

Lanka Education and Research Network



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(LEARN)

- SNMP-based auto-discovery network monitoring
- Written in PHP as web application, derived from another project of Observium
- Includes support for a wide range of hardware:What is SNMP?
 - Cisco, Juniper, Brocade, Foundry, HP, Linux, FreeBSD and many ore
 - See <http://docs.librenms.org/Support/Features/>
 - Over 100 supported!
 - Routers, Switches, Access Points, Security gateways, Hosts, Printers, .

- Available metrics
 - CPU, memory and storage statistics
 - Interface traffic, packet and detailed error statistics (L2 and L3)
 - Temperature, fan speed, voltage, amperage, power humidity and frequency sensors
 - Users, processes, load average and uptime statistic
 - 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 ↔ IP address lookup
 - Find which port an IP/MAC was last seen on

- Features
 - Dashboard
 - Status Map
 - Many Extensions, including:
 - Host monitoring well supported using check_mk and support scripts
 - Billing module
 - Integration with other tools:
 - Smokeping, collectd, syslog (receive logs from devices)/graylog, Rancid/Oxized (config management)

- Philosophy

- LibreNMS' approach is that the network monitoring shouldn't take long to setup
 - You've already worked hard to build your network and configure it
 - LibreNMS is easier to understand if you understand its philosophy
- Configure equipment correctly
 - Community
 - xDP (CDP or LLDP)
 - SysName, sysLocation
- LibreNMS will do the rest
 - Auto discovery of devices and resources
 - Option use of sysServices to map which services (ports) are running on a device
- Concept of enabled vs. ignored
 - By default, LibreNMS will monitor (collect data) all ports/interfaces it finds.
 - If a port is configured to be up, but it's operationally up, LibreNMS will complain about
 - Tell LibreNMS to ignore these ports or better, shut them down if they're not used
 - When they're used, bring them up

- SNMP or nothing
 - Be aware that for LibreNMS to function, SNMP must be enable
 - LibreNMS makes use of CDP/LLDP/OSPF information to detect neighbors and automatically scan for neighboring devices and add them to the monitoring
 - ... but this information is fetched using SNMP!
 - If SNMP isn't enabled or available (or incorrectly configured, LibreNMS won't function