



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

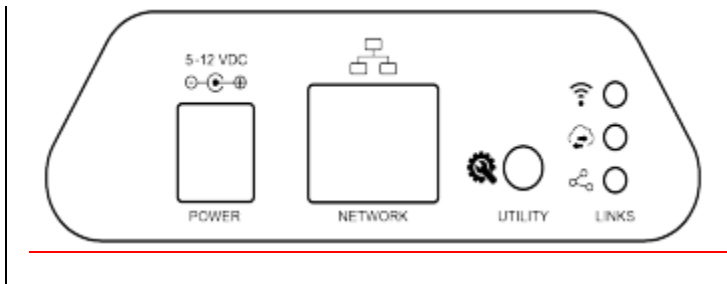
Application Server ICON Signals server

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).

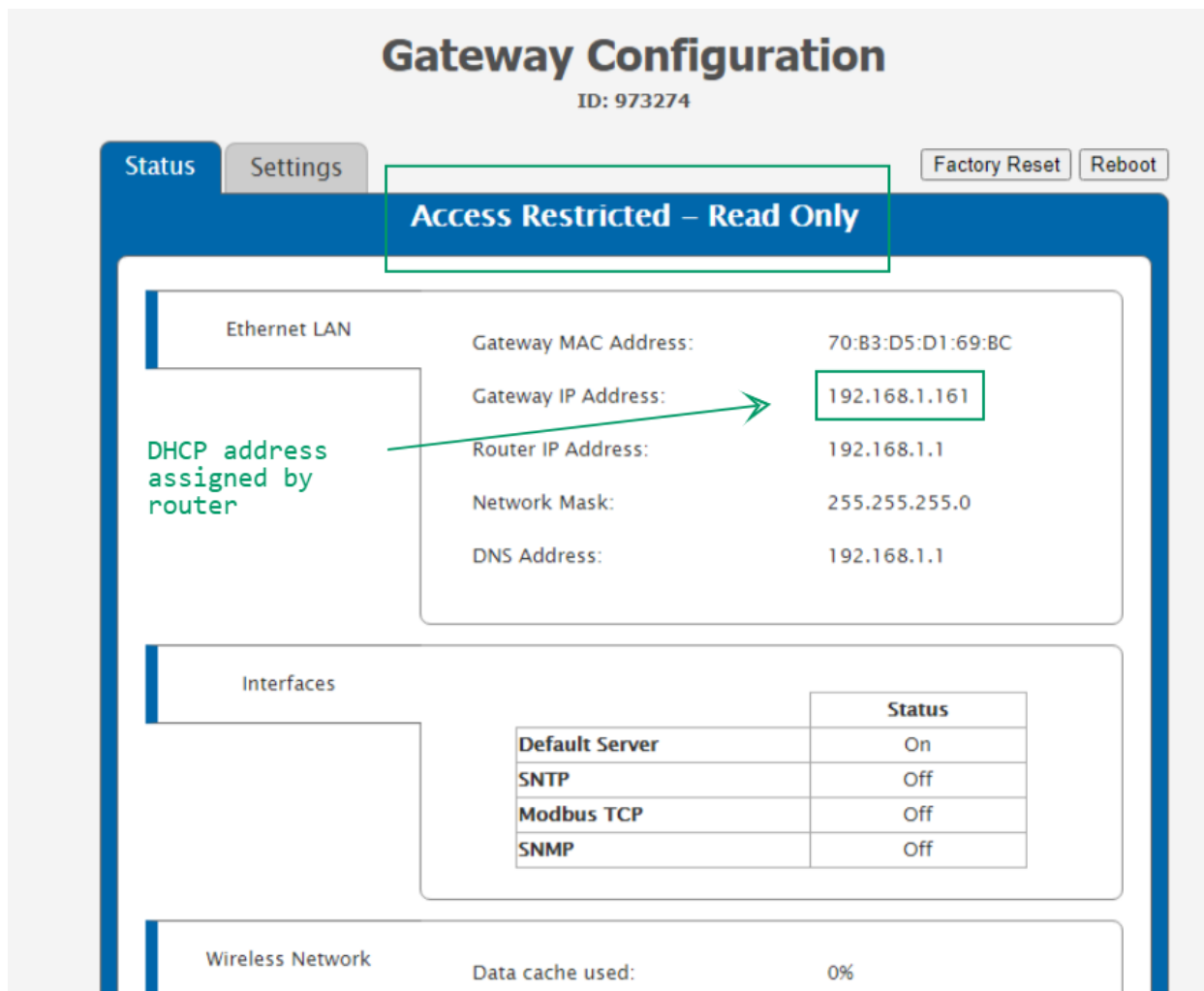
The gateway will reboot and have a dynamic IP address.

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

Monnit gateway MACs start with 70B3D5.

[3] Browse to the dynamic IP address.

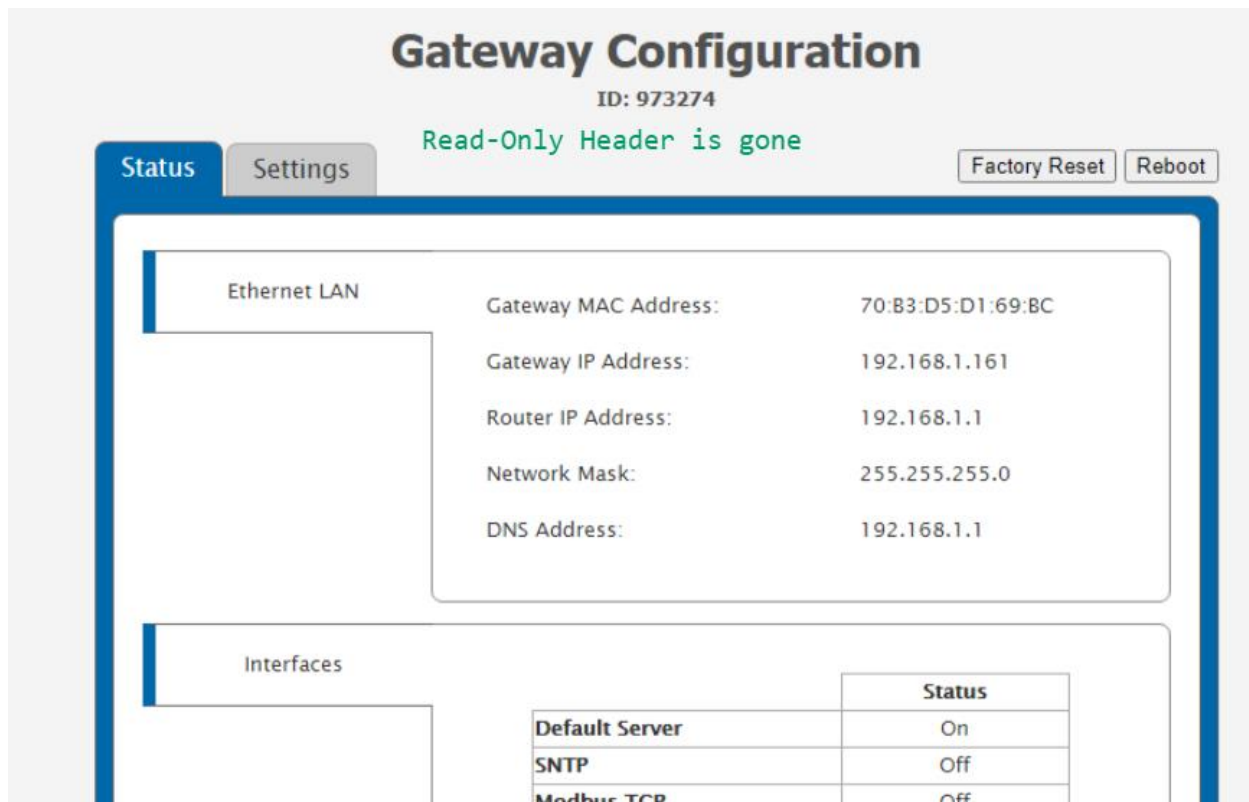
You will see a read-only version of the gateway’s Local Interface as shown below.



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.

Gateway Configuration
ID: 973274

Status Settings Factory Reset Reboot

Ethernet Network
Wireless Network
Modbus TCP
SNMP
Miscellaneous

HTTP Interface Settings

HTTP Interface: ☒ Enable ☐ Disable

HTTP Access Timeout (Sec)
0 = Read Only
65535 = Always Available

1800

Data Management Settings

Data Expiration (Hrs)
(0=off, max=65535)

12

Data Cache Reset

Clear Sensor Data

Auto Reboot Settings

Give yourself some 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 Network

Wireless Network

Modbus TCP

SNMP

Miscellaneous

Add Device to Network

Device ID:

Security Code:

Slot Index [1-256]:

(Optional)

Enter ID & SC from sticker on sensor. Then click Add Device.

Create Network Backup

[Click to Download](#)

Restore Network Backup

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

2.4 Enter IP Address Information

Gateway Configuration
ID: 973274

Status Settings Factory Reset Reboot

Ethernet Network

- Wireless Network
- Modbus TCP
- SNMP
- Miscellaneous

Local Area Network Settings

IP Address (set to 0.0.0.0 for DHCP)

Router IP Address (set to 0.0.0.0 for DHCP)

Subnet Mask (set to 0.0.0.0 for DHCP)

DNS server

Default Server Settings

Default Server: ☒ Enable ☐ Disable

Heartbeat Minutes (default: 5)

Force Transmit on Aware: ☒ Yes ☐ No

Disable Network on No Server: ☐ Yes ☒ No

Default Server Name/IP:

Server Port:

Change these fields, then 'Save Changes'

[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

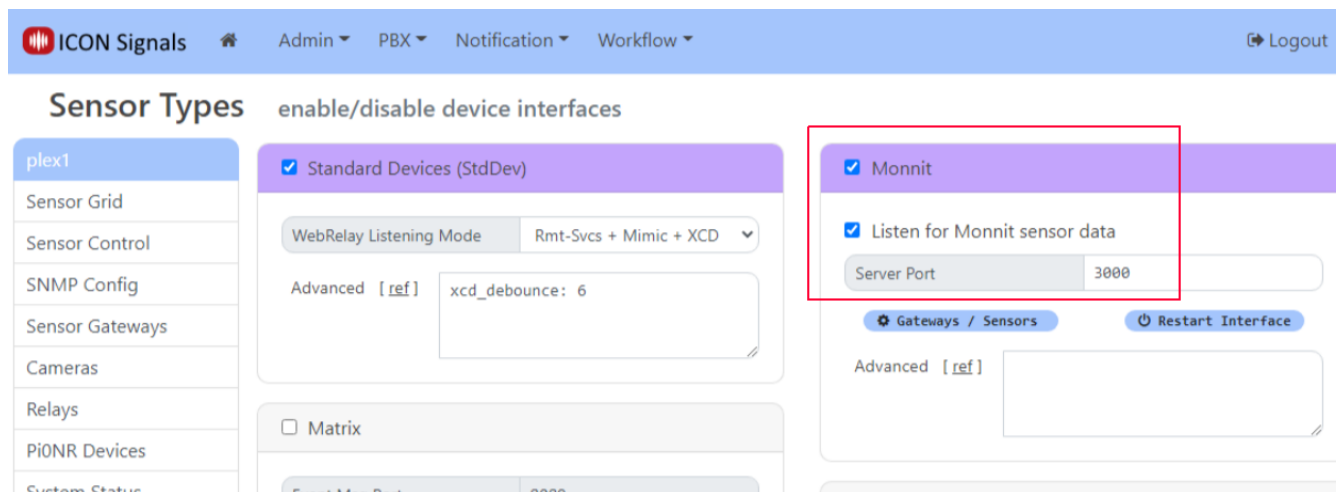
3.1 Enabling the Monnit Interface

[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.

ICON Signals Admin PBX Notification Workflow Logout

Sensor Types

enable/disable device interfaces

plex1

- Sensor Grid
- Sensor Control
- SNMP Config
- Sensor Gateways
- Cameras
- Relays
- PiONR Devices
- System Status
- Change Log
- Online Docs

Standard Devices (StdDev)

☒ Standard Devices (StdDev)

WebRelay Listening Mode: Rmt-Svcs + Mimic + XCD

Advanced [ref] xcd_debounce: 6

☐ Matrix

Event Msg Port	8089
DENY Limit	3
DENY Interval	20

Monnit

☒ Monnit

☒ Listen for Monnit sensor data

Server Port: 3000

Gateways / Sensors Restart Interface

Advanced [ref]

☐ POP3

Server

[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	IP Address	
Name	Lab-GW-973270	Subnet	
GW Type	Ethernet 4.0	Default Router	
Platform	Alta	Primary DNS	
GW FW Ver.		<button>Add/Remove Sensors</button>	
Radio FW Ver.			
Report Interval	5		
Modbus Port	502		

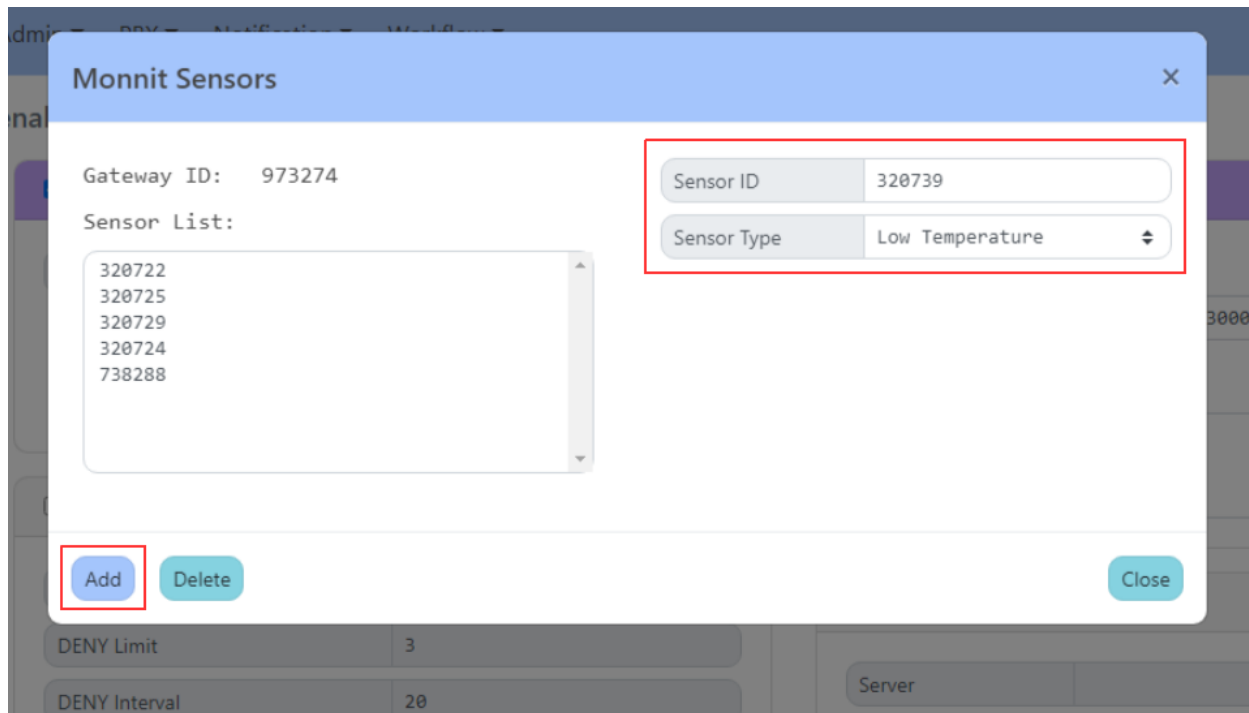
Delete GatewayCloseUpdate

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'.

The screenshot shows a web application interface with a modal dialog titled "Edit Monnit Gateways". The dialog contains two columns of input fields. The left column includes: a dropdown menu with "GW-973274" selected, and text inputs for ID (973274), Name (GW-973274), GW Type (Ethernet 4.0), Platform (Alta), GW FW Ver. (1.0.6.6), Radio FW Ver. (2.5.2.0), Report Interval (5), and Modbus Port (502). The right column includes: text inputs for IP Address (192.168.1.239), Subnet (255.255.255.0), Default Router (192.168.1.1), and Primary DNS (8.8.8.8). Below these fields is a blue button labeled "Add/Remove Sensors", which is highlighted with a red rectangular box. At the bottom of the dialog are three buttons: "Delete Gateway" (light blue), "Close" (light blue), and "Update" (light blue). The background of the application shows a table with columns like "Door Ajar Interval", "Handler", and "Advanced [ref]".

- [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 -