

Campus Network Design Workshop

LibreNMS

All in one network graphing and
monitoring

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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.librenms.org>



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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



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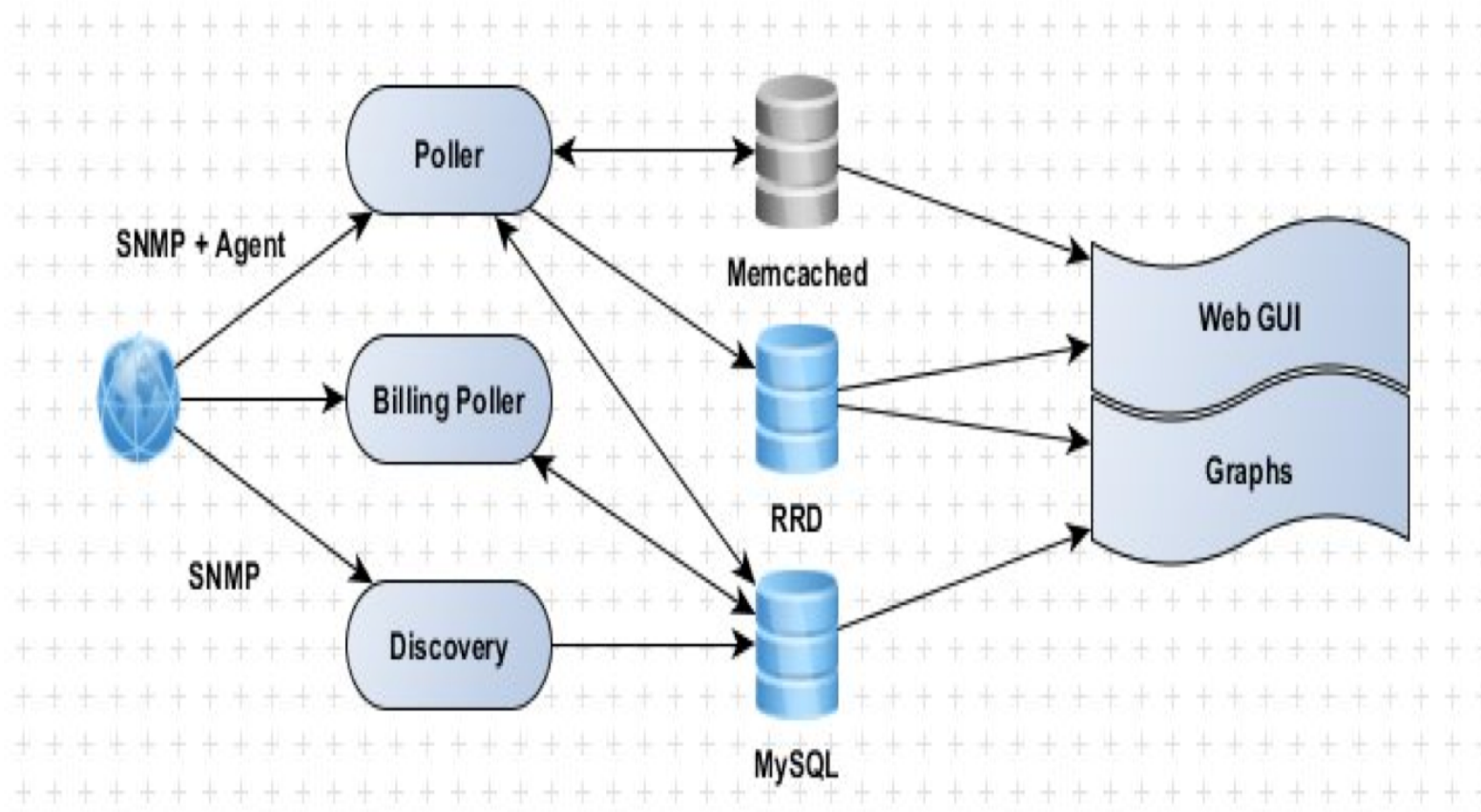
...Available metrics

- 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



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Availability

- LibreNMS
 - Fork of Observium. Open Source, Free and GPL
 - <http://www.librenms.org/>
 - Available as a git download of PHP code
 - Available as an Ubuntu based appliance

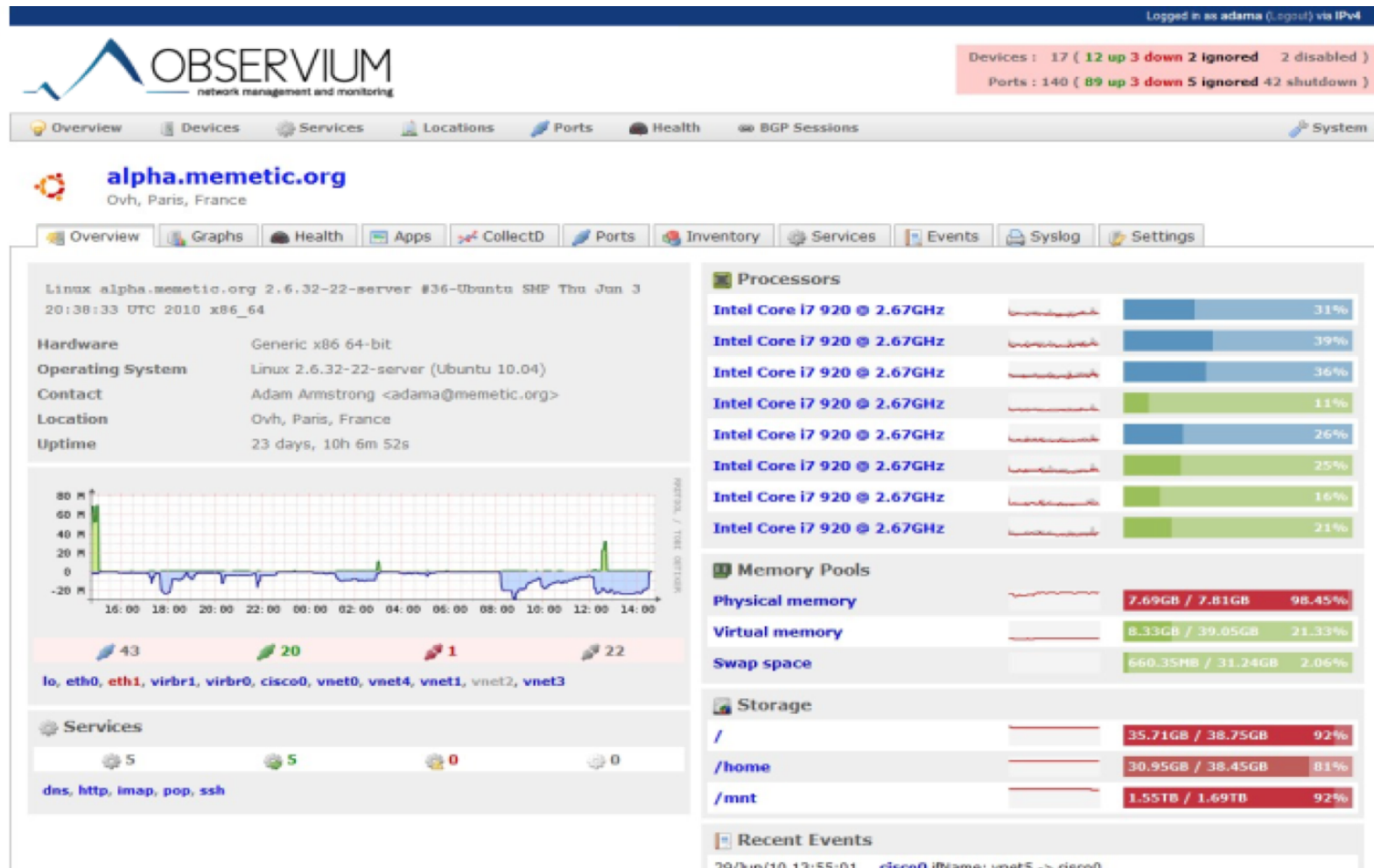


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Screen shots

- These are from the Observium Open Source version.
- LibreNMS is similar in appearance



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Devices : 17 (12 up 3 down 2 ignored 2 disabled)

Ports : 140 (89 up 3 down 5 ignored 42 shutdown)

Overview

Devices

Services

Locations

Ports

Health

BGP Sessions

System



cisco0.vm

Belly of Alpha

Overview

Graphs

Health

Ports

BGP

Map

Inventory

Events

Syslog

Config

Settings

Cisco IOS Software, 7200 Software (C7200-ADVIPSERVICESK9-M), Version 12.2(33)SRD2, RELEASE SOFTWARE (fc2) Technical Support: <http://www.cisco.com/techsupport> Copyright (c) 1986-2009 by Cisco Systems, Inc. Compiled Wed 20-May-09 20:57 by prod_rel_team

Hardware

CISCO7206VXR

Operating System

Cisco IOS 12.2(33)SRD2 (ADVIPSERVICESK9)

Location

Belly of Alpha

Uptime

15 days, 16m 15s



16

7

0

9

Fa0/0, Fa1/0, Fa1/1, Et2/0, Et2/1, Et2/3, Et2/2, Et2/4, Et2/5, Et2/6, Et2/7, Fa3/0, Fa3/1, Null0, Lo0, Lo100

Recent Syslog

14/Jul/10 14:07:58

CLNS-3-BADPACKET : ISIS: L2 CSNP, packet (64769) or wire (115) length invalid from ca01.3979.001c (FastEthernet1/0)

14/Jul/10 14:07:36

CLNS-5-ADJCHANGE : ISIS: Adjacency to 0110.0000.0001 (FastEthernet1/0) Down, hold time expired

Processors

NPE400 0

10%

Memory Pools

7200VXR NPE-400 - I/O

5.38MB / 16MB

33.66%

7200VXR NPE-400 - Processor

40.02MB / 151.46MB

26.42%

7200VXR NPE-400 - Transient

91.5KB / 16MB

0.56%

Temperatures

I/O Cont Inlet

22°C

NPE Inlet

22°C

I/O Cont Outlet

22°C

NPE Outlet

22°C

Recent Events

04/Jul/10 20:07:14

Loopback100 ifName: Tu0 -> Lo100

04/Jul/10 20:07:14

Loopback100 ifDescr: Tunnel0 -> Loopback100

04/Jul/10 20:07:14

Loopback100 ifAlias: -> Cust: Memetic (Loopback fake)

04/Jul/10 20:07:14

Loopback100 ifMtu: 17883 -> 1514

04/Jul/10 20:07:14

Loopback100 ifSpeed: 100000 -> 4294967295

04/Jul/10 20:07:14

Loopback100 ifHighSpeed: 0 -> 8000

04/Jul/10 20:07:14

Loopback100 ifType: tunnel -> softwareLoopback

04/Jul/10 20:07:14

Loopback100 type: -> Cust

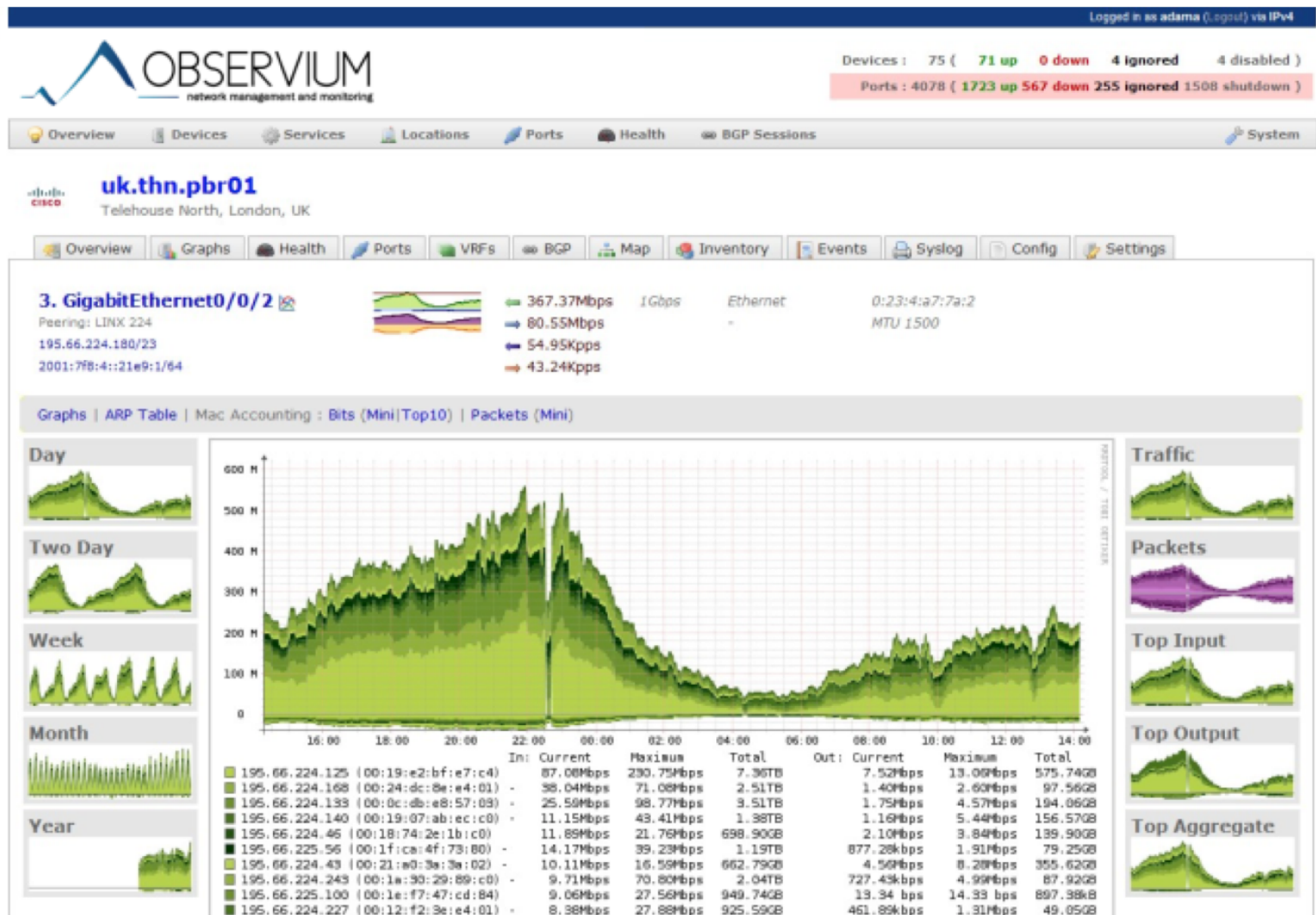
04/Jul/10 20:07:14

Loopback100 descr: -> Memetic

04/Jul/10 20:07:14

Loopback100 notes: -> Loopback fake

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Expand All Nodes

Collapse All Nodes

CISCO7206VXR (Chassis)

Cisco 7206VXR, 6-slot chassis

Serial No. 4294967295

1. I/O and CPU Slot 0

I/O and Processor Slot Container

1. NPE-400 (NPE400 0)

Cisco 7200VXR Network Processing Engine NPE-400

Serial No. 111111111

2. C7200-IO-FE-MII/RJ45 (module 0)

I/O FastEthernet (TX-ISL)

Serial No. 4294967295

1. FastEthernet0/0

DEC21140

1. I/O Cont Inlet Temperature 0 ()

I/O Cont Inlet Temperature Sensor

2. I/O Cont Outlet Temperature 0 ()

I/O Cont Outlet Temperature Sensor

1. Flash Card Slot Container I/O 0

Flash Card Slot Container I/O

2. PA Slot 1

PA Slot Container

3. PA Slot 2

PA Slot Container

1. PA-2FE-FX (module 2)

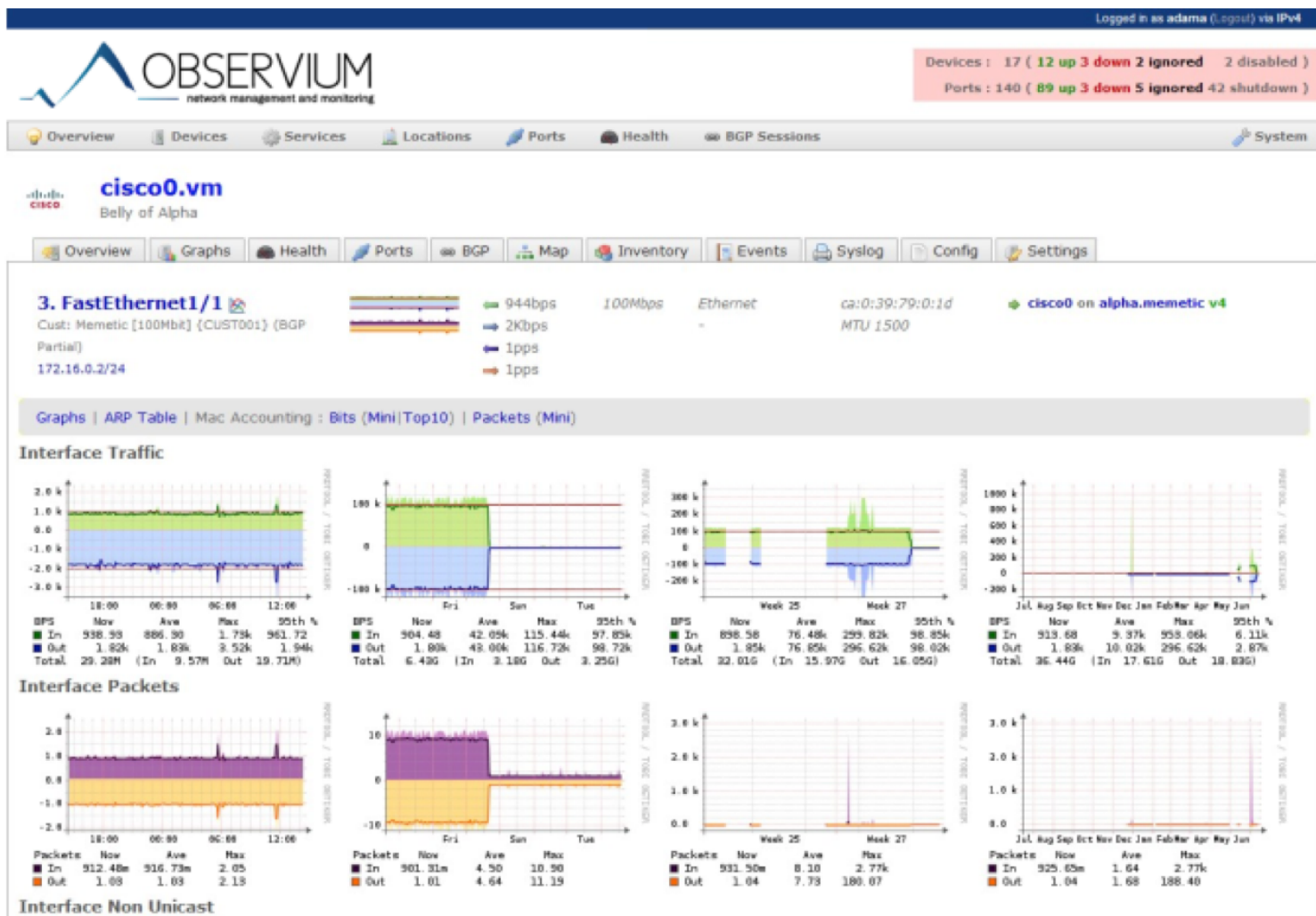
Dual Port FastEthernet (RJ45)

Serial No. XXX00000000

4. PA Slot 3

PA Slot Container

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Online demo

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



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Questions?

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