

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
НАЦІОНАЛЬНИЙ ТЕХНІЧНИЙ УНІВЕРСИТЕТ
«ДНІПРОВСЬКА ПОЛІТЕХНІКА»



Національний
технічний університет
ДНІПРОВСЬКА
ПОЛІТЕХНІКА
1899



ФАКУЛЬТЕТ ІНФОРМАЦІЙНИХ ТЕХНОЛОГІЙ

Кафедра системного аналізу та управління

Лабораторна робота 5

з дисципліни
«Аналіз програмного забезпечення»

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Дніпро
2025

Лабораторна робота 5

AWS EC2

Мета: набуття навичок у створенні і підключення до віддаленого комп'ютера за допомогою AWS EC2.

Налаштування та створення віддаленого комп'ютера:

The screenshot shows the AWS EC2 console interface. On the left, a navigation sidebar lists categories like Dashboard, Instances, Images, and Elastic Block Store. The main area displays 'Resources' usage statistics and a 'Launch instance' section. A central panel shows 'Service health' information. To the right, there's a 'EC2 cost' summary and 'Account attributes'. At the bottom, a detailed view of an 'Amazon Machine Image (AMI)' for Microsoft Windows Server 2025 Base is shown, including its description, architecture, AMI ID, publish date, and owner information.

Resources
You are using the following Amazon EC2 resources in the Europe (Stockholm) Region:

| | | | | | |
|---------------------|---|---------------------|---|-----------------------|---|
| Instances (running) | 0 | Auto Scaling Groups | 0 | Capacity Reservations | 0 |
| Dedicated Hosts | 0 | Elastic IPs | 0 | Instances | 0 |
| Key pairs | 0 | Load balancers | 0 | Placement groups | 0 |
| Security groups | 1 | Snapshots | 0 | Volumes | 0 |

Launch instance
To get started, launch an Amazon EC2 instance, which is a virtual server in the cloud.

Service health
AWS Health Dashboard

EC2 cost
Date range: Past 6 months
Region: Global
Costs in your free plan account are covered by credits.
Credits remaining: \$100 USD
Days remaining: 165 (May 3, 2026)
Unable to load
Analyze your costs in Cost Explorer

Account attributes
Default VPC vpc-06ab652f50f2b52b0
Settings Data protection and security

Instances
Launch an instance

Images
AMIs
AMI Catalog

Elastic Block Store

CloudShell Feedback Console Mobile App

Application and OS Images (Amazon Machine Image)
An AMI contains the operating system, application server, and applications for your instance. If you don't see a suitable AMI below, use the search field or choose Browse more AMIs.

Quick Start

| | | | | | | |
|--------------|-------|--------|---------|---------|------------|--------|
| Amazon Linux | macOS | Ubuntu | Windows | Red Hat | SUSE Linux | Debian |
|--------------|-------|--------|---------|---------|------------|--------|

Amazon Machine Image (AMI)

Microsoft Windows Server 2025 Base
ami-010e40c6557403885 (64-bit (x86))
Virtualization: hvm ENA enabled: true Root device type: ebs

Description
Microsoft Windows 2025 Datacenter edition. [English]

Microsoft Windows Server 2025 Full Locale English AMI provided by Amazon

| Architecture | AMI ID | Publish Date | Username |
|--------------|-----------------------|--------------|---------------|
| 64-bit (x86) | ami-010e40c6557403885 | 2025-11-12 | Administrator |

Verified provider

Create key pair



Key pair name

Key pairs allow you to connect to your instance securely.

The name can include up to 255 ASCII characters. It can't include leading or trailing spaces.

Key pair type

RSA

RSA encrypted private and public key pair

ED25519

ED25519 encrypted private and public key pair (Not supported for Windows instances)

Private key file format

.pem

For use with OpenSSH

.ppk

For use with PuTTY

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 ↗](#)

[Cancel](#)[Create key pair](#)

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[Cancel](#)[Create key pair](#)

Key pair name - required

keynebatovapz

[Create new key pair](#)

For Windows instances, you use a key pair to decrypt the administrator password. You then use the decrypted password to connect to your instance.

▼ Network settings [Info](#)[Edit](#)[Network](#) | [Info](#)

vpc-06ab662f50f2b52b0

[Subnet](#) | [Info](#)

No preference (Default subnet in any availability zone)

[Auto-assign public IP](#) | [Info](#)

Enable

[Firewall \(security groups\)](#) | [Info](#)

A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

 [Create security group](#) [Select existing security group](#)We'll create a new security group called '**launch-wizard-1**' with the following rules: [Allow RDP traffic from](#)

Helps you connect to your instance

Anywhere

0.0.0.0/0

 [Allow HTTPS traffic from the internet](#)

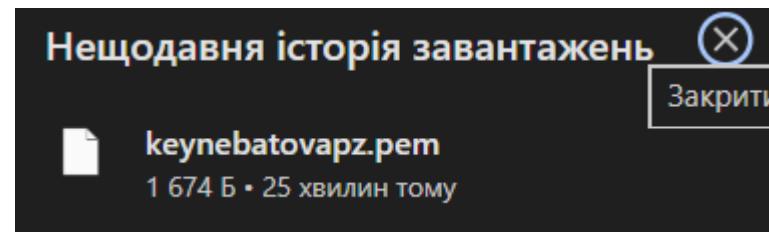
To set up an endpoint, for example when creating a web server

 [Allow HTTP traffic from the internet](#)

To set up an endpoint, for example when creating a web server

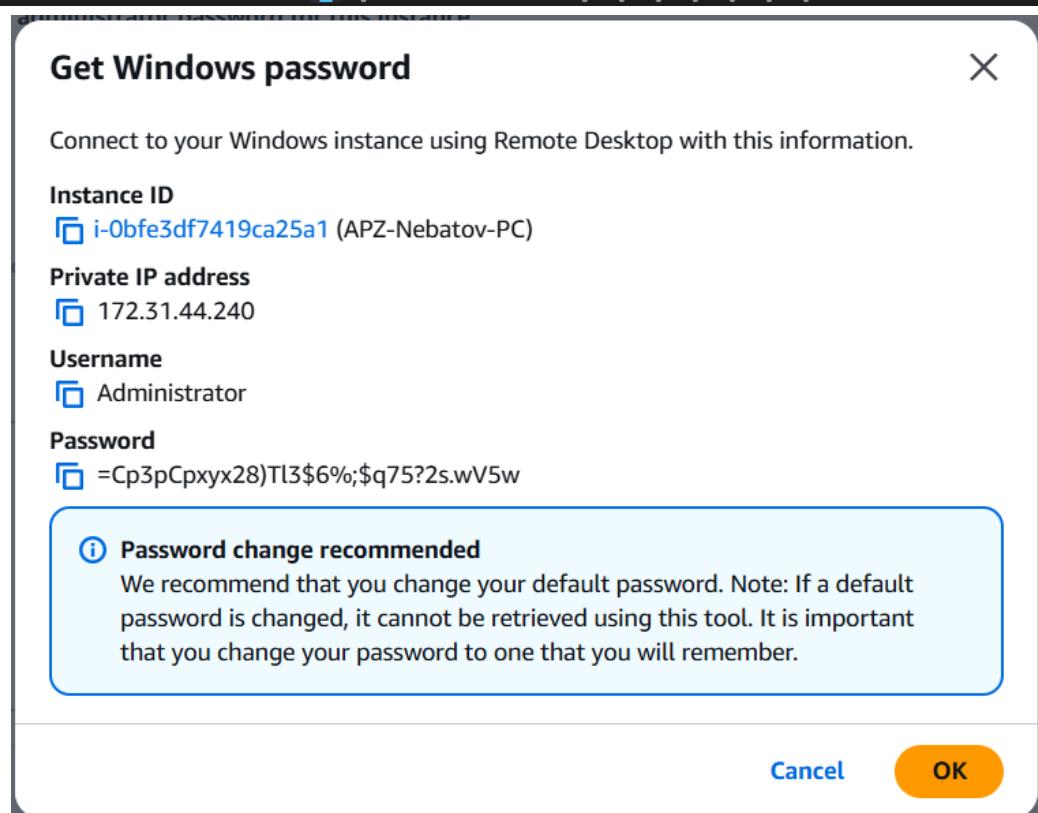
⚠ Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

The screenshot shows the AWS EC2 Instances launch wizard. The user has selected a VPC and subnet. Under 'Network settings', they have chosen to 'Auto-assign public IP'. In the 'Firewall (security groups)' section, they are creating a new security group named 'launch-wizard-1'. They have selected the 'Allow RDP traffic from' rule, which is set to 'Anywhere' (0.0.0.0/0). A note at the bottom of this section advises against using 0.0.0.0/0 and recommends setting security group rules to allow access from known IP addresses only. Below this, a green success message indicates the instance launch was successful. The 'Next Steps' section provides links to create billing alerts, connect to the instance, connect to an RDS database, and create EBS snapshot policies. The browser's address bar shows the URL for launching an instance in the eu-north-1 region.



The screenshot shows a browser window with multiple tabs open, including 'eu-north-1.console.aws.amazon.com/ec2/home?region=eu-north-1#GetWindowsPassword:instanceId=i-0bfe3df7419ca25a1'. The main content area is titled 'Get Windows password' and contains instructions: 'Use your private key to retrieve and decrypt the initial Windows administrator password for this instance.' It displays the 'Instance ID' (i-0bfe3df7419ca25a1) and 'Key pair associated with this instance' (keynebatovapz). A 'Private key' section shows a file named 'keynebatovapz.pem' (1.67 KB) with a download link. Below it is a large text block containing the RSA PRIVATE KEY content.

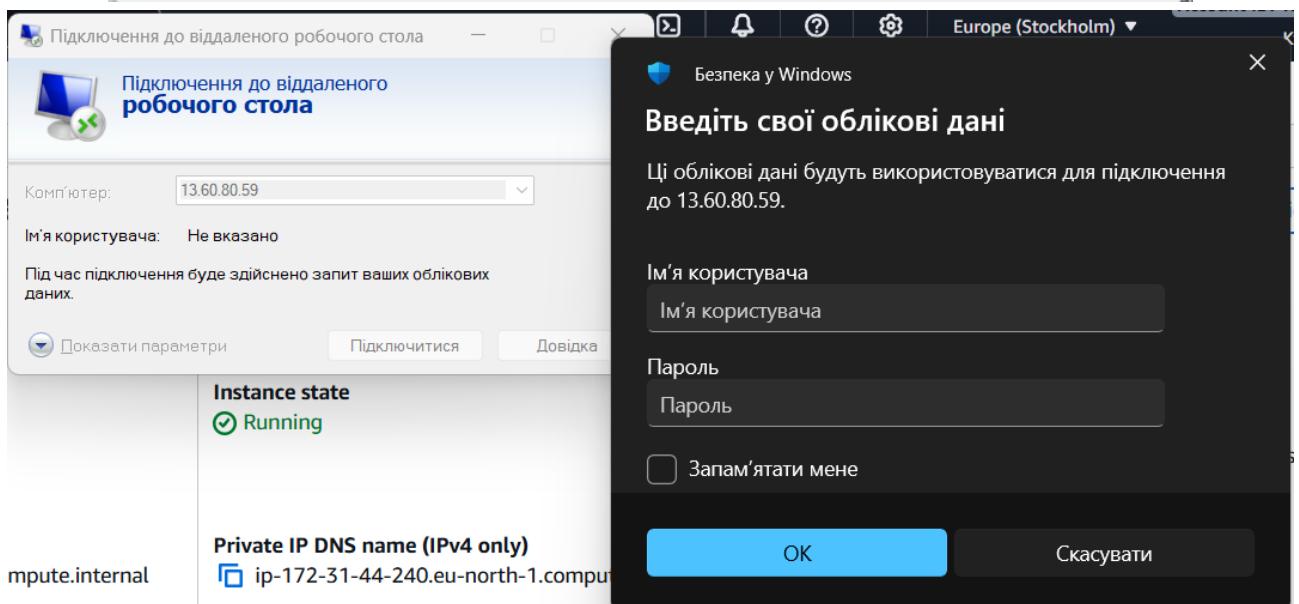
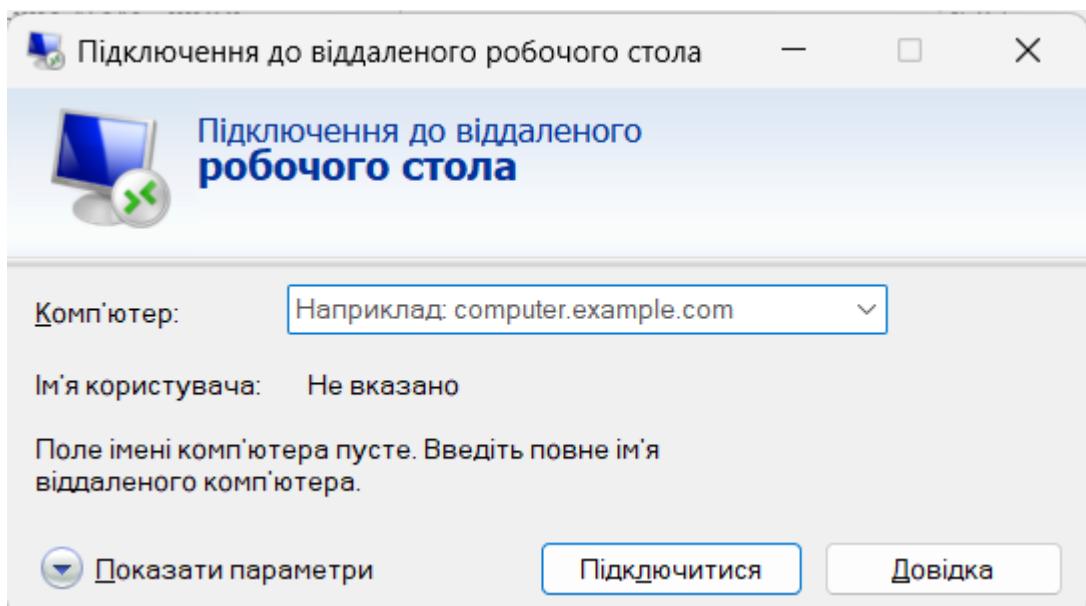
```
-----BEGIN RSA PRIVATE KEY-----  
MIIEglBAKCAQEtAqgmRVk4IN+nTImyo4cGMAss85Qh2vGnPdfpDUjXzPBVRYs  
MxexfO2cq5pAPkomLeTbBg4TFrdtN6qnxBvHeYWMVNzawf3WGyXgOK8CF+rjn/  
JkGsaPaf+cJwlo5Zkqqq1PLJf+2jPQLhrulf5AZPOJB+pqNs9B15gCPujru  
+M0933efyS8Nzmccz7MSmTT87zjB17MvaT0tnthzfXlvrgoa/J3fhDiyd  
OurD+un/GGRjmdoDUEqdwQOkz1x3K7U3hndM4o0QAuoz52/s+axRV80QT6d  
915YMUuHotH154dwU8pxFQx7pn7syraAh9BcwIDAQABAoIBAADCPGBmrRToNs5Q  
NvkAPf2cpN0Oe+++QOyQyNbVRpADL1dqjFMF+B82/maWknnsOCr4nzT8IBWAo4I
```



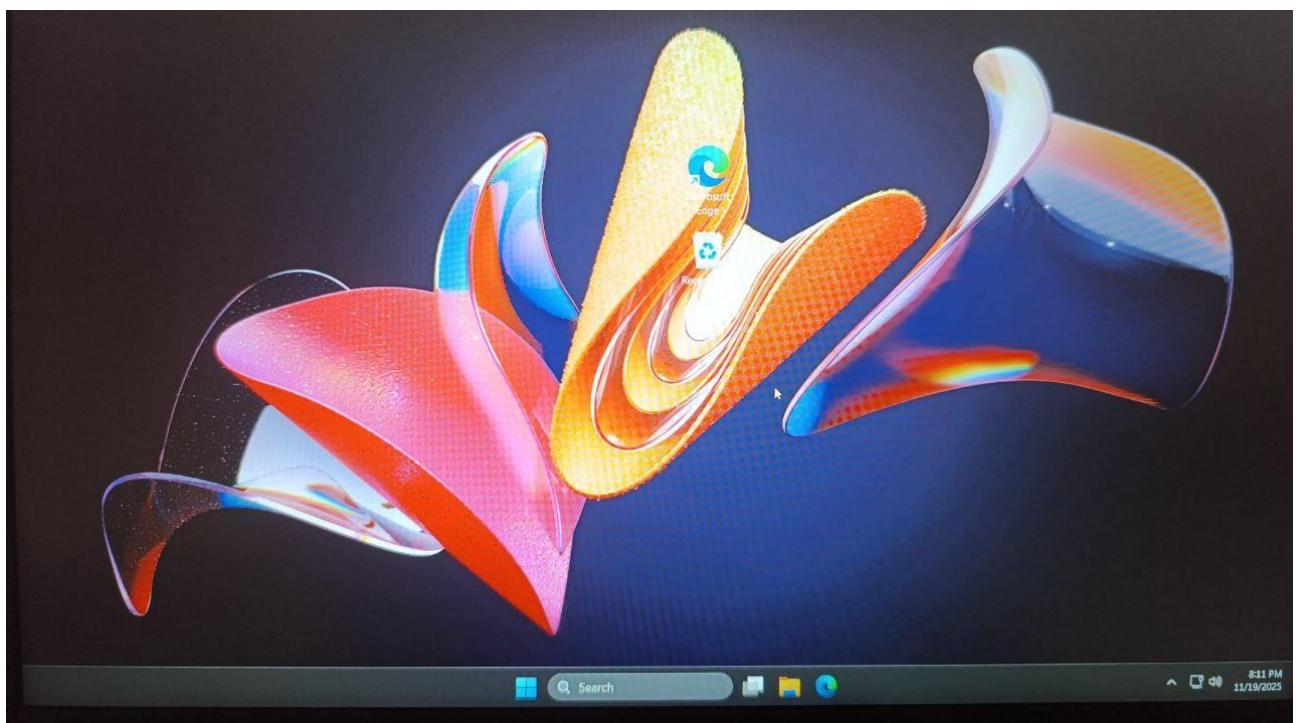
Вигляд створеного комп'ютера:

| Details | Status and alarms | Monitoring | Security | Networking | Storage | Tags |
|---|---|--|----------|------------|---------|------|
| ▼ Instance details Info | | | | | | |
| AMI ID ami-010e40c6557403885 | Monitoring disabled | Platform details Windows | | | | |
| AMI name Windows_Server-2025-English-Full-Base-2025.11.12 | Allowed image - | Termination protection Disabled | | | | |
| Stop protection Disabled | Launch time Wed Nov 19 2025 21:30:13 GMT+0200 (за східноєвропейським стандартним часом) (2 minutes) | AMI location amazon/Windows_Server-2025-English-Full-Base-2025.11.12 | | | | |
| Instance reboot migration Default (On) | Instance auto-recovery Default | Lifecycle normal | | | | |
| Stop-hibernate behavior Disabled | AMI Launch index 0 | Key pair assigned at launch keynebatovapz | | | | |
| State transition reason - | Credit specification unlimited | Kernel ID - | | | | |
| State transition message - | Usage operation RunInstances:0002 | RAM disk ID - | | | | |
| Owner 191280370967 | Enclaves Support Disabled | Boot mode uefi | | | | |
| Current instance boot mode uefi | Allow tags in instance metadata Disabled | Use RBN as guest OS hostname Disabled | | | | |
| Answer RBN DNS hostname IPv4 Enabled | | | | | | |
| ▼ Host and placement group Info | | | | | | |
| Host ID - | Affinity - | Placement group - | | | | |
| Host resource group name - | Tenancy default | Placement group ID - | | | | |
| Virtualization type hvm | Reservation r-072d6194a9d1f14aa | Partition number - | | | | |
| Number of vCPUs 2 | | | | | | |
| ▼ Capacity reservation Info | | | | | | |
| Capacity Reservation ID - | Capacity Reservation setting open | | | | | |

Підключення до комп'ютера:



Змінююмо візуальні налаштування:



Результати:

IP: 13.60.80.59

Private IP address: 172.31.44.240

Username: Administrator

Password: =Cp3pCpxyx28)Tl3\$6%;\$q75?2s.wV5w