LibreNMS

All in one network graphing and monitoring

Network Monitoring and Management

Network Startup Resource Center

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LibreNMS

- SNMP-based auto-discover network monitoring
- Derived from Observium
- Written in PHP as a web application
- Includes support for a wide range of hardware:
  - Cisco, Linux, FreeBSD, Juniper, Brocade, Foundry, HP and many more
  - See http://www.observium.org/wiki/Supported_Devices

Available metrics

- CPU, memory and storage statistics
- Interface traffic, packet and detailed error statistics
- Temperature, fan speed, voltage, amperage, power humidity and frequency sensors
- Users, processes, load average and uptime statistics

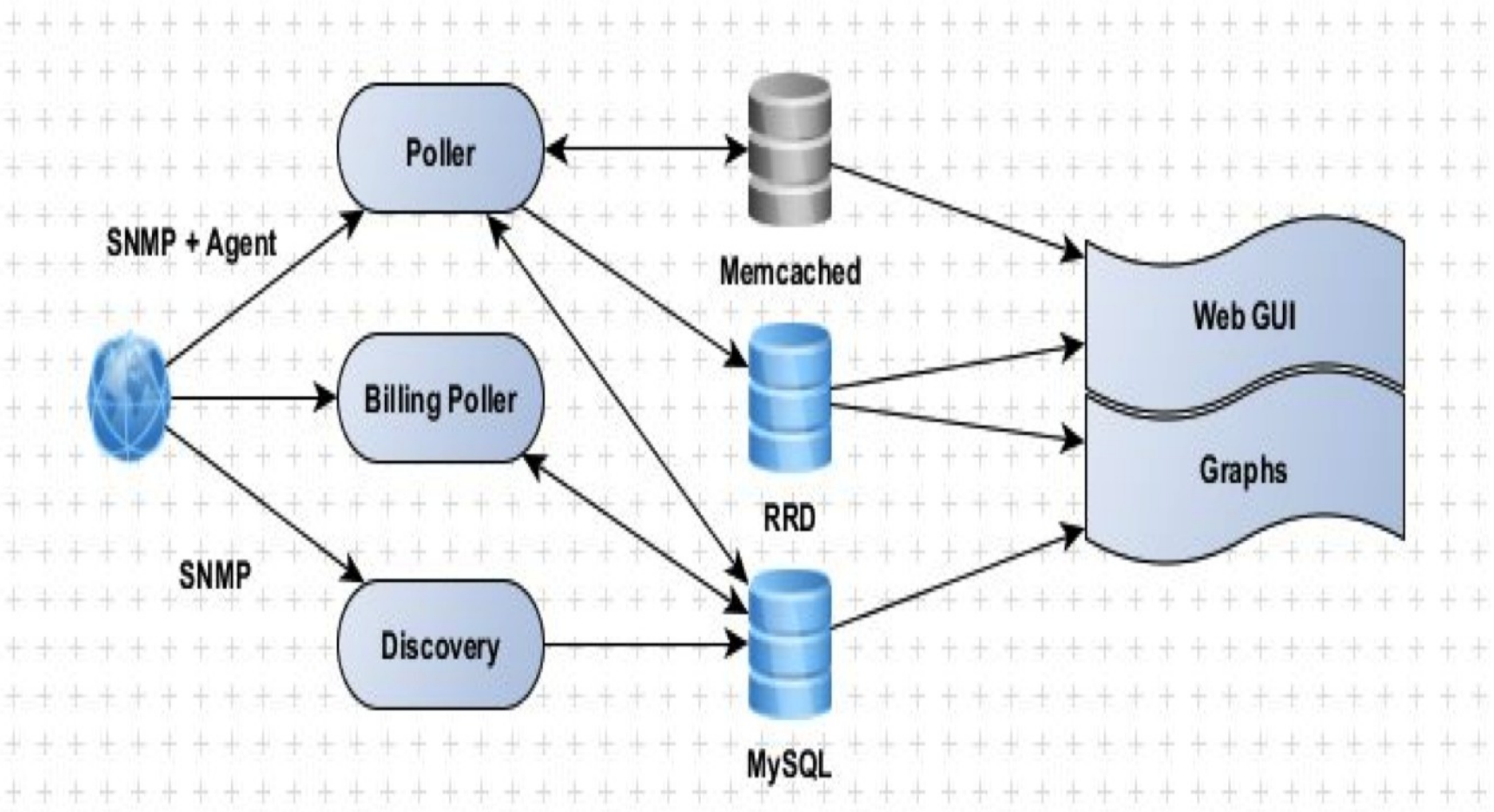
Available metrics cont.

- Linux distribution detection
- Real-time interface traffic graphing
- Device inventory collection (useful!)
- Detailed IPv4, IPv6, TCP and UDP stack statistics
- BGP And OSPF information
- Mac and IP address information

Features

- Concept of enabled vs. ignored
- Many already supported devices
- Host monitoring well supported using check_mk and support scripts
- Application monitoring using SNMP
- Billing module
- Integration with other tools:
  - Smokeping, collectd, syslog (receive logs from devices)

Architecture



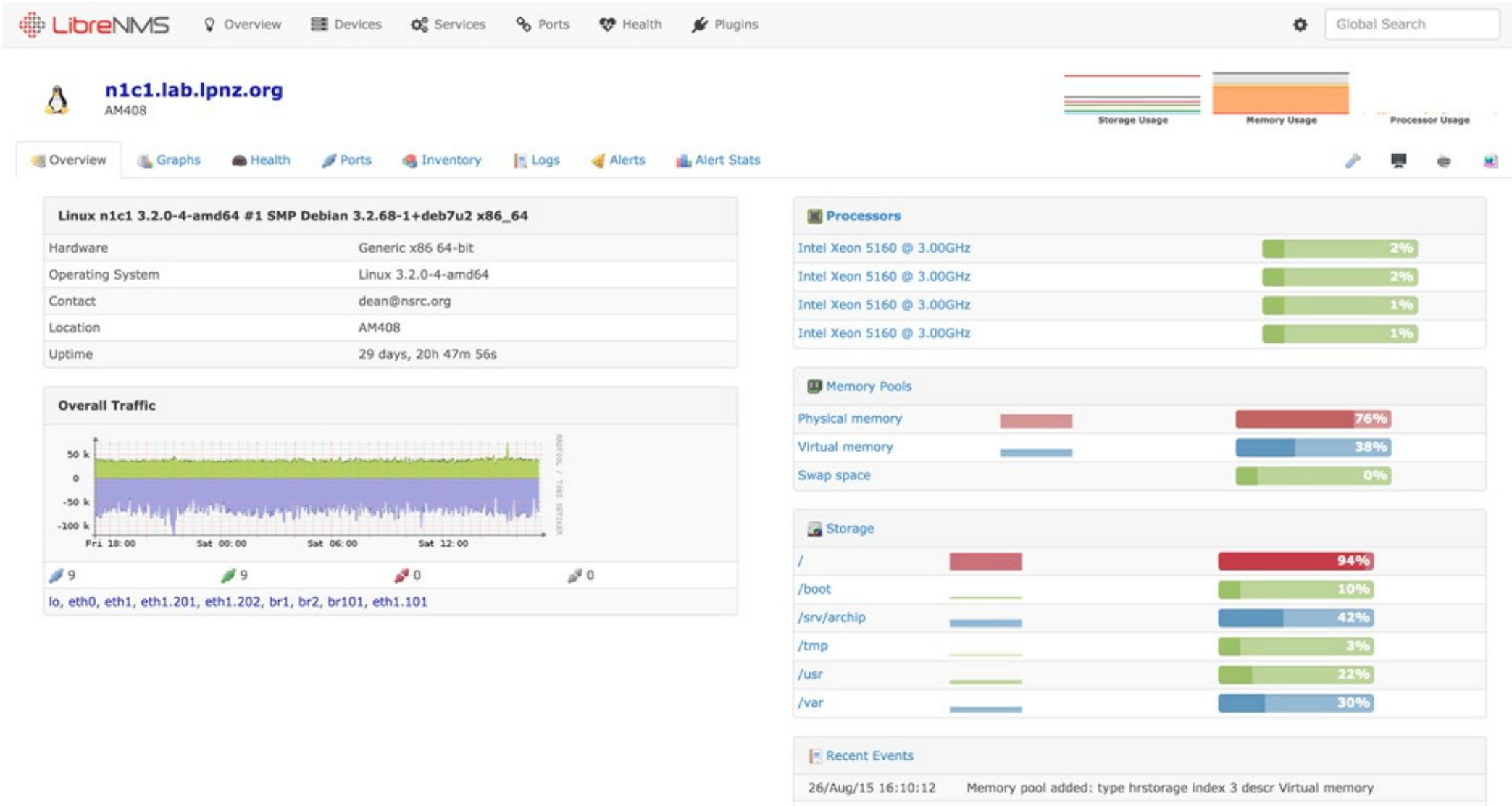
Availability

Librenms

- Fork of Observium. Open Source, Free and GPL
- https://github.com/librenms/librenms
- https://github.com/librenms/librenms/blob/master/doc/General/Welcome-to-Observium-users.md

Screen shots

These are from LibreNMS. This is the version we will use in class and in our labs.


LibreNMS
Overview
Devices
Services
Ports
Health
Plugins
Global Search
n1c1.lab.lpnz.org
AM408
Storage Usage
Memory Usage
Processor Usage
Overview
Graphs
Health
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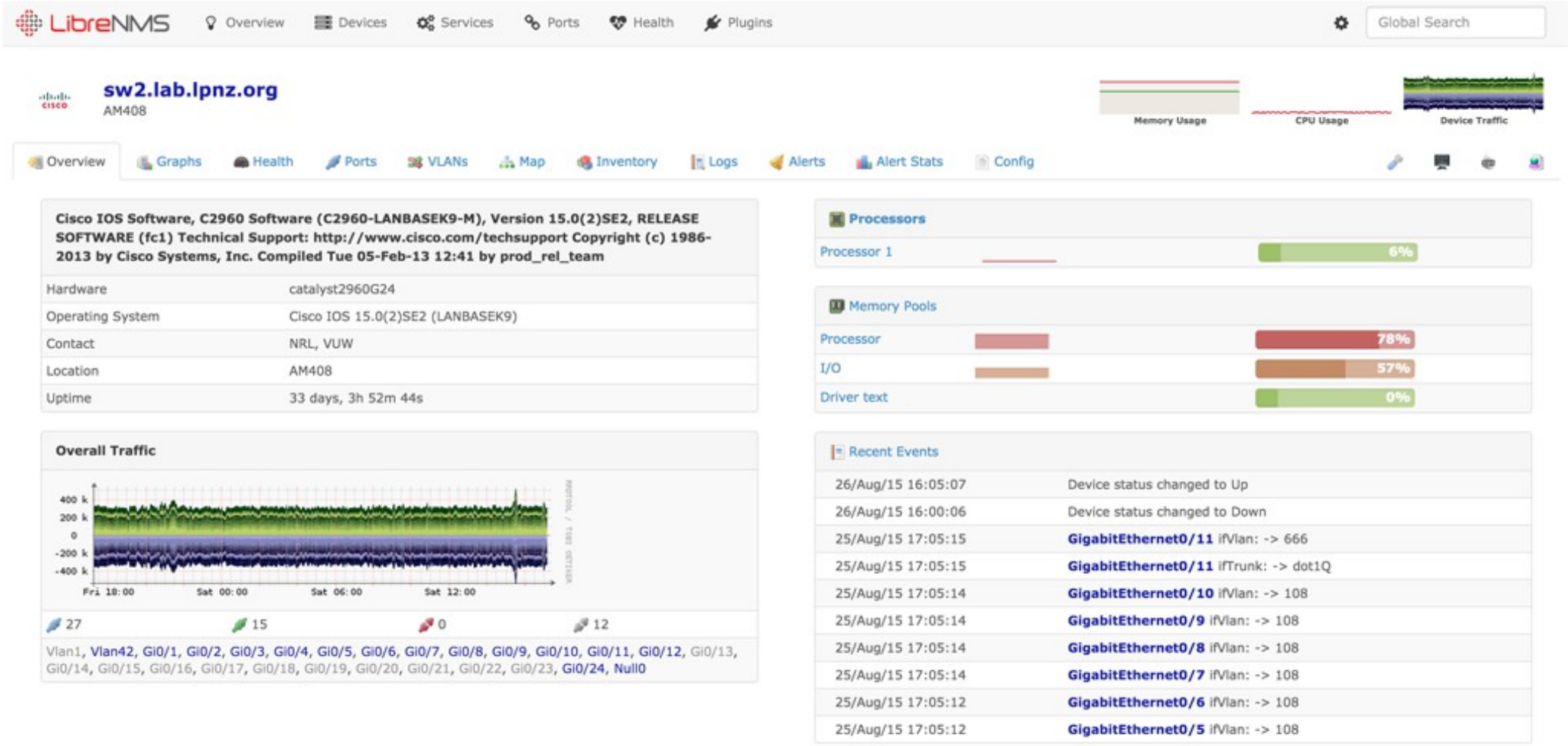
Logs
Alerts
Alert Stats
Linux n1c1 3.2.0-4-amd64 #1 SMP Debian 3.2.68-1+deb7u2 x86_64
Hardware
Generic x86 64-bit
Operating System
Linux 3.2.0-4-amd64
Contact
dean@nsrc.org
Location
AM408
Uptime
29 days, 20h 47m 56s
Overall Traffic
50 k
0
-50 k
-100 k
Fri 18:00
Sat 00:00
Sat 06:00
Sat 12:00
9
9
0
0
lo, eth0, eth1, eth1.201, eth1.202, br1, br2, br101, eth1.101
Processors
Intel Xeon 5160 @ 3.00GHz
2%
Intel Xeon 5160 @ 3.00GHz
2%
Intel Xeon 5160 @ 3.00GHz
1%
Intel Xeon 5160 @ 3.00GHz
1%
Memory Pools
Physical memory
76%
Virtual memory
38%
Swap space
0%
Storage
/
94%
/boot
10%
/srv/archip
42%
/tmp
3%
/usr
22%
/var
30%
Recent Events
26/Aug/15 16:10:12
Memory pool added: type hrstorage index 3 descr Virtual memory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sw2.lab.lpnz.org
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Memory Usage
CPU Usage
Device Traffic
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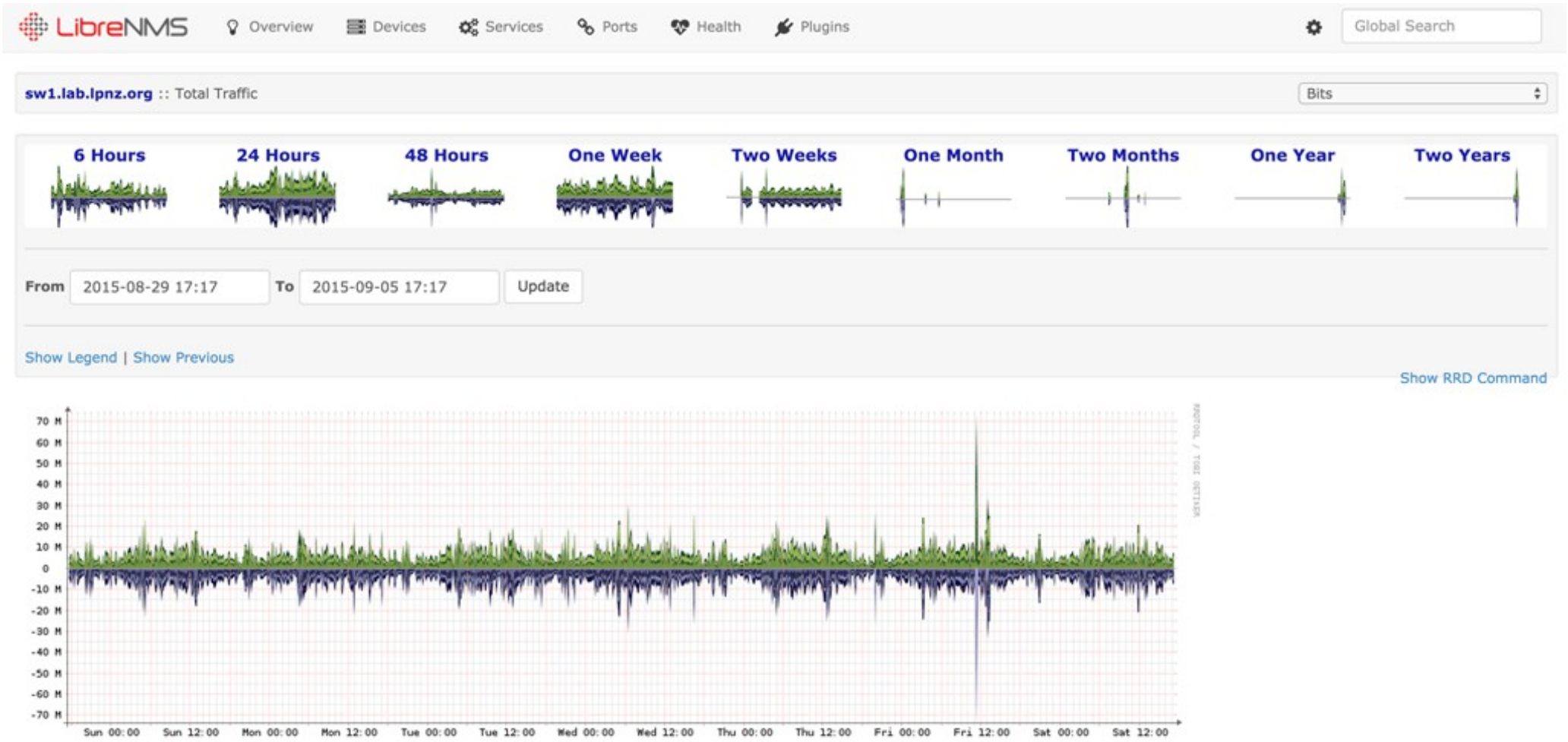
Alert Stats
Config
Cisco IOS Software, C2960 Software (C2960-LANBASEK9-M), Version 15.0(2)SE2, RELEASE SOFTWARE (fc1) Technical Support: http://www.cisco.com/techsupport Copyright (c) 1986-2013 by Cisco Systems, Inc. Compiled Tue 05-Feb-13 12:41 by prod_rel_team
Hardware catalyst2960G24
Operating System Cisco IOS 15.0(2)SE2 (LANBASEK9)
Contact NRL, VUW
Location AM408
Uptime 33 days, 3h 52m 44s
Processors
Processor 1 6%
Memory Pools
Processor 78%
I/O 57%
Driver text 0%
Overall Traffic
400 k
200 k
0
-200 k
-400 k
Fri 18:00
Sat 00:00
Sat 06:00
Sat 12:00
27
15
0
12
Vlan1, Vlan42, Gi0/1, Gi0/2, Gi0/3, Gi0/4, Gi0/5, Gi0/6, Gi0/7, Gi0/8, Gi0/9, Gi0/10, Gi0/11, Gi0/12, Gi0/13, Gi0/14, Gi0/15, Gi0/16, Gi0/17, Gi0/18, Gi0/19, Gi0/20, Gi0/21, Gi0/22, Gi0/23, Gi0/24, Null0
Recent Events
26/Aug/15 16:05:07 Device status changed to Up
26/Aug/15 16:00:06 Device status changed to Down
25/Aug/15 17:05:15 GigabitEthernet0/11 ifVlan: -> 666
25/Aug/15 17:05:15 GigabitEthernet0/11 ifTrunk: -> dot1Q
25/Aug/15 17:05:14 GigabitEthernet0/10 ifVlan: -> 108
25/Aug/15 17:05:14 GigabitEthernet0/9 ifVlan: -> 108
25/Aug/15 17:05:14 GigabitEthernet0/8 ifVlan: -> 108
25/Aug/15 17:05:14 GigabitEthernet0/7 ifVlan: -> 108
25/Aug/15 17:05:12 GigabitEthernet0/6 ifVlan: -> 108
25/Aug/15 17:05:12 GigabitEthernet0/5 ifVlan: -> 108


LibreNMS
Overview
Devices
Services
Ports
Health
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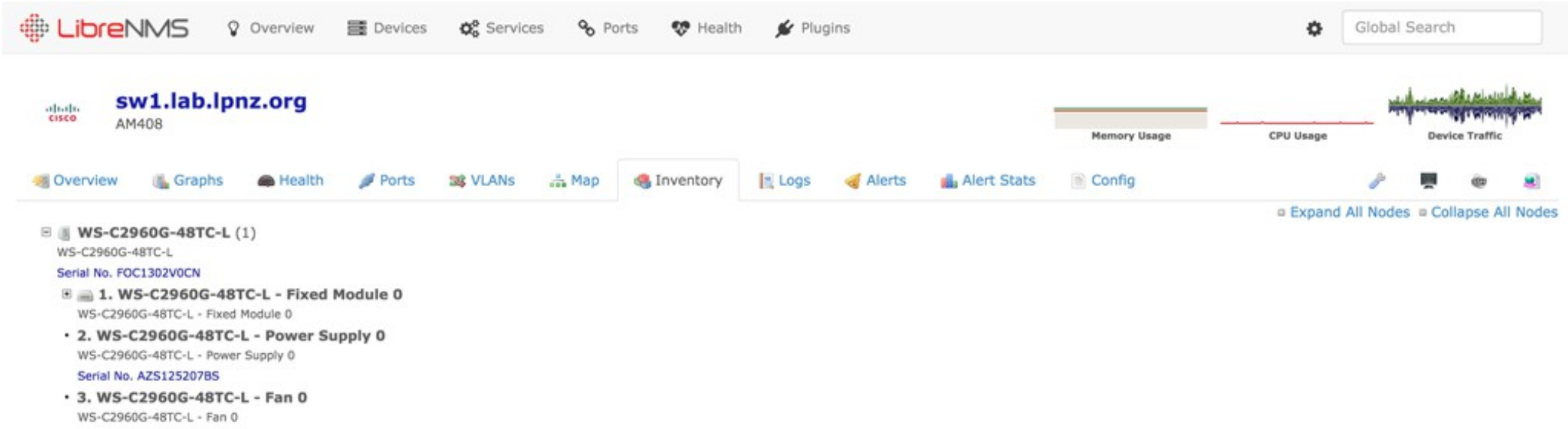
Global Search
sw1.lab.lpnz.org :: Total Traffic
Bits
6 Hours
24 Hours
48 Hours
One Week
Two Weeks
One Month
Two Months
One Year
Two Years
From
2015-08-29 17:17
To
2015-09-05 17:17
Update
Show Legend | Show Previous
Show RRD Command
70 M
60 M
50 M
40 M
30 M
20 M
10 M
0
-10 M
-20 M
-30 M
-40 M
-50 M
-60 M
-70 M
Sun 00:00
Sun 12:00
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00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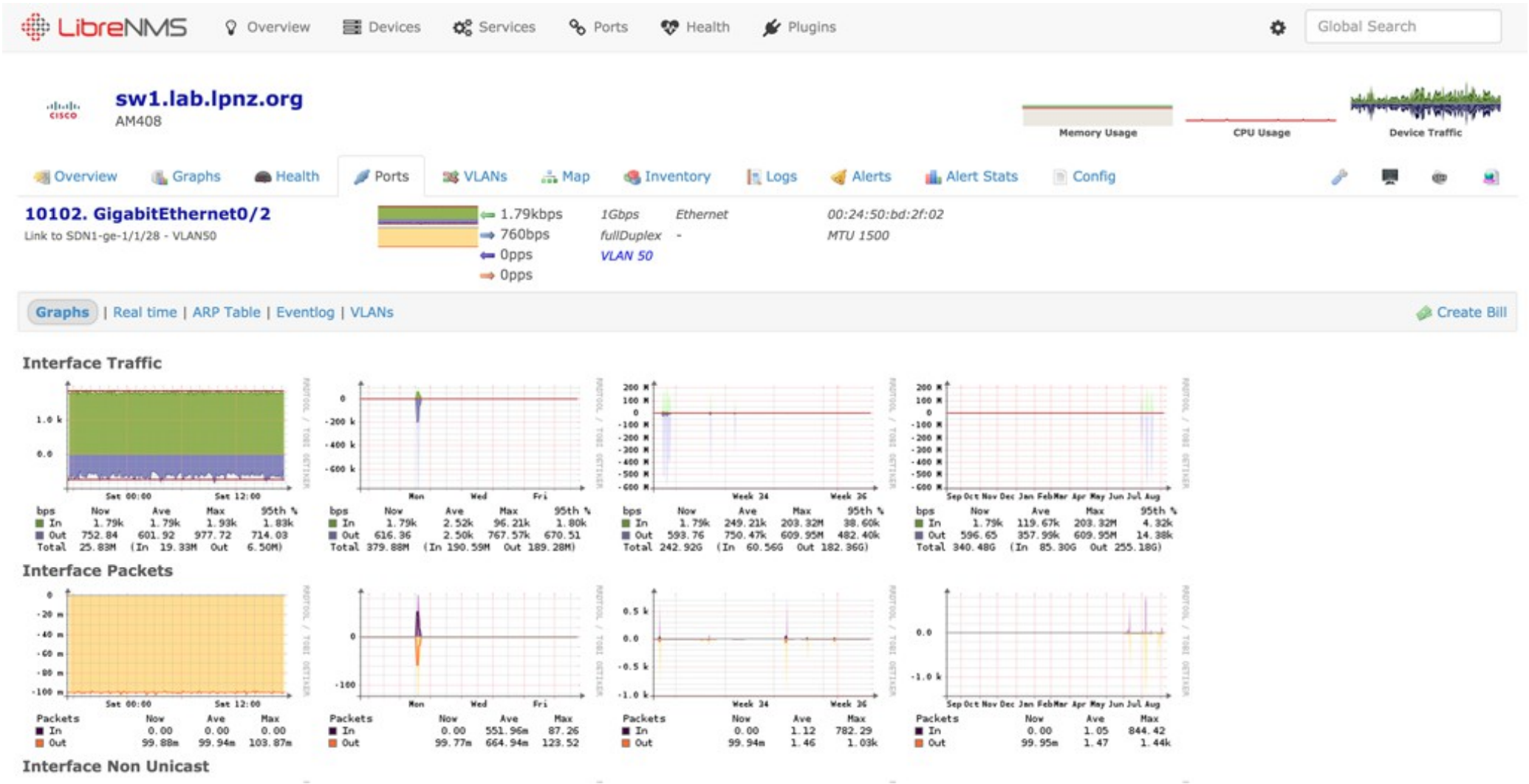
Alerts
Alert Stats
Config
Expand All Nodes
Collapse All Nodes
WS-C2960G-48TC-L (1)
WS-C2960G-48TC-L
Serial No. FOC1302V0CN
1. WS-C2960G-48TC-L - Fixed Module 0
WS-C2960G-48TC-L - Fixed Module 0
2. WS-C2960G-48TC-L - Power Supply 0
WS-C2960G-48TC-L - Power Supply 0
Serial No. AZS125207BS
3. WS-C2960G-48TC-L - Fan 0
WS-C2960G-48TC-L - Fan 0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Alert Stats
Config
10102. GigabitEthernet0/2
Link to SDN1-ge-1/1/28 - VLAN50
1.79kbps
760bps
0pps
0pps
1Gbps
fullDuplex
VLAN 50
Ethernet
-
00:24:50:bd:2f:02
MTU 1500
Graphs | Real time | ARP Table | Eventlog | VLANs
Create Bill
Interface Traffic
Interface Packets
Interface Non Unicast

Online LibreNMS demo

Is available at:

https://demo.librenms.org/

Workshop installation is at:

http://librenms.ws.nsrc.org/

Questions

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