The sys admin's daily grind: Munin monitors SNMP-compatible devices

Good Substitute

What do you do if the Munin system monitoring tool does not have a native Munin client for a device? Sys admin Charly has a solution. *By Charly Kühnast*

As you might remember from a previous article in this space [1], Munin is a two-part monitoring suite: On any device I want to monitor, I need to install the client, the "Munin node." It constantly collects relevant data about the system on which it is installed. At certain intervals, the Munin server retrieves the collection and creates meaningful graphs from it with the help of RRDtool. This approach works well, and I have used Munin for many years, both privately and professionally.

At home, I have two devices that I cannot easily monitor with Munin: an older Cisco router from the 2600 series and a small NAS, by Synology, that provides home backup storage and acts as a DLNA server and data sink. The NAS runs a customized Linux, and on the manufacturer's forums, people exchange ideas on running a Munin node.

However, I don't have to tinker much because I have an easier approach: using SNMP. I only need to activate the SNMP service in the administration interface of the NAS and assign a community name – and I'm done on the client side.

I now tell the Munin server the community name so that it can query the SNMP data on the NAS. To do this, I create a file with a meaningful name, such as the hostname of the target system, `synology`, in the `/etc/munin/plugin-conf.d/` directory. I just need to add the following two lines:

```
[snmp_synology_*]
env.community g3h3im3rn4m3
```

Now the server knows the community name but does not know exactly what data it should collect. On current Linux systems, the `munin-node-configure` command discovers collectable system data. This also relies on SNMP:
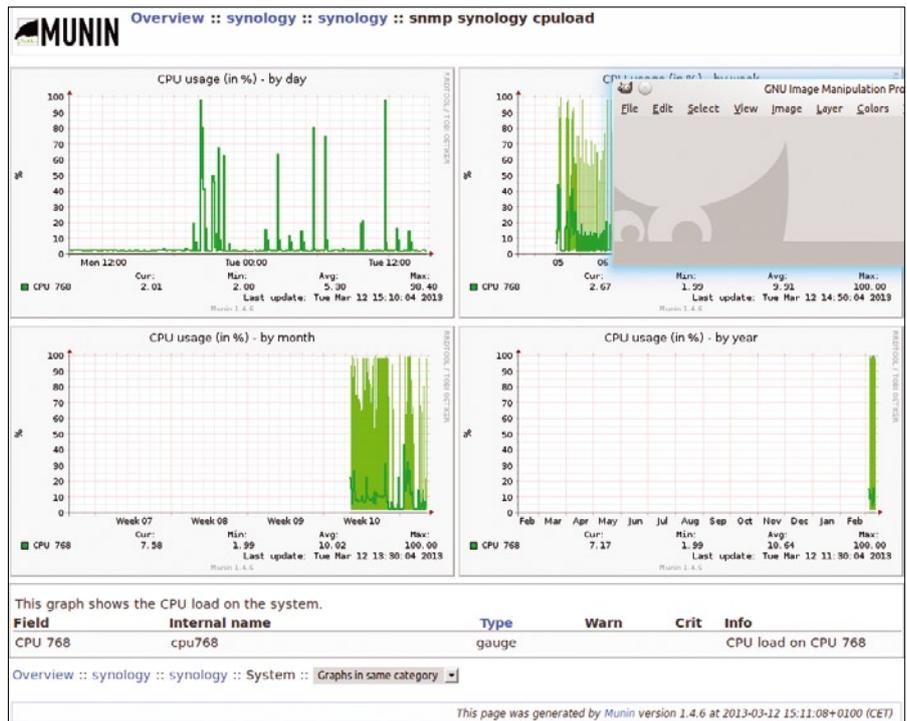

Figure 1: Shortly after the successful SNMP setup, the first data starts to reach RRD databases.

```
sudo -u munin munin-node-configure ↲
    -snmp synology -snmpcommunity ↲
    g3h3im3rn4m3 -shell
```

Here, `munin-node-configure` uses SNMP to query the `synology` system in the `g3h3im3rn4m3` SNMP community and then presents the symlinks it intends to create in `/etc/munin/plugins`. I can alternatively use copy and paste to do this, and omit the data that I do not need at the same time. Or, I can add `|bash` to the command; it then creates the symlinks directly.

Minor Obstacles

Next, I have to add the new Munin target to the configuration file `/etc/munin/munin.conf`. Caution: The IP address that I stored here is the machine that runs the SNMP queries, that is, the Munin server itself. Because this is the source from which Munin receives its data, I cannot enter the NAS IP address here. I'll just add the following two lines:

```
[synology]
    address 192.168.2.10
```

Finally, I have to start the node process on the server using the `service munin-node restart` command. After a short wait, the first data starts to drip into the RRD databases (Figure 1). Using the same approach, I can collect the data from my old Cisco router. Now, what other SNMP-enabled devices can I find at home? ∎∎∎

INFO

[1] "The sys admin's daily grind: Munin" by Charly Kühnast. *Linux Magazine*, January 2008, pg. 71: http://www.linux-magazine.com/Issues/2008/86/Charly-s-Column/