Report on Zabbix Installation and Usage on Nokia Routers

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1 Introduction

This report details the steps for installing and using Zabbix 6.0 on Ubuntu 20.04 for monitoring Nokia routers.

2 Zabbix Installation

The following procedure describes how to install Zabbix using MySQL as the database and Nginx as the web server.

- wget https://repo.zabbix.com/zabbix/6.0/ubuntu/pool/main/z/zabbix-release/zabbix-release_6.0-4+ubuntu20.04_all.deb
- sudo dpkg -i zabbix-release_6.0-4+ubuntu20.04_all.deb
- sudo apt update
- sudo apt install zabbix-server-mysql zabbix-frontend-php zabbix-nginx-conf zabbix-sql-scripts zabbix-agent
- sudo apt install mysql-server

3 MySQL Database Configuration

The database for Zabbix can be created using the following commands.

```
sudo mysql -uroot -p
# mysql> create database zabbix character set utf8mb4 collate utf8mb4_bin;
# mysql> create user zabbix@localhost identified by 'password';
# mysql> grant all privileges on zabbix.* to zabbix@localhost;
# mysql> set global log_bin_trust_function_creators = 1;
# mysql> quit;
```

Then, the SQL scripts for Zabbix are imported into the database.

- sudo zcat /usr/share/zabbix-sql-scripts/mysql/server.sql.gz | mysql --default-character-set=utf8mb4 -uzabbix -p zabbix

Finally, the log_bin_trust_function_creators parameter is reset to its default value.

```
sudo mysql -uroot -p
# mysql> set global log_bin_trust_function_creators = 0;
# mysql> quit;
```

4 Zabbix and Nginx Configuration

The configuration of Zabbix and Nginx is done by modifying the configuration files as follows.

```
sudo nano /etc/zabbix/zabbix_server.conf
# Change DBPassword=password

sudo nano /etc/zabbix/nginx.conf
Uncomment 'listen 8080;'
Uncomment 'server_name example.com;'
```

5 Starting Services

The Zabbix, Nginx, and PHP services are then started and enabled at system startup.

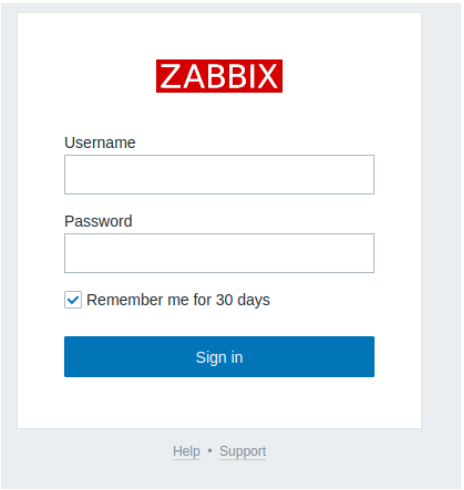
```
sudo systemctl restart zabbix-server zabbix-agent nginx php7.4-fpm
sudo systemctl enable zabbix-server zabbix-agent nginx php7.4-fpm
```

Zabbix is now installed and ready to be used for monitoring Nokia routers. For more information on configuring Zabbix, please refer to the Zabbix documentation. (https://www.zabbix.com/fr/download)

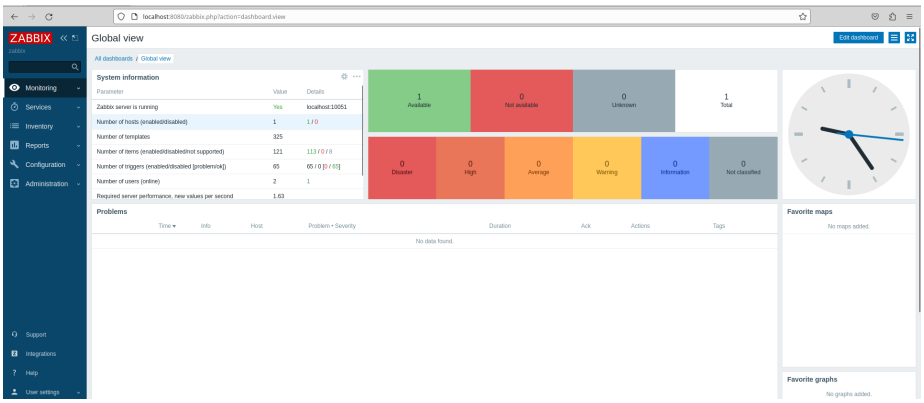
6 Using Zabbix for Monitoring Nokia Routers

Following the installation of Zabbix, we access the site `http://localhost:8080` to enter the Zabbix web interface.

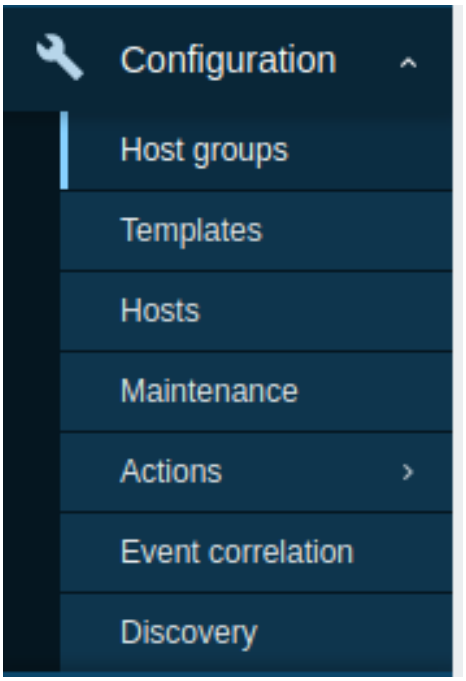
Upon first connection, an interface appears to choose the password. Then, we are directed to the following interface:



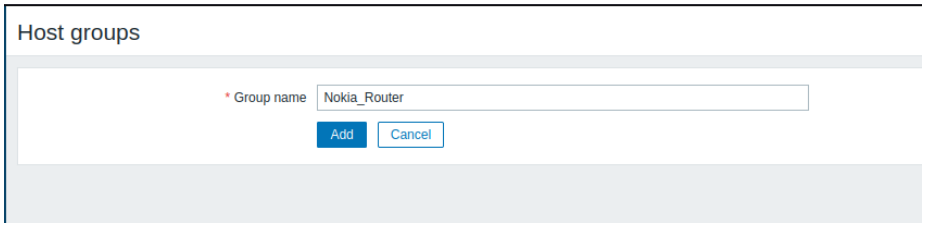
By default, the username is "admin". After authentication, we arrive at the main interface which includes a dashboard. A server is already monitored by default, it's the server where Zabbix is installed.



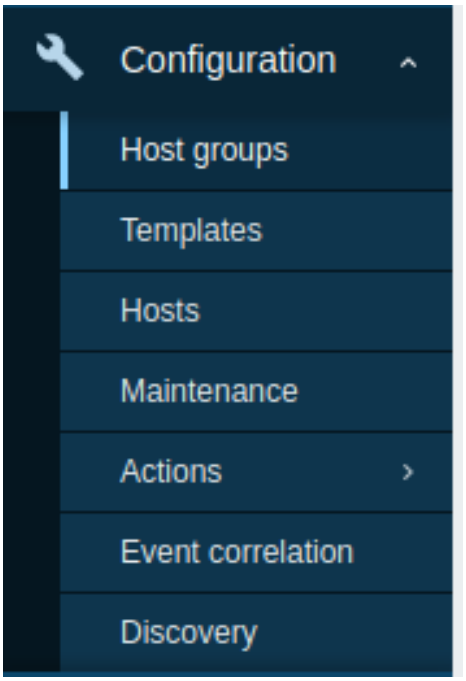
To add a Nokia router, we must first create a group. We go to the left panel and select "Configuration ¿ Host group".



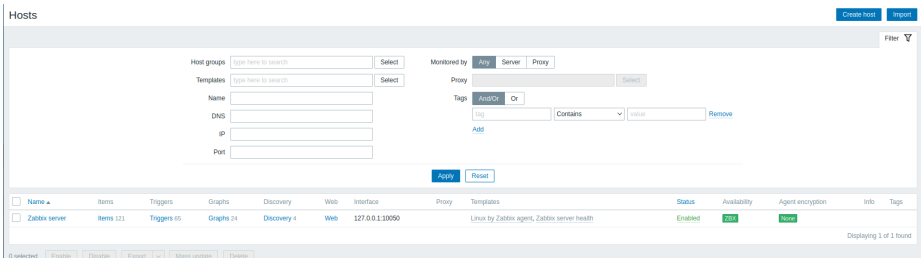
Then, we name the group.



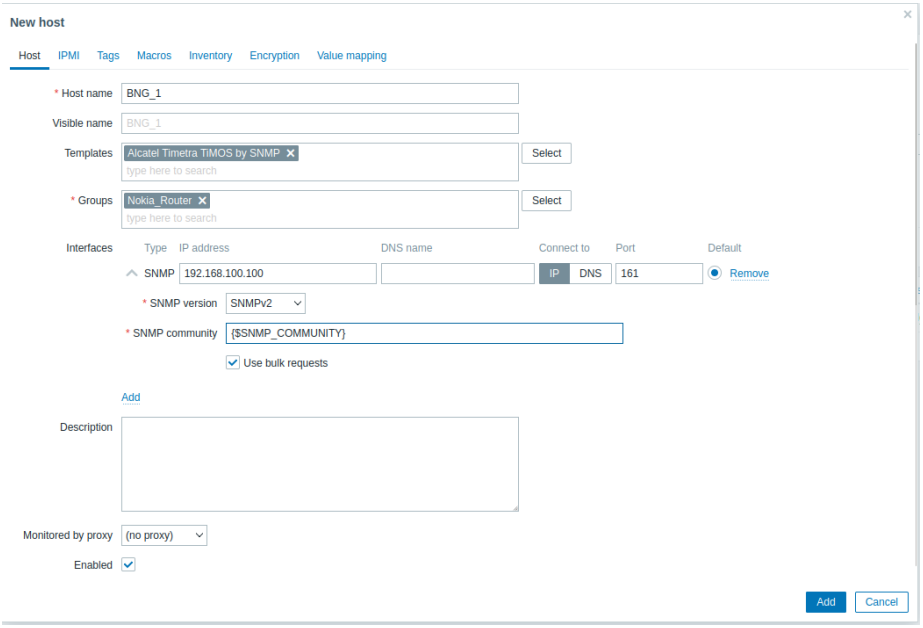
We return to the panel and select ”Hosts”.



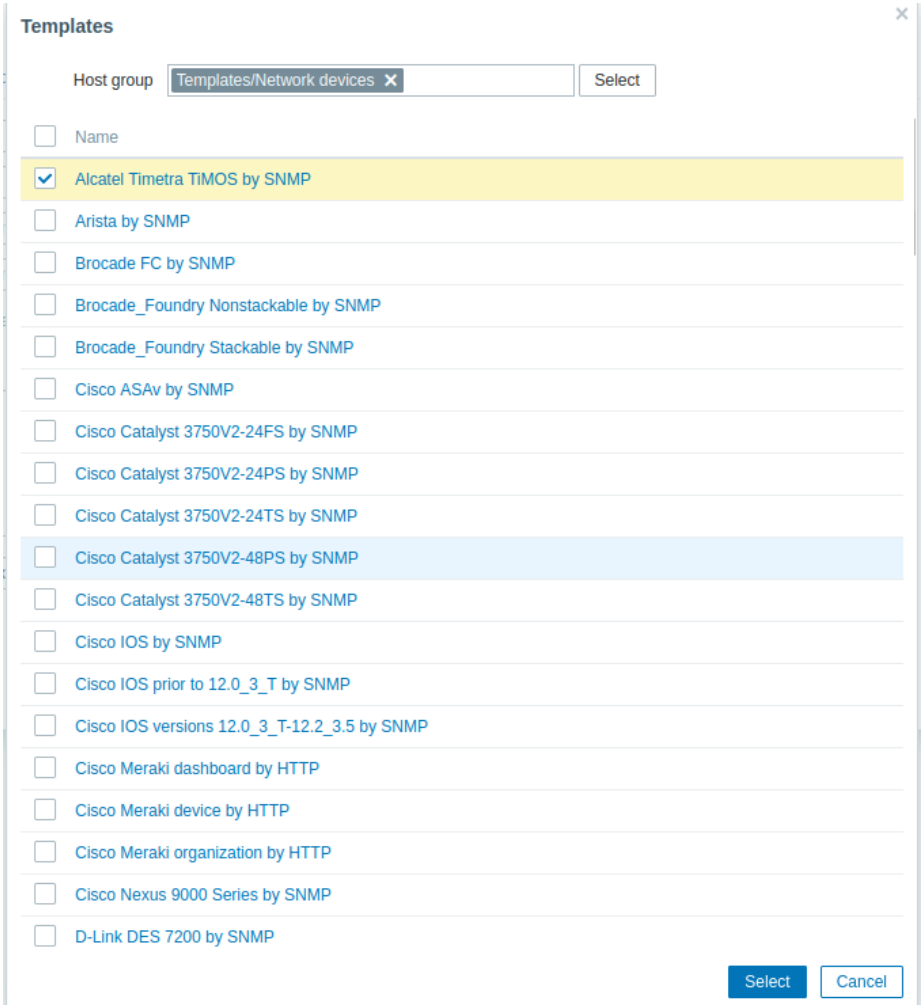
This interface displays all hosts and we then click on "New Host" at the top right.



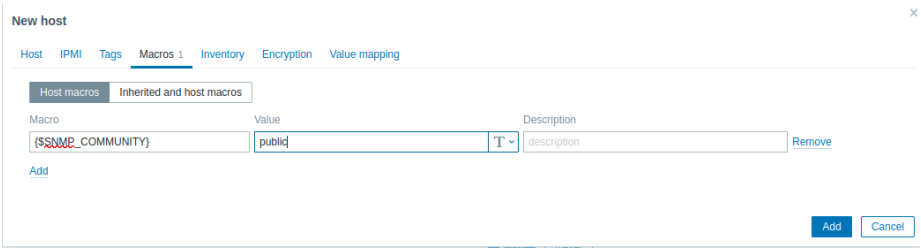
We fill in the necessary information: displayed name, IP address, SNMP port, group, and the template.



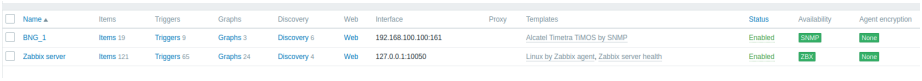
For the template, it is imperative to choose the one from Nokia, otherwise we won't get anything.



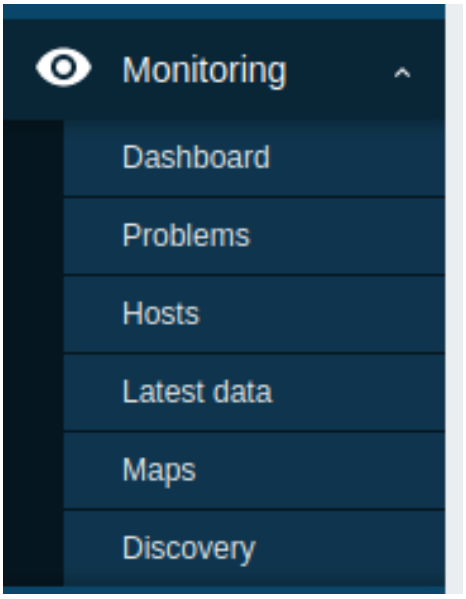
Finally, we need to configure the community for SNMPv2, otherwise the username and password for SNMPv3.



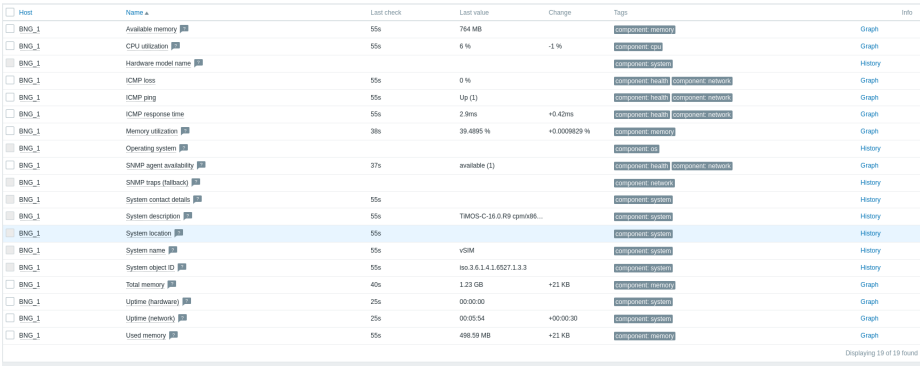
We return to the host page and we must wait a bit until the color of SNMP turns green.



We then go to the panel and select Monitoring ¿ Host.

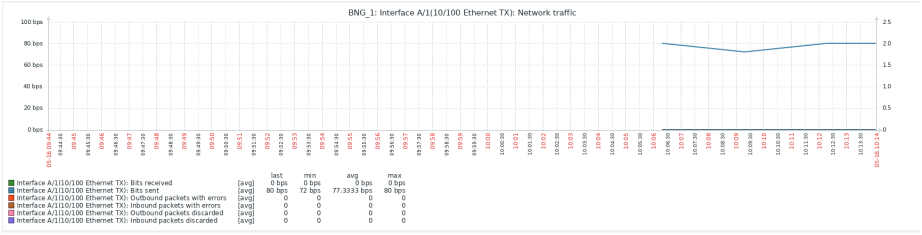


We choose our host and we get all the possible information.



We also find real-time graphs.

For interfaces, we also have real-time traffic.



For these graphs, we have the possibility to choose the time axis we want.