



PROFESSIONAL

# Niveo-KB21011 Self-Healing PoE Settings

## Overview

This brief guide will illustrate how to set PD (Powered Device) Alive function via switch's configuration web page.

When enabled, the switch will detect a network PoE powered device (for example, an IP CAM) with a set of IP address periodically. If the switch doesn't get any replies from the network PoE powered device, the switch will do a power cycle (PoE power OFF, and PoE power ON) to the port that connects the network PoE powered device, allowing that device to reboot. You can set the frequency of detecting, number of times of detecting, and the time period to perform power cycle when there's no reply via the switch's PoE configuration web page.

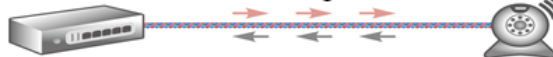
PD Alive works in a never-stopping four-step cycle, as shown in the figure down below:

### Step 1

Detecting interval time, retry count and boot time can be set manually

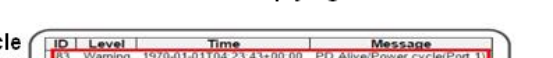
Port	PoE Mode	Priority	Maximum Power [W]	PD Alive Enable	PD IP Address	Interval Time(5-30s)	Retry Count(1-6)	PD Boot Time(10-180s)
1	PoE+	Low	15.4	Enable	192.168.2.112	5	2	10
2	PoE+	Low	15.4	Disable	0.0.0.0	5	2	10
3	PoE+	Low	15.4	Disable	0.0.0.0	5	2	10
4	PoE+	Low	15.4	Disable	0.0.0.0	5	2	10

PoE Switch detecting IP CAM in set interval



### Step 2

IP CAM not replying in set number of times



### Step 3

Power cycle events are recorded via system log

ID	Level	Time	Message
83	Warning	1970-01-01T04:23:43+00:00	PD Alive/Power cycle(Port 1)
85	Info	1970-01-01T04:24:00+00:00	Link down on port 5
86	Warning	1970-01-01T04:24:03+00:00	PD Alive/Power cycle(Port 1)
88	Info	1970-01-01T04:24:07+00:00	Link up on port 5
87	Warning	1970-01-01T04:24:23+00:00	PD Alive/Power cycle(Port 1)
89	Info	1970-01-01T04:24:46+00:00	Link down on port 5
89	Info	1970-01-01T04:24:49+00:00	Link up on port 4

PoE Switch performs a power cycle



### Step 4

IP CAM resumes functioning normally and sends replies to PoE Switch



**This applies to ALL Niveo Professional 'NGSM...' Managed Switches.**

This guide will be divided into 2 sections:

**Section A:** This section will illustrate how to set PD Alive function via configuration web page.

**Section B:** This section will show you how to log into the switch's configuration web page.

This guide will use the NGSME8H as a setting example. PD Alive setting in other switches are the same and can be related.

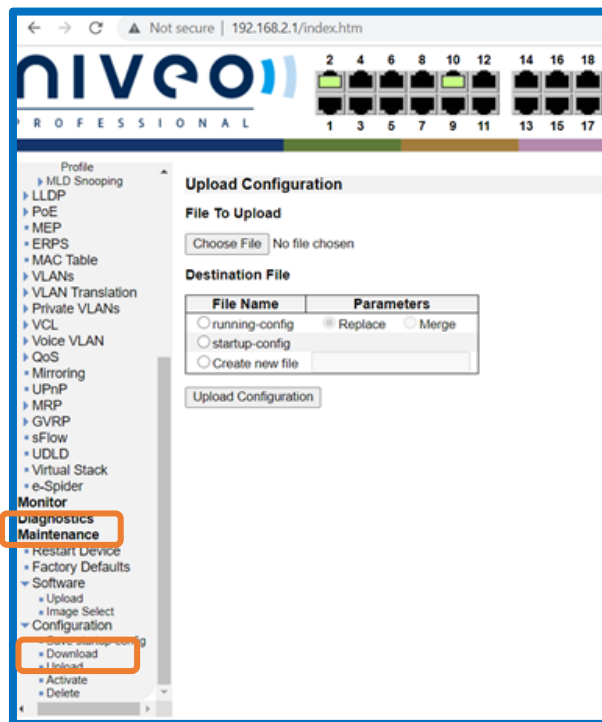


## Section A

Please follow the steps down below to upgrade your switch's firmware.

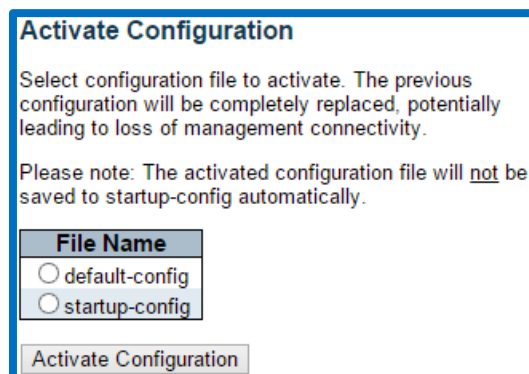
- Step 1** >Go to Maintenance -> Configuration -> Upload and then press the "Choose File" button.  
>To select config file to upload, Check 'startup-config'  
>Click on 'Upload Configuration'

Below is a snapshot of what you will see on your screen.



- Step 2** >Go to Maintenance-> Configuration-> Activate  
>Check startup-config  
>Click on 'Activate Configuration'

Below is a snapshot of what you will see on your screen.





## Section B

The following section will illustrate the PD Alive function in detail. For more information regarding to PoE and other functions, please refer to the switch's user manual.

**Step 1** Open your switch's configuration web page, and go to Configuration -> PoE.

**Configuration**

- System
- Green Ethernet
- Ports
- DHCP
- Security
- Aggregation
- Loop Protection
- Spanning Tree
- IPMC Profile
- MVR
- IPMC
- LLDP
- PoE**
- MAC Table
- VLANs
- Private VLANs

**Power Over Ethernet Configuration**

Reserved Power determined by:  Class  Allocation  LLDP

Power Management Mode:  Actual Consumption  Reserved Power

**PoE Power Supply Configuration**

Primary Power Supply [W]: 120

**PoE Port Configuration**

Port	PoE Mode	Priority	Maximum Power [W]	PD Alive Enable
*	<>	<>	15.4	<>
1	PoE+	Low	15.4	Disable

**Step 2** Here you can set the PD Alive function of the switch.

PoE Port Configuration

Port	PoE Mode	Priority	Maximum Power [W]	PD Alive Enable	PD IP Address	Interval Time(5-30s)	Retry Count(1-6)	PD Boot Time(10-180s)
*	<>	<>	15.4	<>	0.0.0.0	<>	<>	<>
1	PoE+	Low	15.4	Disable	0.0.0.0	5	2	10
2	PoE+	Low	15.4	Disable	0.0.0.0	5	2	10
3	PoE+	Low	15.4	Disable	0.0.0.0	5	2	10
4	PoE+	Low	15.4	Disable	0.0.0.0	5	2	10
5	PoE+	Low	15.4	Disable	0.0.0.0	5	2	10
6	PoE+	Low	15.4	Disable	0.0.0.0	5	2	10
7	PoE+	Low	15.4	Disable	0.0.0.0	5	2	10
8	PoE+	Low	15.4	Disable	0.0.0.0	5	2	10

Save Reset

The settings you can make with PD Alive function include:

- **PD Alive Enable:** This scroll-down menu allows you to enable/disable PD Alive function for each port. (Default: Disable)
- **PD Alive IP Address:** Here you can input the network device's IP address connected to a specific port. (Default: 0.0.0.0)
- **Interval Time (5-30S):** Here you can set the ping interval time. When set, the PoE switch will ping the PoE device connected to that port once with the interval time you set here. (Default: 5 seconds)
- **Retry Count:** Here you can set the ping retry count. If the switch did not get reply for the set number of counts here consecutively, the switch will power cycle that PoE port. (Default: 2 times)
- **PD Boot Time (10~180S):** Here you can set the PD boot time. The PD boot time is a set amount of time that allows your PD to boot. During this time period, the switch won't ping the PD. Please note that it might take 2~3 minutes for your PD (such as IP camera or VoIP phone) to boot, so it is import to leave enough time for your PD to boot. If you don't leave enough time here for your PD to boot, PD might never be able to boot up. (Default: 10 seconds)

By the default setting values of Interval Time (5 seconds), Retry Count (2 times), and PD Boot Time (10 seconds), the switch will ping the IP device every 5 seconds, if the IP device failed to respond 2 times in a row, that port will perform a power cycle. The switch will wait



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10 seconds for the IP device to boot, and it will repeat the whole process by detecting the IP device again.

All the power cycle events will be logged by switch. You can access these logs by going to Monitor -> System -> Log.

ID	Level	Time	Message
1	Info	1970-01-01T00:00:01+00:00	Switch just made a cold boot.
2	Info	1970-01-01T00:00:05+00:00	Link up on port 2
3	Info	1970-01-01T00:00:10+00:00	Link up on port 4
4	Info	1970-01-01T00:00:31+00:00	Link down on port 4
5	Info	1970-01-01T00:00:34+00:00	Link up on port 4
6	Warning	1970-01-01T00:15:49+00:00	PD Alive/Power cycle(Port 4)
7	Info	1970-01-01T00:15:49+00:00	Link down on port 4
8	Info	1970-01-01T00:15:58+00:00	Link up on port 4
9	Warning	1970-01-01T00:16:04+00:00	PD Alive/Power cycle(Port 4)
10	Info	1970-01-01T00:16:04+00:00	Link down on port 4

After you are done, press the “Save” button to apply all the settings that you made here.



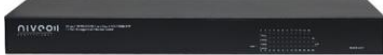
# Niveo-KB21011 Self-Healing PoE Settings



We build Network and Power solutions for AV and Security integrators. Our solutions are designed and supported with AV and Security integrators needs in mind. Our focus is to use selected proven technologies, combine them with a range of proprietary features, and then assemble the units with the best available chipsets and components. We manufacture these products to outperform all their peers. The unparalleled integrator support enables our solutions to be in a class on their own!

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