

Opsview and SMS

Warning

The procedure described in this article is not part of Opsview and is not supported. If you continue to follow the instructions in this document, there are no assurances or product support offered.

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Environment:

Opsview 6.8.6 on Oracle Linux 8 running on Proxmox VM

USB-Serial adapter

Siemens Modem

SIM-card for modem (in my case I used Telia Prepaid). Asking PIN code has been disabled

Moxa 5110A RJ-45/RJ-232 converter

HW install (option1)

Install modem & USB-serial converter to Proxmox host... select Opsview VM and Hardware... add USB-device USB-Serial Controller D (067b:2303) to VM as passthrough device

(check dmesg to find USB address)

```
[root@opsview ~]# dmesg |grep tty
[ 0.001000] printk: console [tty0] enabled
[ 3.753985] usb 2-1: pl2303 converter now attached to ttyUSB0
[root@opsview ~]#
```

HW install (option2)

Install modem behind Moxa. Check IP address of Moxa and login to that (web UI or telnet).

Change Operating Settings -> Port 1 -> Operating mode to: TCP Server Mode

Set Max connection to 2 (if you operate modem from more hosts than one)

SW install

Download smstools to Opsview

```
[root@opsview ~]# wget https://downloads.opsview.com/opsview-support/smstools-2021.11.30.1.20211130155919.el8.x86_64.rpm -P /root
```

Install smstools to Opsview

```
[root@opsview ~]# dnf install /root/smstools-2021.11.30.1.20211130155919.el8.x86_64.rpm -y
```

```
[root@opsview sms]# chmod 777 /var/spool/sms/outgoing
```

SW configuration (option 1: USB-to-serial approach)

modify "device = /dev/ttyS0" to "device = /dev/ttyUSB0"

```
[root@opsview ~]# vi /etc/smsd.conf
```

```
[GSM1]
device = /dev/ttyUSB0
incoming = yes
#pin = 1111
```

check that port is active

```
[root@opsview ~]# ll /dev/ttyUSB0
crw-rw---- 1 root dialout 188, 0 26. 1. 09:41 /dev/ttyUSB0
[root@opsview ~]#
```

Check modem access (option 1: USB-to-serial approach)

Install minicom

```
[root@opsview ~]# dnf install minicom -y
```

```
[root@opsview ~]# minicom -s
```

1. change serial port settings to /dev/ttyUSB0 by pressing 'A' and change /dev/modem to /dev/ttyUSB0
2. Press 'F' to change Hardware Flow Control to No

```
+-----+
| A -   Serial Device       : /dev/ttyUSB0
| C -   Callin Program      :
| D -   Callout Program     :
| E -   Bps/Par/Bits        : 115200 8N1
| F -   Hardware Flow Control : No
| G -   Software Flow Control : No
|
| Change which setting? █
+-----+
|
| Screen and keyboard
| Save setup as dfl
| Save setup as..
| Exit
| Exit from Minicom
+-----+
```

3. Press Enter
4. Select "Save setup as df1"
5. Select "Exit from Minicom"

[root@opsview ~]# minicom

Welcome to minicom 2.7.1

OPTIONS: I18n

Compiled on May 11 2019, 15:00:54.

Port /dev/ttyUSB0, 10:21:59

Press CTRL-A Z for help on special keys

try to type "at" and press enter

if modem respond **OK**, you are good to go... if not, press CTRL-A + Z and select initialize modem from menu

Some optional checks

Check operator:

at+cops?

+COPS: 0,0,"FI SONERA"

OK

Send test message:

at+cmgf=1

OK

at+cmgs="04084xxx18"

> test message (press CTRL-Z) to end message writing

+CMGS: 0

OK

Press CTRL-A + Z anytime to open menu and select Q to quit

SW configuration (option 2: Moxa approach)

Modify device to use Moxa IP-address:

```
[root@opsview ~]# vi /etc/smsd.conf
```

```
[GSM1]
#device = /dev/ttyS0
incoming = yes
#pin = 1111
device=@192.168.0.15:4001
baudrate=115200
needs_wakeup_at=yes
voicecall_ignore_modem_response=yes
```

Check modem access (option 2: Moxa approach)

```
[root@opsview ~]# telnet <moxa IP> 4001
```

```
Trying 192.168.0.15...
Connected to 192.168.0.15.
Escape character is '^]'.
at
```

OK

(press Ctrl – combination to exit to telnet)

```
telnet> quit
```

SMS Service enable/start and testing SMS sending

```
[root@opsview ~]# systemctl enable --now smsd
```

```
[root@opsview ~]# systemctl status smsd
```

- smsd.service - smsd

Loaded: loaded (/usr/lib/systemd/system/smsd.service; disabled; vendor preset: disabled)

Active: active (running) since Thu 2023-01-26 10:30:31 EET; 1s ago

Process: 62239 ExecStartPre=/bin/chown smstools:smstools /var/run/smsd.working (code=exited, status=0/SUCCESS)

Process: 62237 ExecStartPre=/bin/touch /var/run/smsd.working (code=exited, status=0/SUCCESS)

Process: 62235 ExecStartPre=/bin/chown smstools:smstools /var/run/smsd.pid (code=exited, status=0/SUCCESS)

Process: 62233 ExecStartPre=/bin/touch /var/run/smsd.pid (code=exited, status=0/SUCCESS)

Main PID: 62242 (smsd)

Tasks: 2 (limit: 102266)

Memory: 4.1M

CGroup: /system.slice/smsd.service

└─62242 /usr/sbin/smsd -t

└─62245 /usr/sbin/smsd -t

```
tammi 26 10:30:31 opsview systemd[1]: Starting smsd...
```

```
tammi 26 10:30:31 opsview systemd[1]: Started smsd.
```

```
[root@opsview ~]#
```

Check log files for issues: /var/log/smsd/smsd.log

Test with smssend

(NOTE! Leave '+' sign out of your mobile number, but include country code)

```
[root@opsview ~]# smssend 3584xxxxxxx8 "testing modem behind opsview"
```

--

Text: testing modem behind opsview

To: 3584xxxxxxx8

```
[root@opsview ~]#
```

Check smsd directories

```
[root@opsview ~]# watch ls -la /var/spool/sms/*
```

Also check log:

```
[root@opsview ~]# less /var/log/smsd/smsd.log
```

```
2023-01-27 08:39:50,5, smsd: SMS To: 3584xxxxxxx8. Moved file  
/var/spool/sms/outgoing/send_O9fFUC to /var/spool/sms/checked
```

```
2023-01-27 08:39:53,5, GSM1: SMS sent, Message_id: 14, To: 3584xxxxxxx8, sending time 3 sec.
```

Modify Opsview

Edit submit_sms_script file... like below:

```
[root@opsview ~]# vi /opt/opsview/monitoringscripts/notifications/submit_sms_script
```

```
45,46c45
```

```
< # $command = '/usr/local/bin/submit_sms';
```

```
< $command = '/usr/bin/smssend';
```

```
---
```

```
84,86c83
```

```
< #my @command = ( $command, '-n', $number, '-t', $text );
```

```
< my @command = ( $command, $number, $text );
```

```
[root@opsview ~]#
```


Configure Opsview

Set & test SMS Notification Module


Configuration -> Notification methods -> SMS Notification Module -> Edit

Tick box: Enable

Edit : SMS Notification Module ✕

Notification Methods Test

* Name

Enable 

Run On Orchestrator Collector

* Command

User Variables

Cancel Submit Changes

Select "Test" tab:

Mobile: 3584xxxxxxx8 (NOTE!!! without +)

Message: write message of your own or use "Test Message" which is default

Click "Send" and you should get "Notification Sent" - message like below

Edit : SMS Notification Module ✕

Notification Methods **Test**

This page allows you to submit a test message for your notification method, the test will simulate a Host in a down state. Test notifications will always be submitted from the Master

Mobile ?

Message

✔ Notification Sent

Output:
Running: /usr/bin/smssend 3584xxxxxxx8 PROBLEM:
TestNotificationHost is DOWN: Test Message from
Opsview (2023-09-11 11:13:17) – Text: PROBLEM:
TestNotificationHost is DOWN: Test Message from
Opsview (2023-09-11 11:13:17) To: 3584xxxxxxx8

Click "Submit Changes"

In this example I use **admin**-user and I have prepared “CRITICAL-services” hashtag earlier which have few most critical servicechecks from NetApp storage (Cluster health, power supplies, temperatures etc.) and from my Proxmox virtualization platform. Those services should send me SMS if there are any issues.

Example:

Edit : CRITICAL-services ✕

Hashtags **Objects**

Hosts

asustor

Brocade

cdot98

cdot98-rest

centos7-ncpa

cdot912

pve20-ilo.muntalli.org

All Service Checks All service checks on these hosts will be tagged with this hashtag

Service Checks

ACI - APIC - CPU Usage

ACI - APIC - Disk Usage

ACI - APIC - Faults

ACI - APIC - Health State

ACI - APIC - Memory Free

NetApp - Cluster - health

Server - power

Server - temperatures

Filter by selected hosts

All Hosts All hosts with these service checks will be tagged with this hashtag

Selected Objects: 3

Select user from "Users and Roles"...

Select Notifications tab and enter your Mobile number

Edit : admin



User Notifications Notification Profiles My Links

Enter common user information here

Shared Notification Profiles

Jira-ticketing
Polkupyöriä
Receive all alerts during work hours
Testing247

Email jir@polkupyora.fi

Maximum Items 30

Maximum Age 1440

Collapsed Feed

Mobile 358-999999999


Cancel


Submit Changes

Select "Notification Profiles" tab and click "Add New"

Edit : admin ✕

User Notifications **Notification Profiles** My Links

[+ Add New](#) 

NAME		NOTIFY BY	OPTIONS	OBJECTS
Default		> 1	Host: d,u,r Service Check: w,r,c Time Period: 24x7 Business Service: o,i Component: f,i	Host groups: ALL Service groups: ALL Hashtags: ALL

[Cancel](#) [Submit Changes](#)

Enter "Profile Name" as you like

Select "Alert me by": SMS Notification Module

Deselect "All" from Hosts/Service Checks dropdown menus

New Personal Notification Profile ✕

* Profile Name

Alert me by

During

If

Hosts/Service Checks

There are Hosts that are in the following Host Groups

Down Unreachable Flapping

and if there are Service Checks that are in the following Service Groups

Warning Recovery Unknown Flapping

Re-notification Interval ?

0 Objects Selected (Hosts/Service Checks)

Select "Hashtag"-tab

Select "Alert me by": SMS Notification Module

Select "During": <select your timeperiod as you like>

Tick the boxes as you like and select CRITICAL-services from dropdown menu

Select "Stop after alert #": 1 (just to get one SMS)

New Personal Notification Profile ✕

* Profile Name

Alert me by

During

If

Hosts/Service Checks **Hashtags** BSM

There are Hosts that are

Down Recovery

Unreachable Flapping

and if there are Service Checks that are

Warning Critical Flapping

Recovery Unknown

in the following Hashtags

Re-notification Interval ?

Send from alert # User will be sent notifications starting from this alert number.

Stop after alert # User will not be sent notifications starting from this alert number. 0 means no limit

5 Objects Selected (Hashtags)

Click "Update"

Now you should see something similar

NAME		NOTIFY BY	OPTIONS	OBJECTS
Default	☰	> 1	Host: d,u,r Service Check: w,r,c Time Period: 24x7 Business Service: o,i Component: f,i	Host groups: ALL Service groups: ALL Hashtags: ALL
critical-SMS	☰	> 1	Host: d,r Service Check: r,c Time Period: 24x7 Business Service: o,i Component: f,i	Hashtags: CRITICAL-services

Finally click “Submit Changes” and remember to Apply changes after that.

If you have configured “Maximum Check Attempts” to 1, you can easily test SMS by setting specific service status to CRITICAL like below

Set Service Check Status: Server - power

Set Status to: CRITICAL

Comment (required): testing

Now you should receive SMS and recovery message after five minutes.