

**Міністерство освіти і науки України  
Національний технічний університет України  
"Київський політехнічний інститут імені Ігоря Сікорського"  
Фізико-технічний інститут**

**«Харні технології»**

**Лабораторна робота №1**

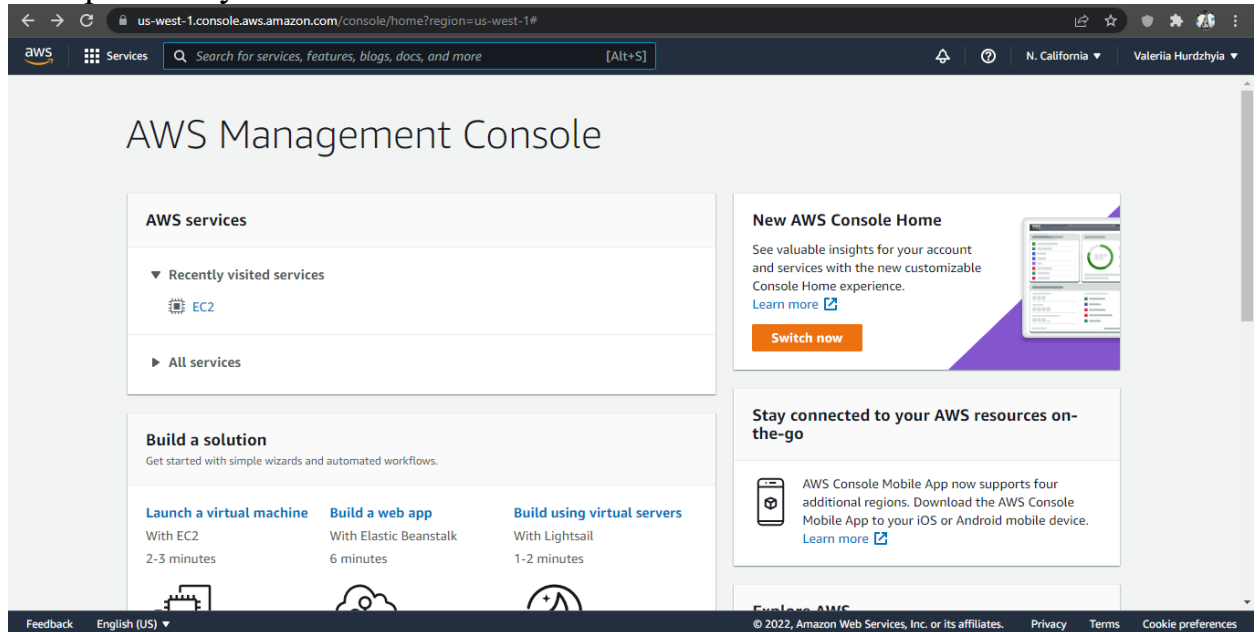
**Виконала:**  
студентка групи ФБ-95  
Гурджия Валерія Вахтангівна

Київ – 2022

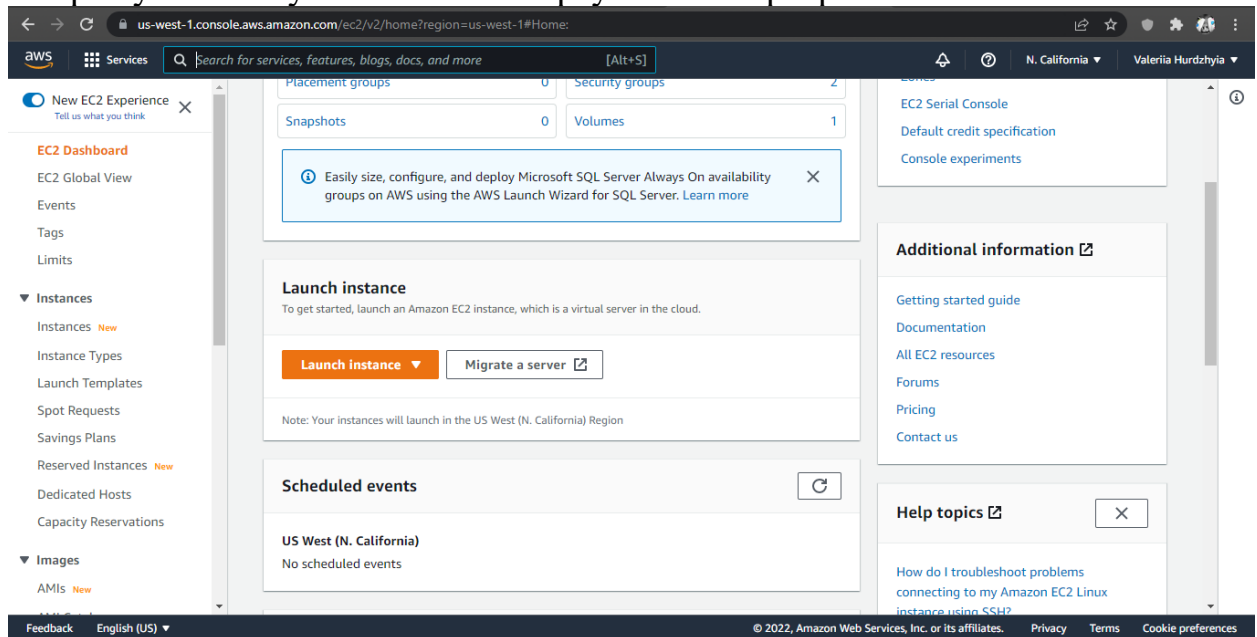
## ЗАВДАННЯ

1. Зареєструватись в AWS
2. Створити мікро-інстанс
3. Отримати доступ до нього
4. Навчитись моніторити використання ресурсів
5. Навчитись завантажувати файли на інстанс (створити пустий файл \*.txt та завантажити його на інстанс через термінал та за допомогою FileZilla)
6. Відкрити файл на інстансі за допомогою редактора Vim (додати текст у файл «Hello world!»)
7. Завантажити із інстанса змінений текстовий файл
8. Результати усіх кроків оформити у вигляді детального протоколу зі скріншотами
9. Навести перелік проблем, вирішення яких було складним в ході виконання роботи в розділі висновків до протоколу

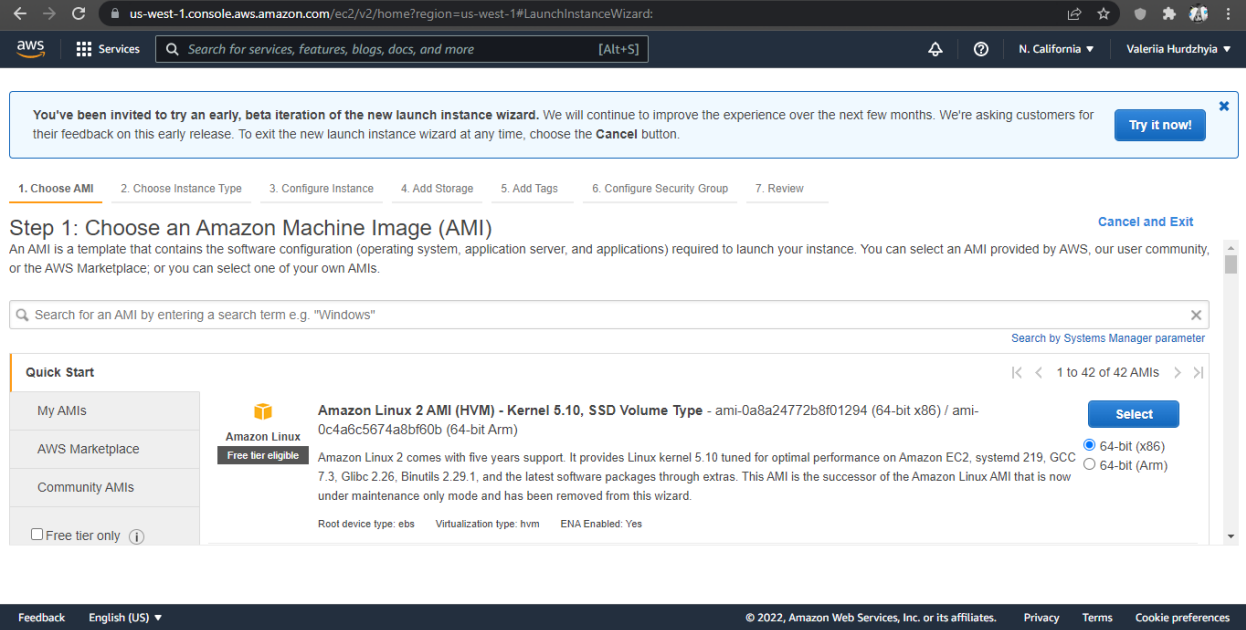
## Створили акаунт на AWS



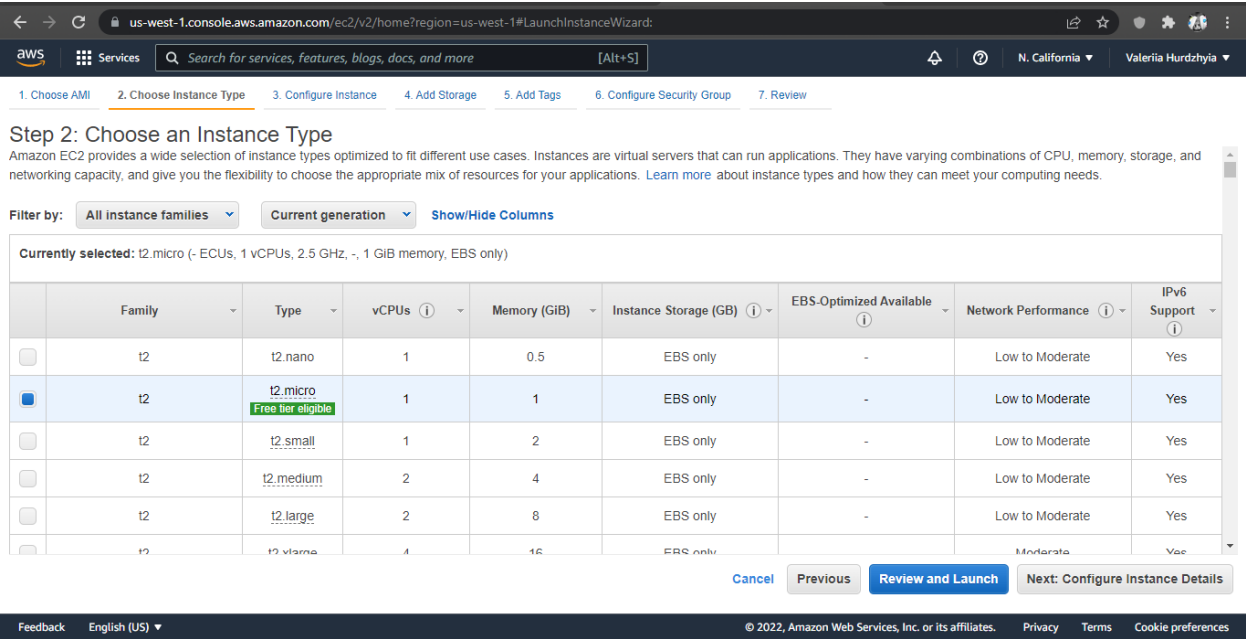
## З сервісу EC2 запускаємо новий віртуальний сервер



# Шаг 1. Вибираємо amazon linux



# Шаг 2



### Шаг 3. Залишаємо все за замовчуванням

us-west-1.console.aws.amazon.com/ec2/v2/home?region=us-west-1#LaunchInstanceWizard:

aws

Services

Search for services, features, blogs, docs, and more

[Alt+S]

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Valeria Hurdzylia

1. Choose AMI

2. Choose Instance Type

3. Configure Instance

4. Add Storage

5. Add Tags

6. Configure Security Group

7. Review

Step 3: Configure Instance Details

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

Number of instances

1

Launch into Auto Scaling Group

Purchasing option

☐ Request Spot instances

Network

vpc-0275ec08f1766bfa (default)

Create new VPC

Subnet

No preference (default subnet in any Availability Zone)

Create new subnet

Auto-assign Public IP

Use subnet setting (Enable)

Hostname type

Use subnet setting (IP name)

DNS Hostname

☒ Enable IP name IPv4 (A record) DNS requests

☒ Enable resource-based IPv4 (A record) DNS requests

☐ Enable resource-based IPv6 (AAAA record) DNS requests

Placement group

☐ Add instance to placement group

Capacity Reservation

Open

Domain join directory

No directory

Create new directory

IAM role

AmazonEC2RoleforAWSLambda

Create new role

Cancel

Previous

Review and Launch

Next: Add Storage

Feedback

English (US)

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us-west-1.console.aws.amazon.com/ec2/v2/home?region=us-west-1#LaunchInstanceWizard:

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1. Choose AMI

2. Choose Instance Type

3. Configure Instance

4. Add Storage

5. Add Tags

6. Configure Security Group

7. Review

Step 4: Add Storage

Your instance will be launched with the following storage device settings. You can attach additional EBS volumes and instance store volumes to your instance, or edit the settings of the root volume. You can also attach additional EBS volumes after launching an instance, but not instance store volumes. [Learn more](#) about storage options in Amazon EC2.

Volume Type	Device	Snapshot	Size (GiB)	Volume Type	IOPS	Throughput (MB/s)	Delete on Termination	Encryption
Root	/dev/xvda	snap-0fa0155ba5ded00ab	8	General Purpose SSD (gp2)	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypted

Add New Volume

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage. [Learn more](#) about free usage tier eligibility and usage restrictions.

Shared file systems

You currently don't have any file systems on this instance. Select "Add file system" button below to add a file system.

Add file system

Cancel

Previous

Review and Launch

Next: Add Tags

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Services

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1. Choose AMI

2. Choose Instance Type

3. Configure Instance

4. Add Storage

5. Add Tags

6. Configure Security Group

7. Review

### Step 5: Add Tags

A tag consists of a case-sensitive key-value pair. For example, you could define a tag with key = Name and value = Webserver.

A copy of a tag can be applied to volumes, instances or both.

Tags will be applied to all instances and volumes. [Learn more](#) about tagging your Amazon EC2 resources.

Key (128 characters maximum)	Value (256 characters maximum)	Instances ⓘ	Volumes ⓘ	Network Interfaces ⓘ
Name	WebServer-LINUX	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Add another tag (Up to 50 tags maximum)

Cancel

Previous

Review and Launch

Next: Configure Security Group

https://us-west-1.console.aws.amazon.com/console/home?region=us-west-1

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# Mar 6

← → ↻

us-west-1.console.aws.amazon.com/ec2/v2/home?region=us-west-1#LaunchInstanceWizard:

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aws

Services

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1. Choose AMI

2. Choose Instance Type

3. Configure Instance

4. Add Storage

5. Add Tags

6. Configure Security Group

7. Review

### Step 6: Configure Security Group

A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. [Learn more](#) about Amazon EC2 security groups.

Assign a security group:

Create a new security group

Select an existing security group

Security group name:

launch-wizard-2

Description:

launch-wizard-2 created 2022-03-13T14:55:55.339+02:00

Type ⓘ	Protocol ⓘ	Port Range ⓘ	Source ⓘ	Description ⓘ
SSH	TCP	22	My IP 176.37.41.39/32	e.g. SSH for Admin Desktop
HTTP	TCP	80	Anywhere 0.0.0.0/0, ::/0	e.g. SSH for Admin Desktop
HTTPS	TCP	443	Anywhere 0.0.0.0/0, ::/0	e.g. SSH for Admin Desktop

Add Rule

Cancel

Previous

Review and Launch

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## Шаг 7

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1. Choose AMI

2. Choose Instance Type

3. Configure Instance

4. Add Storage

5. Add Tags

6. Configure Security Group

7. Review

### Step 7: Review Instance Launch

Please review your instance launch details. You can go back to edit changes for each section. Click Launch to assign a key pair to your instance and complete the launch process.

AMI Details

Free tier eligible

Amazon Linux 2 AMI (HVM) - Kernel 5.10, SSD Volume Type - ami-0a8a24772b8f01294

Amazon Linux 2 comes with five years support. It provides Linux kernel 5.10 tuned for optimal performance on Amazon EC2, systemd 219, GCC 7.3, Glibc 2.28, Binutils 2.28.1, and the latest software packages through extras. This AMI is the successor of the Amazon Linux AMI that is n...

Root Device Type: ebs    Virtualization type: hvm

Edit AMI

Instance Type

Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance
t2.micro	-	1	1	EBS only	-	Low to Moderate

Edit instance type

Security Groups

Security group name

launch-wizard-2

Description

launch-wizard-2 created 2022-03-13T14:55:55.339+02:00

Type	Protocol	Port Range	Source	Description
SSH	TCP	22	176.37.41.39/32	
HTTP	TCP	80	0.0.0.0/0	
HTTP	TCP	80	:/0	
HTTPS	TCP	443	0.0.0.0/0	

Edit security groups

Cancel

Previous

Launch

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## Створюємо ключ RSA

Select an existing key pair or create a new key pair

A key pair consists of a **public key** that AWS stores, and a **private key file** that you store. Together, they allow you to connect to your instance securely. For Windows AMIs, the private key file is required to obtain the password used to log into your instance. For Linux AMIs, the private key file allows you to securely SSH into your instance. Amazon EC2 supports ED25519 and RSA key pair types.

Note: The selected key pair will be added to the set of keys authorized for this instance. Learn more about removing existing key pairs from a public AMI.

Create a new key pair

Key pair type

☒ RSA ☐ ED25519

Key pair name

laba

Download Key Pair

You have to download the private key file (\*.pem file) before you can continue. Store it in a secure and accessible location. You will not be able to download the file again after it's created.

Cancel    Launch Instances

▼ Сегодня (1)

laba.pem

# Створили інстанс

us-west-1.console.aws.amazon.com/ec2/v2/home?region=us-west-1#LaunchInstanceWizard:

aws

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Launch Status

Your instances are now launching

The following instance launches have been initiated: i-0ff446a426562719f View launch log

Get notified of estimated charges

Create billing alerts to get an email notification when estimated charges on your AWS bill exceed an amount you define (for example, if you exceed the free usage tier).

How to connect to your instances

Your instances are launching, and it may take a few minutes until they are in the **running** state, when they will be ready for you to use. Usage hours on your new instances will start immediately and continue to accrue until you stop or terminate your instances. Click **View instances** to monitor your instances' status. Once your instances are in the **running** state, you can connect to them from the Instances screen. Find out how to connect to your instances.

Here are some helpful resources to get you started

How to connect to your Linux instance

Learn about AWS Free Usage Tier

Amazon EC2: User Guide

Amazon EC2: Discussion Forum

While your instances are launching you can also

Create status check alarms to be notified when these instances fail status checks. (Additional charges may apply)

Create and attach additional EBS volumes (Additional charges may apply)

Manage security groups

View Instances

Feedback

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# Після успішного створення інстансу він з'явився у списку активних.

us-west-1.console.aws.amazon.com/ec2/v2/home?region=us-west-1#Instances:

aws

Services

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New EC2 Experience

EC2 Dashboard

EC2 Global View

Events

Tags

Limits

Instances

Instances New

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances New

Dedicated Hosts

Capacity Reservations

Images

AMIs New

AMI Catalog

Elastic Block Store

Volumes New

Snapshots New

LifeCycle Manager New

Instances (1/2) Info

Connect

Instance state

Actions

Launch Instances

Search

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4
WebServer-LI...	i-0ff446a426562719f	Running	t2.micro	2/2 checks passed	No alarms	us-west-1c	ec2-54-151-32-247.us-...	54.151.32.2

Instance: i-0ff446a426562719f (WebServer-LINUX)

Details

Security

Networking

Storage

Status checks

Monitoring

Tags

Instance summary Info

Instance ID

i-0ff446a426562719f (WebServer-LINUX)

Public IPv4 address

54.151.32.247 | open address

Private IPv4 addresses

172.31.11.110

IPv6 address

-

Instance state

Running

Public IPv4 DNS

ec2-54-151-32-247.us-west-1.compute.amazonaws.com | open address

Hostname type

IP name: ip-172-31-11-110.us-west-1.compute.internal

Private IP DNS name (IPv4 only)

ip-172-31-11-110.us-west-1.compute.internal

Answer private resource DNS name

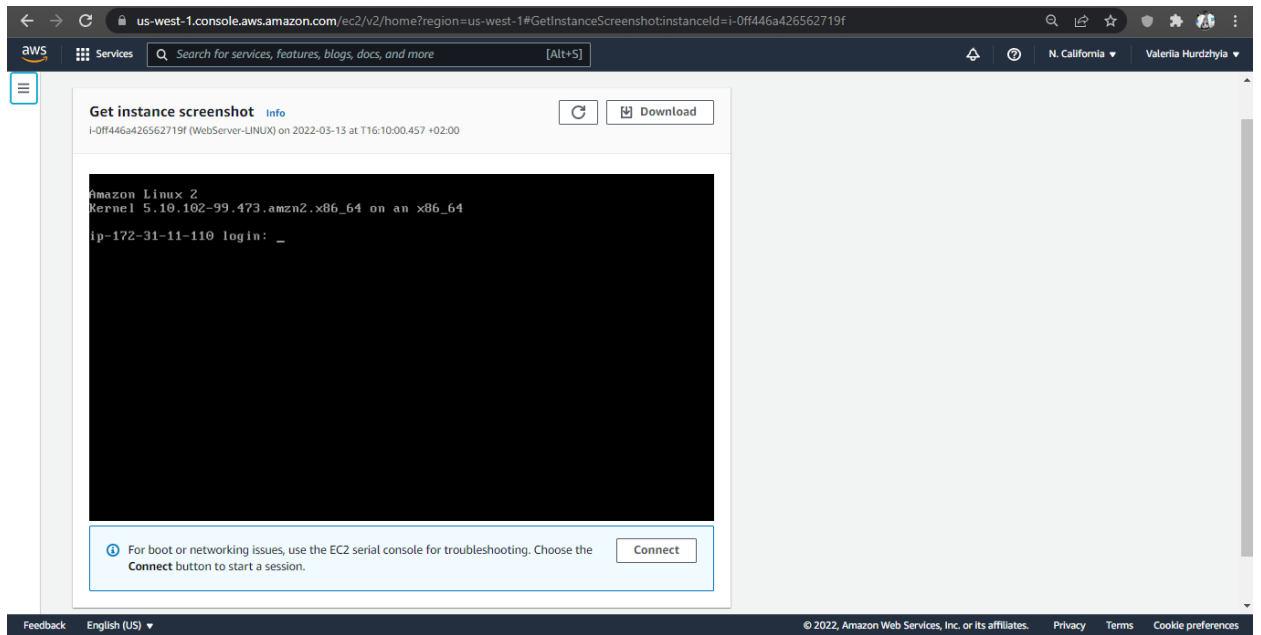
IPv4 (A)

Feedback

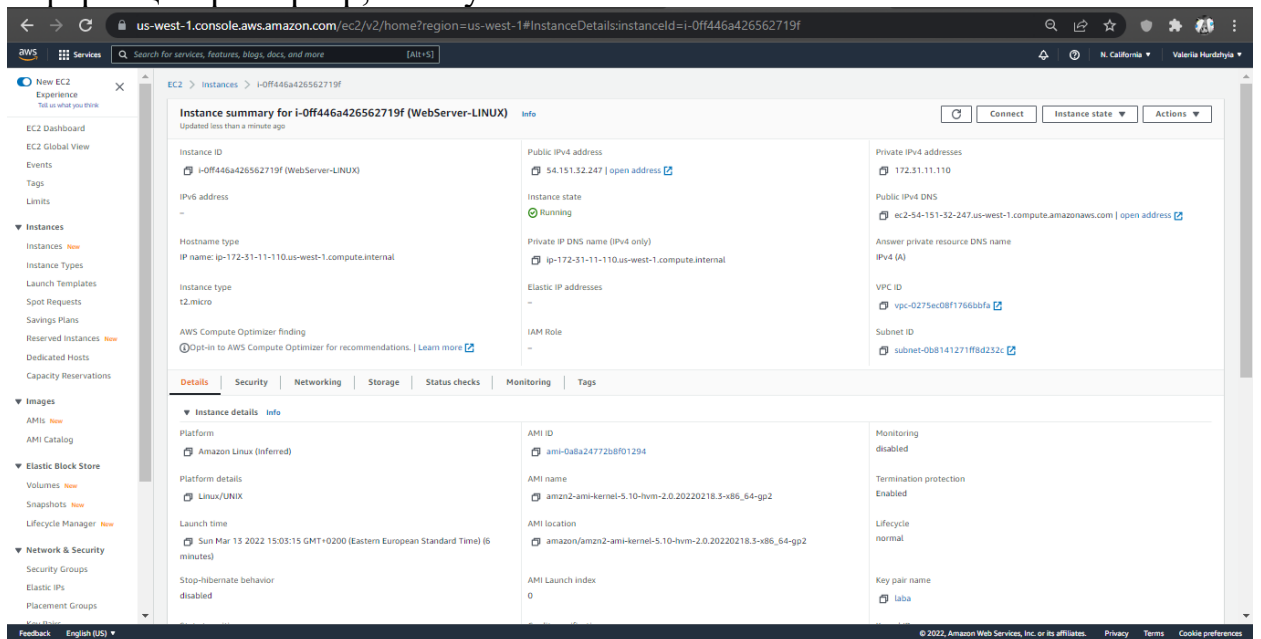
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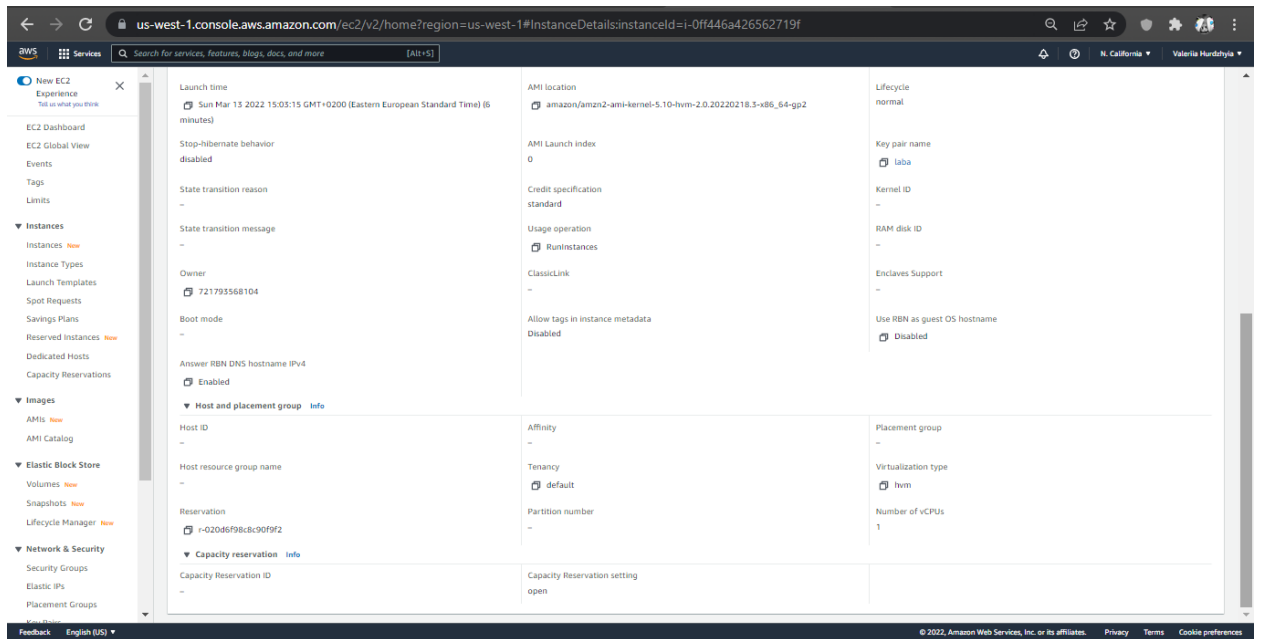
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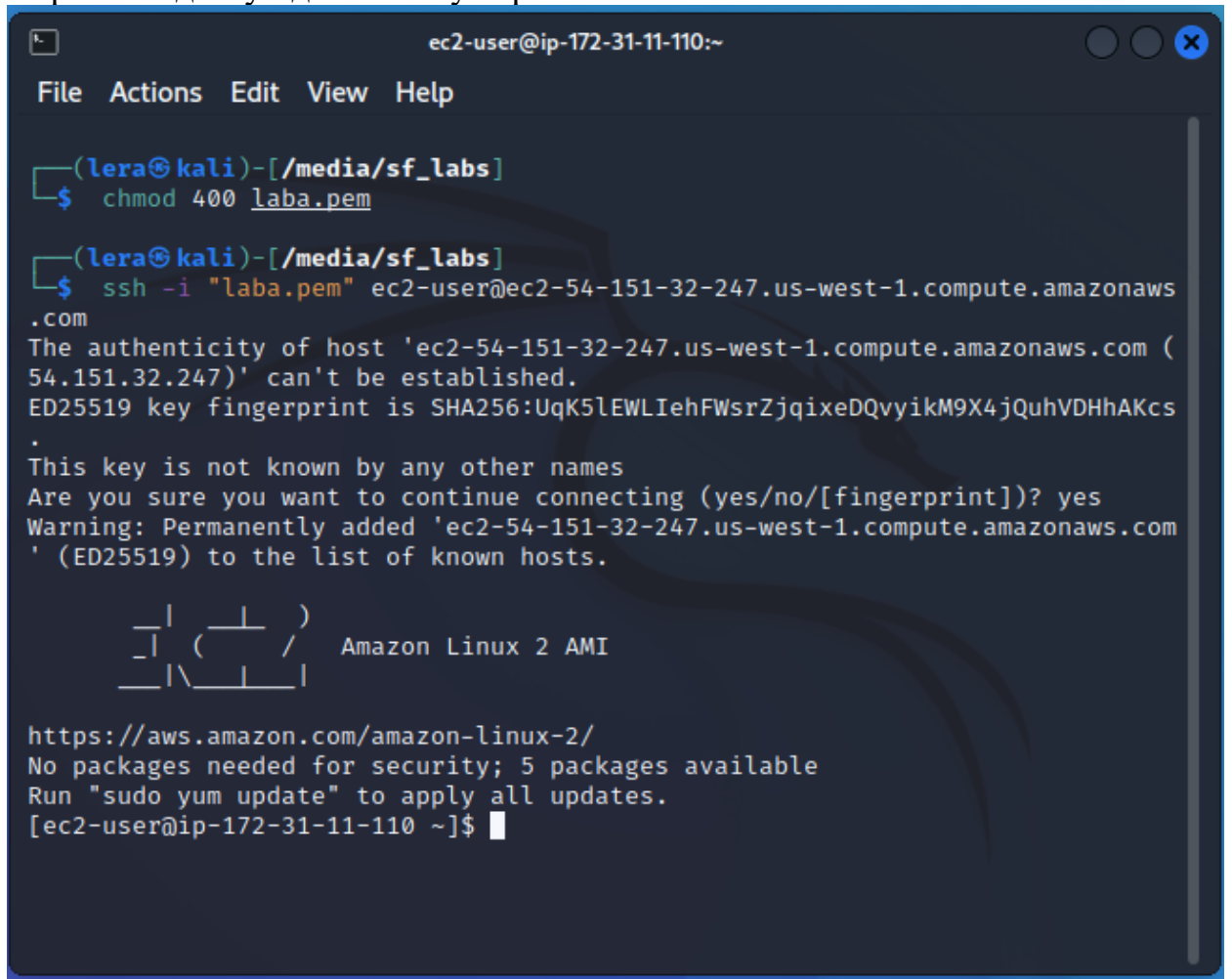


Клацнувши на Instance Id у списку активних інстансів отримали більше інформації про сервер, в тому числі його навантаження





Отримали доступ до інстансу через SSH



## Консольні способи моніторингу навантаження на сервер

Командою `top` визначасмо, що відбувається з активними процесами та наскільки система завантажена на даний момент часу

```
ec2-user@ip-172-31-11-110:~  
File Actions Edit View Help  
[ec2-user@ip-172-31-11-110 ~]$ top  
top - 13:45:11 up 41 min, 1 user, load average: 0.00, 0.00, 0.00  
top - 13:45:26 up 41 min, 1 user, load average: 0.00, 0.00, 0.00  
Tasks: 92 total, 1 running, 50 sleeping, 0 stopped, 0 zombie  
%Cpu(s): 0.0 us, 0.0 sy, 0.0 ni, 100.0 id, 0.0 wa, 0.0 hi, 0.0 si, 0.0 st  
KiB Mem : 988672 total, 366920 free, 88424 used, 533328 buff/cache  
KiB Swap: 0 total, 0 free, 0 used. 765708 avail Mem
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
1	root	20	0	125644	5464	3868	S	0.0	0.6	0:01.87	systemd
2	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kthreadd
3	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	rcu_gp
4	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	rcu_par_gp
6	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/0+
9	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	mm_percpu+
10	root	20	0	0	0	0	S	0.0	0.0	0:00.00	rcu_tasks+
11	root	20	0	0	0	0	S	0.0	0.0	0:00.00	rcu_tasks+
12	root	20	0	0	0	0	S	0.0	0.0	0:00.02	ksoftirqd+
13	root	20	0	0	0	0	I	0.0	0.0	0:00.07	rcu_sched
14	root	rt	0	0	0	0	S	0.0	0.0	0:00.01	migration+
15	root	20	0	0	0	0	S	0.0	0.0	0:00.00	cpuhp/0
17	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kdevtmpfs
18	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	netns
19	root	20	0	0	0	0	I	0.0	0.0	0:00.01	kworker/u+
21	root	20	0	0	0	0	S	0.0	0.0	0:00.01	kauditd
261	root	20	0	0	0	0	S	0.0	0.0	0:00.00	khungtaskd
262	root	20	0	0	0	0	S	0.0	0.0	0:00.00	oom_reaper
263	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	writeback
265	root	20	0	0	0	0	S	0.0	0.0	0:00.07	kcompactd0

За допомогою команди `free` отримуємо огляд стану пам'яті

```
[ec2-user@ip-172-31-11-110 ~]$ free  
total        used        free      shared  buff/cache   available  
Mem:      988672    102204    294936      456     591532     744016  
Swap:      0         0         0
```

lsdf використовуємо для того щоб зрозуміти, які файли відкриваються якими процесами.

```
[ec2-user@ip-172-31-11-110 ~]$ sudo lsdf
```

COMMAND	PID	TID	USER	FD	TYPE	DEVICE	SIZE/OFF
systemd	1		root	cwd	DIR	202,1	257
96 /							
systemd	1		root	rtd	DIR	202,1	257
96 /							
systemd	1		root	txt	REG	202,1	1591648 1
69694 /usr/lib/systemd/systemd							
systemd	1		root	mem	REG	202,1	20056 41
99603 /usr/lib64/libuuid.so.1.3.0							
systemd	1		root	mem	REG	202,1	298632 42
92347 /usr/lib64/libblkid.so.1.1.0							
systemd	1		root	mem	REG	202,1	85976 41
99556 /usr/lib64/libz.so.1.2.7							
systemd	1		root	mem	REG	202,1	157400 41
99568 /usr/lib64/liblzma.so.5.2.2							
systemd	1		root	mem	REG	202,1	23912 41
99719 /usr/lib64/libcap-ng.so.0.0.0							
systemd	1		root	mem	REG	202,1	19816 41
99625 /usr/lib64/libattr.so.1.1.0							
systemd	1		root	mem	REG	202,1	19208 41
99387 /usr/lib64/libdl-2.26.so							
systemd	1		root	mem	REG	202,1	410400 41
99544 /usr/lib64/libpcre.so.1.2.0							
systemd	1		root	mem	REG	202,1	2021752 41
99383 /usr/lib64/libc-2.26.so							
systemd	1		root	mem	REG	202,1	149416 41
99401 /usr/lib64/libpthread-2.26.so							
systemd	1		root	mem	REG	202,1	88640 41

Команда ps показує, скільки пам'яті та процесорного часу використовують програми, що працюють на сервері

```
[ec2-user@ip-172-31-11-110 ~]$ ps
```

PID	TTY	TIME	CMD
4323	pts/0	00:00:00	ps
6724	pts/0	00:00:00	bash

Використовуємо vmstat для контролю того, що відбувається з віртуальною пам'яттю

```
[ec2-user@ip-172-31-11-110 ~]$ vmstat
```

procs		memory				swap		io		system		cpu			
r	b	swpd	free	buff	cache	si	so	bi	bo	in	cs	us	sy	id	wa
0	0	0	364400	2088	534356	0	0	58	104	27	173	1	0	99	0

Використовуємо команду uptime для того, щоб дізнатися, як довго працює сервер та скільки користувачів було зареєстровано у системі

```
[ec2-user@ip-172-31-11-110 ~]$ uptime
```

19:22:10 up 18 min, 1 user, load average: 0.00, 0.00, 0.00

Команда `mpstat` повідомляє про дії кожного з доступних процесорів у багатопроцесорних серверах

```
[ec2-user@ip-172-31-11-110 ~]$ mpstat
Linux 5.10.102-99.473.amzn2.x86_64 (ip-172-31-11-110.us-west-1.compute.internal) 0
3/19/2022 _x86_64_ (1 CPU)

07:25:50 PM CPU %usr %nice %sys %iowait %irq %soft %steal %guest %gn
ice %idle
07:25:50 PM all 0.76 0.00 0.22 0.09 0.00 0.01 0.38 0.00 0
.00 98.55
```

Команда `netstat` виводить дані про мережеві з'єднання, таблицю маршрутизації, статистику мережевих інтерфейсів, маскованих з'єднань.

```
[ec2-user@ip-172-31-11-110 ~]$ netstat
Active Internet connections (w/o servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State
tcp        0      280 ip-172-31-11-110.us:ssh host-176-37-41-39:49729 ESTABLISHED
Active UNIX domain sockets (w/o servers)
Proto RefCnt Flags               Type                   State                  I-Node  Path
unix    3        [ ]                 DGRAM                  11629  /run/systemd/notify
unix    2        [ ]                 DGRAM                  11630  /run/systemd/cgroups-ag
ent
unix    5        [ ]                 DGRAM                  11636  /run/systemd/journal/so
cket
unix    2        [ ]                 DGRAM                  16242  /run/chrony/chronyd.soc
k
unix   15        [ ]                 DGRAM                  11637  /dev/log
unix    2        [ ]                 DGRAM                  13083  /run/systemd/shutdown
unix    3        [ ]                 STREAM                 CONNECTED              17818
unix    3        [ ]                 STREAM                 CONNECTED              17793
unix    3        [ ]                 STREAM                 CONNECTED              17797
unix    2        [ ]                 DGRAM                  16077
unix    3        [ ]                 STREAM                 CONNECTED              17796
unix    3        [ ]                 STREAM                 CONNECTED              17794
unix    3        [ ]                 STREAM                 CONNECTED              16012  /run/systemd/journal/st
dout
unix    3        [ ]                 STREAM                 CONNECTED              17800
unix    3        [ ]                 STREAM                 CONNECTED              17790
unix    3        [ ]                 STREAM                 CONNECTED              17791
unix    3        [ ]                 STREAM                 CONNECTED              16014  /run/systemd/journal/st
dout
unix    3        [ ]                 STREAM                 CONNECTED              17811
unix    3        [ ]                 STREAM                 CONNECTED              16124  /run/dbus/system_bus_so
cket
```

За допомогою `sar` можна повністю отримати дані про ЦП системи, черги виконання, дискового введення-виводу, області підкачки, пам'яті, переривання ЦП, мережі та інших даних про продуктивність

```
-bash: mpmon: command not found
[ec2-user@ip-172-31-11-110 ~]$ sar
Linux 5.10.102-99.473.amzn2.x86_64 (ip-172-31-11-110.us-west-1.compute.intern
al) 03/19/2022 _x86_64_ (1 CPU)

07:04:01 PM LINUX RESTART

07:10:01 PM CPU %user %nice %system %iowait %steal %id
le
07:20:01 PM all 0.01 0.00 0.01 0.01 0.01 99.
97
Average: all 0.01 0.00 0.01 0.01 0.01 99.
97
```

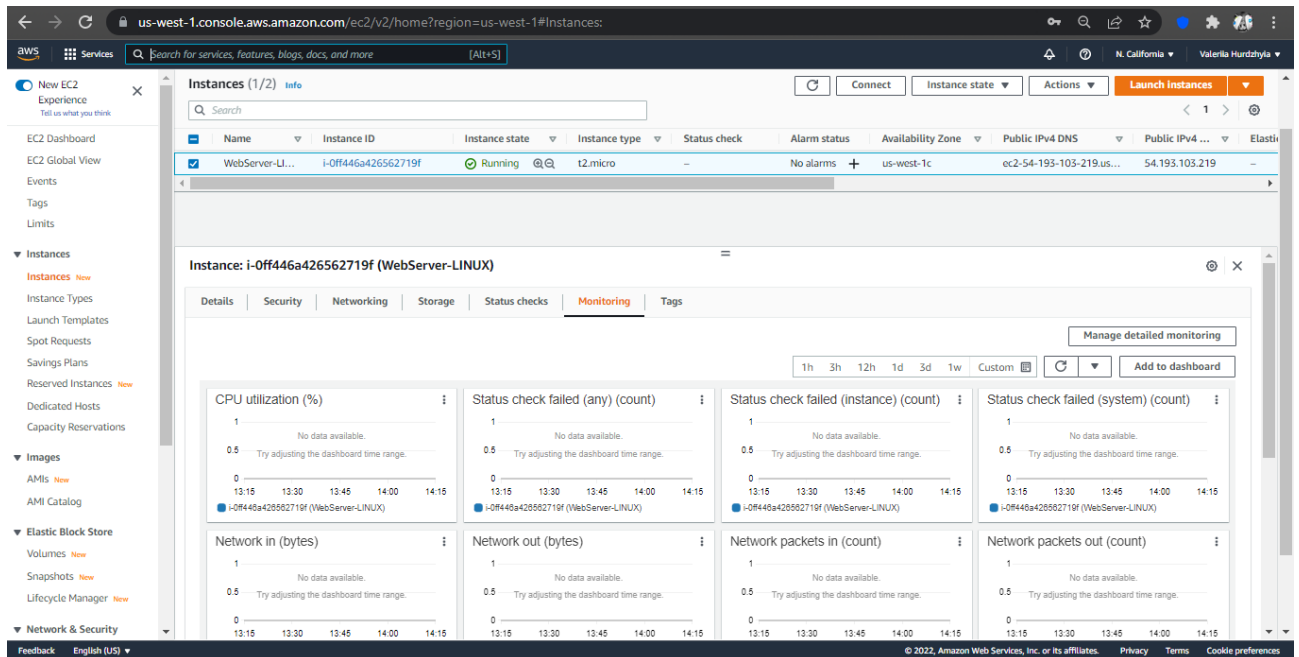
df використовуємо для отримання повної інформації про використання доступного та використаного дискового простору

```
[ec2-user@ip-172-31-11-110 ~]$ df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        475M   0    475M   0% /dev
tmpfs           483M   0    483M   0% /dev/shm
tmpfs           483M  456K   483M   1% /run
tmpfs           483M   0    483M   0% /sys/fs/cgroup
/dev/xvda1      8.0G  1.6G   6.5G  20% /
tmpfs           97M   0     97M   0% /run/user/0
tmpfs           97M   0     97M   0% /run/user/1000
```

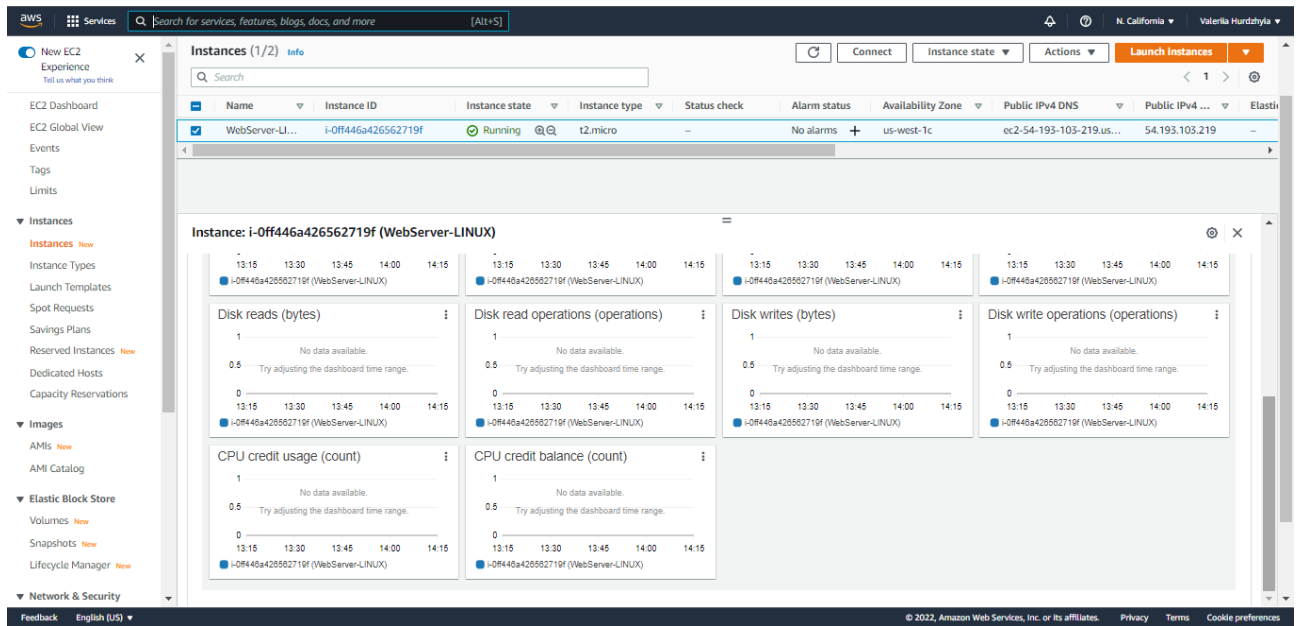
du дозволяє нам вивести розмір усіх файлів

```
[ec2-user@ip-172-31-11-110 ~]$ du -a
4      ./bash_logout
4      ./bash_profile
4      ./bashrc
4      ./ssh/authorized_keys
4      ./ssh
4      ./bash_history
20     .
```

Моніторинг через сайт







**AWS Health Dashboard**

Open and recent issues (0) | Scheduled changes (0) | Other notifications (0) | **Event log**

General service events | Open and recent issues | Service history

Your account events | Open and recent issues | Scheduled changes | Other notifications | **Event log**

Your organization events

Health integrations | Amazon EventBridge

**Event log**

Q Add filter

Event	Status	Event category	Region / Zone	Start time	Last update time	Affected resources
<a href="#">Operational issue - Multiple services (N. Virginia)</a>	Closed	Issue	us-east-1	March 9, 2022 at 11:01:23 PM UTC+2	March 9, 2022 at 11:45:10 PM UTC+2	—
<a href="#">Operational issue - VPC (Frankfurt)</a>	Closed	Issue	eu-central-1	March 3, 2022 at 10:24:07 AM UTC+2	March 3, 2022 at 11:55:28 AM UTC+2	—
<a href="#">Operational issue - InternetConnectivity (Seoul)</a>	Closed	Issue	ap-northeast-2	February 6, 2022 at 2:29:56 PM UTC+2	February 6, 2022 at 2:41:29 PM UTC+2	—
<a href="#">Operational issue - EC2 (Seoul)</a>	Closed	Issue	ap-northeast-2	January 17, 2022 at 5:15:40 PM UTC+2	January 17, 2022 at 6:26:55 PM UTC+2	—
<a href="#">Operational issue - Mobiletargeting (N. Virginia)</a>	Closed	Issue	us-east-1	January 14, 2022 at 8:39:56 PM UTC+2	January 15, 2022 at 12:49:48 AM UTC+2	—
<a href="#">Operational issue - SNS (N. Virginia)</a>	Closed	Issue	us-east-1	January 14, 2022 at 8:59:16 PM UTC+2	January 15, 2022 at 12:49:41 AM UTC+2	—
<a href="#">Operational issue - InternetConnectivity (Mumbai)</a>	Closed	Issue	ap-south-1	December 24, 2021 at 8:41:17 PM UTC+2	December 24, 2021 at 8:43:51 PM UTC+2	—
<a href="#">Operational issue - DirectoryService (N. Virginia)</a>	Closed	Issue	us-east-1	December 22, 2021 at 10:06:30 PM UTC+2	December 23, 2021 at 3:57:39 AM UTC+2	—
<a href="#">Operational issue - Sso (N. Virginia)</a>	Closed	Issue	us-east-1	December 22, 2021 at 7:26:10 PM UTC+2	December 23, 2021 at 3:56:40 AM UTC+2	—
<a href="#">Operational issue - EC2 (N. Virginia)</a>	Closed	Issue	us-east-1	December 22, 2021 at 2:35:51 PM UTC+2	December 23, 2021 at 2:54:12 AM UTC+2	—
<a href="#">Operational issue - ElasticBeanstalk (N. Virginia)</a>	Closed	Issue	us-east-1	December 22, 2021 at 9:33:20 AM UTC+2	December 22, 2021 at 1:43:57 PM UTC+2	—

Feedback English (US)

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Створили файл file.txt та завантажили його на інстанс через термінал

```
(lera@kali)-[/media/sf_labs]  
$ touch file.txt
```

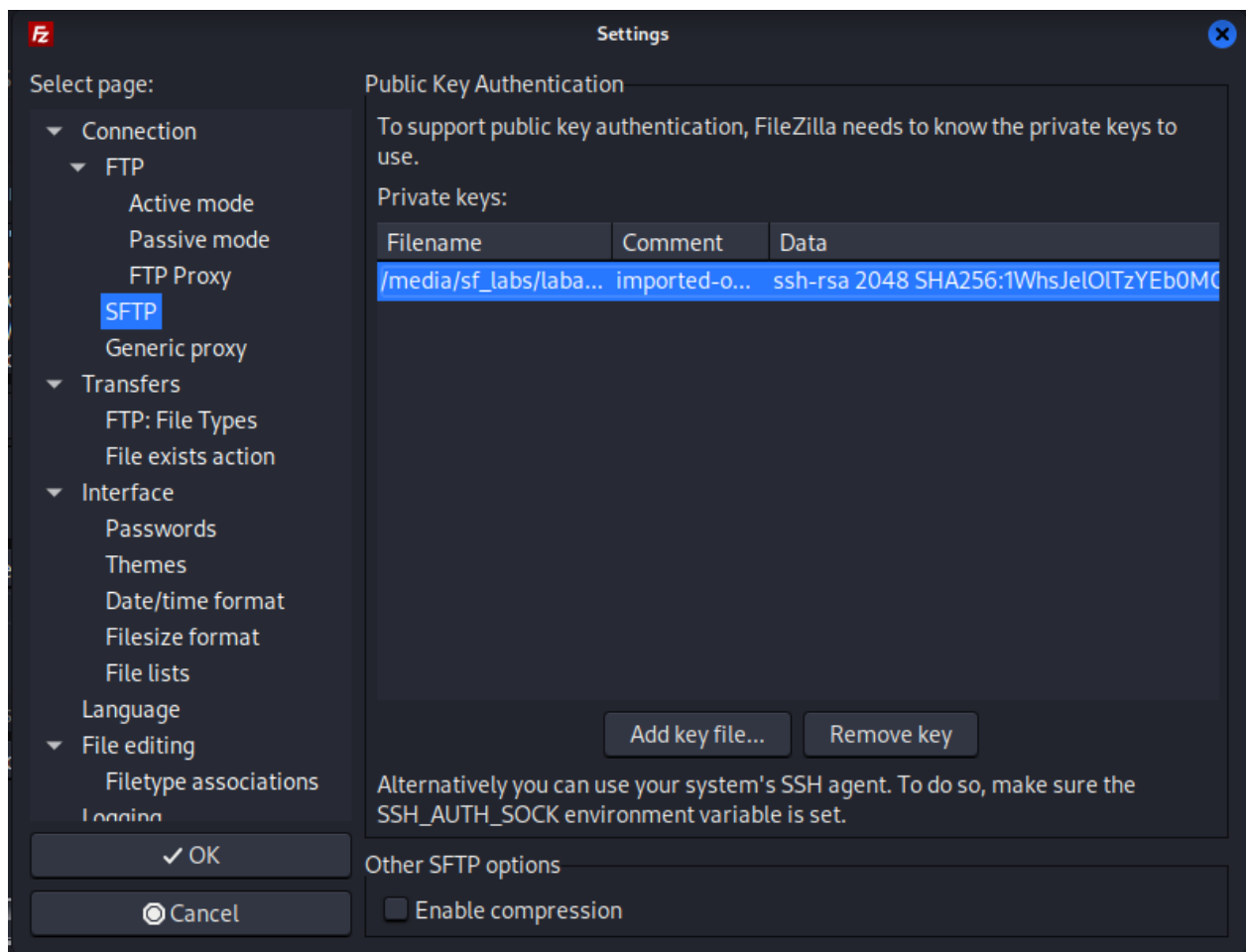
```
(lera@kali)-[/media/sf_labs]  
$ scp -i laba.pem file.txt ec2-user@ec2-54-193-103-219.us-west-1.compute.am  
azonaws.com:.  
file.txt                                100%    0    0.0KB/s    00:00
```

Бачимо що файл завантажився на інстанс

```
[ec2-user@ip-172-31-11-110 ~]$ ls  
file.txt
```

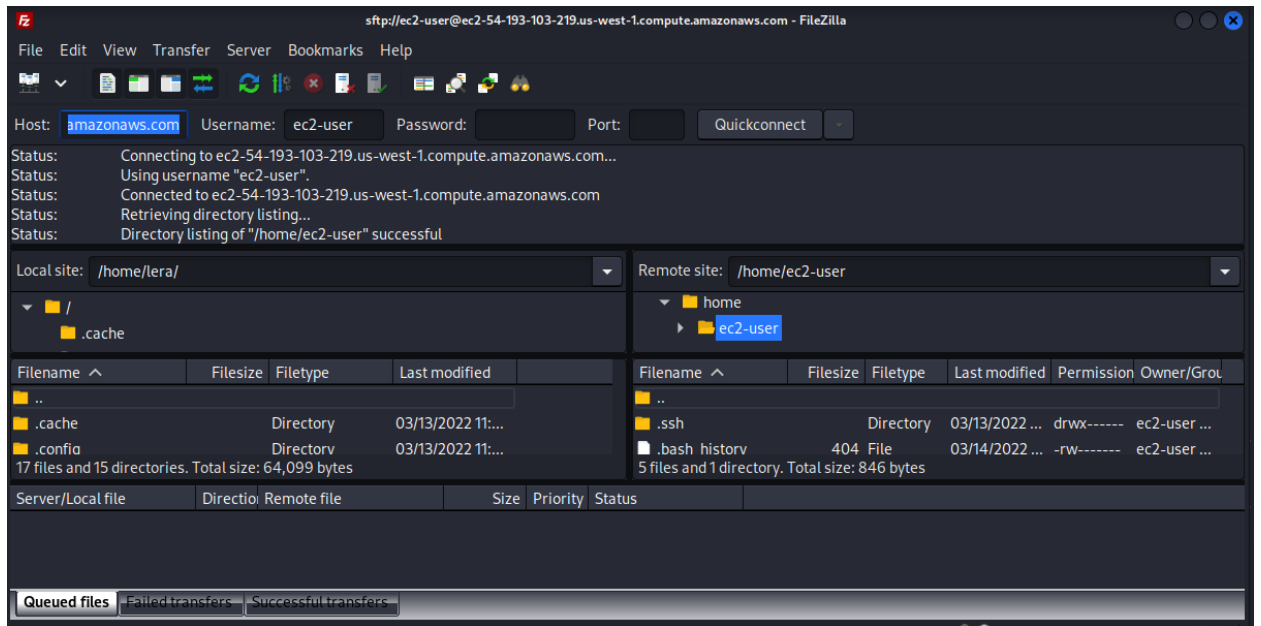
Створили файл file1.txt та завантажили його на інстанс за допомогою FileZilla

Додали key file з розширенням prk.

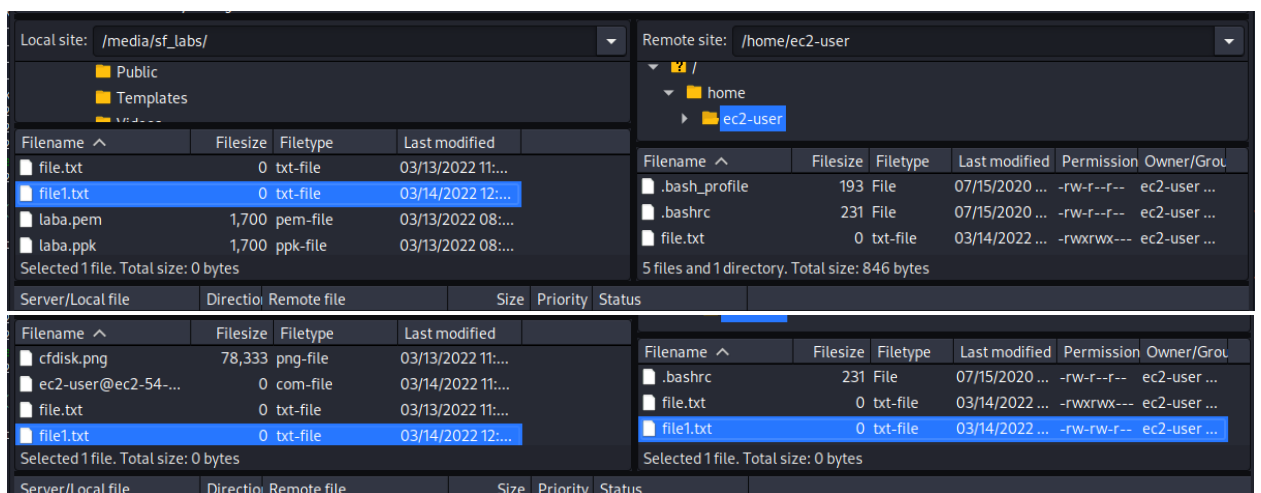




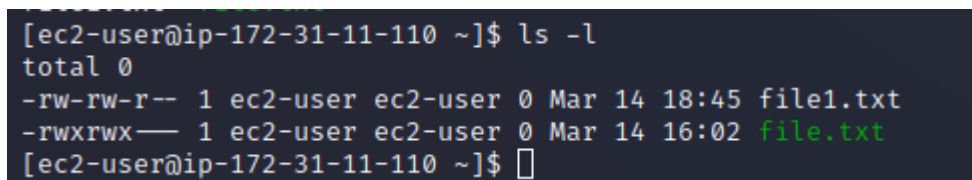
В віконце Port ввели 22 та нажали на Quickconnect



Перетягнули file1.txt з нашої локальної папки на інстанс

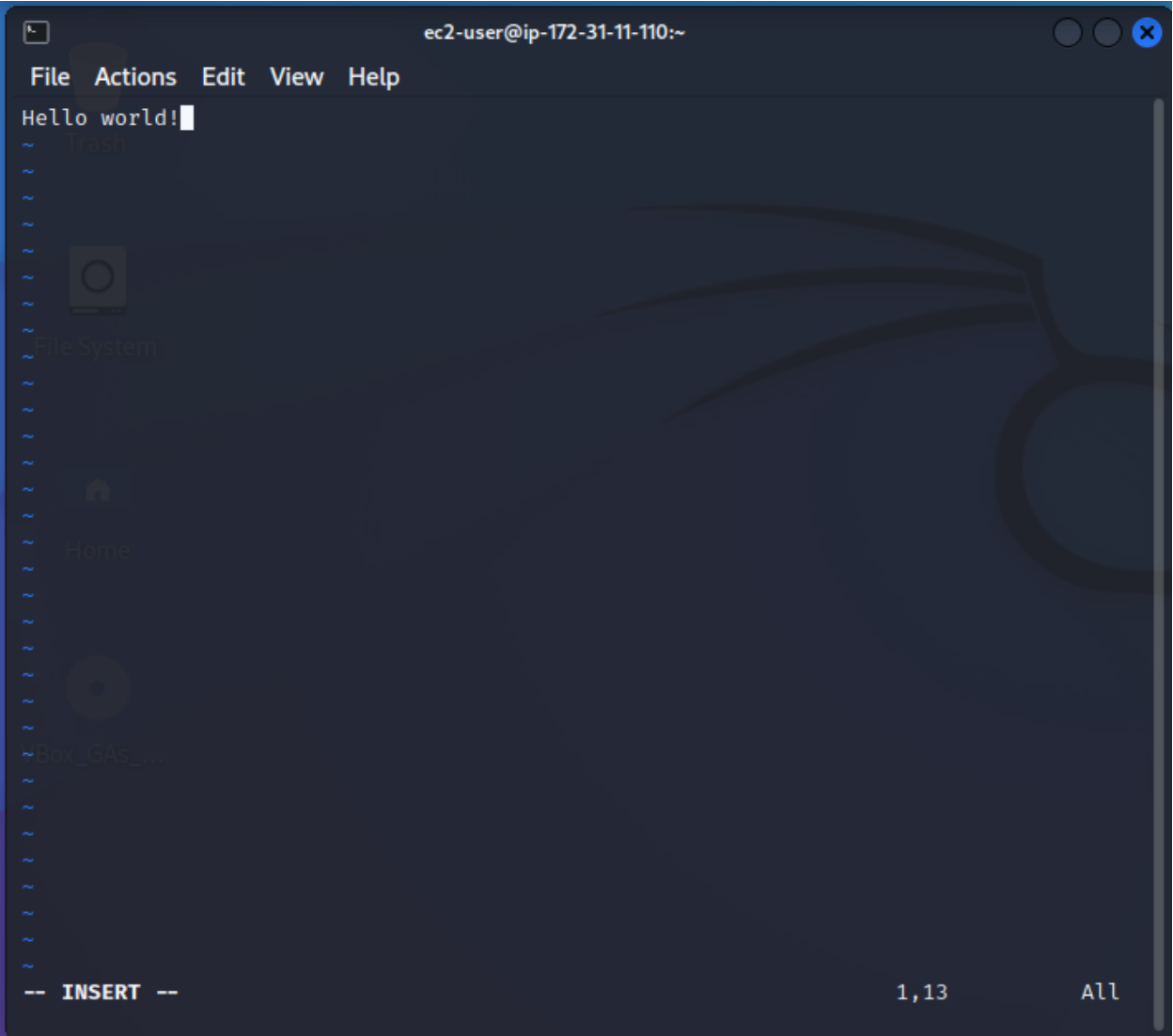


Бачимо що файл завантажився на інстанс



За допомогою редактора Vim записуємо у файл “Hello world!”

```
-rwxrwx-- 1 ec2-user ec2-user 0 Mar 14 16:02 file.txt
[ec2-user@ip-172-31-11-110 ~]$ vim file.txt
```



```
ec2-user@ip-172-31-11-110:~
File Actions Edit View Help
Hello world!
~ Trash
~
~
~
~ File System
~
~
~ Home
~
~
~ Box_GAs...
~
~
~
~
-- INSERT -- 1,13 All
```

Бачимо що текст записався у файл

```
[ec2-user@ip-172-31-11-110 ~]$ vim file.txt
[ec2-user@ip-172-31-11-110 ~]$ cat file.txt
Hello world!
[ec2-user@ip-172-31-11-110 ~]$
```

Завантажили з інстанса змінений тестовий файл

```
(lera@kali)-[/media/sf_labs]
$ scp -i lab.pem ec2-user@ec2-54-193-103-219.us-west-1.compute.amazonaws.co
m:file.txt file.txt
file.txt 100% 13 0.1KB/s 00:00

(lera@kali)-[/media/sf_labs]
$ cat file.txt
Hello world!
```

## Проблеми, які виникли в ході виконання роботи

Коли пробували під'єднатися до інстансу, то видавалася помилка

### Connect to instance [Info](#)

Connect to your instance i-0ff446a426562719f (WebServer-LINUX) using any of these options

EC2 Instance Connect

Session Manager

SSH client

EC2 Serial Console

Instance ID

i-0ff446a426562719f (WebServer-LINUX)

Public IP address

54.193.103.219

User name

ec2-user

Connect using a custom user name, or use the default user name ec2-user for the AMI used to launch the instance.

**Note:** In most cases, the guessed user name is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI user name.

Cancel

Connect

us-west-1.console.aws.amazon.com/ec2/v2/connect/ec2-user/i-0ff446a426562719f

#### There was a problem connecting to your instance

We were unable to connect to your instance. Make sure that your instance's network settings are configured correctly for EC2 Instance Connect. For more information, see [Task 1: Configure network access to an instance](#).

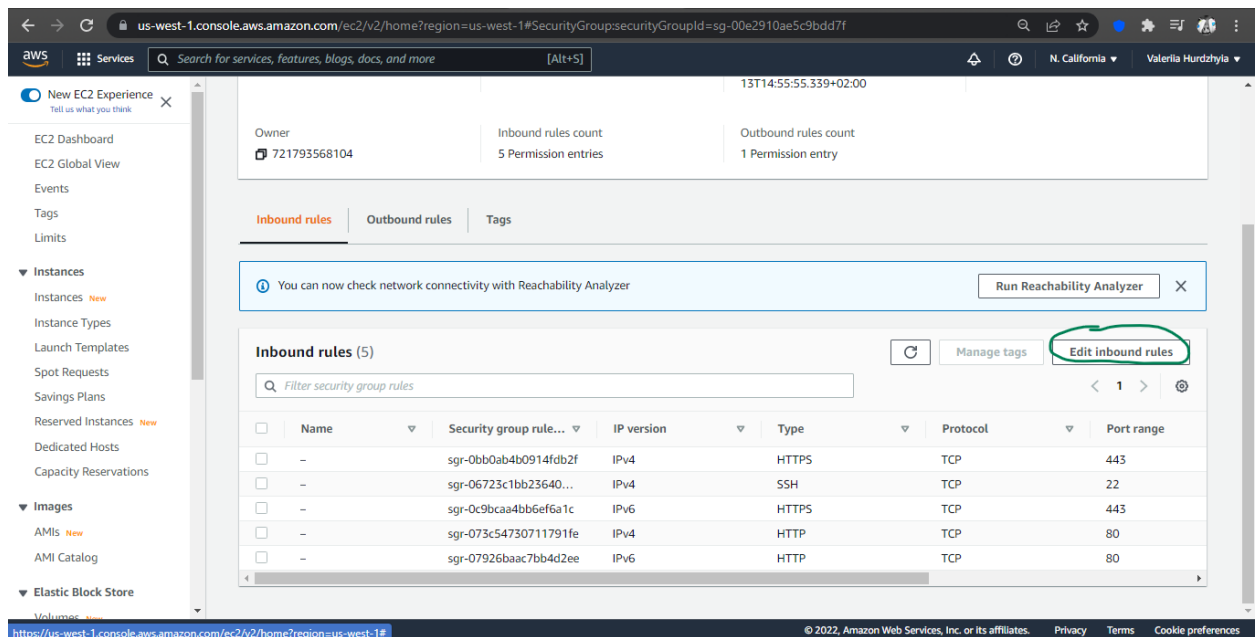
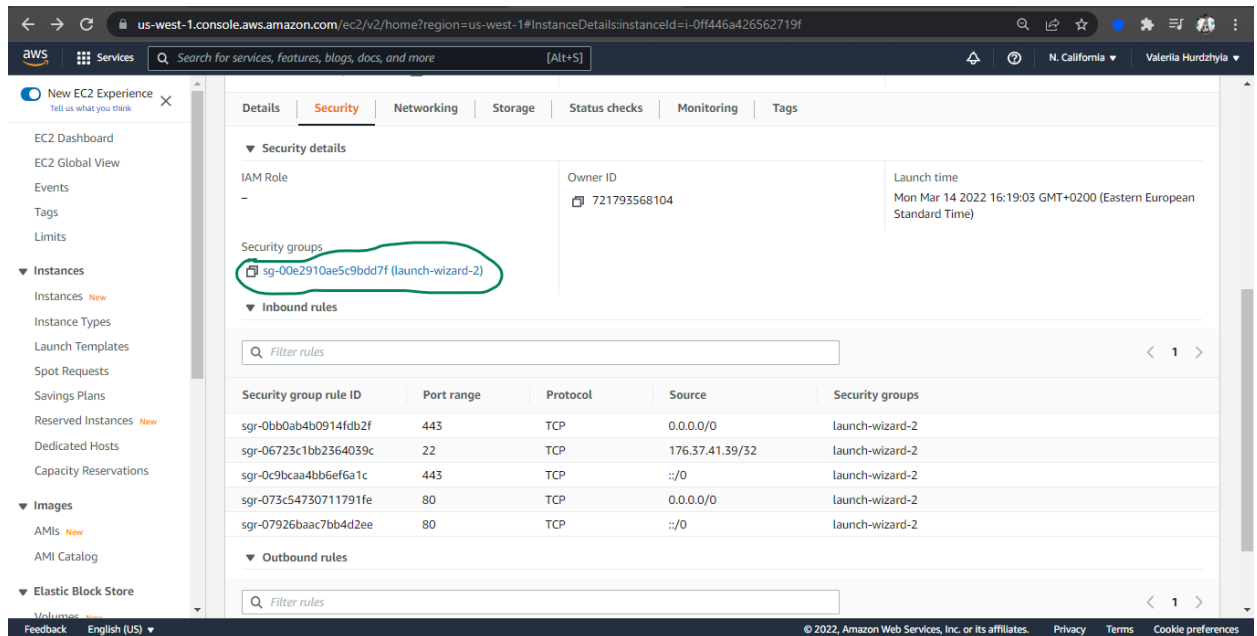
Retry

i-0ff446a426562719f (WebServer-LINUX)

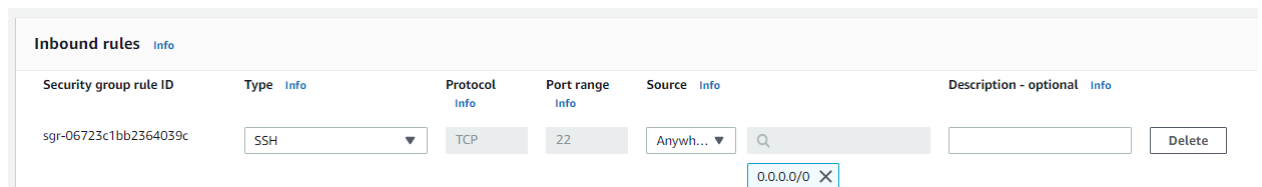
Public IPs: 54.193.103.219 Private IPs: 172.31.11.110

## Рішення

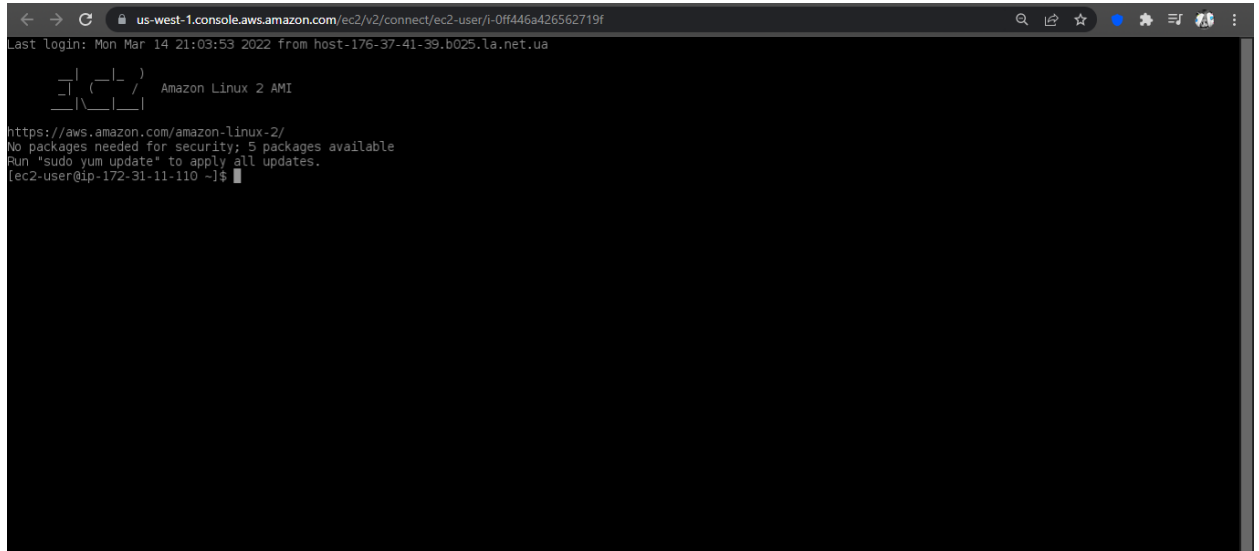
### Клацнули на instance id



Зробили так, щоб доступ через SSH був не через мій IP, а через усі



Після цього змогли отримати доступ



i-0ff446a426562719f (WebServer-LINUX)

Public IPs: 54.193.103.219 Private IPs: 172.31.11.110

Також не вдалося отримати доступ через SSM, але на жаль рішення мені не вдалося знайти

