

02. My First Graph

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Now let's create the very first graph. I won't stick to the host cacti is running on, because this is a very special one. So I'm assuming you're running at least **one** other device. As cacti's roots are network monitoring with SNMP, I will use some SNMP capable device. In this case, I choose the router of my home network. But you may of course choose **any** device that is SNMP enabled. But let's start from the very beginning. Assuming you've just logged in, you'll see a page like this:



Choose either of those marked links to access the **Devices** page. **Add** a new Device like:



Now you're presented with the next page:

A screenshot of the Cacti 'Devices [new]' form. The form has several sections: 'Description' (with a text input field containing 'my own routing device'), 'Hostname' (with a text input field containing 'router'), 'Host Template' (with a dropdown menu set to 'ucd/net SNMP Host'), 'Disable Host' (with a checkbox), 'SNMP Options' (with fields for 'SNMP Community' containing 'your-community-string', 'SNMP Username (v3)', 'SNMP Password (v3)', 'SNMP Version' set to 'Version 1', 'SNMP Port' set to '161', and 'SNMP Timeout' set to '500'). At the bottom right, there are 'cancel' and 'create' buttons.

Description Give this host a meaningful description. **Hostname** Fill in the fully qualified hostname for this device. Personally, I love to use DNS Names instead of IP Adresses. But you may choose any of them **Host Template** Choose what type of host, host template this is. The host template will govern what kinds of data should be gathered from this type of host. The magic of templates is explained later **SNMP Community** Fill in

the **SNMP read** community for this device. If you don't know, use the string "public" as a start. Now hit **Create** to see:

Save Successful.

my own routing device (router)

SNMP Information
System: DrayTek Corporation
Uptime: 138852864
(16 days, 1 hours, 42 minutes)
Hostname: router
Location:
Contact: info@draytek.com.tw

***Create Graphs for this Host**

Devices [edit: my own routing device]

Description

Give this host a meaningful description.

my own routing device

Hostname

Fill in the fully qualified hostname for this device.

router

Host Template

Choose what type of host, host template this is. The host template will govern what kinds of data should be gathered from this type of host.

ucd/net SNMP Host

Please notice the information already retrieved from this device. Of course, this output pertains to my special device. The text may vary for your equipment. In case you see:

SNMP Information
SNMP error

there is an error with the **SNMP Community** String that must be fixed prior to graph generation. When scrolling down, you should see some more information, that was provided by assigning this device to the given **Host Template**. I'm aiming at **SNMP - Interface Statistics**:

Associated Graph Templates

Graph Template Name	Status
1) ucd/net - CPU Usage	Not Being Graphed
2) ucd/net - Load Average	Not Being Graphed
3) ucd/net - Memory Usage	Not Being Graphed

Add Graph Template: Cisco - CPU Usage

add

Associated Data Queries

Data Query Name	Debugging	Re-index Method	Status
1) SNMP - Interface Statistics	(Verbose Query)	Uptime Goes Backwards	Success [24 Items, 4 Rows]
2) ucd/net - Get Monitored Partitions	(Verbose Query)	Uptime Goes Backwards	Success [0 Items, 0 Rows]

Add Data Query: Example based on Interface XML

Re-index Method: Uptime Goes Backwards

add

cancel save

Now, back to the top of the page, select **Create Graphs for this Host** and find the following:

my own routing device (router)

ucd/net SNMP Host

Create new graphs for the following host:

[*Edit this Host](#)

my own routing device (router)

[*Create New Host](#)

Graph Templates			
Graph Template Name			
Create:	ucd/net - CPU Usage		
Create:	ucd/net - Load Average		
Create:	ucd/net - Memory Usage		
Create:	(Select a graph type to create)		

Data Query [SNMP - Interface Statistics]					
Index	Status	Description	Type	Speed	Hardware Address
1	Up	Ethernet0	ethernetComacd(6)	1000000000	00:30:30:2E:35:30:2E:37:46:2E:30:43:2E:30:30:2E:44:16:00:00:00:01:00
2	Up		0	0	
3	Up		0	0	

Check the box next to an interface you want to get data for. A good choice is a row, where a **Hardware Address** (aka: MAC Address) or the like is shown. From the dropdown, select a graph template of your liking. But remember, that 64 bit graphs are only supported with SNMP V2 (and some more conditions). Finally, **Create** to get:

+ Created graph: my own routing device - Traffic - Ethernet0/1

my own routing device (router)

Create new graphs for the following host:

my own routing device (router)

*Edit this Host

*Create New Host

You want to see your work immediately? So, here is the answer: You have to be patient. Assuming you did not forget to configure your cacti host's scheduler to run the poller every 5 minutes, you'll have to wait **at least 10 minutes** to see anything. Then, please move to **Graph Management**:

Graph Management

Filter by host:

my own routing device (router)

 Search:

<< Previous

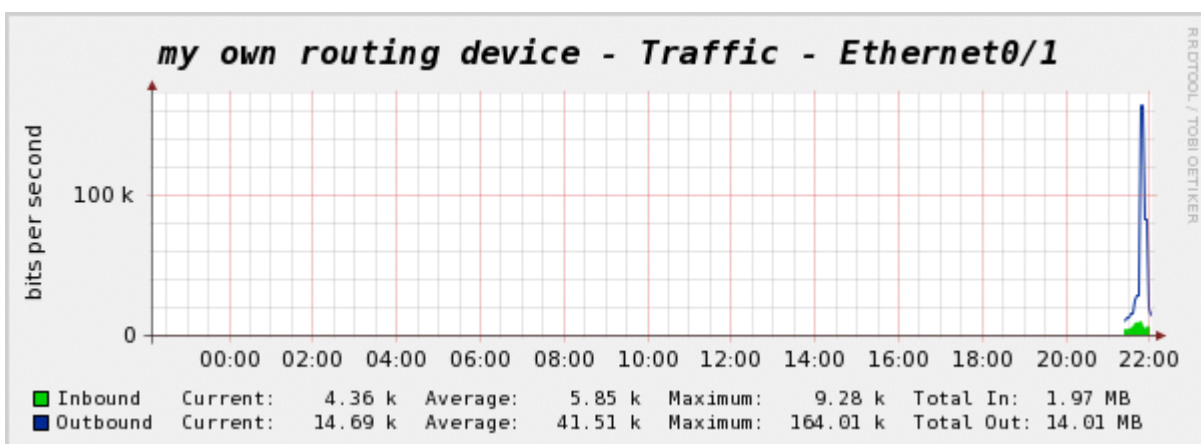
Showing Rows 1 to 1 of 1 [1]

Graph Title	Template Name
my own routing device - Traffic - Ethernet0/1	Interface - Traffic (bits/sec, Total Bandwidth)

<< Previous

Showing Rows 1 to 1 of 1 [1]

and select the newly generated graph. Please notice, that I've filtered for the device. This was for demonstrating purpose only and to suppress all devices from the list I've already created.



The last steps are **not** the recommended way to handle this. Later on, I'll show how to use the **Graph** tab and all the magic within.