

Práctica 3

Monitorización

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B3

1. Instalación de Zabbix en Ubuntu Server

Empezamos instalando el paquete de configuración del repositorio con los siguientes comandos:

```
>wget
```

```
http://repo.zabbix.com/zabbix/3.4/ubuntu/pool/main/z/zabbix-release/zabbix-release_3.4-1+xenial_all.deb
```

```
javi@ubuntu:~$ wget http://repo.zabbix.com/zabbix/3.4/ubuntu/pool/main/z/zabbix-release/zabbix-release_3.4-1+xenial_all.deb
--2017-11-30 08:34:53-- http://repo.zabbix.com/zabbix/3.4/ubuntu/pool/main/z/zabbix-release/zabbix-release_3.4-1+xenial_all.deb
Resolviendo repo.zabbix.com (repo.zabbix.com)... 162.243.159.138
Conectando con repo.zabbix.com (repo.zabbix.com)[162.243.159.138]:80... conectado.
Petición HTTP enviada, esperando respuesta... 200 OK
Longitud: 3884 (3,8K) [application/x-debian-package]
Grabando a: "zabbix-release_3.4-1+xenial_all.deb"

zabbix-release_3.4-1+xen 100%[=====>] 3,79K --.-KB/s in 0s
2017-11-30 08:34:53 (43,7 MB/s) - "zabbix-release_3.4-1+xenial_all.deb" guardado [3884/3884]
```

```
>sudo dpkg -i zabbix-release_3.4-1+xenial_all.deb
```

```
javi@ubuntu:~$ sudo dpkg -i zabbix-release_3.4-1+xenial_all.deb
Seleccionando el paquete zabbix-release previamente no seleccionado.
(Leyendo la base de datos ... 59997 ficheros o directorios instalados actualmente.)
Preparando para desempaquetar zabbix-release_3.4-1+xenial_all.deb ...
Desempaquetando zabbix-release (3.4-1+xenial) ...
Configurando zabbix-release (3.4-1+xenial) ...
```

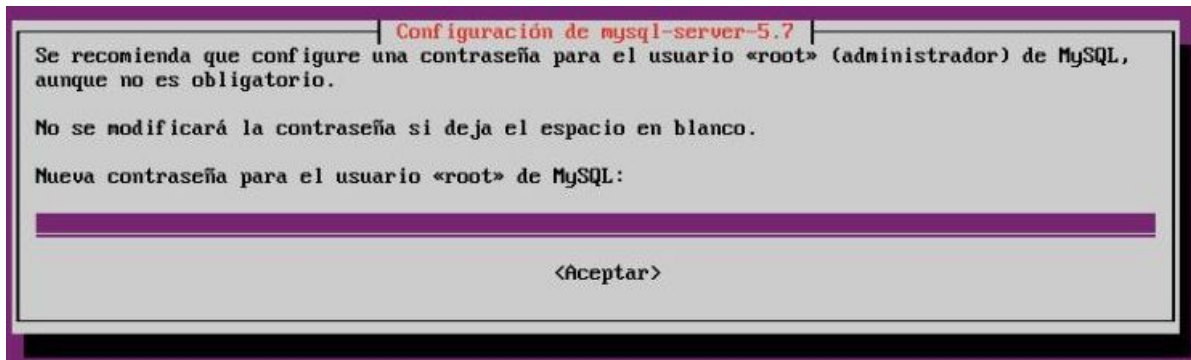
```
>sudo apt-get update
```

```
javi@ubuntu:~$ sudo apt-get update
[sudo] password for javi:
Obj:1 http://security.ubuntu.com/ubuntu xenial-security InRelease
Obj:2 http://es.archive.ubuntu.com/ubuntu xenial InRelease
Obj:3 http://es.archive.ubuntu.com/ubuntu xenial-updates InRelease
Obj:4 http://es.archive.ubuntu.com/ubuntu xenial-backports InRelease
Leyendo lista de paquetes... Hecho
```

Instalamos el servidor de Zabbix con:

```
>sudo apt-get install zabbix-server-mysql
```

Nos pedirá una contraseña, yo he introducido 'practicass,ISE'



Instalamos el frontend de Zabbix con:

```
>sudo apt-get install zabbix-frontend-php
```

Ahora procedemos a crear la base de datos con:

```
shell> mysql -uroot -p
```

La contraseña que te pide es la que hemos puesto antes: 'practicass,ISE'.

```
javi@ubuntu:~$ mysql -uroot -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 5
Server version: 5.7.20-0ubuntu0.16.04.1 (Ubuntu)

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
```

Ahora procedemos a crear la base de datos y dar los permisos necesarios con:

```
mysql> create database zabbix character set utf8 collate utf8_bin;
```

```
mysql> grant all privileges on zabbix.* to zabbix@localhost identified by 'zabbix';
```

```
MariaDB [(none)]> create database zabbix character set utf8 collate utf8_bin;
Query OK, 1 row affected (0,02 sec)

MariaDB [(none)]> grant all privileges on zabbix.* to zabbix@localhost identified by 'zabbix';
Query OK, 0 rows affected, 1 warning (0,00 sec)
```

Nos salimos del sql.

```
mysql>quit;
```

Ahora importamos el esquema inicial y los datos para el servidor con:

```
>zcat /usr/share/doc/zabbix-server-mysql/create.sql.gz | mysql -uzabbix -p zabbix
```

```
javi@ubuntu:~$ zcat /usr/share/doc/zabbix-server-mysql/create.sql.gz | mysql -uzabbix -p zabbix
Enter password:
ERROR 1050 (42S01) at line 1: Table 'users' already exists
```

Ese error es porque yo ya estoy repitiendo la orden y la tabla ya está creada.

Editamos el archivo.

```
>vi /etc/zabbix/zabbix_server.conf
```

Modificamos estos valores:

DBhost=localhost (lo dejamos comentado).

DBName=zabbix (Ya está así).

DBUser=zabbix (Ya está así).

DBPassword=zabbix

Levantamos el servidor de Zabbix y hacemos que se levante cuando el sistema se inicie:

```
>service zabbix-server start
```

```
>update-rc.d zabbix-server enable
```

Las contraseñas que nos pide es 'practicass,ISE'

```
javi@ubuntu:~$ service zabbix-server start
==== AUTHENTICATING FOR org.freedesktop.systemd1.manage-units ====
Authentication is required to start 'zabbix-server.service'.
Authenticating as: javi,,, (javi)
Password:
==== AUTHENTICATION COMPLETE ====
javi@ubuntu:~$ update-rc.d zabbix-server enable
insserv: fopen(.depend.stop): Permission denied
==== AUTHENTICATING FOR org.freedesktop.systemd1.reload-daemon ====
Se requiere autenticación para recargar el estado de systemd.
Authenticating as: javi,,, (javi)
Password:
==== AUTHENTICATION COMPLETE ====
```

Nos vamos al archivo /etc/apache2/conf-enabled/zabbix.conf, las líneas que están como:

```
# php_value date.timezone Europe/Riga
```

Las sustituimos por:

```
php_value date.timezone Europe/Madrid
```

Hacemos un restart a apache2 con:

```
>service apache2 restart
```

La contraseña que nos pide es 'practicass,ISE'.

```
javi@ubuntu:~$ service apache2 restart
==== AUTHENTICATING FOR org.freedesktop.systemd1.manage-units ====
Se necesita autenticación para reiniciar «apache2.service».
Authenticating as: javi,,, (javi)
Password:
==== AUTHENTICATION COMPLETE ====
```

Instalamos el agente de Zabbix con:

```
>sudo apt-get install zabbix-agent
```

Lo levantamos:

```
>service zabbix-agent start
```

La contraseña que nos pide es 'practicass,ISE'.

```
javi@ubuntu:~$ service zabbix-agent start
==== AUTHENTICATING FOR org.freedesktop.systemd1.manage-units ====
Authentication is required to start 'zabbix-agent.service'.
Authenticating as: javi,,, (javi)
Password:
==== AUTHENTICATION COMPLETE ====
```

Desactivamos el cortafuegos:

```
>sudo ufw disable
```

2. Instalación de Zabbix en CentOS

Instalamos Zabbix con:

```
>rpm -Uvh
```

```
http://repo.zabbix.com/zabbix/3.0/rhel/7/x86_64/zabbix-release-3.0-1.el7.noarch.rpm
```

```
[root@localhost ~]# rpm -Uvh http://repo.zabbix.com/zabbix/3.0/rhel/7/x86_64/zab
bix-release-3.0-1.el7.noarch.rpm
Recuperando http://repo.zabbix.com/zabbix/3.0/rhel/7/x86_64/zabbix-release-3.0-1
el7.noarch.rpm
curl: (22) The requested URL returned error: 404 Not Found
error: omitiendo http://repo.zabbix.com/zabbix/3.0/rhel/7/x86_64/zabbix-release-
3.0-1.el7.noarch.rpm - transferencia fallida
[root@localhost ~]# rpm -Uvh http://repo.zabbix.com/zabbix/3.0/rhel/7/x86_64/zab
bix-release-3.0-1.el7.noarch.rpm
Recuperando http://repo.zabbix.com/zabbix/3.0/rhel/7/x86_64/zabbix-release-3.0-1
el7.noarch.rpm
advertencia:/var/tmp/rpm-tmp.U1J8ju: EncabezadoV4 DSA/SHA1 Signature, ID de clave
79ea5ed4: NOKEY
Preparando... ##### [100%]
Actualizando / instalando...
1:zabbix-release-3.0-1.el7 ##### [100%]
```

Instalamos también el agent de Zabbix:

```
>yum install zabbix-agent
```

Ahora nos vamos al archivo de configuración /etc/zabbix/zabbix_agentd.conf.

Buscamos la parte del server, y ponemos:

Server=<la ip de nuestro ubuntu> (192.168.58.105)

También buscamos Hostname y User y los dejamos así:

Hostname=CentOS

ServerActive=<la ip de nuestro ubuntu> (192.168.58.105)

Activamos el agente:

```
>zabbix_agentd
```

```
[root@localhost ~]# zabbix_agentd
```

Debemos ahora descubrir el puerto que usa Zabbix además de cambiarle los permisos con:

```
>semanage permissive -a zabbix_agent_t
```

```
>semange port -l | grep zabbix
```

```
[root@localhost ~]# semanage permissive -a zabbix_agent_t
[root@localhost ~]#
[root@localhost ~]# semanage port -l | grep zabbix
zabbix_agent_port_t      tcp      10050
zabbix_port_t           tcp      10051
```

Vemos que el puerto que usa es el puerto 10050. Añadimos el puerto al firewall, reiniciamos el firewall y el agente con:

```
>firewall-cmd --add-port=10050/tcp
```

```
>firewall-cmd --permanent --add-port=10050/tcp
```

```
>systemctl restart firewalld
```

```
>systemctl restart zabbix-agent
```

```
[root@localhost ~]# firewall-cmd --add-port=10050/tcp
success
[root@localhost ~]# firewall-cmd --permanent --add-port=10050/tcp
success
[root@localhost ~]# systemctl restart firewalld
[root@localhost ~]# systemctl restart zabbix-agent
```

3. Monitorización

Primeramente comprobaremos si estamos recibiendo bien los datos:

-http

·CentOS

```
(Ubuntu)>zabbix_get -s 192.168.58.110 -k net.tcp.service[http]
```

```
(CentOS)>systemctl status httpd.service
```

En ambos debe estar activado o desactivado.

·Ubuntu

```
(Ubuntu)>zabbix_get -s 127.0.0.1 -k net.tcp.service[http]
```

```
(Ubuntu)>systemctl status apache2.service
```

En ambos debe estar activado o desactivado.

-ssh

·CentOS

```
(Ubuntu)>zabbix_get -s 192.168.58.110 -k net.tcp.service[ssh]
```

```
(CentOS)>systemctl status sshd.service
```


En ambos debe estar activado o desactivado.

·Ubuntu

```
(Ubuntu)>zabbix_get -s 127.0.0.1 -k net.tcp.service[ssh]
```

```
(Ubuntu)>systemctl status ssh.service
```

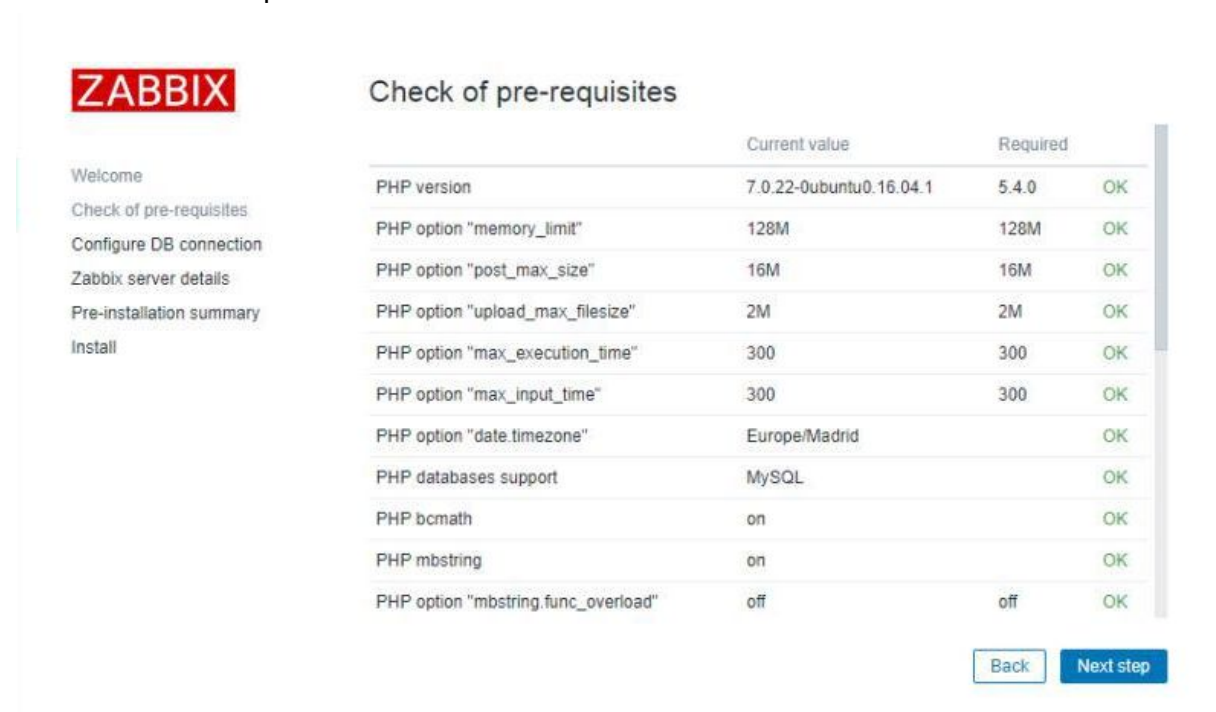
En ambos debe estar activado o desactivado.

Procederemos ahora a la instalación de Zabbix.

Pulsamos 'Next step'.



Pulsamos 'Next step'.



Pulsamos 'Next step'.

ZABBIX

Welcome

Check of pre-requisites

Configure DB connection

Zabbix server details

Pre-installation summary

Install

Configure DB connection

Please create database manually, and set the configuration parameters for connection to this database. Press "Next step" button when done.

Database type

MySQL ▾

Database host

localhost

Database port

0

0 - use default port

Database name

zabbix

User

zabbix

Password

Back

Next step

ZABBIX

Welcome

Check of pre-requisites

Configure DB connection

Zabbix server details

Pre-installation summary

Install

Zabbix server details

Please enter the host name or host IP address and port number of the Zabbix server, as well as the name of the installation (optional).

Host

localhost

Port

10051

Name

Back

Next step

Pulsamos 'Next step'.

ZABBIX

Welcome

Check of pre-requisites

Configure DB connection

Zabbix server details

Pre-installation summary

Install

Pre-installation summary

Please check configuration parameters. If all is correct, press "Next step" button, or "Back" button to change configuration parameters.

Database type	MySQL
Database server	localhost
Database port	default
Database name	zabbix
Database user	zabbix
Database password	*****
Zabbix server	localhost
Zabbix server port	10051
Zabbix server name	

Back

Next step

Pulsamos 'Finish'.

ZABBIX

Welcome

Check of pre-requisites

Configure DB connection

Zabbix server details

Pre-installation summary

Install

Install

Congratulations! You have successfully installed Zabbix frontend.

Configuration file "/usr/share/zabbix/conf/zabbix.conf.php" created.

Back

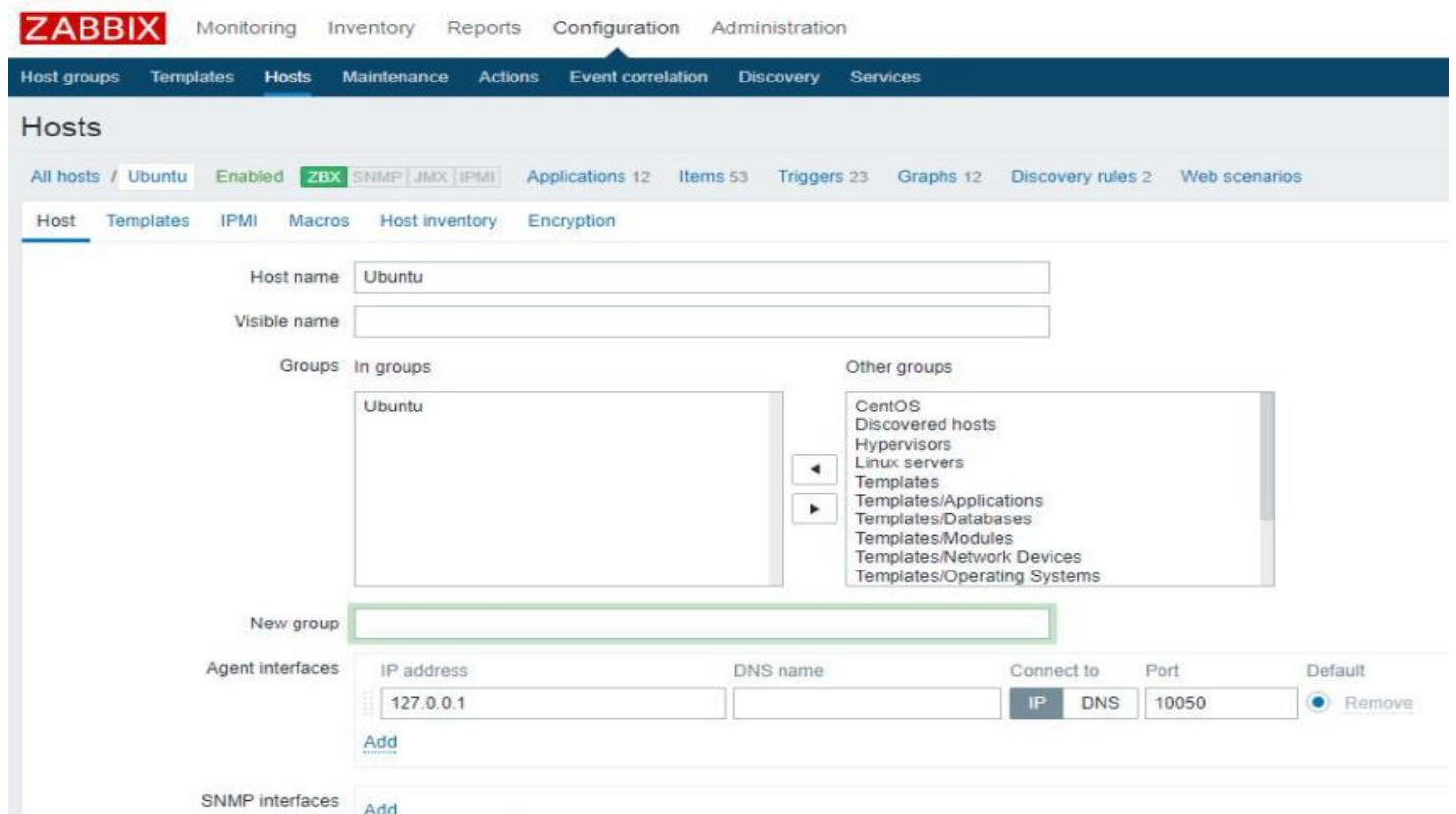
Finish

Ahora en el login usaremos como usuario 'Admin' y como contraseña 'zabbix'.



The image shows the ZABBIX login interface. At the top is the ZABBIX logo in a red box. Below it are two input fields: 'Username' with 'Admin' entered and 'Password' with '*****' entered. There is a checkbox labeled 'Remember me for 30 days' which is checked. Below these is a blue 'Sign in' button. At the bottom, there is a link that says 'or sign in as guest'.

Ahora pasaremos a configurar los hosts.
En Configuration->Hosts->Create host.
Creamos Ubuntu:



The image shows the ZABBIX 'Hosts' configuration page. The top navigation bar includes 'Monitoring', 'Inventory', 'Reports', 'Configuration', and 'Administration'. The 'Configuration' tab is active, and the 'Hosts' sub-tab is selected. The page title is 'Hosts'. Below the title, there are several tabs: 'All hosts', 'Ubuntu', 'Enabled', 'ZBX', 'SNMP', 'JMX', 'IPMI', 'Applications 12', 'Items 53', 'Triggers 23', 'Graphs 12', 'Discovery rules 2', and 'Web scenarios'. The 'Host' tab is selected. The main form has several sections: 'Host name' (Ubuntu), 'Visible name' (empty), 'Groups' (Ubuntu), and 'Other groups' (a list of templates and groups). There is a 'New group' input field. The 'Agent interfaces' section has a table with columns: 'IP address', 'DNS name', 'Connect to', 'Port', and 'Default'. The first row has '127.0.0.1', an empty 'DNS name', 'IP' selected under 'Connect to', '10050' in the 'Port' field, and a 'Default' radio button. There are 'Add' and 'Remove' buttons. The 'SNMP interfaces' section has an 'Add' button.

Creamos CentOS:

The screenshot shows the Zabbix web interface for configuring a new host. The top navigation bar includes 'Monitoring', 'Inventory', 'Reports', 'Configuration', and 'Administration'. The 'Hosts' section is active, showing a list of hosts with filters for 'CentOS', 'Enabled', 'ZBX', 'SNMP', 'JMX', and 'IPMI'. The 'Host' tab is selected, displaying the configuration form for a host named 'CentOS'. The form includes fields for 'Host name' (CentOS), 'Visible name', and 'Groups' (CentOS). A 'New group' field is highlighted with a green border. The 'Agent interfaces' section shows a table with columns for 'IP address', 'DNS name', 'Connect to', 'Port', and 'Default'. The first row contains '192.168.58.110', an empty 'DNS name' field, 'IP', 'DNS', '10050', and a 'Default' radio button. An 'Add' button is below the table. The 'SNMP interfaces' section has an 'Add' button.

Host name: CentOS

Visible name:

Groups: In groups: CentOS

Other groups: Discovered hosts, Hypervisors, Linux servers, Templates, Templates/Applications, Templates/Databases, Templates/Modules, Templates/Network Devices, Templates/Operating Systems, Templates/Servers Hardware

New group:

Agent interfaces:

IP address	DNS name	Connect to	Port	Default
192.168.58.110		IP DNS	10050	<input checked="" type="radio"/> Remove

Add

SNMP interfaces: Add

En la pestaña de templates añadimos HTTP, SSH y OS Linux. Lo hacemos tanto en Ubuntu como en CentOS

The screenshot shows the Zabbix web interface for configuring a new host. The top navigation bar includes 'Monitoring', 'Inventory', 'Reports', 'Configuration', and 'Administration'. The 'Hosts' section is active, showing a list of hosts with filters for 'Ubuntu', 'Enabled', 'ZBX', 'SNMP', 'JMX', and 'IPMI'. The 'Host' tab is selected, displaying the configuration form for a host named 'Ubuntu'. The 'Templates' tab is active, showing a list of linked templates. The 'Link new templates' section has a search bar and a 'Select' button. The 'Update', 'Clone', 'Full clone', 'Delete', and 'Cancel' buttons are at the bottom.

Host groups: Templates Hosts Maintenance Actions Event correlation Discovery Services

Hosts

All hosts / Ubuntu Enabled ZBX SNMP JMX IPMI Applications 12 Items 53 Triggers 23 Graphs 12 Discovery rules 2 Web scenarios

Host Templates IPMI Macros Host inventory Encryption

Linked templates:

Name	Action
Template App HTTP Service	Unlink Unlink and clear
Template App SSH Service	Unlink Unlink and clear
Template OS Linux	Unlink Unlink and clear

Link new templates:

type here to search

Add

Una vez en este menú pulsamos “Create graph”.

Para SSH en items añadimos “SSH service is running”.

Para HTTP en items añadimos “HTTP service is running”.

Esto hay que hacerlo tanto para el host de CentOS como para el de Ubuntu.

ZABBIX

MonitoringInventoryReportsConfigurationAdministration

Share?User

Host groupsTemplatesHostsMaintenanceActionsEvent correlationDiscoveryServices192.168.58.105

Graphs

Groupall

HostCentOS

Create graph

All hosts / CentOSEnabledZBXSNMPJMXIPMIApplications 12Items 48Triggers 21Graphs 11Discovery rules 2Web scenarios

<input type="checkbox"/> Name	Width	Height	Graph type
<input type="checkbox"/> Template OS Linux: CPU jumps	900	200	Normal
<input type="checkbox"/> Template OS Linux: CPU load	900	200	Normal
<input type="checkbox"/> Template OS Linux: Memory usage	900	200	Normal
<input type="checkbox"/> SSH centos	900	200	Normal
<input type="checkbox"/> http centos	900	200	Normal
<input type="checkbox"/> Network interface discovery: Network traffic on enp0s3	900	200	Normal
<input type="checkbox"/> Network interface discovery: Network traffic on enp0s8	900	200	Normal
<input type="checkbox"/> Template OS Linux: Swap usage	600	340	Pie
<input type="checkbox"/> Mounted filesystem discovery: Disk space usage /	600	340	Pie
<input type="checkbox"/> Mounted filesystem discovery: Disk space usage /boot	600	340	Pie
<input type="checkbox"/> Template OS Linux: CPU utilization	900	200	Stacked

Displaying 11 of 11 found

Ya podemos visualizar nuestras gráficas.

