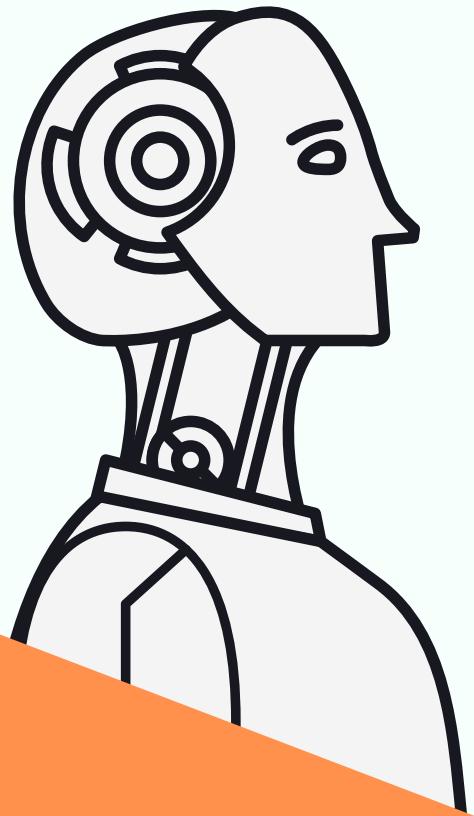




HOME CENTER

HOME CENTER



2021

# Manual Tecnico



HOME CENTER

# ÍNDICE

|                               |          |
|-------------------------------|----------|
| <b>I. INTRODUCCIÓN</b>        | <b>2</b> |
| <b>2. INSTALACIÓN ZABBIX.</b> | <b>4</b> |

# 1. INTRODUCCIÓN.

La empresa de Zaleon Planea implementar servicios para la infraestructura del data center de la empresa De Homecenter, a su vez este incluye los servicios de aplicaciones, outsourcing, soporte técnico, computación, seguridad, y consultoría. Teniendo en cuenta esto Homecenter otorgara los mejores servicios de calidad.

Homecenter enfoca sus servicios hacia la mejora de la arquitectura de la empresa, proyecta un enfoque a la optimización, la seguridad , el almacenamiento, y recursos de hardware para un mejor rendimiento y una optima administración

# HOMECENTER.

HOMECENTER

## 2. Instalación Zabbix.



ZABBIX



# MANUAL TECNICO.

Nos dirigimos a la pagina Oficial de Zabbix.

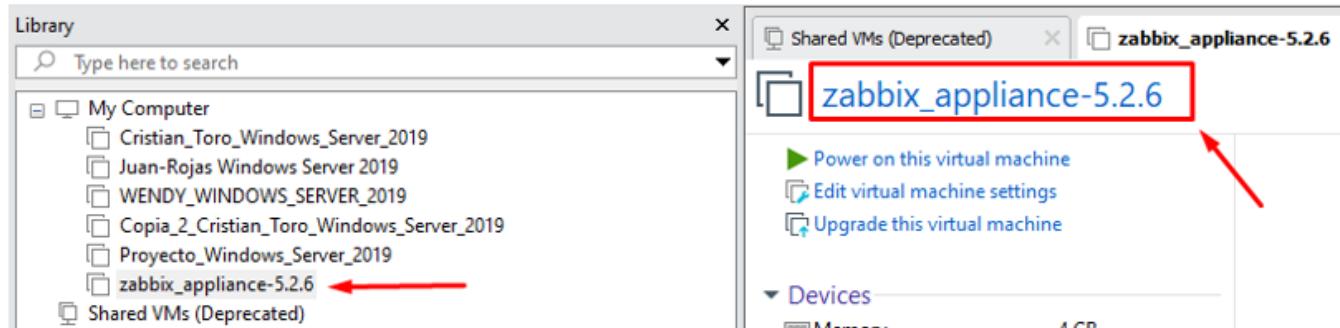
The screenshot shows the Zabbix 5.4 homepage. At the top, there's a navigation bar with links for 'PRODUCTO', 'SOLUCIONES', 'SERVICIOS DE SOPORTE', 'FORMACIÓN', 'PARTNERS', 'COMUNIDAD', 'SOBRE NOSOTROS', and a prominent green 'DESCARGAR' button. Below the navigation is a large banner for 'ZABBIX 5.4' with the tagline 'LAS MEJORAS QUE ESTABAS ESPERANDO!'. The banner features a red circular graphic and a network of icons. Below the banner, there are three statistics: '23 years of experience', '100% Software gratuito y open source', and '300 000 + instalaciones en todo el mundo'. The main content area has a heading 'Monitorear cualquier cosa' and a sub-section 'Soluciones para cualquier tipo de infraestructura, servicios, aplicaciones o recursos de TI'. A search bar and a system status bar at the bottom indicate '16°C Parc. nublado' and the date '19/06/2021'.

Procedemos a realizar los pasos de la instalación pertinente.

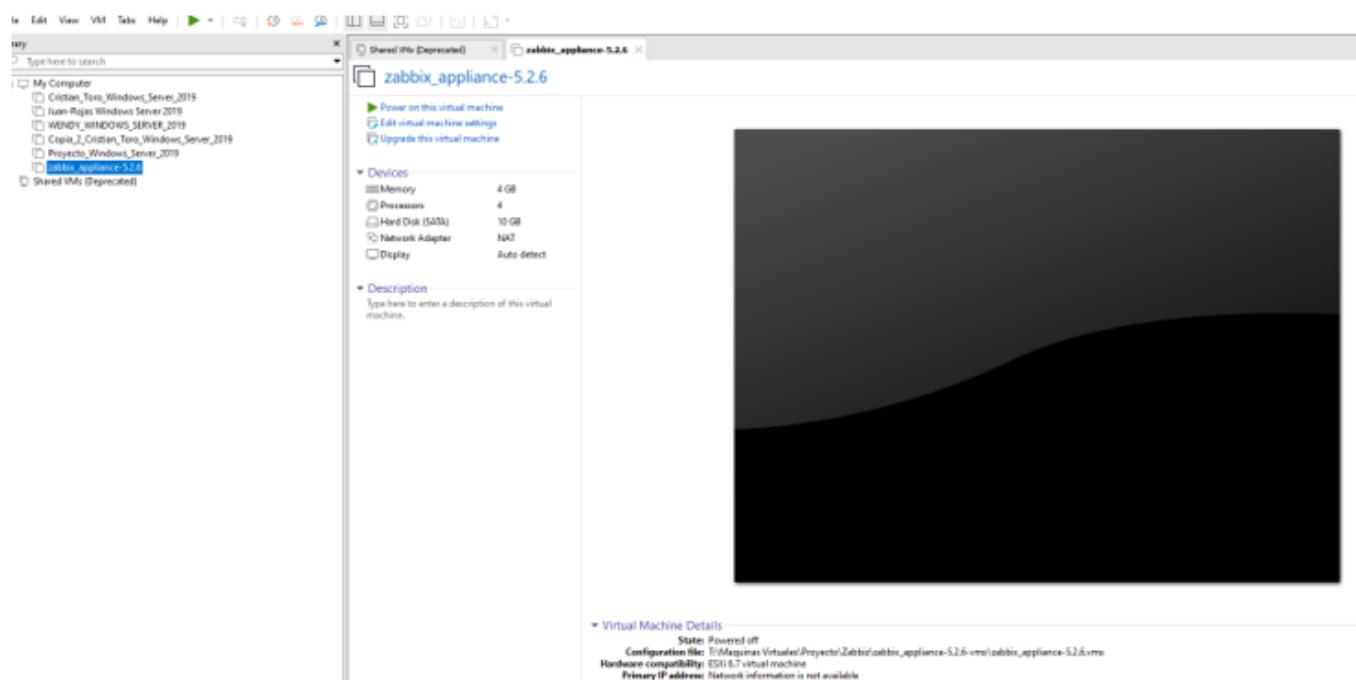
The screenshot shows the 'Instalar el Appliance Zabbix' section of the Zabbix website. It features a grid of download options for different platforms: Installation CD/DVD (.iso), VMware (.vmx), Open virtualization format (.ovf), Microsoft Hyper-V 2012, Microsoft Hyper-V 2008, KVM, Parallels, QEMU, USB stick, VirtualBox, Xen (.raw), and KVM, QEMU (.qcow2). The 'Zabbix Appliance' option is highlighted with a dark blue background. A red arrow points to the 'Descargar' button for the VMware (.vmx) link. Below the grid, a note says 'Please refer to Zabbix 5.4 Appliance manual or Appliance related documentation and instructions.' Another screenshot below shows the same grid for Zabbix 5.2, with a red arrow pointing to the 'VMware (.vmx)' link.

# MANUAL TECNICO.

Se crea la Maquina en la cual se ejecutar el servidor para Zabbix.

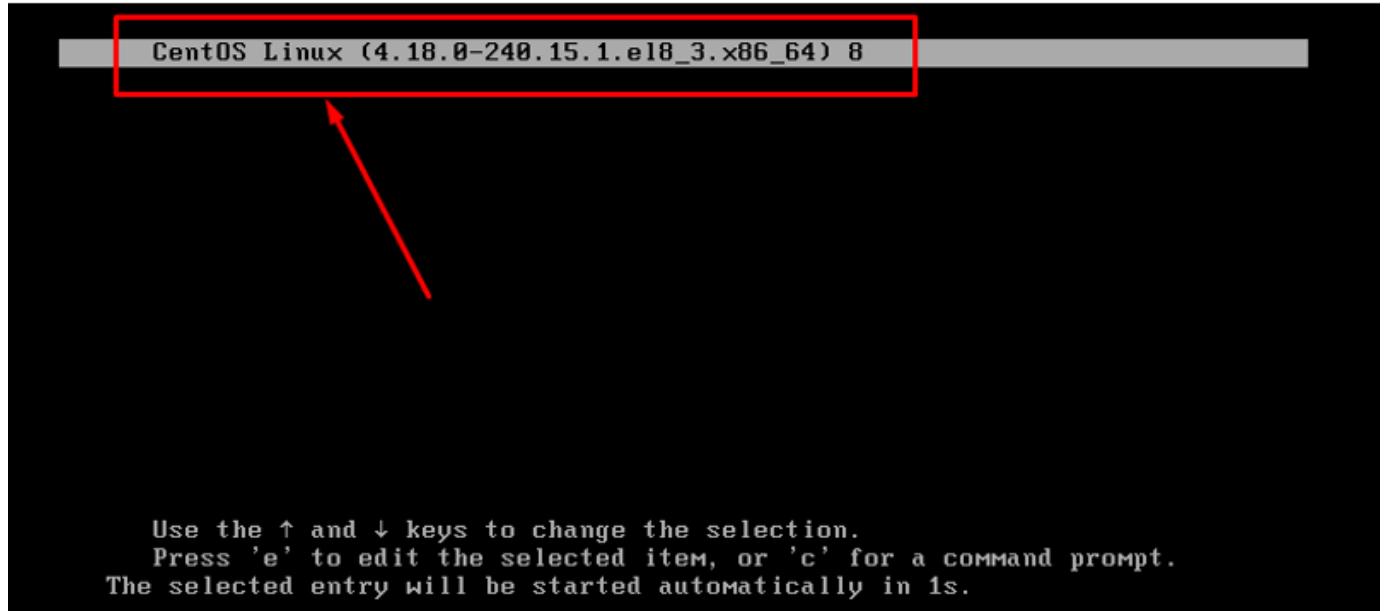


Procedemos Abrir la maquina virtual De Linux Centos.



# MANUAL TECNICO.

Arrancamos Linux Centos para 64 bits.

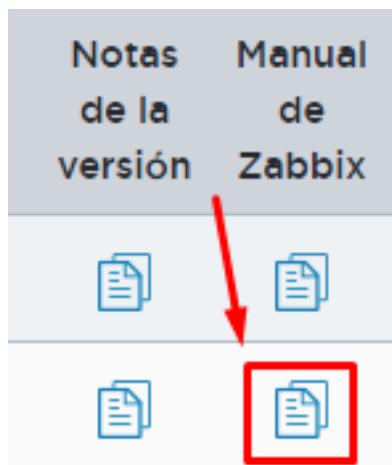


A screenshot of a terminal window titled "zabbix\_appliance-5.2.6". The window displays a log of kernel messages. The log starts with "[ 7.768126] [drm] HP Command Queue." and continues with various DRM initialization messages, including support for vblank timestamp caching, command buffers, and DMA pool allocators. It also mentions fbcon, console switching, and network interface configuration (IPV6, NETDEV\_UP, NETDEV\_CHANGE).

```
[ 7.768126] [drm] HP Command Queue.
[ 7.768241] [drm] Capabilities2:
[ 7.768330] [drm] Grow oTable.
[ 7.768420] [drm] IntraSurface copy.
[ 7.768522] [drm] Max GMR ids is 64
[ 7.768617] [drm] Max number of GMR pages is 65536
[ 7.768742] [drm] Max dedicated hypervisor surface memory is 0 kiB
[ 7.768896] [drm] Maximum display memory size is 262144 kiB
[ 7.769038] [drm] VRAM at 0xe8000000 size is 131072 kiB
[ 7.769254] [drm] MMIO at 0xfce00000 size is 256 kiB
[ 7.769815] [TTM] Zone kernel: Available graphics memory: 2012252 KiB
[ 7.769985] [TTM] Initializing pool allocator
[ 7.770143] [TTM] Initializing DMA pool allocator
[ 7.770332] [drm] Supports vblank timestamp caching Rev 2 (21.10.2013).
[ 7.770500] [drm] No driver support for vblank timestamp query.
[ 7.770714] [drm] Screen Target Display device initialized
[ 7.770895] [drm] width 1280
[ 7.770984] [drm] height 768
[ 7.771105] [drm] bpp 32
[ 7.820136] [drm] Fifo max 0x00040000 min 0x00001000 cap 0x0000077f
[ 7.822203] [drm] Using command buffers with DMA pool.
[ 7.822372] [drm] DX: no.
[ 7.822451] [drm] Atomic: yes.
[ 7.822537] [drm] SM4_1: no.
[ 7.840995] fbcon: svgadrmfb (fb0) is primary device
[ 7.844117] Console: switching to colour frame buffer device 160x48
[ 7.878603] [drm] Initialized vmwgfx 2.17.0 20200114 for 0000:00:0f.0 on minor 0
[ 10.817241] IPv6: ADDRCONF(NETDEV_UP): eth0: link is not ready
[ 10.817936] e1000: eth0 NIC Link is Up 1000 Mbps Full Duplex, Flow Control: None
[ 10.818990] IPv6: ADDRCONF(NETDEV_CHANGE): eth0: link becomes ready
```

# MANUAL TECNICO.

Verificamos las credenciales en el manual técnico de la pagina oficial de Zabbix.

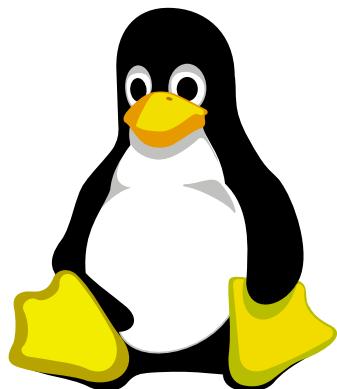


Comprobamos las credenciales.

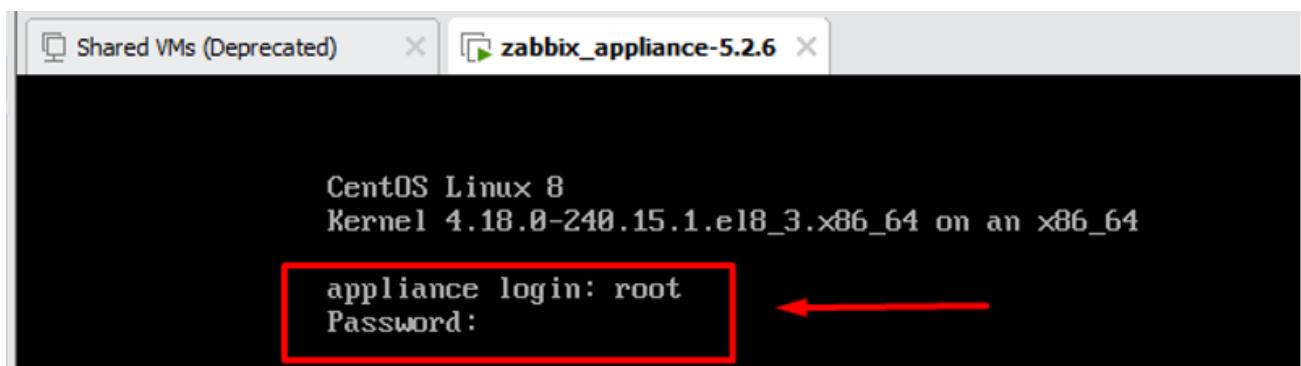
## 2.1 CREDENTIALS (LOGIN:PASSWORD)

System:  
■ root:zabbix

Zabbix frontend:



Registraremos las credenciales en el servidor.



# MANUAL TECNICO.

```
CentOS Linux 8
Kernel 4.18.0-240.15.1.el8_3.x86_64 on an x86_64

appliance login: root
Password:
Last failed login: Mon May 18 20:45:13 UTC 2021 on ttys1
There was 1 failed login attempt since the last successful login.

Zabbix frontend credentials:
Username: Admin
Password: zabbix

To learn about available professional services, including technical support and training, please visit https://www.zabbix.com/services
Official Zabbix documentation available at https://www.zabbix.com/documentation/current/
Note! Do not forget to change timezone PHP variable in /etc/php-fpm.d/zabbix.conf file.

[root@appliance ~]# _
```

Para saber nuestra dirección ip escribimos "ip addr show".

```
*****
[root@appliance ~]# ip addr show
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
        inet 127.0.0.1/8 scope host lo
            valid_lft forever preferred_lft forever
            inet6 ::1/128 scope host
                valid_lft forever preferred_lft forever
2: eth0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 00:0c:29:e3:8c:05 brd ff:ff:ff:ff:ff:ff
        inet 192.168.0.12/24 brd 192.168.0.255 scope global dynamic eth0
            valid_lft 86447sec preferred_lft 86447sec
            inet6 fe80::20c:29ff:fee3:8c05/64 scope link
                valid_lft forever preferred_lft forever
[root@appliance ~]# _
```

Para poder utilizar el comando de ifconfig escribimos en "sudo su"

```
*****
[root@appliance ~]# ifconfig
-bash: ifconfig: command not found
[root@appliance ~]# sudo su ←
```

# MANUAL TECNICO.

Escribimos La dirección ip del Servidor zabbix.



Registraremos las credenciales en el inicio de sesión en Zabbix como administrador para tener control total del servicio.

ZABBIX

Username

Password

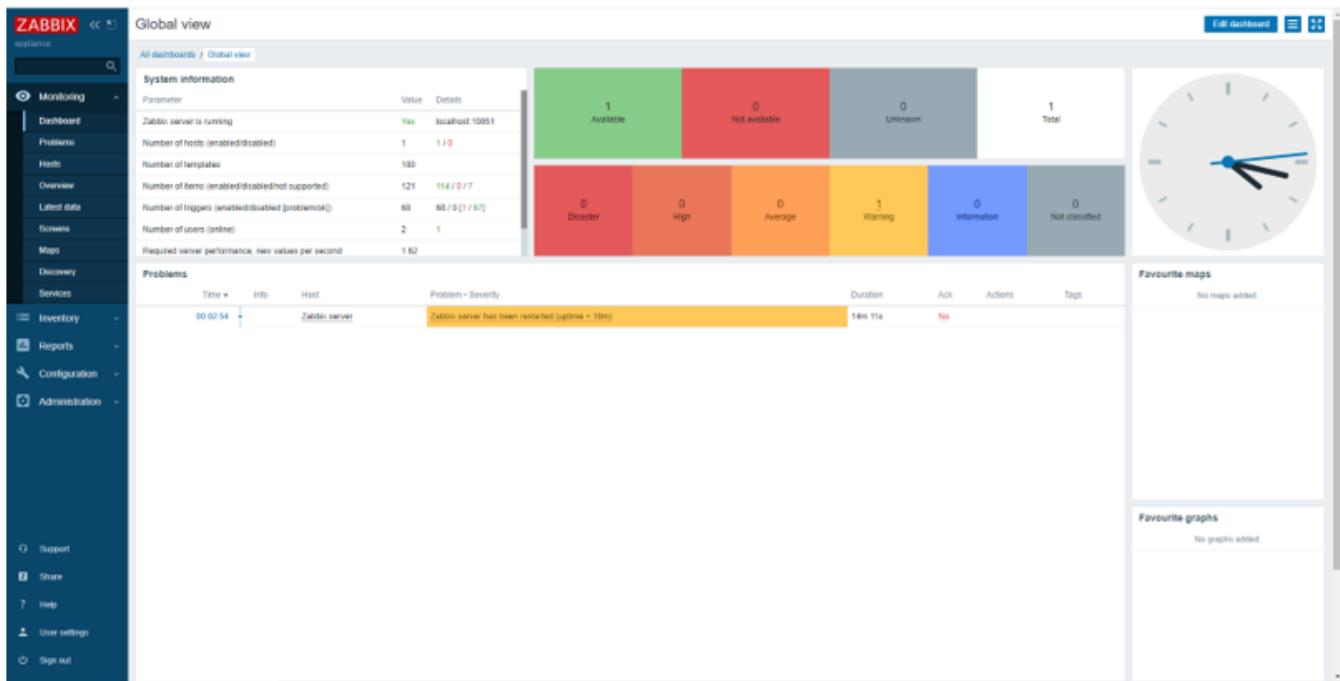
Remember me for 30 days

Sign in



# MANUAL TECNICO.

Abrimos el servicio de monitorización para servidores. Mostrándonos de un primer vistazo la dashboard en general del servicio.



Verificamos inicio y la correcta funcionalidad del servicio de zabbix.



# MANUAL TECNICO.

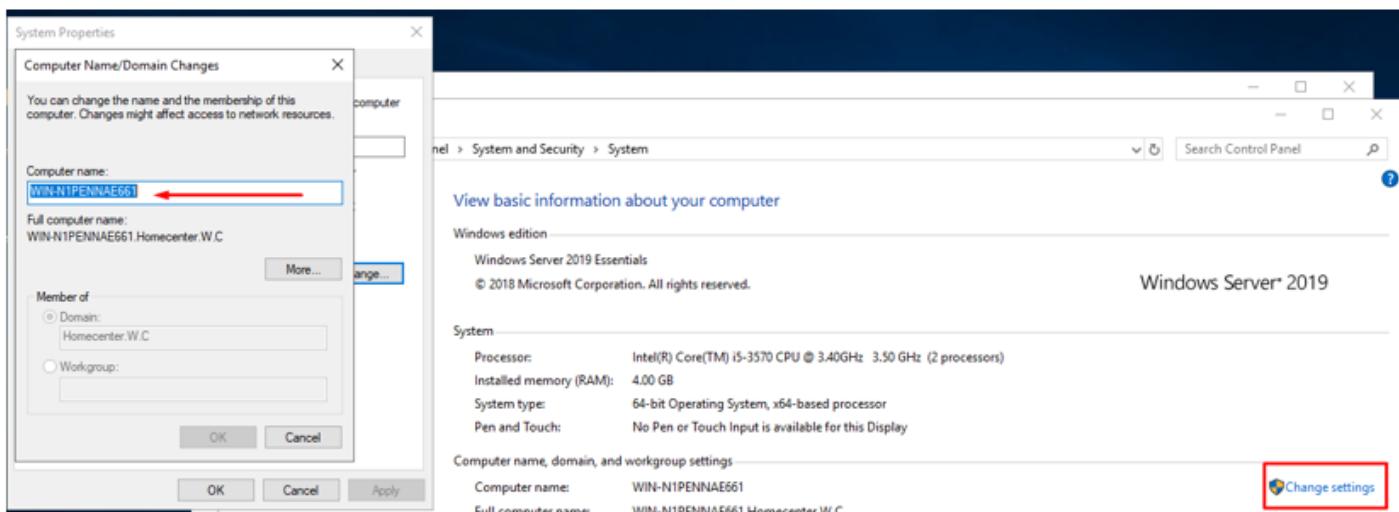
## 1.1. Configuración Zabbix.

Iniciamos el proceso de configuración para el servidor Zabbix de monitoreo.

### Información del sistema

| Parámetro   | Valor | Detalles         |
|---|-------|------------------|
| El servidor Zabbix se está ejecutando                               | sí    | localhost: 10051 |
| Número de hosts (habilitados / deshabilitados)                      | 1     | 1 / 0            |
| Numero de plantillas  | 180   | 121              |
| Número de elementos (habilitados / deshabilitados / no admitidos)   | 68    | 114 / 0 / 7      |
| Número de disparadores (habilitado / deshabilitado [problema / ok]) | 2     | 68/0 [ 0 / 68 ]  |
| Número de usuarios (en línea)                                       | 1,62  | 1                |
| Rendimiento del servidor requerido, nuevos valores por segundo      | No    |                  |
| Se actualizaron las tablas del historial de la base de datos        |       |                  |

Para realizar la vinculación con windows servers necesitamos saber el nombre del equipo dentro de la red,



# MANUAL TECNICO.

Indicamos las características generales para la configuración del servidor.

Name  ←

Host groups  ←

IP  ←

DNS  ←

Port  ←

Severity  Not classified  Warning  High  
 Information  Average  Disaster

Agregamos un grupo de Host en el cual iniciara sesión el servidor, y seguidamente configuraremos el agente y la interfaz web.

Templates

Host group

Name  
 AIX  
 FreeBSD  
 HP-UX  
 Linux by Prom  
 Linux by Zabbix agent  
 Linux by Zabbix agent active  
 Linux SNMP  
 Mac OS X  
 OpenBSD  
 Solaris  
 Windows by Zabbix agent  
 Windows by Zabbix agent active ←  
 Windows SNMP

# MANUAL TECNICO.

Aplicamos la configuraciones.

The screenshot shows the Zabbix template configuration interface. At the top, there are sections for 'Host groups' (set to 'Templates/Operating systems'), 'Tags' (set to 'And/Or'), and 'Name' (set to 'Windows Server'). Below these are sections for 'Linked templates' (set to 'Windows by Zabbix agent active') and another 'Tags' section. A red arrow points from the 'Apply' button (which is highlighted with a red box) to the 'Add' button in the 'Link new templates' section. Another red arrow points from the 'Add' button to the 'Link new templates' search bar.

Host groups: Templates/Operating systems × Select  
Tags: And/Or Or  
Name: Windows Server

Linked templates: Windows by Zabbix agent active × Select  
Tags: Add

Name: Windows Server

Template Linked templates Tags Macros

Linked templates Name Action

Link new templates Type here to search Select

Add Cancel

Agregamos un agente Activo Zabbix en los servicios de Windows

Windows memory by Zabbix agent active

Windows network by Zabbix agent active

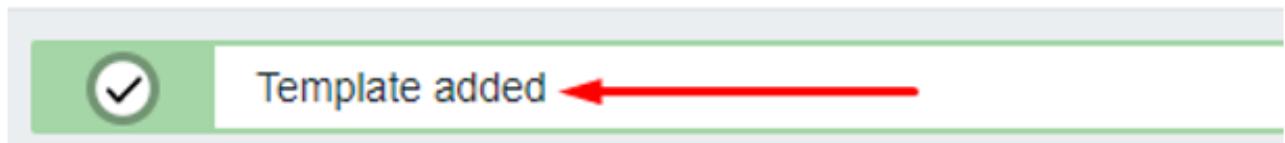
Windows physical disks by Zabbix agent active

Windows services by Zabbix agent active

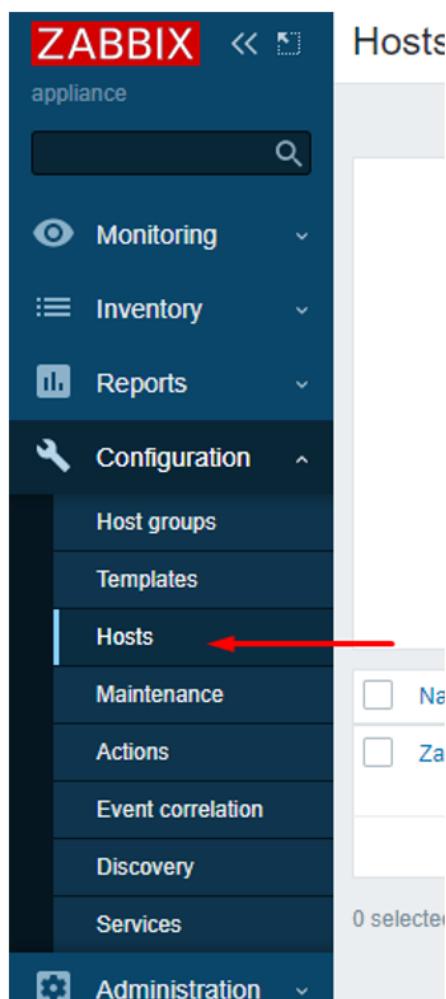
# MANUAL TECNICO.

Añadimos la plantilla que elegimos anteriormente, es decir la del agente Activo Zabbix.

## Templates

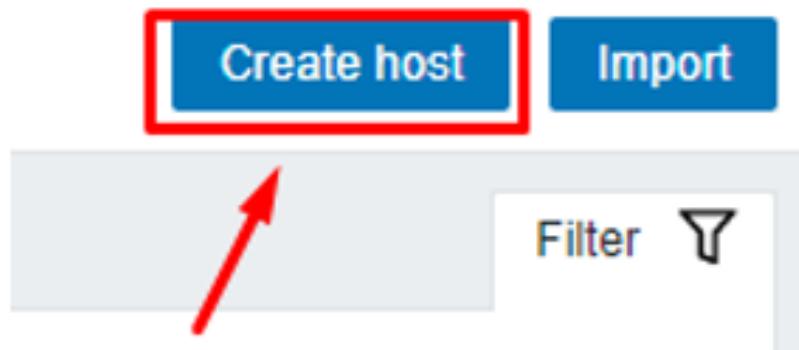


Para añadir un hosts nos dirigimos al apartado de configuración.



# MANUAL TECNICO.

Hacemos clic en Create Host.



Para añadir un hosts nos dirigimos al apartado de configuración.

A detailed screenshot of the 'Create host' configuration form. The form includes the following fields:

- \* Host name: WIN-N1PENNAE661
- Visible name: HomecenterSENA
- \* Groups: A dropdown menu showing various templates and hosts, with 'Discovered hosts' selected. Other options include Hypervisors, Linux servers, Templates, and many Zabbix-specific templates like Templates/Operating systems, Templates/Power, and Templates/Virtualization.
- Interfaces: A table with one row:

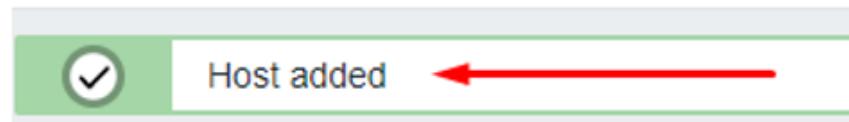
| Interfaces | Type  | IP address    | DNS name  | Connect to | Port | Default |
|------------|-------|---------------|-----------|------------|------|---------|
|            | Agent | 192.168.0.235 | 127.0.0.1 | IP         | DNS  | 10050   |

A red arrow points to the 'Add' button under the interfaces section.
- Description: A text input field containing 'Proyecto De Etapa Productiva.'
- Monitored by proxy: A dropdown menu set to '(no proxy)'.
- Enabled: A checked checkbox.
- Action buttons: 'Add' (highlighted with a red box and a red arrow) and 'Cancel'.

# MANUAL TECNICO.

Agregamos el Host que configuramos posteriormente.

## Hosts



Como podemos observar en la siguiente imagen ya estaría vinculado con el windows server inhouse.

| Name           | Interface            | Availability            | Tags | Problems | Status                                   |
|----------------|----------------------|-------------------------|------|----------|--|
| HomecenterSENA | 192.168.0.235: 10050 | ZBX   SNMP   JMX   IPMI |      |          | Enabled <span style="color:red">→</span> |

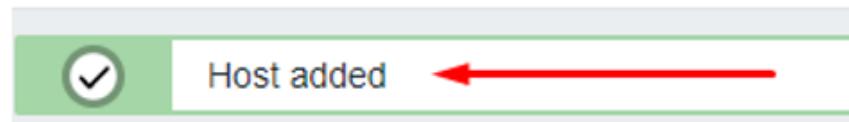
A screenshot of the Zabbix interface showing the host 'HomecenterSENA'. The host is listed in the main table with the interface '192.168.0.235: 10050'. Below the table, there is a sidebar with various configuration options:

- HOST**: Inventory, Latest data, Problems, Graphs, Dashboards, Web, Configuration
- SCRIPTS**: Detect operating system, Ping ←, Traceroute

# MANUAL TECNICO.

Agregamos el Host que configuramos posteriormente.

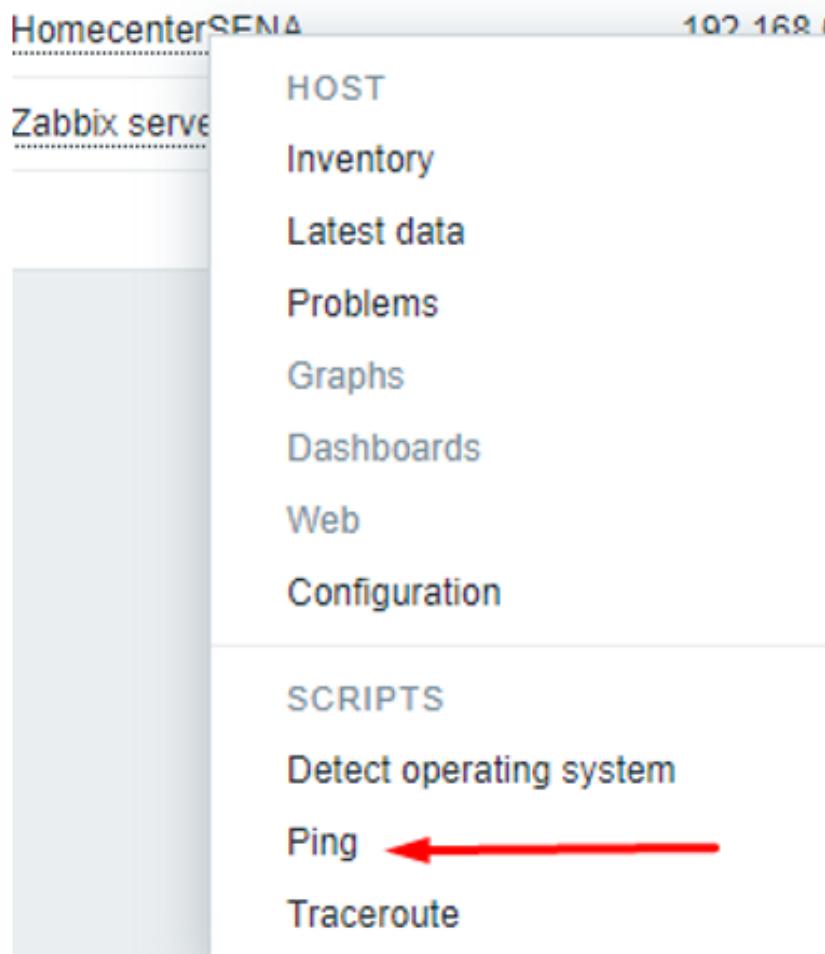
## Hosts



Como podemos observar en la siguiente imagen ya estaría vinculado con el windows server inhouse.

| Name           | Interface            | Availability            | Tags | Problems | Status  |
|----------------|----------------------|-------------------------|------|----------|---------|
| HomecenterSENA | 192.168.0.235: 10050 | ZBX   SNMP   JMX   IPMI |      |          | Enabled |

Realizamos un ping desde el zabbix para comprobar la conexión.

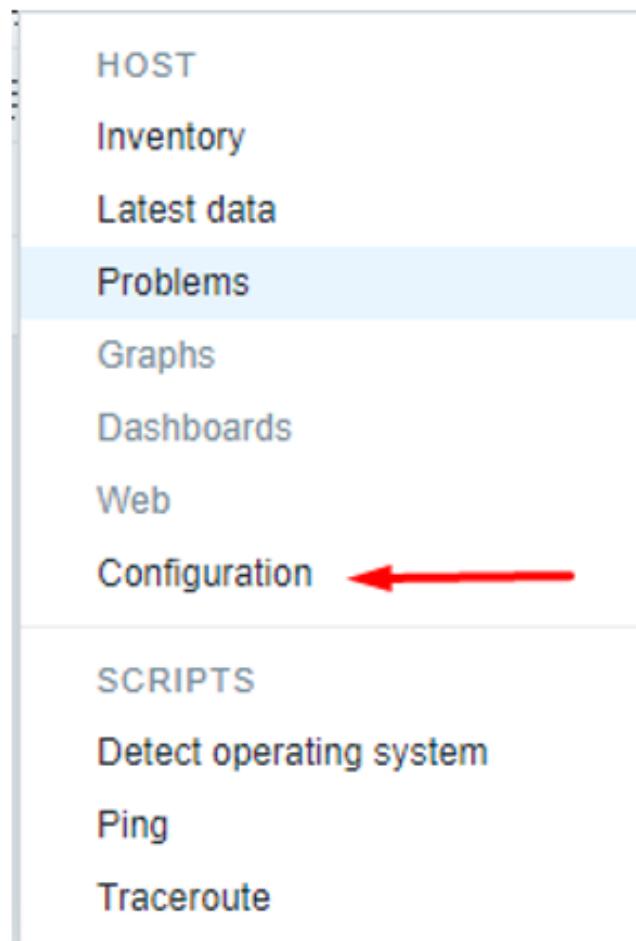


# MANUAL TECNICO.

## Hacemos ping desde Zabbix a nuestro Windows Server

```
ping -c 3 192.168.0.235; case $? in [01]) true;; *) false;; esac  
  
PING 192.168.0.235 (192.168.0.235) 56(84) bytes of data.  
64 bytes from 192.168.0.235: icmp_seq=1 ttl=128 time=0.329 ms  
64 bytes from 192.168.0.235: icmp_seq=2 ttl=128 time=0.413 ms  
64 bytes from 192.168.0.235: icmp_seq=3 ttl=128 time=0.319 ms  
  
--- 192.168.0.235 ping statistics ---  
3 packets transmitted, 3 received, 0% packet loss, time 41ms  
rtt min/avg/max/mdev = 0.319/0.353/0.413/0.047 ms
```

## Nos dirigimos a la Configuración del servidor.

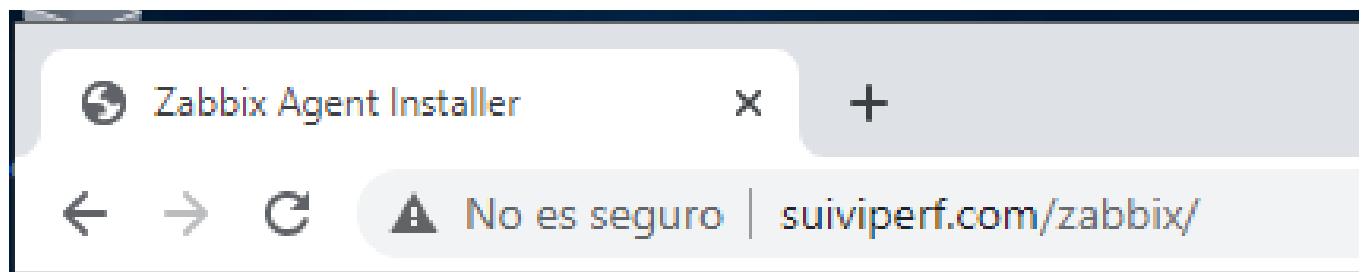


# MANUAL TECNICO.

Como podemos observar en la siguiente imagen el servidor no presenta ningun tipo de conexion con zabbix.

| Name             | Interface            | Availability | Tags              | Problems | Status  | Last |
|------------------|----------------------|--------------|-------------------|----------|---------|------|
| HomecenterSENA   | 192.168.0.235: 10050 | ZBX          | SNMP   JMX   IPMI |          | Enabled | La   |
| HomecenterSENAPC | 192.168.0.235: 10050 | ZBX          | SNMP   JMX   IPMI |          | Enabled | La   |
| Zabbix server    | 127.0.0.1: 10050     | ZBX          | SNMP   JMX   IPMI |          | Enabled | La   |

Se procede a realizar la instalación del agente zabbix en windows server.



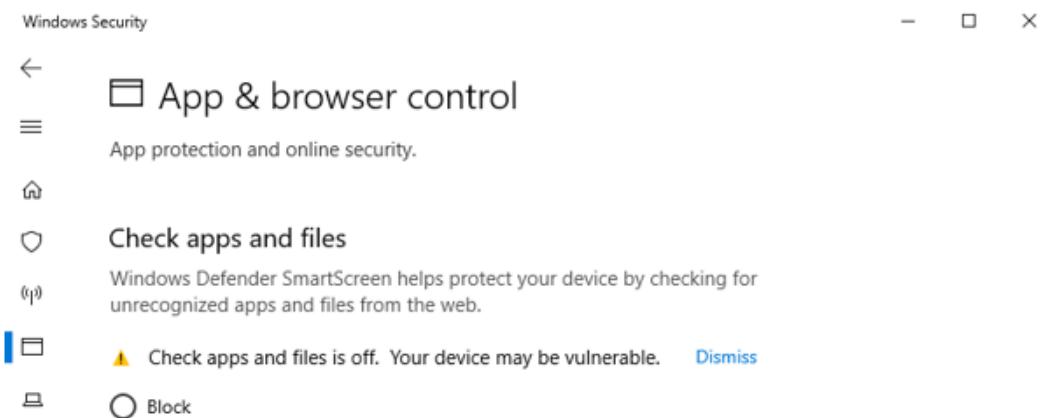
Procedemos a Descargar un agente Zabbix, en este caso la Versión 3.0.28 x64.msi.

# MANUAL TECNICO.

Para solucionar este problema y poder instalar el agente tenemos que realizar una pequeña configuración en Windows Defender.



Desactivamos la siguiente Opción.



The screenshot shows the Windows Security settings window under "App & browser control". The "Check apps and files" section is selected. A red arrow points to the "Off" radio button under "Action when a file is found to be malicious".

Windows Security

- App & browser control
  - App protection and online security.
  - Check apps and files
    - Windows Defender SmartScreen helps protect your device by checking for unrecognized apps and files from the web.
    - ⚠ Check apps and files is off. Your device may be vulnerable. [Dismiss](#)
    - Block
    - Warn
    - Off ←

Privacy Statement

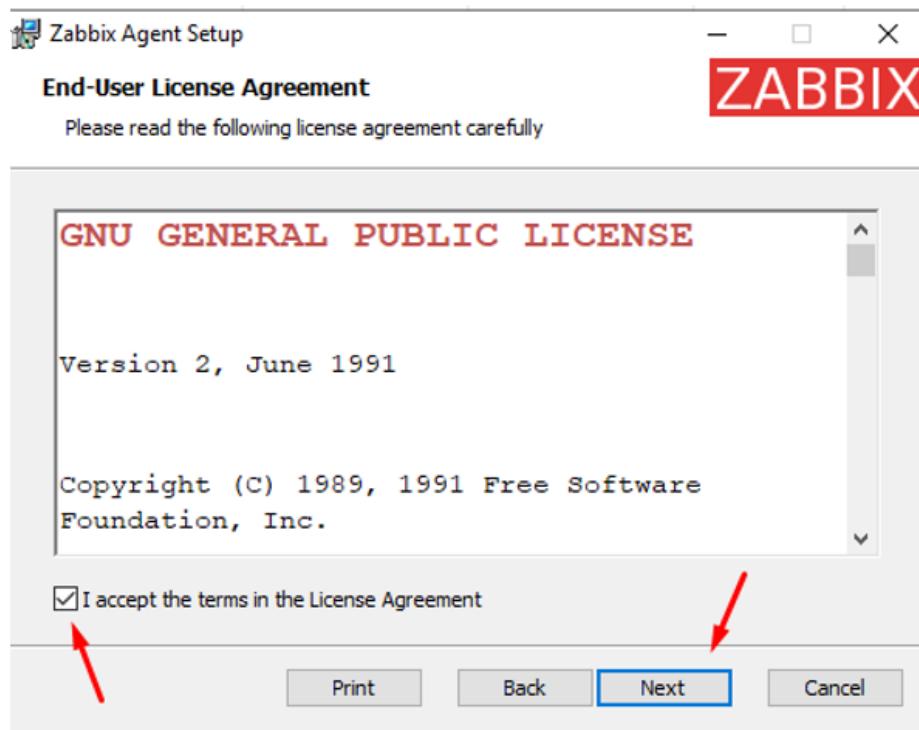
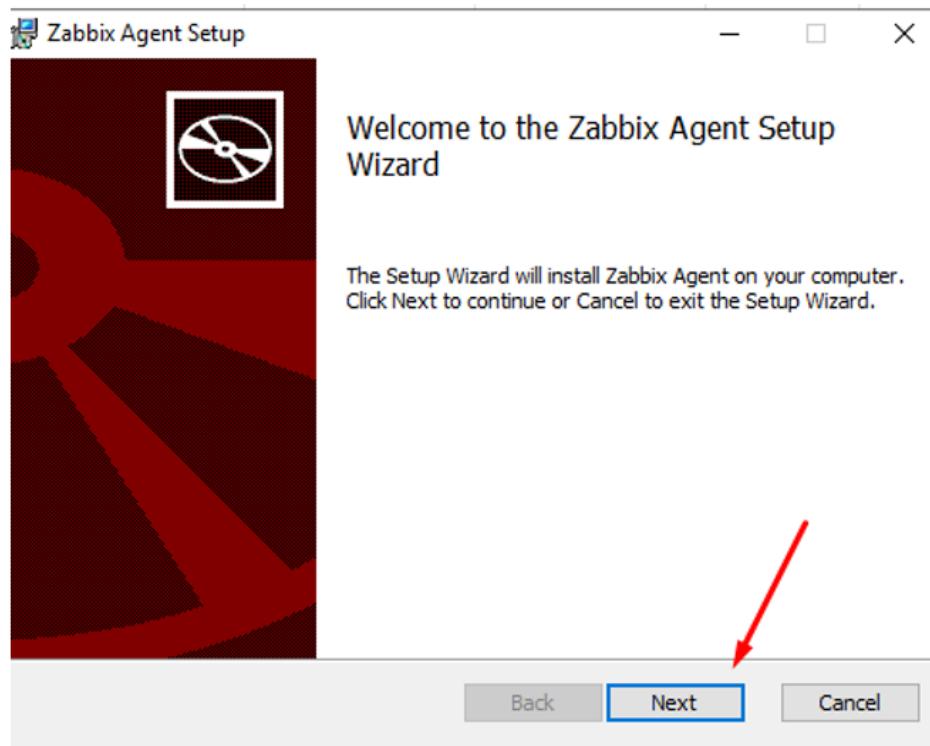
Exploit protection

Exploit protection is built into Windows 10 to help protect your device against attacks. Out of the box, your device is already set up with the protection settings that work best for most people.

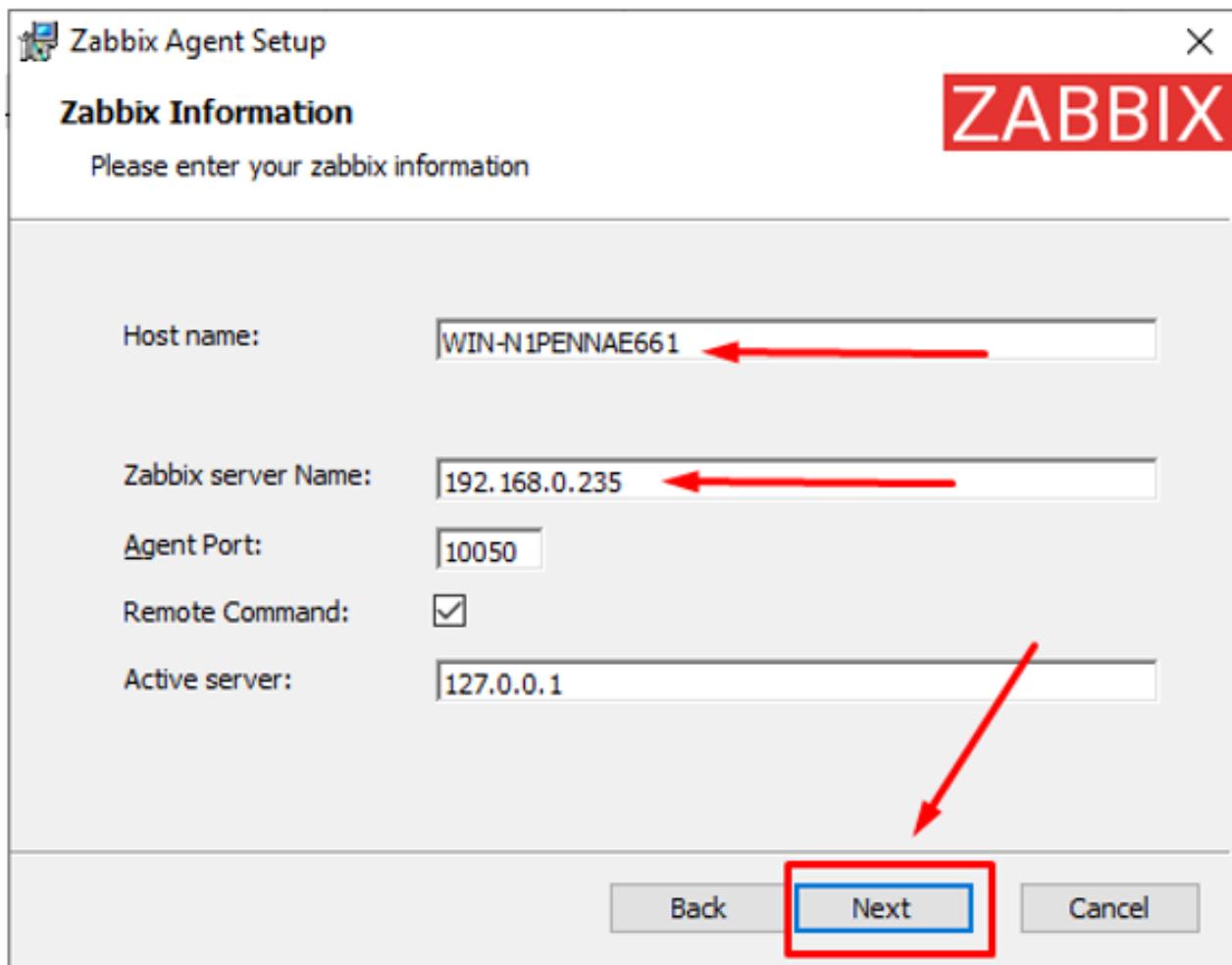
Exploit protection settings

# MANUAL TECNICO.

Se Realiza El Proceso De Instalación del Agente De Zabbix para realizar la monitorización general de la maquina.



# MANUAL TECNICO.



Para solucionar este problema tenemos que habilitar el puerto 10050 en windows server 2019.

| Get value from agent failed: cannot connect to [[ 192.168.0.235 ]]: [4] Interrupted system call |                             |         |         |        |          |         |               |                |          |  |
|---|-----------------------------|---------|---------|--------|----------|---------|---------------|----------------|----------|--|
| Name  | Group                       | Profile | Enabled | Action | Override | Program | Local Address | Remote Address | Protocol |  |
| ✓ Zabbix port 2   | All                         | All     | Yes     | Allow  | No       | Any     | Any           | Any            | TCP      |  |
| ✓ Zabbix  | All                         | Yes     | Allow   | No     | Any      | Any     | Any           | Any            | TCP      |  |
| Active Directory Domain Controller - Echo Request   | Active Directory Domain Ser | All     | Yes     | Allow  | No       | System  | Any           | Any            | ICMPv4   |  |

# MANUAL TECNICO.

## Zabbix Properties



|                     |                       |                  |
|---------------------|-----------------------|------------------|
| General             | Programs and Services | Remote Computers |
| Protocols and Ports | Scope                 | Advanced         |
| Local Principals    | Remote Users          |                  |

Protocols and ports

Protocol type: TCP

Protocol number: 6

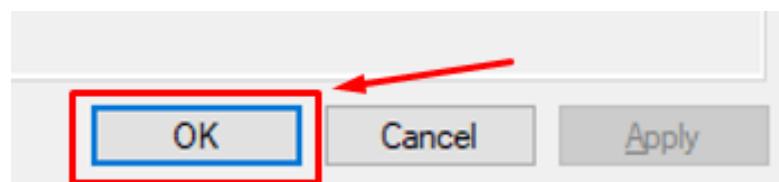
Local port: Specific Ports  
10050

Example: 80, 443, 5000-5010

Remote port: All Ports

Example: 80, 443, 5000-5010

Internet Control Message Protocol (ICMP) settings: Customize...



# MANUAL TECNICO.

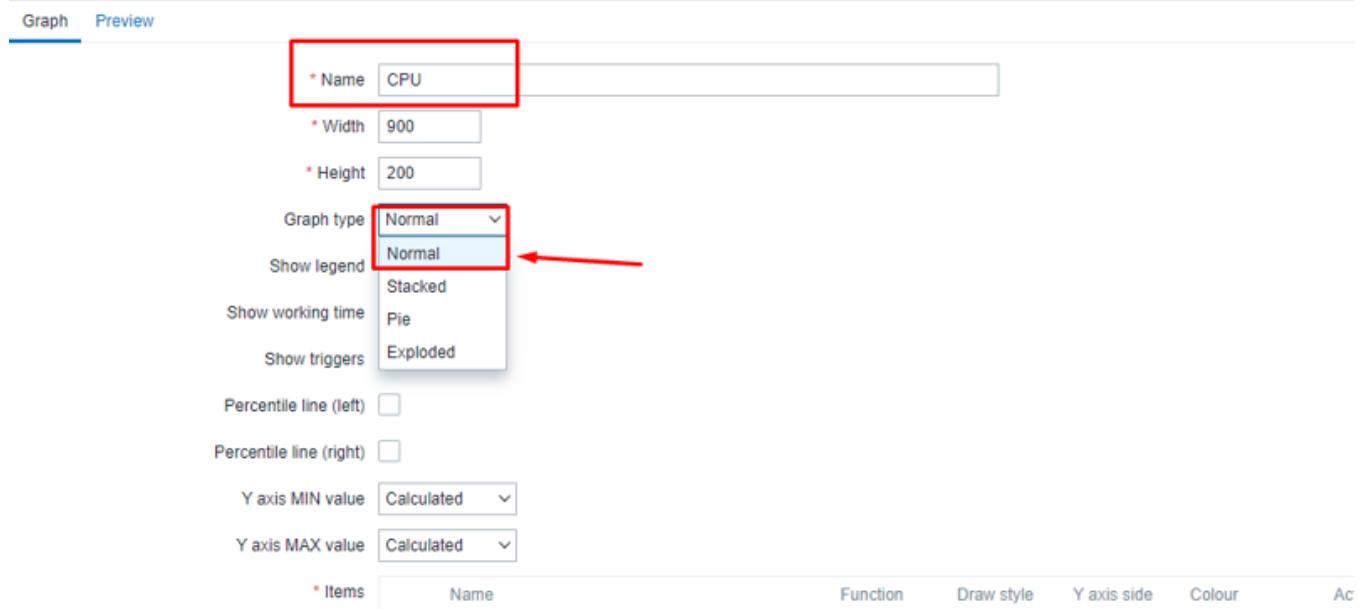
The screenshot shows the Zabbix search interface. On the left, there are two input fields: 'From' containing 'now-24h' and 'To' containing 'now'. A red box highlights the 'From' field, and a red arrow points from it to a list of time range options on the right. The list includes: Last 2 days, Yesterday, Today, Last 5 minutes; Last 7 days, Day before yesterday, Today so far, Last 15 minutes; Last 30 days, This day last week, This week, Last 30 minutes; Last 3 months, Previous week, This week so far, Last 1 hour; Last 6 months, Previous month, This month, Last 3 hours; Last 1 year, Previous year, This month so far, Last 6 hours; and Last 2 years, This year, This year so far, Last 12 hours. A 'Last 1 day' button is also visible. At the top right are 'Zoom out', 'Last 1 day', 'Filter', and a search icon.

Finalmente, teniendo la configuración completa y correcta del Servidor de Zabbix, podemos iniciar el proceso de monitoreo, mediante graficos.

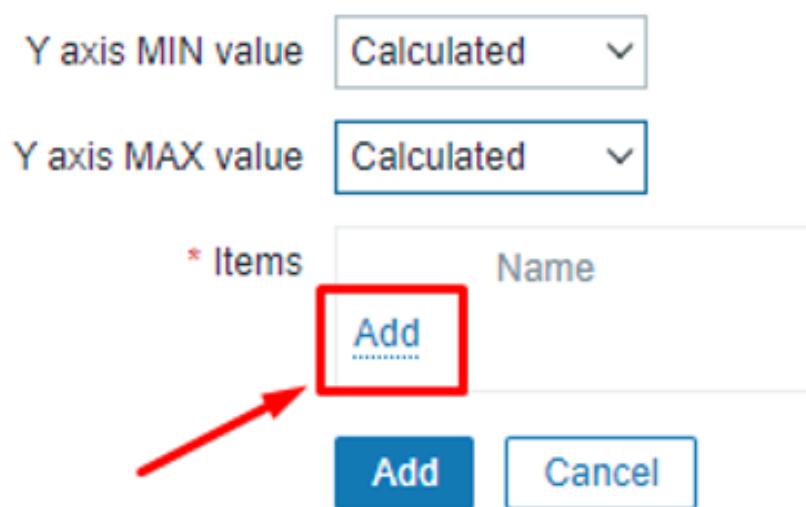
The screenshot shows the Zabbix graph creation interface. At the top, there are filters for 'very rules 4' and 'Web scenarios'. Below that, there are search fields for 'Host groups' and 'Hosts', both containing 'HomecenterSena'. A red box highlights the 'Create graph' button at the top right. At the bottom, there are 'Apply' and 'Reset' buttons. A red arrow points from the 'Create graph' button towards the center of the interface.

# MANUAL TECNICO.

Seleccionamos el Tipo Gráfica.



Agregamos el dispositivo que deseemos monitorear..



# MANUAL TECNICO.

Se Selecciona cada una de los servicios.

| Name  | Key                                   | Type         | Type of information | Status        |
|---|---------------------------------------|--------------|---------------------|---------------|
| <input type="checkbox"/> C:: Space utilization      | vfs.fs.size[C:,pused]                 | Zabbix agent | Numeric (float)     | Enabled       |
| <input checked="" type="checkbox"/> C:: Total space | vfs.fs.size[C:,total]                 | Zabbix agent | Numeric (unsigned)  | Enabled       |
| <input checked="" type="checkbox"/> C:: Used space  | vfs.fs.size[C:,used]                  | Zabbix agent | Numeric (unsigned)  | Enabled       |
| <input type="checkbox"/> Cache bytes                | perf_counter_en["Memory/Cache Bytes"] | Zabbix agent | Numeric (unsigned)  | Not supported |

| Name   | Key  | Type           | Type of information | Status        |
|--|--|----------------|---------------------|---------------|
| <input checked="" type="checkbox"/> CPU utilization      | system.cpu.util  | Zabbix agent   | Numeric (float)     | Enabled       |
| <input type="checkbox"/> Free swap space                 | system.swap.free   | Calculated     | Numeric (unsigned)  | Not supported |
| <input checked="" type="checkbox"/> Free swap space in % | system.swap.pfree  | Dependent item | Numeric (float)     | Enabled       |
| <input type="checkbox"/> Free system page table entries  | perf_counter_en["Memory/Free System Page Table Entries"]                         | Zabbix agent   | Numeric (unsigned)  | Not supported |
| <input type="checkbox"/> Memory page faults per second   | perf_counter_en["Memory/Page Faults/sec"]  | Zabbix agent   | Numeric (float)     | Not supported |
| <input type="checkbox"/> Memory pages per second         | perf_counter_en["Memory/Pages/sec"]  | Zabbix agent   | Numeric (float)     | Not supported |
| <input type="checkbox"/> Memory pool non-paged           | perf_counter_en["Memory/Pool Nonpaged Bytes"]                                    | Zabbix agent   | Numeric (unsigned)  | Not supported |
| <input checked="" type="checkbox"/> Memory utilization   | vm.memory.util   | Calculated     | Numeric (float)     | Enabled       |
| <input checked="" type="checkbox"/> Number of cores      | wmi.get[root\cimv2,"Select NumberOfLogicalProcessors from Win32_ComputerSystem"] | Zabbix agent   | Numeric (unsigned)  | Enabled       |
| <input checked="" type="checkbox"/> Number of processes  | proc.num[]   | Zabbix agent   | Numeric (unsigned)  | Enabled       |

Hacemos clic en Graphs.

Name ▲ Items Triggers Graphs Discovery Web Interface Proxy Templates

HomecenterSena Items 107 Triggers 85 Graphs 13 Discovery 4 Web 192.168.0.235:10050 Windows by memory by agent

# MANUAL TECNICO.

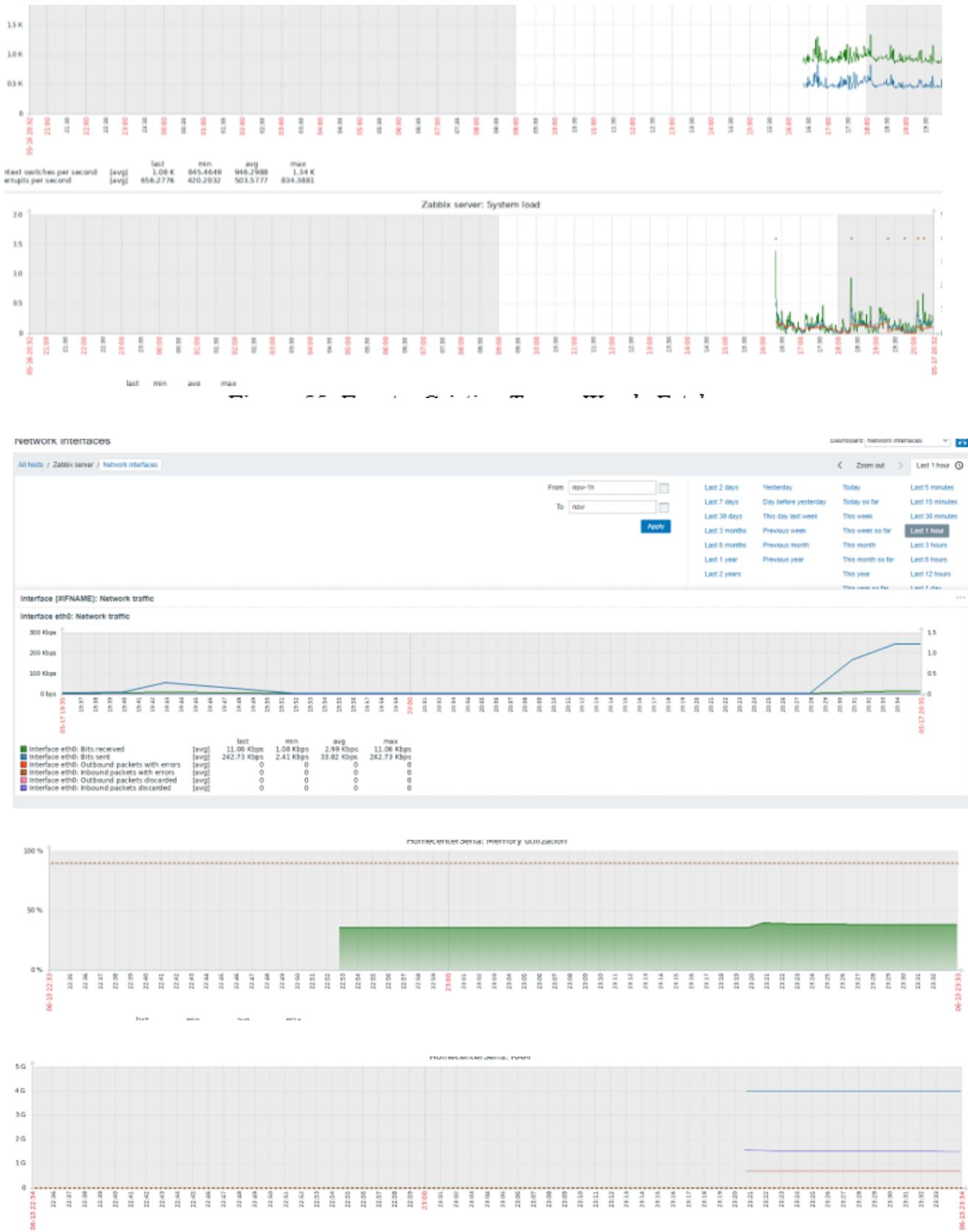
Procedemos a monitorear el Directorio activo y controlador de dominio desde Zabbix.

|   |  |              |                    |         |
|---|--|--------------|--------------------|---------|
| <input checked="" type="checkbox"/> State of service "ADWS" (Active Directory Web Services)                             | service.info["ADWS",state]                   | Zabbix agent | Numeric (unsigned) | Enabled |
| <input checked="" type="checkbox"/> State of service "AppHostSvc" (Application Host Helper Service)                     | service.info["AppHostSvc",state]             | Zabbix agent | Numeric (unsigned) | Enabled |
| <input checked="" type="checkbox"/> State of service "BFE" (Base Filtering Engine)                                      | service.info["BFE",state]                    | Zabbix agent | Numeric (unsigned) | Enabled |
| <input checked="" type="checkbox"/> State of service "BrokerInfrastructure" (Background Tasks Infrastructure Service)   | service.info["BrokerInfrastructure",state]   | Zabbix agent | Numeric (unsigned) | Enabled |
| <input checked="" type="checkbox"/> State of service "CDPSvc" (Connected Devices Platform Service)                      | service.info["CDPSvc",state]                 | Zabbix agent | Numeric (unsigned) | Enabled |
| <input checked="" type="checkbox"/> State of service "CDPUserSvc_4d187" (Connected Devices Platform User Service_4d187) | service.info["CDPUserSvc_4d187",state]       | Zabbix agent | Numeric (unsigned) | Enabled |
| <input checked="" type="checkbox"/> State of service "CDPUserSvc_57652" (Connected Devices Platform User Service_57652) | service.info["CDPUserSvc_57652",state]       | Zabbix agent | Numeric (unsigned) | Enabled |
| <input checked="" type="checkbox"/> State of service "CoreMessagingRegistrar" (CoreMessaging)                           | service.info["CoreMessagingRegistrar",state] | Zabbix agent | Numeric (unsigned) | Enabled |
| <input checked="" type="checkbox"/> State of service "CryptSvc" (Cryptographic Services)                                | service.info["CryptSvc",state]               | Zabbix agent | Numeric (unsigned) | Enabled |
| <input checked="" type="checkbox"/> State of service "DcomLaunch" (DCOM Server Process Launcher)                        | service.info["DcomLaunch",state]             | Zabbix agent | Numeric (unsigned) | Enabled |
| <input checked="" type="checkbox"/> State of service "Dfs" (DFS Namespace)  | service.info["Dfs",state]                    | Zabbix agent | Numeric (unsigned) | Enabled |
| <input checked="" type="checkbox"/> State of service "DFSR" (DFS Replication)   | service.info["DFSR",state]                   | Zabbix agent | Numeric (unsigned) | Enabled |
| <input checked="" type="checkbox"/> State of service "Dhcp" (DHCP Client)   | service.info["Dhcp",state]                   | Zabbix agent | Numeric (unsigned) | Enabled |

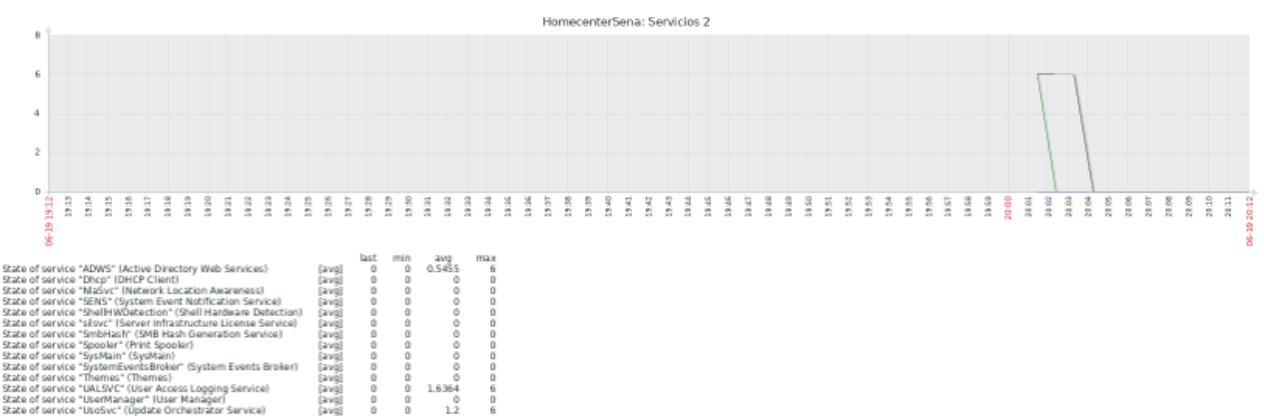
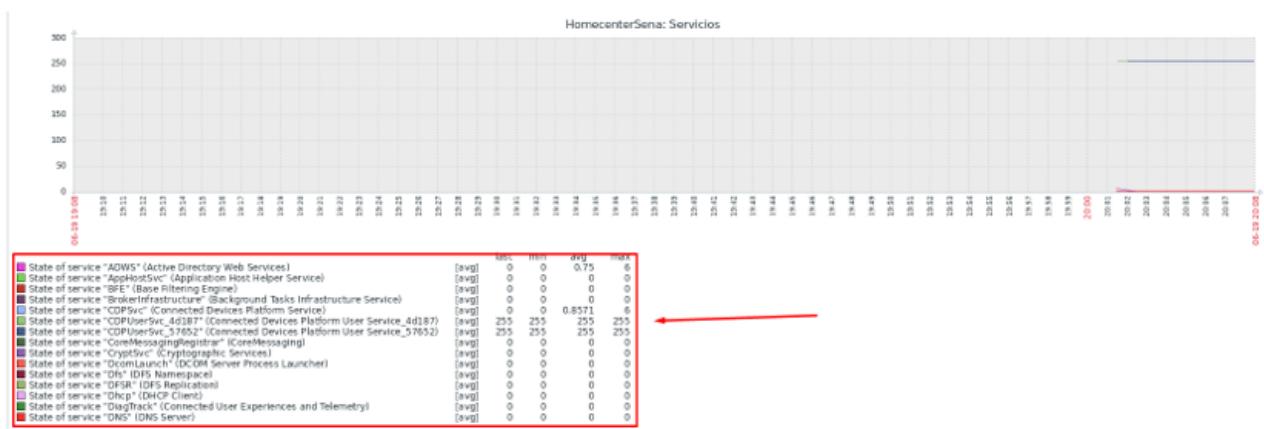
Las siguientes imágenes evidencian los graficos de monitoreo del servidor Zabbix.



# MANUAL TECNICO.



# MANUAL TECNICO.





**GRACIAS!!**

---

HOMECENTER