Assignment - 1

ET2536 - Applied Network Management

Sasank Sai Sujan Adapa
Department of Telecommunication Systems
Blekinge Institute of Technology
Karlskrona, Sweden
saad15@student.bth.se

***Abstract*— This report presents the procedural steps on how to install and configure Multi Router Traffic Grapher (MRTG) and about its replica tool that was developed in the assignment 1. This document also includes the correlation between the two tools.**

I. INTRODUCTION

The Multi Router Traffic Grapher (MRTG) is a tool that is used for monitoring and measuring the traffic load on the network links. It shows the traffic load on network in the graphical form which provides a live representation of the traffic which are shown as png images in the html pages created by mrtg. MRTG is written in perl script and comes with the full source. It uses highly portable SNMP protocol implementation which is written completely in perl. Hence it doesn't require any external SNMP packages. The c program is used in MRTG to log all the traffic and graphs. Additionally, with a daily view, MRTG also creates live visual representations of traffic observed during the last seven days, the last five weeks and the last twelve months.

In this assignment, we will generate a MRTG replica tool and compare the values of the tool with MRTG tool.

II. INSTALLATION & CONFIGURATION OF MRTG

The below steps are followed to install and configure MRTG on the Ubuntu 14.04 system.

- Sudo apt-get intall mrtg
- Sudo updated && locate mrtg
- Sudo mkdir /etc/mrtg && sudo mv /etc/mrtg.cfg /etc/mrtg
- Sudo cfgmaker –output=/etc/mrtg/mrtg.cfg public@yourrouter'sipadress
- Sudo env LANG=c /usr/bin/mrtg /etc/mrtg/mrtg.cfg
- sudo indexmaker --output /var/www/mrtg/index.html /etc/mrtg/filename.cfg

In your .cfg file include RunAsDaemom:Yes and Interval:5 in global defaults section. In the browser, open the localhost/mrtg path to view the graphs.

III. REPLICATION OF MRTG - TOOL

A replica tool which is working similar to MRTG was developed in this assignment using SNMP session and RRD tool. The backend part is completely written in perl and all the modules which need to be installed as a prerequisite required for this assignment 1 are included in the readme.txt file in the assignment folder. The script connects to the given database and starts an SNMP session in order to find the working interfaces. The working interfaces which satisfy specific array are calculated using objective identifiers and are sent to rrd tool to generate the graph. The data stored in Mysql database was used to display the device credentials in web dashboard. The frontend page was designed using the HTML and PHP.

IV. COMPARISON BETWEEN MRTG & TOOL

The values calculated using this MRTG replica tool are equal to the MRTG tool. Figures 1 & 2 which show the graphs generated by MRTG tool and also by the replica tool. Figure 1 shows the graph generated by the MRTG tool and the Figure2 shows the graph generated by replica tool. The values are almost equal because the tool was designed to work as replica to the MRTG tool. If the tools were executed at the same time, the results will be identical. The minute difference in the values between mrtg and replica tool are due to the time variance in execution of scripts.

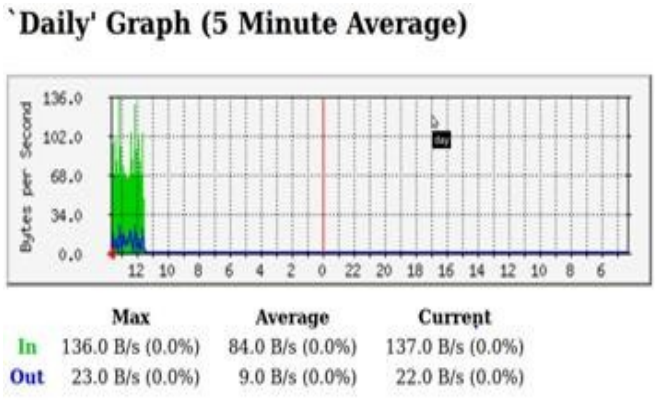

Fig.1

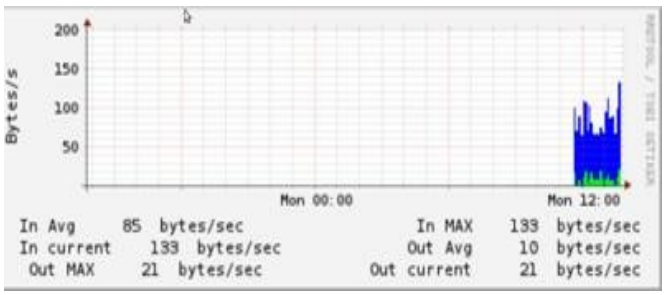

Fig. 2