# Checking the battery state of an IBM SIS SAS adapter

- If you have a system with an IBM SIS SAS (Serial Attached SCSI) RAID (Redundant Array of Independent Disks) controller that contains a rechargeable battery one day you will be faced with the situation that this battery must be replaced.
- With the help of the `sissasraidmgr` command one can easily maintain the SAS adapter and thus implement a check for Nagios/Icinga.
- More information about the `sissasraidmgr` command can be found in the man page ("`man sissasraidmgr`").

The current battery state for the device `sissas0` for instance can be queried as follows:

```
$ /usr/bin/sissasraidmgr -M -o0 -l sissas0
RAID Adapter  . . . . . . . . . . . . . . : sissas0
Battery Type  . . . . . . . . . . . . . . : Lithium Ion (LiIon)
Battery State . . . . . . . . . . . . . . : No battery warning/error
Power-on time (days)  . . . . . . . . . . : 367
Adjusted power-on time (days) . . . . . . : 367
Estimated time to warning (days)  . . . . : 605
Estimated time to error (days)  . . . . . : 696
Concurrently maintainable battery pack. . : No
Battery pack can be safely replaced . . . : No
```

Based on that information I have implemented a check for the remaining days of the battery pack of the specified adapter:

```
Usage: check_ibm_sissas.sh [-h] -d <sissas-device> -w <warn> -c <crit>
    -h display help
    -d SISSAS RAID Adapter to check (e.g., sissas0)
    -w Warning threshold (in days)
    -c Critical threshold (in days)
```

The `check_ibm_sissas.sh` script can be downloaded here:

check_ibm_sissas.sh

**Please note:**
Running `/usr/bin/sissasraidmgr` requires root privileges. As `nrpe` does not run as root you need to implement **sudo** for it!
Check out this article here on how to do it.

Once you have transferred the `check_ibm_sissas.sh` script to your plugins directory and implemented `sudo`, you define appropriate services for it on your Icinca/Nagios host.

service-ibm-sissas0.cfg

```
# Define a service to check the state of the battery of the SIS SAS RAID
# adapter sissas0 on the remote machine.

define service {
        use                     generic-service
        servicegroups           NRPE-Checks
        host_name               <HOSTNAME>
        service_description     Battery state of SIS SAS RAID Adapter sissas0
        check_command           check_nrpe!check_ibm_sissas0
}
```

Similar if you have more than one IBM SIS SAS RAID adapter you just add additional services:

service-ibm-sissas1.cfg

```
# Define a service to check the state of the battery of the SIS SAS RAID
# adapter sissas1 on the remote machine.

define service {
        use                     generic-service
        servicegroups           NRPE-Checks
        host_name               <HOSTNAME>
        service_description     Battery state of SIS SAS RAID Adapter sissas1
        check_command           check_nrpe!check_ibm_sissas1
}
```

<HOSTNAME> refers to the name of the host for which the check should be implemented and the name of your service group for NRPE checks might be different as well.

In your `nrpe.cfg` file (typically located in `/etc/nagios` or `/etc/icinga`) you have to add the following checks (for devices `sissas0` and `sissas1`). The parameters for the number of days for the critical (`-c`) and warning threshold (`-w`) are hardcoded as passing parameters to NRPE is a potential security hole. `PLUGINS_DIR` refers to the absolute path of the `check_ibm_sissas.sh` script.

nrpe.cfg snippet

```
command[check_ibm_sissas0]=PLUGINS_DIR/check_ibm_sissas.sh -d sissas0 -c 20 -w 10
command[check_ibm_sissas1]=PLUGINS_DIR/check_ibm_sissas.sh -d sissas1 -c 20 -w 10
```