

SOAP adding multiple graphs manual

Author: Sergej Sorli

Before we can use soap client make sure that the soap server for cacti is installed and configured.

Soap client installation instructions:

1. Use PHP 5.x (with SOAP support)
2. Extract files from "cacti-import.zip"
3. Open the command line interface and got to the directory where you've extracted the files. There you will find tools for adding large sets of devices, graphs and trees.

Usage instructions:

Importing multiple hosts:

We need to create a CSV source file "host.csv" (this is just an example; of course you can choose a different name). Every record is a separate row of data. Every row is in the following format:

```
<fqdn>;<name>;<community>;<snmp_ver>;<disable>;<snmp_username>;<snmp_password>;<snmp_port>;<snmp_timeout>;<template_name>
```

Description of fields:

<fqdn> - FQDN or IP address of the host,
<name> - device name,
<community> - community name,
<snmp_ver> - snmp version values: 1, 2, 3,
<disable> - host is disabled (value 1) or host is enabled (value 0),
<snmp_username> - username if we use snmp version 3,
<snmp_password> - password if we use snmp version 3,
<snmp_port> - snmp port number. Default value is 161,
<snmp_timeout> - snmp timeout in milliseconds,
<template_name> - This is host template name. Go to cacti web interface. Click "Host Templates". Select host template for new device. Copy entire field for name (watch out for empty strings) and paste it here.

An example of the "host.csv" file:

```
"host1";"hostname1";"com123";2;0;;;161;500;"Cisco Router"  
"host2";"hostname2";"com123";2;0;;;161;500;"Cisco Router"  
"host3";"hostname3";"com123";2;0;;;161;500;"Cisco Router"
```

After we have the "host.csv" file, we can run the command:

```
php auto_add_devices_cl.php --urn="<hostname>:<port>/cacti" --username="soap"  
--password="soap" --source="C:\\path\\host.csv"
```

--urn: is the location where cacti service is running. If you are running both cacti service and client in local machine, just type: --urn=localhost/cacti or --urn=localhost
--source: is location of the CSV file. For delimiter between directory and subdirectory use double slash ("\\").

Script "auto_add_devices_cl.php" will generate two files named after a source file but with added suffix "log.csv" and "err.csv". First file contains the data that was successfully imported to Cacti service. We can find it in file "host.csv.log.csv" and second file "host.csv.err.csv" contains data which failed to be imported. These files have the same structure as the source file.

Importing graphs and trees

We need to create a CSV source file "graph.csv" (this is just an example; of course you can choose a different name). Every record is a separate row of data. Every row is in the following format:

```
<fqdn>;<subdescr>;<graphTemplateName>;<snmpQueryName>;<snmpQueryTypeName>;<snmpFieldName>;<snmpValueName>;<page>;<section>
```

We can create custom graphs (CG) or data sources (DS) graphs. For CG graphs use empty values for snmpQueryName, snmpQueryTypeName, snmpFieldName and snmpValueName. The following example will show how we create data sources graphs:

Description for each column:

<fqdn> - FQDN or IP address of the host.

<subdescr> - sub description of the graphs for this host. We can use defined variables for generating descriptions (|host_description|, |host_name|, |query_inxmlfile| etc.). We can use generated sub descriptions defined in Cacti Data Queries template if we leave this value empty.

<graphTemplateName> - This is a graph template name. Go to cacti web interface. Click "Graph Templates". Select graph template for new graphs. Copy entire field from name and paste it here. Watch out for empty strings.

<snmpQueryName> - This is a data query template name. Go to cacti web interface. Click "Data Queries". Select data query for new graphs. Copy entire field from name and paste it here. Watch out for empty strings.

<snmpQueryTypeName> - Go to cacti web service. Click "Data Queries". Select data query for new graphs. Go to selected record in table "Associated Graph Templates". Copy entire content from the name field and paste it here.

<snmpFieldName> - Field name for selected device interfaces. Click "Data Queries". Select data query for new graphs. Here we can find full file path of used xml query. Open this xml file. We can see the list of all query fields for the selected data query template.

<snmpValueName> - It contains value from selected "<snmpFieldName>". Click "New Graphs". Select host name and graph types. Now we can see table of all input fields and their values. We can select only value in column that we defined in "<snmpFieldName>".

<page> - This is the name of tree in root position.

For adding graphs to existing menus; go to cacti web interface. Click "Graph Trees". Select the record in table option. Copy entire field from name and paste it here. Watch out for empty strings.

Or if we would like to add a new menu just enter a new name. If the value is empty, then the column name section is ignored. The script will put graphs in root of cacti menu,

<section> - This is the name of sub tree. This has a status of child. The left column is parent name a "<page>". If this value is empty then column section is ignored. The script will put all graphs in parent of Cacti menu,

Sample of "graph.csv" file:

```
host1";;"Interface - Traffic (bits/sec)";"SNMP - Interface Statistics";"In/Out Bits (64-bit Counters)";"ifOperStatus";"Up";"Page1";"Section1"
```

Now we have a graph.csv file. Then we run two commands:

1. Command: For adding graphs:

```
php auto_add_graphs_cl.php --urn="<hostname>:<port>/cacti" --username="soap" --password="soap" --source="C:\\path\\graph.csv"
```

2. Command: Adding trees and graphs to the trees:

```
php auto_add_trees_cl.php --urn="<hostname>:<port>/cacti" --username="soap" --password="soap" --source="C:\\path\\graph.csv"
```

First command for adding graphs will create all graphs for monitored interfaces traffic for selected host. We will use SNMP version 2 which supports 64bit counters. In the name field we enter: "ifOperStatus". This will ask for status for each interface. Interface has a status "Up" or "Down". We fill field "<snmpValueName>" with value "Up". This will select all the interfaces for selected host which status name "ifOperStatus" is "Up" and it will create a traffic graphs for selected interfaces.

Second command for adding trees will put all created graphs for selected host to the menu of cacti tree.