

# Monitorando com LibreNMS

## Uma visão com uso prático

Instalação / Configuração / Integração  
Exemplos / Escolhas

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FIM

10/12/24

<https://www.librenms.org/>

Welcome to LibreNMS, a fully featured network monitoring system that provides a wealth of features and device support.

WHAT CAN IT DO?

web-1

## FEATURES



### Automatic discovery

Automatically discovers your entire network using CDP, FDP, LLDP, OSPF, BGP, SNMP and ARP.



### Customisable alerting

Highly flexible alerting system, notify via email, irc, slack and more.



### API Access

A full API to manage, graph and retrieve data from your install.



### Billing system

Generate bandwidth bills for ports on your network based on usage or transfer.



### Automatic Updates

Stay up to date automatically with bug fixes, new features and more.



### Distributed Polling

Horizontal scaling to grow with your network.



### iPhone App

Native iPhone App is available which provides core functionality.



### Android App

Native Android App is available which provides core functionality.

## DOWNLOADS

READY TO INSTALL LIBRENMS FOR YOUR NETWORK?

### LibreNMS Documentation

- LibreNMS Docs
- LibreNMS Installation Guides
- GitHub LibreNMS

### Centos / Ubuntu

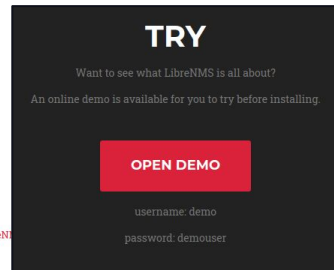
- Support for both Apache and Nginx Web Servers
- Installation Guide

### Virtual Machines

- LibreNMS Virtual Machines: Documentation
- LibreNMS: OVA Images

### Docker Images

- Docker image documentation located on: [GitHub LibreNMS](#)
- LibreNMS on: [dockerhub](#)
- LibreNMS on: [QUAY](#)



### More...

- Extensive device support
- Mobile friendly Web UI
- Unix Agent

### Integration support for:

- NfSen
- collectd
- SmokePing
- RANCID
- Oxidized

### Multiple authentication methods:

- MySQL
- HTTP
- LDAP
- Radius
- Active Directory

Contexto

Configuração

Uso

Integração

Alarmes

FIM

**LibreNMS** <https://community.librenms.org/> Sign Up Log In

Topics More

Categories

- Announcements
- Help
- Plugins
- Feature Requests
- Device Requests
- All categories

Tags

- snmp
- discovery
- graphing
- alerting
- featurerequest
- All tags

Categories Latest Top

Category Topics Latest

**Announcements** 4 / month

**Help** 51 / month

**Plugins** 145

**Feature Requests**

**Device Requests**

**Projects**

LibreNMS Docs <https://docs.librenms.org/>

Home

General

Home

Features

Changelog

Welcome to Observium users

3rd Party Libraries

Installation

Setup

3rd Party Integration

Alerting

API

Getting help

Contributing + Developing

Miscellaneous

**Installing**

Install LibreNMS Now

Install Using Docker

**Setup**

Applications

Auto Discovery

Oxidized

Using the API End

Product Solutions Resources Open Source Enterprise Pricing

librenms / librenms Public

Code Issues 148 Pull requests 114 Actions Projects 26 Security 26

Search: Issue (reopen)

145 Open 4,093 Closed

Application polling fails because of snmpget getting an error

LibreNMS - Ciena software version detection

Invalid datetime format: 1366 Incorrect string value: '\xE9seau...' for column 'Librenms\_event\_log\_message at row 1'

Line Messaging Api Issues

Failure the creates graphs on the Application: mvida

DOS/recursive loop with faulty 0 Table index

Netgear M4250 Does not show CPU Usage

<https://github.com/librenms/librenms/issues>

LibreNMS # general LibreNMS:frean

Browse Channels

announcements

welcome

# role-requests

SUPPORT

# general

# devel

# LOBBY

# off-topic

FEEDS

# community

# newsfeed

# development

# donations

VOICE CHANNELS

General

<https://t.libren.ms/discord>

```
ERROR: Error installing LibreNMS:
ERROR: Failed to build gem native extension.

current directory: /var/lib/gems/3.2.0/gems/rugged-0.99.0/ext/rugged
/usr/bin/ruby3.2 -I/usr/lib/ruby/vendor_ruby extconf.rb
checking for gmake... yes
checking for make... yes
checking for pkg-config... yes
*** extconf.rb failed ***
Could not create Makefile due to some reason, probably lack of necessary
libraries and/or headers. Check the mkmf.log file for more details. You may
need configuration options.

Provided configuration options:
--with-opt-dir
--without-opt-dir
--with-opt-include
--without-opt-include
--with-make-prog
--without-make-prog
--srcdir=.
--curdir
--ruby=/usr/bin/$(RUBY_BASE_NAME)3.2
--with-sha1dc
--without-sha1dc
--use-system-libraries
extconf.rb:101:in `block in <main>': undefined method `exists?' for Dir:Class (NoMethodError)
Dir.mkdir("build") if !Dir.exists?("build")
*****
Did you mean? exist?
from extconf.rb:100:in `chdir'
from extconf.rb:100:in `<main>'

To see why this extension failed to compile, please check the mkmf.log which can be found here:
/var/lib/gems/3.2.0/extensions/x86_64-linux-gnu/3.2.0/rugged-0.99.0/mkmf.log
```

LibreNMS 1,077 posts

<https://x.com/librenms>

LibreNMS @LibreNMS

Community-based GPLv3-licensed Network Monitoring Software

librenms.org Joined October 2013

25 Following 2,256 Followers

Not followed by anyone you're following

Posts Replies Media

Pinned

LibreNMS @LibreNMS · Nov 20

It's not been long since our last release, but we wanted to stay on our usual mid-month release cycle. Anyway, it's here again, and the biggest thing to highlight is that the minimum PHP version is now 8.2.

community.librenms.org

24.11.0 Release Announcement

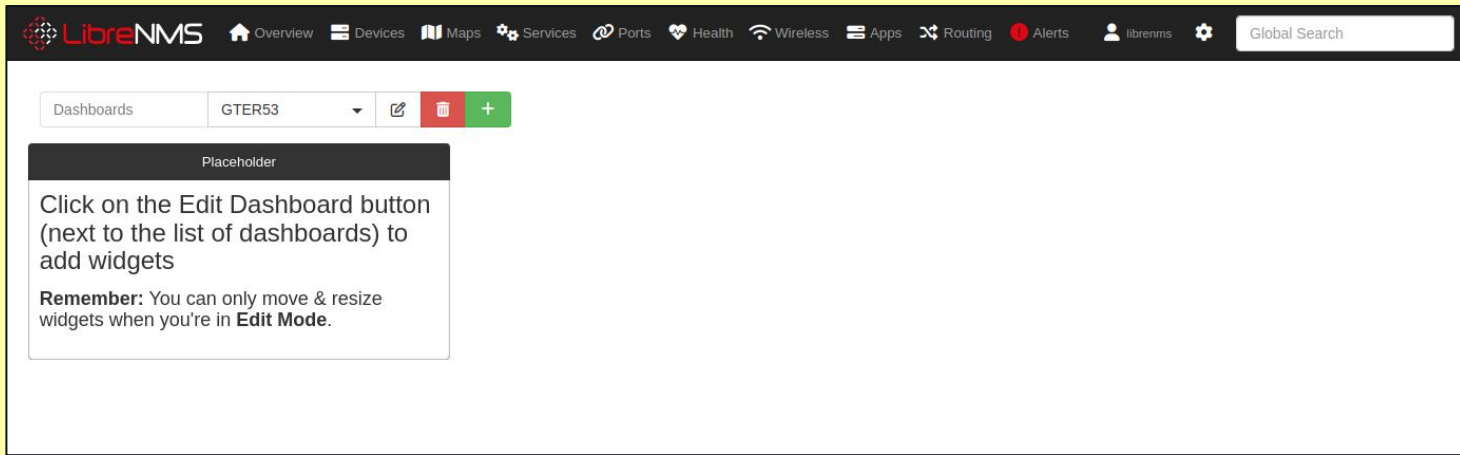
LibreNMS version 24.11.0 was released on November 20th, 2024. We thank every one of the 20 different...

1 8 328

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OpenTSDB	

# Primeiro acesso



LibreNMS Overview Devices Maps Services Ports Health Wireless Apps Routing Alerts librenms Global Search

Dashboards GTER53 [Edit] [Delete] [Add]

Placeholder

Click on the Edit Dashboard button (next to the list of dashboards) to add widgets

**Remember:** You can only move & resize widgets when you're in **Edit Mode**.

LibreNMS Overview Devices Maps Services Ports Health Wireless Apps Routing Alerts librenms Global Search

Dashboards GTER53 [Edit] [Delete] [Add]

Placeholder

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LibreNMS Overview Devices Maps Services Ports Health Wireless Apps Routing Alerts librenms Global Search

Dashboards GTER53 [Edit] [Delete] [Add]

Placeholder

Click on the Edit Dashboard button (next to the list of dashboards) to add widgets

**Remember:** You can only move & resize widgets when you're in **Edit Mode**.

# O caminho

## Usei

- MRTG
- **Cacti**
  - **Weathermap**
- **Groundwork ( Nagios )**
- Smokeping
- **Centron ( Nagios )**
  - **Nagvis**
- Zabbix
- **LibreNMS**

## Esbarrei

- Zenoss
- PRTG
- Zabbix
- Solarwind
- OpenNMS
- Observium
- NTop
- *Grafana*
- Telegraf
- Nagios-forks
- The Dude

# Visão sobre monitoramento

## Necessidade

- Coletar / Receber dados
  - SNMP, Syslog, Telemetria/Stream
- Transformar Dados -> Informação
  - Classificar a informação / Dar significado / Status
- Alertar / Alarmar / Notificar
  - Mensagens ( Telegram, WhatsApp, SMS )
- Manter histórico
- Apresentar
  - Dados
  - Informação
  - Histórico



# A situação

## Problema

- Vários ISPs
- Zabbixes, Dudes, Centreon
- Resistência à mudança
- Visibilidade parcial
- Pouca documentação
- Configurações variadas
- IP duplicados
- Ausências de padrões
  - Nomes
  - Descrições
  - Sistemas

## Objetivo

- **Monitoramento unificado**
- **Auto descoberta da rede**
- **Facilidade de uso**
- **Mensagens regionalizadas**
- Facilidade de instalação
- Backups unificado
- Padrões unificados
- Novas visualizações
- Gestão de ciclo de vida
- Gestão de acesso

# A escolha

## LibreNMS

- Coleta de dados
- Alarmística básica

## Graylog + Syslog-NG

- Coleta de log

## InfluxDB

- Segundo de dados de monitoramento
- Fonte usada no Grafana

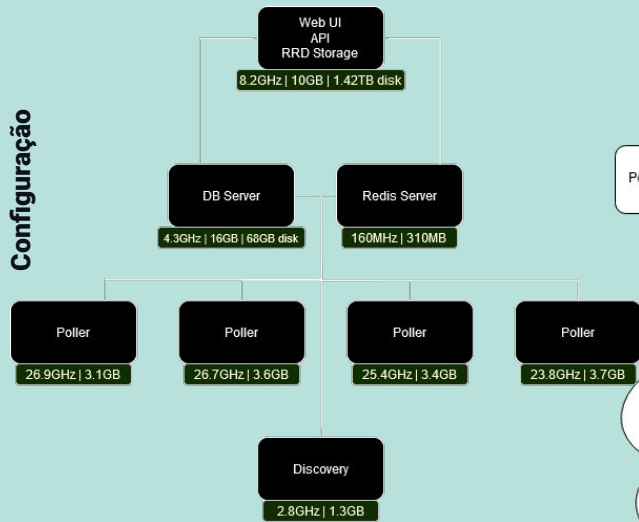
## Grafana

- MariaDB do LibreNMS
- Outras fontes
- Apresentação diferenciadas

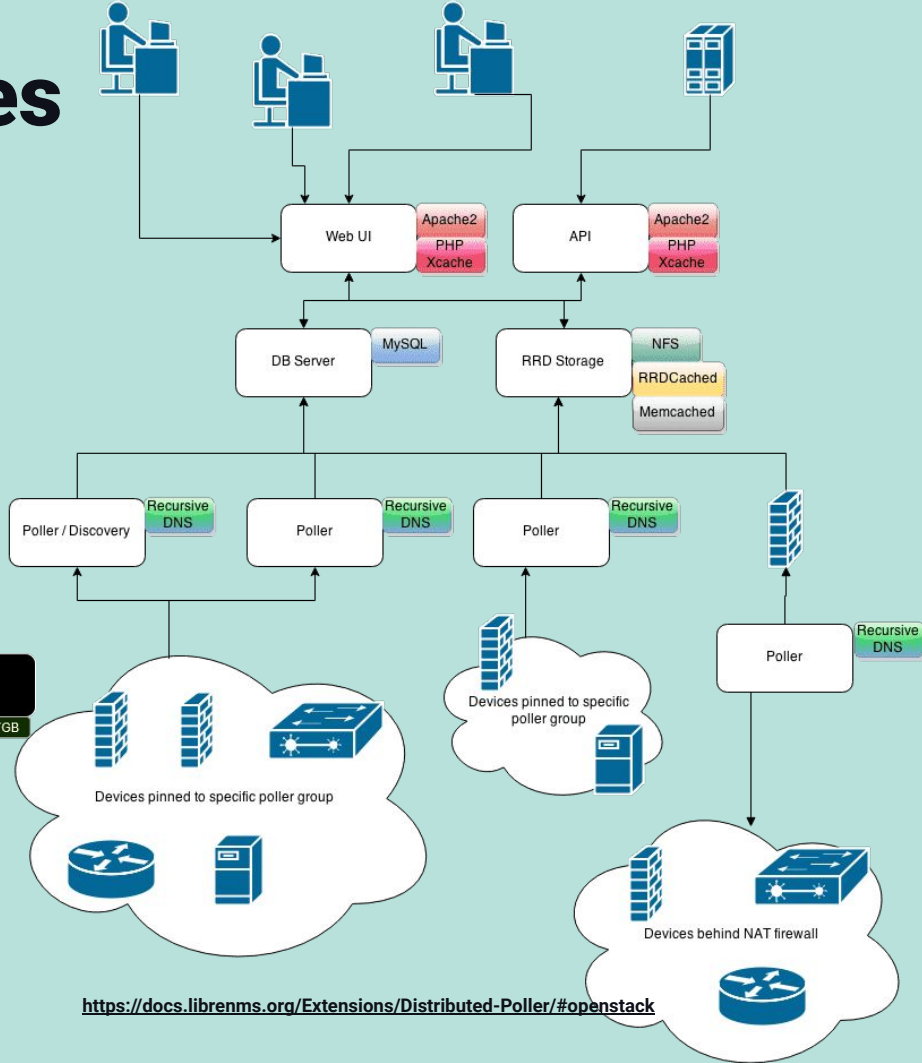
## Oxidized

- Backup e versionamento

# Considerações



<https://docs.librenms.org/Extensions/Distributed-Poller/#esxi>



<https://docs.librenms.org/Extensions/Distributed-Poller/#openstack>

# Arquitetura escolhida

- ( Coletores ) Único X **Distribuído**
- ( Backend ) **Centralizado** X Distribuídos
  - MariaDB / Redis / Memcached / "HTTP"
- ( Frequência ) 1min X **5min + "Fast Ping"**
- ( RRDs ) **RRDCached** X NFS ( ou outra alternativa )
- ( Logs ) **Syslog-NG X Graylog**
- ( Serviços ) Agent X **SNMP Extended**
- ( DNS ) **Externo** X Cache Local
- ( Função x Coletor ) Seletivo\* X **Todas**
- ( Configuração ) Arquivo X **Banco de Dados**
- ( Distância ) **Perto** X Longe

# Instalação

( instalação básica + coletor distribuído )

- RRDcached ( usando rede )
- Forçar configurações Locais ( ~/config.php )
- Adicionar communities

The image shows two screenshots related to the installation of RRDTool. The top screenshot is the RRDTool web interface, and the bottom screenshot is a terminal window showing configuration files.

**RRDTool Web Interface:**

- Dataset: RRDTool
- Tune all rrd port files to use max values:
- Change the rrd step value (default 300):
- Change the rrd heartbeat value (default 600):
- RRD Format Settings: RRA:AVERAGE:0.5:1:2016 RRA:AVERAGE:
- Enable rrdcached (socket):
- RRD Location:
- Sets the version of rrdtool on your server:

**Terminal Window:**

```
?php
# $config['distributed_poller'] = true;
$config['distributed_poller_name'] = php_uname('n');
$config['user'] = 'librenms';
$config['enable_slm'] = 1;
$config['enable_syslog_hooks'] = 1;
$config['l2tp_descr'] = [ 'pw', 'vpws' ];
$config['os']['nokia-isam']['polling']['selected_ports'] = true;
$config['os']['slms']['polling']['selected_ports'] = true;
$config['os']['exa']['polling']['selected_ports'] = true;

# Local Config
$config['influxdb']['host'] = '192.168.1.30';
$config['default_poller_group'] = 1;

# WebUI
$config['device_display_default'] = '{{ $sysName_fallback }}';
```

**Communities (priority) Table:**

Priority	Community Name	Action
1.	public	Remove
2.	private	Remove
3.	adsl	Remove
4.	Mi	Remove
5.	sn	Remove
6.	wc	Remove

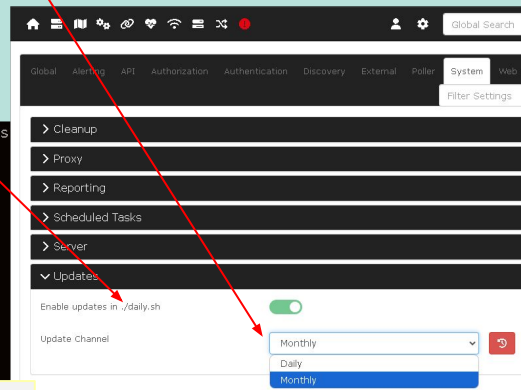
# Instalação - ( cont )

- Escolher versão ( **estável/mensal** ou master )
  - Forçar atualização em seguida
- Autenticação externa ( TI )
  - “Global Read” para todos

```
[librenms@LibreNMS-WebDbRrdFluxOxi ~]$ lnms  
[  
"Trt_A"  
"Trt_A"  
"Trt_A"  
"Trt_A"  
"Trt_C"  
"Trt_E"  
"Trt_G"  
"Trt_L"  
"Trt_O"  
"Trt_S"  
"Trt_S"  
"Trt_S"
```

```
"FNA,GGC,OCA,AANP,ANA",  
"FNA",  
"GGC",  
"OCA",  
"AANP",
```

- Integrar
  - InfluxDB
  - Syslog-NG
  - Graylog
- Configurar **Port Types** customizadas
- Adicionar Devices / Escanear a rede



# Configuração - Discovery

Global Settings

- Validate Config
- Manage Users
- Auth History
- Poller
- API
- About LibreNMS

Discovery Modules

- Applications
- ARP Table
- BGP Peers
- Cisco CBQOS
- Cisco CEF
- Cisco MAC Accounting
- Cisco PW
- Cisco OTV
- Cisco V

Autodiscovery Networks

1.	10.33.1.0/24		
2.	10.50.14.0/24		
3.	10.50.17.0/24		
4.	10.98.67.64/30		
5.	10.90.90.0/24		
6.	10.100.255.0/24		
7.	10.200.120.0/24		

```
librenms@librenms-WebDbRrdFluxOxi ~]$ lnms.config:get os.exa
{"os": "exa",
 "text": "Calix EXA",
 "type": "Network",
 "ifname": true,
 "empty_ifdescr": true,
 "icon": "calix",
 "aib_dir": "calix",
 "over": [
  {
    "graph": "device_bits",
    "text": "Device Traffic"
  }
 ],
 "snmp_max_oid": 8,
 "discovery": [
  {
    "sysobjectID": [
      ".1.3.6.1.4.1.6321.1.2.2"
    ]
  }
 ],
 "bad_if_regexp": [
  "/[Oo]nt .+/"
 ],
 "polling": {
  "selected_ports": true
 }
 }
librenms@librenms-WebDbRrdFluxOxi ~]$
```

Misc

- Disable ICMP Test?  OFF
- Exclude from Oxidized?  OFF
- Override default ssh port
- Override default telnet port
- Override default http port
- Unix agent port
- Enable RRD Tune for all ports?  OFF
- Enable selected port polling?  ON

01

02

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# Configuração - Poller

The screenshot displays the Huawei Poller configuration page for device 'tec-swc-bbc-asc\_gadot'. The interface is divided into several sections:

- Navigation:** Overview, Devices, Maps, Services, Ports, Health, Wireless, Apps, Routing, Alerts, librenms.
- Global Settings:** Alerting, API, Authorization, Authentication, Discovery, External, Poller, System, Web UI.
- Device Information:** HUAWEI logo, device name 'tec-swc-bbc-asc\_gadot', location 'ASCENTY - Maracanao/CE-BR', and contact info '[-3.830867, -38.611759]'. It also shows graphs for Memory Usage, Processor Usage, and Device Traffic.
- Navigation Menu:** Overview, Graphs, Health, Ports, Wireless, VLANs, Routing, Neighbours, STP, Inventory, Logs, Alerts, Alert Stats, Config, Latency, Notes.
- Configuration Tabs:** Device Settings | SNMP | Port Settings | Applications | Alert Rules | **Modules** | Services | IPMI | Health | Wireless Sensors | Storage | Processors | Memory | Misc | Components | Custom OID.
- Poller Modules Table:**

Module	Global	OS	Device	Override
Applications	Enabled	Unset	Unset	<input type="button" value="ON"/>
Aruba Controller	Disabled	Unset	Unset	<input type="button" value="OFF"/>
Availability	Enabled	Unset	Unset	<input type="button" value="ON"/> <input type="button" value="OFF"/>
BGP Peers	Enabled	Unset	Unset	<input type="button" value="ON"/>
- Discovery Modules Table:**

Module	Global	OS	Device	Override
Applications	Enabled	Unset	Unset	<input type="button" value="ON"/>
ARP Table	Enabled	Unset	Unset	<input type="button" value="ON"/>
BGP Peers	Enabled	Unset	Unset	<input type="button" value="ON"/>
Cisco CBQOS	Enabled	Unset	Unset	<input type="button" value="ON"/>
- Poller Modules List (Left):**
  - Applications:
  - Aruba Controller:
  - Availability:
  - BGP Peers:
  - Cipsec Tunnels:
  - Cisco ACE Loadbalancer:
  - Cisco ACE Serverfarms:
- Configuration Parameters (Right):**
  - Poller Workers (Workers): 24
  - Poller Frequency (Warning) (Seconds): 300
  - Device Down Retry (Seconds): 60
  - Discovery Workers (Workers): 8
  - Discovery Frequency (Seconds): 86400
  - Services Workers (Workers): 8
  - Services Frequency (Seconds): 300
  - Billing Frequency (Seconds): 300
  - Billing Calculate Frequency (Seconds): 60
  - Alerting Frequency (Seconds): 60



# Configurações de Equipamentos

- Habilitar **LLDP** + Eliminar VLANs
- **Nomes** dos equipamentos
- **Descrições** de interfaces
  - Pensando no que o LibreNMS "sabe" usar
- **SysLocation**
  - Com nome do **PoP**
    - Com alguma lógica usável
    - Com coordenadas geográficas
- Syslog e SNMP Trap
- Usuário para o Oxidized ( backup )

# Poolers

[Poller](#)
[Groups](#)
[Settings](#)
[Performance](#)
[Log](#)

### Poller Cluster Health

Name	Node ID	Version	Groups Served	Last Checkin	Cluster Master	Job	Workers	Devices Actioned Last Interval	Devices Pending	Worker Seconds Consumed/Maximum
LibreNMS-AZZ01	671a9e4bdfac6	librenms-service	26	2024-12-09 08:18:55	No	poller	24	107	23	7487 / 7200
						discovery	32	0	0	0 / 2764800
						alerting	1	0	0	0 / 60
						services	8	0	0	0 / 2400
						billing	2	0	0	0 / 600
LibreNMS-CBN01-WebDbRrdFluxOxi	61180892e5225	librenms-service	15,0,1,17	2024-12-09 08:20:00	Yes	poller	24	43	0	490 / 7200
						discovery	12	0	0	0 / 1036800
						alerting	1	0	0	0 / 60
						services	8	0	0	0 / 2400
						billing	2	6	0	78 / 600
LibreNMS-CBN02	613003589bec5	librenms-service	1,15,0,17	2024-12-09 08:19:11	No	poller	82	223	0	4014 / 24600
						discovery	8	0	0	0 / 691200
						alerting	1	0	0	0 / 60
						services	8	0	0	0 / 2400
						billing	2	0	0	0 / 600
LibreNMS-CBN03	62d36b811bf0e	librenms-service	16,1,17,0,15	2024-12-09 08:19:12	No	poller	82	169	0	2983 / 24600
						discovery	12	0	0	0 / 1036800
						alerting	1	0	0	0 / 60
						services	8	0	0	0 / 2400
						billing	2	0	0	0 / 600
						ping	1	0	0	0 / 60

[Groups](#)
[Settings](#)
[Performance](#)
[Log](#)

### Settings

MS-CBN01-RrdFluxOxi

Assigned Groups: General Group CNTL Group Public IPs 1 Group Phone

libreNMS-OUT01: Poller Enabled

libreNMS-STW01: Poller Workers (Workers):

libreNMS-MPY01: Device Down Retry (Seconds):

libreNMS-CNX01: Discovery Enabled

libreNMS-WNT01: Discovery Workers (Workers):

libreNMS-CBN02: Services Enabled

libreNMS-IP301: Services Workers (Workers):

libreNMS-RSN01: Billing Enabled

libreNMS-NVG01: Alerting Enabled

libreNMS-SPC01: Fast Ping Enabled

libreNMS-NTC01: Log Level:

libreNMS-STW02: Watchdog Enabled

libreNMS-CBN03:

libreNMS-WAY01:

libreNMS-OUT02:

libreNMS-WNT02:

libreNMS-MPY02:

# Menus

The image displays several screenshots of the LibreNMS web interface, highlighting various menu options and their locations. The interface is organized into several main sections:

- Overview:** Contains a top navigation bar with 'Overview', 'Devices', 'Maps', and 'Services'. A dropdown menu is open, listing options such as 'Dashboard', 'Plugins', 'Tools', 'Eventlog', 'Syslog', 'Graylog', 'Inventory', 'Outages', and search filters for 'IPv4 Address', 'IPv6 Address', 'MAC Address', 'ARP Tables', and 'FDB Tables'. A sub-menu for 'Tools' is also visible, showing 'RIPE NCC API' and 'Oxidized'.
- Devices:** Features a top navigation bar with 'Devices', 'Maps', 'Services', 'Ports', 'Health', 'Wireless', and 'App'. A dropdown menu lists 'All Devices', 'Device Groups', 'Geo Locations', 'Manage Groups', 'Device Dependencies', 'Virtual Machines', '+ Add Device', and 'Delete Device'. A secondary menu shows a list of device groups including 'A10', 'All Devices', 'All Devices Disabled', 'All Devices Enabled', 'All Servers', 'Aplicação 100G', 'Aplicação 100G\_2', 'B2B', 'Backbone CE', 'Backbone SE', 'Backbone SE\_2024\_Q2', 'P Devices', 'C Dell iDrac', 'Gs\_All', 'Nat A10', 'Nat NFWare', and 'ster RN-PB'.
- Routing & Alerts:** A central menu lists 'Routing' (with an alert icon), 'Alerts', 'VRFs', 'MPLS', 'OSPF Devices', 'ISIS Adjacencies', 'BGP All Sessions', 'BGP External', 'BGP Internal', 'Cisco CEF', 'Alerted BGP 37', and 'PeeringDB'.
- Alerts:** A detailed alert menu includes 'Alerts', 'Notifications', 'Alert History', 'Statistics', 'Alert Rules', 'Scheduled Maintenance', 'Alert Templates', and 'Alert Transports'.
- Ports:** The top navigation bar includes 'Ports', 'Health', and 'Wireless'. The main content area lists 'All Ports', 'Errored 2036', 'Ignored 80985', 'VLANs', 'Traffic Bills', 'Pseudowires', and 'NAC'. A 'Customers' section lists 'L2TP', 'Transit', 'Peering', 'Peering + Transit', and 'Core'. A list of transit providers follows, including 'Trt\_...', 'FNA,GGC,OCA,AANP,ANA', 'FNA', and 'GGC'.
- Health & Wireless:** The top navigation bar includes 'Health' and 'Wireless'. The main content area lists 'Memory', 'Processor', 'Storage', 'Fanspeed', 'Signal', 'Temperature', 'Current', 'Frequency', 'Power', 'Voltage', 'Charge', 'Count', 'dBm', 'Freq', 'Load', 'Loss', 'Percent', 'Runtime', 'SNR', 'State', and 'Toner'.
- Maps & Services:** The top navigation bar includes 'Maps', 'Services', 'Ports', 'Health', and 'Wireless'. The main content area lists 'Availability', 'Device Groups Dependencies', 'Network', 'Geographical', 'Device Groups Maps', 'GTER53', 'Custom Map Editor', and 'Custom Node Image Manager'. A list of device groups is shown, including 'A10', 'All Devices', 'All Servers', 'Aplicação 100G', and 'Aplicação 100G\_2'.

# Adicionar Primeiro Device

Devices | Maps | Services | Ports | Health | Wireless | Apps | Routing | Alerts

All Devices  
Device Groups  
Geo Locations  
Manage Groups  
Device Dependencies  
Virtual Machines  
+ Add Device  
Delete Device

## Add Device

Devices will be checked for Ping/SNMP reachability before being probed.

Hostname or IP:

SNMP:

SNMP Version:

Port Association Mode:

### SNMPv1/2c Configuration

Community:

Poller Group:

Force add (No ICMP or SNMP checks performed):

```
[librenms@LibreNMS-WebDbRrdFluxOxi ~]$ lnms device:add -h
Description:
  Add a new device

Usage:
  device:add [options] [--] <device spec>

Arguments:
  device spec      Hostname or IP

Options:
  -1, --v1          Use SNMP v1
  -2, --v2c        Use SNMP v2c
  -3, --v3          Use SNMP v3
  -c, --community=COMMUNITY  SNMP v1 or v2 c
  -r, --port=PORT   SNMP transport
  -t, --transport=TRANSPORT  Transport to co
  -d, --display-name=DISPLAY-NAME  A string to dis
  May be a simple

  -b, --ping-fallback  Add the device
  -g, --poller-group=POLLER-GROUP  commands.device
  -p, --port-association-mode=PORT-ASSOCIATION-MODE  Sets how ports
ias] [default: "ifIndex"]

  -P, --ping-only      Add a ping only
  -o, --os=OS          Ping only: spec
  -w, --hardware=HARDWARE  Ping only: spec
  -s, --sysName=SYSNAME  Ping only: spec
  -h, --help           Display help fo
d

  -q, --quiet          Do not output a
  -V, --version        Display this ap
  --ansi|--no-ansi    Force (or disab
  -n, --no-interaction  Do not ask any
  --env[=ENV]         The environment
  -v|vv|vvv, --verbose  Increase the ve
```

# Device ( Servidor )

**librenms-webdbdrfluxo1**  
R.E. Cabo Telecom - Nasa@RIN-RR [5.627605 -05.213615]

**System Name:** librenms-webdbdrfluxo1  
**Resolved IP:** 19.30  
**Hardware:** oVirt RHEL  
**Operating System:** Linux 5.14.0-522.el9.x86\_64 (CentOS 9)  
**Serial:** 407  
**Object ID:** 3.3.1.4.1.8072.3.2.10  
**Contact:** ADM-4 - radin@cabotelecom.com.br  
**Device Added:** 3 years 7 months 1 day 3 hours 43 seconds ago  
**Last Discovered:** 16 hours 18 minutes 3 seconds ago  
**Uptime:** 1 month 1 day 1 hour 5 minutes 28 seconds  
**Location:** R.E. Cabo Telecom - Nasa@RIN-RR  
**Last Log:** 05.627605 -05.213615

**Processors:** AMD EPYC Processor x128 (9%)

**Memory:** Physical memory (80%), Virtual memory (80%), Memory buffers (0%), Cached memory (50%), Shared memory (2%).

**Storage:** / (80%), /boot (40%), /boot/efi (1%), /dev/shm (0%), /tmp (20%), /tmpfs/0 (0%), /tmpfs (50%).

# O que e como ele monitora?

Depende do como:

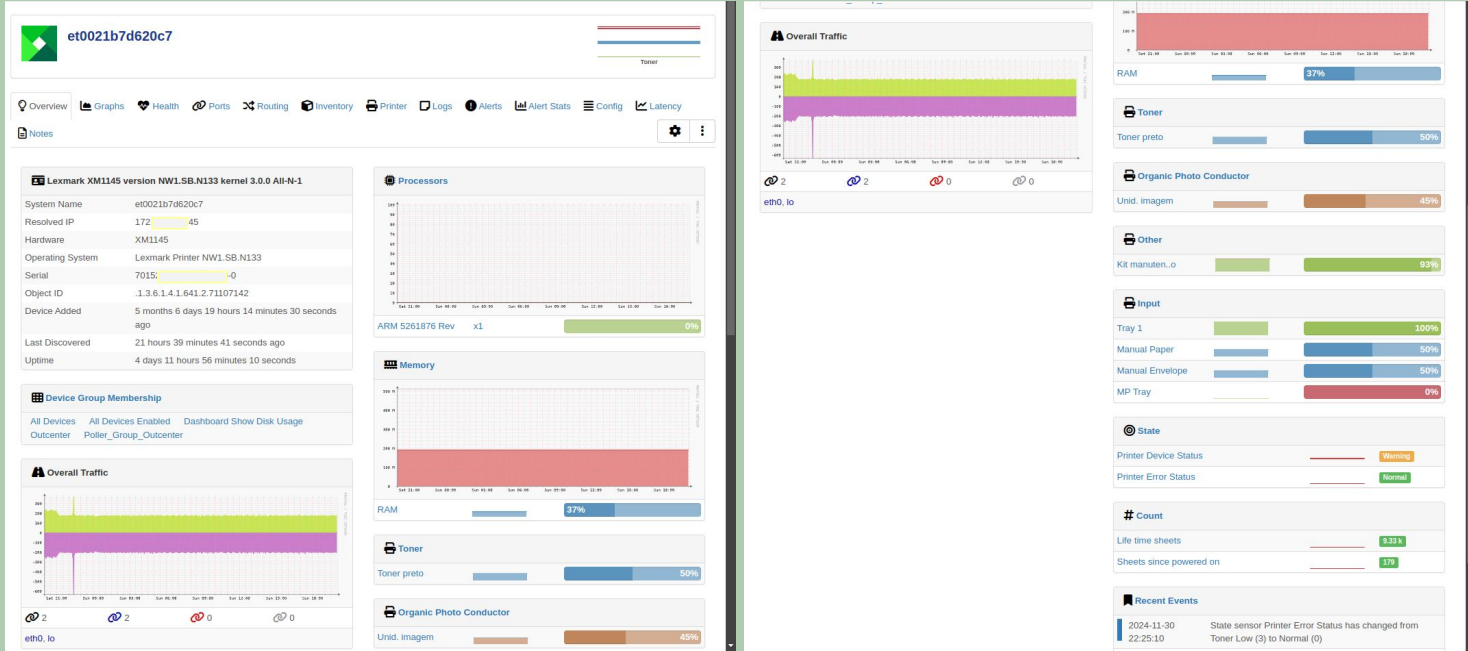
- Plugins Nagios
- Check\_MK
- **SNMP**

! Ele precisa do discovery para descobrir e ativar algumas coisas depois de alterações no device


Baseado em templates:

- Detecta o SO a cada discovery
- Detecta módulos
- Usa gráficos e layout do SO
- As configurações são em YAML ou PHP
- Possível usar OIDs customizadas ( não )
- Contribua com o projeto!

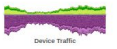
# Exemplos - Impressora



# Exemplos - CMTS



**cbn-cmt-acc-kiko**  
H.E. Cabo Telecom - Natal/RN-BR [5.837685, -35.213515]



Overview
Graphs
Health
Ports
Routing
Inventory
Logs
Alerts
Alert Stats
Config
Latency
Notes

**CMTS\_V08.02.01.07, <<HW\_REV: 3.0; VENDOR: ARRIS; BOOTR: V00.01.00>>**

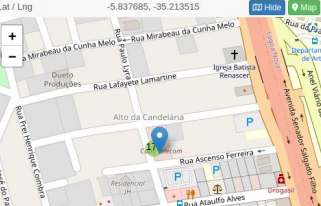
System Name	cbn-cmt-acc-kiko
Resolved IP	192.168.1.49
Hardware	C4
Operating System	Arris CMTS 08.02.01.07
Object ID	1.3.6.1.4.1.4998.2.1
Contact	CABO Telecom - Eng. IP <admin@cabotelecom.com.br>
Device Added	2 years 9 months 23 hours 8 minutes 14 seconds ago
Last Discovered	2 months 2 weeks 4 days 4 hours 48 minutes 34 seconds ago
Uptime	9 years 1 month 3 weeks 3 days 8 hours 32 minutes 26 seconds
Location	H.E. Cabo Telecom - Natal/RN-BR
Lat / Lng	-5.837685, -35.213515

**Temperature**

CAM (0D, 24U)	46 °C
CAM (0D, 24U)	47 °C
CAM (0D, 24U)	46 °C
CAM (0D, 12U)	42 °C
CAM (0D, 24U)	45 °C
CAM (0D, 24U)	49 °C
CAM (0D, 12U)	47 °C
CAM (32D, 0U)	49 °C
CAM (32D, 0U)	41 °C
CAM (32D, 0U)	46 °C
CAM (32D, 0U)	47 °C
CAM (32D, 0U)	45 °C
CAM (32D, 0U)	59 °C
RCM A	59 °C
RCM B	42 °C
SCM A	31 °C
SCM B	30 °C

**SNR**

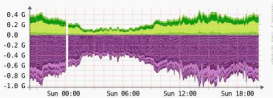
Channel - cable 1/1- upstream 0.0	0 dB
Channel - cable 1/1- upstream 1.0	0 dB



Device Group Membership
All Devices
All Devices Enabled
Cabo
Cluster RN-PB
Dashboard

Show Disk Usage
HE-Natal-TMP
Polter\_Group\_CNTL

**Overall Traffic**



744    337    0    0

cable-upstream 1/0, cable-upstream 1/0.0, cable-upstream 1/0.1, cable-upstream 1/1, cable-upstream 1/1.0, cable-upstream 1/1.1, cable-upstream 1/2, cable-upstream 1/2.0, cable-upstream 1/2.1, cable-upstream 1/3, cable-upstream 1/3.0, cable-upstream 1/3.1, cable-upstream 1/4, cable-upstream 1/4.0, cable-upstream 1/4.1, cable-upstream 1/5, cable-upstream 1/5.0, cable-upstream 1/5.1, cable-upstream 1/6, cable-upstream 1/6.0, cable-upstream 1/6.1, cable-upstream 1/7, cable-upstream 1/7.0, cable-upstream 1/7.1, cable-upstream 1/8, cable-upstream 1/8.0, cable-upstream 1/8.1, cable-upstream 1/9, cable-upstream 1/9.0, cable-upstream 1/9.1, cable-upstream 1/10, cable-upstream 1/10.0, cable-upstream 1/10.1, cable-upstream 1/11, cable-upstream 1/11.0, cable-upstream 1/11.1, **cable-upstream 1/12, cable-upstream 1/12.0, cable-upstream 1/12.1, cable-upstream 1/13, cable-upstream 1/13.0, cable-upstream 1/13.1, cable-upstream 1/14, cable-upstream 1/14.0, cable-upstream 1/14.1, cable-upstream 1/15, cable-upstream 1/15.0, cable-upstream 1/15.1, cable-upstream 1/16, cable-upstream 1/16.0, cable-upstream 1/16.1, cable-upstream 1/17, cable-upstream 1/17.0, cable-upstream 1/17.1, cable-upstream 1/18, cable-upstream 1/18.0, cable-upstream 1/18.1, cable-upstream 1/19, cable-upstream 1/19.0, cable-upstream 1/19.1, cable-upstream 1/20, cable-upstream 1/20.0, cable-upstream 1/20.1, cable-upstream 1/20.2, cable-upstream 1/21, cable-upstream 1/21.0, cable-upstream 1/21.1, cable-upstream 1/22, cable-upstream 1/22.0, cable-upstream 1/22.1, cable-upstream 1/23, cable-upstream 1/23.0, cable-upstream 1/23.1, cable-upstream 2/0, cable-upstream 2/0.0, cable-upstream 2/0.1, cable-upstream 2/1, cable-upstream 2/1.0, cable-upstream 2/1.1, cable-upstream 2/2, cable-upstream 2/2.0, cable-upstream 2/2.1, cable-upstream 2/3, cable-upstream 2/3.0, cable-upstream 2/3.1, cable-upstream 2/4, cable-upstream 2/4.0, cable-upstream 2/4.1, cable-upstream 2/5, cable-upstream 2/5.0, cable-upstream 2/5.1, cable-upstream 2/6, cable-upstream 2/6.0, cable-upstream 2/6.1, cable-upstream 2/7, cable-upstream 2/7.0, cable-upstream 2/7.1, cable-upstream 2/8, cable-upstream 2/8.0, cable-upstream 2/8.1, cable-upstream 2/9, cable-upstream 2/9.0, cable-upstream 2/9.1, cable-upstream 2/10, cable-upstream 2/10.0, cable-upstream 2/10.1, cable-upstream 2/11,**

Channel - cable 1/- upstream 6.0	0 dB
Channel - cable 1/- upstream 7.0	0 dB
Channel - cable 1/- upstream 8.0	0 dB
Channel - cable 1/- upstream 9.0	0 dB
Channel - cable 1/- upstream 10.0	0 dB
Channel - cable 1/- upstream 11.0	0 dB
Channel - cable 1/- upstream 12.0	31.5 dB
Channel - cable 1/- upstream 13.0	33.3 dB
Channel - cable 1/- upstream 14.0	35.4 dB
Channel - cable 1/- upstream 15.0	37.2 dB
Channel - cable 1/- upstream 16.0	37.4 dB
Channel - cable 1/- upstream 17.0	38.9 dB
Channel - cable 1/- upstream 18.0	35.6 dB
Channel - cable 1/- upstream 19.0	31.1 dB
Channel - cable 1/- upstream 20.0	38.3 dB
Channel - cable 1/- upstream 21.0	37.2 dB
Channel - cable 1/- upstream 22.0	33.3 dB
Channel - cable 1/- upstream 23.0	35.7 dB
Channel - cable 2/- upstream 0.0	0 dB
Channel - cable 2/- upstream 1.0	0 dB
Channel - cable 2/- upstream 2.0	0 dB
Channel - cable 2/- upstream 3.0	0 dB
Channel - cable 2/- upstream 4.0	0 dB
Channel - cable 2/- upstream 5.0	0 dB
Channel - cable 2/- upstream 6.0	0 dB
Channel - cable 2/- upstream 7.0	0 dB
Channel - cable 2/- upstream 8.0	0 dB
Channel - cable 2/- upstream 9.0	0 dB
Channel - cable 2/- upstream 10.0	0 dB
Channel - cable 2/- upstream 11.0	0 dB



# Exemplos - Dell iDRAC

**idrac-conexao1**  
Unknown

Memory Usage Processor Usage

Overview | Graphs | Health | Ports | Routing | Logs | Alerts | Alert Stats | Latency | Notes

**System Name** idrac-conexao1  
**Resolved IP** 10.10.10.7  
**Hardware** iDRAC8  
**Operating System** Dell DRAC 2.61.60.60  
**Serial** 3GT7  
**Object ID** 1.3.6.1.4.1.674.10892.5  
**Contact** support@del.com  
**Device Added** 6 months 2 weeks 6 days 23 hours 15 minutes 46 seconds ago  
**Last Discovered** 20 hours 8 minutes 20 seconds ago  
**Uptime** 1 year 10 months 6 days 1 hour 5 minutes 7 seconds  
**Location** Unknown  
**Lat / Lng** 25.029422, -77.381956

**Temperature**  
System Board Inlet Temp: 22.1C  
CPU1 Temp: 32.1C

**Fanspeed**  
System Fan1: 4.68 RPM  
System Fan2: 4.32 RPM  
System Fan3: 4.2 RPM  
System Fan4: 4.44 RPM

**State**  
Global System Status: OK  
Intrusion Status: OK  
Intrusion Reading: chassisIOBlocked  
System Board CMOS Battery: OK  
Intel(R) Xeon(R) CPU E3-1240 v6 @ 3.70GHz: OK  
DIMM.SocketA1\_16384 MB: OK  
CPU1.VCORE PG: OK  
System Board 1.5V PG: OK  
CPU1.MEM.PDU.VDDQ PG: OK  
System Board 1.5V PG: OK  
CPU1.VR\_PVT1\_MEM\_PG: OK  
System Board 3.3V PG: OK  
System Board 5V AUX PG: OK

**idrac-conexao1**  
Unknown

Memory Usage Processor Usage

Overview | Graphs | Health | Ports | Routing | Logs | Alerts | Alert Stats | Latency | Notes

Graphs = Availability | Netstats | Poller | System

**Ping Response**

**Poller Modules Performance**

# Exemplos - IRD

**mpy-tv-ird052-cartoonito\_tcm**  
H.E. Multiplay - Fortaleza/CE-BR [-3.74602, -38.49900]

Overview | Graphs | Health | Ports | Wireless | Routing | Logs | Alerts | Alert Stats | Latency | Notes

**D9858 APR**

System Name: mpy-tv-ird052-cartoonito\_tcm  
Resolved IP: 172.17.0.14  
Description: CARTOONITO (57/557) e TCM (01) | Rack 06 | IN-21 H (3.92 GHz)  
Hardware: D9858  
Operating System: Cisco Satellite Receiver 4.90/4.90/R03.02.00  
Serial: B41000000000000000000000000000000  
Object ID: .1.3.6.1.4.1.1429.2.2.6.5  
Contact: headend@multiplaytelecom.com.br  
Device Added: 2 years 7 months 3 weeks 4 days 5 hours 23 minutes 27 seconds ago  
Last Discovered: 22 hours 53 minutes 35 seconds ago  
Uptime: 10 months 8 hours 47 minutes 38 seconds  
Location: H.E. Multiplay - Fortaleza/CE-BR  
Lat / Lng: -3.74602, -38.499

**Fanspeed**

Fan Speed 1	4.92 RPM
Fan Speed 2	4.8 RPM
Fan Speed 3	4.88 RPM
Fan Speed 4	4.88 RPM
Fan Speed 5	4.88 RPM
Fan Speed 6	4.88 RPM
Fan Speed 7	4.8 RPM

**State**

Sat Lock 1: Lock + Signal

**Recent Events**

- 2024-11-29 21:52:15 State sensor Sat Lock 1 has changed from No Lock (1) to Lock + Signal (3)
- 2024-11-29 21:46:25 State sensor Sat Lock 1 has changed from Lock + Signal (3) to No Lock (1)

```
os: cisco
text: 'Cisco Satellite Receiver'
type: network
icon: cisco
mib_dir: cisco
over:
- { graph: device_bits, text: Traffic }
- { graph: device_wireless_rssi, text: Sat Signal Level }
discovery:
-
sysObjectID: .1.3.6.1.4.1.1429.2.2.6.5
```

**mpy-tv-ird052-cartoonito\_tcm**  
H.E. Multiplay - Fortaleza/CE-BR [-3.74602, -38.49900]

Overview | Graphs | Health | Ports | Wireless | Routing | Logs | Alerts | Alert Stats | Latency | Notes

Alerts » Active alerts | Alert history

Alert Log entries

State: Any Severity: Any Filter

Search

50

State	Timestamp	Device	Alert	Severity	Details
Warning	2024-11-25 10:37:24	mpy-tv-ird052-cartoonito_tcm	Hardware: Failed: Fan	warning	
Warning	2024-11-25 10:37:24	mpy-tv-ird052-cartoonito_tcm	Hardware: Power: PSU: Failed	warning	
Warning	2024-11-25 10:31:40	mpy-tv-ird052-cartoonito_tcm	Hardware: Failed: Fan	warning	
Warning	2024-11-25 10:31:40	mpy-tv-ird052-cartoonito_tcm	Hardware: Power: PSU: Failed	warning	
Critical	2024-11-10 00:04:07	mpy-tv-ird052-cartoonito_tcm	Hardware: Sensor: Over Upper Limit	critical	
Critical	2023-05-26 14:34:46	mpy-tv-ird052-cartoonito_tcm			
Critical	2023-04-24 12:14:57	mpy-tv-ird052-cartoonito_tcm	Port: Status: Down - RE - PB	critical	

Showing 1 to 7 of 7 entries

# Exemplos Rádio

**stw-ptp-d2fm-to-cristo-psa**  
POP TORRE D2 FM - SANTA RITA DO SAPUCAI/MG - [-22.197718, -45.743056]

Overview | Graphs | Health | Ports | Wireless | Routing | Inventory | Logs | Alerts | Alert Stats | Latency | Notes

**IP-10 agent**

System Name: stw-ptp-d2fm-to-cristo-psa  
Resolved IP: 172.16.23.5  
Operating System: Ceragon CeraOS 7.0.0.0.16-1 (0 radios in unit)  
Object ID: 1.3.6.1.4.1.2281.1.7.3  
Contact: NOC Starweb  
Device Added: 2 years 6 months 3 weeks 3 days 8 hours 14 minutes 18 seconds ago  
Last Discovered: 22 hours 50 minutes 55 seconds ago  
Uptime: 1 month 2 weeks 7 hours 32 minutes 25 seconds  
Location: POP TORRE D2 FM - SANTA RITA DO SAPUCAI/MG -  
Lat / Lng: -22.197718, -45.743056

**Processors**

CPU x1: 17%

**Memory**

Real Memory: 86%

```
[librenms@LibreNMS-WebDbRrdFluxOxi includes]$ find -iname 'ceraos.*'  
./definitions/ceraos.yaml  
./definitions/discovery/ceraos.yaml  
./discovery/sensors/voltage/ceraos.inc.php
```

**Real Memory**: 86%

**Storage**: 9%

**Temperature**: 52°C

**Voltage**: 53V

**State**

Radio Operational Status: Active

Remote Radio Operational Status: Active

**Recent Events**

Time	Hardware	Serial
2024-11-30 21:19:23	Hardware:	Serial:
2024-11-30 21:19:23	Hardware:	Serial:
2024-11-30 21:14:37	Hardware:	Serial:
2024-11-30 21:14:36	Hardware:	Serial:
2024-11-29 21:18:20	Hardware:	Serial:
2024-11-29 21:18:20	Hardware:	Serial:
2024-11-29 21:14:20	Hardware:	Serial:
2024-11-29 21:14:20	Hardware:	Serial:

```
<?php  
  
$mib = 'genEquipUnitIduVoltageInput.0';  
$oid = '1.3.6.1.4.1.2281.10.1.1.10.0';  
$oids = snmp_get($device, $mib, '-OsnpU', 'MWRM-UNIT-MIB');  
d_echo($oids . "\n");  
  
if (! empty($oids)) {  
    echo ' Ceragon CeraOS Voltage ' ;  
  
    $divisor = 1;  
    $type = 'ceraos';  
  
    [, $current] = explode(' ', $oids);  
    $index = $oid;  
    $descr = 'System voltage';  
    discover_sensor(null, 'voltage', $device, $oid, $index, $type, $descr, $divisor, '1', null, null, null, null, $current);  
}
```

# Exemplos - UPS

The screenshot displays the LibreNMS interface for a UPS device named 'mpy-ups-everest'. The interface is divided into several sections:

- Overview:** Shows system details such as System Name (ups-everest), Resolved IP (10.10.0.42), Hardware (S80KH), Operating System (MegaTec NetAgent II 3.7.DA807.APC.6), Object ID, Contact (NOC), Device Added (2 years 7 months 1 week 5 days 2 hours 21 minutes 12 seconds ago), Last Discovered (22 hours 34 minutes 35 seconds ago), Uptime (3 years 10 months 2 weeks 3 days 3 hours 6 minutes 44 seconds), and Location (H.E. Multiplay - Fortaleza/CE-BR).
- Battery Charge:** Shows a battery charge level of 100%.
- Temperature:** Shows a temperature of 31.3°C.
- Voltage:** Lists input and output voltages for L1, L2, L3, and Bypass stages.
- Frequency:** Shows input, output, and bypass frequencies.
- Load:** Shows load percentages for Out L1 (R), Out L2 (S), and Out L3 (T).
- State:** Lists various operational states like UPS state (Online), In And Out (ThreeThreOut), Back Status (abnormal), Charge Status (float), Breaker Status (open), AC status (abnormal), Inverter Operating (yes), Rectifier Operating (yes), Switch Mode (inverted), Rectifier Rotation Error (no), Bypass freq. fail (yes), and Short Circuit (no).
- Health Table:** A table with columns for Class, Type, Description, Current, High, High warn, Low warn, Low, and Alerts. A red arrow points to the 'High' column for the 'charge' row.

Class	Type	Description	Current	High	High warn	Low warn	Low	Alerts
charge	netagent2	Battery Charge	100	100		10	0	ON <span>Reset</span>
current	netagent2	Battery Current	0.1	30				ON <span>Reset</span>
frequency	netagent2	Bypass frequency	0	60	51	49	0	OFF <span>Reset</span>
frequency	netagent2	Input frequency	60	64	62	58	55	ON <span>Reset</span>
frequency	netagent2	Output frequency	60	64	62	58	55	ON <span>Reset</span>
load	netagent2	Out L1 (R)	40	100	80		0	ON <span>Reset</span>

**AIO** mpy-cgn-nat-cgn44-tiffany  
H.E. Multiplay - Fortaleza/CE-BR [-3.74602, -38.49900]

Memory Usage CPU Usage Device Traffic

Overview Graphs Health Ports Neighbours Inventory Logs Alerts Alert Stats Config Latency Notes

**Thunder Series Unified Application Service Gateway TH3230, ACOS 5.1.0-P6,**

System Name mpy-cgn-nat-cgn44-tiffany  
Resolved IP 172.17.0.2  
Hardware TH3230  
Operating System A10 Networks 5.1.0-P6(build: 38)  
Serial TH325  
Object ID 1.3.6.1.4.1.22610.1.3.42  
Contact UNKNOWN  
Device Added 2 years 5 months 1 week 4 days 6 hours 26 minutes 23 seconds ago  
Last Discovered 36 minutes 36 seconds ago  
Uptime 2 years 9 months 2 weeks 3 days 0 hours 52 seconds  
Location H.E. Multiplay - Fortaleza/CE-BR  
Lat / Lng -3.74602, -38.499

**Processors**

100  
80  
60  
40  
20  
0  
Sun 00:00 Sun 06:00 Sun 12:00 Sun 18:00

Proc #0 x8 32%

**Memory**

14 G  
12 G  
10 G  
8 G  
6 G  
4 G  
2 G  
0  
Sun 00:00 Sun 06:00 Sun 12:00 Sun 18:00

System Memory 69%

**Storage**

Disk 27%

**Temperature**

System Temp 35 °C

Fan 4B okLowMed

Fan 5A okMedHigh

Fan 5B okLowMed

System Voltage 12V normal

System Voltage 5V normal

System Voltage AVCC 3.3V normal

System Voltage CC(3.3V) normal

System Voltage VCoreB(0.9v) normal

System Voltage IOH 1.1V normal

System Voltage VBAT 3.3V normal

System Voltage SB 5V normal

System Voltage PCH(1.5V) normal

System Voltage VCoreA(1.2V) normal

System Voltage VTT(0.75V) normal

System Voltage DRAM(1.5V) normal

System Temp lowMed

**HA**

HA Local Status standby

**# Count**

**Connections**

Count of L4 Sessions 934.67

Count of TCP Established 322.31

Count of UDP connections 507.86

Count of non TCP/UDP 99

**Recent Events**

2024-12-01 20:00:02 State sensor Fan 2B has changed from okMedHigh (7) to okLowMed (5)

2024-12-01 19:54:09 State sensor Fan 2B has changed from okLowMed (5) to okMedHigh (7)

# Exemplos - CGNat A10

# Exemplos - OLT Fiberhome

**wby-olt-acc-cbr-fh-01**  
Fiberhome DefaultsysLocation

Memory Usage CPU Usage Device Traffic

Overview Graphs Health Ports Logs Alerts Alert Stats Latency Notes

**ANS516-01**

System Name wby-olt-acc-cbr-fh-01  
Resolved IP 192.114  
Hardware ANS516-01  
Operating System Fiberhome V104R002 (WKE2.115.331R1A)  
Object ID 1.3.6.1.4.1.5875.800.1001.11  
Contact DefaultsysContact  
Device Added 6 months 3 weeks 1 day 10 hours 32 seconds ago  
Last Discovered 1 hour 14 minutes 18 seconds ago  
Uptime 1 year 3 months 2 weeks 2 days 20 hours 55 minutes 54 seconds  
Location DefaultsysLocation  
Lat / Lng N/A

**Processors**

Hswa 9 Processor x1 19%

**Memory**

Hswa 9 Memory 84%

**Temperature**

Internal Temperature 0 38 TC

**State**

Fan slot 21 Status Normal  
Power slot 1 Status Normal  
Power slot 2 Status Normal

**wby-olt-acc-cbr-fh-01**  
Fiberhome DefaultsysLocation

Memory Usage CPU Usage Device Traffic

Overview Graphs Health Ports Logs Alerts Alert Stats Latency Notes

**Performance**

From 2024-11-29 23:32 To 2024-12-01 23:32 Update

Latency

Milliseconds	Cur	Min	Max	Avg
RTT	2.69	2.50	2.94	2.96
Loss	0.00	0.00	2.00	0.00

192.168.228.130/device/4244/latency

# Exemplos - OLT Huawei

**crt-olt-acc-goh01-ch01**  
POP Cortez - Goiânia/RR-BR [-6.2823365, -35.2046914]

Overview | Graphs | Health | Ports | Routing | Neighbours | STP | Inventory | Logs | Alerts | Alert Stats | Latency

**Huawei Integrated Access Software**

- System Name: crt-olt-acc-goh01-ch01
- Resolved IP: 192.130
- Hardware: Fan Tray Assembly
- Operating System: Huawei SmartAX MAS800V100R019C12B066
- Serial: 02311
- Object ID: 1.3.6.1.4.1.2011.2.316
- Contact: CABO Telecom - Eng. IP <adm-ig@cabotelecom.com.br>
- Device Added: 3 years 6 months 1 week 6 days 8 hours 6 minutes 46 seconds ago
- Last Discovered: 1 hour 13 minutes 46 seconds ago
- Uptime: 3 years 10 months 3 weeks 2 days 12 hours 21 minutes 42 seconds
- Location: POP Cortez - Goiânia/RR-BR
- Lat / Lng: -6.282337, -35.204691

**Processors**

H902GPSF processor x9: 13%

**Memory**

Slot	Model	Usage
Slot 1	H902GPSF	63%
Slot 2	H902GPSF	63%
Slot 3	H902GPSF	67%
Slot 4	H902GPSF	60%
Slot 5	H902GPSF	60%
Slot 6	H902GPSF	58%
Slot 7	H902GPSF	57%
Slot 8	H903MPLA	52%

**GPON 07/10 Added ONTs**

GPON 07/11 Added ONTs	35
GPON 07/12 Added ONTs	28
GPON 07/13 Added ONTs	12
GPON 07/14 Added ONTs	11
GPON 07/15 Added ONTs	16
GPON 01/0 Added ONTs	44
GPON 01/01 Added ONTs	43
GPON 01/02 Added ONTs	59
GPON 01/03 Added ONTs	35
GPON 01/04 Added ONTs	45
GPON 01/05 Added ONTs	25
GPON 01/06 Added ONTs	24
GPON 01/07 Added ONTs	54
GPON 01/08 Added ONTs	30
GPON 01/09 Added ONTs	37
GPON 01/10 Added ONTs	15
GPON 01/11 Added ONTs	10

**T-CONTs Count**

GPON 01/0 T-CONTs	208
GPON 01/1 T-CONTs	202
GPON 01/2 T-CONTs	316
GPON 01/3 T-CONTs	154
GPON 01/4 T-CONTs	380
GPON 01/5 T-CONTs	272
GPON 01/6 T-CONTs	336
GPON 01/7 T-CONTs	232
GPON 01/8 T-CONTs	376
GPON 01/9 T-CONTs	354
GPON 01/10 T-CONTs	46
GPON 01/11 T-CONTs	304

**Power**

Chassis Total	586 W
H902GPSF	46 W
H902GPSF	46 W
H902GPSF	46 W
H902GPSF	46 W
H902GPSF	46 W
H902GPSF	46 W
H902GPSF	46 W
H902GPSF	46 W
H903MPLA	0 W
H902GPSF	46 W
H902PILA	4 W
H902PILA	4 W

**State**

**Frames**

Frame 0 (H901BP1B) Status	normal
---------------------------	--------

**Boards**

Slot 1 (H902GPSF) Status	normal
Slot 2 (H902GPSF) Status	normal
Slot 3 (H902GPSF) Status	normal
Slot 4 (H902GPSF) Status	normal
Slot 5 (H902GPSF) Status	normal
Slot 6 (H902GPSF) Status	normal
Slot 7 (H902GPSF) Status	normal
Slot 8 (H903MPLA) Status	normal
Slot 9 (H903MPLA) Status	offline
Slot 10 (H902GPSF) Status	normal
Slot 18 (H902PILA) Status	normal

# Exemplos - OLT Nokia

**NOKIA** jureia  
Alcatel Bell - Antwerpen

Memory Usage CPU Usage Device Traffic

Overview Graphs Health Ports Logs Alerts Alert Stats Latency Notes

**R5.7.02** NFXS-F FANT-F NOKIA ISAM Copyright (c) 2016 Nokia. All rights reserved. All use subject to applicable license agreement. Nokia and Alcatel-Lucent are registered trademarks of Nokia Corporation.

System Name: jureia  
Resolved IP: 10.12.1.34  
Hardware: NFXS-F  
Operating System: NOKIA ISAM R5.7.02  
Serial: FH1-9  
Object ID: 1.3.6.1.4.1.637.61.1  
Contact: Alcatel  
Device Added: 1 month 1 week 2 days 17 minutes 58 seconds ago  
Last Discovered: 1 hour 48 minutes 20 seconds ago  
Uptime: 6 months 1 week 1 day 13 hours 2 minutes 13 seconds  
Location: Alcatel Bell - Antwerpen  
Lat / Lng: N/A

**Processors**  
CPU 4353 x3 0%

**Memory**  
FANT-F: 0 Memory (4353) 95%  
FGLT-B: 2 Memory (4355) 70%  
FGLT-B: 3 Memory (4356) 69%

**Temperature**  
nt-a: Sensor 1 43 °C  
nt-a: Sensor 2 32 °C  
nt-a: Sensor 3 47 °C

Map showing device locations in Europe.

**Tx Power**

R:1/1/1/13 Tx Power	5.42 dBm
R:1/1/1/14 Tx Power	5.55 dBm
R:1/1/1/15 Tx Power	3.68 dBm
R:1/1/1/16 Tx Power	3.57 dBm
R:1/1/2/1 Tx Power	5.18 dBm
R:1/1/2/2 Tx Power	5.12 dBm
R:1/1/2/3 Tx Power	5.21 dBm
R:1/1/2/4 Tx Power	5.27 dBm
R:1/1/2/5 Tx Power	5.12 dBm
R:1/1/2/6 Tx Power	5.23 dBm
R:1/1/2/7 Tx Power	5.24 dBm
R:1/1/2/8 Tx Power	5.18 dBm
R:1/1/2/9 Tx Power	5.19 dBm
R:1/1/2/10 Tx Power	5.2 dBm
R:1/1/2/11 Tx Power	5.27 dBm
R:1/1/2/12 Tx Power	3.68 dBm

**State**

acw:1/1/ NGFC-F (NGFC-F)	no_error
nt-a: FANT-F (FANT-F)	no_error
nt-b: FANT-F (FANT-F)	no_error
R:1/1/1/ FGLT-B (FGLT-B)	no_error
R:1/1/2/ FGLT-B (FGLT-B)	no_error
R:1/1/3/ EMPTY (FGLT-B)	board-installation-missing
R:1/1/4/ EMPTY (FGLT-B)	board-installation-missing
4481 EMPTY (NOT_PLANNED)	no_error
Fan Mode	protect

**Recent Events**

- 2024-12-01 22:59:15 nokia FGLT-... ifSpeed: 0 bps -> 1.24 Gbps

**cbn-olt-lab-nokia-ihub**

Overview Graphs Ports Routing Logs Alerts

**TIMOS-B-14.11.private** bothPpe Nokia 7710 ISAM Copyright (c) 2000-2023 Nokia. All rights reserved. All use subject to applicable license agreements. Built on Build on Mon May 29 17:26:51 IST 2023 by bmc in /repo/ef/nante/sw/vobs/dsl/PPD/main

System Name: cbn-olt-lab-nokia  
Assigned IP: 192.168.1.60  
Operating System: Generic Device  
Object ID: 1.3.6.1.4.1.6527  
Device Added: 5 months 3 weeks 3 days 7 hours 48 minutes 14 seconds ago  
Last Discovered: 21 hours 7 minutes 4 seconds ago  
Uptime: 1 week 5 days 9 hours 55 minutes 26 seconds

**Device Group Membership**

All Devices All Devices Enabled All Servers Cabo Dashboard Show  
Disk Usage Generic Poller\_Group\_CNTRL Ports ifSpeed => 40Gbps

**Overall Traffic**

Graph showing traffic over time.

36 20 12 0

lag-1, lag group, lag-cbn-rtt-bng-acc-chacal-trunk101-10g, lag-1-0, lg interface, bbn-svc-cor-bbc-mewtwo-(BE20.4041)-(200g), lag-2, lag group, teste, lag-21, lag group, lacp-lab-calcix, lag-22, lag group, huawei 6720 monica eth-trunk 22 - lab nokia sr-1 julius pppoe, lag-31, lag group, lacp-dzs-mux-f, lag-



# Exemplos - OLT ZTE

**stw-olt-acc-zte-02**  
POP Apollo, Altabia/SP-BR [-23.125506, -46.566219]

Overview | Graphs | Health | Ports | VLANs | Routing | Logs | Alerts | Alert Stats | Latency | Notes

**ZXA10 C600, ZXA10 Software Version: V1.2.2**

System Name: stw-olt-acc-zte-02  
 Resolved IP: 172.17.0.3  
 Operating System: ZTE ZXA10  
 Object ID: 1.3.6.1.4.1.3902.1082.1001.600.1.1  
 Device Added: 1 year 11 months 3 weeks 3 days 23 hours 39 minutes 5 seconds ago  
 Last Discovered: 22 hours 15 minutes 53 seconds ago  
 Uptime: 6 months 3 days 21 hours 33 minutes 56 seconds  
 Location: POP Apollo, Altabia/SP-BR  
 Lat / Lng: -23.125506, -46.566219

**Processors**

HFTH Processor x270 0%

**Recent Events**

- 2024-12-01 08:56:54 **gpon\_olt-M...** #OperStatus: down -> up
- 2024-12-01 08:51:15 **gpon\_olt-M...** #OperStatus: up -> down
- 2024-07-26:21 07:26:21 **gpon\_olt-M...** #OperStatus: down -> up
- 2024-00:42:19 00:42:19 **gpon\_olt-M...** #OperStatus: down -> up
- 2024-00:36:42 00:36:42 **gpon\_olt-M...** #OperStatus: up -> down
- 2024-18:36:15 18:36:15 **#0** /opt/librenms/LibreNMS/Alert/RunAlerts.php(53): LibreNMS/Alert/Transport/Dummy->deliverAlert()#1
- 2024-18:36:15 18:36:15 **#0** /opt/librenms/LibreNMS/Alert/RunAlerts.php(262): LibreNMS/Alert/DummyTransport->sendAlert()

**Device Group Membership**

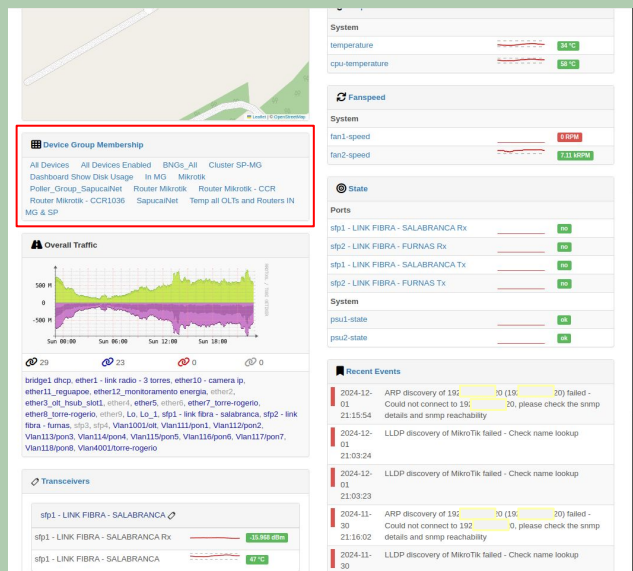
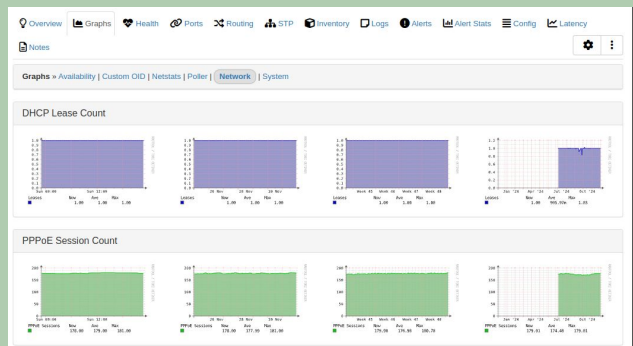
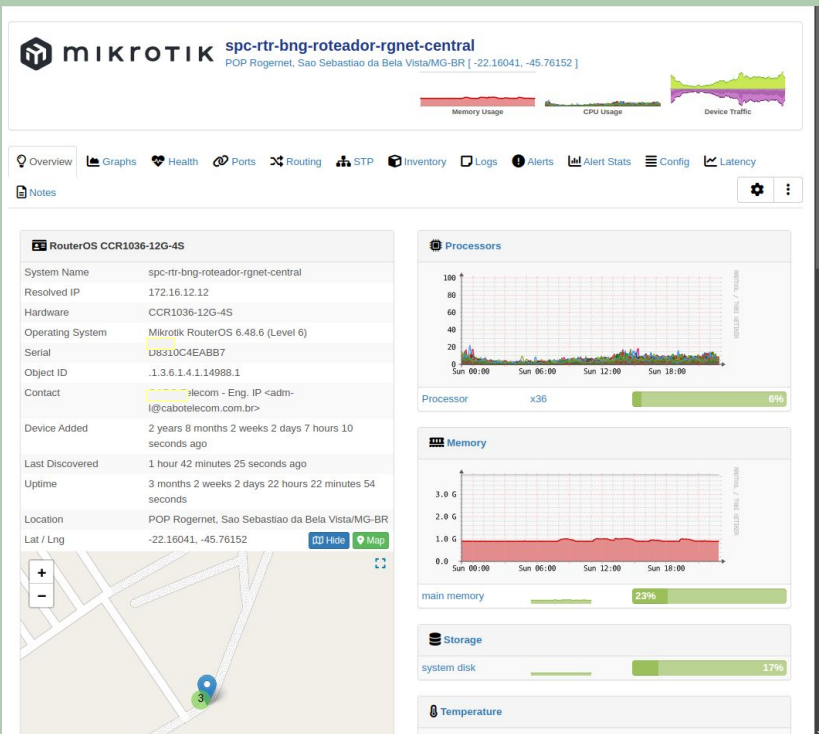
**SNMP Statistics**

**SNMP Packet Type Statistics**

**TCP Statistics**

**UDP Statistics**

# Exemplos - Mikrotik



# Exemplos - Switch Huawei

**System Information:**

System Name	wby-swc-bbc-orn_dc-01-hocuspocus
Resolved IP	10.1.1.9
Hardware	S12700E-4
Operating System	Huawei VRP 5.170 (V200R022C00SPC500) Copyright (c) 2000-2022 Huawei Technologies Co., Ltd
Object ID	1.3.6.1.4.1.2011.2.279.6
Contact	redes@grupowebty.com.br
Device Added	6 months 3 weeks 1 day 8 hours 55 minutes 12 seconds ago
Uptime	1 year 7 months 3 days 18 hours 5 minutes 8 seconds
Location	DC-01 Ourinhos - Ourinhos/SP-BR -
Lat / Lng	-22.958114, -49.883406

**Processors:**

LPU Board 1 Processor	x6	31%
-----------------------	----	-----

**Memory:**

LPU Board 1 Memory	17%	17%
LPU Board 2 Memory	17%	17%
LPU Board 3 Memory	29%	29%
MPU Board 5 Memory	15%	15%
SFU Board 7 Memory	1%	1%
SFU Board 8 Memory	1%	1%

**Ports:** Basic | Detail | ARP Table | FDB Table | Transceivers | Neighbors

**Graphs:** Bits (Min) | Unicast Packets (Min) | Non-Unicast Packets (Min) | Errors (Min)

MAC Address	Vendor	IPv4 Address	Port	Description	Vlan	First seen	Last seen
00:00:00:0a:00:00	ICANN, IANA Depart...	10.1.1.10	XG10/35	PAP-SW-OUR...	1769	2024-11-20 22:51:33	7 minutes ago
00:00:00:3e:00:00	ICANN, IANA Depart...	10.1.1.62	XG10/31	PAP-SW-OUR...	1810	2024-11-20 22:51:33	7 minutes ago
00:00:00:c2:00:00	Uniwil Computer Corp.		Eth-Trunk8	LAG-SW-OUR...		2024-11-20 22:51:33	7 minutes ago
00:00:00:38:00:00	Mega System Techn...		Eth-Trunk10	LAG-SW-OUR...		2024-11-20 22:51:33	7 minutes ago
00:00:00:94:00:00	Fortinet, Inc.		Eth-Trunk8	LAG-SW-OUR...		2024-11-20 22:51:33	7 minutes ago
00:01:00:ef:00:00	Ubiquiti Inc	10.7.100.34	XG10/33	PAP-SW-OUR...		2024-11-20 22:51:33	7 minutes ago
00:01:00:f7:00:00	Intelbras		Eth-Trunk10	LAG-SW-OUR...		2024-11-20 22:51:33	7 minutes ago
00:01:00:e3:00:00	Intelbras		Eth-Trunk10	LAG-SW-OUR...		2024-11-20 22:51:33	7 minutes ago
00:01:00:fc:00:00	Intelbras		Eth-Trunk10	LAG-SW-OUR...		2024-11-20 22:51:33	7 minutes ago
00:01:00:40:00:00	Intelbras		Eth-Trunk10	LAG-SW-OUR...		2024-11-20 22:51:33	7 minutes ago

Showing 1 to 10 of 3914 entries

# Exemplos - Switch Extreme

**mpy-swc-bbc-extreme\_3**  
H.E. Multiplay - Fortaleza/CE-BR [3.74602, -38.49900]

Overview | Graphs | Health | Ports | VLANs | Routing | Neighbours | STP | Inventory | Logs | Alerts | Alert Stats

Config | Latency | Notes

**ExtremeXOS (X67002-48x-4q) version 31.1.1.3 31.1.1.3-patch1-1 by release-manager on Sat Nov 14 01:32:02 EST 2020**

System Name: mpy-swc-bbc-extreme\_3  
Resolved IP: 172.16.1.9  
Hardware: X67002-48x-4q  
Operating System: Extreme XOS 31.1.1.3 (31.1.1.3-patch1-1)  
Object ID: .1.3.6.1.4.1.1916.2.195  
Contact: noc@multiplaytelecom.com.br  
Device Added: 3 years 5 months 3 weeks 2 days 6 hours 48 minutes 25 seconds ago  
Last Discovered: 1 hour 27 minutes 45 seconds ago  
Uptime: 6 months 3 weeks 1 day 13 hours 51 minutes 36 seconds  
Location: H.E. Multiplay - Fortaleza/CE-BR  
Lat / Lng: -3.74602, -38.499

**Processors**

Processor x1: 16%

**Memory**

Dynamic Memory: 2.4%

**Temperature**

Chassis Temperature	49 °C
1:1 SFP Temperature	25 °C
1:2 SFP Temperature	27 °C
1:5 SFP Temperature	26 °C
1:6 SFP Temperature	28 °C

**mpy-swc-bbc-extreme\_3**  
H.E. Multiplay - Fortaleza/CE-BR [3.74602, -38.49900]

Overview | Graphs | Health | Ports | VLANs | Routing | Neighbours | STP | Inventory | Logs | Alerts | Alert Stats

Config | Latency | Notes

VLANs » Basic | Graphs: Bits | Unicast Packets | Non-Unicast Packets | Errors

VLAN Number	VLAN Name	Ports
3	VLAN3	1:19 (U), 1:57
30	VLAN30	1:9, 1:18
31	VLAN31	1:18
33	VLAN33	1:18
50	VLAN50	1:18
67	VLAN67	1:36
68	VLAN68	10_IN, 1:9, 1:49
69	VLAN69	10_OUT, 1:9, 1:49
75	VLAN75	MA1, 1:20
76	VLAN76	MA2, 1:20
80	VLAN80	1:9, 1:18
85	VLAN85	1:3, 1:4, 1:9, 1:16, 1:21, 1:22, 1:23, 1:29, 1:31, 1:33, 1:34, 1:37, 1:39, 1:41, 1:42, 1:45, 1:47, 1:48, 1:49
87	VLAN87	ROUTER-MGMT, 1:9, 1:20
90	VLAN90	o2, 1:18
95	VLAN95	T, 1:18
100	VLAN100	EMPRESA, 1:9, 1:29
101	VLAN101	res, 1:9 (U), 1:17 (U), 1:18
120	VLAN120	1:6, 1:18, 1:36, 1:49
202	VLAN202	1:23
211	VLAN211	1:23, 1:36, 1:49
212	VLAN212	1:23, 1:57

# Exemplos - Switch Datacom

**DATAKOM crt-swc-381**

Memory Usage CPU Usage Device Traffic

Overview Graphs Health Ports Inventory Logs Alerts Alert Stats Config Latency Notes

**DM4370 4GT+4GX+4XS (DmOS version 9.4.2-042-1-g6453973b4e)**

System Name	crt-swc-381
Resolved IP	192.168.1.5
Hardware	DM4370
Operating System	DmOS 9.4.2-042-1-g6453973b4e
Object ID	1.3.6.1.4.1.3709.1.2.137
Contact	Alares Internet - Eng IP <engenhar@alaresinternet.com.br>
Device Added	8 months 1 week 6 days 13 hours 34 minutes 44 seconds ago
Last Discovered	21 hours 5 minutes 15 seconds ago
Uptime	1 month 1 week 2 days 16 hours 59 minutes 29 seconds
Location	RN
Lat / Lng	-6.123456, -38.123456

Location: RN

Lat / Lng: -6.123456, -38.123456

**Processors**

Processor x1: 28%

**Memory**

Memory: 58%

**Recent Events**

- 2024-11-30 12:40:32 Device status changed to Up from icmp check by 63c75e4522721.
- 2024-11-30 12:39:54 Device status changed to Up from icmp check by 61180892e5225.
- 2024-11-30 12:39:29 Device status changed to Down from icmp check by 63c75e4522721.

**DATAKOM crt-swc-381**

Memory Usage CPU Usage Device Traffic

Overview Graphs Health Ports Inventory Logs Alerts Alert Stats Config Latency Notes

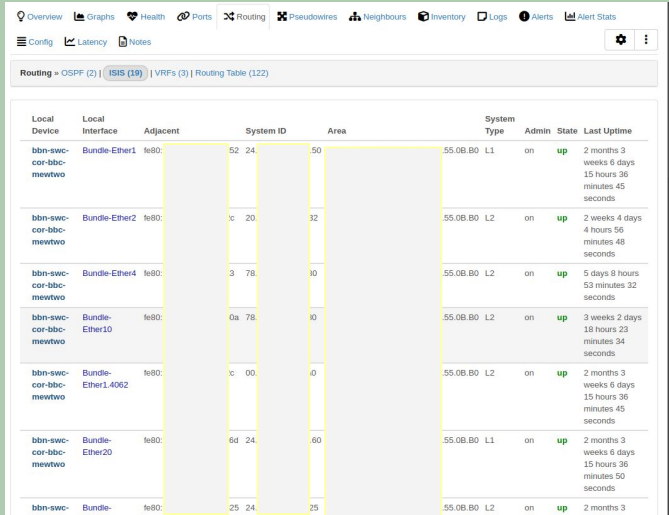
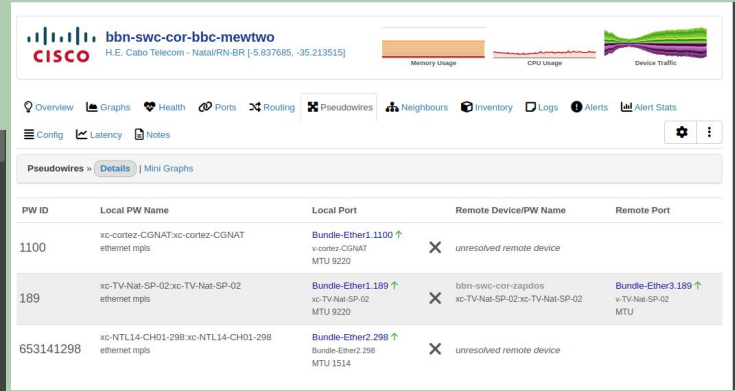
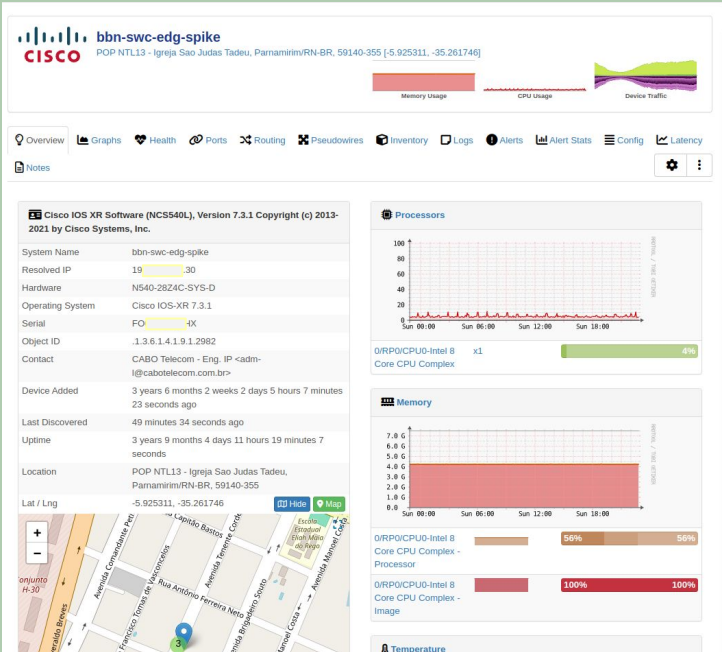
Ports » Basic | Detail | Graphs: Bits (Min) | Unicast Packets (Min) | Non-Unicast Packets (Min) | Errors (Min)

Port	Port Groups	Graphs	Traffic	Speed	Media	MAC Address
ten-gigabit-ethernet-1/1/3	Default		← 1.16 Gbps → 148.91 Mbps ← 115.13 Kpps → 42.15 Kpps	10 Gbps	Ethernet	70:12:34:56:78:9A
lag-1	Default		← 1.16 Gbps → 148.91 Mbps ← 115.13 Kpps → 42.15 Kpps	10 Gbps	ieee8023adLag	70:12:34:56:78:9A
ten-gigabit-ethernet-1/1/1	Default		← 110.95 Mbps → 1.16 Gbps	10 Gbps	Ethernet	70:12:34:56:78:9A

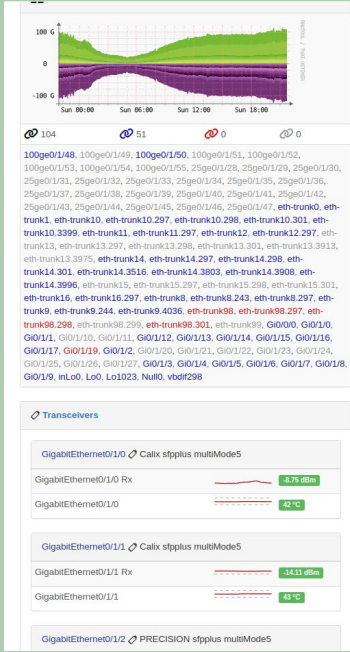
**Errors**

Port	Errors	In	Out	Max
ten-gigabit-ethernet-1/1/1	0.00 pps	0.00 pps	0.00 pps	0.00 pps
ten-gigabit-ethernet-1/1/2	0.00 pps	0.00 pps	0.00 pps	0.00 pps

# Exemplos - Switch Cisco



# Exemplos - Roteador Huawei



TempSensor 16908287.0.255.2	67 °C
TempSensor 16908287.0.255.3	59 °C
TempSensor 16908287.0.255.4	59 °C
TempSensor 16908287.0.255.5	56 °C
TempSensor 16908287.0.255.6	59 °C
TempSensor 16908287.0.255.7	57 °C
TempSensor 16908287.0.255.8	56 °C
TempSensor 16908287.0.255.9	59 °C
TempSensor 16908287.0.255.10	54 °C
TempSensor 16908287.0.255.11	42 °C
TempSensor 16908287.0.255.12	44 °C
TempSensor 16908287.0.255.13	46 °C
TempSensor 16908287.0.255.14	34 °C

Voltage	
IPU 1	0.78 V
GPRACQ20YS 0/1	0.78 V
POWER 3	12.04 V
PWR2	219 V
PWR3	218 V

Slot-16908287	
VoltSensor 16908287.0.0.0	0.78 V
VoltSensor 16908287.0.0.1	0.78 V
VoltSensor 16908287.0.0.2	0.78 V
VoltSensor 16908287.0.0.3	0.81 V
VoltSensor 16908287.0.0.4	0.78 V
VoltSensor 16908287.0.0.5	0.8 V
VoltSensor 16908287.0.0.6	0.9 V
VoltSensor 16908287.0.0.8	1.2 V
VoltSensor 16908287.0.0.9	1.3 V

**cbn-rtr-bng-acc-rataro**  
H.E. Cabo Telecom - Nata-RUN-BR [-5.837685, -35.213515]

Memory Usage █ Processor Usage █ Device Traffic █

Overview | Graphs | Health | Ports | Routing | Neighbours | STP | Inventory | Logs | Alerts | Alert Stats | Config

Latency | NAC | Notes

Routing = **BGP (8)** | VRFs (4) | Routing Table (174)

Local AS : 65300 BGP > Basic | Updates | Prefixes: **IPv4** | VPNv4 Ucast | IPv6 | VPNv6 Ucast | Traffic: Bits | Packets

Peer address	Type	Family	Remote AS	Peer description	State	Last error	Uptime
18.30 cbn-swc-acc-tesla v-NE8000-Rataro rtr(187) (0/31)	IBGP	ipv4unicast	AS65300		start established		2 months 3 weeks 4 days 10 hours 35 minutes 10 seconds Updates ↓ 10050 ↑ 355
187.2 cbn-swc-acc-ampere v-NE8000-Rataro rtr(18) (62/01)	IBGP	ipv4unicast	AS65300		start established	Hold Timer Expired	3 weeks 5 days 4 hours 27 minutes 38 seconds Updates ↓ 1995 ↑ 157
189.30 cbn-rtr-edg-qui-gon-jinn LoopBack0	Priv eBGP	ipv4unicast	AS65399		start established		2 months 3 weeks 4 days 10 hours 35 minutes 3 seconds Updates ↓ 882 ↑ 349

# Exemplos - Roteador Huawei (cont)

**cbn-rtr-bng-acc-rataro**  
H.E. Cabo Telecom - Natal/RN-BR [-5.837685, -35.213515]

Overview | Graphs | Health | Ports | Routing | Neighbours | STP | Inventory | Logs | Alerts | Alert Stats | Config | Latency | NAC | Notes

**1. NetEngine 8000 F1A-BH20Q frame**  
NetEngine 8000 F1A-BH20Q frame

- 1. IPU slot 1
  - IPU slot 1
    - 1. CR880BK03C0 (IPU 1)
      - Integration Processing Unit
      - Serial No. 210235
      - Sensors:
        - power: 23.6 W
        - temperature: 45.5 C
    - 1. GPR8CQ20YS (GPR8CQ20YS 0/1)
      - 8-Port 100GBase-QSFP28 - 20-Port 25GBase-Y-SFP+
      - Sensors:
        - temperature: 45.5 C
        - voltage: 3.33 V
      - 0. SFP-10G-BX (GigabitEthernet0/1/0)
        - 10300Mb/s-1330nm-L-C-20km(0.009mm)
        - Serial No. T01000000000000000000000000000000
        - Sensors:
          - current: 44.6 mA
          - Rx dbm: -29.79 dbm
          - Tx dbm: -31.11 dbm
          - temperature: 45.5 C
          - voltage: 3.33 V
      - 1. SFP-10G-BX (GigabitEthernet0/1/1)
        - 10300Mb/s-1330nm-L-C-20km(0.009mm)
        - Serial No. T01000000000000000000000000000000
        - Sensors:
          - current: 29.6 mA
          - Rx dbm: -29.33 dbm
          - Tx dbm: -31.11 dbm
          - temperature: 45.5 C
          - voltage: 3.33 V
      - 2. PRESFP10G-B32-40 (GigabitEthernet0/1/2)
        - 10300Mb/s-1330nm-L-C-20km(0.009mm)
        - Serial No. T01000000000000000000000000000000
        - Sensors:
          - current: 29.6 mA
          - Rx dbm: -29.33 dbm
          - Tx dbm: -31.11 dbm
          - temperature: 45.5 C
          - voltage: 3.33 V

**cbn-rtr-bng-acc-rataro**  
H.E. Cabo Telecom - Natal/RN-BR [-5.837685, -35.213515]

Overview | Graphs | Health | Ports | Routing | Neighbours | STP | Inventory | Logs | Alerts | Alert Stats | Config | Latency | NAC | Notes

NAC

Include Historical NAC entries

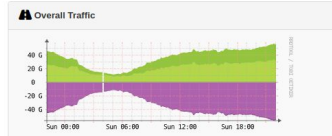
Ports	Mac Address	Vendor	IP Address	Vlan	Domain	Host Mode	Username	Auth By	Timeout	Time Elapsed	NAC Authc	NAC Authd	NAC Method	First seen	Last seen
Eth-Trunk10.301	0e:f1:08:00:00:00	8	1f:86:3:...	3		default	0e:f1:08:00:00:00	e	ordinaryvlan	0m 0s	5d 4h	success	success	2024-11-26 17:33:34 ago	1 minute
Eth-Trunk10.301	0e:f1:07:00:00:00	77	1f:29:3:...	3		default	0e:f1:07:00:00:00	e	ordinaryvlan	0m 0s	5d 4h	success	success	2024-11-26 17:33:34 ago	1 minute
Eth-Trunk10.301	0e:f1:16:00:00:00	16	1f:04:3:...	3		default	0e:f1:16:00:00:00	e	ordinaryvlan	0m 0s	5d 4h	success	success	2024-11-26 17:33:34 ago	1 minute
Eth-Trunk10.301	a0:f1:00:00:00:00	Technicolor Delivery Technologies Belgium NV	1f:39:3:...	3		default	a0:f1:00:00:00:00	e	ordinaryvlan	0m 0s	5d 4h	success	success	2024-11-26 17:33:34 ago	1 minute
Eth-Trunk10.301	04:f1:00:00:00:00	Technicolor Delivery Technologies Belgium NV	1f:22:3:...	3		default	04:f1:00:00:00:00	e	ordinaryvlan	0m 0s	5d 4h	success	success	2024-11-26 17:33:34 ago	1 minute
Eth-Trunk10.301	2a:f1:00:00:00:00	2a	1f:08:3:...	3		default	2a:f1:00:00:00:00	e	ordinaryvlan	0m 0s	5d 4h	success	success	2024-11-26 17:33:34 ago	1 minute
Eth-Trunk10.301	a0:f1:00:00:00:00	Technicolor Delivery Technologies Belgium NV	1f:58:3:...	3		default	a0:f1:00:00:00:00	e	ordinaryvlan	0m 0s	5d 4h	success	success	2024-11-26 17:33:34 ago	1 minute
Eth-Trunk10.301	a0:f1:00:00:00:00	Technicolor Delivery Technologies Belgium NV	1f:05:3:...	3		default	a0:f1:00:00:00:00	e	ordinaryvlan	0m 0s	5d 4h	success	success	2024-11-26 17:33:34 ago	1 minute
Eth-Trunk10.301	8c:f1:00:00:00:00	Vantiva USA LLC	1f:49:3:...	3		default	8c:f1:00:00:00:00	e	ordinaryvlan	0m 0s	5d 4h	success	success	2024-11-26 17:33:34 ago	1 minute
Eth-Trunk10.301	a0:f1:00:00:00:00	Technicolor Delivery Technologies Belgium NV	1f:02:3:...	3		default	a0:f1:00:00:00:00	e	ordinaryvlan	0m 0s	5d 4h	success	success	2024-11-26 17:33:34 ago	1 minute
Eth-Trunk10.301	8c:f1:00:00:00:00	Vantiva USA LLC	1f:02:3:...	3		default	8c:f1:00:00:00:00	e	ordinaryvlan	0m 0s	5d 4h	success	success	2024-11-26 17:33:34 ago	1 minute
Eth-Trunk10.301	64:f1:00:00:00:00	Vantiva USA LLC	1f:05:3:...	3		default	64:f1:00:00:00:00	e	ordinaryvlan	0m 0s	5d 4h	success	success	2024-11-26 17:33:34 ago	1 minute



# Exemplos - Roteador Juniper

### Device Group Membership

All Devices All Devices Enabled BGP Devices BNGs\_All BNGs\_Non\_Mikrotik Cluster-SP-MG ClusterSE-CRIT Conexao Conexao-CORE Dashboard Show Disk Usage In SP Juniper Poller\_Group\_Conexao Ports #Speed >= 40Gbps Report\_1\_Map Router Juniper Routers Temp all OLTs and Routers IN MG & SP



ae0, ae0.32767, cbp0, dsc, em2, em2.32768, em3, em3.0, em4, em4.0, esi, et-0/0/0, et-0/0/0.101, et-0/0/0.115, et-0/0/0.32767, et-0/0/0.392, et-0/0/1, et-0/0/1.267, et-0/0/1.32767, et-0/0/1.363, et-0/0/1.366, et-0/0/1.367, et-0/0/2, b0, fl1, fl2, fl3, fl4, fl5, fl6, fl7, fxd0, fxd0.0, gre, lpp, lrb, lrv, lrv.1, lc-0/0/0, lc-0/0/0.32769, lo0, lo0.0, lo0.16385, ml, ml.64000, mtun, ple-0/0/0, ple-0/0/0.16383, pth-0/0/0, pth-0/0/0.16383, pth-0/0/0.16384, plmd, pime, pip0, rbeb, tap, vtep, xe-0/1/0, xe-0/1/0.32767, xe-0/1/1, xe-0/1/2, xe-0/1/3, xe-0/1/4, xe-0/1/5, xe-0/1/6, xe-0/1/7

### Transceivers

- et-0/0/0 Skylane Optics QSFP-100G-SR4-T2
  - et-0/0/0 lane 0 Rx Power: 1.51 dBm
  - et-0/0/0 lane 1 Rx Power: 2.93 dBm
  - et-0/0/0 lane 2 Rx Power: 2.41 dBm
  - et-0/0/0 lane 3 Rx Power: 1.49 dBm
  - et-0/0/0 Temperature: 26 °C
- et-0/0/1 Skylane Optics QSFP-100G-SR4-T2

### State

PEM 0	30 °C
PEM 1	35 °C
Routing Engine	40 °C
CB 0	31 °C

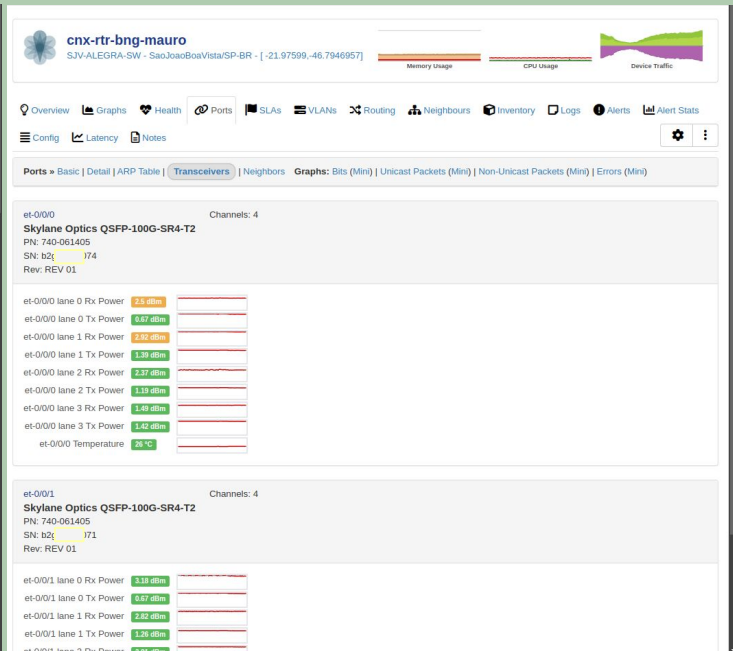
PEM 0	online
PEM 1	online
Fan Tray 0 Fan 0	online
Fan Tray 0 Fan 1	online
Fan Tray 1 Fan 0	online
Fan Tray 1 Fan 1	online
Fan Tray 2 Fan 0	online
Fan Tray 2 Fan 1	online
FPC: MPC @ 0/1*	online
PIC: 4XQSFP28 PIC @ 0/0*	online
PIC: 8XSFP6 PIC @ 0/1*	online
Routing Engine	online
CB 0	online

### Loss

#### RPM Probes

External-Ping [yellow] currentTest Probe	Loss	0 %
External-Ping [yellow] lastCompletedTest Pro	Loss	0 %
External-Ping [yellow] allTests Probe	Loss	0 %
External-Ping [yellow] currentTest Probe	Loss	0 %
External-Ping [yellow] lastCompletedTest Pro	Loss	0 %

# Exemplos - Roteador Juniper (cont)



# Exemplos - Roteador Nokia

# Count

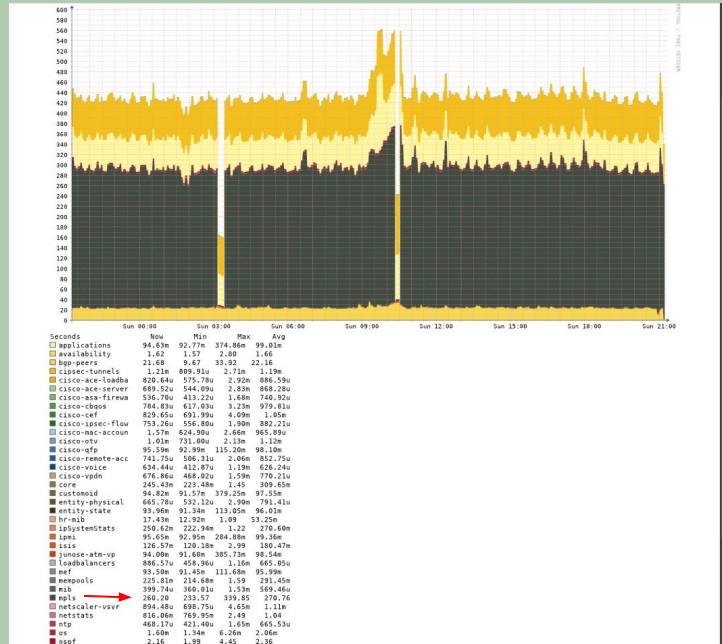
Subscribers

Active subscribers on this system 115.61 k

V4 hosts on this system 115.61 k

V6 hosts on this system 63.99 k

Total hosts on this system 179.6 k



**NOKIA** asbr268323-azza-bgp02/ce02-cot

Device Traffic

Overview | Graphs | Health | Ports | Routing | Neighbours | Inventory | Logs | Alerts | Alert Stats | Config | Latency

Notes

**TIMOS-B-22.2.R2 both/hops64 Nokia 7750 SR Copyright (c) 2000-2022 Nokia. All rights reserved. All use subject to applicable license agreements. Built on Wed Apr 6 13:51:37 PDT 2022 by builder in /builds/c/222B/R2/panos/main/sros**

System Name: asbr268323-azza-bgp02/ce02-cot  
 Resolved IP: 10.1.1.3  
 Hardware: 7750 SR-1  
 Operating System: Nokia SR OS (TIMOS) 22.2.R2  
 Serial: NS-5  
 Object ID: 1.3.6.1.4.1.6527.1.3.15  
 Device Added: 1 month 1 week 3 days 2 hours 38 minutes 30 seconds ago  
 Last Discovered: 1 day 18 hours 59 minutes 4 seconds ago  
 Uptime: 1 year 6 months 1 week 4 days 16 hours 25 minutes 37 seconds

**Device Group Membership**

All Devices | All Devices Enabled | B2B | Backbone SE\_2024\_Q2 | BGP Devices | Dashboard Show Disk Usage | Poller\_Group\_Azza | Ports | iSPeed == 40Gbps | Router Nokia | Routers | Temp all OLTs and Routers | IN MG & SP

**Processors**

Processor: x1 | 20%

**Memory**

Memory: 70%

**Temperature**

Chassis esat-1

- Slot 1: 53°C
- Slot A: 53°C
- MDA J/1: 60°C
- MDA J/2: 43°C

**Overall Traffic**

# Exemplos - Roteador Nokia (cont)

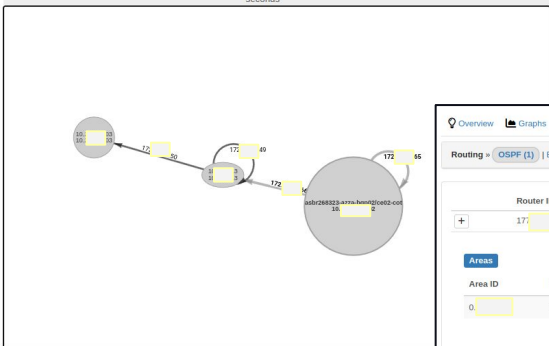
Overview | Graphs | Health | Ports | Routing | Neighbours | Inventory | Logs | Alerts | Alert Stats | Config | Latency

Notes

Routing » OSPF (1) | BGP (83) | VRFs (5) | MPLS (500)

MPLS » LSPs | Paths | SDPs | SDP binds | Services | SAPs

LSP Name	IndexType	Admin State	Oper State	Last Change at	Transitions	Bandwidth	Oper BW	State	Failcode	Fail Node	Metric	Oper Metric	
+ JQT-via-CIRION-LOG	1	primary	<span>inService</span>	<span>outOfService</span>	2 months 2 weeks 1 day 17 hours 5 minutes 27 seconds	1674	0	0	inactive	<span>badNode</span>	asbr268323-azza-bgp02/ce02-cot	0	16777215
+ JQT-via-CIRION-LOG	2	secondary	<span>inService</span>	<span>inService</span>	2 months 2 weeks 1 day 17 hours 5 minutes 43 seconds	1783	0	0	active	<span>noError</span>	0.0.0.0	0	1
+ OLT-ITA01-via-SLS-DIRETO	5	primary	<span>inService</span>	<span>inService</span>	11 months 3 weeks 6 days 11 hours 43 minutes 32 seconds	15351	0	0	active	<span>noError</span>	0.0.0.0	0	16777215



Notes

Neighbours » List | Map

Local Port	Remote Device	Remote Port	Protocol
1/1/c1/1 ethlag-Fran_1100G_0_(PSA-PSA_DCX)	fran 7250 IXR-x	1/1/c2/51 ethlag-Drew_1100G_0_(PSA-PSA_DCX)	LLDP
1/1/c1/10/1 ethlag-Cala_1100G_0_(LOCAL)	stw-swc-bbc-cala S6730-H48X6C	100GE0/0/3 ethlag-Drew_1100G_0_(LOCAL)	LLDP
1/1/c3/1 Drew-Sirius_1100G_(PSA-PSA_0)	stw-rt-edg-bng-sirius Juniper JNP204 [MX204] Edge Router	et-0/0/3 ethlag-Drew-Sirius_1100G_(PSA-PSA_0)	LLDP
1/1/c5/1 ethlag-Charlene_1100G_0_(DWDM_ZTE_PSA-ESP)	gus 7250 IXR-x	1/1/c2/1/1 100-Gig Ethernet	LLDP
1/1/c6/1 ethlag-Charlene_1100G_0_(DWDM_ZTE_PSA-ESP)	gus 7250 IXR-x	1/1/c2/4/1 ethlag-Drew_1100G_0_(DWDM_ZTE_PSA-ESP)	LLDP
1/1/c7/1 ethlag-Bobby_1100G_0_(DWDM_ZTE_PSA-PCS)	bobby 7250 IXR-x	1/1/c1/1 ethlag-Drew_1100G_0_(DWDM_ZTE_PSA-PCS)	LLDP
1/1/c8/1 ethlag-Bobby_1100G_0_(DWDM_ZTE_PSA-PCS)	bobby 7250 IXR-x	1/1/c2/1 ethlag-Drew_1100G_0_(DWDM_ZTE_PSA-PCS)	LLDP
1/2/c1/1 ethlag-Fran_1100G_0_(PSA-PSA_DCX)	fran 7250 IXR-x	1/1/c2/1/1 ethlag-Cala_1100G_0_(PSA-PSA_DCX)	LLDP
1/2/c1/10/1 ethlag-Cala_1100G_0_(LOCAL)	stw-swc-bbc-cala S6730-H48X6C	100GE0/0/4 ethlag-Drew_1100G_0_(LOCAL)	LLDP

Overview | Graphs | Health | Ports | Routing | Neighbours | Inventory | Logs | Alerts | Alert Stats | Config | Latency | Notes

Routing » OSPF (1) | BGP (135) | VRFs (7) | MPLS (18)

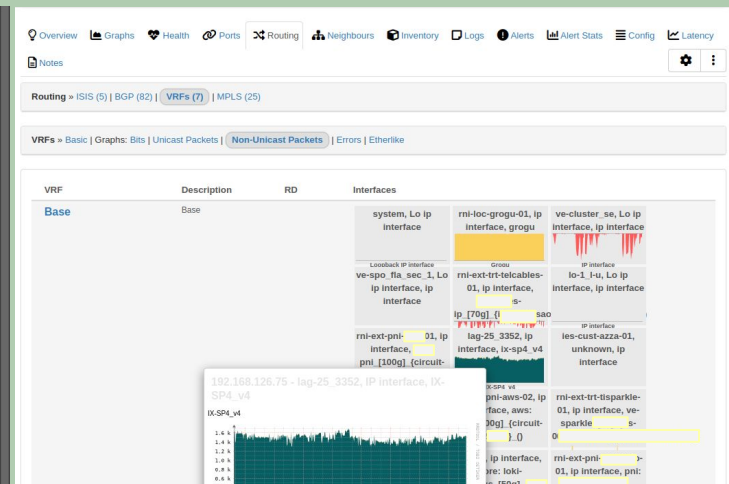
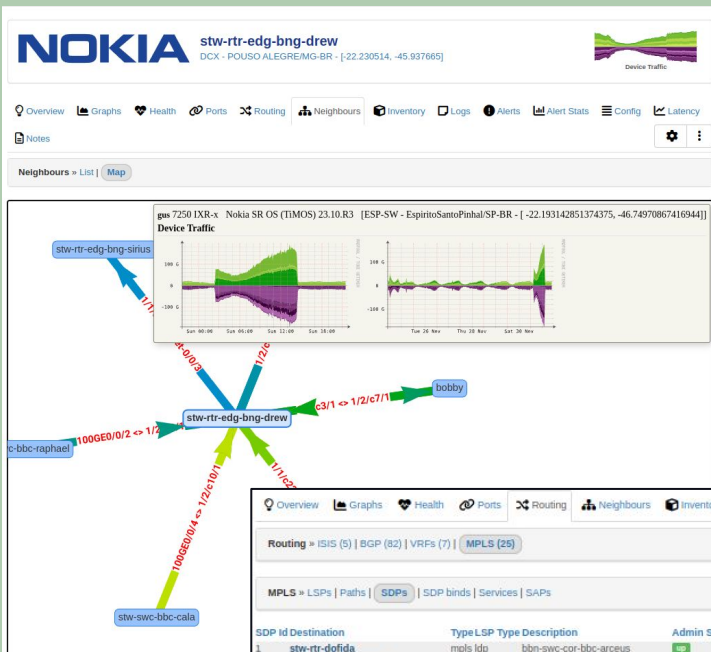
Router ID	Status	ABR	ASBR	Areas	Ports(Enabled)	Neighbours
+ 172.17.1.4	<span>enabled</span>	false	false	1	6(6)	43

Area ID	Ports(Enabled)	Status
0	6(6)	<span>enabled</span>

Port	Port Type	Port State	Cost	Status	Area ID
Lo-Mon	broadcast	designatedRouter	0	<span>enabled</span>	0
system	broadcast	designatedRouter	0	<span>enabled</span>	0
ve-991	pointToPoint	pointToPoint	100	<span>enabled</span>	0
ve-936	broadcast	otherDesignatedRouter	100	<span>enabled</span>	0
ve-937	broadcast	otherDesignatedRouter	100	<span>enabled</span>	0
ve-934	broadcast	otherDesignatedRouter	100	<span>enabled</span>	0

Router ID	Device	IP Address	Status
172.17.1.254	wby-rt-edg-jnp-orm-dc-01-walterwhite	192.1	<span>Full</span>
10.1.1.3	wby-rt-cgn-orm-gagarin	192.1	<span>Full</span>
10.1.1.4	wby-rt-cgn-orm-amphibia	192.1	<span>Full</span>
10.1.1.5	wby-rt-bras02-jnp-orm-dc-01-skylerwhite	192.1	<span>Full</span>
10.1.1.20	unknown	192.1	<span>Full</span>
10.1.1.21	unknown	192.1	<span>Full</span>

# Exemplos - Roteador Nokia (cont)



The screenshot displays the MPLS configuration section, showing a table of SDP IDs and their destinations. The table includes columns for SDP Id, Destination, Type, LSP, Type, Description, Admin State, Oper State, Admin MTU, Oper MTU, Last Mgmt, Change at, and Last Status.

SDP Id	Destination	Type	LSP	Type	Description	Admin State	Oper State	Admin MTU	Oper MTU	Last Mgmt	Change at	Last Status	Change at
1	stwrtr-dofidia	mpls	ldp		bbn-swc-car-bbc-arcus	up	down	9230	9230	41 seconds		1 year 2 weeks 2 days 9 hours 44 minutes 44 seconds	
2	ntc-swc-bbc-raphael	mpls	ldp		bbn-swc-car-bbc-newtwo	up	up	9230	9230	41 seconds		1 year 1 hour 40 seconds	
11	0.0.0.0	mpls	ldp		cmx-swc-bbc-tjv_alegra-dunga	up	up	9230	9230	41 seconds		1 year 1 week 6 days 12 hours 28 minutes 13 seconds	
15	stwrtr-swc-bbc-cala	mpls	ldp		stwrtr-swc-bbc-cala	up	up	9230	9230	41 seconds		1 year 5 days 7 hours 55 minutes 54 seconds	
16	stwrtr-swc-bbc-capella	mpls	ldp		stwrtr-swc-bbc-capella	up	up	9230	9230	41 seconds		1 year 5 days 7 hours 55 minutes 54 seconds	
60	out-rttr-edg-subzero	mpls	ldp		Subzero	up	up	9230	9230	7 months 3 days 13 hours 56 minutes 8 seconds		1 year 5 days 7 hours 55 minutes 54 seconds	
101	wmt-swc-bbc-mcd-buda	mpls	ldp		Buda	up	up	9230	9230	4 months 2 weeks 5 days 12 hours 26 minutes 55 seconds		1 year 5 days 7 hours 55 minutes 54 seconds	
102	wmt-swc-bbc-srn-sati	mpls	ldp		Sati	up	up	9230	9230	4 months 2 weeks 5 days 12 hours 26 minutes 55 seconds		1 year 5 days 7 hours 55 minutes 54 seconds	
103	out-swc-bbc-goro	mpls	ldp		Goro	up	up	9230	9230	4 months 2 weeks 5 days 12 hours 26 minutes 55 seconds		1 year 5 days 7 hours 55 minutes 54 seconds	
130	cbn-rttr-edg-qui-gon-jinn	mpls	ldp		Qui-Gon-Jinn	up	up	0	9770	8 months 1 week 2 days 7 hours 34 minutes 23 seconds		1 year 1 hour 40 seconds	

# Exemplos - Dashboards

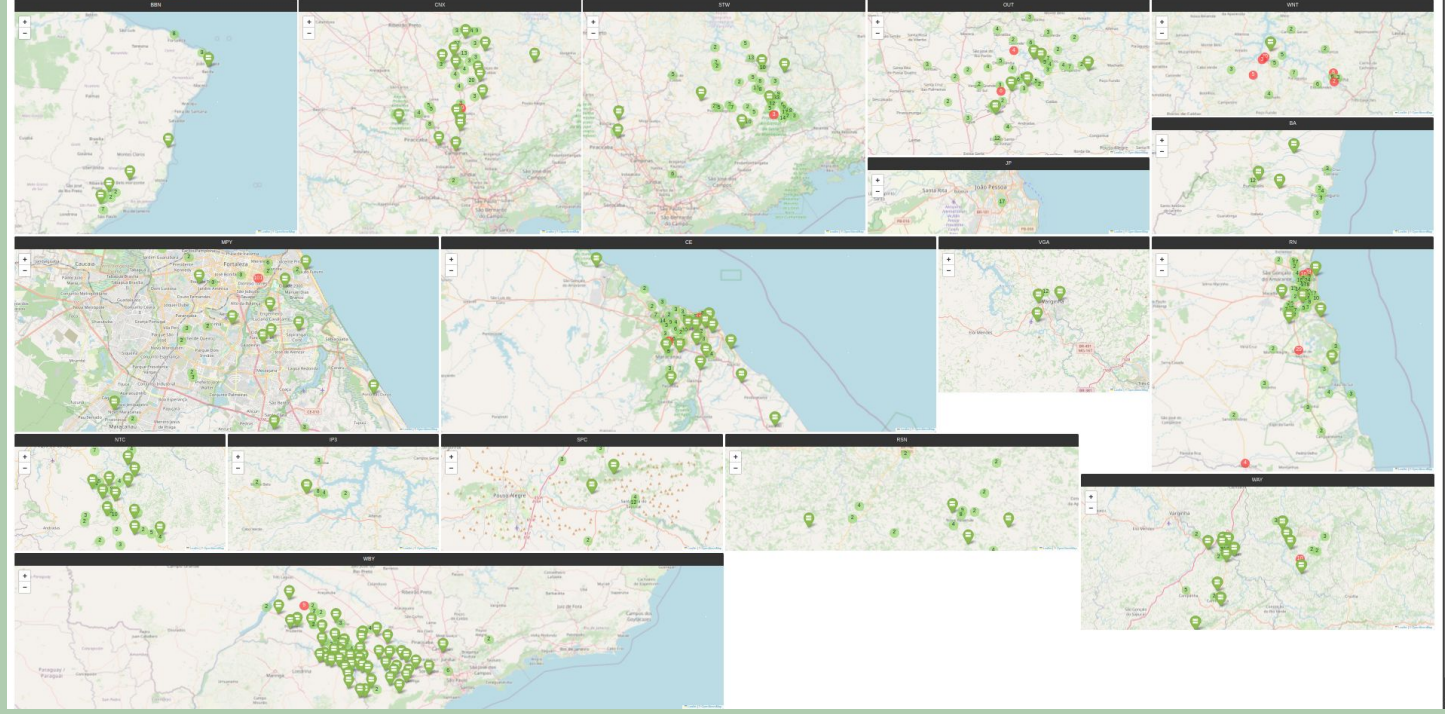
LibreNMS Dashboard for GTERS3-2. The main view shows a map of equipment locations in the Northeast region. A table on the right lists the status of various devices, with a 'Total hosts' summary at the top.

LibreNMS Dashboard for GTERS3-1. This view displays alert history with columns for timestamp, rule, hostname, location, and acknowledgment status. Below the alerts, there are sections for 'Device Types' and 'Top 15 errored interfaces' with associated charts and data tables.

LibreNMS Dashboard for GTERS3. The top section shows 'Upstream A' traffic graphs and a table of current and average metrics. Below, there are 'Notes' and a 'Global' map showing the geographical distribution of devices.

LibreNMS Dashboard for GTERS3. This section is titled 'Exemplos de Widgets para a GTERS3' and displays various data visualization widgets, including traffic graphs, status tables, and maps.

# Exemplos - Dashboards



# Exemplos - Buscas

Overview Devices Maps Services Ports Health Wireless Apps Routing Alerts librenms 00:03:98:09:1a:26

Dashboard | IPv6 Address | MAC Address | ARP Table | F

Plugins Tools

Eventlog Syslog Graylog Inventory Outages

Q IPv4 Address Q IPv6 Address Q MAC Address Q ARP Tables Q FDB Tables

cbj-sw-a... 00:1f:4b... 0d Lineage Power XGIO/0/15 ... 486 eth-rettica... 2024-11-07 21:47:36 12 hours ago

cbj-sw-a... 00:26:b5... ed Dell Inc. 192.168.1... Eth-Trunk2 486 lag-Dell-R... 2024-11-07 21:47:36 12 hours ago

cbj-sw-a... 00:26:b5... ee Dell Inc. Eth-Trunk2 486 lag-Dell-R... 2024-11-07 21:47:36 12 hours ago

cbj-sw-a... 00:40:9c... :1a DigiBoard 192.168.1... XGIO/0/2 486 eth-rettica... 2024-11-07 21:47:36 12 hours ago

cbj-sw-a... 64:9d:95... :88 Fs Com Inc XGIO/0/12 ... 486 eth1-Chav... 2024-11-07 21:47:36 12 hours ago

cbj-sw-a... e8:a4:c1... a3 Deep Sea Electronic... 192.168.1... XGIO/0/14 ... 486 eth-Gerad... 2024-11-07 21:47:36 12 hours ago

cbj-sw-a... f0:4d:a2... 7c Dell Inc. Eth-Trunk4 486 lag-Dell-R... 2024-11-07 21:47:36 12 hours ago

cbj-sw-a... 00:00:5e... :97 ICANN, IANA Depart... 192.168.3... Eth-Trunk0 3862 lag-mandi... 2024-11-07 21:47:36 12 hours ago

cbj-sw-a... 00:00:5e... :cb ICANN, IANA Depart... Eth-Trunk0 3862 lag-mandi... 2024-11-07 21:47:36 12 hours ago

cbj-sw-a... 00:03:9e... :26 Wisi XGIO/0/5 3862 eth-Tangra... 2024-11-07 21:47:36 12 hours ago

cbj-sw-a... 00:03:9e... :dd Wisi XGIO/0/5 3862 eth-Tangra... 2024-11-07 21:47:36 12 hours ago

cbj-sw-a... 00:03:9e... :4c Wisi XGIO/0/5 3862 eth-Tangra... 2024-11-07 21:47:36 12 hours ago

cbj-sw-a... 00:03:9e... :4e Wisi XGIO/0/5 3862 eth-Tangra... 2024-11-07 21:47:36 12 hours ago

cbj-sw-a... 00:03:9e... :50 Wisi XGIO/0/5 3862 eth-Tangra... 2024-11-07 21:47:36 12 hours ago

cbj-sw-a... 00:0c:29... :d0 VMware, Inc. 192.168.1... Eth-Trunk0 3862 lag-mandi... 2024-11-07 21:47:36 12 hours ago

cbj-sw-a... 38:c8:5c... :4f Cisco SPVTG Eth-Trunk0 3862 lag-mandi... 2024-11-07 21:47:36 12 hours ago

cbj-sw-a... e4:11:5b... :8e Hewlett Packard 192.168.3... Eth-Trunk0 3862 lag-mandi... 2024-11-07 21:47:36 12 hours ago

Search

Address	Vendor	IPv4 A...	Port	Vlan	Descri...	First seen	Last seen
00:1f:4b...	ICANN, IANA Depart...	192.168.1...	Eth-Trunk0	486	lag-mandi...	2024-11-07 21:47:36	12 hours ago
2:fd:3f...	Extreme Networks H...	187.111.2...	Eth-Trunk0	486	lag-mandi...	2024-11-07 21:47:36	12 hours ago
2:25:d0...	VMware, Inc.	192.168.1...	Eth-Trunk0	486	lag-mandi...	2024-11-07 21:47:36	12 hours ago
4:48:3f...	Dell Inc.		Eth-Trunk3	486	lag-Dell-2...	2024-11-07 21:47:36	12 hours ago
4:48:43...	Dell Inc.	192.168.1...	Eth-Trunk3	486	lag-Dell-2...	2024-11-07 21:47:36	12 hours ago
cbj-sw-a...	Lineage Power		XGIO/0/15 ...	486	eth-rettica...	2024-11-07 21:47:36	12 hours ago
cbj-sw-a...	Dell Inc.	192.168.1...	Eth-Trunk2	486	lag-Dell-R...	2024-11-07 21:47:36	12 hours ago
cbj-sw-a...	Dell Inc.		Eth-Trunk2	486	lag-Dell-R...	2024-11-07 21:47:36	12 hours ago
cbj-sw-a...	DigiBoard	192.168.1...	XGIO/0/2	486	eth-rettica...	2024-11-07 21:47:36	12 hours ago
cbj-sw-a...	Fs Com Inc		XGIO/0/12 ...	486	eth1-Chav...	2024-11-07 21:47:36	12 hours ago
cbj-sw-a...	Deep Sea Electronic...	192.168.1...	XGIO/0/14 ...	486	eth-Gerad...	2024-11-07 21:47:36	12 hours ago
cbj-sw-a...	Dell Inc.		Eth-Trunk4	486	lag-Dell-R...	2024-11-07 21:47:36	12 hours ago
cbj-sw-a...	ICANN, IANA Depart...	192.168.3...	Eth-Trunk0	3862	lag-mandi...	2024-11-07 21:47:36	12 hours ago
cbj-sw-a...	ICANN, IANA Depart...		Eth-Trunk0	3862	lag-mandi...	2024-11-07 21:47:36	12 hours ago
cbj-sw-a...	Wisi		XGIO/0/5	3862	eth-Tangra...	2024-11-07 21:47:36	12 hours ago
cbj-sw-a...	Wisi		XGIO/0/5	3862	eth-Tangra...	2024-11-07 21:47:36	12 hours ago
cbj-sw-a...	Wisi		XGIO/0/5	3862	eth-Tangra...	2024-11-07 21:47:36	12 hours ago
cbj-sw-a...	Wisi		XGIO/0/5	3862	eth-Tangra...	2024-11-07 21:47:36	12 hours ago
cbj-sw-a...	VMware, Inc.	192.168.1...	Eth-Trunk0	3862	lag-mandi...	2024-11-07 21:47:36	12 hours ago
cbj-sw-a...	Cisco SPVTG		Eth-Trunk0	3862	lag-mandi...	2024-11-07 21:47:36	12 hours ago
cbj-sw-a...	Hewlett Packard	192.168.3...	Eth-Trunk0	3862	lag-mandi...	2024-11-07 21:47:36	12 hours ago

Apps Routing Alerts librenms grogu

Devices

bbn-rtt-cor-edg-yoda | Juniper JunOS | 22.1R3-S4.4  
Juniper JNP10003 [MX10003] Edge Router with 243 port(s) | PIX Eleetronet - São Paulo/SP-BR [-23.632956, -46.711909]

NOKIA grogu (bbn-rtt-edg-grogu) | Nokia SR OS (TIMOS) | 24.3.R1  
7750 SR-1 with 50 port(s) | PIX Eleetronet - São Paulo/SP-BR [-23.632956, -46.711909]

Ports

- 1/21e6 - bbn-rtt-bng-cgn-caruso
- ethlag-Grogu\_100G\_0\_1(Loca) 1/21e6, IP interface, ethlag-Grogu\_100G\_0\_1(Loca)
- 1/21e6 - bbn-rtt-bng-cgn-tasha

vpr-MGMT-Grogu\_1000 - bbn-rtt-bng-cgn-caruso  
MGMT: Grogu

vpr-MGMT-Grogu\_1000 - bbn-rtt-bng-cgn-tasha  
MGMT: Grogu

mi-LOC-Grogu-01 - bbn-rtt-bng-cgn-tasha  
CORE: [300G]\_0\_0 (mi-LOC-Grogu-01, IP interface, CORE: [300G]\_0\_0)

mi-LOC-Grogu-01 - bbn-rtt-bng-cgn-caruso  
Grogu (mi-LOC-Grogu-01, IP interface, Grogu)



# Exemplos - Inventário

Dashboard

Part No All Parts Serial No Device bbn-rtr-cor-edg-grievousx Search

Plugins Tools

Eventlog Syslog Graylog Inventory Outages

IPv4 Address IPv6 Address MAC Address ARP Tables FDB Tables

Description	Part Name	Part No	Serial No
Juniper JNP10003 [MX10003] ...	JNP10003-CHAS	750-074276	JN1 CB
PEM 0	JNP-PWR1100-DC	740-066938	1HS 1
PEM 2	JNP-PWR1100-DC	740-066938	1HS 5
Fan Tray 0	JNP-FAN-3RU	760-069329	S/N 97
PEM 1	JNP-PWR1100-DC	740-066938	1HS 3
PEM 3	JNP-PWR1100-DC	740-066938	1HS 0
Fan Tray 1	JNP-FAN-3RU	760-069329	S/N 33
Fan Tray 2	JNP-FAN-3RU	760-069329	S/N 39
Fan Tray 3	JNP-FAN-3RU	760-069329	S/N 54
bbn-rtr-cor-edg-grievous FPC: LC2103 @ 1/*	JNP10003-LC2103	750-066879	S/N 26
bbn-rtr-cor-edg-grievous MIC: 6x QSFP 40GE PIC @ ...		BUILTIN	BUI
bbn-rtr-cor-edg-grievous MIC: 12x QSFP28 100GE TIC ...	JNP-MIC1	750-068806	S/N 34
bbn-rtr-cor-edg-grievous PIC: 6xQSFP @ 1/0*		BUILTIN	BUI
bbn-rtr-cor-edg-grievous PIC: MIC1 @ 1/1*	JNP-MIC1	750-068806	S/N 34
bbn-rtr-cor-edg-grievous Routing Engine 0			
bbn-rtr-cor-edg-grievous Routing Engine 1			
bbn-rtr-cor-edg-grievous CB 0	JNP10003-RE1-BB	750-067071	S/N 54
bbn-rtr-cor-edg-grievous CB 1	JNP10003-RE1-BB	750-067071	S/N 79
bbn-rtr-cor-edg-grievous QSFP-100GBASE-SR4 @ 1/1/0	QSFP-100GBASE-SR4	MJ-QSFP100G-SR4	MJ
bbn-rtr-cor-edg-grievous QSFP-100G-SR4-T2 @ 1/1/1	QSFP-100G-SR4-T2	740-061405	INK 57
bbn-rtr-cor-edg-grievous QSFP-100G-SR4-T2 @ 1/1/2	QSFP-100G-SR4-T2	740-061405	INK 7
bbn-rtr-cor-edg-grievous QSFP-100G-SR4-T2 @ 1/1/3	QSFP-100G-SR4-T2	740-061405	INK 2
bbn-rtr-cor-edg-grievous QSFP-100GBASE-LR4 @ 1/1/4	QSFP-100GBASE-LR4	740-058732	BH: 5
bbn-rtr-cor-edg-grievous QSFP-100GBASE-LR4 @ 1/1/5	QSFP-100GBASE-LR4	740-058732	BH: 3
bbn-rtr-cor-edg-grievous QSFP-100GBASE-LR4 @ 1/1/6	QSFP-100GBASE-LR4	PRE-QSFP28-LR4	BH: 2
bbn-rtr-cor-edg-grievous QSFP-100G-SR4-T2 @ 1/1/7	QSFP-100G-SR4-T2	740-061405	INM 348
bbn-rtr-cor-edg-grievous QSFP-100G-SR4-T2 @ 1/1/8	QSFP-100G-SR4-T2	740-061405	INM 343

2,168,228.130/inventory

# Exemplos - Grupos

The screenshot displays the LibreNMS interface with a list of device groups and a detailed view of one group. The top navigation bar includes Overview, Devices, Maps, Services, Ports, Health, Wireless, Apps, Routing, and Alerts. The user is logged in as 'librenms'.

The main table lists device groups:

Group Name	Type	Count	Action	Filter
Multiplay	Dynamic	106	View	devices.sysName LIKE 'MPY-TV%'
NetVGA	Dynamic	199	View	devices.poller_g...
New DW	Static	19	View	
Nowtech	Dynamic	230	View	devices.poller_g...
OLT Calix	Dynamic	8	View	devices.os = "ex"
OLT Cdata	Dynamic	1	View	devices.os = "cd"
OLT Datacom	Dynamic	16	View	devices.os LIKE "%datacom%" AND devices.sysName LIKE "%olt%"
OLT Fiberhome	Dynamic	131	View	devices.os LIKE "%Fiberhome%"
OLT Fiberhome - AN5516-01	-> OLT Fiberhome	Dynamic 75	View	devices.os LIKE "%fiberhome%" AND devices.hardware LIKE "%AN5516-01%"

The detailed view for the group "Temp all OLTs and Routers IN MG & SP" shows the following filter:

```
(devices.os LIKE "%zxa10%" OR devices.os LIKE "%zxls%" OR devices.os LIKE "%smatax%" OR devices.os LIKE "%nokia-isam%" OR devices.os LIKE "%6xa%" OR devices.os LIKE "%slms%" OR devices.hardware LIKE "%JNP%" OR devices.hardware LIKE "%timos%" OR devices.hardware LIKE "%ne4%" OR devices.hardware LIKE "%ne2%" OR devices.hardware LIKE "%1002%" OR devices.hardware LIKE "%NetEngine 8000%" OR devices.hardware LIKE "%ASR9k%" OR devices.os LIKE "%timos%" OR devices.os LIKE "%Fiberhome%") OR (locations.location LIKE "%MG%" OR locations.location LIKE "%SP%")
```

# Exemplos - Grupos ( cont )

Lists: **Basic** | Detail Graphs: Bits | CPU | Load | Memory | Uptime | Storage | Disk I/O | Poller | Ping | Temperature Agent Remove Search | Remove Header

Search  All OS - All Versions - All Platforms - All Featuresets - All Locations - All Device Types

Search Update URL Reset

Device Group: in BA

S.▼	Id	M.	Vendor	Device	Metrics	Platform	Operating System	Up/Down Time	Location
47				out-swc-bbc-nightwolf	105 228	S6720-54C-EI-48S-DC	Huawei VRP (V200R021C00SPC100) [V200R021SPH006]	2yrs 9mos 3w	POP-01 - Eunapolis/BA-BR - [-16]
50				out-c-quan_chi	49 59	S6720-30C-EI-24S-DC	Huawei VRP (V200R021C00SPC100) [V200R021SPH006]	4mos 2w 6d	Pousada-Mirante - Arraial_D'ajud
53				out-c-skarlet	54 74	S6720-30C-EI-24S-DC	Huawei VRP (V200R021C00SPC100) [V200R021SPH006]	1yr 9mos 1w	Mirante - Santa_Cruz_de_Cabralia
69				out-c-sonya_blade	53 41	S6720-30C-EI-24S-DC	Huawei VRP (V200R021C00SPC100) [V200R021SPH006]	3mos 5d 20h	Bahianao - Porto_Seguro/BA-BR -
70				out-c-sheeva	37 54	S6720-30C-EI-24S-DC	Huawei VRP (V200R021C00SPC100) [V200R021SPH006]	8mos 2w 4d	Batalhao-PM - Ponto_Central/BA-B
71				out-c-sektor	63 84	S6720-30C-EI-24S-DC	Huawei VRP (V200R021C00SPC100) [V200R021SPH006]	2yrs 7mos 1w	Escritorio - Porto_Seguro/BA-BR
72				out-c-sindiel	38 59	S6720-30C-EI-24S-DC	Huawei VRP (V200R021C00SPC100) [V200R021SPH006]	2yrs 9mos 3w	Predio-Accesse - Vera_Cruz/BA-BR
146				out-rtr-scorpion	55 127	NE40E-M2K-B	Huawei VRP 0.8220	1yr 1mo 1w	POP-01 - Eunapolis/BA-BR - [-16]

Lists: **Basic** | Detail Graphs: Bits | CPU | Load | Memory | Uptime | Storage | Disk I/O | Poller | Ping | Temperature Agent Remove Search | Remove Header

Search  All OS - All Versions - All Platforms - All Featuresets - All Locations - All Device Types

Search Update URL Reset

Device Group: in BA

Status▼	Device	Platform	Operating System	Up/Down Time	Actions
	out-swc-bbc-nightwolf	S6720-54C-EI-48S-DC	Huawei VRP	2yrs 9mos 3w	
	out-swc-bbc-quan_chi	S6720-30C-EI-24S-DC	Huawei VRP	4mos 2w 6d	
	out-swc-bbc-skarlet	S6720-30C-EI-24S-DC	Huawei VRP	1yr 9mos 1w	
	out-swc-bbc-sonya_blade	S6720-30C-EI-24S-DC	Huawei VRP	3mos 5d 20h	
	out-swc-bbc-sheeva	S6720-30C-EI-24S-DC	Huawei VRP	8mos 2w 4d	
	out-swc-bbc-sektor	S6720-30C-EI-24S-DC	Huawei VRP	2yrs 7mos 1w	
	out-swc-bbc-sindiel	S6720-30C-EI-24S-DC	Huawei VRP	2yrs 9mos 3w	
	out-rtr-edg-scorpion	NE40E-M2K-B	Huawei VRP	1yr 1mo 1w	
	out-cgn-nat-triborg	TH1040	A10 Networks	2yrs 6mos 1w	
	out-cgn-nat-ermac	TH1040	A10 Networks	2yrs 6mos 1w	
	out-rtr-bng-reptile	NE20E-S2F	Huawei VRP	4yrs 6mos 4d	
	out-swc-bbc-shinnok	dmSwitch4100	Datacom	8mos 3w 1h	
	out-entro-pop-01-eunapolis	CCR1036-8G-2S+	Mikrotik RouterOS	2w 2d 20h	
	out-ftth-arraial	CCR1036-12G-4S	Mikrotik RouterOS	1mo 3w 5d	
	out-ftth-trancoso	CCR1036-12G	Mikrotik RouterOS	4mos 3w 3d	
	out-entro-cust-cameras-pm	CCR1016-12S-1S+	Mikrotik RouterOS	1mo 1w 6d	
	out-entro-01-bahianao-centro	RB2011UIAS	Mikrotik RouterOS	3mos 5d 20h	
	out-entro-mirante-cabralia	RB2011UIAS	Mikrotik RouterOS	3mos 2w 4d	
	out-entro-corporativos-porto-seguro	RB1100Ahx2	Mikrotik RouterOS	1yr 1mo 2w	

# Exemplos - Grupos ( cont )

In BA Highlight Node None

Alert Rule: Docs

Advanced

Rule name: Device: Downt - RE - BA

Import from

AND OR + Add rule + Add group

macros.device\_down equal  No  Yes

devices.last\_polled greater or equal  [DATE\_SUB(NOW(),INTERV)]

Severity: Critical

Max alerts: 1 Delay: 3m Interval: 10m

Mute alerts: OFF Invert rule match: OFF

Recovery alerts: OFF Acknowledgement alerts: ON

Match devices, groups and locations list: In BA All devices except in list: OFF

Transports: In Group: RE - BA

Procedure URL

Notes

Save Rule

# Exemplos - Localização

## SNMP syslocation

The screenshot displays the LibreNMS interface for managing locations. A dropdown menu is open, showing options like 'All Devices', 'Device Groups', 'Geo Locations', 'Manage Groups', 'Device Dependencies', and 'Virtual Machines'. A red arrow points to 'Geo Locations'. Below, a table lists locations with columns for Name, Coordinates, Devices, Down status, and Actions. The first location is 'DC Equinix SP2 - Barueri/SP-BR'. Below the table are several time-series graphs showing metrics over time. At the bottom, a table lists devices with columns for S, Id, M, Vendor, Device, Metrics, Platform, Location, and Actions. A search dropdown is visible over the table.

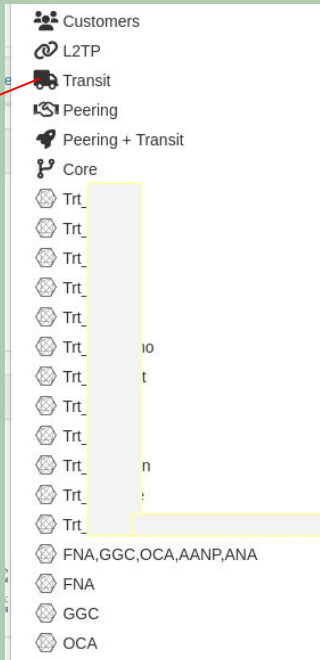
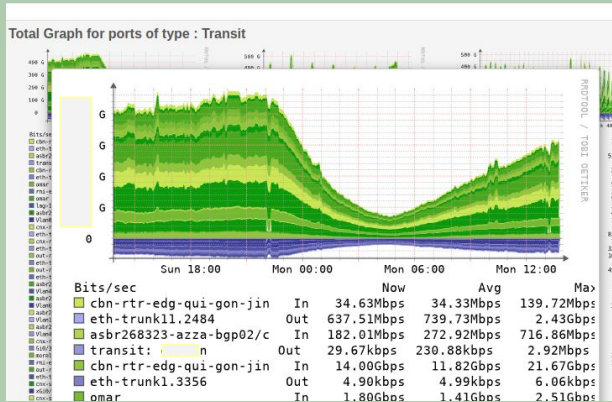
Location	Coordinates	Devices	Down	Actions
DC Equinix SP2 - Barueri/SP-BR - [-23.50275, -46.827028]	-23.50275, -46.827028	2	0	Traffic Edit Delete
Equinix - SP2 - Sao Paulo/SP-BR - [-23.50275, -46.827028]	-23.50275, -46.827028	5	0	Traffic Edit Delete
EQUINIX-SP4 - SAO PAULO/SP-BR - [-23.493419, -46.809430]	-23.493419, -46.80943	4	0	Traffic Edit Delete
EQUINIX-SP4 - SAO PAULO/SP-BR - [-23.493419, -46.809430]	-23.493419, -46.80943	4	0	Traffic Edit Delete

S.	Id	M.	Vendor	Device	Metrics	Platform	Location	Actions
4151	10	4	wb	bc-bre-sp2-kaiser	303 108	S6730-H	Equinix - SP2 - Sao Paulo/SP-BR	Info Lock Settings
5662	18	6	lib	zz01	2	Generic	Equinix - SP2 - Sao Paulo/SP-BR	Info Lock Settings
5137	19	134	wb	bc-bre-sp2-dm-careca	45	DM4770	Equinix - SP2 - Sao Paulo/SP-BR	Info Lock Settings
5411	19	198	sw	c2-racknovo-temporario	62 110	S6730-H	Equinix - SP2 - Sao Paulo/SP-BR	Info Lock Settings
3933	19	44	wby	swc-bbc-bre-sp2-dm-jaegerlecoultr	44	DM4770	Equinix - SP2 - Sao Paulo/SP-BR	Info Lock Settings

# Exemplos - Portas

A descrição é importante

- TAG: NOME [VEL] {ID} (COMENT)
- Os 6 primeiros são predefinidos
- Tags agrupam gráficos de portas
- CUST: NOME agrupa por nome



# Exemplos - Portas - Clientes

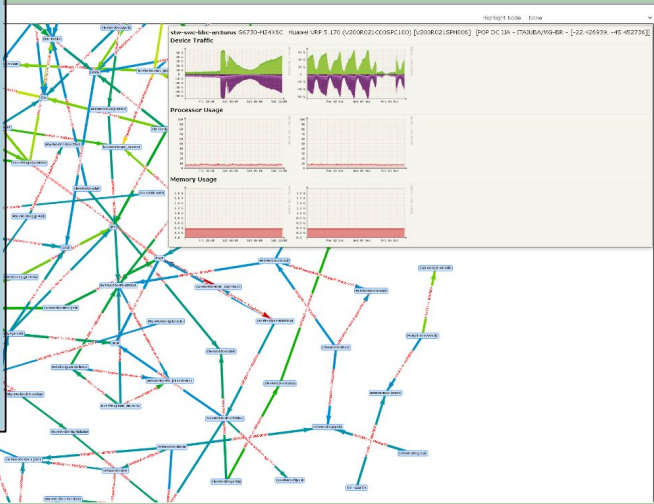
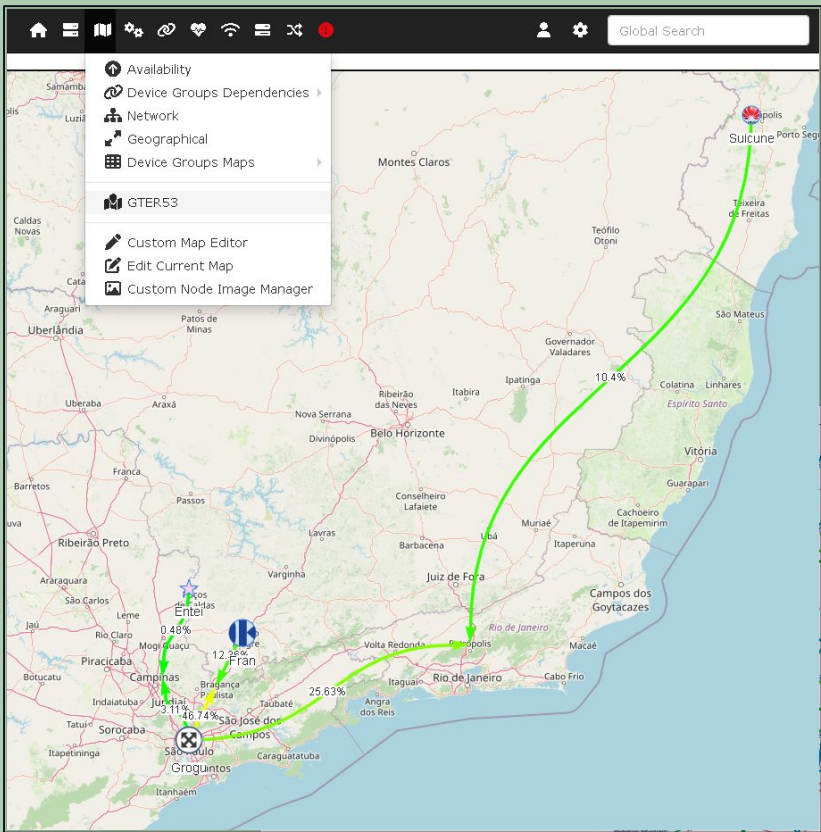
LibreNMS Overview Devices Maps Services Ports Health Wireless Apps Routing Alerts

Global Search

Q pr

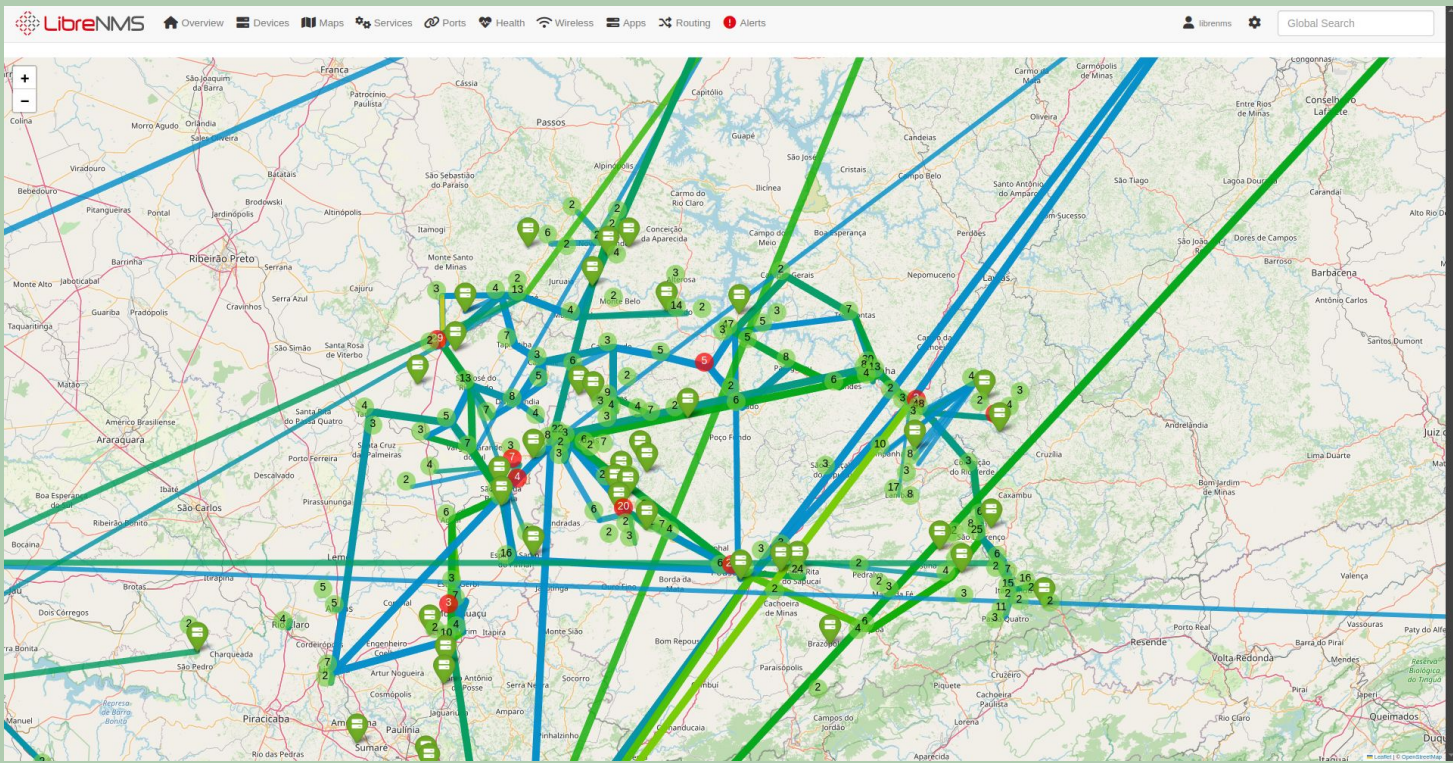
Customer	Device	Interface	Speed	Circuit	Notes	
P	ME	cnx-rtr-edg-ne-maradona	Eth-Trunk1.236	2G	C	CLII
		cnx-swc-bbc-etva-ronaldinho	XGigabitEthernet0/0/5	500M	C	CLII
		cnx-swc-bbc-etva-ronaldinho	XGigabitEthernet0/0/6	1G-Pecentil-5G	C	CLII
		cnx-swc-bbc-aai-higuita	Vlanif236	2G	C	CLIE
		cnx-swc-bbc-aai-higuita	Vlanif1362	2G	74	Tran
		cnx-swc-bbc-aai-higuita	Vlanif1363	2G	74	Tran
		cnx-swc-bbc-aai-higuita	Vlanif1461	2G	C	CLII
		cnx-swc-bbc-aai-higuita	Vlanif1300	500M	C	CLII
		cnx-swc-bbc-aai-higuita	XGigabitEthernet0/0/1	2,5G	C	CLII
		cnx-swc-bbc-aai-higuita	XGigabitEthernet0/0/9	1G-Pecentil-5G	C	CLII
		bbn-swc-cor-loki	Bundle-Ether12.1362	2G	74	Tran
		bbn-swc-cor-loki	Bundle-Ether12.1363	2G	74	Tran
		bbn-swc-cor-loki	Bundle-Ether12.1700	5G	90	Tran
		bbn-swc-cor-loki	Bundle-Ether12.1701	5G	90	Tran
		cnx-swc-bbc-etva-ronaldinho	Vlanif1462	500M	C	CLII
		cnx-swc-bbc-aai-higuita	Vlanif1462	500M	C	CLII
		cnx-swc-bbc-vgs-pirlo	XGigabitEthernet0/0/13	500M	C	CLII
		cnx-swc-bbc-vgs-pirlo	Vlanif1300	500M	C	CLII
		cnx-swc-bbc-aai-higuita	Vlanif1464	1GPecentil5G	C	CLII
		cnx-swc-bbc-etva-ronaldinho	Vlanif1464	1GPecentil5G	C	CLII
		cnx-rtr-edg-ne-maradona	Eth-Trunk1.2432	74		
		cnx-swc-bbc-mmm_pop1-messi	Vlanif236	2G	C	CLII

# Exemplos - Mapa





# Exemplos - Mapa ( cont )



01  
02  
03  
04  
05

**Início**  
**Introdução**  
**Contexto**  
**Configuração**  
**Uso**

06  
07  
08

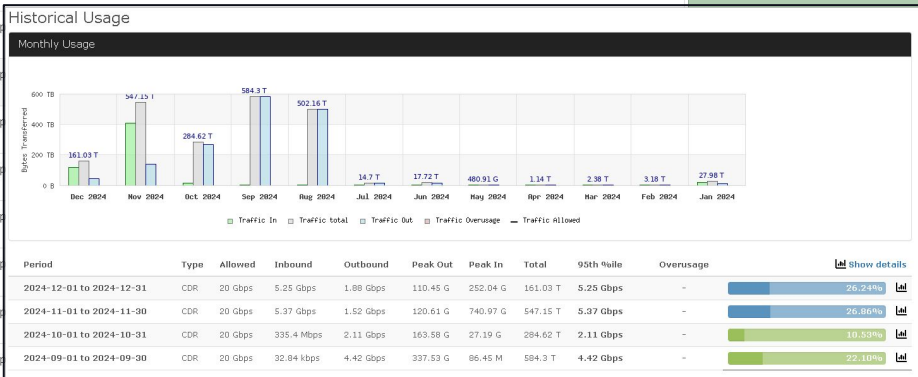
**Integração**  
**Alarmes**  
**FIM**

# Exemplos - Billing

+ Create Bill

Current Billing Period | All Types | All States | Search | 50

Billing name	Type	Allowed	Inbound	Outbound	Total	95th Percentile	Overusage	Predicted	
Upstream 2024-12-01-12-31	CDR	20 Gbps	0 bps	0 bps	165.38 GB	0 bps	-	0 bps	0% <a href="#">Edit</a>
Upstream 2024-12-01-12-31	CDR	20 Gbps	5.25 Gbps	1.88 Gbps	161.03 TB	5.25 Gbps	-	26.24 Gbps	26.24% <a href="#">Edit</a>
Upstream 2024-12-01-12-31	CDR	70 Gbps	134.8 Gbps	16.62 Gbps					
Upstream 2024-12-01-12-31	CDR	3 Gbps	618.87 Mbps	5.87 kbps					
Upstream 2024-12-01-12-31	CDR	150 Gbps	152.35 Gbps	26.02 Gbps					
Upstream 2024-12-01-12-31	CDR	10 Gbps	0 bps	0 bps					
Upstream 2024-12-01-12-31	CDR	20 Gbps	35.18 Gbps	10.66 kbps					
Upstream 2024-12-01-12-31	CDR	10 Gbps	0 bps	0 bps					
Upstream 2024-12-01-12-31	CDR	15 Gbps	0 bps	0 bps					
Upstream 2024-12-01-12-31	CDR	60 Gbps	23.88 Gbps	7.17 Gbps					



### Bill: Upstream\_Algo

Quick Graphs | Accurate Graphs | Transfer Graphs | Historical Graphs | Delete | Reset

← back to Bills

#### Bill Properties

##### Bill Information

Description: Upstream\_...  
Billing Type: CDR 95th | Quota  
CDR: 20 | gigabits per second (gbps)  
95th Calculation: Max In/Out | Aggregate  
Billing Day: 1

##### Optional Information

Customer Reference:  
Billing Reference:  
Notes:

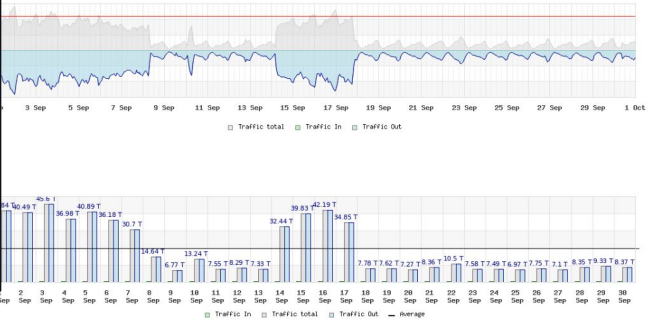
[Save Properties](#)

#### Billed Ports

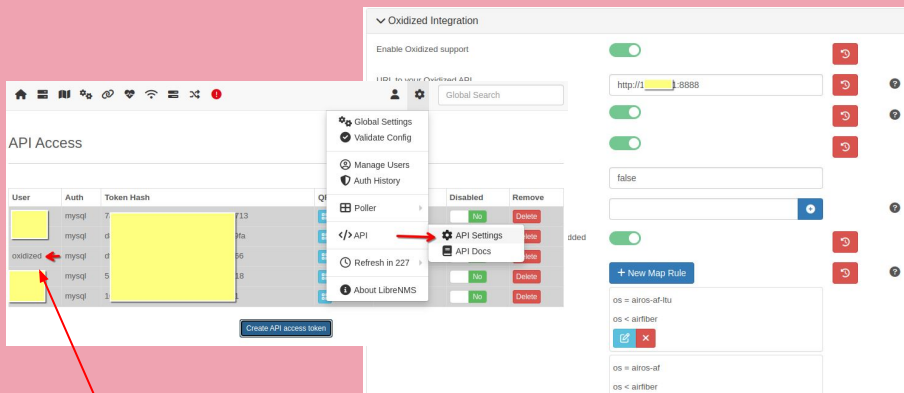
cdm-rtt-edg-qui-gon-line-14-Eth-Trunk11-1-1ep [200L] [Remove Endpoint](#)  
...\_Trunk10\_Local  
cdj-swc-acc-e1ntr-3f-XigabEthem65/047-1n [100L\_DPA] [Remove Endpoint](#)

#### Add Port

Device: mvald-hostname  
Port:   
[Add Port](#)



# Oxidized



```
source:
  default: http
  debug: false
  http:
    url: http://192.168.1.30/api/v0/oxidized
    map:
      name: hostname
      model: os
      group: group
    vars_map:
      ssh_proxy: ssh_proxy
    headers:
      X-Auth-Token: 'df8[redacted]6'
```

Configuração do Oxidized

## Entregue pelo LibreNMS para o Oxidized

```
[
  {
    "hostname": "192.168.1.79",
    "os": "vrp",
    "ip": "192.168.1.79",
    "group": "backbone"
  },
  {
    "hostname": "192.168.1.9",
    "os": "vrp",
    "ip": "192.168.1.9",
    "group": "backbone"
  },
  {
    "hostname": "192.168.1.1",
    "os": "junos",
    "ip": "192.168.1.1",
    "group": "cabo"
  },
  {
    "hostname": "192.168.1.70",
    "os": "vrp",
    "ip": "192.168.1.70",
    "ssh_proxy": "172.16.1.5",
    "group": "backbone"
  },
  {
    "hostname": "192.168.1.4",
    "os": "iosxr",
    "ip": "192.168.1.4",
    "group": "backbone"
  },
],
```

# Oxidized - ( cont )

Variable Mapping

+ New Map Rule

os = airos-af-itu os < airofiber

os = oneaccess os < oneos

os = nokia-isam os < isam

os = zxdsl os < zteolt

os = timos os < srosmd

os = airos-af

os

airfiber

Submit

Match (=)

Match (=)

Regex (→)

Source

os

Match (=)

Target

os

group

ip

submit

Replacement

os

hostname

os

type

hardware

sysObjectID





































sysName

sysDescr

location

ip

poller\_group

sysName ~ /^wnt-/	ssh_proxy < 189.	 
sysName ~ /^ip3-/	ssh_proxy < 187.	 
sysName ~ /^rsn-/	ssh_proxy < 187.	 
sysName ~ /^spc-/	ssh_proxy < 177.	 
sysName = /ntc-rtr-bng-splinter/	ssh_proxy < 127.	 
sysName = /^ntc-/	ssh_proxy < 186.	 
sysName = /cnx-/	ssh_proxy < 177.	 
ssh_proxy < 127.		 
ssh_proxy < 189.		 
ssh_proxy < 187.		 
ssh_proxy < 187.		 
ssh_proxy < 177.		 
hostname = /192.26./	ssh_proxy < 127.	 
sysName ~ /^stw-/	group < starweb	 
sysName ~ /^out-/	group < outcenter	 
sysName ~ /^crt-/	group < cortez	 
sysName ~ /^cnx-/	group < conexao	 
sysName ~ /^cbn-/	group < cabo	 

# Oxidized - ( cont )

**Author:** Oxidized

**Message:** update cabo/192

**Hide line numbers**

```
diff --git a/192.168.1.9 b/192.168.1.9
index 82f45b9..c8add19 100644
--- a/192.168.1.9
+++ b/192.168.1.9
@@ -58,8 +58,8 @@
 #
 # 7 CLK Present Registered Normal OTHER 0 Master
 #
-!Software Version V800R012C10SPC300
-!Last configuration was updated at 2024-11-27 19:04:08+00:00 by
-!Last configuration was saved at 2024-11-27 19:09:08+00:00
+!Last configuration was updated at 2024-11-16 01:59:29+00:00 by
+!Last configuration was saved at 2024-11-16 02:09:56+00:00 by
 #
 # fib-miss-report enable
 #
@@ -1663,13 +1663,14 @@ bgp 65399
 group ng_Confed_NTL_v4_Test internal
 peer ng_Confed_NTL_v4_Test description "Confederation Natal/RN"
 peer ng_Confed_NTL_v4_Test connect-interface LoopBack0
- peer ng_Confed_NTL_v4_Test password simple A
```

Hostname	Last Status	Last Update	Model	Group	Actions
zila	🟢	2024-12-03 15:01:46 -03	SROSMD	backbone	🔗 📄
wby-swc-bbc-ppc-dm-thecode	🔴	2024-12-03 15:16:18 -03	DataCom	webby	🔗 📄
wby-swc-bbc-bas-balwash	🔴	2024-12-03 15:16:16 -03	DataCom	webby	🔗 📄
way-rt-brng-papriavessende	🔴	2024-12-03 15:13:18 -03	RouterOS	waymet	🔗 📄
way-rt-brng-papppussara	🔴	2024-12-03 15:13:22 -03	RouterOS	waymet	🔗 📄
way-rt-brng-papcota	🔴	2024-12-03 15:13:18 -03	RouterOS	waymet	🔗 📄
way-rt-brng-papbelavista	🔴	2024-12-03 15:13:18 -03	RouterOS	waymet	🔗 📄
trevor	🟢	2024-12-03 15:00:45 -03	VRP	cabo	🔗 📄
tonya	🟢	2024-12-03 15:01:00 -03	SROSMD	backbone	🔗 📄
sucuna	🟢	2024-12-03 15:00:21 -03	VRP	backbone	🔗 📄
...	...	...	...	...	...

google

Search

Config appears on the following device(s):

- hbn-rt-bbc-sidivus:tecnol.com.br
- spc-rt\_vissal\_snet
- crx-sec-bbc-moc-tidane
- wby-rt-edg-jpg-dm-dc-01-walterswhite
- out-cgr-nat-borachio
- out-cgr-nat-triborg
- tec-rt-brng-corona
- cft-cgr-nat-acc-sil-misa
- cft-cgr-nat-acc-sil-misa
- stw-rt-dofida
- wnt-rt-edg-alf-bellwood
- out-cgr-nat-ermac

# Graylog

Origin	Timestamp	Level	Source	Message	Facility
bbn-rtr-bng-cgn-tasha	2024-12-08 09:12:08		bbn-rtr-bng-cgn-tasha	<186>Dec 8 12:24:11 192. [redacted] 7 TMNX: 3557624 vpm488 SECURITY-MAJOR-mafEntryMatch-2019 [MAF Ip Filter Entry: 20]: Description: There have been 3 matches since the previously logged match. Interface: lag-206, action: permit Src IP: 192. [redacted] 1 Dst IP: 2[redacted] lags: 0 TOS: c0 TTL: 1 Len: 80 Protocol: 89 Hex: 02 05 00 2c c0 a8 7e 0f 00 00 00 00 00 00 02 00 00 01 10 00 46 0c 50 00 06 02 01 c0 a8 7f 76*	
bbn-rtr-bng-cgn-caruso	2024-12-08 09:12:06		bbn-rtr-bng-cgn-caruso	<188>Dec 8 12:24:11 192. [redacted] 5 TMNX: 8694143 Base SYSTEM-WARNING-tmnxConfigDelete-2008 [LDP]: vRtrLdpNgSessionTable: Virtual Router 1, Peer 192 [redacted] 1:0. managed object deleted	
bbn-rtr-bng-cgn-caruso	2024-12-08 09:12:06		bbn-rtr-bng-cgn-caruso	<188>Dec 8 12:24:11 192 [redacted] 75 TMNX: 8694142 Base SYSTEM-WARNING-tmnxStateChange-2009 [LDP]: Status of vRtrLdpNgSessionTable: Virtual Router 1, Peer 192 [redacted] 1:0. changed administrative state: outOfService, operational state: outOfService	
bbn-rtr-bng-cgn-caruso	2024-12-08 09:12:05		bbn-rtr-bng-cgn-caruso	<188>Dec 8 12:24:11 189 [redacted] 2 SR1-Caruso: 27865554 Base SYSTEM-WARNING-tmnxConfigDelete-2008 [LDP]: vRtrLdpNgSessionTable: Virtual Router 1, Peer 192 [redacted] 1:0. managed object deleted	
bbn-rtr-bng-cgn-caruso	2024-12-08 09:12:05		bbn-rtr-bng-cgn-caruso	<188>Dec 8 12:24:11 189. [redacted] 82 SR1-Caruso: 27865553 Base SYSTEM-WARNING-tmnxStateChange-2009 [LDP]: Status of vRtrLdpNgSessionTable: Virtual Router 1, Peer 192.168.255.1:0. changed administrative state: outOfService, operational state: outOfService	
jorginho	2024-12-08 09:12:93		jorginho	<190>Dec 8 2024 12:24:10 CNX-SWC-TV-SJV_ALEGRA-JORGINHO %%01SW_SNP6/6/PORT_LEAVE(!)[2737215]: Querier received an IGMP Leave packet. (Group/Port=23 [redacted] )	
192.168.126.82	2024-12-08 09:12:85		192. [redacted] 2	<186>Dec 8 12:24:10 192. [redacted] 2 TMNX: 2043741 vpm488 SECURITY-MAJOR-mafEntryMatch-2019 [MAF Ip Filter Entry: 20]: Description: There have been 4 matches since the previously logged match. Interface: lag-105, action: permit Src IP: 192. [redacted] 4 Dst IP: 2[redacted] Flags: 0 TOS: c0 TTL: 1 Len: 80 Protocol: 89 Hex: 02 05 00 2c c0 a8 de 05 00 00 00 00 00 00 02 00 00 01 10 00 28 57 5d 00 0a 02 01 c0 a8 7f 76*	

# Syslog

Syslog-NG  
Rsyslog  
Logstash

```
destination d_librenms {
    program("/opt/librenms/syslog.php" template
("$_HOST||$_FACILITY||$_PRIORITY||$_LEVEL||$_TAG||$_R_YEAR-$_R_MONTH-$_R_
DAY $_R_HOUR:$_R_MIN:$_R_SEC||$MSG||$_PROGRAM\n")
template-escape(yes));
};
```

Syslog  
Hook

```
$config[os]['asa']['syslog_hook'][] = Array('regex' =>
'/%ASA-(config)?5-111005/', 'script' =>
'/opt/librenms/scripts/syslog-notify-oxidized.php');
```

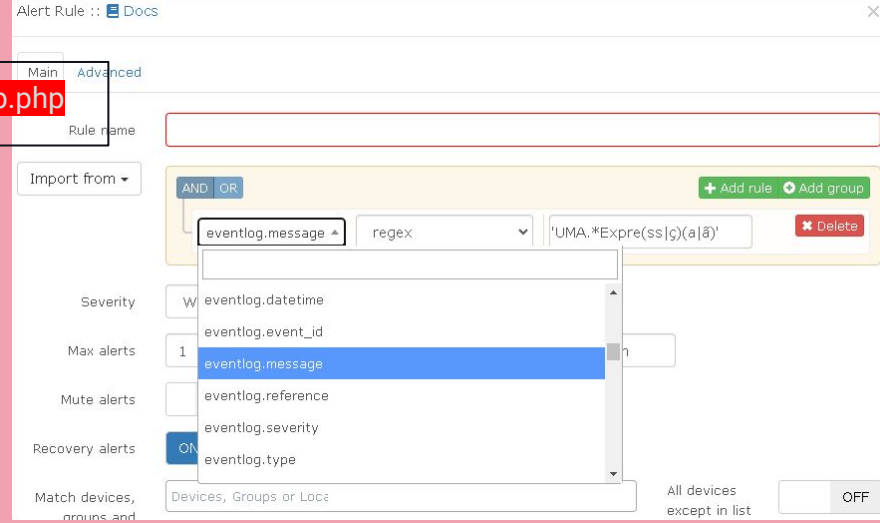
Timestamp	Level	Hostname	Program	Message	Priority
2024-12-08 09:56:00	6	cnx-rtr-edge-ne-pele	SNMPTRAPD	2024-12-08 09:56:00 <UNKNOWN> [UDP: [192.168.1.100]:161->[192.168.1.130]:162]:#012SNMPv2-MIB::sysUpTime.0 = Timeticks: (1803341344) 20s days, 17:16:53.44#011SNMPv2-MIB::snmpTrapOID.0 = OID: MPLS-L3VPN-STD-MIB::mplsL3VpnVrfNumVrfRouteMaxThreshExceeded#011MPLS-L3VPN-STD-MIB::mplsL3VpnVrfPerfCurrNumRoutes."vr-Mgmt-EXT" = Wrong Type (should be Gauge32 or Unsigned32): Counter32: 512#011MPLS-L3VPN-STD-MIB::mplsL3VpnVrfConfHighRteThresh."vr-Mgmt-EXT" = Wrong Type (should be Gauge32 or Unsigned32): Counter32: 0	6
2024-12-08 09:55:57	6	cnx-rtr-edge-ne-pele	SNMPTRAPD	2024-12-08 09:55:57 <UNKNOWN> [UDP: [192.168.1.100]:161->[192.168.1.130]:162]:#012SNMPv2-MIB::sysUpTime.0 = Timeticks: (80273809) 9 days, 6:58:58.09#011SNMPv2-MIB::snmpTrapOID.0 = OID: CISCO-SMI::ciscoMgmt.41.2.0.1#011CISCO-SMI::ciscoMgmt.41.1.2.3.1.2.0 = STRING: "ROUTING-FIB#011CISCO-SMI::ciscoMgmt.41.1.2.3.1.3.0 = INTEGER: 4#011CISCO-SMI::ciscoMgmt.41.1.2.3.1.4.0 = STRING: "PLATF_UPD_FAIL"#011CISCO-SMI::ciscoMgmt.41.1.2.3.1.5.0 = STRING: "FIB platform update failed: Obj=FIB_DATA_TYPE_LDI_LW[ptr=0x9e8d5468,refc=0x2,flags=0x8] Action=CREATE Prtoto=mpls. Cerr=No such file or directory : fib_mgr : (PID=4044) : -Traceback= 7fca5eef1247 55fc78a2ab5d 55fc78853880 55fc78853d27 55fc7888f4b4 55fc77*#011CISCO-SMI::ciscoMgmt.41.1.2.3.1.6.0 = Timeticks: (80273763) 9 days, 6:58:57.63	6

# SNMP Traps

## SNMPTrapd

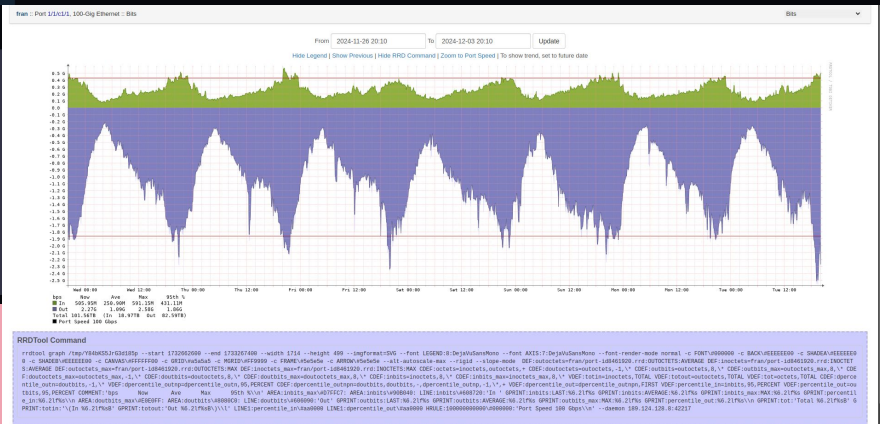
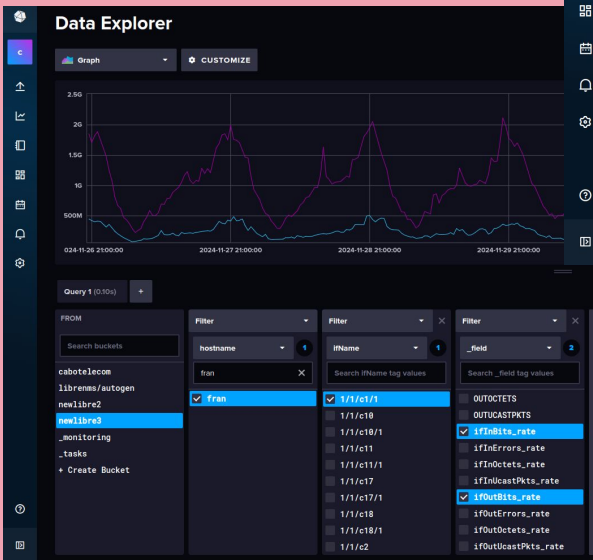
```
traphandle default /opt/librenms/snmptrapd.php
```

- Pode criar um “evento”
- Evento pode ser consultado nas “regras” de alertas





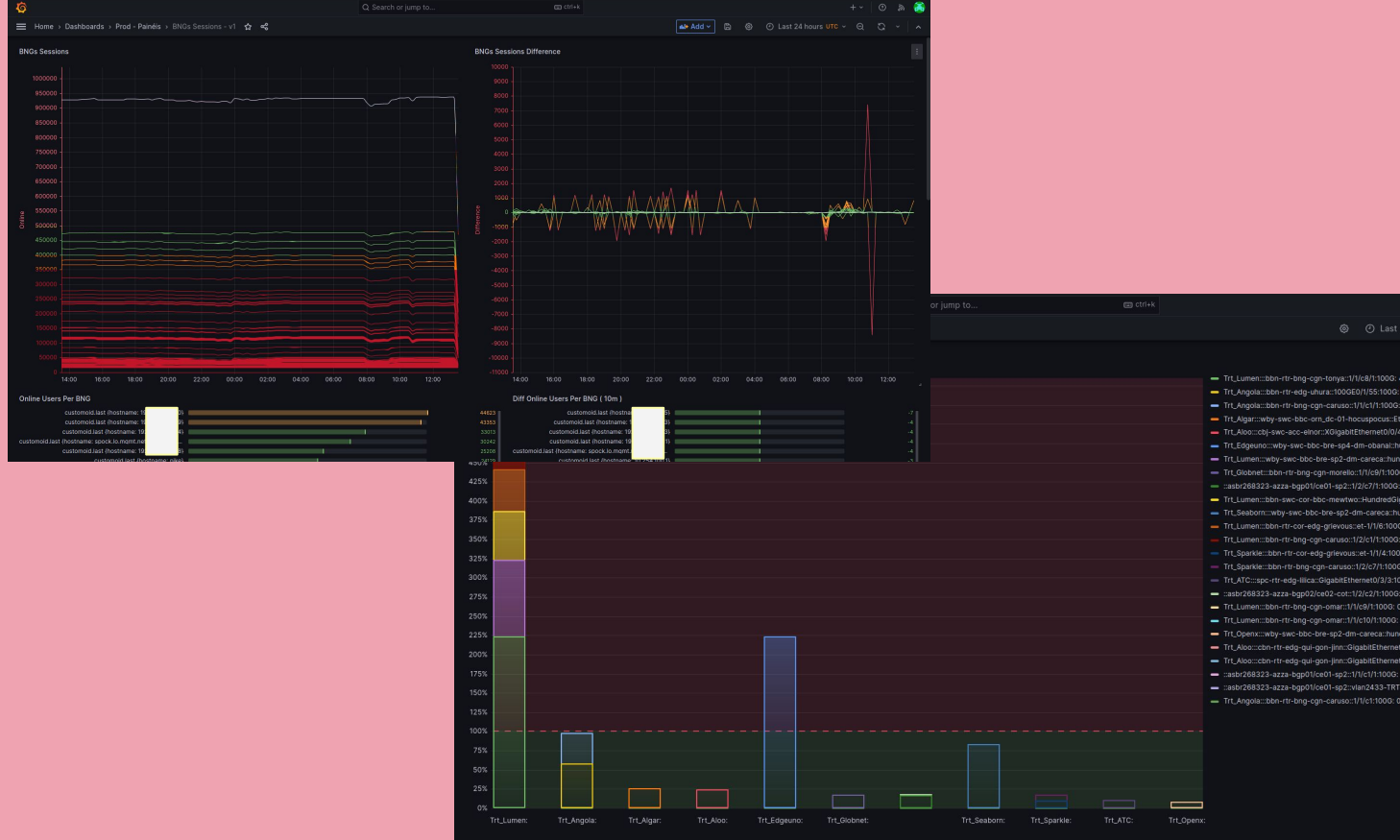
# InfluxDB



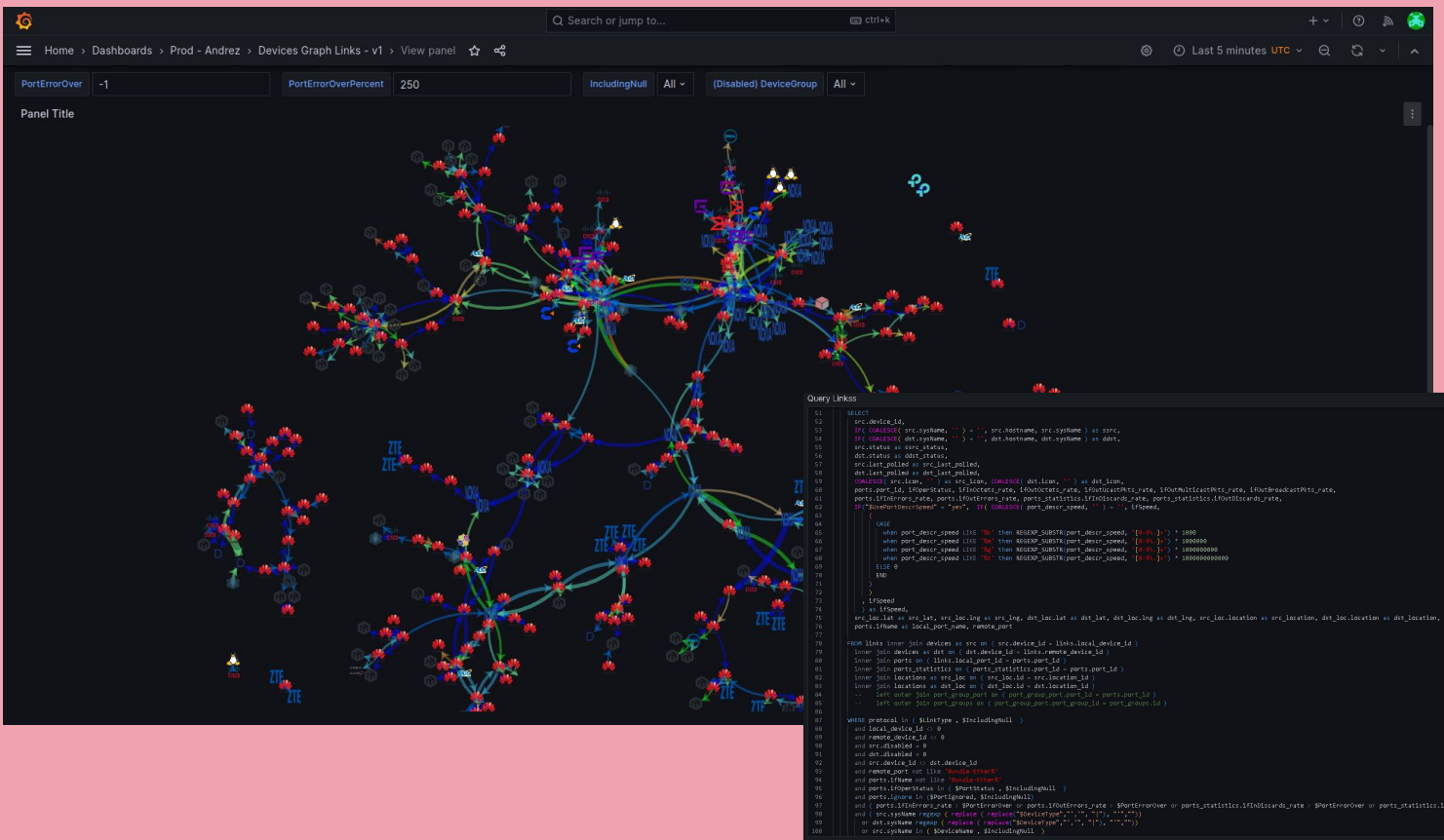
# Grafana



# Grafana - ( cont )



# Grafana - ( cont )

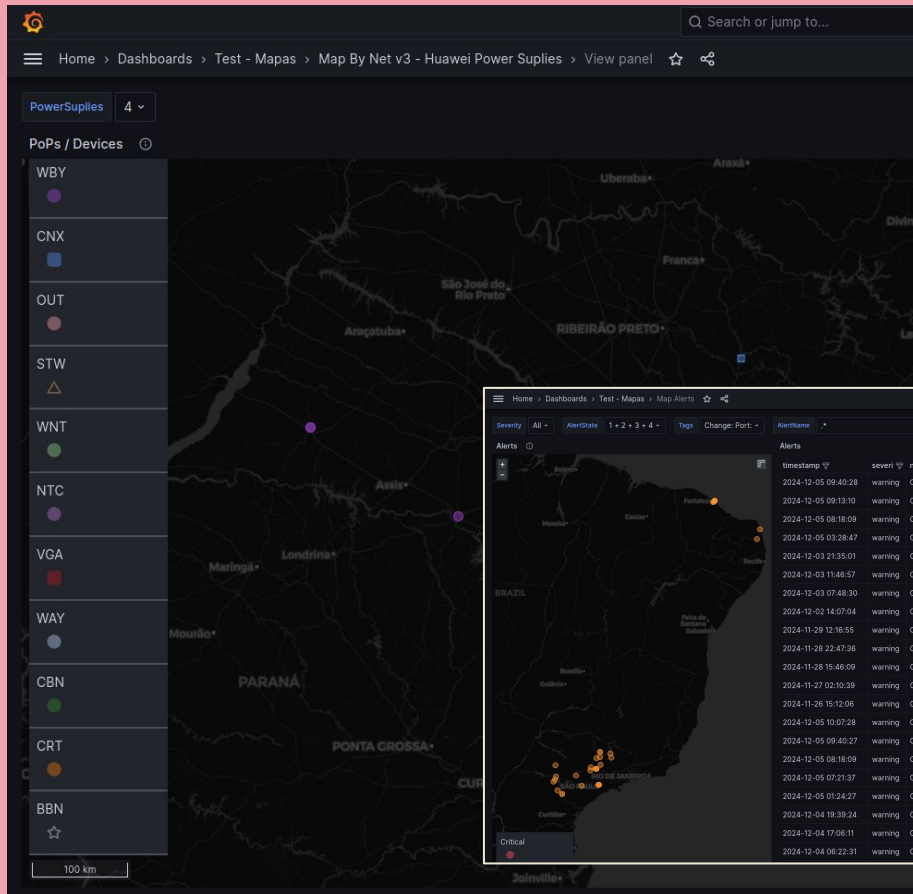


# Grafana - ( cont )

The screenshot displays a Grafana dashboard for a network map. The top navigation bar includes 'Home', 'Dashboards', and 'Prod - Andrez > Geo Network Map - v4 (1920x1080)'. Below the navigation bar are several filter panels for 'SysLocation', 'DeviceType', 'DeviceVendor', 'DeviceHW', 'DeviceOS', 'DeviceOSVer', 'DeviceDisabled', 'DeviceIgnored', 'DeviceStatus', 'DeviceName', 'PortStatus', 'PortIgnored', 'PortUsageOver', 'PortUsageUnder', 'PortUsageOverPercent', 'GeoLines', 'IncludingNull', and '(Disabled) DeviceGroup'. The main content area is divided into three sections: 'Devices and Links Usage' (a network map with a highlighted path), 'Top Link Out Usage' (a horizontal bar chart), and 'Top Total Link Errors' (a horizontal bar chart). A 'NOKIA' widget is overlaid on the right, showing 'Limeira POP1 - Limeira/' and various performance metrics: '169.7 kbps', '73.92 kbps', '248 pps', and '81 pps'. Below the widget is a 'Port Notes' table with columns for 'LineString', 'Port', and 'Status'. A 'Submit' button is located at the bottom of the widget.

LineString	Port	Status
[[-47.108,-22.1],[-47.11,-22.1]]	1	Up
[[-47.11,-22.1],[-47.11,-22.1]]	2	Up
[[-47.11,-22.1],[-47.11,-22.1]]	3	Up
[[-47.11,-22.1],[-47.11,-22.1]]	4	Up
[[-47.11,-22.1],[-47.11,-22.1]]	5	Up
[[-47.11,-22.1],[-47.11,-22.1]]	6	Up
[[-47.11,-22.1],[-47.11,-22.1]]	7	Up
[[-47.11,-22.1],[-47.11,-22.1]]	8	Up
[[-47.11,-22.1],[-47.11,-22.1]]	9	Up
[[-47.11,-22.1],[-47.11,-22.1]]	10	Up

# Grafana - ( cont )



# Regras

Alert rule collection

Search  10

Name	Rule	
Devices up/down	macros.device_down = "1"	Select
Device Down! Due to no ICMP response.	macros.device_down = "1" && devices.status_reason = "icmp"	Select
Device Down (SNMP unreachable)	macros.device_down = "1" && devices.status_reason = "snmp"	Select
Device rebooted	devices.uptime < "300" && macros.device = "1"	Select
BGP Session down	bgpPeers.bgpPeerState != "established" && macros.device_up = "1" && bgpPeers.bgpPeerAdminStatus != "stop"	Select
ISIS Adjacency down	isis_adjacencies.isisISAdjState = "down" AND (component.type = "ISIS" AND (component.ignore = 0 AND component.disabled = 0)) AND macros.device_up = 1	Select
BGP Session established	bgpPeers.bgpPeerFsmEstablishedTime < "300" && bgpPeers.bgpPeerState = "established" && macros.device_up = "1"	Select
Port status up/down	macros.port_down = "1"	Select
Ping Latency	devices.last_ping_timetaken > "10"	Select
Port utilisation over threshold	macros.port_usage_perc >= "80" && macros.port_up = "1"	Select

## Alarmes

LibreNMS Overview Devices Maps Services Ports Health Wireless Apps Routing Alerts

Create new alert rule - OR - Create rule from collection

Type	Name	Devices	Transports	Notification Settings	Rule	Severity	Status	Enabled	Action
	001teste_macro	1764 Automation Parkway, San Jose, CA, USA	No Alerts	Max: 1 Delay: 60 Interval: 300	macros.sensor_port_link = 1			OFF	
	BNG: Low PPPoE Sessions Num - SPC-Furnas-Alex	spc-rotador-bng-furnas-alex	All Messages - Default	Max: 1 Delay: 0 Interval: 300	macros.device_up = 1 AND (customoids.cust...			ON	
	Change: Device: New Device	All Devices	NOC	Max: 1 Delay: 0 Interval: 600	devices.inserted >= DATE_SUB(NOW(),INTERVAL 24 Hour)	Warning		ON	
	Change: Location Changed	All Devices	All Messages - Default	Max: 1 Delay: 0 Interval: 300	eventlog.type = "system" AND eventlog.message LIKE 'Location:%' AND eventlog.datetime > DATE_SUB(NOW(),INTERVAL 24 Hour)	OK		OFF	
	Change: Port: Disabled	EXCEPT cbrn-voz-srv-pbr-uniq	All Messages - Default	Max: 1 Delay: 0 Interval: 600	ports.ifAdminStatus = "down" AND ports.ifAdminStatus_prev = "up" AND macros.device_up = 1 AND devices.snmp_disable = 0	Warning		ON	
	Change: Port: Enabled	EXCEPT cbrn-voz-srv-pbr-uniq	All Messages - Default	Max: 1 Delay: 0 Interval: 600	ports.ifAdminStatus = "up" AND ports.ifAdminStatus_prev = "down" AND macros.device_up = 1 AND devices.snmp_disable = 0	Warning		ON	
	Change: Sensor: Device: Sensor has been deleted	All Devices	All Messages - Default	Max: 1 Delay: 60 Interval: 300	eventlog.message REGEXP "Deleted" AND eventlog.datetime >= DATE_SUB(NOW(),INTERVAL 24 Hour) AND devices.snmp_disable = 0	Warning		OFF	
	Device: Down! - RE - BA	In BA	RE - BA	Max: 1 Delay: 180 Interval: 600	macros.device_down = 1 AND devices.last_polled >= DATE_SUB(NOW(),INTERVAL 12 Hour)	Critical		ON	

# Regras ( cont )

Alert Rule :: Docs

Main Advanced

Rule name BGP Session down

Import from

AND OR + Add rule + Add

bgpPeers.bgpPeerState not equal established

macros.device\_up equal No Yes

bgpPeers.bgpPeerAdminStatus not equal

stop

Severity Warning

Max alerts 1 Delay 1m Interval 5m

Mute alerts OFF Invert rule match OFF

Recovery alerts ON Acknowledgement alerts ON

Match devices, groups and locations list All devices except in list OFF

Transports Transport/Group Name

Procedure URL

Notes

Save Rule

Alert Rule :: Docs

Main Advanced

Override SQL OFF

Query

```
SELECT * FROM devices WHERE (devices.device_id = ?) AND (devices.status = 0 && (devices.disabled = 0 && devices.ignore = 0)) = 1 AND (devices.hardware LIKE '%VMware%' OR devices.hardware LIKE '%ovirt%' OR devices.hardware LIKE '%QEMU%' OR devices.hardware LIKE '%PowerEdge%' OR devices.os LIKE '%proxmox%' OR devices.os LIKE '%Linux%' OR devices.os LIKE '%pfSense%' OR devices.os LIKE '%FreeBSD%') AND devices.status_reason = "icmp" AND devices.last_polled >= DATE_SUB(NOW(),INTERVAL 12 Hour)
```

Save Rule



# Templates

Alert Template :: Docs

Template name  
BGP Sessions.

Template

```
<b>{{ $alert->title }}</b>
*** <b>@if ($alert->name) {{ $alert->name }} @else {{ $alert->rule }} @endif</b> :: <b>{{ $alert->severity }}</b> ***

Device: *** <b>{{ $alert->sysName }}</b> ***
( http://192.{{ $alert->ip }}/device/device={{ $alert->device_id }}/alerts )

Location: <b>{{ $alert->location }}</b>
Timestamp: [{{ $alert->timestamp }}] :: Duration: <b>{{ $alert->elapsed }}</b>

@if ($alert->faults)
@foreach ($alert->faults as $key => $value)
+
|Fault: #{{ $key }}:
+--
|| Peer: <b>{{ $value['astext'] }}</b>
|| IP: <b>{{ $value['bgpPeerIdentifier'] }}</b>
|| AS: <b>{{ $value['bgpPeerRemoteAs'] }}</b>
|| EstTime: <b>{{ $value['bgpPeerFsmEstablishedTime'] }}</b>
|| State: [{{ $value['bgpPeerState'] }}]
|| LastError: [{{ $value['bgpPeerLastError'] }}]
|| Map: https://maps.google.com/?q={{ $value['location_id'] }}<br>
App\Models\Location::find($value['location_id']->lat ),{{
App\Models\Location::find($value['location_id']->lng }}
+--
+-

@endforeach
@endif
```


Attach template to rules

Routing: BGP: Session Down  Routing: BGP: Session Up

Alert title  
Device: {{ \$alert->sysName }} - @if (\$alert->name) {{ \$alert->name }} @else {{ \$alert->rule }} @endif

Recovery title  
Device: {{ \$alert->sysName }} - @if (\$alert->name) {{ \$alert->name }} @else {{ \$alert->rule }} @endif

# Transportes e Grupos

Alert Transport :: Docs 

Transport name:

Transport type:

Default Alert:

API Method:

API URL:

Options:

headers:

body:

Auth Username:

Auth Password:

Transport type:

Default Alert:

API Method:

API URL:


Options:

headers:

body:

Auth Username:

Auth Password:

Alert Transport Groups :: Docs 

Group Name:

Group Members:

# Alertas

Timestamp	Rule	Hostname	Location	ACK	Notes	Details
2024-12-07 16:31:32	Port: Monitoring: Up with Alerts Disabled!	way-swc-acc-switch_matuck	Matuck - Tres_Coracoes/MG-BR - [-21.12.12, -45.12.12]			
2024-12-07 16:31:31	Change: Port: Disabled	way-swc-acc-switch_matuck #1: TrAirTCB3Max; network - TrAirTCB3Max;	Matuck - Tres_Coracoes/MG-BR - [-21.12.12, -45.12.12]			
2024-12-07 16:29:53	Port: Monitoring: Up with Alerts Disabled!	tec-olt-acc-tec07-bom_jardim	POP_BOM_JARDIM- Fortaleza/CE-BR - [-3.12.12, -38.12.12]			
2024-12-07 15:41:10	Port: Monitoring: Up with Alerts Disabled!	tec-rtr-acc-fla-msj-01 #1: Ether3-UPLINK-SW-GEO/0/11; network - ether3-UPLINK-SW-GEO/0/11; #2: Ether4-UPLINK-SW-GEO/0/12; network - ether4-UPLINK-SW-GEO/0/12;	POP_MESSEJANA - Fortaleza/CE-BR - [-3.12.12, -38.12.12]			
2024-12-07 14:01:41	Port: Monitoring: Up with Alerts Disabled!	out-olt-acc-majin-boo	Escritorio - Porto_Seguro/BA-BR - [-16.12.12, -39.12.12]			
2024-12-07 11:09:37	Port: Monitoring: Up with Alerts Disabled!	out-olt-acc-mosco	Pousada-Mirante - Arraial_D'ajuda/BA-BR - [-16.12.12, -39.12.12]			
2024-12-07 10:56:04	Port: Monitoring: Up with Alerts Disabled!	cnx-olt-acc-zte-lra-03	Lim			

Acknowledge Alert

(Un)Acknowledgement note:

Acknowledge until clear:  OFF

Alert notes

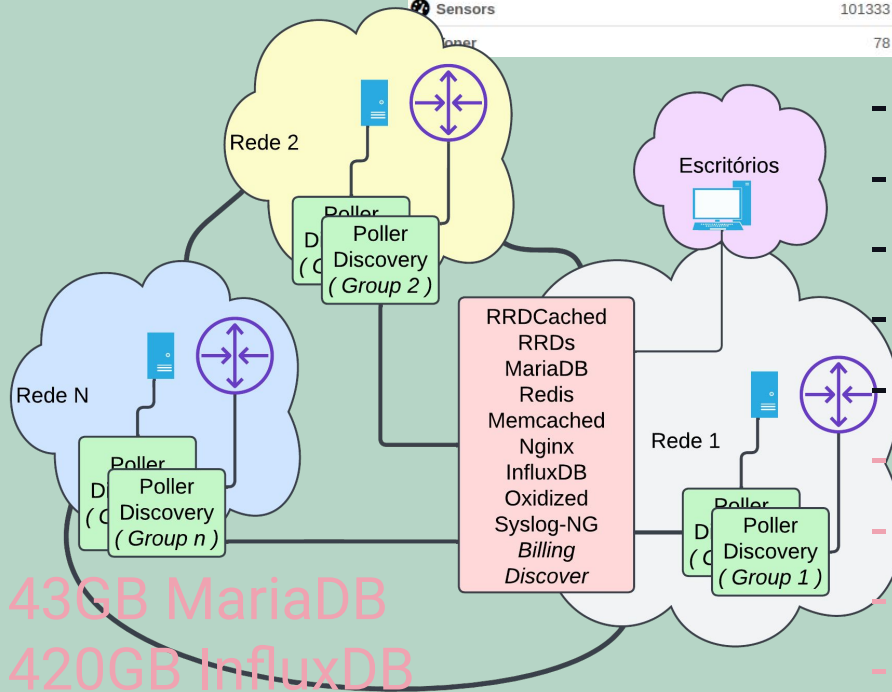
01  
02  
03  
04  
05  
06  
07

Início  
Introdução  
Contexto  
Configuração  
Uso  
Integração  
Alarmes

08

FIM

# Cenário Atual



- 43GB MariaDB  
 - 420GB InfluxDB  
 - 740GB RRDs

Devices	5330	Ports	1308912
IPv4 Addresses	17917	IPv4 Networks	11450
IPv6 Addresses	933	IPv6 Networks	512
Services	10	Applications	327
Processors	18202	Memory	5290
Storage	3475	Disk I/O	1040
HR-MIB	14821	Entity-MIB	118997
Syslog Entries	3814379	Eventlog Entries	17003089
Sensors	101333	Wireless Sensors	23531
Uplink	78		

- 26 servidores (VMs pequenas)
- 4075 devices Ativos
- 112193s usados
- 318000s total
- 224 Thread (Maior Poller)
- 1.3TB SSD
- 56GB RAM
- 200Mbps
- 2200 Threads
- 3700 Qps (DB)

# Perguntas?

# Obrigado!