PARA PROVEDORES

ZABBIX

ZABBIX 6 LTS / GRAFANA 9

https://raphaelisp.com.br/

AGENDA

- APRESENTAÇÃO DO TREINAMENTO
- TOPOLOGIAS DE REDE PARA PROVEDORES ISP
- INSTALAÇÃO SIMPLIFICADA - ZABBIX
- INICIANDO O MONITORAMENTO
- SNMP E LLD
- INSTALAÇÃO SIMPLIFICADA – GRAFANA
- CRIANDO DASHBOARDS

BÔNUS

TREINAMENTO GERÊNCIA DE INFRA ESTRUTURA COM phpIPAM

SNMP

Simple Network Management Protocol (SNMP), em português Protocolo Simples de Gerência de Rede, é o protocolo padrão para gerenciamento de dispositivos em redes IP, atualmente esta em desuso, dando lugar a TELEMETRIA.

Na prática, SNMP é o protocolo mais usado para saber o que acontece dentro de uma infraestrutura de rede, para mais pesquise sobre RFC 1067.

Praticamente qualquer ativo de rede gerenciável "fala" SNMP e diversos serviços usam SNMP como protocolo de gerenciamento.

UDP 161: porta do agente SNMP

UDP 162: porta do NMS que receberá informações enviadas pelo agente SNMP (trap)

O SNMP foi criado para facilitar o monitoramento e gerenciamento de redes permitindo que uma plataforma de gerenciamento possa trabalhar com ativos de rede e serviços de diversos fabricantes.

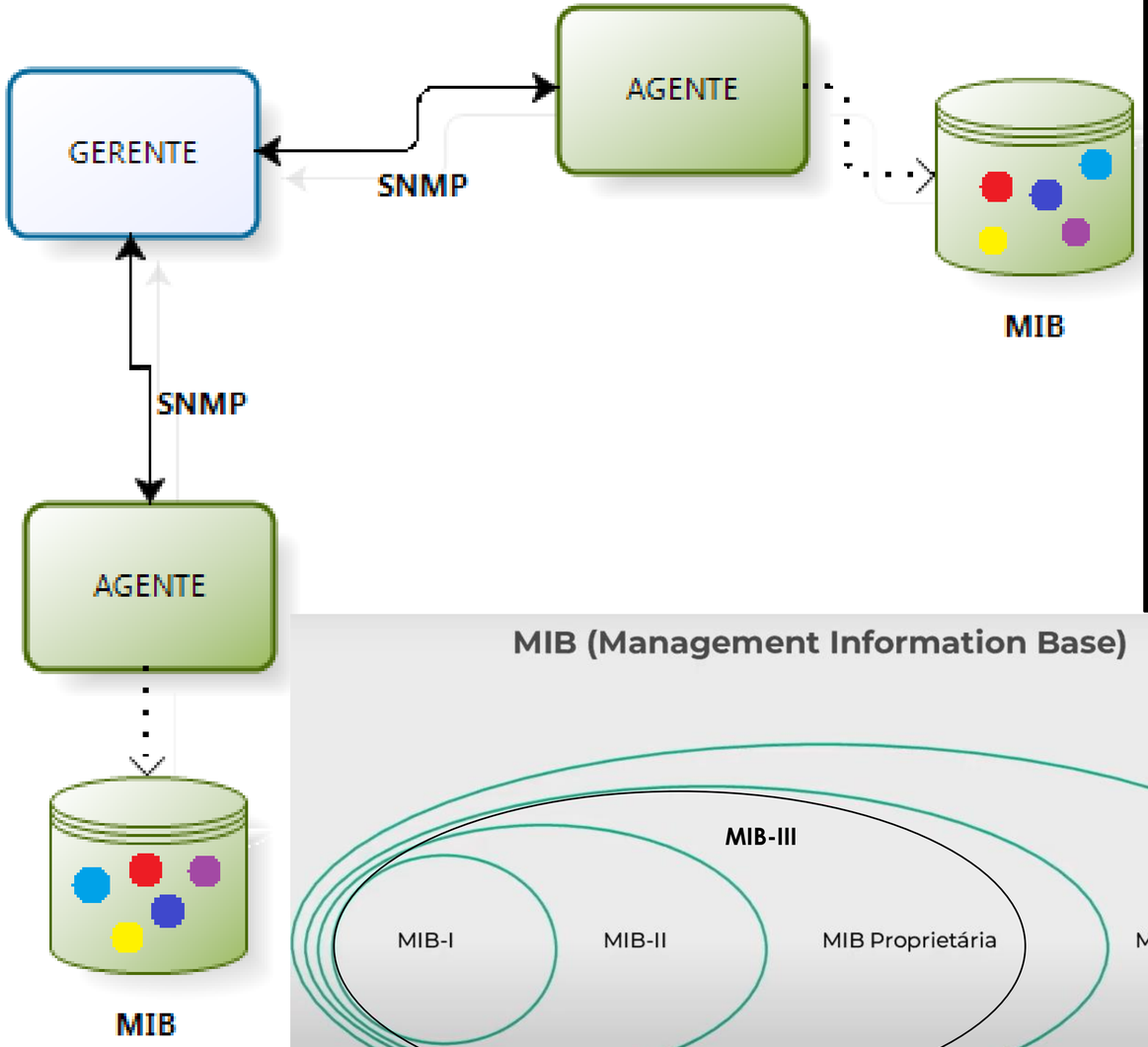
Para que esta consulta possa ser feita, o gerente tem que conhecer as informações que podem ser obtidas do agente SNMP. Isso é garantido pelo uso de algo semelhante a um dicionário de dados: MIB e OID.

A MIB é base de informações de gerenciamento e um OID é o identificador único dentro da MIB

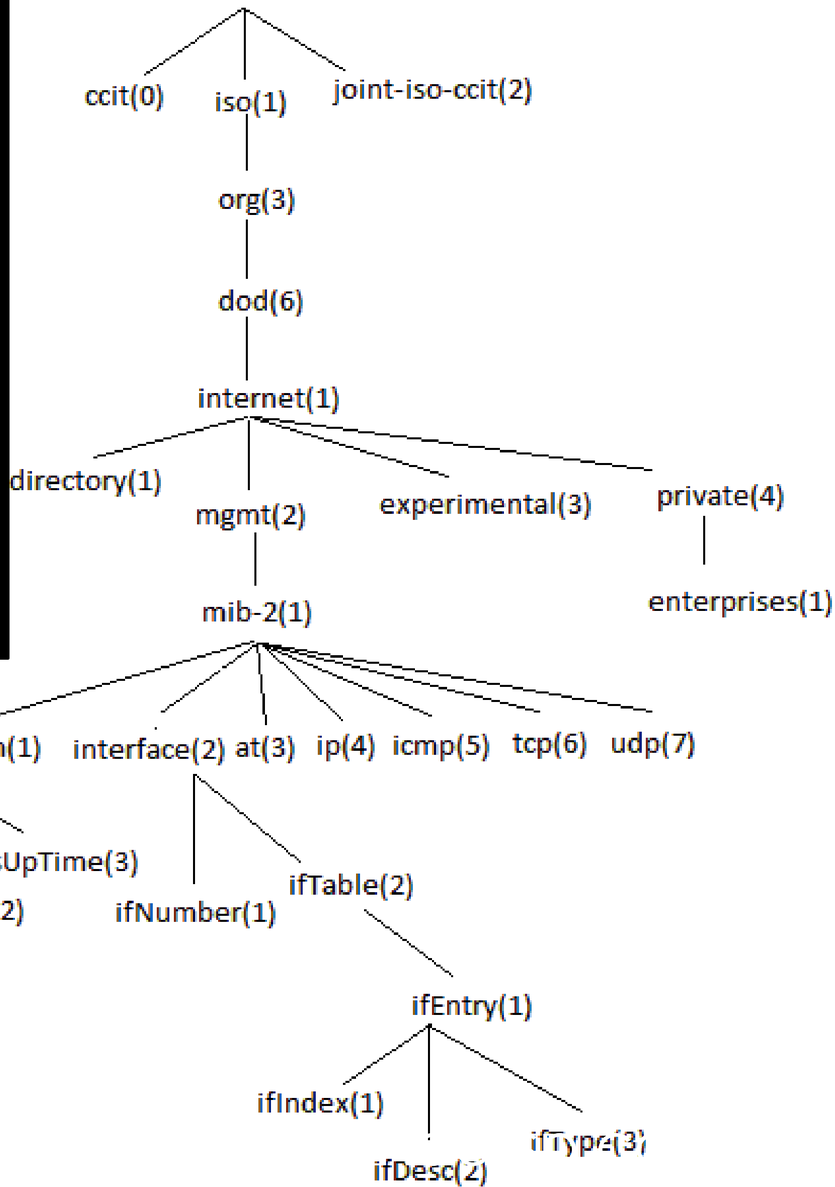
SNMP

A MIB (Management Information Base RFC 1066), pode ser descrita como um banco de dados de objetos gerenciados pelos agentes, onde os dados podem ser acessados pelos gerentes.
A MIB proprietária conta com extensões feitas pelo fabricante, relativas ao equipamento em específico. Já a MIB extensível pode estar ou não disponível nos equipamentos, MIB I (RFC 1156) e MIB II (RFC 1158) MIB III (RFC 1213) são padrão.
OID (Object Identifier ou Identificador de objeto), são encontrados em todos os dispositivos gerenciados pelo SNMP, ou seja, Tudo que pode ser monitorado com SNMP tem um OID.
Mas o OID oferece informações numéricas. Para que elas sejam melhor administradas e compreendidas, temos o MIB, que é um arquivo de texto que permite transmitir OIDs numéricos em OIDs com palavras.
PDUs (Protocol Data Unit) são mensagens SNMP e possuem as informações básicas:
get, getnext, set, getresponse, trap
getbulk, notification, inform, report(V2 e V3);
A community funciona como uma senha.
Community tipo write: permite apenas envio de set;
Community tipo read: permite apenas envio de get/getnext/getbulk;
Community tipo read-write: permite os dois métodos acima;

SNMP



1 iso - ISO é o nome do grupo que lançou o padrão OID
.3 org - organização
.6 dod - Departamento de Defesa dos EUA
.1 internet - Determina que a comunicação será feita pela internet
.4 private - declara que o dispositivo é fabricado por uma empresa privada
.1 empresa - declara que o fabricante é uma empresa



SNMP

```
-- 1.3.6.1.4.1.5875.800.3.10.1.1.10
   -- 1.3.6.1.4.1.5875.800.3.10.1.1.10
   authOnuListMac OBJECT-TYPE
      SYNTAX OCTET STRING
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
         "Column Description"
      ::= { authOnuListEntry 10 }

-- 1.3.6.1.4.1.5875.800.3.9.3.3.1.6
   -- 1.3.6.1.4.1.5875.800.3.9.3.3.1.6
   onuPonRxOpticalPower OBJECT-TYPE
      SYNTAX Integer32
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
         "Column Description"
      ::= { onuPonInfoEntry 6 }
```

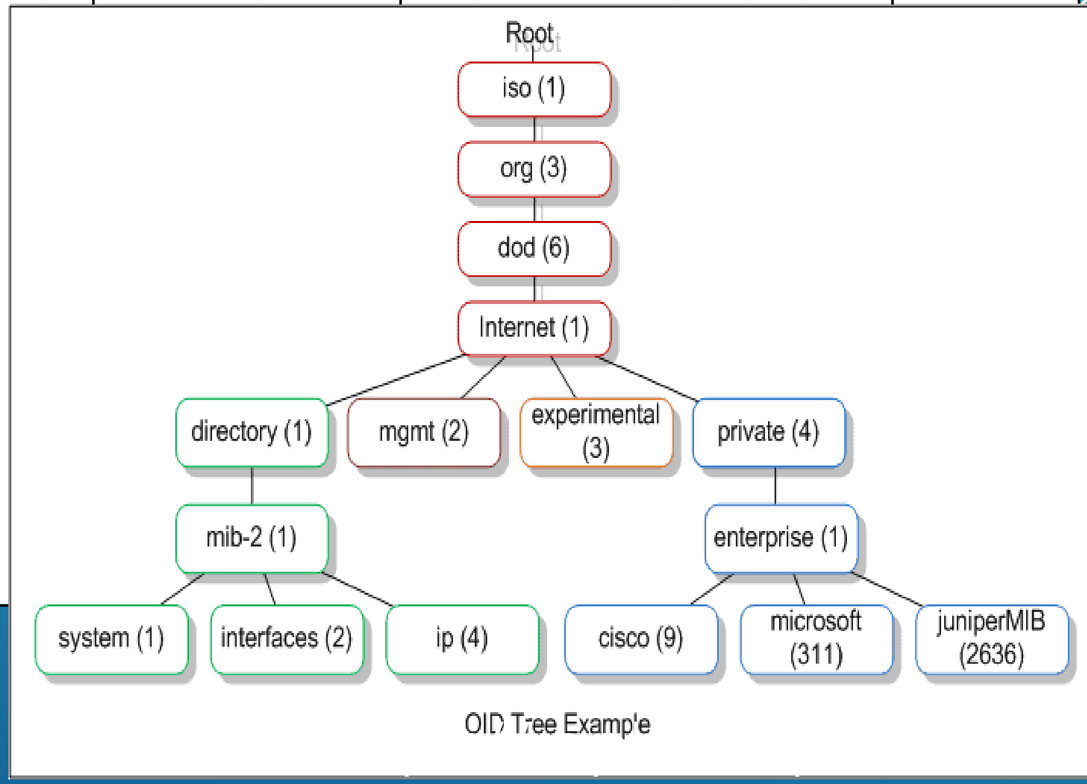
Object Name	Object Identifier
bdEponOnu	1.3.6.1.4.1.3320.101.10
bdepononuTable	1.3.6.1.4.1.3320.101.10.1
bdEponOnuEntry	1.3.6.1.4.1.3320.101.10.1.1
onuVendorID	1.3.6.1.4.1.3320.101.10.1.1.1
onuIcVersion	1.3.6.1.4.1.3320.101.10.1.1.10
onuServiceSupported	1.3.6.1.4.1.3320.101.10.1.1.11
onuGePortCount	1.3.6.1.4.1.3320.101.10.1.1.12
onuGePortDistributing	1.3.6.1.4.1.3320.101.10.1.1.13
onuFePortCount	1.3.6.1.4.1.3320.101.10.1.1.14
onuFePortDistributing	1.3.6.1.4.1.3320.101.10.1.1.15
onuPotsPortCount	1.3.6.1.4.1.3320.101.10.1.1.16
onuE1PortCount	1.3.6.1.4.1.3320.101.10.1.1.17
onuUsQueueCount	1.3.6.1.4.1.3320.101.10.1.1.18
onuUsQueueMaxCount	1.3.6.1.4.1.3320.101.10.1.1.19
onuModuleID	1.3.6.1.4.1.3320.101.10.1.1.2
onuDsQueueCount	1.3.6.1.4.1.3320.101.10.1.1.20
onuDsQueueMaxCount	1.3.6.1.4.1.3320.101.10.1.1.21
onuIsBakupBattery	1.3.6.1.4.1.3320.101.10.1.1.22
onuADSL2PlusPortCount	1.3.6.1.4.1.3320.101.10.1.1.23
onuVDSL2PortCount	1.3.6.1.4.1.3320.101.10.1.1.24

SNMP

```
root@debian:~# snmpwalk -v2c -c commu 10.11.104.2 1.3.6.1.4.1.2011.6.128.1.1.2.43.1.9

SNMPv2-SMI::enterprises.2011.6.128.1.1.2.43.1.9.4194320384.0 = STRING: "CMSZ-3B03B214"
SNMPv2-SMI::enterprises.2011.6.128.1.1.2.43.1.9.4194320384.1 = STRING: "CMSZ-3B03C231"

root@debian:~# snmpwalk -v2c -c commu 10.11.104.2 1.3.6.1.4.1.2011.6.128.1.1.2.51.1.4

SNMPv2-SMI::enterprises.2011.6.128.1.1.2.51.1.4.4194320384.0 = INTEGER: -1943
SNMPv2-SMI::enterprises.2011.6.128.1.1.2.51.1.4.4194320384.1 = INTEGER: -2508
SNMPv2-SMI::enterprises.2011.6.128.1.1.2.51.1.4.4194320384.2 = INTEGER: -2508

root@debian:~# snmptranslate -On GEPON-OLT-COMMON-MIB::onuPonRxOpticalPower
.1.3.6.1.4.1.5875.800.3.9.3.3.1.6

root@debian:~# snmpwalk -v2c -c adsl 100.65.0.10 .1.3.6.1.4.1.5875.800.3.9.3.3.1.6
GEPON-OLT-COMMON-MIB::onuPonRxOpticalPower.34078976 = INTEGER: -2619
GEPON-OLT-COMMON-MIB::onuPonRxOpticalPower.34079232 = INTEGER: -2408
GEPON-OLT-COMMON-MIB::onuPonRxOpticalPower.34079488 = INTEGER: -2060
```

Texto e número da OID: 1 (iso). 3 (org). 6 (dod). 1 (internet). 4 (private). 1 (enterprises). 9 (cisco). 9 (ciscoMgmt). 147 (ciscoFirewallMIB). 1 (ciscoFirewallMIBObjects). 2 (cfwSystem). 1 (cfwStatus). 1 (cfwHardwareStatusTable). 1 (cfwHardwareStatusEntry). 2 (cfwHardwareInformation)

1 iso - ISO é o nome do grupo que lançou o padrão OID
.3 org - organização
.6 dod - Departamento de Defesa dos EUA
.1 internet - Determina que a comunicação será feita pela internet
.4 private - declara que o dispositivo é fabricado por uma empresa privada
.1 empresa - declara que o fabricante é uma empresa



OID Tree Examp'e

SNMP

iReasoning MIB Browser

File Edit Operations Tools Bookmarks Help

Address: 100.65.0.10 Advanced... OID: .1.3.6.1.4.1.5875.800.3.9.3.3.1.6 Operations: Get Next Go

SNMP MIBs

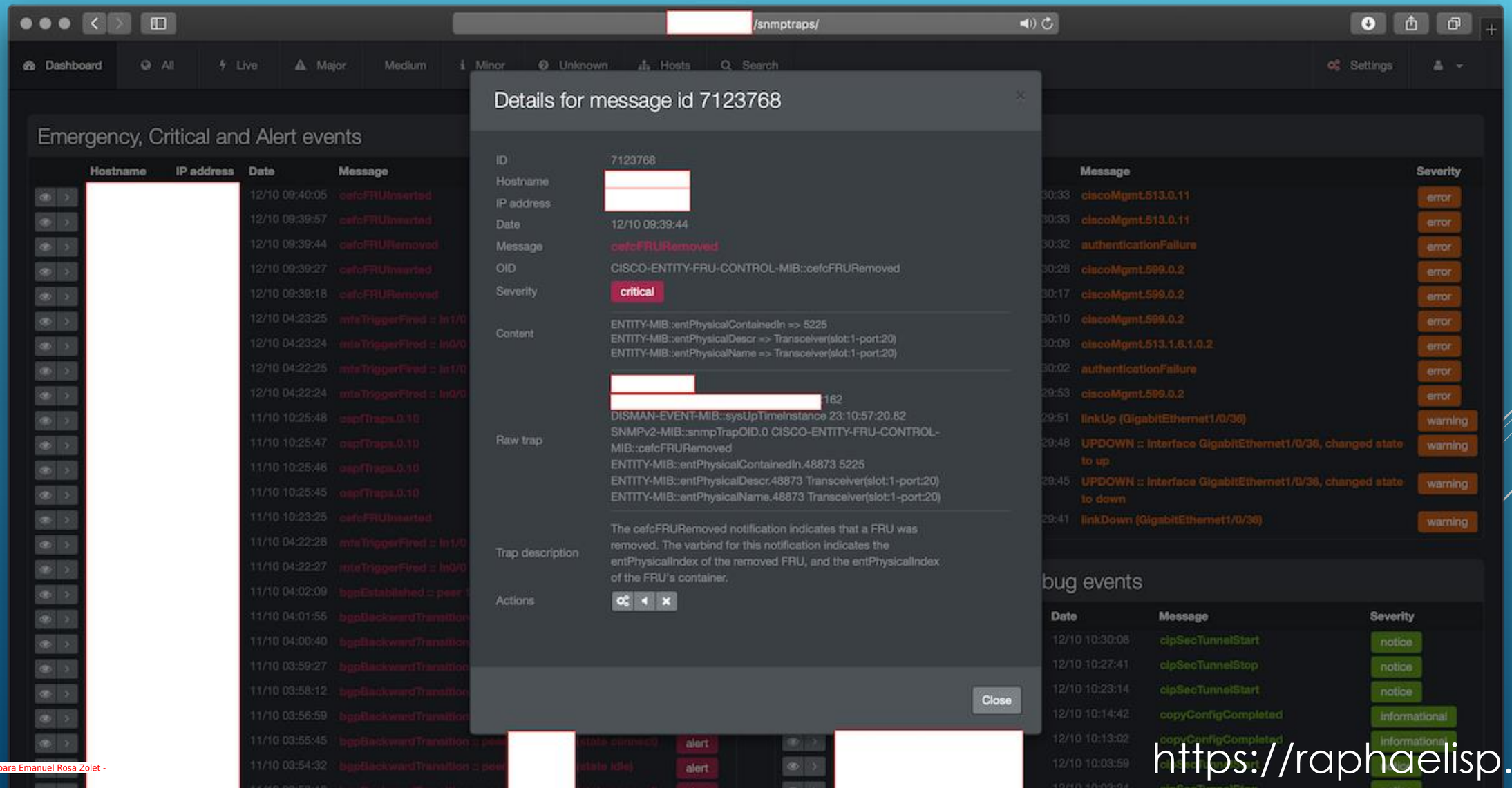
- MIB Tree
  - iso.org.dod.internet
    - mgmt
    - private
      - enterprises
        - fiberhome
          - standard
            - oltData
              - onuWhiteList
              - interfaceEnable
              - onuPortConfig
              - feServiceConfigure
              - qinq
              - ftthPerformance
              - systemInfo
                - frameInfo
                - cardInfo
                - interfaceInfo
                - portInfoTable
                - potsInfoTable
                - onuPonInfoTable
                - onuPonInfoEntry
                - onuPonType
                - onuPonName
                - onuPonDesc
                - onuPonEnableStatus
                - onuPonSpeed
                - onuPonRxOpticalPower
                - onuPonTxOpticalPower

Name	onuPonRxOpticalPower
OID	.1.3.6.1.4.1.5875.800.3.9.3.3.1.6
MIB	GEPON-OLT-COMMON-MIB
Syntax	INTEGER32
Access	read-only
Status	current
DefVal	
	onuIndex

Result Table

Name/OID	Value	Type	IP:Port
sysObjectID.0	.1.3.6.1.4.1.5875.800.1001.11	OID	100.65.0.10...
sysUpTime.0	1752 hours 10 minutes 22 seconds (630782265)	TimeTicks	100.65.0.10...
onuPonRxOpticalPower.34078976	-2619	Integer	100.65.0.10...
onuPonRxOpticalPower.34079232	-2397	Integer	100.65.0.10...
onuPonRxOpticalPower.34079488	-2060	Integer	100.65.0.10...
onuPonRxOpticalPower.34079744	-2107	Integer	100.65.0.10...
onuPonRxOpticalPower.34080000	-2657	Integer	100.65.0.10...
onuPonRxOpticalPower.34080256	-2141	Integer	100.65.0.10...
onuPonRxOpticalPower.34080512	-2795	Integer	100.65.0.10...
onuPonRxOpticalPower.34080768	-2259	Integer	100.65.0.10...
onuPonRxOpticalPower.34081024	-2055	Integer	100.65.0.10...
onuPonRxOpticalPower.34081280	-2397	Integer	100.65.0.10...
onuPonRxOpticalPower.34081536	-2292	Integer	100.65.0.10...
onuPonRxOpticalPower.34081792	-2259	Integer	100.65.0.10...
onuPonRxOpticalPower.34082048	-2102	Integer	100.65.0.10...
onuPonRxOpticalPower.34082304	-2055	Integer	100.65.0.10...
onuPonRxOpticalPower.34082560	-2408	Integer	100.65.0.10...
onuPonRxOpticalPower.34082816	-2045	Integer	100.65.0.10...
onuPonRxOpticalPower.34083328	-2337	Integer	100.65.0.10...
onuPonRxOpticalPower.34083584	-2494	Integer	100.65.0.10...
onuPonRxOpticalPower.34083840	-2657	Integer	100.65.0.10...
onuPonRxOpticalPower.34084096	-2130	Integer	100.65.0.10...
onuPonRxOpticalPower.34084352	-2008	Integer	100.65.0.10...
onuPonRxOpticalPower.34084608	-2387	Integer	100.65.0.10...
onuPonRxOpticalPower.34084864	-2214	Integer	100.65.0.10...
onuPonRxOpticalPower.34085120	-2070	Integer	100.65.0.10...
onuPonRxOpticalPower.34085376	-2148	Integer	100.65.0.10...
onuPonRxOpticalPower.34085888	-2160	Integer	100.65.0.10...
onuPonRxOpticalPower.34086144	-2326	Integer	100.65.0.10...
onuPonRxOpticalPower.34086400	-1723	Integer	100.65.0.10...
onuPonRxOpticalPower.34086656	-1920	Integer	100.65.0.10...
onuPonRxOpticalPower.34086912	-2229	Integer	100.65.0.10...
onuPonRxOpticalPower.34087168	-2050	Integer	100.65.0.10...
onuPonRxOpticalPower.34087424	-1917	Integer	100.65.0.10...
onuPonRxOpticalPower.34087680	-2376	Integer	100.65.0.10...
onuPonRxOpticalPower.34087936	-2309	Integer	100.65.0.10...

SNMP



https://raphaelisp.com.br

SNMP

###altere o arquivo /etc/snmp/snmp.conf e comente a quarta linha com o texto “mibs :” e acrescente na linha abaixo o seguinte texto mibs +All.

nano /etc/snmp/snmp.conf

```
rrl@debian: ~
  GNU nano 3.2                                  /etc/snmp/snmp.conf

# As the snmp packages come without MIB files due to license reasons, loading
# of MIBs is disabled by default. If you added the MIBs you can reenable
# loading them by commenting out the following line.
#mibs :
mibs +ALL
```

SNMP

##encontre o diretório em que suas mibs estão e faça a importação.

net-snmp-config --default-mibdirs

```
root@debian:~#
root@debian:~#
root@debian:~# net-snmp-config --default-mibdirs
/root/.snmp/mibs:/usr/share/snmp/mibs:/usr/share/snmp/mibs/iana:/usr/share/snmp/mibs/ietf:/usr/share
/mibs/site:/usr/share/snmp/mibs:/usr/share/mibs/iana:/usr/share/mibs/ietf:/usr/share/mibs/netsnmp
root@debian:~#
```

SNMP

WinSCP

Local Marcar Arquivos Comandos Sessão Opções Remoto Ajuda

Sincronizar | Fila | Ajustes de transferência Padrão

Nova Sessão

Área de trabalho | Upload | Editar | Propriedades | Novo | Download | Editar | Propriedades | Novo

C:\Users\rapha\OneDrive\Área de Trabalho\Treinamento Zabbix ISP\

Nome	Tamanho	Tipo
..		Diretório
Apostilas		Pasta de a
Diagramas		Pasta de a
grafana		Pasta de a
ICONES		Pasta de a
Material - consultas		Pasta de a
MIBs		Pasta de a
templates		Pasta de a
venda		Pasta de a
zabbix		Pasta de a
Zabbix CCAT - T3		Pasta de a
Zabbix CCAT -T2		Pasta de a
zte		Pasta de a
Adicionando ONU Terceiros com OLT F...	1.957 KB	Microsoft
Apostila Aula 1.pdf	1.592 KB	Microsoft
Apostila Aula 1.pptx	5.000 KB	Apresenta
Apostila Aula 2 [Salvo automaticament...	5.387 KB	Apresenta
Apostila Aula 2.pdf	3.699 KB	Microsoft
Apostila Aula 2.pptx	4.978 KB	Apresenta
Apostila Aula 3.pdf	1.790 KB	Microsoft

Tamanho | Dat

Login

- Novo Site
- GlobalNet DNS
- GlobalNet Zabbix
- Hr DNS Autoritativo
- Hr Zabbix
- MZL PABX
- MZL PABX - Elastix
- MZL Speedtest
- MZL Vmware
- MZL Zabbix
- Netmais OSPF-MPLS
- Netmais Zabbix
- Netmais Zabbix-2
- Senior Core ACX Equinix
- Senior Core Extreme
- Senior Core Extreme-ADEUS
- Senior DNS1
- Senior DNS2
- Senior eBGP-IX-RJ
- Senior eBGP-IX-RJ-2

Sessão

Protocolo de arquivo: SCP

Host: | Porta: 22

Usuário: | Senha:

Salvar... | Avançado...

Ferramentas | Gerenciar | Login | Fechar | Ajuda

Exibir diálogo de login durante a iniciação e quando a última sessão for fechada

SNMP

mibs - rrl@100.127.254.3 - WinSCP

Local Marcar Arquivos Comandos Sessão Opções Remoto Ajuda

Sincronizar | Fila | Ajustes de transferência Padrão

rrl@100.127.254.3 | Nova Sessão

Área de trabalho | Upload | Editar | Propriedades | Novo

C:\Users\rapha\OneDrive\Área de Trabalho\Treinamento Zabbix ISP\

Nome	Tamanho	Tipo	Data de modificação
..		Diretório acima	04/07/2021 15:45:29
Apostilas		Pasta de arquivos	23/05/2021 03:54:43
Diagramas		Pasta de arquivos	27/04/2021 10:03:40
grafana		Pasta de arquivos	20/01/2021 17:22:12
ICONES		Pasta de arquivos	20/01/2021 15:18:12
Material - consultas		Pasta de arquivos	03/07/2021 17:45:38
MIBs		Pasta de arquivos	13/01/2021 12:11:14
templates		Pasta de arquivos	22/03/2021 10:36:48
venda		Pasta de arquivos	13/01/2021 12:16:29
zabbix		Pasta de arquivos	19/01/2021 21:23:25
Zabbix CCAT - T3		Pasta de arquivos	14/07/2021 02:03:00
Zabbix CCAT -T2		Pasta de arquivos	30/05/2021 01:31:23
zte		Pasta de arquivos	27/03/2021 11:46:06
Adicionando ONU Terceiros com OLT F...	1.957 KB	Microsoft Edge P...	10/11/2020 00:25:26
Apostila Aula 1.pdf	1.592 KB	Microsoft Edge P...	20/01/2021 15:13:55
Apostila Aula 1.pptx	5.000 KB	Apresentação do ...	24/03/2021 17:25:59
Apostila Aula 2 [Salvo automaticament...	5.387 KB	Apresentação do ...	25/03/2021 16:51:24
Apostila Aula 2.pdf	3.699 KB	Microsoft Edge P...	20/01/2021 07:21:58
Apostila Aula 2.pptx	4.978 KB	Apresentação do ...	20/01/2021 07:20:58
Apostila Aula 3.pdf	1.790 KB	Microsoft Edge P...	22/01/2021 18:31:32
Apostila Aula 3.pptx	4.049 KB	Apresentação do ...	27/03/2021 03:37:29
chaves_criptografia_trainer.txt	1 KB	Documento de Te...	16/12/2020 17:49:16
clientes_OLT_FH.sh	1 KB	Arquivo SH	05/02/2020 14:22:00

mibs | Download | Editar | Propriedades | Novo | Localizar arquivos

/usr/share/snmp/mibs/

Nome	Tamanho	Data de modificação	Direitos	Pro
..		23/05/2021 01:50:49	rwxr-xr-x	roc
iana		29/05/2018 14:48:57	rwxrwxrwx	roc
ietf		29/05/2018 14:48:57	rwxrwxrwx	roc
GEPON-OLT-COMMON-MIB.txt	151 KB	31/05/2021 14:58:45	rw-r--r--	roc
GNOME-SMI.txt	2 KB	28/01/2021 06:49:23	rw-r--r--	roc
IANA-ADDRESS-FAMILY-NUMBERS-MIB.txt	7 KB	08/12/2014 18:23:22	rw-r--r--	roc
IANAifType-MIB.txt	33 KB	08/12/2014 18:23:22	rw-r--r--	roc
IANA-LANGUAGE-MIB.txt	5 KB	08/12/2014 18:23:22	rw-r--r--	roc
IANA-RTPROTO-MIB.txt	4 KB	08/12/2014 18:23:22	rw-r--r--	roc
LM-SENSORS-MIB.txt	6 KB	08/12/2014 18:23:22	rw-r--r--	roc
miblist.txt	1 KB	11/04/2015 18:24:23	rw-r--r--	roc
NET-SNMP-AGENT-MIB.txt	16 KB	08/12/2014 18:23:22	rw-r--r--	roc
NET-SNMP-EXAMPLES-MIB.txt	9 KB	08/12/2014 18:23:22	rw-r--r--	roc
NET-SNMP-EXTEND-MIB.txt	10 KB	08/12/2014 18:23:22	rw-r--r--	roc
NET-SNMP-MIB.txt	2 KB	08/12/2014 18:23:22	rw-r--r--	roc
NET-SNMP-MONITOR-MIB.txt	2 KB	08/12/2014 18:23:22	rw-r--r--	roc
NET-SNMP-PASS-MIB.txt	4 KB	08/12/2014 18:23:22	rw-r--r--	roc
NET-SNMP-PERIODIC-NOTIFY-MIB.txt	3 KB	08/12/2014 18:23:22	rw-r--r--	roc
NET-SNMP-SYSTEM-MIB.txt	2 KB	08/12/2014 18:23:22	rw-r--r--	roc
NET-SNMP-TC.txt	5 KB	08/12/2014 18:23:22	rw-r--r--	roc
NET-SNMP-VACM-MIB.txt	5 KB	08/12/2014 18:23:22	rw-r--r--	roc
RFC-1215.txt	2 KB	08/12/2014 18:23:22	rw-r--r--	roc
SNMP-TLS-TM-MIB.txt	43 KB	08/12/2014 18:23:22	rw-r--r--	roc

DESAFIO

- INTEGRAÇÃO IMPORTAR MIB WINSCP
- INTEGRAÇÃO IMPORTAR MIB-BROWSER
- COMPARTILHAR RESULTADOS
- TROUBLESHOOTING

SNMP

Template | Linked templates | Tags | Macros

* Template name: Template Huawei OLT MA56xx

Visible name:

* Groups: GPON ✖ (type here to search) — Select

Description: Template usado para toda as OLTs Huawei.

Update | Clone | Full clone | Delete | Delete and clear | Cancel

SNMP

Item | Preprocessing

* Name	Uptime
Type	SNMP agent
* Key	system.uptime[sysUpTime.0] (Select)
* SNMP OID	1.3.6.1.2.1.1.3.0
Type of information	Numeric (unsigned)
Units	uptime
* Update interval	30s
Custom intervals	Type: Flexible / Scheduling; Interval: 50s; Period: 1-7,00:00-24:00; Action: Remove; Add
* History storage period	Do not keep history / Storage period: 2w
* Trend storage period	Do not keep trends / Storage period
Show value	As is (show value mappings)
New application	
Applications	-None- / General / Status

Name - Uptime

Type - SNMP agent

Key - system.uptime[sysUpTime.0]

SNMP OID - 1.3.6.1.2.1.1.3.0

Units - uptime

Update interval - 30s

SNMP

Item | Preprocessing

* Name	System description
Type	SNMP agent
* Key	system.descr[sysDescr.0]
* SNMP OID	1.3.6.1.2.1.1.1.0
Type of information	Character
* Update interval	1h
Custom intervals	Type: Flexible / Scheduling; Interval: 50s; Period: 1-7,00:00-24:00; Add
* History storage period	Do not keep history / Storage period: 2w
Show value	As is — show value mappings
New application	
Applications	-None- / General / Status

Name - System description
Type - SNMP agent
Key - system.descr[sysDescr.0]
SNMP OID - 1.3.6.1.2.1.1.1.0
Update interval - 30s

DESAFIO

- INTEGRAÇÃO ITEM SNMP
- COMPARTILHAR RESULTADOS
- TROUBLESHOOTING

LOW-LEVEL-DISCOVERY

O processo de LLD (DESCOBERTA DE BAIXO NÍVEL) fornece uma forma automática de criar itens, triggers, gráficos para os diferentes objetos descobertos no dispositivo monitorado.
Por exemplo, o Zabbix pode começar automaticamente a monitorar interfaces de rede de um roteador de borda, sem precisar que sejam criados manualmente itens para cada um deles.
Monitorar nível de sinal das interfaces sfp
Monitorar status da porta pon
Monitorar snr do rádio enlace
Monitorar umidade do ar
Monitorar temperatura do equipamento
E muitos mais.....

https://www.zabbix.com/documentation/current/pt/manual/discovery/low_level_discovery

LOW-LEVEL-DISCOVERY

All templates / Template Huawei OLT MA56xx Discovery list / ONU RX Item prototypes 1 Trigger prototypes 2 Gra

Discovery rule | Preprocessing | LLD macros | Filters | Overrides

* Name	ONU RX
Type	SNMP agent
* Key	onudisc
* SNMP OID	discovery[{#ONUNAME},1.3.6.1.4.1.2011.6.128.1.1.2.43.1.9]
* Update interval	8h

Custom intervals

Type	Interval	Period	Action
Flexible / Scheduling	50s	1-7,00:00-24:00	Remove

Add

* Keep lost resources period	30d
Description	
Enabled	☑

Update | Clone | Test | Delete | Cancel

name - ONU RX
type - snmp agent
key - onudisc
snmp oid - discovery[{#ONUNAME},1.3.6.1.4.1.2011.6.128.1.1.2.43.1.9]
update interval - 8h
Keep lost resources period - 30d

LOW-LEVEL-DISCOVERY

* Name: ONT Rx power {#ONUNAME}
Type: SNMP agent
* Key: OntRxPower.[{#SNMPINDEX}] Select
* SNMP OID: 1.3.6.1.4.1.2011.6.128.1.1.2.51.1.4.{#SNMPINDEX}
Type of information: Numeric (float)
Units: dBm
* Update interval: 6h
Custom intervals: Type | Interval | Period | Action
Flexible | Scheduling | 50s | 1-7,00:00-24:00 | Remove
Add
* History storage period: Do not keep history | Storage period | 730d
* Trend storage period: Do not keep
Show value: As is
New application:
Applications: -None- / OLT_HW / ONU / Status
New application prototype:
Application prototypes: -None-

name - ONT Rx power {#ONUNAME}
type - snmp agent
key - OntRxPower.[{#SNMPINDEX}]
snmp oid - 1.3.6.1.4.1.2011.6.128.1.1.2.51.1.4.{#SNMPINDEX}
Type – numeric float
Unt - dBm
update interval - 8h
Applications- ONU

All templates / Template Huawei OLT MA56xx Discovery list / ONU RX Item prototypes 1 Trigger prototypes 2 Graph prototypes 1 Host prototypes

Item prototype Preprocessing

Preprocessing steps Name Parameters Custom on fail Actions
1: Custom multiplier 0.01 Test Remove
Add Test all steps

Update Clone Test Delete Cancel

LOW-LEVEL-DISCOVERY

All templates / Template Huawei OLT MA56xx Discovery list / ONU RX Item prototypes 1 Trigger prototypes 2 Graph prototypes 1 Host prototypes

Trigger prototype Tags Dependencies

* Name: ONT {#SNMPINDEX} RX Power alert(>30)

Operational data:

Severity: Not classified | Information | Warning | Average | High | Disaster

* Expression:

```
{Template Huawei OLT MA56xx:OntRxPower.[{#SNMPINDEX}].last()}
<-30
```

Add

Expression constructor

OK event generation: Expression | Recovery expression | None

PROBLEM event generation mode: Single | Multiple

Allow manual close: ☑

LOW-LEVEL-DISCOVERY

name - ONT Rx power [{#ONUNAME}

All templates / Template Huawei OLT MA56xx Discovery list / ONU RX Item prototypes 1 Trigger prototypes 2 Graph prototypes 1 Host prototypes

Graph prototype Preview

* Name	ONT Rx power [{#ONUNAME}
* Width	900
* Height	200
Graph type	Normal
Show legend	☑
Show working time	☑
Show triggers	☑
Percentile line (left)	☐
Percentile line (right)	☐
Y axis MIN value	Fixed -35
Y axis MAX value	Fixed 0

* Items

	Name	Function	Draw style	Y axis side	Colour	Action
1:	Template Huawei OLT MA56xx: ONT Rx power {#ONUNAME}	avg	Line	Left	1A7C11	Remove

Add Add prototype

Discover ☑

Update Clone Delete Cancel

DESAFIO

- CRIAR LLD SNMP OLT HUAWEI
- COMPARTILHAR RESULTADOS
- TROUBLESHOOTING

LOW-LEVEL-DISCOVERY

Templates

All templates / Mikrotik PPP BNG Bras | Applications 1 | Items | Triggers | Graphs | Screens | Discovery rules 1 | Web scenarios

Template | Linked templates | Tags | Macros

* Template name: MikroTik PPPoE BNG Bras

Visible name: Mikrotik PPP BNG Bras

* Groups: Templates/Modules ✖ — type here to search — Select

Description:

Update | Clone | Full clone | Delete | Delete and clear | Cancel

LOW-LEVEL-DISCOVERY

Discovery rules

All templates / Mikrotik PPP BNG Bras Discovery list / Descoberta de interfaces de rede ... Item prototypes 2 Trigger prototyp

Discovery rule | Preprocessing | LLD macros | Filters | Overrides

* Name: Descoberta de interfaces de rede LLD

Type: SNMP agent

* Key: net.if.discovery

* SNMP OID: discovery[{#IFOPERSTATUS},1.3.6.1.2.1.2.2.1.8,{#IFADMINSTATUS},1.3.6.1.2.1.2.2

* Update interval: 1h

Custom intervals

Type	Interval	Period	Action
Flexible / Scheduling	50s	1-7,00:00-24:00	Remove

Add

* Keep lost resources period: 7d

Description:

Enabled: ☑

Update | Clone | Test | Delete | Cancel

name - Descoberta de interfaces de rede LLD

Key - net.if.Discovery

SNMP OID –

discovery[{#IFOPERSTATUS},1.3.6.1.2.1.2.2.1.8,{#IFADMINSTATUS},1.3.6.1.2.1.2.2.1.7,{#IFALIAS},1.3.6.1.2.1.31.1.1.1.18,{#IFNAME},1.3.6.1.2.1.31.1.1.1.1,{#IFDESCR},1.3.6.1.2.1.2.2.1.2,{#IFTYPE},1.3.6.1.2.1.2.2.1.3]

Interval – 4h

LOW-LEVEL-DISCOVERY

name - Interface {#IFNAME}: Download

Key - net.if.out[ifHCOutOctets.[{#IFNAME}]

SNMP OID – 1.3.6.1.2.1.31.1.1.1.10.{#SNMPINDEX}
Units - bps
Interval – 4h

Item prototypes

All templates / Mikrotik PPP BNG Bras Discovery list / Descoberta de interfaces de rede ... Item prototypes 2 Trigger prototypes Graph prototypes 1

Item prototype Preprocessing

* Name: Interface {#IFNAME}({#IFALIAS}): Download
Type: SNMP agent
* Key: net.if.out[ifHCOutOctets.{#IFNAME}] Select
* SNMP OID: 1.3.6.1.2.1.31.1.1.1.10.{#SNMPINDEX}
Type of information: Numeric (unsigned)
Units: bps
* Update interval: 1m
Custom intervals: Type | Interval | Period | Action
Flexible | Scheduling | 50s | 1-7,00:00-24:00 | Remove
Add
* History storage period: Do not keep history | Storage period | 7d
* Trend storage period: Do not keep trends | Storage period | 90d
Show value: As is show valu
New application:
Applications: -None- / Network interfaces

Item prototypes

All templates / Mikrotik PPP BNG Bras Discovery list / Descoberta de interfaces de rede ... Item prototypes 2

Item prototype Preprocessing

Preprocessing steps Name Parameters
1: Change per second
2: Custom multiplier 8
Add
Update Clone Test Delete Cancel

LOW-LEVEL-DISCOVERY

name - Interface {#IFNAME}({#IFALIAS}): Upload

Key - net.if.in[ifHCInOctets.[{#IFNAME}]

SNMP OID – 1.3.6.1.2.1.31.1.1.1.6.{#SNMPINDEX}
Units - bps
Interval – 4h

Item prototypes

All templates / Mikrotik PPP BNG Bras Discovery list / Descoberta de interfaces de rede ... Item prototypes 2 Trigger prototypes Graph prototypes 1 Host

Item prototype Preprocessing

* Name: Interface {#IFNAME}({#IFALIAS}): Upload
Type: SNMP agent
* Key: net.if.in[ifHCInOctets.{#IFNAME}] Select
* SNMP OID: 1.3.6.1.2.1.31.1.1.1.6.{#SNMPINDEX}
Type of information: Numeric (unsigned)
Units: bps
* Update interval: 1m
Custom intervals: Type | Interval | Period | Action
Flexible | Scheduling | 50s | 1-7,00:00-24:00 | Remove
Add
* History storage period: Do not keep history | Storage period | 7d
* Trend storage period: Do not keep trends | Storage period | 90d
Show value: As is show value
New application:
Applications: -None- / Network interfaces

Item prototypes

All templates / Mikrotik PPP BNG Bras Discovery list / Descoberta de interfaces de rede ... Item prototypes 2

Item prototype Preprocessing

Preprocessing steps Name Parameters
1: Change per second
2: Custom multiplier 8
Add

Update Clone Test Delete Cancel

https://raphaelisp.com.br

LOW-LEVEL-DISCOVERY

name - Interface {#IFNAME}({#IFALIAS}): Network traffic

Graph prototypes

All templates / Mikrotik PPP BNG Bras Discovery list / Descoberta de interfaces de rede ... Item prototypes 2 Trigger prototypes Graph p

Graph prototype Preview

* Name: Interface {#IFNAME}({#IFALIAS}): Network traffic

* Width: 900

* Height: 200

Graph type: Normal

Show legend: ☑

Show working time: ☑

Show triggers: ☑

Percentile line (left): ☐

Percentile line (right): ☐

Y axis MIN value: Calculated

Y axis MAX value: Calculated

* Items

	Name	Function	Draw style	Y axis side		
1:	Mikrotik PPP BNG Bras: Interface {#IFNAME} ({#IFALIAS}): Download	avg	Bold line	Left		
2:	Mikrotik PPP BNG Bras: Interface {#IFNAME} ({#IFALIAS}): Upload	avg	Bold line	Left	FF0000	Remove

Add Add prototype

DESAFIO

- CRIAR LLD SNMP BRAS BNG MIKROTIK
- COMPARTILHAR RESULTADOS
- TROUBLESHOOTING

SNMP TRAP

apt install snmptrapd libsnmp-perl perl libxml-simple-perl

wget https://git.zabbix.com/projects/ZBX/repos/zabbix/raw/misc/snmptrap/zabbix_trap_receiver.pl -O /etc/zabbix/zabbix_trap_receiver.pl

##Edite a SNMPTrapperFilevariável em nano /etc/zabbix/zabbix_trap_receiver.pl
$SNMPTrapperFile = '/var/log/snmptrap/snmptrap.log';

##Crie o diretório:
mkdir /var/log/snmptrap

##Configure snmptrap com estes comandos
echo 'authCommunity log,net,execute public' | tee -a /etc/snmp/snmptrapd.conf
echo 'perl do "/etc/zabbix/zabbix_trap_receiver.pl";' | tee -a /etc/snmp/snmptrapd.conf

##Edite os parâmetros em nano /etc/zabbix/zabbix_server.conf
SNMPTrapperFile=/var/log/snmptrap/snmptrap.log
StartSNMPTrapper=1

##Reinicie os serviços:
systemctl restart snmptrapd zabbix-server
systemctl enable snmptrapd

https://www.zabbix.com/documentation/current/manual/config/items/itemtypes/snmptrap

SNMP TRAP

```
root@debian:/etc/zabbix#  snmptrap -v 1 -c public 127.0.0.1 '.1.3.6.1.6.3.1.1.5.4' '0.0.0.0' 6 33 '55' .1.3.6.1.6.3.1.1.5.4 s "eth1“
root@debian:/etc/zabbix# cat /var/log/snmptrap/snmptrap.log
02:22:21 2021/07/15 ZBXTRAP 127.0.0.1
PDU INFO:
  transactionid               6
  receivedfrom                UDP: [127.0.0.1]:52867->[127.0.0.1]:162
  errorstatus                 0
  community                   public
  requestid                   0
  messageid                   0
  version                     0
  notificationtype            TRAP
  errorindex                  0
VARBINDS:
  DISMAN-EVENT-MIB::sysUpTimeInstance type=67 value=Timeticks: (55) 0:00:00.55
  SNMPv2-MIB::snmpTrapOID.0       type=6  value=OID: IF-MIB::linkUp.0.33
  IF-MIB::linkUp                  type=4  value=STRING: "eth1"
  SNMP-COMMUNITY-MIB::snmpTrapCommunity.0 type=4  value=STRING: "public"
  SNMPv2-MIB::snmpTrapEnterprise.0 type=6  value=OID: IF-MIB::linkUp
```

SNMP TRAP

```
root@debian:/etc/zabbix# cat /var/log/snmptrap/snmptrap.log
02:34:38 2021/07/15 ZBXTRAP 100.127.254.1
PDU INFO:
  community                      public
  errorstatus                    0
  requestid                      517565555
  transactionid                  10
  receivedfrom                   UDP: [100.127.254.1]:36479->[100.127.254.3]:162
  notificationtype               TRAP
  errorindex                     0
  messageid                      0
  version                        1
VARBINDS:
  DISMAN-EVENT-MIB::sysUpTimeInstance type=67 value=Timeticks: (465864) 1:17:38.64
  SNMPv2-MIB::snmpTrapOID.0      type=6  value=OID: SNMPv2-SMI::enterprises.14988.1.1.9.0.1
  iso.2.2.1.2                    type=4  value=STRING: "sfp is up"
02:34:41 2021/07/15 ZBXTRAP 100.127.254.1
PDU INFO:
  version                        1
  messageid                      0
  errorindex                     0
  notificationtype               TRAP
  transactionid                  11
  receivedfrom                   UDP: [100.127.254.1]:35980->[100.127.254.3]:162
  requestid                      809372118
  community                      public
  errorstatus                    0
VARBINDS:
  DISMAN-EVENT-MIB::sysUpTimeInstance type=67 value=Timeticks: (466130) 1:17:41.30
  SNMPv2-MIB::snmpTrapOID.0      type=6  value=OID: SNMPv2-SMI::enterprises.14988.1.1.9.0.1
  iso.2.2.1.2                    type=4  value=STRING: "sfp is down"
root@debian:/etc/zabbix#
```

```
snmp send-trap oid=1.2.2.1.2 type=string value="sfp is down"
snmp send-trap oid=1.2.2.1.2 type=string value="sfp is up"
snmp send-trap oid=1.2.2.1.2 type=string value="sfp is up"
snmp send-trap oid=1.2.2.1.2 type=string value="sfp is down"
```

```
[raphael@Site-CENTRO] >
[raphael@Site-CENTRO] >
[raphael@Site-CENTRO] >
[raphael@Site-CENTRO] >
```

SNMP Settings

- [x] Enabled

Contact Info:	
Location:	
Engine ID:	
Trap Target:	100.127.254.3
Trap Community:	public
Trap Version:	2
Trap Generators:	temp-exception
Trap Interfaces:	all
Src. Address:	100.127.254.1

OK | Cancel | Apply | Communities

SNMP TRAP

Templates

All templates / Tempate BRAS SNMP TRAP | Applications 1 | Items 1 | Triggers | Graphs | Dashboards | Discovery rules | Web scenarios

Template | Linked templates | Tags | Macros

* Template name: Tempate BRAS SNMP TRAP

Visible name: Tempate BRAS SNMP TRAP

* Groups: BRAS ✖ PPPOE ✖ type here to search — Select

Description

Update | Clone | Full clone

Applications

All templates / Tempate BRAS SNMP TRAP | Applications 1 | Items 1 | Triggers | Graphs | Dashboards | Discovery rules | Web scenarios

* Name: SNMP TRAP

Update | Clone | Delete | Cancel

SNMP TRAP

Items

All templates / Tempate BRAS SNMP TRAP | Applications 1 | Items 1 | Triggers | Graphs | Dashboards | Discovery rules

Item | Preprocessing

* Name: PPPOE SNMP TRAP

Type: SNMP trap

* Key: snmptrap.fallback — Select

Type of information: Log

* History storage period: Do not keep history | Storage period — 1w

Log time format: hh:mm:ss yyyy/MM/dd

New application:

name - PPPOE SNMP TRAP
type - snmp trap
key - snmptrap.fallback

Type – log
Log time format - hh:mm:ss yyyy/MM/dd

SNMP TRAP

Items

All templates / Tempate BRAS SNMP TRAP Applications 1 Items 2 Triggers Graphs Dashbo

Item Preprocessing

* Name	PPPOE SNMP TRAP - REGEX
Type	SNMP trap
* Key	snmptrap["up"]
Type of information	Log
* History storage period	Do not keep history / Storage period: 1w
Log time format	hh:mm:ss yyyy/MM/dd
New application	

name - PPPOE SNMP TRAP - REGEX
type - snmp trap
key - snmptrap["up"]
Type – log
Log time format - hh:mm:ss yyyy/MM/dd

SNMP TRAP

Latest data

Filter

Host groups: type here to search — Select

Hosts: BRAS BGN PPPOE - TRAP — Select

type here to search

Application

Name

Show items without data

Zoom out | Last 1 hour | Filter

Host	Name ▲
BRAS BGN PPPOE - TRAP	**SNMP TRAP** (1 Item)
	PPPOE SNMP TRAP

Items list: BRAS BGN PPPOE - TRAP: PPPOE SNMP TRAP — Select

type here to search

Value

Selected: Show selected

Apply | Reset

Timestamp	Local time	Value
2021-07-15 03:16:33	2021-07-15 03:16:31	03:16:31 2021/07/15 PDU INFO: errorindex 0 errorstatus 0 requestid 769284573 version 1 transactionid 25 receivedfrom UDP: [100.127.254.1]:45964->[100.127.254.3]:162 messageid 0 notificationtype TRAP community public VARBINDS: DISMAN-EVENT-MIB::sysUpTimeInstance type=67 value=Timeticks: (717180) 1:59:31.80 SNMPv2-MIB::snmpTrapOID.0 type=6 value=OID: SNMPv2-SMI::enterprises.14988.1.1.9.0.1 iso.2.2.1.2 type=4 value=STRING: "sfp is up"

SNMP TRAP

teste CLI zabbix server
snmptrap -v 2c -c public 127.0.0.1 "" 1.3.6.1.4.1.8072.9999.9999

teste mikrotik
/snmp send-trap oid=1.2.2.1.2 type=string value="55 is down"

teste Cisco
Switch#configure terminal
Switch(config)#snmp-server enable traps
Switch(config)#snmp-server host 192.168.1.70 version 2c mycommunity

teste Huawei
huawei-olt(config)# snmp-agent target-host trap-hostname huawei address <zabbix address> udp-port 162 trap-paramsname <community trap name>
huawei-olt(config)# snmp-agent target-host trap-hostname huawei address <LOGtrap address> udp-port 162 trap-paramsname <community trap name>
huawei-olt(config)# snmp-agent target-host trap-paramsname <community trap name> v2C securityname private@123

verificar resultado
cat /var/log/snmptrap/snmptrap.log

DESAFIO

- CRIAR SNMP TRAP
- COMPARTILHAR RESULTADOS
- TROUBLESHOOTING

CALCULATED ITEM

Items

All templates / Tempate BRAS SNMP TRAP Applications 2 Items 3 Triggers Graphs Dashboards Discovery rules Web scenarios 1

Item Preprocessing

* Name: Interface eth0: Total traffic" (bytes per second)

Type: Calculated

* Key: net.if.total[eth0] Select

* Formula:
```
last("net.if.in[eth0]")+ last("net.if.out[eth0]")
```

Type of information: Numeric (unsigned)

Units: B

* Update interval: 10s

Custom intervals

Type	Interval	Period	Action
Flexible / Scheduling	50s	1-7,00:00-24:00	Remove

Add

* History storage period: Do not keep history / Storage period: 90d

* Trend storage period: Do not keep trends / Storage period: 365d

Show value: As is show value mappings

New application: Network

Name: Interface eth0: Total traffic" (bytes per second)
- Type: Calculated
- Key: net.if.total[eth0]
- Formula:last(//net.if.in[eth0,bytes])+last(//net.if.out[eth0,bytes])
- Type of information: Numeric(unsigned)
- Units: b
- Update interval: 10s
- Application: Networ

https://www.zabbix.com/documentation/current/en/manual/config/items/itemtypes/calculated

DESAFIO

- CRIAR ITEM CALCULADO INTERFACES
- COMPARTILHAR RESULTADOS
- TROUBLESHOOTING

DADOS RECENTES

Dados recentes pode ser utilizado para consultar os últimos dados adquiridos pela monitoração, assim como acessar gráficos sobre os itens.
Nos dados recentes também pode ser observado os processos internos do zabbix, para identificar possíveis problemas na plataforma.
Para visualizar os dados, por questões de performance, é necessário que você indique algum filtro. Para isso clique no link Filtrar, indique o filtro (por exemplo Zabbix Server) e clique no botão Filtrar.

https://www.zabbix.com/documentation/current/pt/manual/web_interface/frontend_sections/monitoring/latest_data

FILA

Dados recentes

Filtra

Grupos de hosts: informe aqui o argumento para pesquisa — Selecionar
Hosts: Zabbix server ✖ — informe aqui o argumento para pesquisa — Selecionar
Aplicação: Zabbix server — Selecionar
Nome:
Exibir itens sem dados
Mostrar detalhes
Aplicar | Limpar

Host	Nome ▲	Última checagem	Último valor	Modificar	
Zabbix server	**Zabbix server** (46 Itens)				
	Number of processed character values per second	14-07-2021 17:06:54	0.01687	+0.01687	Gráfi
	Number of processed log values per second	14-07-2021 17:06:55	0		Gráfi
	Number of processed not supported values per second	14-07-2021 17:06:58	0.06747	-0.03227	Gráfi
	Number of processed numeric (float) values per second	14-07-2021 17:06:53	3.1035	+0.128	Gráfi
	Number of processed numeric (unsigned) values per second	14-07-2021 17:06:56	38.0382	+2.997	Gráfi
	Number of processed text values per second	14-07-2021 17:06:57	0.1181	+0.001718	Gráfi
	Number of processed values per second	14-07-2021 17:06:57	41.2769	+3.1439	Gráfi
	Utilization of alerter internal processes, in %	14-07-2021 17:06:32	0 %		Gráfi
	Utilization of alert manager internal processes, in %	14-07-2021 17:06:51	0.01693 %	+0.01693 %	Gráfi
	Utilization of alert syncer internal processes, in %	14-07-2021 17:06:03	0.06773 %	-0.01693 %	Gráfi
	Utilization of configuration syncer internal processes, in %	14-07-2021 17:06:33	3.0772 %	-1.8617 %	Gráfi
	Utilization of discoverer data collector processes, in %	14-07-2021 17:06:35	0 %	-0.0008475 %	Gráfi
	Utilization of escalator internal processes, in %	14-07-2021 17:06:36	0.08467 %	+0.01693 %	Gráfi
	Utilization of history syncer internal processes, in %	14-07-2021 17:06:37	0.5728 %	+0.1215 %	Gráfi
	Utilization of housekeeper internal processes, in %	14-07-2021 17:06:38	42.9369 %	+42.9369 %	Gráfi
	Utilization of http poller data collector processes, in %	14-07-2021 17:06:39	0.01694 %	+0.01694 %	Gráfi
	Utilization of icmp pinger data collector processes, in %	14-07-2021 17:06:40	15.3421 %	+0.2151 %	Gráfi
	Utilization of ipmi manager internal processes, in %				Gráfi
	Utilization of ipmi poller data collector processes, in %				Gráfi
	Utilization of java poller data collector processes, in %				Gráfi
	Utilization of LLD manager internal processes, in %	14-07-2021 17:06:36	0 %		Gráfi
	Utilization of LLD worker internal processes, in %	14-07-2021 17:06:38	0 %		Gráfi
	Utilization of poller data collector processes, in %	14-07-2021 17:06:44	0.4546 %	+0.2913 %	Gráfi
	Utilization of preprocessing manager internal processes, in %	14-07-2021 17:06:47	0.2868 %	+0.1858 %	Gráfi
	Utilization of preprocessing worker internal processes, in %	14-07-2021 17:06:48	0.01687 %	+0.01687 %	Gráfi
	Utilization of proxy poller data collector processes, in %	14-07-2021 17:06:45	0.01694 %	+0.01694 %	Gráfi
	Utilization of self-monitoring internal processes, in %	14-07-2021 17:06:46	0 %		Gráfi
	Utilization of snmp trapper data collector processes, in %				Gráfi
	Utilization of task manager internal processes, in %	14-07-2021 17:06:24	0 %	-0.01695 %	Gráfi
	Utilization of timer internal processes, in %	14-07-2021 17:06:48	0 %		Gráfi
	Utilization of trapper data collector processes, in %	14-07-2021 17:06:49	0 %		Gráfi
	Utilization of unreachable poller data collector processes, in %	14-07-2021 17:06:50	0.0008459 %	-0.0008488 %	Gráfi
	Utilization of vmware data collector processes, in %				Gráfi
	Zabbix configuration cache, % used	14-07-2021 17:06:53	47.5657 %	+0.0002503 %	Gráfi
	Zabbix history index cache, % used	14-07-2021 17:06:55	13.0093 %		Gráfi
	Zabbix history write cache, % used	14-07-2021 17:06:54	0 %		Gráfi
	Zabbix LLD queue	14-07-2021 17:06:34	0		Gráfi
	Zabbix preprocessing queue	14-07-2021 17:06:49	0		Gráfi
	Zabbix queue	14-07-2021 17:06:52	0		Gráfi
	Zabbix queue over 10 minutes	14-07-2021 16:57:51	0		Gráfi
	Zabbix trend write cache, % used	14-07-2021 17:06:56	2.0018 %		Gráfi
	Zabbix value cache, % used	14-07-2021 17:06:40	45.6076 %	+0.006199 %	Gráfi
	Zabbix value cache hits	14-07-2021 17:06:45	314.928 vps	+23.3632 vps	Gráfi
	Zabbix value cache misses	14-07-2021 17:06:48	0 vps		Gr
	Zabbix value cache operating mode	14-07-2021 17:06:22	Normal (0)		Gra
	Zabbix vmware cache, % used				Gráfi

COMANDOS INTERNOS

-c --config <arquivo> caminho absoluto (completo) para o arquivo de configuração (o padrão é /etc/zabbix/zabbix_server.conf)
-R --runtime-control <opção> executa funções administrativas
-h --help apresenta o help de parâmetros
-V --version apresenta o número de versão

root@debian:zabbix_server -c /usr/local/etc/zabbix_server.conf
root@debian:zabbix_server --help
root@debian:zabbix_server -V

root@debian:zabbix_server -R config_cache_reload
root@debian:zabbix_server -R snmp_cache_reload
root@debian:zabbix_server -R log_level_increase=poller,2
root@debian:zabbix_server -R log_level_increase=1234
root@debian:zabbix_server -R log_level_decrease="http poller"

https://www.zabbix.com/documentation/current/manpages/zabbix_server

COMANDOS INTERNOS

```
#!/bin/bash
#Database credentials
#Solucao temporaria para backup frontend,alert scripts, external scripts e databases mysql zabbix
# Desenvolvido por Hernandes Martins - Unirede Solucoes Corporativas
# Unirede Treinamentos @todos os direitos reservados

#set variaveis
user="zabbix"
password="P455w0RD"
host="localhost"
db_name="zabbix"

# Other options backup_path="/home/backup"
backup_path="/opt/backup"
date=$(date +"%d-%b-%Y")

# Set default file permissions
umask 177

# Create directory backup
mkdir $backup_path
mkdir $backup_path/backup-$date
mkdir $backup_path/backup-$date/frontend
mkdir $backup_path/backup-$date/alertscripts
mkdir $backup_path/backup-$date/externalscripts
mkdir $backup_path/backup-$date/database
mkdir $backup_path/backup-$date/fileconf
mkdir $backup_path/backup-$date/fileconf/mysql

# Dump database into SQL file
mysqldump --user=$user --password=$password --host=$host $db_name --single-transaction --skip-lock-tables > $backup_path/backup-$date/database/$db_name-$date.sql.bkp

# Delete files older than 30 days
find $backup_path/backup-$date/database/* -mtime +30 -exec rm {} \;

# Backup Frontend
cp -R /usr/share/zabbix/* $backup_path/backup-$date/frontend

# Alert Scripts
cp -R /usr/lib/zabbix/alertscripts/* $backup_path/backup-$date/alertscripts

# External Scripts
cp -R /usr/lib/zabbix/externalscripts/* $backup_path/backup-$date/externalscripts

# Files Cofiguration
cp -R /etc/zabbix/* $backup_path/backup-$date/fileconf

# File Cofiguration my.cnf
cp -R /etc/my.cnf $backup_path/backup-$date/fileconf/mysql

# File Cofiguration my.cnf
cp -R /etc/my.cnf.d/* $backup_path/backup-$date/fileconf/mysql

# Add File to .tar
tar -cvf $backup_path/backup-$date.tar

# Add File to .tar.gz
gzip $backup_path/backup-$date.tar
```

DESAFIO

- CRIAR ANALISAR A SAÚDE DO SEU ZABBIX
- REALIZAR BACKUP
- COMPARTILHAR RESULTADOS
- TROUBLESHOOTING

PARA PROVEDORES

ZABBIX

ZABBIX 6 LTS / GRAFANA 9

“ A VIDA É APENAS UMA VISÃO MOMENTÂNEA DAS MARAVILHAS DESTE ASSOMBROSO UNIVERSO”
CARL SAGAN

https://raphaelisp.com.br/