

SMM ePlus

Last Gasp support

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1. Scope

This document describes **Wake up** feature in SMMePlus.

2. Reference

Document Reference:

Ref 1. SMM ePlus - Requirements - Integration v.2.4

3. System configuration

3.1. Wake up support

SMMePlus configures inside concentrators the wake up feature.

If the wake up feature is enabled, the concentrator periodically sends keep-alive messages to the system in order to keep the gprs connection alive.

If the concentrator can't reach the system (ip address not reachable, port not opened) the concentrator becomes unreachable until next wake up message succeeds.

In SMMePlus settings, Wake Ip port has to be configured.

The parameters below must be already evaluated by system administrator, because they refer to SMMePlus Listener service configuration.

IP of internal LB used for concentrator spontaneous messages	10.132.20.228
Port to use for wakeup messages	58692

3.2. Wake up configuration on concentrator

3.2.1. Spontaneous profile

It is needed to create a spontaneous profile having Wake up feature enabled.

The ip address and ports are taken from the settings of SMMePlus environments and cannot be changed.

The screenshot shows the SMM ePlus - SMART METERS MANAGER interface. On the left, there's a sidebar with icons for Admin, System, Technical area, Commercial area, and Report. The main menu has tabs for Configuration, Monitoring, and Operation. Under Configuration, 'Concentrators installation' is selected, showing sub-options like Procedure profile, Spontaneous profile (which is highlighted in orange), Concentrator installation, Concentrator modification, and Concentrator removal. A modal window titled 'Add concentrator spontaneous' is open. It contains fields for 'Name *' (with 'profilo_wakeup' entered), 'Spontaneous messages IP address *' (with '10.132.20.228'), 'Wakeup enabled' (checked), 'Wakeup port *' (set to '58692'), and 'Wakeup period min *' (with a dropdown menu). A note below says 'Last Gasp not configurable'. At the bottom right of the modal is a blue 'Add' button.

It's possible to fill the form, the fields with * are mandatory.

There are some constraints on the fields file:

Field	Field length	Field type
Name	Max lenght 50	alphanumeric
Wakeup enabled	true/false	bool
Wakeup port	Default value: 58692	Numeric (read only)
Wakeup ip	nn.nn.nn.nn	Ip address
Last Gasp enabled	true/false	bool
Last Gasp ip	nn.nn.nn.nn	Ip address

If the fields are filled with a wrong value their label is circled with a red line and a correct value is required.

Clicking then on the **Add** button the new Spontaneus Profile is inserted into the system

We summarize the current configuration in Chile in the production and UAT environment

Environment	Name	Ip Address	Port	Period time
Production	Wake up SMMePlus 10 min	10.132.20.228	58692	10
Production	Wake up SMMePlus 100 min	10.132.20.228	58692	100
UAT	smmeplus uat	10.132.20.229	58692	10

3.2.2. Concentrator configuration

During configuration process, it is needed to select the new spontaneous profile in order to write the configuration on the concentrator.

The screenshot shows the 'SMM ePlus - SMART METERS MANAGER' application. In the top navigation bar, there are three tabs: 'Configuration' (selected), 'Monitoring', and 'Operation'. On the left sidebar, under 'Concentrator installation', there is a dropdown menu set to 'Chile' and a link to 'Upload installation file'. The main content area is titled 'Add Concentrator installation'. It contains two sections: 'Select concentrator' and 'Select spontaneous profile'. The 'Select concentrator' section displays a table with four columns: Serial number, Type, Manufacturer, and a checkbox column. The table lists four entries, all of which are selected (indicated by a checked checkbox). The 'Select spontaneous profile' section also displays a table with four columns: Name, Wake up enabled, Wakeup IP, and Wakeup period min. The table lists three entries, with the third entry being selected (indicated by a checked checkbox). Total item counts are displayed at the bottom of each section: 'Total items: 90' for the concentrator selection and 'Total items: 3 (Selected items: 1)' for the spontaneous profile selection.

Serial number	Type	Manufacturer	
16CEC50610036665	CERCO1	Ap System	<input checked="" type="checkbox"/>
16CEC50610036655	CERCO1	Ap System	<input checked="" type="checkbox"/>
16CEC50610036798	CERCO1	Ap System	<input checked="" type="checkbox"/>
16CEC50610040488	CERCO1	Ap System	<input checked="" type="checkbox"/>

Total items: 90

Name	Wake up enabled	Wakeup IP	Wakeup period min
Wake up SMMWeb COM	true	10.116.63.36	300
Wake up SMMePlus 10 min	true	10.132.20.228	10
Wake up SMMePlus 100 min	true	10.132.20.228	100

Total items: 3 (Selected items: 1)

3.3. Wake Up Events

3.3.1. Report

The screenshot shows the Enel SMM ePlus - SMART METERS MANAGER web interface. The top navigation bar includes standard browser controls (back, forward, refresh, home) and a URL bar indicating a secure connection (<https://smmeplus-web-sapro.enelint.global>). The main header features the Enel logo and the title "SMM ePlus - SMART METERS MANAGER". Below the header, there are three main navigation tabs: "Manufacturing" (with a factory icon), "Field" (with a location icon), and "Monitoring" (with a bar chart icon). On the left, a vertical sidebar lists several menu items: "Admin" (house icon), "System" (gear icon), "Technical area" (lightning bolt icon), "Commercial area" (bar chart icon), and "Report" (bar chart icon). The "Report" section is currently active. The main content area displays a list of reporting options under the heading "Devices". A power button icon is visible above the list. The options are as follows:

- Company: Chile (selected)
- Concentrators in field
- Meters in field
- Count meters by concentrator
- Concentrator autodiscovery conflicts
- Count Meters
- Wake up** (highlighted with yellow underline)
- Wake up per day** (highlighted with yellow underline)
- Concentrator autodiscovery repeater

Wake up

This report shows first, last and total number of wakeup messages sent for each concentrator

Wake up messages

concentrator name	ipaddress	port	first wake up date utc	last wake up date utc	last wake up date local	wake up count
		58692	8/30/2019 7:20:11 AM	9/24/2020 10:18:46 AM	9/24/2020 7:18:46 AM	5686
		58692	8/23/2019 10:11:54 AM	3/13/2020 12:49:32 PM	3/13/2020 9:49:32 AM	2944
		58692	8/23/2019 10:10:49 AM	9/24/2020 9:22:35 AM	9/24/2020 6:22:35 AM	5778
		58692	8/22/2019 1:21:51 PM	9/24/2020 9:58:02 AM	9/24/2020 6:58:02 AM	5742
		58692	8/22/2019 1:14:16 PM	9/24/2020 9:25:20 AM	9/24/2020 6:25:20 AM	5997
		58692	8/22/2019 1:22:44 PM	9/24/2020 9:59:59 AM	9/24/2020 6:59:59 AM	5953
		58692	8/22/2019 1:12:22 PM	9/24/2020 8:51:30 AM	9/24/2020 5:51:30 AM	5763
		58692	8/22/2019 1:13:49 PM	9/24/2020 10:18:11 AM	9/24/2020 7:18:11 AM	5845
		58692	8/22/2019 1:14:28 PM	9/24/2020 8:50:45 AM	9/24/2020 5:50:45 AM	5863
		58692	8/22/2019 1:13:38 PM	9/24/2020 8:42:31 AM	9/24/2020 5:42:31 AM	5980
		58692	8/22/2019 1:17:24 PM	9/24/2020 8:53:00 AM	9/24/2020 5:53:00 AM	5773
		58692	8/23/2019 10:09:50 AM	9/24/2020 3:04:14 AM	9/24/2020 12:04:14 AM	5878
		58692	8/23/2019 10:08:48 AM	9/24/2020 10:08:43 AM	9/24/2020 7:08:43 AM	5822
		58692	8/23/2019 10:07:44 AM	9/24/2020 9:27:29 AM	9/24/2020 6:27:29 AM	5845
		58692	8/23/2019 10:06:43 AM	9/24/2020 9:00:18 AM	9/24/2020 6:00:18 AM	5861

Wake up per day

In this report, next to total number of wake up messages, the count of daily message is shows for current day

Wake up messages per day

concentrator name	ipaddress	date	daily msg count	total msg count
		9/23/2020 12:00:00 AM	14	5678
		9/23/2020 12:00:00 AM	15	5771
		9/23/2020 12:00:00 AM	14	5734
		9/23/2020 12:00:00 AM	15	5990
		9/23/2020 12:00:00 AM	14	5945
		9/23/2020 12:00:00 AM	14	5756
		9/23/2020 12:00:00 AM	15	5837
		9/23/2020 12:00:00 AM	17	5856
		9/23/2020 12:00:00 AM	15	5973
		9/23/2020 12:00:00 AM	14	5765
		9/23/2020 12:00:00 AM	15	5874
		9/23/2020 12:00:00 AM	14	5814
		9/23/2020 12:00:00 AM	15	5838
		9/23/2020 12:00:00 AM	15	5854

3.4. Concentrator behavior

Concentrator behavior:

1. The wake up messages are sent with a fixed time interval (example 1 sample every 10/100 minutes).
2. If the electric network gets an outage and comes back ON, the concentrator is restarted and immediately sends first wake up message.
3. If a wake up message fails in reaching the service, the concentrator becomes unreachable, and another task “RETRY TASK” starts and executes some retries in order to check GPRS connection.
Current configuration is: 3 retries, with an interval of 60 seconds. If all attempts fail, the RETRY TASK waits 30 minutes and restarts again.
4. If one of the attempts reaches the service, the RETRY TASK is stopped and wake up are sent based on default interval (10/100 min)