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Національний технічний університет
«Дніпровська політехніка»**



**ЗВІТ
з виконання практичної роботи
з дисципліни
«Аналіз програмного забезпечення»**

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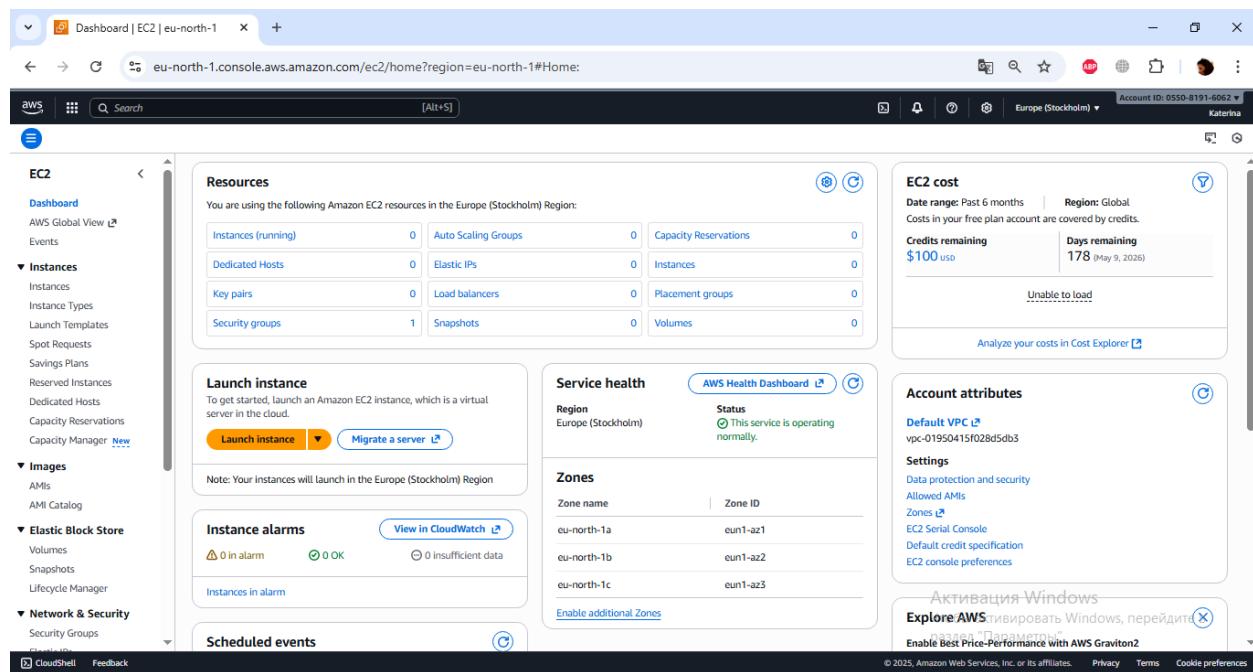
**Дніпро
2025**

Практична робота №5

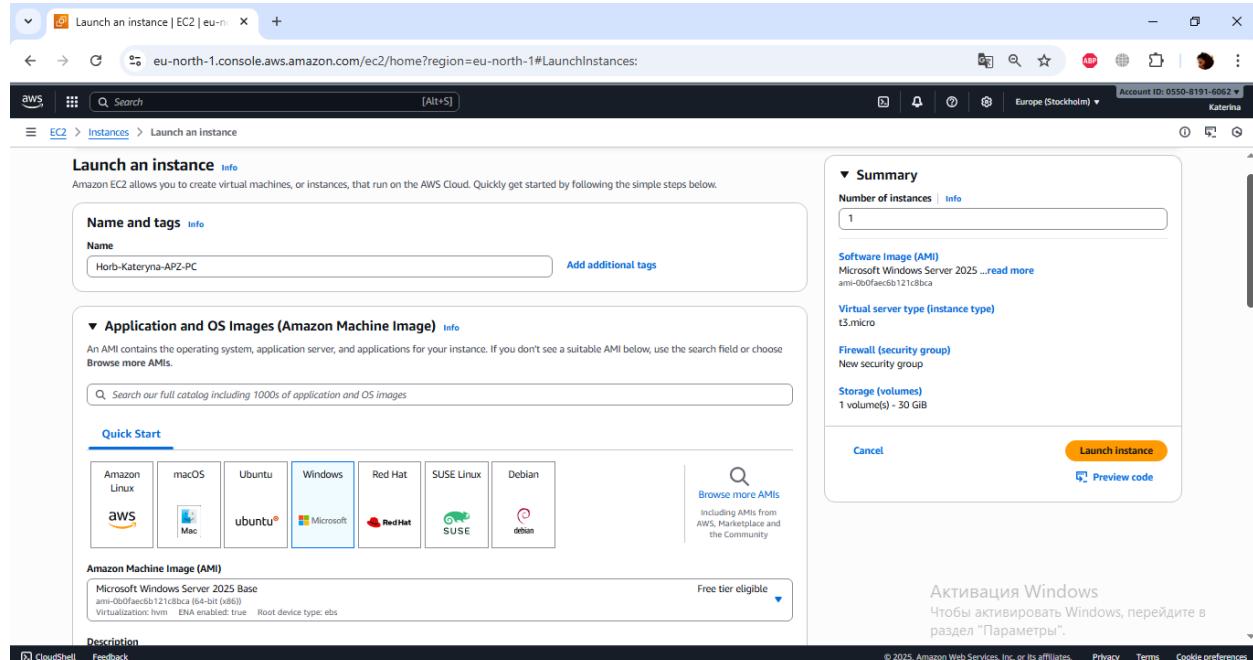
Тема роботи: AWS EC2.

Мета роботи: набування навичок у створенні і підключенні до віддаленого комп’ютера за допомогою AWS EC2.

1. Налаштuvати та створити віддалений комп’ютер.



The screenshot shows the AWS EC2 Dashboard for the Europe (Stockholm) Region. The left sidebar includes links for Dashboard, Instances, Images, Elastic Block Store, Network & Security, and CloudShell. The main area displays 'Resources' such as Instances (running), Auto Scaling Groups, Capacity Reservations, Dedicated Hosts, Elastic IPs, Instances, Key pairs, Load balancers, Placement groups, Security groups, Snapshots, and Volumes. It also shows 'Launch instance' and 'Instance alarms' sections. The 'Service health' section indicates that the service is operating normally. The 'Account attributes' section shows the Default VPC (vpc-01950415f028d5db) and other settings. A sidebar on the right provides information about EC2 cost and credits remaining (\$100 USD, 178 days until May 9, 2026).



The screenshot shows the 'Launch an instance' wizard. Step 1: Name and tags. It asks for a name (Horb-Katerina-APZ-PC) and allows adding additional tags. Step 2: Application and OS Images (Amazon Machine Image). It lists various AMIs including Microsoft Windows Server 2025 Base (ami-050fae5b121c8bca) and others like macOS, Ubuntu, Windows, Red Hat, SUSE Linux, and Debian. Step 3: Quick Start, showing icons for Amazon Linux, macOS, Ubuntu, Windows, Red Hat, SUSE Linux, and Debian. Step 4: Summary, showing 1 instance. Step 5: Software Image (AMI) selected as Microsoft Windows Server 2025 Base. Step 6: Virtual server type (instance type) selected as t3.micro. Step 7: Firewall (security group) selected as New security group. Step 8: Storage (volumes) selected as 1 volume(s) - 30 GB. Step 9: Launch Instance button. A sidebar on the right provides activation instructions for Windows.

Launch an instance | EC2 | eu-north-1

eu-north-1.console.aws.amazon.com/ec2/home?region=eu-north-1#LaunchInstances:

Instances > Launch an instance

Description: Microsoft Windows 2025 Datacenter edition. [English]

Architecture: 64-bit (x86)

AMI ID: ami-0b0faec6b121c8bca

Publish Date: 2025-10-17

Username: Administrator

Verified provider

Instance type: m7i-flex.large

Family: m7i

2 vCPU, 8 GiB Memory

Current generation: true

On-Demand Linux base pricing: 0.10175 USD per Hour

On-Demand Ubuntu Pro base pricing: 0.10525 USD per Hour

On-Demand RHEL base pricing: 0.13055 USD per Hour

On-Demand Windows base pricing: 0.18915 USD per Hour

On-Demand SUSE base pricing: 0.15805 USD per Hour

Free tier eligible

All generations

Compare instance types

Additional costs apply for AMIs with pre-installed software

Key pair (login): Select

Create new key pair

Network settings: Edit

Summary: Number of instances: 1

Software Image (AMI): Microsoft Windows Server 2025 ...read more

ami-0b0faec6b121c8bca

Virtual server type (instance type): m7i-flex.large

Firewall (security group): New security group

Storage (volumes): 1 volume(s) - 30 GiB

Cancel

Launch instance

Preview code

Активация Windows

Чтобы активировать Windows, перейдите в раздел "Параметры".

Launch an instance | EC2 | eu-north-1

eu-north-1.console.aws.amazon.com/ec2/home?region=eu-north-1#LaunchInstances:

Instances > Launch an instance

Key pair (login): Info

Key pair name - required: Select

Create new key pair

Network settings: Network, Subnet, Auto-assign public IP, Firewall (security groups)

Create key pair

Key pair name: keyhborforapz

Key pair type: RSA

Private key file format: .pem

When prompted, store the private key in a secure and accessible location on your computer. You will need it later to connect to your instance. Learn more

Summary: Number of instances: 1

Software Image (AMI): Microsoft Windows Server 2025 ...read more

ami-0b0faec6b121c8bca

Virtual server type (instance type): m7i-flex.large

Firewall (security group): New security group

Storage (volumes): 1 volume(s) - 30 GiB

Cancel

Launch instance

Preview code

Активация Windows

Чтобы активировать Windows, перейдите в раздел "Параметры".

Launch an instance | EC2 | eu-north-1

eu-north-1.console.aws.amazon.com/ec2/home?region=eu-north-1#LaunchInstances:

Key pair (login) info

Key pair name - required: keyfororapz

Network settings info

Network: vpc-01950415f028d5db3

Subnet: No preference (Default subnet in any availability zone)

Auto-assign public IP: Enabled

Firewall (security groups) info

Create security group: Create security group

Allow RDP traffic from: Anywhere (0.0.0.0/0)

Allow HTTPS traffic from the internet: To set up an endpoint, for example when creating a web server

Allow HTTP traffic from the internet: To set up an endpoint, for example when creating a web server

Summary

Number of instances: 1

Software Image (AMI): Microsoft Windows Server 2025 ...read more

Virtual server type (instance type): m7i-flex.large

Firewall (security group): New security group

Storage (volumes): 1 volume(s) - 30 GiB

Cancel Launch instance Preview code

Launch an instance | EC2 | eu-north-1

eu-north-1.console.aws.amazon.com/ec2/home?region=eu-north-1#LaunchInstances:

Allow RDP traffic from: Anywhere (0.0.0.0/0)

Allow HTTPS traffic from the internet: To set up an endpoint, for example when creating a web server

Allow HTTP traffic from the internet: To set up an endpoint, for example when creating a web server

Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

Configure storage info

Root volume: 30 GiB gp3

Add new volume

Click refresh to view backup information

Advanced details info

Summary

Number of instances: 1

Software Image (AMI): Microsoft Windows Server 2025 ...read more

Virtual server type (instance type): m7i-flex.large

Firewall (security group): New security group

Storage (volumes): 1 volume(s) - 30 GiB

Cancel Launch instance Preview code

The screenshot shows the AWS EC2 'Launch an instance' page. At the top, a green success message box says: 'Success Successfully initiated launch of instance (i-0ad9a69a6f6020fc6)'. Below it, a 'Launch log' button is visible. A 'Next Steps' section contains several cards: 'Create billing usage alerts', 'Connect to your instance', 'Connect an RDS database', 'Create EBS snapshot policy', 'Manage detailed monitoring', 'Create Load Balancer', 'Create AWS budget', and 'Manage CloudWatch alarms'. Each card has a corresponding 'Create' or 'Learn more' button.

2. Вигляд створеного комп’ютера.

The screenshot shows the AWS EC2 'Instance details' page for the instance i-0ad9a69a6f6020fc6. The left sidebar shows the navigation menu under the 'EC2' section, including 'Instances' (selected), 'Images', 'Elastic Block Store', and 'Network & Security'. The main content area displays the 'Instance summary' for the instance. Key details include:

- Instance ID:** i-0ad9a69a6f6020fc6
- Public IPv4 address:** 13.61.190.120 (with a 'Connect' button)
- Private IP DNS name (IPv4 only):** ip-172-31-18-89.eu-north-1.compute.internal
- Instance state:** Running
- VPC ID:** vpc-01950415f028d5b3
- Subnet ID:** subnet-0293fd27108281369
- Instance ARN:** arn:aws:ec2:eu-north-1:055081916062:instance/i-0ad9a69a6f6020fc6
- Private IPv4 addresses:** 172.31.18.89
- Public DNS:** ec2-13-61-190-120.eu-north-1.compute.amazonaws.com (with a 'Connect' button)
- Elastic IP addresses:** -
- AWS Compute Optimizer finding:** Opt-in to AWS Compute Optimizer for recommendations. | Learn more
- Auto Scaling Group name:** -
- Managed:** false

At the bottom, there are tabs for 'Details' (selected), 'Status and alarms', 'Monitoring', 'Security', 'Networking', 'Storage', and 'Tags'. A note about activating Windows is present at the bottom right.

Screenshot of the AWS EC2 Instance Details page for instance i-0ad9a69a6f6020fc6.

Details Tab (Selected):

- AMI ID:** ami-0b0faec6b121c8bc
- AMI name:** Windows_Server-2025-English-Full-Base-2025.10.15
- Stop protection:** Disabled
- Instance reboot migration:** Default (On)
- Stop-hibernate behavior:** Disabled
- State transition reason:** -
- Owner:** 055081916062
- Current instance boot mode:** uefi
- Answer RBN DNS hostname IPv4:** Enabled
- Monitoring:** disabled
- Allowed image:** -
- Launch time:** Wed Nov 12 2025 11:40:05 GMT+0200 (Восточная Европа, стандартное время) (1 minute)
- Instance auto-recovery:** Default
- AMI Launch index:** 0
- Credit specification:** Not supported by instance type
- Usage operation:** RunInstances:0002
- Enclaves Support:** Disabled
- Allow tags in instance metadata:** Disabled
- Platform details:** Windows
- Termination protection:** Disabled
- AMI location:** amazon/Windows_Server-2025-English-Full-Base-2025.10.15
- Lifecycle:** normal
- Key pair assigned at launch:** keyborforapz
- Kernel ID:** -
- RAM disk ID:** -
- Boot mode:** uefi
- Use RBN as guest OS hostname:** Disabled

Activation Windows: Чтобы активировать Windows, перейдите в раздел "Параметры".

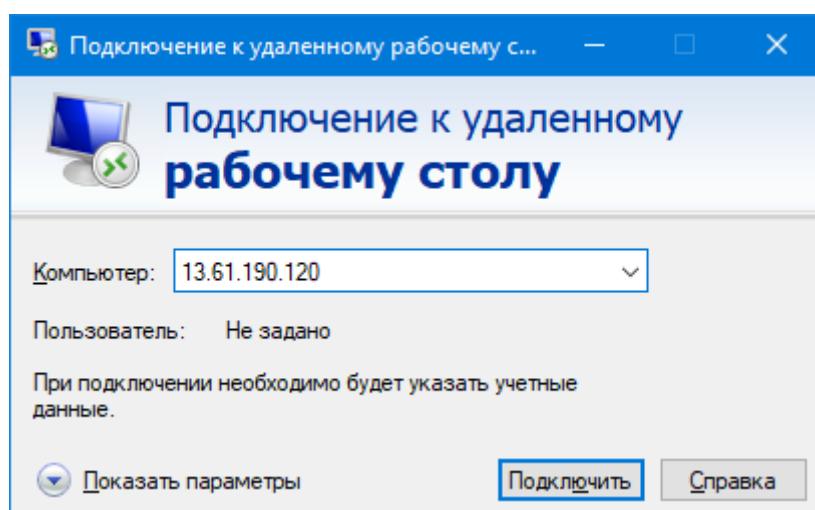
Screenshot of the AWS EC2 Instance Details page for instance i-0ad9a69a6f6020fc6.

Host and placement group Tab:

- State transition reason:** -
- State transition message:** -
- Owner:** 055081916062
- Current instance boot mode:** uefi
- Answer RBN DNS hostname IPv4:** Enabled
- Host ID:** -
- Affinity:** -
- Placement group:** -
- Host resource group name:** -
- Tenancy:** default
- Placement group ID:** -
- Virtualization type:** hvm
- Reservation:** r-06d32875d100edb0b
- Number of vCPUs:** 2
- Partition number:** -
- Capacity reservation:** Capacity Reservation ID: -
- Capacity Reservation setting:** open

Activation Windows: Чтобы активировать Windows, перейдите в раздел "Параметры".

3. Підключення до створеного комп'ютера.



Launch an instance | EC2 | eu-north-1 **Get windows password | EC2 | eu-north-1**

eu-north-1.console.aws.amazon.com/ec2/home?region=eu-north-1#GetWindowsPassword:instanceId=i-0ad9a69a6f6020fc6

AWS Search [Alt+S]

EC2 > Instances > i-0ad9a69a6f6020fc6 > Get Windows password

Get Windows password Info

Use your private key to retrieve and decrypt the initial Windows administrator password for this instance.

Instance ID: i-0ad9a69a6f6020fc6 (Horb-Kateryna-APZ-PC)

Key pair associated with this instance: keyhorbforapz

Private key: Either upload your private key file or copy and paste its contents into the field below.

Upload private key file (keyhorbforapz.pem, 1.674KB)

Private key contents - optional:

```
-----BEGIN RSA PRIVATE KEY-----
MIIEowIBAAKCAQDy7owdy/X8D0LYLHvHRA1WcpnaSsdcn3VtjfmuOr5Wgp3
9kgc3UmlmW5pwHUOXICsn2s-LJLm1505-9E/0QJO.LduXae3l8qWPxGvQc
iJgjMvT5B4u24n-24nJNvUr-uhD9-24a2NBDBfsluL93q+UNG1u3z)1/V
9fNT4y+kOrhimbKJ4DL/buJkGpClnQDoxu78sv/kO/X4n2tCLe+QG3A11aF/s
8MsTaVxshwdb5dQIMr9AE0vymBzcZL86PEYfGgG05fri3zooXv5pMw7Vp
Lf3h8vB0sg06Hjd9/SEk/B+yv5gJ9YkGWVdwIDAQABaJlBAQxCwOp8AGZfOvwza
tPM1sWt/WehXKtNOEQxtBKMR1TgX6pxE9P57BqHGl3/I02GA3GsrdxHu8DF58
```

Cancel Decrypt password

Активация Windows
Чтобы активировать Windows, перейдите в раздел "Параметры".

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Launch an instance | EC2 | eu-north-1 **Get windows password | EC2 | eu-north-1**

eu-north-1.console.aws.amazon.com/ec2/home?region=eu-north-1#GetWindowsPassword:instanceId=i-0ad9a69a6f6020fc6

AWS Search [Alt+S]

EC2 > Instances > i-0ad9a69a6f6020fc6 > Get Windows password

Get Windows password Info

Use your private key to retrieve and decrypt the initial Windows administrator password for this instance.

Instance ID: i-0ad9a69a6f6020fc6 (Horb-Kateryna-APZ-PC)

Key pair associated with this instance: keyhorbforapz

Private key: Either upload your private key file or copy and paste its contents into the field below.

Upload private key file (keyhorbforapz.pem)

Private key contents - optional:

Get Windows password

Connect to your Windows instance using Remote Desktop with this information.

Instance ID: i-0ad9a69a6f6020fc6 (Horb-Kateryna-APZ-PC)

Private IP address: 172.31.18.89

Username: Administrator

Password: u%Awb!Zdvd)YZ9Wbi)h8xFPI!OnfduuF

Passwd change recommended
We recommend that you change your default password. Note: If a default password is changed, it cannot be retrieved using this tool. It is important that you change your password to one that you will remember.

Cancel OK

Активация Windows
Чтобы активировать Windows, перейдите в раздел "Параметры".

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Результатом роботи

IP

13.61.190.120

Username

Administrator

Password

u%Awb!Zdvd)YZ9Wbi)h8xFPI!OnfduuF