

Project Report

TRAFFIC AND RESOURCES MONITORING USING OBSERVIUM AND SNMP

Advisor: PROF. QUAN LE-TRUNG

Class: NT531.O21.MMCL

Group 4:

Đặng Trung Hậu – 21520833

Nguyễn Gia Quân - 21521327



CONTENTS

1.OVERVIEWS

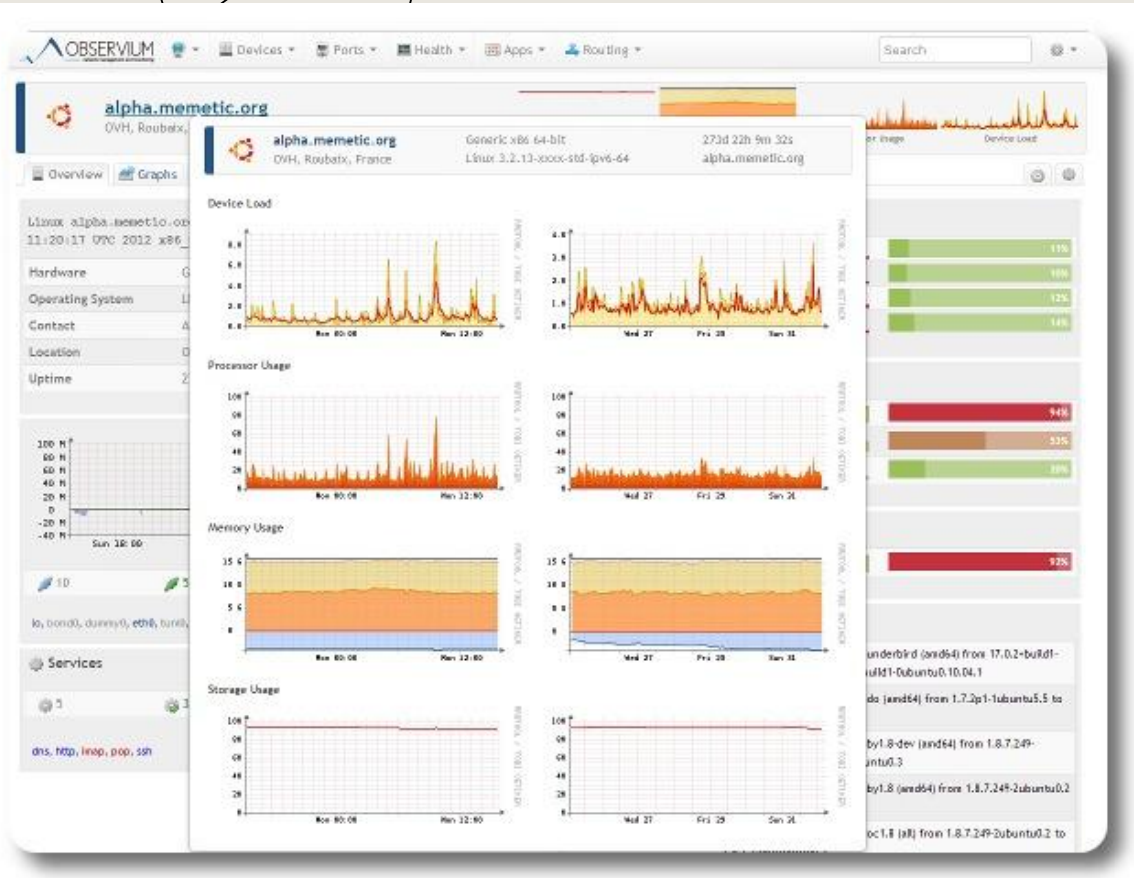
**2.SIMPLE NETWORK MANAGEMENT PROTOCOL
(SNMP)**

3.OBSERVUM

4.DEPLOYMENT AND RESULT

5.DEMO

1. OVERVIEWS



BENEFITS OF NETWORK MONITORING SYSTEM



Real-Time Alerts



Remote Access



Security



Performance



Scalability



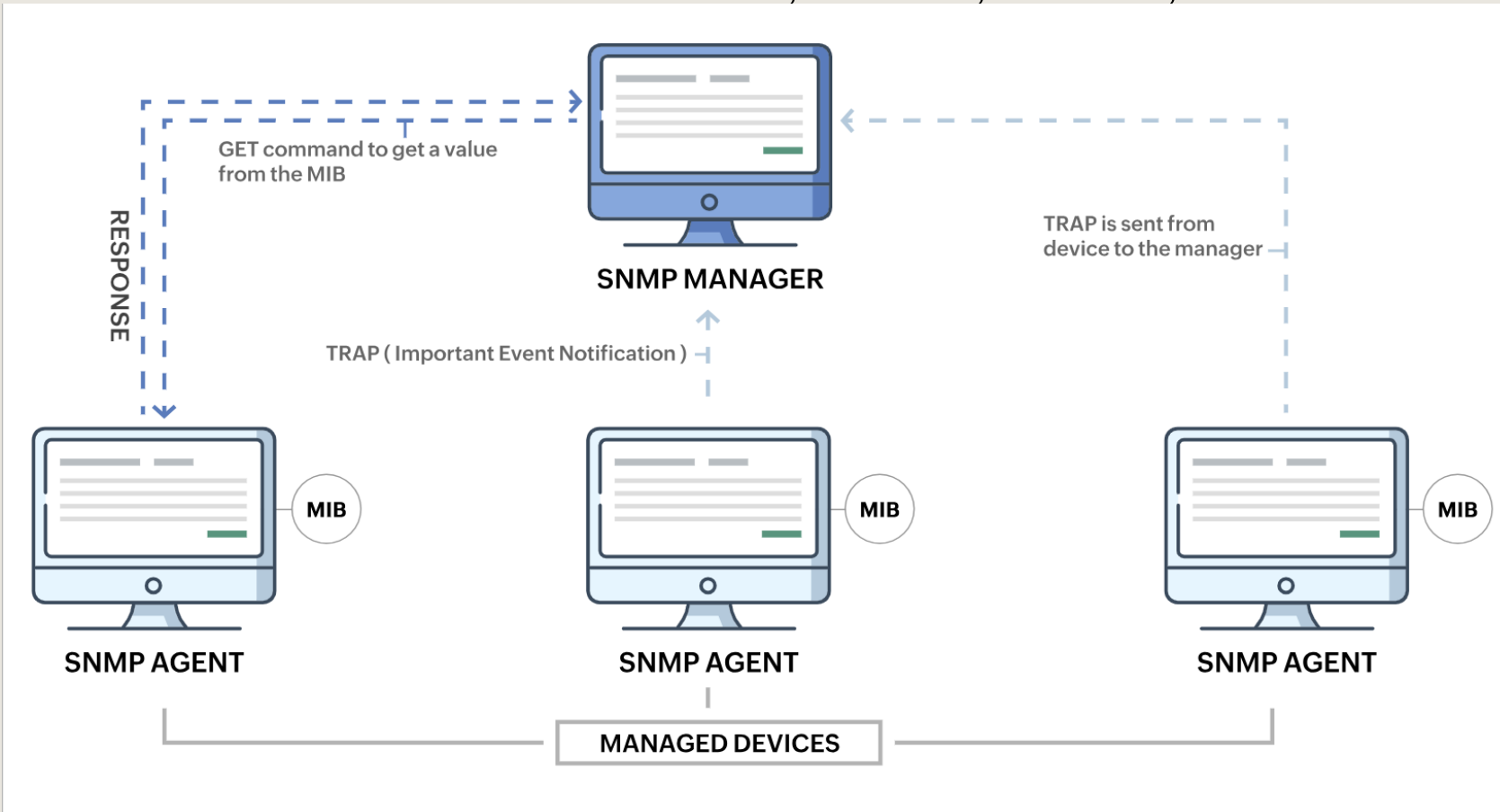
Cost-Effectiveness



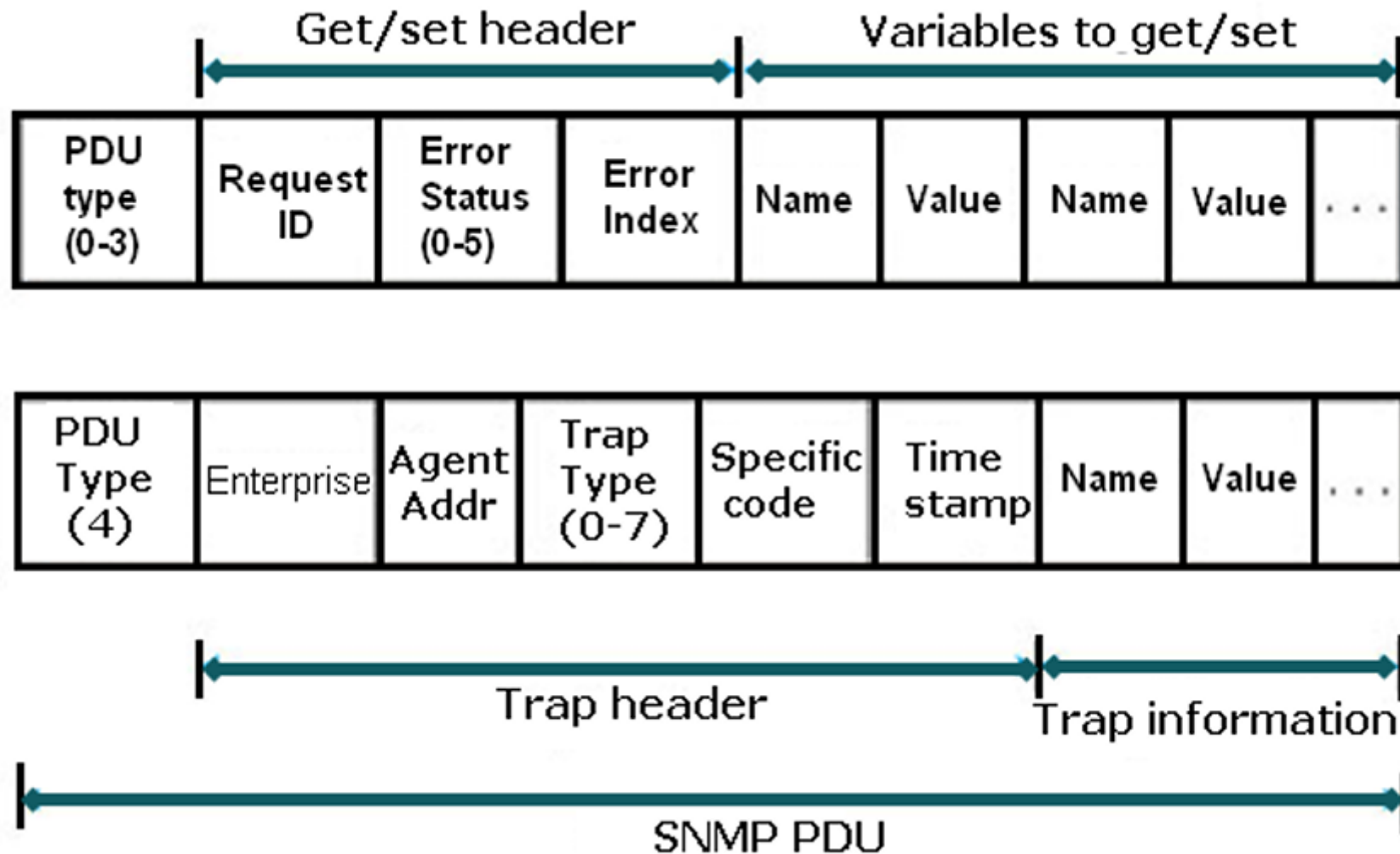
EN EXTERNETWORKS

2. SNMP

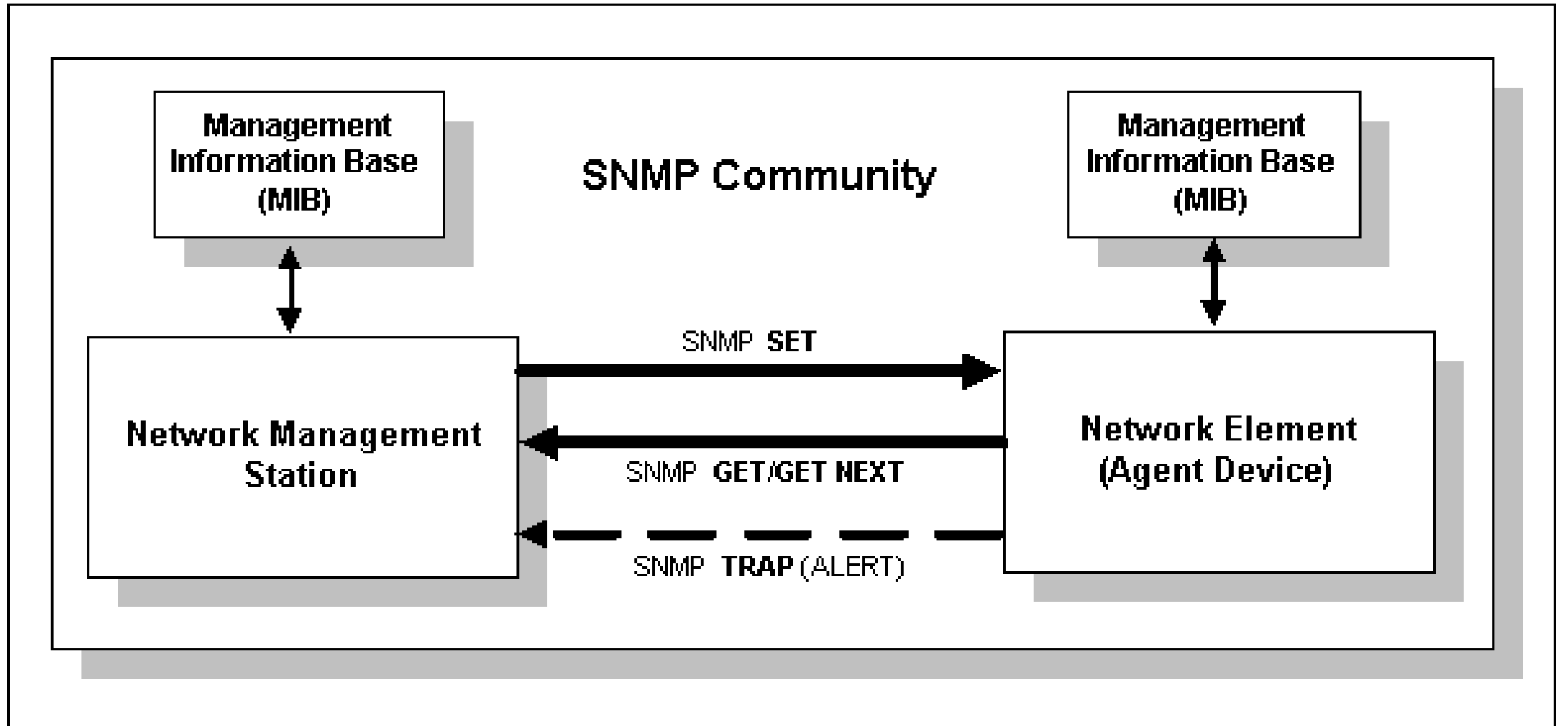
Simple Network Management Protocol (SNMP) operates at the application layer, running on ports 160, 161, 162 over UDP. SNMP is used to manage devices in the network such as workstations, routers, servers, ...



2. SNMP



2. SNMP



3. OBSEVIUM

- Autodiscovering SNMP based network monitoring tool
- Written in PHP (web application)
- Includes support for a wide range of network hardware and operating systems including: - Cisco, Linux, FreeBSD, Juniper, Brocade, Foundry, HP and many more.



<https://www.observium.org/>



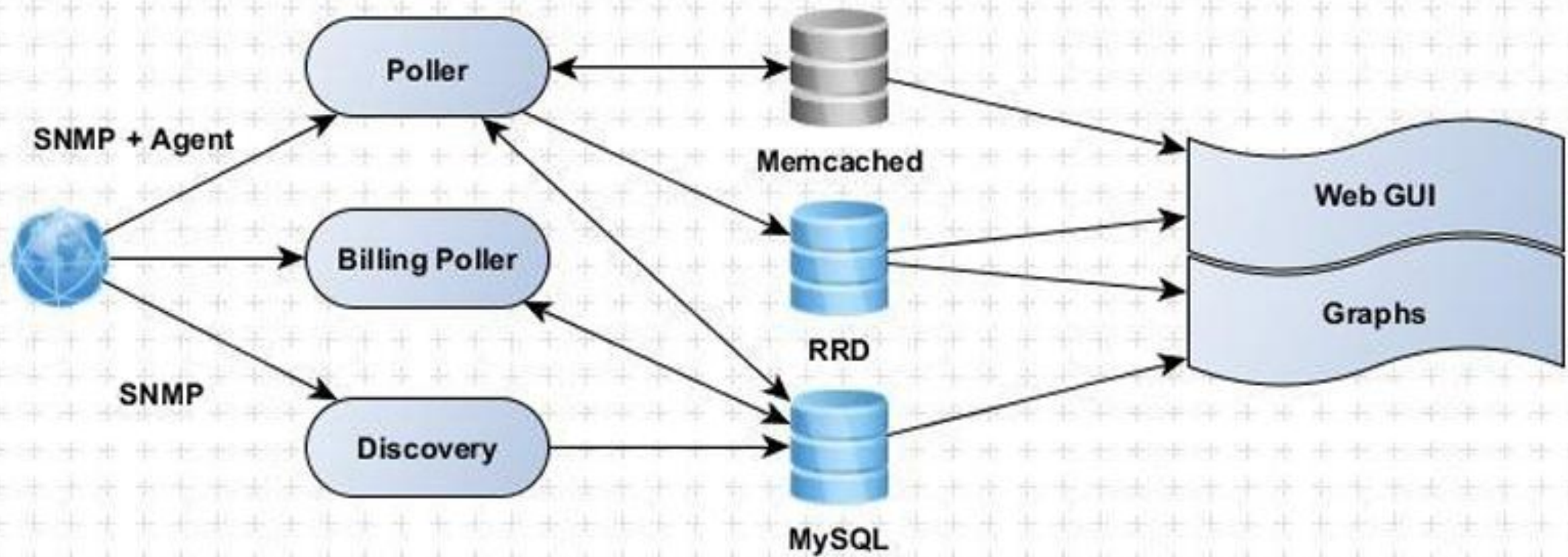
3. OBSEVIUM

- Linux distribution detection.
- Real-time interface traffic graphing.
- Device inventory collection (very useful!)
- Detailed IPv4, IPv6, TCP and UDP stack statistics.
- BGP and OSPF statistics.
- MAC / IP

<https://www.observium.org/>

3. OBSEVIUM

Architecture



3. OBSEVIUM



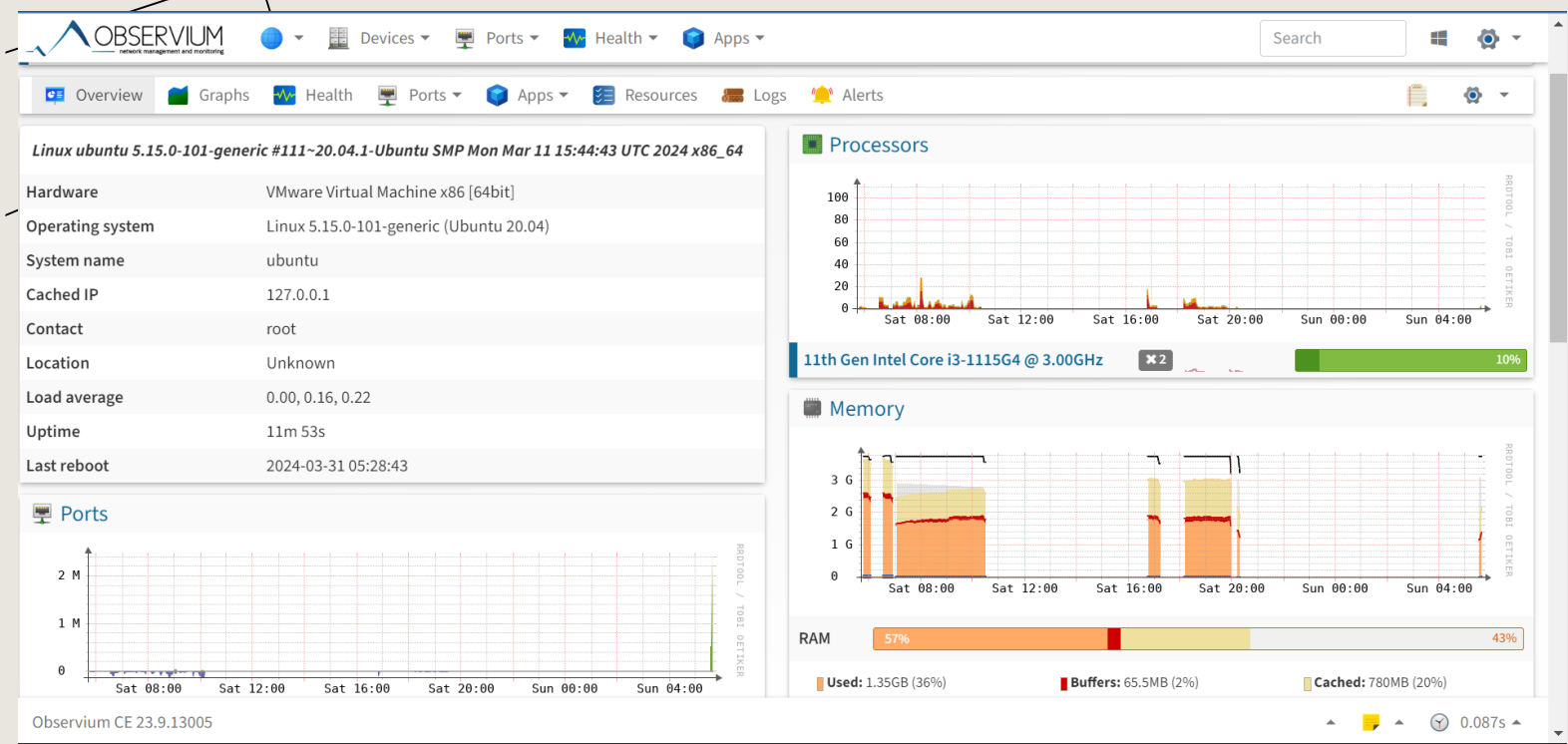
Please log in:

Username

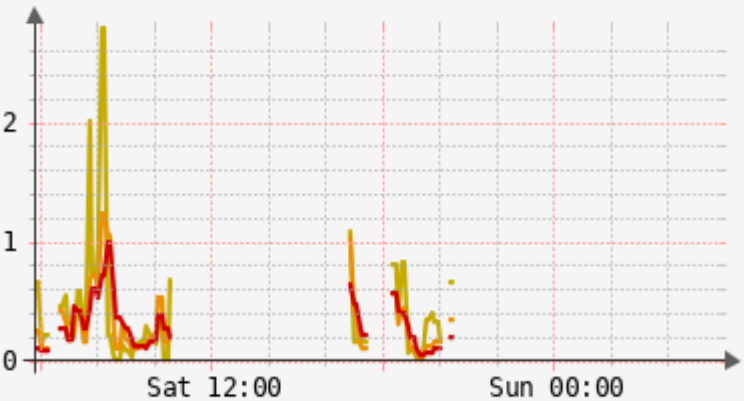
Password

☐ Remember my login

Log in



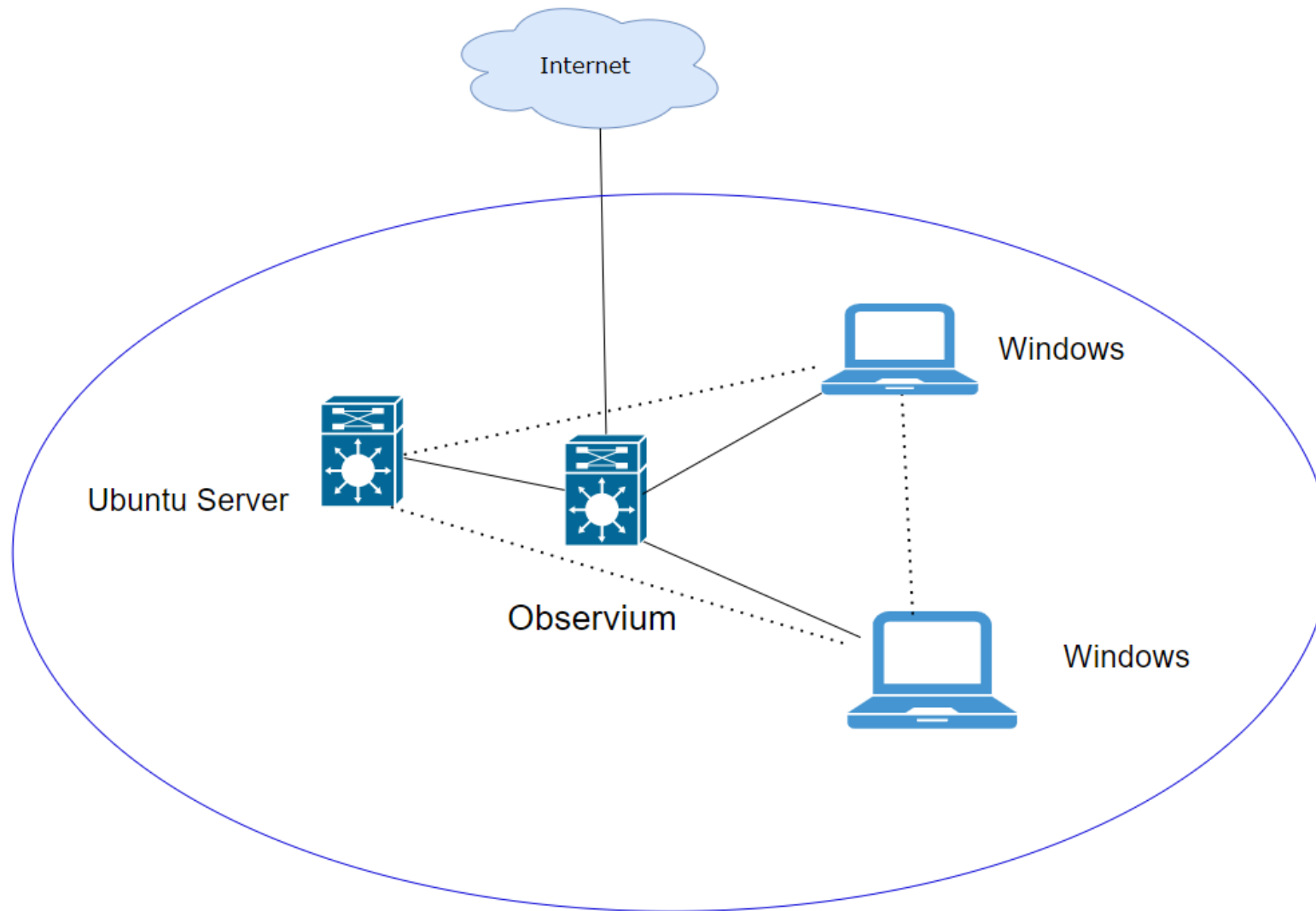
Load Averages










Load Average	Now	Avg	Max
1 Min	0.08	0.41	2.78
5 Min	0.31	0.31	1.23
15 Min	0.27	0.30	0.98

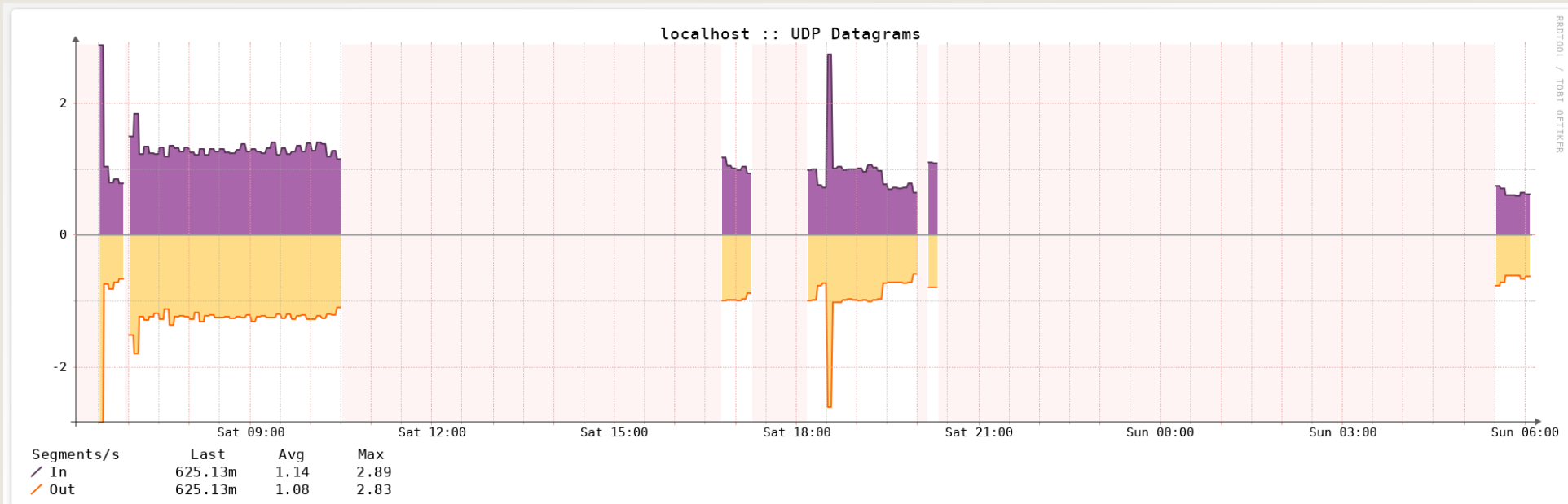
RRDTOOL / TOBI OETIKER

4. DEPLOYMENT AND RESULT

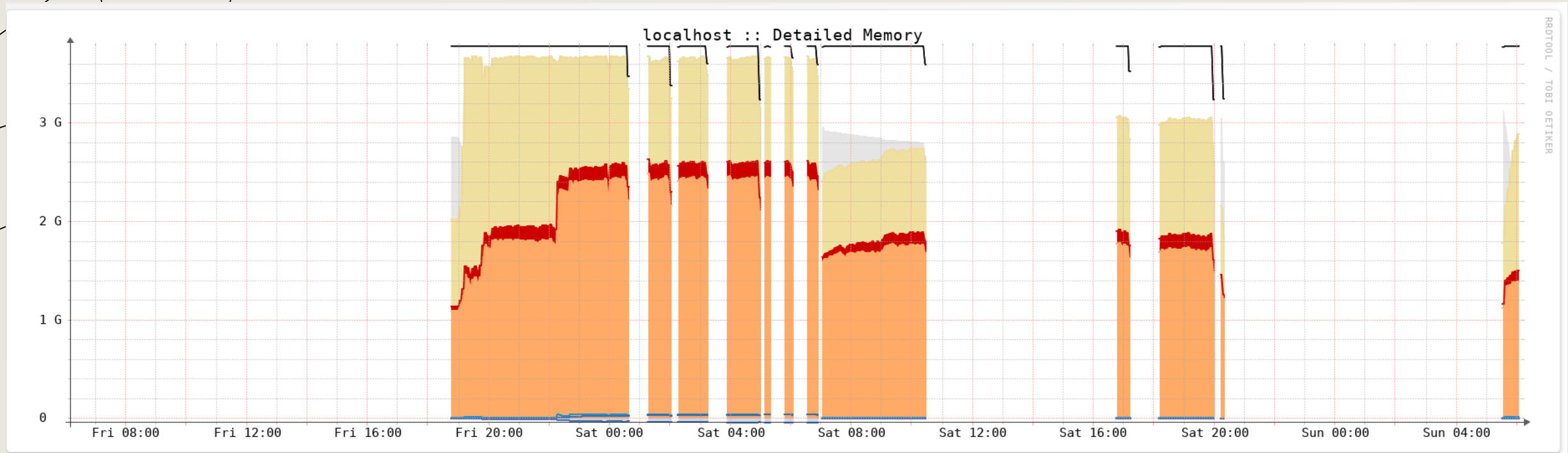


4. DEPLOYMENT AND RESULT

Hostname / Domain / Location	Operating System / Hardware Platform	Uptime / sysName
 192.168.85.150 Sitting on the Dock of the Bay	Linux 5.4.0-174-generic (Ubuntu) Generic x86 [64bit]	Down (PING) 9h 50m 25s linuxserver
 192.168.85.156	 5 Microsoft Windows 8.1, Update 1 (NT 6.3) (Multiprocessor) Intel (64-bit)	Down (PING) 19h 40m 21s win-7u0m3ag1ekn
 192.168.85.160	 4 Microsoft Windows 8.1, Update 1 (NT 6.3) (Multiprocessor) Intel (64-bit)	Down (PING) 10h 40m 26s win-a521jilv43i
 localhost Unknown	 2 Linux 5.15.0-101-generic (Ubuntu 20.04) VMware Virtual Machine x86 [64bit]	36m 52s ubuntu



4. DEPLOYMENT AND RESULT





5. DEMO