How to configure Nagios to monitor network switch and it's active ports.

1. Enable switch.cfg in nagios.cfg

Uncomment the switch.cfg line in /usr/local/nagios/etc/nagios.cfg as shown below.

```
[nagios-server]# grep switch.cfg /usr/local/nagios/etc/nagios.cfg

cfg_file=/usr/local/nagios/etc/objects/switch.cfg
```

2. Add new hostgroup for switches in switch.cfg

Add the following switches hostgroup to the /usr/local/nagios/etc/objects/switch.cfg file.

```
define hostgroup{
hostgroup_name switches
alias Network Switches
}
```

3. Add a new host for the switch to be monitered

In this example, I've defined a host to monitor the core switch in the /usr/local/nagios/etc/objects/switch.cfg file. Change the address directive to your switch ip-address accordingly.

```
define host{

use          generic-switch

host_name          core-switch
```

```
alias Cisco Core Switch

address 192.168.1.50

hostgroups switches
}
```

4. Add common services for all switches

Displaying the uptime of the switch and verifying whether switch is alive are common services for all switches. So, define these services under the switches hostgroup_name as shown below.

```
# Service definition to ping the switch using check_ping
define service{
use
                        generic-service
hostgroup_name
                        switches
service_description
                        PING
check_command
                        check_ping!200.0,20%!600.0,60%
normal_check_interval
                        5
retry_check_interval
}
# Service definition to monitor switch uptime using check_snmp
define service{
use
                        generic-service
```

```
hostgroup_name switches

service_description Uptime

check_command check_snmp!-C public -o sysUpTime.0

}
```

5. Add service to monitor port bandwidth usage

check_local_mrtgtraf uses the <u>Multil Router Traffic Grapher – MRTG</u>. So, you need to install MRTG for this to work properly. The *.log file mentioned below should point to the MRTG log file on your system.

6. Add service to monitor an active switch port

Use check_snmp to monitor the specific port as shown below. The following two services monitors port#1 and port#5. To add additional ports, change the value ifOperStatus.n accordingly. i.e n defines the port#.

7. Add services to monitor multiple switch ports together

Sometimes you may need to monitor the status of multiple ports combined together. i.e Nagios should send you an alert, even if one of the port is down. In this case, define the following service to monitor multiple ports.

8. Validate configuration and restart nagios

Verify the nagios configuration to make sure there are no warnings and errors.

```
# /usr/local/nagios/bin/nagios -v /usr/local/nagios/etc/nagios.cfg

Total Warnings: 0

Total Errors: 0

Things look okay - No serious problems were detected during the pre-flight check
```

Restart the nagios server to start monitoring the VPN device.

```
# /etc/rc.d/init.d/nagios stop

Stopping nagios: .done.

# /etc/rc.d/init.d/nagios start

Starting nagios: done.
```

Verify the status of the switch from the Nagios web UI: http://{nagios-server}/nagios as shown below:

Service Status Details For Host 'core-switch'

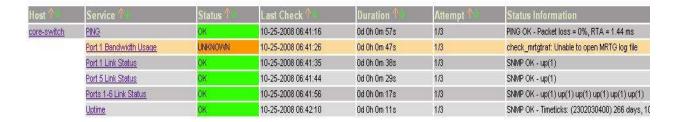


Fig: Nagios GUI displaying status of a Network Switch