

Cosy131/Flexy Ethernet Switch Monitoring

1. Introduction

In some environment where the electromagnetic emissions are too high (out of the standards values), it has been noticed that the Ethernet Switch of the eWON Cosy131/Flexy may malfunction. That's for this reason that an enhanced monitoring mechanism of this switch has been implemented as of the firmware 12.1s0.

According to different reported cases, we can see that the issue mainly occurs on Cosy131.

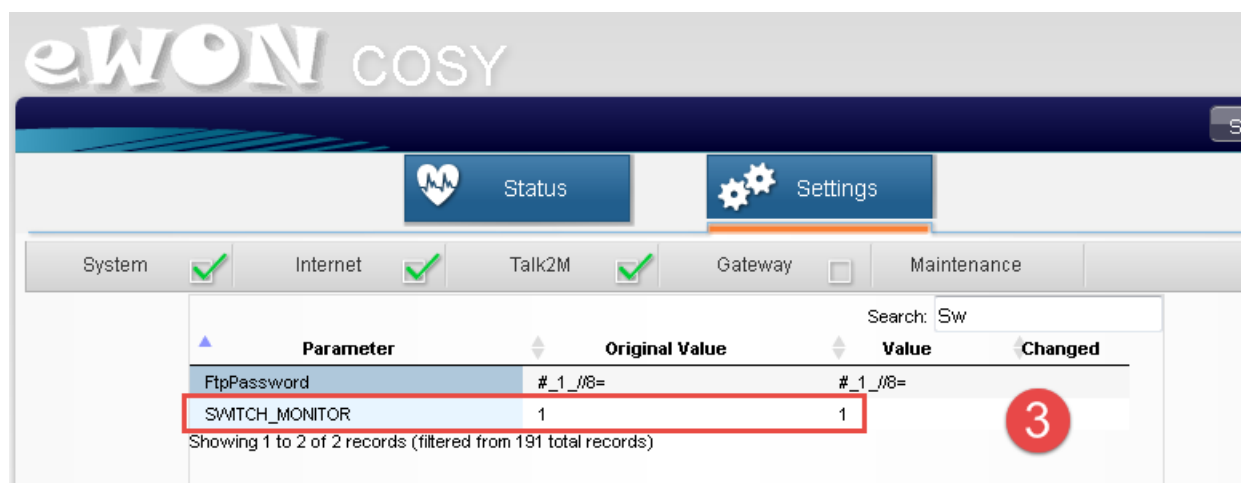
This document describes how to activate this feature (Feature that is not activated by default).

2. Ethernet Switch Monitoring Activation

In the SYSTEM configuration, a new parameter named **SWITCH_MONITOR** has been added.

To activate the Ethernet switch monitoring, you have to edit the System parameters and activate the parameter **SWITCH_MONITOR**.





The parameter can take several values. Each bit of its value has a specific meaning :

- Bit #0 : Monitoring of the Switch errors counters.
- Bit #1 : Monitoring of the communication on the port.
- Bit #2 : Display the debug logs in the Event Log.

By combining the different bit values, you can then have the following acceptable values :

- **1** (bit #0 = 1, bit #1 = 0, bit #2 = 0) : Most Sensible detection. If an error is detected on a specific port, the port is reset within 10 seconds.
- **3** (bit #0 = 1, bit #1 = 1, bit #2 = 0) : Least sensible detection. If an error is detected on a specific port and there is no communication on the port during 10 sec, the port is reset. In some cases, it can take up to 5 min to reset the port.
- **5** (bit #0 = 1, bit #1 = 0, bit #2 = 1) : Same as 1 but with debug logs.
- **7** (bit #0 = 1, bit #1 = 1, bit #2 = 1) : Same as 3 but with debug logs.

- Note -

- If you do not know which parameter value to set, we advise to set the value **1**.
- The parameter does not require any reboot to be applied. However if your eWON switch is already stuck, a reboot is required to recover the communication.

3. Event Logs

By default, the parameter is not activated (Set to 0) but a message is displayed in the Event logs when an error is detected on a port (Same detection as value 1) :

11/04/2017 07:29:37	1073762010	pla-Switch monitoring (counters fix here)		
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The user is then invited to click on the “counters fix here” link. This activates the Switch monitoring feature with the value 1.



When the switch monitoring is activated and a problem is detected on one of the 4 ports, the following error message is displayed :

11/04/2017 07:30:08	1073762010	pla-Switch monitoring (Reset port 1)
11/04/2017 07:30:08	1073762010	pla-Switch monitoring (glitch counters detected on port 1)

4. Cabling Precautions

During the internal tests, it has been proved that a good earth connection on the eWON as well as the use of **Shielded** Ethernet cables minimize the impact of these electromagnetic disturbances and thus minimize the problem.

It is also important to verify that the earth connection (on the main green connector) of the eWON is well connected to the nearest earth bar inside the cabinet.

Revision

Revision History

Revision Level	Date	Description
1.0	30/05/17	First version
1.1	08/08/17	Some modifications in values

Document build number: 36

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