AlarmManager-PRO on Nagios Core

1. About this howTo

This document describes how to setup Nagios for monitoring Kentix AlarmManager-PRO with connected MultiSensors and use the AlarmManager as SMS-Gateway for sending alarms to mobile phones.

(Tested on Debian Linux with Nagios Core and Icinga)

2. System Requirements

- Installed Nagios Core with SNMP-Plugins / Nagios-Plugins
- Installed and configured E-Mail-Server (e.g. postfix)

The configuration is done by editing the Nagios config-files manually.
A configuration with a GUI (Graphical User Interface), e.g. NagiosQL is also possible but it has to be installed separately.

The paths of the Nagios installation and its config files can vary depending on the way of installation (packages/source). The files that have to be modified are always the same.

For this manual the Nagios installation was built from its sources.

3. Prepare Nagios for AlarmManager-Setup

Edit the main Nagios config file (nagios.cfg):

nano /usr/local/nagios/etc/nagios.cfg

Locate the line „check_external_command=0" and

activate: "check_external_command = 1"

Locate the „OBJECT CONFIGURATION FILES section"

Add the config files:

cfg_file=/usr/local/nagios/etc/objects/commands.cfg
cfg_file=/usr/local/nagios/etc/objects/hosts.cfg
cfg_file=/usr/local/nagios/etc/objects/services.cfg
cfg_file=/usr/local/nagios/etc/objects/contacts.cfg

(paths can vary between distributions and installation variant (packages/built from source)

Create the defined config files if these do not already exist.

touch /usr/local/nagios/etc/objects/commands.cfg
touch /usr/local/nagios/etc/objects/hosts.cfg
touch /usr/local/nagios/etc/objects/services.cfg
touch /usr/local/nagios/etc/objects/contacts.cfg

4. Add the AlarmManager to the monitored hosts

Edit the hosts configuration file

nano /usr/local/nagios/etc/objects/hosts.cfg

Insert the AlarmManager as a new host to check in Nagios.

```
define host {
        use                     generic-host
        host_name               AlarmManager
        alias                   AlarmManager
        address                 192.168.1.1
        check_command           check-host-alive
        max_check_attempts   10
        notification_interval     60
        notification_period       24x7
        notification_options      d,u,r
}
```

Restart Nagios

/etc/init.d/nagios restart

The AlarmManager should now appear in the hosts section of the nagios web interface.

5. Adding an SNMP check for 1 MultiSensor value

Download the file Kampro.mib (SNMP MIB in the software section on www.kentix.de) and open it in a MIB Browser (e.g. iReasoning MIB Browser) to determine the OIDs for e.g. the temperature of MultiSensor 1. It's also possible to use **snmpwalk** to catch the needed OID.

snmpwalk -v2c -c private IP .1.3.6.1.4.1.37954

Edit the commands configuration file

nano /usr/local/nagios/etc/objects/commands.cfg

Insert / modify the following command definition:

```
# 'check_snmp' command definition
define command{
command_name        check_snmp
command_line        $USER1$/check_snmp -H $HOSTADDRESS$ -c $ARG1$ -o $ARG2$ -c $ARG3$
}
```

Description of the arguments:
$ARG1$ = SNMP Community
$ARG2$ = OID
$ARG3$ = critical warning range (also possible in 2 levels with -w (warning) and -c (critical))

Edit the services configuration file

nano /usr/local/nagios/etc/objects/services.cfg

Insert the following service definition:

define service{
*   use   generic-service*
*   host_name   AlarmManager*
*   service_description   Sensor 1 Temperature*
*   check_command check_snmp!IP-of-AlarmManager!public !.1.3.6.1.4.1.37954.1.2.1.2.0!100:300*
}

Arguments are separated with "!"
!100:300 means warn below 10 degrees and above 30 degrees.

Restart Nagios

/etc/init.d/nagios restart

The Sensor should now appear in the Services section and update its value after a short time.

6. Setting up Nagios E-Mail notification and SMS-Alarming via AlarmManager

Edit the hosts configuration file

nano /usr/local/nagios/etc/objects/hosts.cfg

Add a contact or contact group to your AlarmManager-host for the alarming.

...
contacts nagiosadmin
..

Edit the contacts configuration file

nano /usr/local/nagios/etc/objects/contacts.cfg

Create a new contact:

```
define contact{
    contact_name          nagiosadmin              ; Short name of user
    use                   generic-contact          ; Inherit default values from generic-contact template
    alias                 Administrator            ; Full name of user
    service_notifications_enabled      1           ;
    service_notification_period        24x7        ;
    host_notification_period           24x7        ;
    service_notification_options       w,u,c,r,f   ;
    host_notification_options          d,u,r,f     ;
    service_notification_commands      notify-service-by-email,notify-by-sms-service   ;
    host_notification_commands         notify-host-by-email,notify-by-sms-host ;
    pager                              +491711234567,          ;
    email                 mail@address.de    ; <<** CHANGE THIS TO YOUR EMAIL ADDRESS **
    }
```

Edit the commands configuration file

nano /usr/local/nagios/etc/objects/commands.cfg

Locate the following sections.

 # 'notify-host-by-email' command definition

 # 'notify-service-by-email' command definition

In the command_line of these two command definitions update the mailer behind the pipe to your used mailing-command (e.g. „/usr/bin/mail").

Insert the following command definition for SMS sending:

define command {
*   command_name notify-by-sms-host*
*   command_line $USER1$/NagiosSendSMS.pl nagiosadmin kentix $CONTACTPAGER$ "Device: $HOSTNAME$, Description: $HOSTSTATE$, $HOSTOUTPUT$"*
}

define command {
*   command_name notify-by-sms-service*
*   command_line $USER1$/NagiosSendSMS.pl nagiosadmin kentix $CONTACTPAGER$ "Device: $HOSTNAME$, Description: $SERVICEDESC$, $SERVICEOUTPUT$"*
}

Note:
nagiosadmin   is the user that has to exist in your AlarmManager configuration
kentix   is the Web User Password of the AlarmManager-user

We recommend to use a separate user with only **User name** and **Web User Password** for SMS-Gateway alarming.

Copy the Perl-Script-File „NagiosSendSMS.pl" that comes with the SNMP MIB archive download into the folder of your Nagios Plugins (/usr/local/nagios/libexec).

Edit the Script-File:

nano /libexec/NagiosSendSMS.pl

In line #32 change the IP-address to your AlarmManager-IP.

Modify the file-owner to your nagios user (chown) and make it executable (chmod +x).

Restart Nagios

/etc/init.d/nagios restart

E-Mail and SMS-Notification should now work for the AlarmManager host and its defined services.
To test both ways of notification, set one of the values in your services configuration file (**services.cfg)** to a critical level, and restart nagios again.
After 3 attempts you should receive your notification.