

# Unit 3

## Пункт перший

Мені потрібно налаштувати базові параметри своєї віртуальної машини. Якщо деякі з опцій на цьому етапі мені незнайомі, це нормально. Ми опишемо всі ці опції у майбутньому модулі. Я можу скопіювати значення, які використовуються тут.

На вкладці Основне вводжу наступні значення для кожного параметра.

Microsoft Azure

Search resources, services, and docs (G+)

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MICROSOFT LEARN LABBOOK

Home > Virtual machines >

Create a virtual machine

Basics | Disks | Networking | Management | Monitoring | Advanced | Tags | Review + create

Create a virtual machine that runs Linux or Windows. Select an image from Azure marketplace or use your own customized image. Complete the Basics tab then Review + create to provision a virtual machine with default parameters or review each tab for full customization. [Learn more](#)

Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription \* 

Concierge Subscription

Resource group \* 

learn-e3b9d632-ecf3-44b5-9907-8b3fc5ee58a5

Create new

Instance details

Virtual machine name \* 

panchenko-serhiy

Region \* 

(US) North Central US

Availability options 

No infrastructure redundancy required

Security type 

Standard

Image \* 

Ubuntu Server 20.04 LTS - x64 Gen2

See all images | Configure VM generation

☒ This image is compatible with additional security features. [Click here to swap to the Trusted launch security type.](#)

VM architecture 

☐ Arm64

☒ x64

Review + create

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Security type 

Standard

Image \* 

Ubuntu Server 20.04 LTS - x64 Gen2

See all images | Configure VM generation

☒ This image is compatible with additional security features. [Click here to swap to the Trusted launch security type.](#)

VM architecture 

☐ Arm64

☒ x64

Run with Azure Spot discount 

☐

Size \* 

Standard\_D2s\_v3 - 2 vcpus, 8 GiB memory (\$73.00/month)

See all sizes

Item(s) availability based on policy assignment(s) for the selected scope.

1ba712d0-8089-7ba5-e106-f279dfda658/Microsoft.Authorization/vm-assignment (Policy details)

Enable Hibernation (preview) 

☐

To enable Hibernation, you must register your subscription. [Learn more](#)

Administrator account

Authentication type 

☒ SSH public key

☐ Password

Azure now automatically generates an SSH key pair for you and allows you to store it for future use. It is a fast, simple, and secure way to connect to your virtual machine.

Review + create

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Create a virtual machine

Item(s) availability based on policy assignment(s) for the selected scope.  
1ba712d0-8089-7ba5-e106-fc759dfda658/Microsoft.Authorization/vm-assignment  
(Policy details)

Enable Hibernation (preview) ☐

To enable Hibernation, you must register your subscription. [Learn more](#)

Administrator account

Authentication type ☒ SSH public key  
☐ Password

Azure now automatically generates an SSH key pair for you and allows you to store it for future use. It is a fast, simple, and secure way to connect to your virtual machine.

Username \*

SSH public key source

Key pair name \*

Inbound port rules

Select which virtual machine network ports are accessible from the public internet. You can specify more limited or granular network access on the Networking tab.

Public inbound ports \* ☐ None  
☒ Allow selected ports

Select inbound ports \*

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Authentication type ☒ SSH public key  
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Username \*

SSH public key source

Key pair name \*

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Public inbound ports \* ☐ None  
☒ Allow selected ports

Select inbound ports \*

Review > create

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Give feedback

## Пункт другий та третій

Є кілька інших вкладок, які я можу дослідити, щоб побачити налаштування, які я можу змінювати під час створення ВМ. Після завершення огляду вибираю Перегляд + створення, щоб перевірити та підтвердити налаштування.

Azure перевіряє налаштування конфігурації для ресурсу, перш ніж створити його. Можливо, мені доведеться надати додаткову інформацію згідно з вимогами творця образу, вбудованого в Azure. Це просто; просто відкриваю вкладку, на якій є помилка. Перевіряю, що всі налаштування встановлені так, як я хочу, а потім вибираю Створити, щоб розгорнути та створити ВМ.

Microsoft Azure

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Create a virtual machine

Validation passed

BasicsDisksNetworkingManagementMonitoringAdvancedTagsReview + create

Cost given below is an estimate and not the final price. Please use [Pricing calculator](#) for all your pricing needs.

Price

1 X Standard D2s v3  
by Microsoft  
[Terms of use](#) | [Privacy policy](#)

Subscription credits apply  
**0.1000 USD/hr**  
[Pricing for other VM sizes](#)

TERMS

By clicking "Create", I (a) agree to the legal terms and privacy statement(s) associated with the Marketplace offering(s) listed above; (b) authorize Microsoft to bill my current payment method for the fees associated with the offering(s), with the same billing frequency as my Azure subscription; and (c) agree that Microsoft may share my contact, usage and transactional information with the provider(s) of the offering(s) for support, billing and other transactional activities. Microsoft does not provide rights for third-party offerings. See the [Azure Marketplace Terms](#) for additional details.

Name

Serhii Panchenko

Preferred e-mail address

panchenko.serhiy@ill.kpi.ua

Preferred phone number

You have set SSH port(s) open to the internet. This is only recommended for testing. If you want to change this setting, go back to Basics tab.

Create

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Validation passed

Preferred e-mail address

panchenko.serhiy@ill.kpi.ua

Preferred phone number

You have set SSH port(s) open to the internet. This is only recommended for testing. If you want to change this setting, go back to Basics tab.

Basics

Subscription

Concierge Subscription

Resource group

learn-e3b9d632-ecf3-44b5-9907-8b3fc5ee58a5

Virtual machine name

panchenko-serhiy

Region

North Central US

Availability options

No infrastructure redundancy required

Security type

Standard

Image

Ubuntu Server 20.04 LTS - Gen2

VM architecture

x64

Size

Standard D2s v3 (2 vcpus, 8 GiB memory)

Authentication type

SSH public key

Username

panchenko\_serhiy

Key pair name

panchenko-serhiy\_key

Public inbound ports

SSH

Azure Spot

No

Disks

Create

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Create a virtual machine

Validation passed

Size

Standard D2s v2 (2 vcpus, 8 GiB memory)

Authentication type

SSH public key

Username

panchenko\_serhiy

Key pair name

panchenko-serhiy\_key

Public inbound ports

SSH

Azure Spot

No

Disks

OS disk size

Image default

OS disk type

Premium SSD LRS

Use managed disks

Yes

Delete OS disk with VM

Enabled

Ephemeral OS disk

No

Networking

Virtual network

(new) panchenko-serhiy-vnet

Subnet

(new) default (10.0.0.0/24)

Public IP

None

Accelerated networking

On

Place this virtual machine behind an existing load balancing solution?

No

Delete NIC when VM is deleted

Disabled

Management

Microsoft Defender for Cloud

None

System assigned managed identity

Off

Create

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Give feedback

Microsoft Azure

Search resources, services, and docs (G+I)

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Home > Virtual machines >

Create a virtual machine

Validation passed

Accelerated networking

On

Place this virtual machine behind an existing load balancing solution?

No

Delete NIC when VM is deleted

Disabled

Management

Microsoft Defender for Cloud

None

System assigned managed identity

Off

Login with Azure AD

Off

Auto-shutdown

Off

Enable hotpatch

Off

Patch orchestration options

Image Default

Monitoring

Alerts

Off

Boot diagnostics

On

Enable OS guest diagnostics

Off

Enable application health monitoring

Off

Advanced

Extensions

None

VM applications

None

Cloud init

No

User data

No

Disk controller type

SCSI

Proximity placement group

None

Create

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Microsoft Azure

Search resources, services, and docs (G+/?)

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Create a virtual machine

Validation passed

existing load balancing solution?  
Delete NIC when VM is deleted

Disabled

Management

Microsoft Defender for Cloud

System assigned managed identity

Login with Azure AD

Auto-shutdown

Enable hotpatch

Patch orchestration options

None

Off

Off

Off

Off

Image Default

Monitoring

Alerts

Boot diagnostics

Enable OS guest diagnostics

Enable application health monitoring

Off

On

Off

Off

Advanced

Extensions

VM applications

Cloud init

User data

Disk controller type

Proximity placement group

Capacity reservation group

None

None

No

No

SCSI

None

None

Create

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Give feedback

## Пункт четвертий

Відкривається вікно Генерація нової пари ключів. Вибираю Завантажити приватний ключ і створити ресурс.

Microsoft Azure

Search resources, services, and docs (G+/?)

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Home > Virtual machines >

Create a virtual machine

Validation passed

existing load balancing solution?  
Delete NIC when VM is deleted

Disabled

Management

Microsoft Defender for Cloud

System assigned managed identity

Login with Azure AD

Auto-shutdown

Enable hotpatch

Patch orchestration options

None

Off

Off

Off

Off

Image Default

Monitoring

Alerts

Boot diagnostics

Enable OS guest diagnostics

Enable application health monitoring

Off

On

Off

Off

Advanced

Extensions

VM applications

Cloud init

User data

Disk controller type

Proximity placement group

Capacity reservation group

None

None

No

No

SCSI

None

None

Create

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Download a template for automation

Give feedback

Generate new key pair

An SSH key pair contains both a public key and a private key. Azure doesn't store the private key. After the SSH key resource is created, you won't be able to download the private key again. [Learn more](#)

Download private key and create resource

Return to create a virtual machine

## Пункт п'ятий

Я можу стежити за розгортанням у деталях розгортання на панелі огляду або через панель сповіщень. Вибираю значок сповіщень у верхньому правому інструментальному рядку, щоб показати або приховати панель сповіщень.

Процес розгортання ВМ займає кілька хвилин. Я отримую сповіщення про те, що розгортання вдалося.

Microsoft Azure

Search resources, services, and docs (G+)

Home > CreateVm-canonical.0001-com-ubuntu-server-focal-2-20240218202811 | Overview

Deployment

Search

Delete Cancel Redeploy Download Refresh

Overview

Inputs

Outputs

Template

Deployment is in progress

Deployment name: CreateVm-canonical.0001-com-ubuntu-server-f... Start time: 2/18/2024, 8:36:42 PM  
Subscription: Concierge Subscription Correlation ID: 8ff4c5c2-3829-4fc5-8ae2-345f9817de2e

Resource group: learn-e3b9d632-ecf3-44b5-9907-8b3fc5ee58a5

Deployment details

Resource	Type	Status	Operation details
panchenko-serhii	Microsoft.Compute/virtualMachines	Created	Operation details
panchenko-serhii256	Microsoft.Network/networkInterfaces	Created	Operation details
panchenko-serhii-vnet	Microsoft.Network/virtualNetworks	OK	Operation details
panchenko-serhii-ip	Microsoft.Network/publicIPAddresses	OK	Operation details
panchenko-serhii-nsg	Microsoft.Network/networkSecurityGroups	OK	Operation details

Give feedback

Tell us about your experience with deployment

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Deployment

Search

Delete Cancel Redeploy Download Refresh

Overview

Inputs

Outputs

Template

Your deployment is complete

Deployment name: CreateVm-canonical.0001-com-ubuntu-server-f... Start time: 2/18/2024, 8:36:42 PM  
Subscription: Concierge Subscription Correlation ID: 8ff4c5c2-3829-4fc5-8ae2-345f9817de2e

Resource group: learn-e3b9d632-ecf3-44b5-9907-8b3fc5ee58a5

Deployment details

Next steps

Setup auto-shutdown Recommended

Monitor VM health, performance and network dependencies Recommended

Run a script inside the virtual machine Recommended

Go to resource Create another VM

Give feedback

Tell us about your experience with deployment

Deployment succeeded

Deployment 'CreateVm-canonical.0001-com-ubuntu-server-focal-2-20240218202811' to resource group 'learn-e3b9d632-ecf3-44b5-9907-8b3fc5ee58a5' was successful.

Go to resource Pin to dashboard

Cost Management

Get notified to stay within your budget and prevent unexpected charges on your bill.

Set up cost alerts >

Microsoft Defender for Cloud

Secure your apps and infrastructure

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## Пункт шостий

Вибираю Перейти до ресурсу. З'являється сторінка огляду моєї ВМ.

Тут я можу побачити всю інформацію та опції конфігурації для моєї новоствореної ВМ Ubuntu. Однією з частин інформації є публічна IP-адреса.

Коли я увімкнув аутентифікацію за допомогою публічного ключа SSH на попередньому етапі, інтерфейс користувача також надав опцію для увімкнення SSH. SSH дозволяє мені підключатися до моєї VM через публічну IP-адресу за допомогою будь-якого клієнта SSH.

Microsoft Azure

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panchenko-serhii Virtual machine

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Connect Start Restart Stop Hibernate (preview) Capture Delete Refresh Open in mobile Feedback CU / PS

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Properties

Locks

Availability + scale

Essentials

Resource group (move) : [learn-e3b9d632-ecf3-44b5-9907-8b3f5ee58a5](#)

Status : Running

Location : North Central US

Subscription (move) : [Concierge Subscription](#)

Subscription ID : 179dd20b-e2ea-45a0-8003-473940f3d4f1

Tags (edit) : [Add tags](#)

Operating system : Linux (ubuntu 20.04)

Size : Standard D2s v3 (2 vcpus, 8 GiB memory)

Public IP address : [20.221.206.38](#)

Virtual network/subnet : [panchenko-serhii-vnet/default](#)

DNS name : [Not configured](#)

Health state : -

JSON View

Properties

Monitoring

Capabilities (7)

Recommendations

Tutorials

Virtual machine

Computer name : panchenko-serhii

Operating system : Linux (ubuntu 20.04)

Image publisher : canonical

Image offer : 0001-com-ubuntu-server-focal

Image plan : 20\_04-lts-gen2

VM generation : V2

VM architecture : x64

Agent status : Ready

Agent version : 2.9.1.1

Hibernation : Disabled

Host group : -

Host : -

Proximity placement group : -

Networking

Public IP address : [20.221.206.38](#) ( Network interface panchenko-serhii256 )

Public IP address (IPv6) : -

Private IP address : 10.0.0.4

Private IP address (IPv6) : -

Virtual network/subnet : [panchenko-serhii-vnet/default](#)

DNS name : [Configure](#)

Size

Size : Standard D2s v3

vCPUs : 2

RAM : 8 GiB

Disk

OS disk : panchenko-serhii\_OsDisk\_1\_639da27467044bdbc552a3c82ea2429

Microsoft Azure

Search resources, services, and docs (G+)

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Availability + scale

Image offer : 0001-com-ubuntu-server-focal

Image plan : 20\_04-lts-gen2

VM generation : V2

VM architecture : x64

Agent status : Ready

Agent version : 2.9.1.1

Hibernation : Disabled

Host group : -

Host : -

Proximity placement group : -

Colocation status : N/A

Capacity reservation group : -

Disk controller type : SCSI

Availability + scaling

Availability zone (edit) : -

Availability set : -

Scale Set : -

Security type

Security type : Standard

Health monitoring

Health monitoring : Not enabled

Extensions + applications

Extensions : -

Applications : -

Private IP address (IPv6) : -

Virtual network/subnet : [panchenko-serhii-vnet/default](#)

DNS name : [Configure](#)

Size

Size : Standard D2s v3

vCPUs : 2

RAM : 8 GiB

Disk

OS disk : panchenko-serhii\_OsDisk\_1\_639da27467044bdbc552a3c82ea2429

Encryption at host : Disabled

Azure disk encryption : Not enabled

Ephemeral OS disk : N/A

Data disks : 0

Auto-shutdown

Auto-shutdown : Not enabled

Scheduled shutdown : -

Azure Spot

Azure Spot : -

Azure Spot eviction policy : -

Microsoft Azure

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panchenko-serhii

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Virtual machine

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ADMS

Agent status  
Ready

Agent version  
2.9.1.1

Hibernation  
Disabled

Host group  
-

Host  
-

Proximity placement group  
-

Colocation status  
N/A

Capacity reservation group  
-

Disk controller type  
SCSI

Availability + scaling

Availability zone (edit)  
-

Availability set  
-

Scale Set  
-

Security type

Security type  
Standard

Health monitoring

Health monitoring  
Not enabled

Extensions + applications

Extensions  
-

Applications  
-

Size

Size  
Standard D2s v3

vCPUs  
2

RAM  
8 GiB

Disk

OS disk  
panchenko-serhii\_OsDisk\_1\_639da27467044bdbc552a3c82ea2429

Encryption at host  
Disabled

Azure disk encryption  
Not enabled

Ephemeral OS disk  
N/A

Data disks  
0

Auto-shutdown

Auto-shutdown  
Not enabled

Scheduled shutdown  
-

Azure Spot

Azure Spot  
-

Azure Spot eviction policy  
-