



## 241-[LX]-Lab - Servicios administrativos

### Datos Generales:

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**Fecha:** 09/09/2023

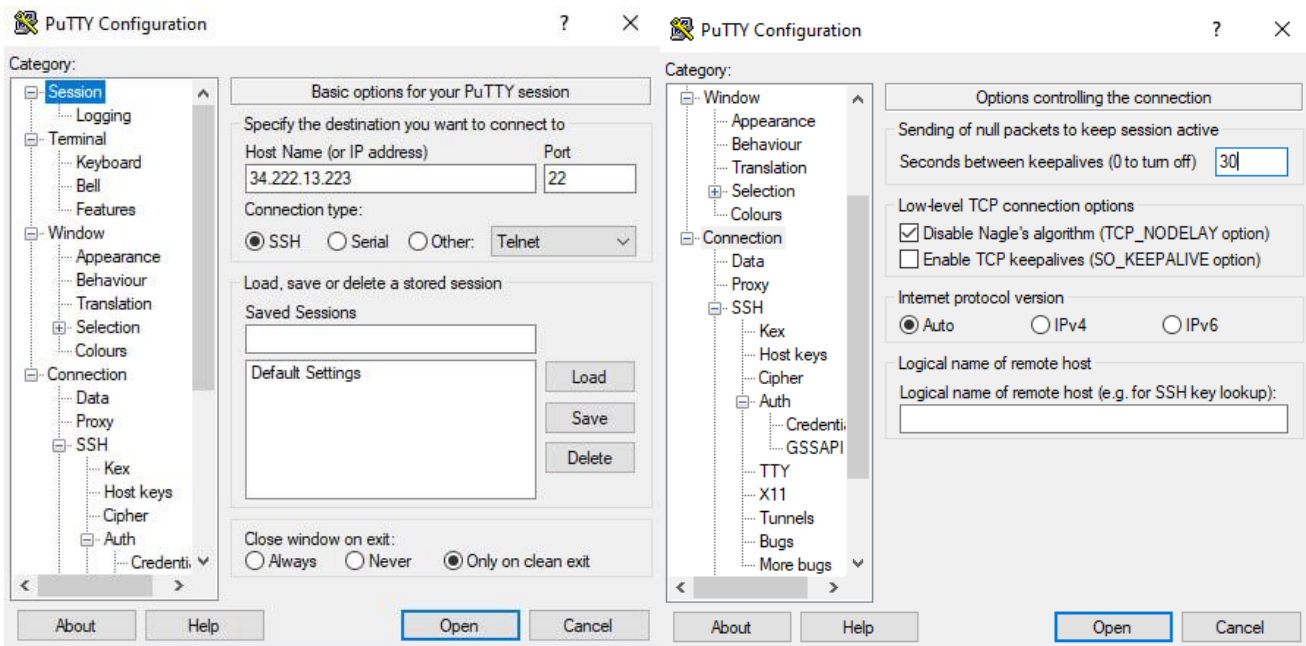
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En este laboratorio, hará lo siguiente:

- Verificar el estado del servicio **httpd (Servidor HTTP Apache)** para asegurarse de que se está ejecutando y que puede realizar una conexión http con la dirección IP del host local.
- También aprenderá a monitorear su instancia EC2 de Amazon Linux 2 utilizando el comando **top** de Linux, y utilizando AWS **CloudWatch**.

# Tarea 1: conectarse a una instancia EC2 de Amazon Linux mediante SSH

1. Abrir Putty.exe: Se ingresa dirección IPv4 de la instancia EC2 en la sección Session.
2. En la sección Connection → SSH → Auth → Credentials se ingresa el archivo PPK descargado anteriormente.
3. En la sección Connection se establece **Seconds between keepalive en 30 (el valor predeterminado es 0).**



4. Se hace click en "Open" para validar y conectarse al Host.



## Tarea 2: Revise el estado del servicio httpd

httpd = nombre del servicio web Apache.

- Apache = servidor web ligero, gratuito y open-source desarrollado y mantenido por Apache Software foundation.

systemctl = se utiliza para administrar los servicios de unidades de systemd.

- Systemd es el sistema de gestión de servicios y procesos predeterminados en la mayoría de las distribuciones de Linux
- status = obtener información sobre el estado de un servicio o unidad
- start = iniciar un servicio o unidad
- stop = detener un servicio o unidad

ec2-user@ip-10-0-10-120:~

```
[ec2-user@ip-10-0-10-120 ~]$ sudo systemctl status httpd.service
Unit httpd.service could not be found.
[ec2-user@ip-10-0-10-120 ~]$ sudo systemctl start httpd.service
[ec2-user@ip-10-0-10-120 ~]$ sudo systemctl status httpd.service
● httpd.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; disabled; vendor preset: disabled)
   Active: active (running) since Sat 2023-09-09 21:55:35 UTC; 6s ago
     Docs: man:httpd.service(8)
 Main PID: 5699 (httpd)
    Status: "Processing requests..."
    CGroup: /system.slice/httpd.service
            └─5699 /usr/sbin/httpd -DFOREGROUND
              └─5700 /usr/sbin/httpd -DFOREGROUND
                └─5702 /usr/sbin/httpd -DFOREGROUND
                  └─5707 /usr/sbin/httpd -DFOREGROUND
                    └─5709 /usr/sbin/httpd -DFOREGROUND
                      └─5714 /usr/sbin/httpd -DFOREGROUND

Sep 09 21:55:35 ip-10-0-10-120.us-west-2.compute.internal systemd[1]: Starting The Apache HTTP Server...
Sep 09 21:55:35 ip-10-0-10-120.us-west-2.compute.internal systemd[1]: Started The Apache HTTP Server.
[ec2-user@ip-10-0-10-120 ~]$
```

### Test Page

This page is used to test the proper operation of the Apache HTTP server after it has been installed. If you can read this page, it means that the Apache HTTP server installed at this site is working properly.

#### If you are a member of the general public:

The fact that you are seeing this page indicates that the website you just visited is either experiencing problems, or is undergoing routine maintenance.

If you would like to let the administrators of this website know that you've seen this page instead of the page you expected, you should send them e-mail. In general, mail sent to the name "webmaster" and directed to the website's domain should reach the appropriate person.

For example, if you experienced problems while visiting [www.example.com](http://www.example.com), you should send e-mail to "webmaster@example.com".

#### If you are the website administrator:

You may now add content to the directory `/var/www/html/`. Note that until you do so, people visiting your website will see this page, and not your content. To prevent this page from ever being used, follow the instructions in the file `/etc/httpd/conf.d/welcome.conf`.

You are free to use the image below on web sites powered by the Apache HTTP Server.





ec2-user@ip-10-0-10-120:~

```
[ec2-user@ip-10-0-10-120 ~]$ sudo systemctl stop httpd.service
[ec2-user@ip-10-0-10-120 ~]$ sudo systemctl status httpd.service
• httpd.service - The Apache HTTP Server
  Loaded: loaded (/usr/lib/systemd/system/httpd.service; disabled; vendor preset: disabled)
  Active: inactive (dead)
  Docs: man:httpd.service(8)

Sep 09 21:55:35 ip-10-0-10-120.us-west-2.compute.internal systemd[1]: Starting The Apache HTTP Server...
Sep 09 21:55:35 ip-10-0-10-120.us-west-2.compute.internal systemd[1]: Started The Apache HTTP Server.
Sep 09 21:57:19 ip-10-0-10-120.us-west-2.compute.internal systemd[1]: Stopping The Apache HTTP Server...
Sep 09 21:57:20 ip-10-0-10-120.us-west-2.compute.internal systemd[1]: Stopped The Apache HTTP Server.
[ec2-user@ip-10-0-10-120 ~]$
```

## Tarea 3: Monitoreo de una instancia EC2 de Linux

top = muestra una lista de todos los procesos en ejecución

- se utiliza para monitorear los procesos en ejecución en un OS Linux

ec2-user@ip-10-0-10-120:~

```
top - 21:58:12 up 4 min, 1 user, load average: 0.03, 0.15, 0.08
Tasks: 92 total, 1 running, 47 sleeping, 0 stopped, 0 zombie
%Cpu(s): 0.2 us, 0.0 sy, 0.0 ni, 99.8 id, 0.0 wa, 0.0 hi, 0.0 si, 0.0 st
KiB Mem : 966816 total, 462164 free, 86184 used, 418468 buff/cache
KiB Swap: 0 total, 0 free, 0 used. 735672 avail Mem
```

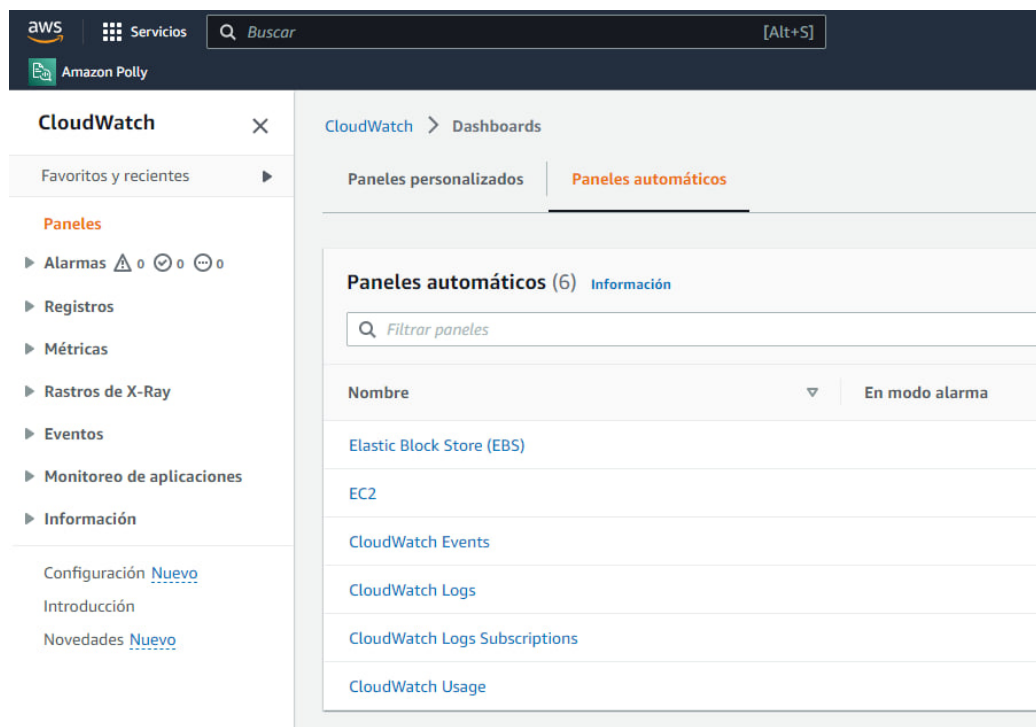
PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
1	root	20	0	123716	5744	4036	S	0.0	0.6	0:01.18	systemd
2	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kthreadd
3	root	20	0	0	0	0	I	0.0	0.0	0:00.04	kworker/0:0
4	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/0:0H
5	root	20	0	0	0	0	I	0.0	0.0	0:00.09	kworker/u4:0
6	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	mm_percpu_wq
7	root	20	0	0	0	0	S	0.0	0.0	0:00.02	ksoftirqd/0
8	root	20	0	0	0	0	I	0.0	0.0	0:00.10	rcu_sched
9	root	20	0	0	0	0	I	0.0	0.0	0:00.00	rcu_bh
10	root	rt	0	0	0	0	S	0.0	0.0	0:00.00	migration/0
11	root	rt	0	0	0	0	S	0.0	0.0	0:00.00	watchdog/0
12	root	20	0	0	0	0	S	0.0	0.0	0:00.00	cpuhp/0
13	root	20	0	0	0	0	S	0.0	0.0	0:00.01	cpuhp/1
14	root	rt	0	0	0	0	S	0.0	0.0	0:00.00	watchdog/1
15	root	rt	0	0	0	0	S	0.0	0.0	0:00.22	migration/1

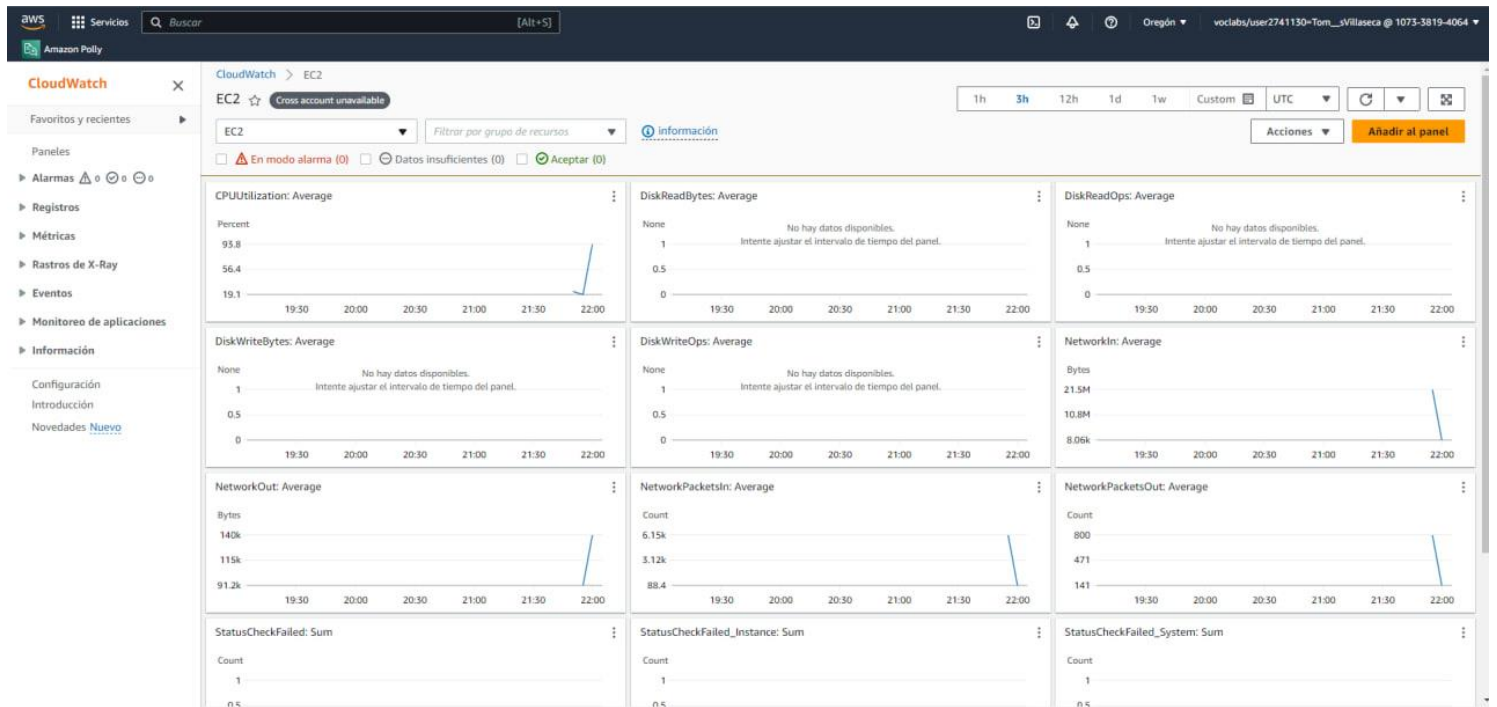
Ejecutar script stress.sh que simula una carga de trabajo pesada en la instancia EC2:

```
ec2-user@ip-10-0-10-120:~  
top - 21:58:42 up 5 min, 1 user, load average: 0.02, 0.13, 0.08  
Tasks: 101 total, 15 running, 49 sleeping, 0 stopped, 0 zombie  
%Cpu(s): 56.0 us, 34.4 sy, 0.0 ni, 0.0 id, 0.0 wa, 0.0 hi, 0.0 si, 9.6 st  
KiB Mem : 966816 total, 254400 free, 293940 used, 418476 buff/cache  
KiB Swap: 0 total, 0 free, 0 used. 527916 avail Mem
```

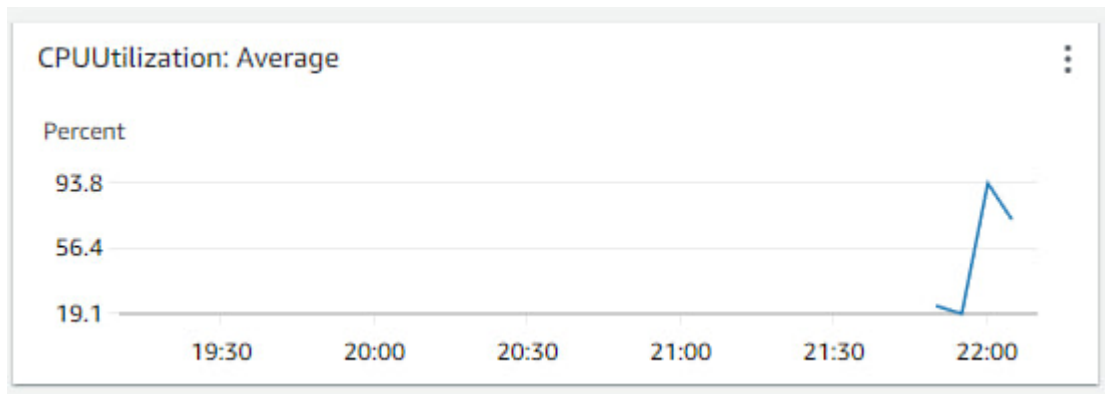
PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
5770	ec2-user	20	0	7580	96	0	R	13.0	0.0	0:00.40	stress
5773	ec2-user	20	0	7580	96	0	R	13.0	0.0	0:00.40	stress
5776	ec2-user	20	0	7580	96	0	R	13.0	0.0	0:00.40	stress
5778	ec2-user	20	0	7580	96	0	R	13.0	0.0	0:00.40	stress
5780	ec2-user	20	0	7580	96	0	R	13.0	0.0	0:00.40	stress
5781	ec2-user	20	0	7580	96	0	R	13.0	0.0	0:00.40	stress
5782	ec2-user	20	0	7580	96	0	R	13.0	0.0	0:00.49	stress
5783	ec2-user	20	0	7580	96	0	R	13.0	0.0	0:00.40	stress
5771	ec2-user	20	0	7580	96	0	R	12.6	0.0	0:00.38	stress
5772	ec2-user	20	0	138656	100360	212	R	12.6	10.4	0:00.39	stress
5774	ec2-user	20	0	7580	96	0	R	12.6	0.0	0:00.39	stress
5775	ec2-user	20	0	138656	106960	212	R	12.6	11.1	0:00.39	stress
5777	ec2-user	20	0	7580	96	0	R	12.6	0.0	0:00.39	stress
5779	ec2-user	20	0	7580	96	0	R	12.6	0.0	0:00.39	stress
1	root	20	0	123716	5744	4036	S	0.0	0.6	0:01.18	systemd
2	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kthreadd
3	root	20	0	0	0	0	I	0.0	0.0	0:00.04	kworker/0:0

Ingresar a CloudWatch en AWS Management Console y seleccionar EC2 en paneles automáticos:





Se puede visualizar un pico en la utilización de la CPU que coincide con el momento en que comenzó el script stress.sh:



Laboratorio Completado