

SMONITOR, Simple snmp based script for monitoring systems

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Description

SMONITOR is a simple shell script designed to generate e-mail alerts when processes/disk/memory problems occur on a set of hosts running snmpd.

Source

The source is located in pimentech script package : <http://www.pimentech.fr/en/technologies/outils> , you can also download it here : <ftp://ftp.pimentech.net/src/scripts/src/shell/smonitor>

```
#!/bin/bash

case $DEBUG in
  1) set -x
    ;;
  *)
    ;;
esac

usage() {
  echo "smonitor : host, service and network monitoring program."
  echo "usage : smtpmonitor [ -h for help ] -f <smonitor.cfg>"
  echo
  echo "config file syntax :"
  echo "host device_number max_percentage_allowed"
  echo "To find device numbers, do a"
  echo "snmpwalk -v2c -c public <host> .iso.org.dod.internet.mgmt.mib-2.host.h"
  echo "or scli -c 'show system storage' <host>"
  echo
  echo "This script is designed for crontab : it generates output only if one o"
}

while true ; do
  case $1 in
    -d) debug=1 ; set -x ; shift 1 ;;
    -h) usage ; exit 0 ;;
  esac
done
```

```

        -f) conffile=$2 ; shift 2 ;;
        *) break ;;
    esac
done

if [ -z "$conffile" ] ; then
    usage
    exit 1
fi

hdmib=".iso.org.dod.internet.mgmt.mib-2.host.hrStorage.hrStorageTable.hrStorageEnt
psmib=".iso.org.dod.internet.private.enterprises.ucdavis.prTable.prEntry.prErrMes

command='snmpget -v2c -Cf -Oqv -c public ${host} ${hdmib}.${item}.${device} | gre

sed -e 's/#.*$//g' -e '/^[[[:space:]]*$$/d' -e 's/[[[:space:]]+]/ /g' $conffile | \
while read host device maxpercentage ; do
    if [ $device = "proc" ] ; then
        snmpwalk -v2c -Oq -c public ${host} ${psmib} \
            | cut -d' ' -f2- \
            | sed -e '/^[[[:space:]]*$$/d' -e 's/^[^/]*${host}' : /g'
    else
        size=`item=hrStorageSize eval ${command}`
        used=`item=hrStorageUsed eval ${command}`

        if [ -z "$size" -o -z "$used" ]
        then
            echo "${devicename}@${host} : no response from host"
        else
            percentageused=$((100*$used/$size))
            if [ ${percentageused} -ge ${maxpercentage} ] ; then
                devicename=`item=hrStorageDescr eval ${command}`
                blocksize=`item=hrStorageAllocationUnits eval ${command}|cut -
                free=$((($size-$used)*$blocksize/1024/1024))
                sizem=$((($size)*$blocksize/1024/1024))
                echo "${devicename}@${host} : ${percentageused}% used ($free
            fi
        fi
    fi
done

```

Setup

SNMP Setup

On each host you want to monitor :

1. Install snmpd
2. Edit /etc/snmp/snmpd.conf :
 - Add the line

```
com2sec readonly listener.host public
```

where "listener.host" is the host where the listener script will run.

- For each process you want to monitor, add

```
proc NAME [MAX=0] [MIN=0]
```

where NAME is the name of the process to check for. It must match exactly (ie, http will not find httpd processes).

3. Restart snmpd

SMONITOR Setup

You must have the snmp client package installed on listener host.

Configuration file

For processes monitoring, simply add the line

```
HOST proc
```

for each destination host.

For disk/swap monitoring, you have to find the node number in the snmp tree. On listener host, type the command :

```
snmpwalk -v2c -c public HOST .iso.org.dod.internet.mgmt.mib-2.host.hrStorage.hrSt
```

You should have an output like that :

```
HOST-RESOURCES-MIB::hrStorageDescr.1 = STRING: /
HOST-RESOURCES-MIB::hrStorageDescr.2 = STRING: /dev/pts
HOST-RESOURCES-MIB::hrStorageDescr.3 = STRING: /mnt/sdb1
HOST-RESOURCES-MIB::hrStorageDescr.101 = STRING: Real Memory
HOST-RESOURCES-MIB::hrStorageDescr.102 = STRING: Swap Space
HOST-RESOURCES-MIB::hrStorageDescr.103 = STRING: Memory Buffers
```

If not, ensure that UDP port 161 is opened on HOST.

For instance, if you want to be warned when disk usage exceeds 80% on the root partition, 10% on the swap partition, add

```
HOST 1 80
HOST 102 10
```

Repeat this operation for each host.

Usage

Now try to launch smonitor :

```
smonitor smonitor.conf
```

Problems on your hosts will be reported on stdout, like this

```
hal : Too many apache2 running (# = 219)
mdm2 : Too many postmaster running (# = 265)
```

No output means no problems :)

That's it ! Additionally, you can put smonitor in your crontab to get e-mail alerts.