Campus Network Design Workshop

LibreNMS

All in one network graphing and monitoring

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NSRC
Network Startup Resource Center

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.librenms.org

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

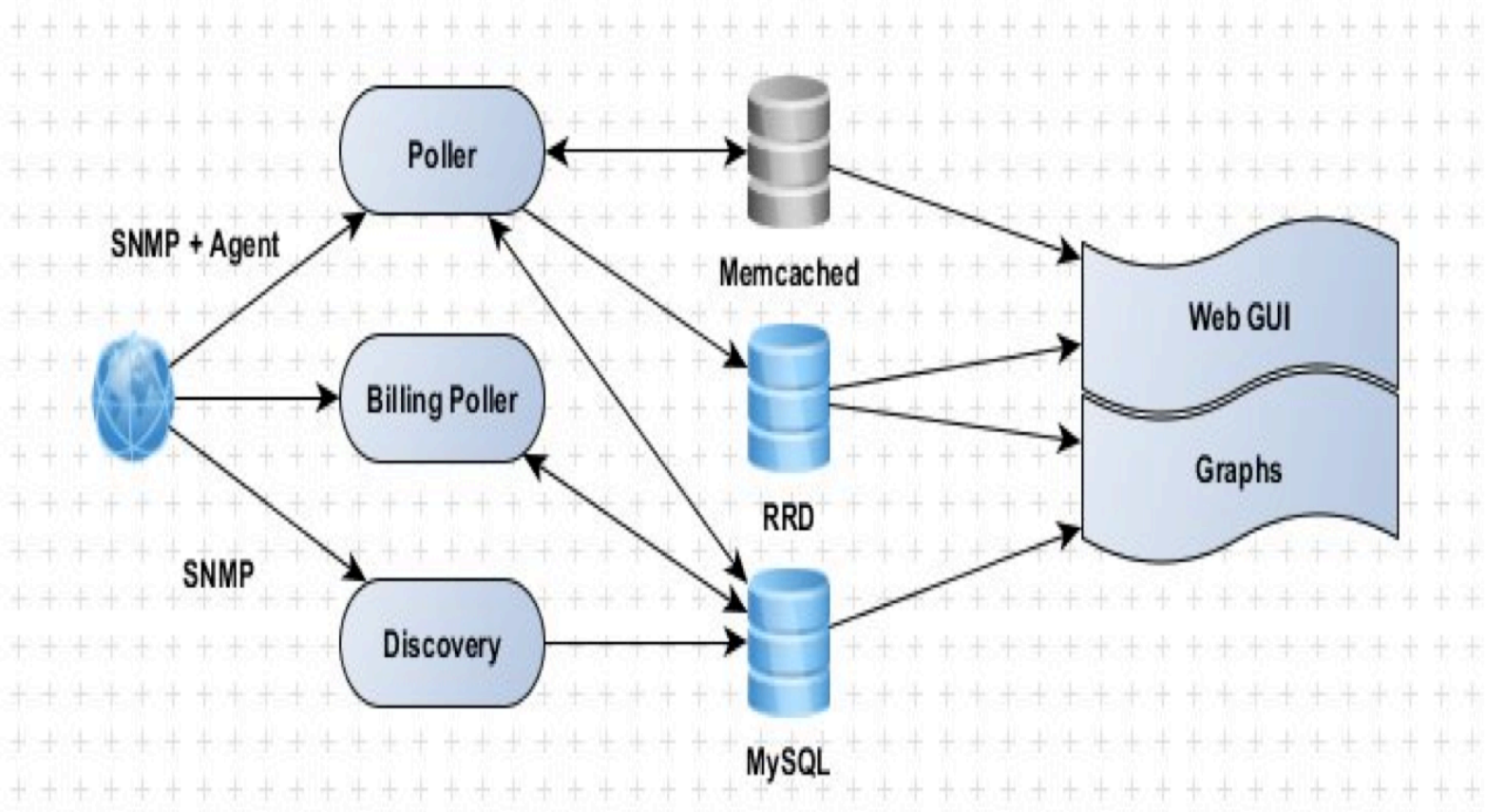
...Available metrics

- 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, nfsen, rancid, syslog (receive logs from devices)
- Alerting

Architecture

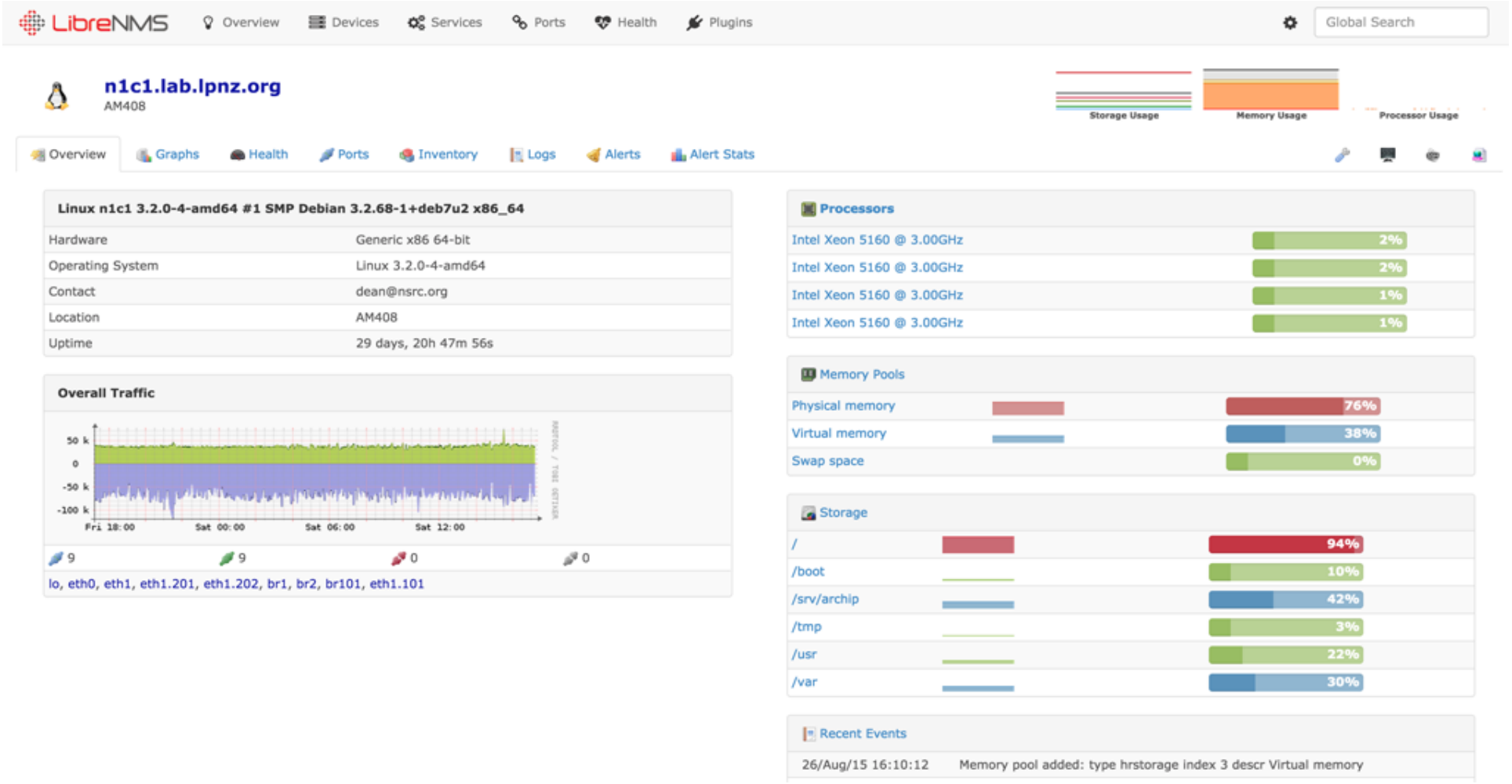


Availability

- LibreNMS
  - Fork of Observium. Open Source, Free and GPL
  - http://www.librenms.org/
  - Available as a git download of PHP code
    - https://github.com/librenms/librenms
    - https://github.com/librenms/librenms/blob/master/doc/General/Welcome-to-Observium-users.md
  - Available as an Ubuntu based appliance

Screen shots

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



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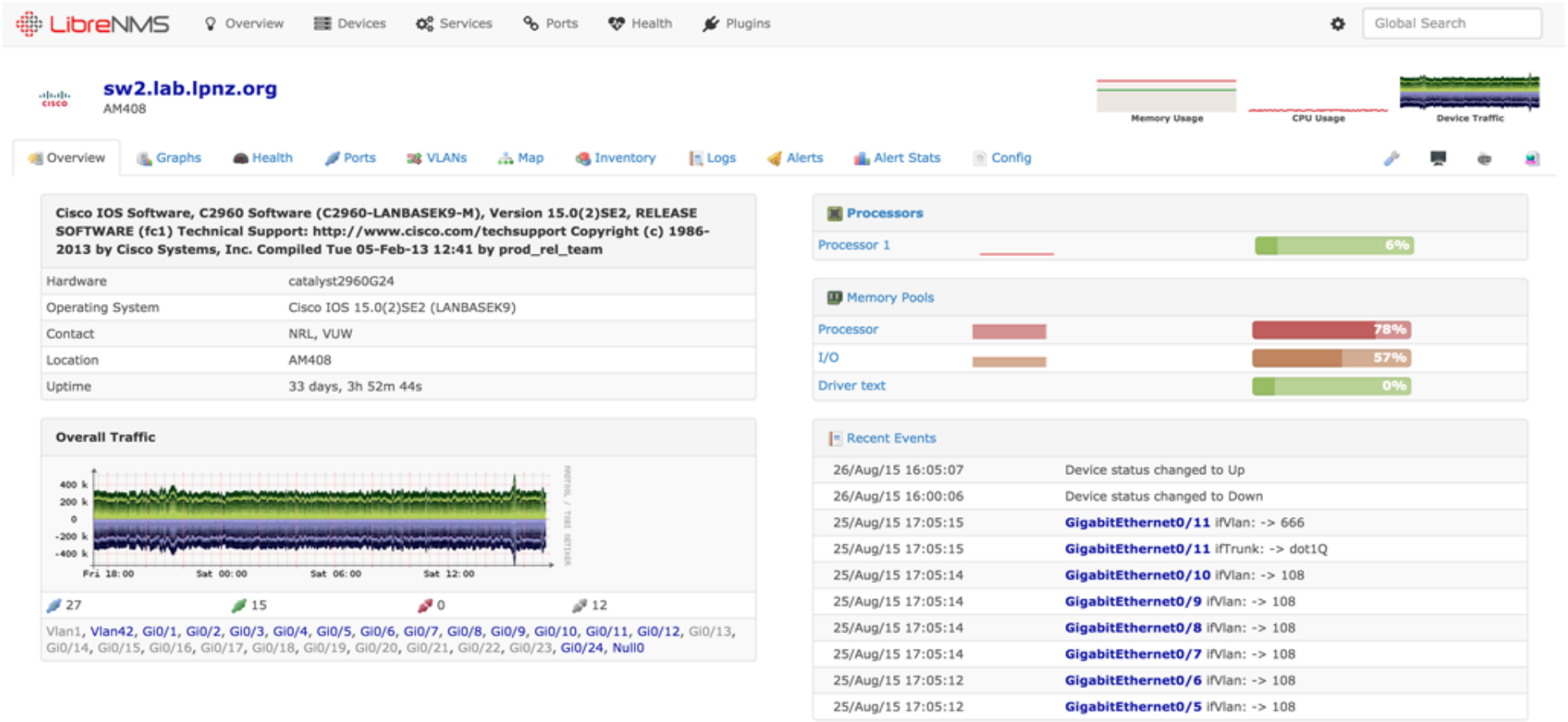

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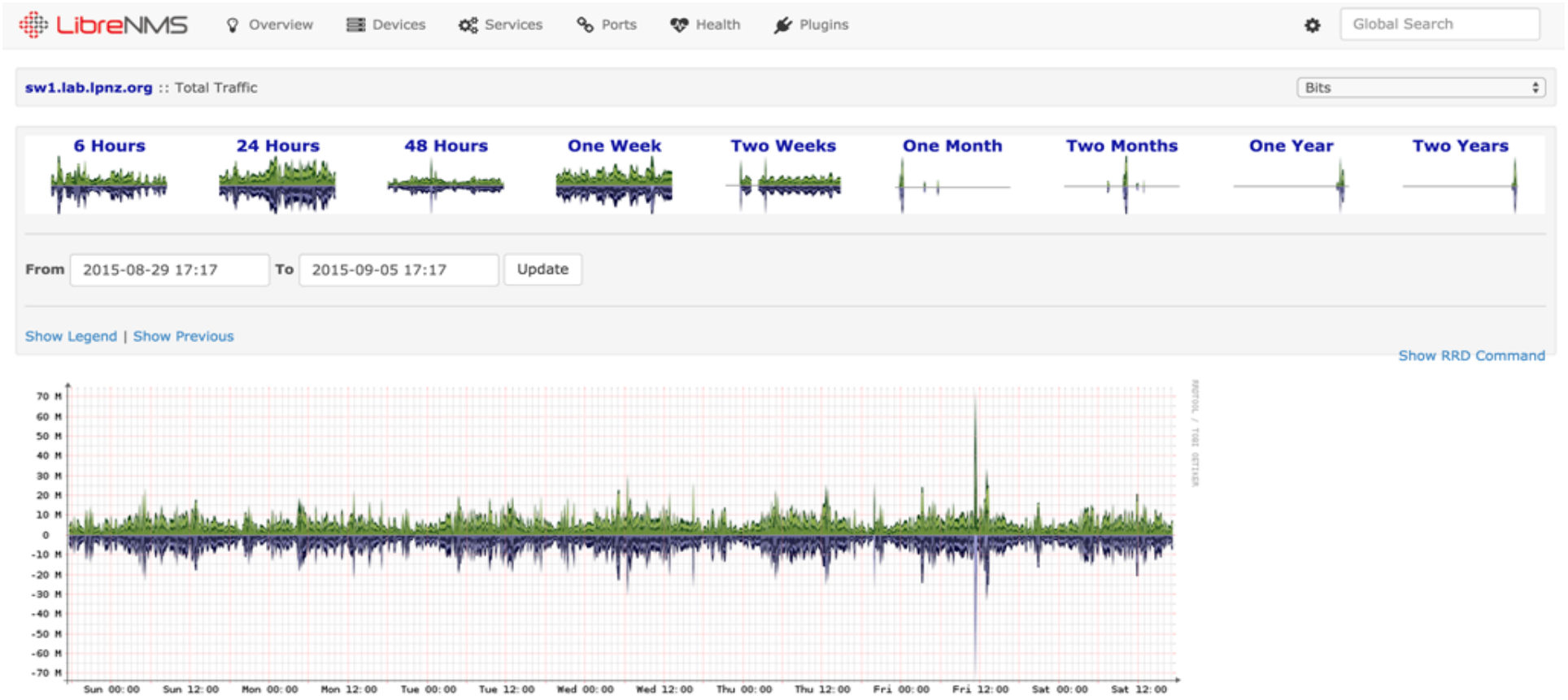

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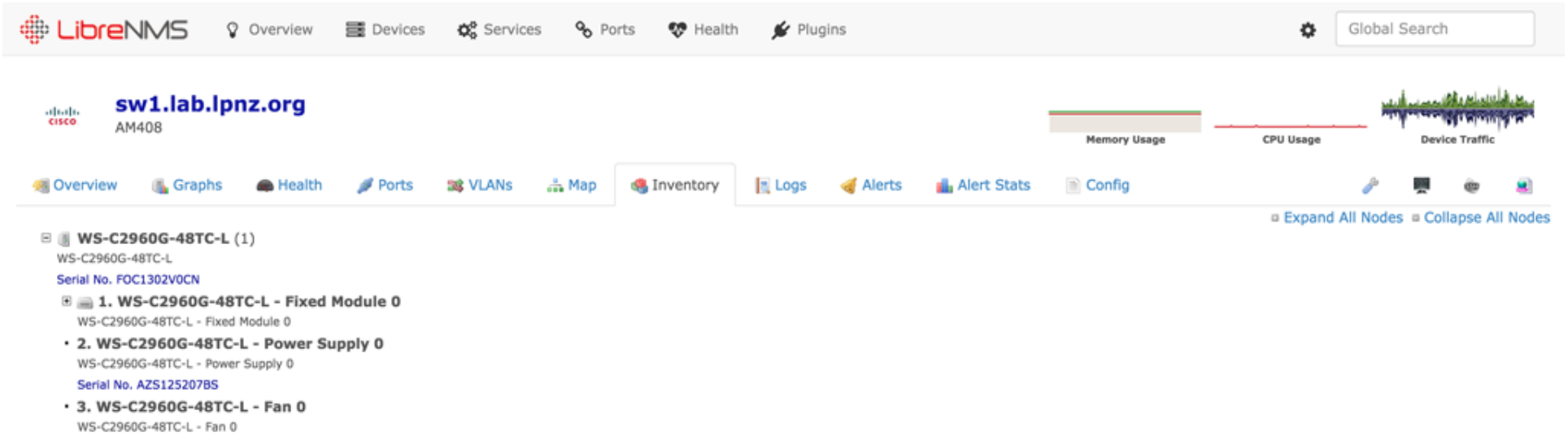
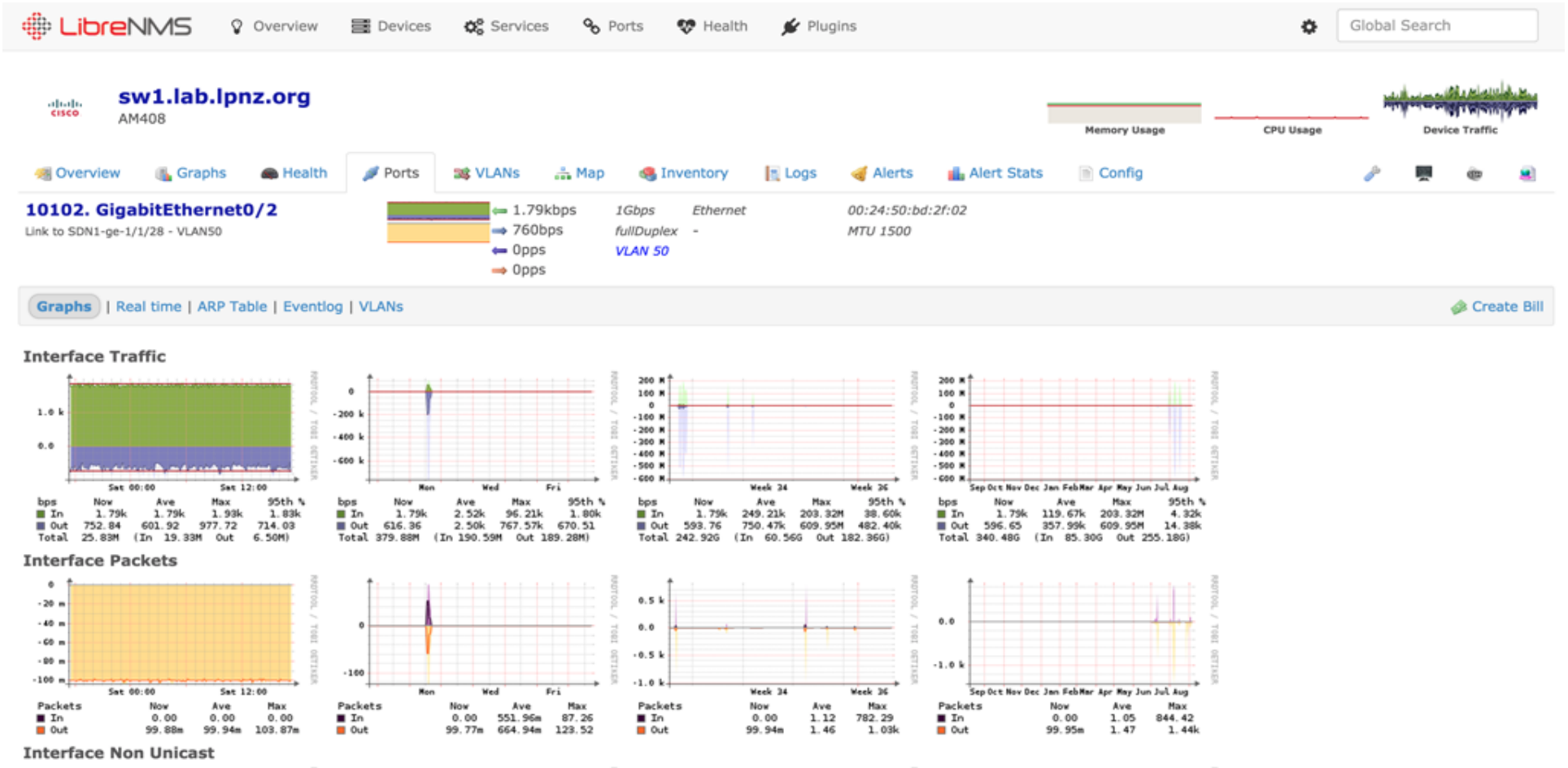

LibreNMS
Overview
Devices
Services
Ports
Health
Plugins
Global Search
sw1.lab.lpnz.org
AM408
Memory Usage
CPU Usage
Device Traffic
Overview
Graphs
Health
Ports
VLANs
Map
Inventory
Logs
Alerts
Alert Stats
Config
Expand All Nodes
Collapse All Nodes
WS-C2960G-48TC-L (1)
WS-C2960G-48TC-L
Serial No. FOC1302V0CN
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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Online demo

- https://demo.librenms.org/
  - User: admin
  - Pass: admin

Questions?

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