Table of Contents

Ganglia installation for GT testbeds

In this page I am collecting notes accumulated during the installation of Ganglia as a possible monitoring solution for GT testbeds. The first use case would be to monitor the virtual machines created with vNode to get statistics about their usage.

Ganglia documentation can be found here:

- Official site: http://ganglia.sourceforge.net/
- README file
- A good article from IBM: http://www.ibm.com/developerworks/wikis/display/WikiPtype/ganglia
- Presentation given at ApacheCon 2007 by Brad Nicholes: Monitoring Your Data Center using Ganglia

Basic installation and configuration

In this section we explain how to setup a node with a monitoring daemon (gmond), a metadata daemon (gmetad) and a web server with the Ganglia web front-end.

The core archive with the sources of all the Ganglia components can be downloaded from the official site, we worked with the 3.1.7 version. Before compiling the software additional packages have been installed: apr-1.4.2 (installed from source), libconfuse and libconfuse-devel (dag), ncompress, rrdtool and rrdtool-devel, ant httpd and php for the web front-end from the yum repository. To configure and install Ganglia we then issued:

```
./configure --with-libapr="/usr/local/apr/bin/apr-1-config" --with-libpcre=no --sysconfdir=/etc/g
make
make install
```

The directory */var/lib/ganglia/rrds* has to exist, and be owned by the user that Ganglia will use to run the gmetad daemon (*nobody*).

The two basic configuration files are:

- /etc/ganglia/gmond.conf: only the cluster section (name and owner) has been changed.
- /etc/ganglia/gmetad.conf: only data_source ("GT_VTB_Cluster" localhost) and gridname value have been changed.

If everything goes well you should be able to see the metrics collected for the machine in the web page. If not, refer to the documentation linked at the beginning of this twiki for troubleshooting hints.

Adding a node to the cluster

On a monitored node only the gmond daemon should run, so you need to install apr-1.4.2 (from sources), libconfuse and libconfuse-devel from the dag repository, then build and install ganglia:

```
./configure --with-libapr="/usr/local/apr/bin/apr-1-config" --with-libpcre=no --sysconfdir=/etc/g
make
make install
```

In order to add a host we changed the udp channels in the gmond.conf to send information directly to vtb-generic-43.cern.ch, which is the host where gmetad is running:

```
udp_send_channel {
```

```
  bind_hostname = yes
  host = vtb-generic-43.cern.ch
  port = 8649
}

udp_recv_channel {
  port = 8649
  family = inet4
}
```

and restarted the gmond daemons.

On the web front-end we now see the two hosts as part of the GT_VTB_Cluster.

Hints for troubleshooting

- In case this error appears:

```
Unable to create UDP client for xxx:8649. Exiting
```

try commenting in the section udp_send_channel, the 'bind_hostname' property.

-- GianniPucciani - 11-May-2010

This topic: Main > GangliaVTB
Topic revision: r7 - 2010-05-17 - GianniPucciani