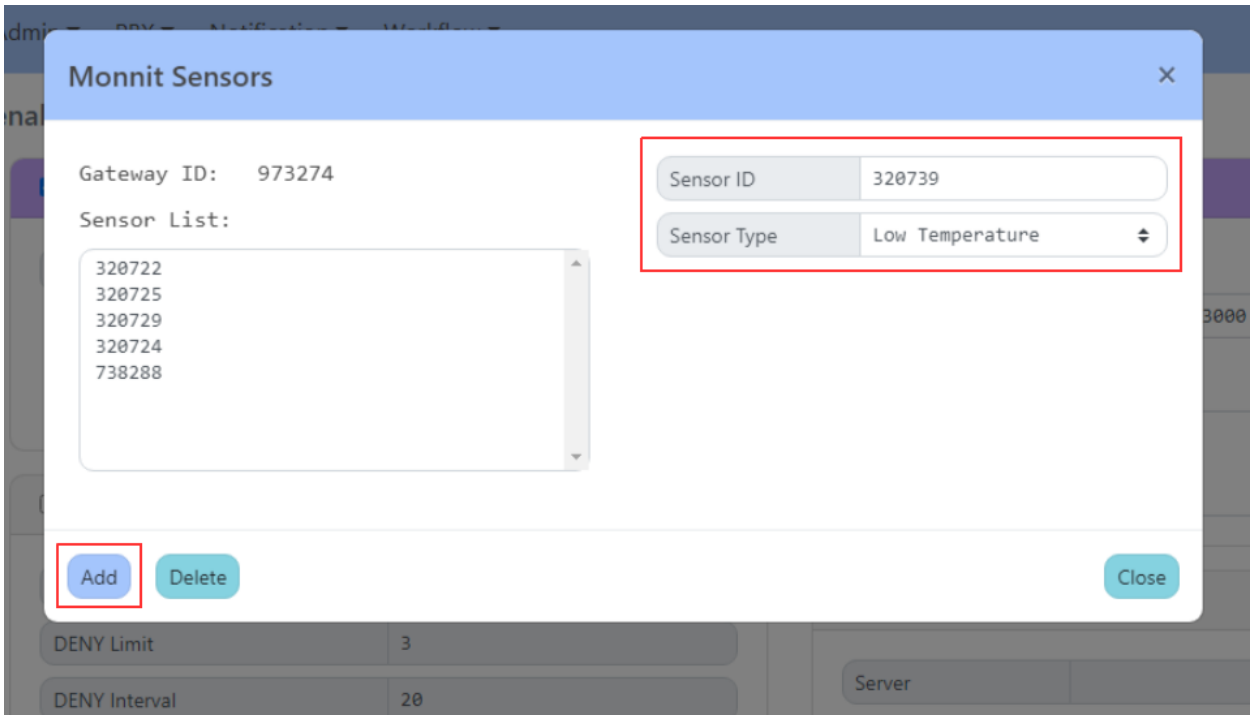
[1] Browse to Workflow > Sensor Types.

[2] Click the ‘Gateways / Sensors’ button in the Monnit section.

[3] Select Gateway from the Dropdown and click ‘Add/Remove Sensors’.



[4] For each new device, enter the sensor serial number and type, then click the ‘Add’ button.



The updated list of sensors will be added to the Gateway in a subsequent communication between the Gateway and ICON Signals.

When data is received for a new sensor device, Signals automatically adds it to the Sensor Grid with a default configuration. That config data can then be changed and will be updated the next time the sensor sends a status message.

- END -