

Optimisation del ancho de banda (Intro Monitoring - 2nd part)



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Review of basic Linux/Fedora concepts

- Basic packages managements (*rpm, yum*)
 - Starting/stopping a system service
 - *service <service_name> status|start|stop*
 - Crond/Crontab
 - Logfiles (*syslog, /var/log/....*)
 - Configuration files (*/etc*)
 - Net utils (*ping, traceroute, ...*)
-
- **SNMP** (*net-snmp, net-snmp-utils*)
 - **RRDtool** (Round Robin Database tool)
 - **Mysql**

Network Top (**NTOP**) (1/2)

- Mainly used to monitor the interfaces on the local host
 - but It can also monitor remote interfaces through the Netflow/sFlow protocols
 - [Q] Where would you place it in the network?
- Powerful traffic classification
- Web interface
 - Embedded http/https server (ie, no need for Apache)
- Graphs based on RRDtool
- You can find good DOC in its homepage

Network TOP (NTOPI) (2/2)

- **Exercise 1**

- Check if it is already installed
 - *rpm -qi ntop*
- Install it if necessary
 - *yum install ntop*
 - *(best would be to install the latest tarball version)*
- Identify the configuration file/s AND the init file
 - *rpm -ql ntop | grep etc*
- Start it

- **Exercise 2**

- Add all local devices to the configuration

- **Exercise 3**

- Connect with the browser to a remote *ntop* instance

MRTG (1/3)

- **Multi-Router Traffic Graph**
- Originally developed to monitor remote network interfaces via **SNMP** (Now it can monitor all kind of parameters, such as CPU load, disk space, etc)
 - We won't look at SNMP into details because we do not have time (and it is boring)
 - Here is all we need to know for now:
 - Version (1, 2, 3)
 - Community string (= password)
 - OID = Object Identifier
 - MIB = Management Information Base

MRTG (2/3)

- Not easy to configure at the beginning (via tarball)
 - Pretty easy for example with Fedora/Yum (but it may not be the latest version)
- It collects data via SNMP (ie, it needs SNMP)
- Web interface (it needs a web server, like Apache or a lighter one)
 - daily, weekly, yearly graphs
- Graphs based on RRDtool
- Automatic update every 5 min via crontab
 - (option: daemon)

MRTG (3/3)

- **Exercise 1:**

- Check if it is already installed
 - (+ net-snmp + net-snmp-utils)
- Install it if necessary (remember SNMP and HTTPD)
- Identify the configuration file/s AND the init file
 - See the [mrtg-unix-guide](http://oss.oetiker.ch/mrtg/doc/index.en.html) (only the section “Configuration”) at <http://oss.oetiker.ch/mrtg/doc/index.en.html>
 - *cfgmaker, indexmaker*
 - (See documents <http://oss.oetiker.ch/mrtg/doc/index.en.html>)
- Start it (?how?)

- **Exercise 2**

- Configure it so that it monitors the links of all routers in the lab (group routers + lab router). Let's use a different community string in each group.

NAGIOS (1/3)

- Probably the most popular open source monitoring tool
- You can monitor devices and services
 - Plugins
- You can define topologies to take into account dependencies
 - child/parent
- Web interface
 - It needs an external web server (ie, Apache)
 - It uses RRDtool

NAGIOS (2/3)

- **Exercise 1**

- Check if it is already installed
- Install it if necessary
- Identify the configuration file/s AND the init file
 - Use the doc <http://www.nagios.org/docs/>
- Start it

- **Exercise 2**

- Configure it so that it monitors all hosts/services inside the group, plus the router and web server of the other groups, plus the lab's router, ...

- **Exercise 3**

- Connect with the browser to a remote *nagios* instance

NAGIOS (3/3)

- **Exercise 4 (optional)**
 - Install nagiosgraph
 - <http://nagiosgraph.cvs.sourceforge.net/>
 - Add graphs to some of the host/services you have created with Exercise 2

- **Additional documentation**
 - <http://www.novell.com/coolsolutions/feature/19807.html>
 - <http://www.novell.com/coolsolutions/feature/19843.html>

CACTI (1/2)

-Exercise-

Write one slide that describes the main features of Cacti, and how it operates.

(NOTE: do not waste time with the installation details, focus on the features it offers/supports)

CACTI (2/2)

- **Exercise 1** (See doc <http://docs.cacti.net/>):
 - Check if it is already installed
 - Install it if necessary
 - Identify the configuration file/s AND the init file
 - Start it (!poller versus daemon!)
 - It needs mysqld (and snmpd in most cases)
- **Exercise 2**
 - Create graphs for the status of the resources of the local host (cpu, disk, etc), plus the traffic RX/TX of the local interfaces as well as that of some remote hosts (ie, the group's server and router, etc) in your group.
- **Exercise 3**
 - Connect with the browser to a remote *cacti* instance

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