



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

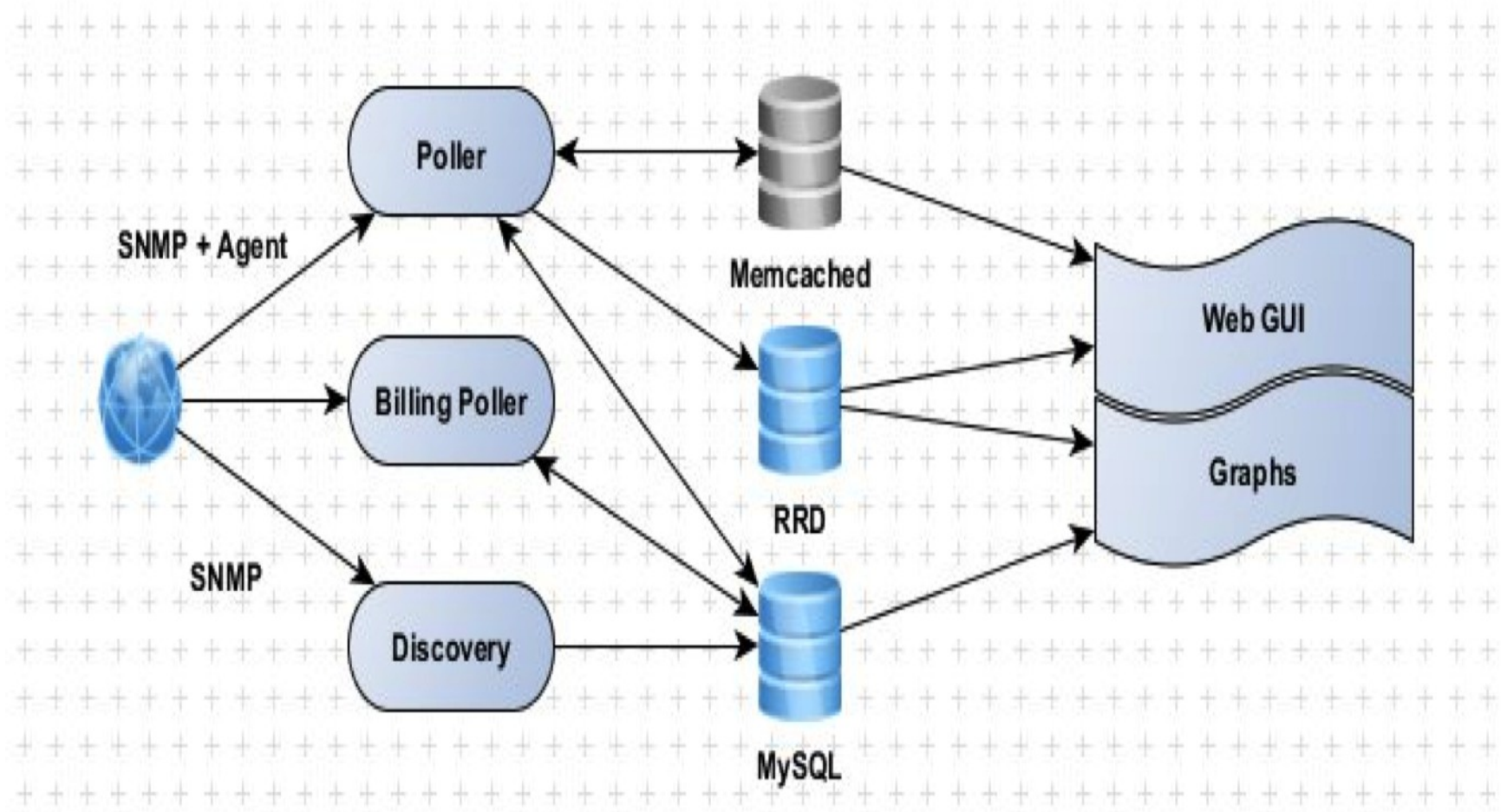
Available metrics cont.

- 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.

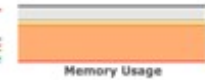


n1c1.lab.lpnz.org

AM408



Storage Usage



Memory Usage



Processor Usage

Overview

Graphs

Health

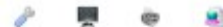
Ports

Inventory

Logs

Alerts

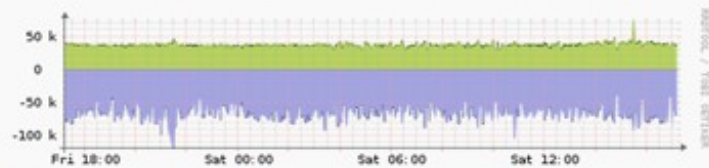
Alert Stats



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



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

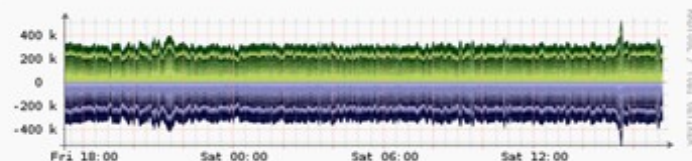
26/Aug/15 16:10:12 Memory pool added: type hrstorage index 3 descr Virtual memory



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

Overall Traffic



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

Processors

Processor 1 6%

Memory Pools

Processor 78%
I/O 57%
Driver text 0%

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

sw1.lab.lpnz.org :: Total Traffic

Bits

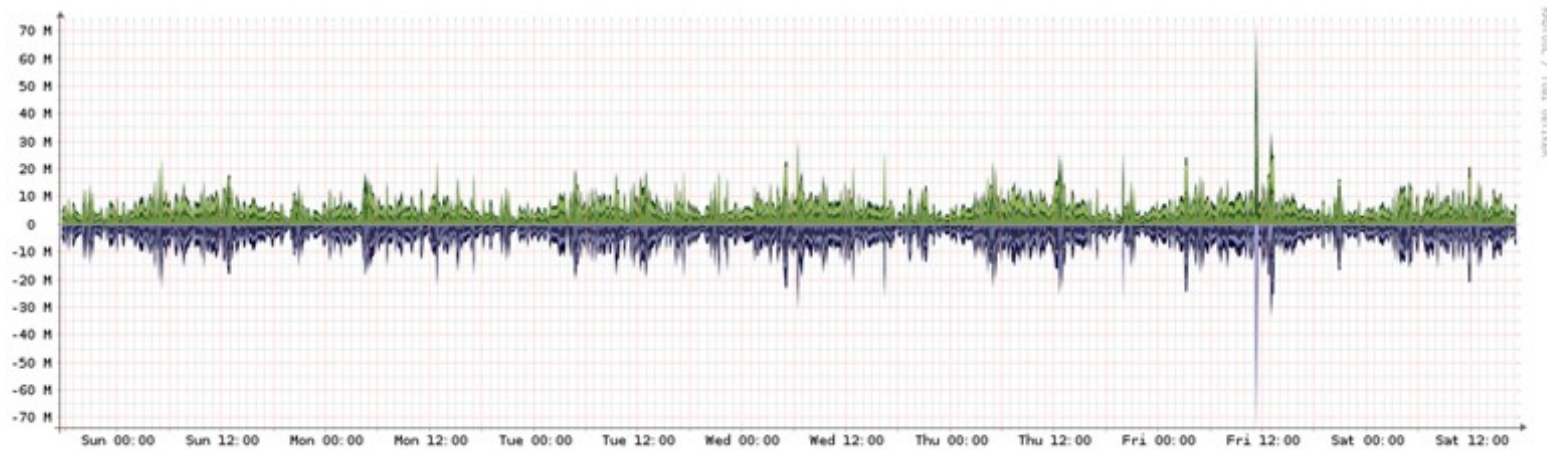
6 Hours 24 Hours 48 Hours One Week Two Weeks One Month Two Months One Year Two Years



From 2015-08-29 17:17 To 2015-09-05 17:17 Update

Show Legend | Show Previous

Show RRD Command



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

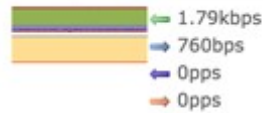
Serial No. AZS125207BS

3. WS-C2960G-48TC-L - Fan 0

WS-C2960G-48TC-L - Fan 0

10102. GigabitEthernet0/2

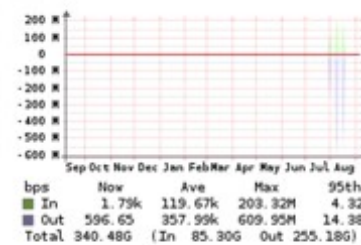
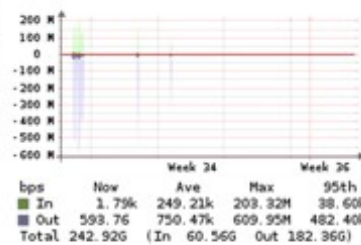
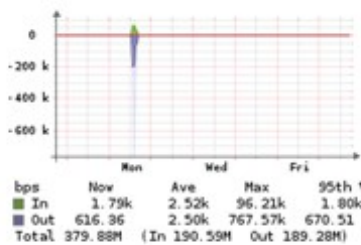
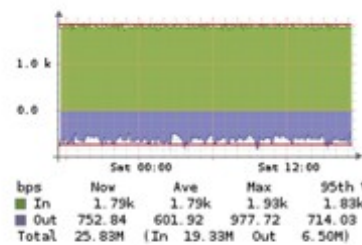
Link to SDN1-ge-1/1/28 - VLAN50


1Gbps Ethernet
fullDuplex -
VLAN 50

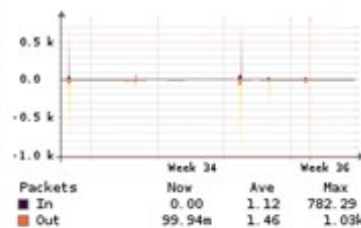
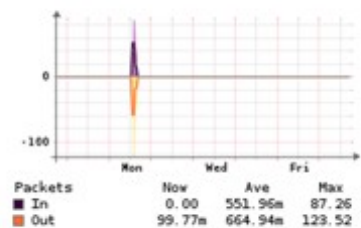
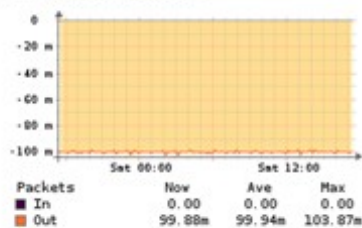
00:24:50:bd:2f:02
MTU 1500

[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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