Network Monitoring and Management
Cacti Plugin Configuration and Use (Settings and Thold)

<u>Notes:</u>

- Commands preceded with "$" imply that you should execute the command as a general user - not as *root*.
- Commands preceded with "#" imply that you should be working as the *root* user.
- Commands with more specific command lines (e.g. "RTR-GW>" or "mysql>") imply that you are executing commands on remote equipment, or within another program.
- If a command line ends with "\" this indicates that the command continues on the next line and you should treat this as a single line.
- These exercises are tested against Ubuntu server version 9.10.

Exercises

These exercises *assume* that you have installed Cacti from source. If you installed cacti by doing "apt-get install cacti" on your Linux machine, then these exercises will not work.

Exercise 0

Log in to your PC or open a terminal window as the sysadm user.

Exercise 1

Turn on Plugin Management

You may have already done this. If you don't see a "Plugin Management" option in Cacti on the bottom left of the Console do the following:

Go to Cacti in your web browser:

> http://pcN.ws.nsrc.org/cacti

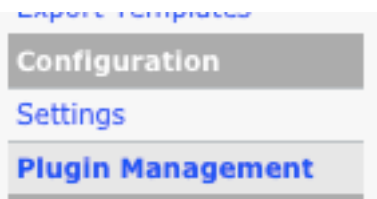Log in as the "admin" user.

> Go to User Management
> ==> select "admin" user
> ==> at the bottom of the page check the box in the "Realm Permissions" that says "Plugin Management"
> ==> Press "Save"

Note on the left side of the Cacti page there is now a "Plugin Management" option under

Configuration:

## Complete the install of Settings and Thold Plugins

Click on the Plugin Management choice on the left of the screen in Cacti. You should now see:

To install and enbale the Settings and Thold plugins click on the two white down-arrows circled above. Your screen will now show:

To finish the Thold Plugin installation click on the green arrow white arrow in the green box circled above.

Your plugins are now fully installed and active in Cacti.

Exercise 2

Configuring the Settings plugin

The Settings plugin allows you to specify additional settings for sending email in Cacti.
This is very important (actually critical) if you wish to set up Cacti so that it can
send email and generate tickets in a ticketing system.

Logged in to Cacti as the "admin" user you should click on the "Settings" link on the left side of the page you will now see an extra tab in your available settings called "Mail / DNS" – Click on this tab and view the newly available options.

At this point we are going to configure Cacti to send email to the sysadmin@localhost account. This way we can test that email is working before we attempt to configure email to go to our Request Tracker ticket queue at net@localhost.

On the next page fill in the items circled in yellow (Test Email, From Email Address, From Name) and then click on the "Send a Test Email" item circled in red.

Settings

Test Email:	sysadm@localhost
From Email Address:	cacti@localhost
From Name:	Cacti Systems Monitor

You must press Save first before attempting to send a test email.

One you press, "Send a Test Email" you should see a popup window like this:

```
Checking Configuration...
Creating Message Text...
```

> This is a test message generated from Cacti. This message was sent to
> test the configuration of your Mail Settings.
>
> Your email settings are currently set as follows
>
> **Method**: PHP's Mailer Class

```
Sending Message...
```

> Success!

You can verify that your sysadmin account received the email by viewing your mail. Be sure to do this as the *sysadm* user on your machine. If mutt is not installed, then as the *sysadm* user on your machine do:

```
$ sudo apt-get install mutt
```

And, now check your email. If prompted, say yes to create a new mailbox if you are prompted to do so.

```
$ mutt
```

Later we will revisit this tab and update the "Test Email" field to send email to our ticketing system.

Most installations that use Cacti with a ticketing system install the Thold (threshold) plugin (next exercise). This plugin requires that the settings plugin be installed first in order to work.

Exercise 3

Configuring the Thold Plugin

You should see a new tab in your Cacti web interface that looks like this:
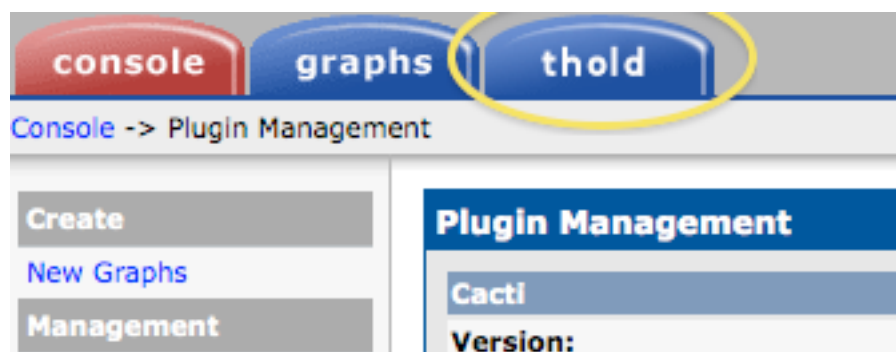
Now we are ready to define a new threshold so that we can generate tickets in Request Tracker if, or when, the threshold is met. You can come up with most any threshold imaginable. As we'd like to generate a ticket let's create a threshold that we know will be met. First, click on the "Thresholds" menu choice on the left of your screen just under the "Management" category:
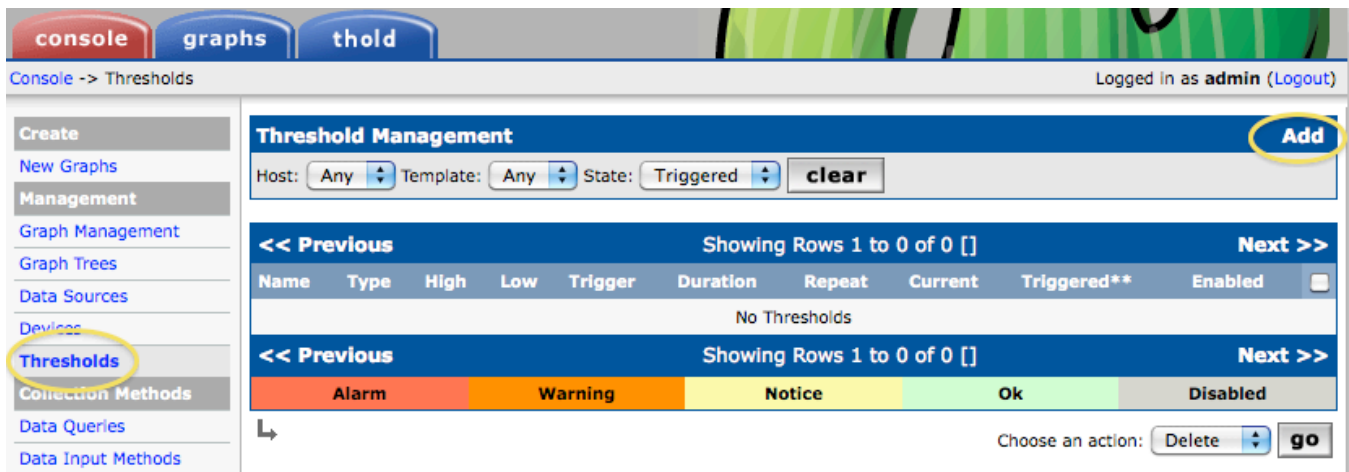
Click on the "Add" option at the upper-right of the screen. You will see the Threshold Creation Wizard. In the drop-down menu for "Host" choose "Localhost (127.0.0.1). Under "Graph" choose "Localhost – Processes." Finally, when "Data Source" appears select "proc."

Now press "create" and you will see a full page of options appear. Near the bottom of the page are the ones that we will update to create our threshold (next page):

High / Low Settings

High Threshold If set and data source value goes above this number, alert will be triggered	50
Low Threshold If set and data source value goes below this number, alert will be triggered	
Breach Duration The amount of time the data source must be in breach of the threshold for an alert to be raised.	5 Minutes

Data Manipulation

Data Type Special formatting for the given data.	Exact Value

Other setting

Re-Alert Cycle Repeat alert after this amount of time has pasted since the last alert.	Never
Notify accounts This is a listing of accounts that will be notified when this threshold is breached.	
Extra Alert Emails You may specify here extra e-mails to receive alerts for this data source (comma separated)	net@localhost,sysadm@localhost

cancel   save

What we are saying here is that if we see more than 50 processes running on our localhost machine for more than 5 minutes, then we will send an email to net@localhost and to sysadm@localhost. Note that under the "Re-Alert Cycle" we have chosen "Never" to avoid creating a new ticket every 5 minutes.

Be sure you fill in the fields as shown in the screen capture on the previous page. In reality this is a contrived threshold, as most Linux boxes will easily run with over 50 processes. We simply want to show you how to create a threshold and to have it trigger.

Note that once you press "save" you will not see anything for a few minutes. But, after 5 to 10 minutes if you click on the "Thold" tab in your Cacti web pages you will see something like this:

| console | graphs | thold | | settings | Tree View List View Preview View |

Console -> Thresholds   Logged in as **admin** (Logout)

Thresholds | **Host Status**

Threshold Status
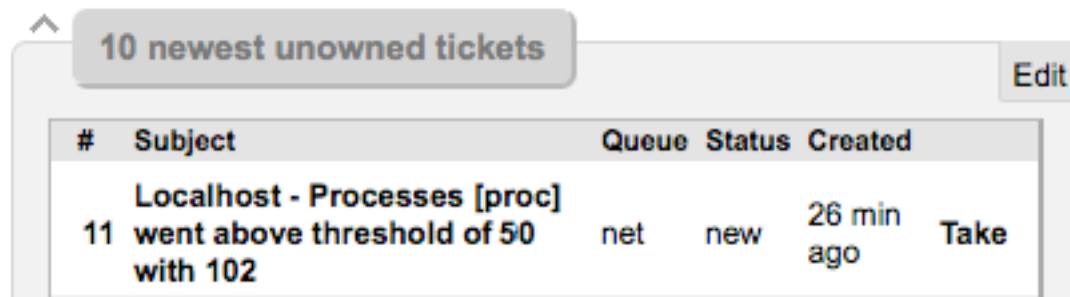
Template: All   Status: Triggered   Rows: 30   Search: [   ]   go   clear

<< Previous   Showing Rows 1 to 1 of 1 [1]   Next >>

Actions	Name**	ID	Type	High	Low	Current	Enabled
	Localhost - Processes [proc]	1	High/Low	50		98	Enabled

<< Previous   Showing Rows 1 to 1 of 1 [1]   Next >>

Alarm	Warning	Notice	Ok	Disabled

Time: 0 seconds, **User:** 0 seconds, **System:** 0 seconds, **Swaps:** 0 swaps, **Pages:** 0 pages

If you check email for your sysadmin account or if you look at the Request Tracker pages logged in as "sysadmin" (go to http://pcN.ws.nsrc.org/rt/) you should see a new ticket created that looks something like this (once you have installed RT, perhaps later in the week):

Now you are ready to review what hosts and services you are monitoring. If you see items that you wish to be notified about, then you can create thresholds for them and send an email notice to an account or to a ticket queue of your creation.