

# CHECK CISCO QOS PANDORA PLUGIN

# INTRODUCTION

This plugin is responsible for displaying the number of bits / s drop by or send a Cisco router interfaces configured with qos.

We can choose a particular interface or all interfaces (in this case will-i ALL).

We can also choose whether the data shows bits / s drop or send for a particular interface or all.

This data is observed for all classes.

The following figure shows the different possibilities of the plugin:

F.	P.	Type	Module name	Description	Status	Warn	Data	Graph	Last contact
General									
○		🔧	Check Cisco ALL interfaces Dro...	Displays the number of bits / s that are drop in all interfa...	■	N/A - N/A	0	📊 101	2 seconds
○		🔧	Check Cisco ALL interfaces Sen...	Displays the number of bits / s that are send in all interfa...	■	N/A - N/A	0	📊 101	Now
○		🔧	Check Cisco Fa0/0 Drop	Displays the number of bits / s that are drop in Fa0/0 inter...	■	N/A - N/A	0	📊 101	4 seconds
○		🔧	Check Cisco Fa0/0 Send	Displays the number of bits / s that are send in Fa0/0 inter...	■	N/A - N/A	21,328	📊 101	3 seconds

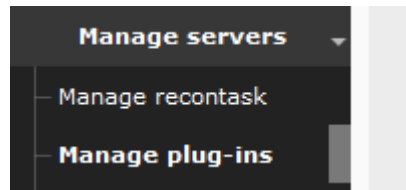
As we see in this example the first two monitors act for all interfaces (one drop and another send) and the other two act on a specific interface.

# INSTALLATION.




In principle, the plugin has execute permissions, but to avoid problems make sure recommend it.

Copy the plugin in the folder you want.

Now pandora fms side menu go to manage servers → Manage plug-ins




In the screen that shows we give the add button.

DNS Plugin	Standard	/usr/share/pandora_server/util/plugin/dns_plugin.sh		
IPMI Plugin	Standard	/usr/share/pandora_server/util/plugin/ipmi-plugin.pl		
MySQL Plugin	Standard	/usr/share/pandora_server/util/plugin/mysql_plugin.sh		
SMTP Check	Standard	/usr/share/pandora_server/util/plugin/SMTP_check.pl		
UDP port check	Standard	/usr/share/pandora_server/util/plugin/udp_nmap_plugin.sh		

[Add >](#)

### General

<b>Name</b>	Check Cisco QOS		
<b>Plug-in type</b>	Standard ▼		
<b>Max. timeout</b> ★	15 seconds ▼ 	<b>Max. retries</b>	1
<b>Description</b>	This plugin returns the number of bits / s drop or send		

### Command

<b>Plug-in command</b>	/root/check_cisco_qos.pl
<b>Plug-in parameters</b> ?	-H _field1_ -C _field2_ -i _field3_ -t _field4_
<b>Command preview</b>	/root/check_cisco_qos.pl -H 10.27.47.2 -C idc1ro -i ALL -t send

In this screen we name the plugin as you want. In the example: Check Cisco QOS.

Plugin type: Standard. (Being plugin pandora).

The most important areas to consider are:

Plug-in command: here we put the plugin path. This is the folder where the file check\_cisco\_qos.pl





Plug-in parameters: Here we must place the four fields shown in the figure above. Which coincide with the parameters explained in paragraph OPERATION.

We deployed the macro parameters option and add the name of the parameter and its default value.

Description (_field1_)	<input type="text" value="ip"/>	Default value (_field1_)	<input type="text" value="10.27.47.2"/>
Help (_field1_)	<div style="border: 1px solid #ccc; height: 100px;"></div>		
Description (_field2_)	<input type="text" value="comunity"/>	Default value (_field2_)	<input type="text" value="idc1ro"/>

Description (_field3_)	<input type="text" value="interfaz"/>	Default value (_field3_)	<input type="text" value="ALL"/>
Help (_field3_)	<div style="border: 1px solid #ccc; height: 100px;"></div>		
Description (_field4_)	<input type="text" value="tipo de dato"/>	Default value (_field4_)	<input type="text" value="send"/>

We press the button to create and the plugin is now available.

Name	Type	Command	Op.
Check Cisco QOS	Standard	/root/check_cisco_qos.pl	 
DNS Plugin	Standard	/usr/share/pandora_server/util/plugin/dns_plugin.sh	 

To monitor an agent must create and add the monitors (in the examples we see some monitors with this plugin).

## OPERATION

For command line put the name of the command and a number of parameters that are detailed below.

```
root@slpandora13:~# ./check_cisco_qos.pl -H 10.27.47.2 -t send -C idclro -i Fa0/0
280
```

To launch the plugin in command line we need to consider the following fields:

ip router : -H <router>. IP Address or Hostname of the router

community : -C <community>. SNMP Community String

interface : -i <interface> . What interface do you want to check.

data type : -t . This parameter defines what type of data we want to return  
(DROP or SEND)

help : -h. Print help.

IMPORTANT → Interface names:

This plugin identifies interface names based on their short name like "Fa0/0".  
If we check all interfaces pass the ALL parameter.

Bit rate calculation:

The first time you run the plugin it will create a temporary file in /tmp

This file contains 3 lines:

- the last drop counter in bits (lastDrop=XXXXXXXX)
- the last sent counter in bits (lastPost=XXXXXXXX)
- the last epoch time in seconds (lastEpoch=XXXXXXXX)

The second time you run the plugin, it will compare actual values against the previous ones and calculate the rates as follows:

- dropRate=(current drop counter - last drop counter) / (current epoch - last epoch)
- sentRate=(current post counter - last post counter) / (current epoch - last epoch)

## EXAMPLES

### *In terminal:*

Example 1. Monitors bits / s drop in all the interfaces.

```
root@slpandora13:~# ./check_cisco_qos.pl -H 10.27.47.2 -t drop -C idclro -i ALL
0
```

Example 2. Monitors bits / s send in all the interfaces.

```
root@slpandora13:~# ./check_cisco_qos.pl -H 10.27.47.2 -t send -C idclro -i ALL
0
```

Example 3. Monitors bits / s drop in the Fa0 / 0

```
root@slpandora13:~# ./check_cisco_qos.pl -H 10.27.47.2 -t drop -C idclro -i Fa0/0
0
```

Example 4. Monitors bits / is send in the Fa0 / 0

```
root@slpandora13:~# ./check_cisco_qos.pl -H 10.27.47.2 -t send -C idclro -i Fa0/0
280
```

Ejemplo5. Show the help (only in terminal)

```
root@slpandora13:~# ./check_cisco_qos.pl -h
usage: ./check_cisco_qos.pl [-h] -H <hostname> -C <community> -i <interface> -t <data_type>

Nagios check for Cisco IP SLAs.
Checks for probe status and returns execution time
as perf data (multi-line output)

[-h]           :           Print this message
[-H] <router>  :           IP Address or Hostname of the router
[-C] <community> :       SNMP Community String (default = "public")
[-i] <interface> :       What interface do you want to check
                   ( "-i ALL" to check all interfaces)
[-t] <data_type> :       data type to return (drop|send)
```

## In Pandora FMS

In Pandora once we add the module to the agent only have to populate fields that are choosing to plug-in the name we have put the plugin to install. In the advanced options do not need to change anything for proper operation (This does not mean that you can not), but it is always interesting to add a description to the module.

Example 1. Monitors bits / s drop in all the interfaces.

The screenshot shows the configuration page for a module in Pandora FMS. The module is named "Check Cisco ALL interfaces Drop" and is currently disabled. It is configured to monitor for drops on all interfaces (interfaz: ALL) at IP address 10.27.47.2. The warning and critical status thresholds are both set to 0.00. The module uses the "Check Cisco QOS" plug-in. The description field is populated with "Displays the number of bits / s that are drop in all interfaces".

Using module component ?	--Manual setup--		
Name	Check Cisco ALL interfaces Drop	Disabled	<input type="checkbox"/>
Type ?	Generic numeric (generic_data)	Module group	General
Warning status ?	Min. 0.00 Max. 0.00 Inverse interval <input type="checkbox"/>	Critical status ?	Min. 0.00 Max. 0.00 Inverse interval <input type="checkbox"/>
FF threshold ?	0	Historical data	<input checked="" type="checkbox"/>
Plug-in	Check Cisco QOS	This plugin returns the number of bits / s drop or send	
ip	10.27.47.2		
comunity	idc1ro		
interfaz	ALL		
tipo de dato	drop		
▼ Advanced options			
Description	Displays the number of bits / s that are drop in all interfaces		

Example 2. Monitors bits / s send in all the interfaces.

Check Cisco Qos - Modules

Using module component ? --Manual setup--

Name: Check Cisco ALL interfaces Send  Disabled

Type ? Generic numeric (generic\_data) Module group: General

Warning status ? Min: 0.00 Max: 0.00 Inverse interval  Critical status ? Min: 0.00 Max: 0.00 Inverse interval

FF threshold ? 0 Historical data

Plug-in: Check Cisco QOS This plugin returns the number of bits / s drop or send

ip: 10.27.47.2

comunity: idc1ro

interfaz: ALL

tipo de dato: send

Advanced options

Description: Displays the number of bits / s that are send in all interfaces

### Ejemplo3. Monitoriza bits/s drop en la interfaz Fa0/0

Check Cisco Qos - Modules

Using module component ? --Manual setup--

Name: Check Cisco Fa0/0 Drop  Disabled

Type ? Generic numeric (generic\_data) Module group: General

Warning status ? Min: 0.00 Max: 0.00 Inverse interval  Critical status ? Min: 0.00 Max: 0.00 Inverse interval

FF threshold ? 0 Historical data

Plug-in: Check Cisco QOS This plugin returns the number of bits / s drop or send

ip: 10.27.47.2

comunity: idc1ro

interfaz: Fa0/0

tipo de dato: Drop

Advanced options

Description: Displays the number of bits / s that are drop in Fa0/0 interfaces



## Example 4. Monitors bits / is send in the Fa0 / 0

Check Cisco Qos - Modules	
Using module component ?	--Manual setup--
Name	Check Cisco Fa0/0 Send <input type="checkbox"/>
Type ?	Generic numeric (generic_data) <b>Module group</b> General
Warning status ?	Min. 0.00 Max. 0.00 Inverse interval <input type="checkbox"/>
Critical status ?	Min. 0.00 Max. 0.00 Inverse interval <input type="checkbox"/>
FF threshold ?	0 <b>Historical data</b> <input checked="" type="checkbox"/>
Plug-in	Check Cisco QOS This plugin returns the number of bits / s drop or send
ip	10.27.47.2
comunity	idc1ro
interfaz	Fa0/0
tipo de dato	send
<b>Advanced options</b>	
Description	Displays the number of bits / s that are send in Fa0/0 interfaces

Example of a four-module qos agent.

### Check Cisco Qos

siendora13\_plugin

10.27.47.1

5.0dev

Monitors Qos de router cisco

Agent contact

Interval: 30 seconds

Last contact / Remote: 9 seconds / 2013-09-31 15:39:25

Next contact:

Agent Info

Parent: N/A

Remote configuration: Disabled

Events (24h)

Agent access rate (24h)

NO DATA TO SHOW

Full list of monitors

Form filter

F.	P.	Type	Module name	Description	Status	Warn	Data	Graph	Last contact
<b>General</b>									
0		🔧	Check Cisco ALL Interfaces Dro...	Displays the number of bits / s that are drop in all inter...	🟢	N/A - N/A	0		10 seconds
0		🔧	Check Cisco ALL Interfaces Sen...	Displays the number of bits / s that are send in all inter...	🟢	N/A - N/A	0		9 seconds
0		🔧	Check Cisco Fa3/10 Drop	Displays the number of bits / s that are drop in Fa3/10 inter...	🟢	N/A - N/A	0		13 seconds
0		🔧	Check Cisco Fa3/10 Send	Displays the number of bits / s that are send in Fa3/10 inter...	🟢	N/A - N/A	0		14 seconds

Made for David Torres.