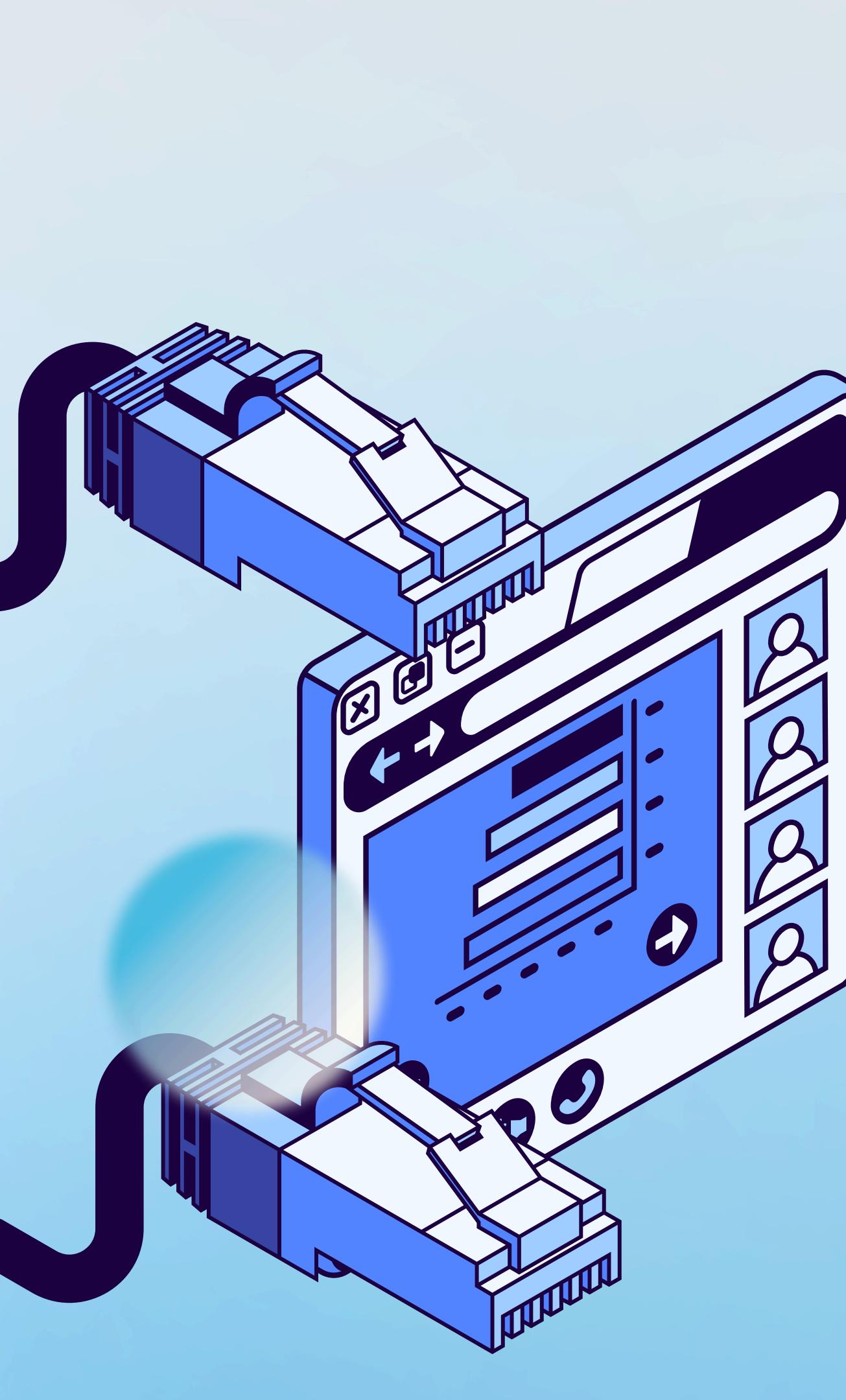


Web App for Startup Business



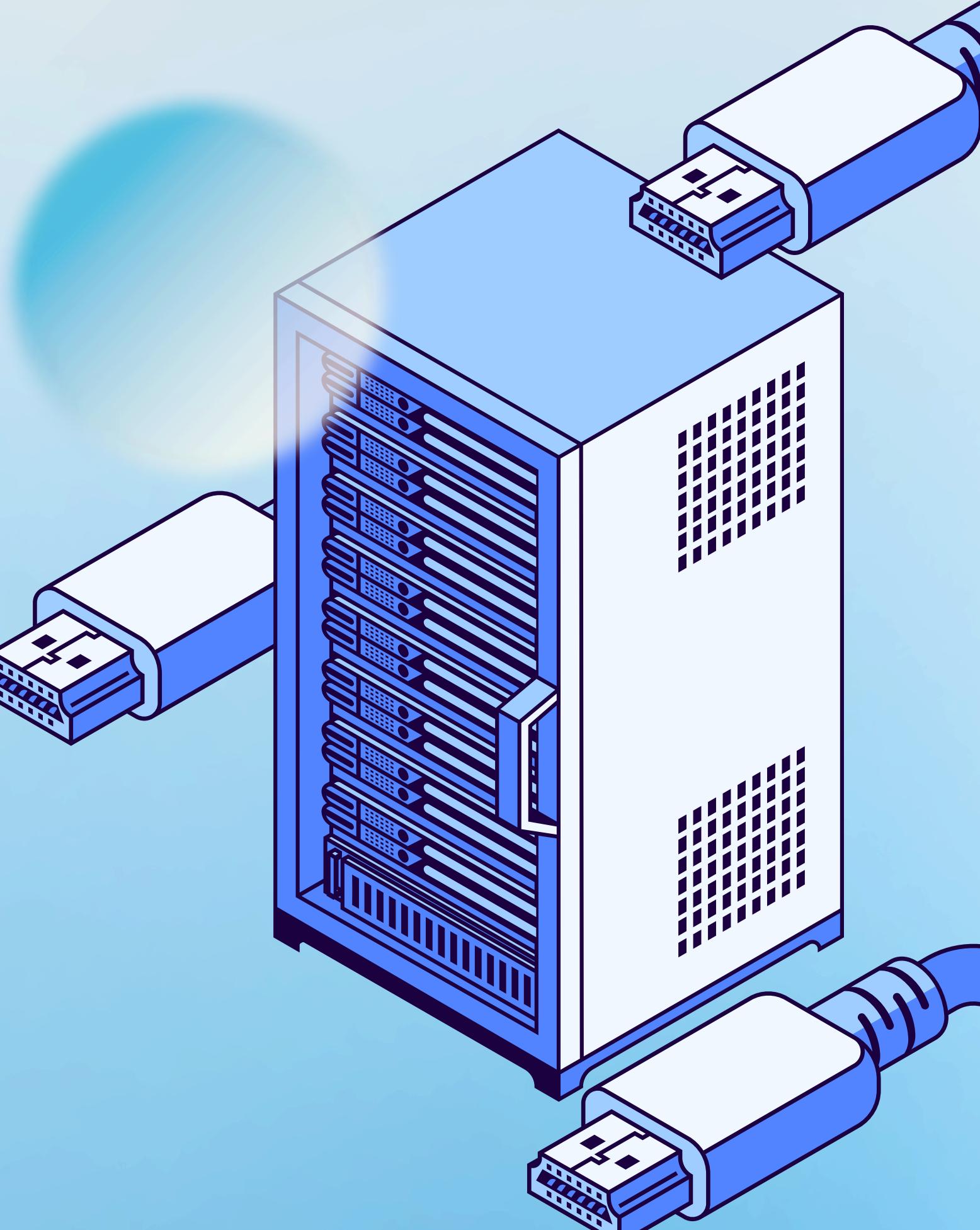


Team members :

- **Mohamed Mostafa**
- **Ahmed Nasr**
- **Salah Ahmed Fathi**
- **Ahmed Ali Ragab**
- **Abdelrahman Atef Lotfy**
- **Mahmoud Khaled Abdel-Ghny**

Project steps:

- Resource group
- Virtual network & Network security group
- Virtual machine
- Active directory
- Storage account
- Recovery services vault
- Web application.





The Project

I developed a dedicated website for a startup design company, exclusively accessible to internal members for the purpose of uploading their design work. This website is integrated with a file share to efficiently store and manage the uploaded designs.

Additionally, I set up a virtual machine (VM) that serves as the HR department's workstation, enabling them to review the submitted designs securely and effectively.

Cloud and its benefit

Cloud computing is the delivery of various services over the internet. These services include servers, storage, databases, networking, software, and more.

Cloud benefits :

- cost efficiency
- disaster recovery
- flexibility and mobility
- automatic updates.

1)-Resource group



- **Resource group is essential for managing and organizing resources ,such as virtual machines, storage accounts, and databases, effectively.**

Create a resource group

 Basics Tags Review + create

Resource group - A container that holds related resources for an Azure solution. The resource group can include all the resources for the solution, or only those resources that you want to manage as a group. You decide how you want to allocate resources to resource groups based on what makes the most sense for your organization. [Learn more](#)

Project details

Subscription * 

Azure for Students

Resource group * 

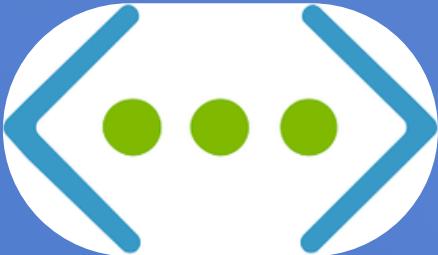
RG-FinalProject-UKSOUTH

Resource details

Region * 

(Europe) UK South

2)-Virtual network & network security group



- **VNet is essential for (isolation, security, communication between resources).**
- **NSG is essential for controlling network traffic to and from Azure resources. It acts as a virtual firewall, allowing or denying inbound and outbound traffic based on specified rules.**

Create virtual network

Basics Security IP addresses Tags Review + create

Configure your virtual network address space with the IPv4 and IPv6 addresses and subnets you need. [Learn more](#)Define the address space of your virtual network with one or more IPv4 or IPv6 address ranges. Create subnets to segment the virtual network address space into smaller ranges for use by your applications. When you deploy resources into a subnet, Azure assigns the resource an IP address from the subnet. [Learn more](#)[Add a subnet](#)

10.0.0.0/16		Delete address space
10.0.0.0	/16	
10.0.0.0 - 10.0.255.255		65,536 addresses
Add IPv4 address space		
Subnets	IP address range	Size
default	10.0.0.0 - 10.0.0.255	/24 (256 addresses)
		Edit Delete

Edit subnet

Select an address space and configure your subnet. You can customize a default subnet or select from subnet templates if you plan to add select services later. [Learn more](#)Subnet purpose [?](#) DefaultName [?](#)

sebnet1

IPv4

Include an IPv4 address space IPv4 address range [*](#) [?](#)10.0.0.0/16
10.0.0.0 - 10.0.255.255Starting address [*](#) [?](#)

10.0.0.0

Size [?](#)

/24 (256 addresses)

Subnet address range [?](#)

10.0.0.0 - 10.0.0.255

IPv6

Include an IPv6 address space

This virtual network has no IPv6 address ranges.

Private subnet

Private subnets enhance security by not providing default outbound access. To enable outbound connectivity for virtual machines to access the internet, it is necessary to explicitly grant outbound access. A NAT gateway is the recommended way to provide outbound connectivity for virtual machines in the subnet. [Learn more](#)Enable private subnet (no default outbound access)

Security

Simplify internet access for virtual machines by using a network address translation gateway. Filter subnet traffic using a network security group. [Learn more](#)NAT gateway [?](#) None
[Create new](#)[!](#) A NAT gateway is recommended for outbound internet access from subnets. Edit the subnet to add a NAT gateway. [Learn more](#)Network security group [?](#) None
[Create new](#)

Route table

 None

Service Endpoints

Create service endpoint policies to allow traffic to specific azure resources from your virtual network over service endpoints. [Learn more](#)

Services

Activate Windows [Remove service endpoint](#)
Go to Settings to activate Windows[Save](#)[Cancel](#)[Give feedback](#)[Previous](#)[Next](#)[Review + create](#)

Create virtual network

Basics Security IP addresses Tags Review + create

Configure your virtual network address space with the IPv4 and IPv6 addresses and subnets you need. [Learn more](#)

Define the address space of your virtual network with one or more IPv4 or IPv6 address ranges. Create subnets to segment the virtual network address space into smaller ranges for use by your applications. When you deploy resources into a subnet, Azure assigns the resource an IP address from the subnet. [Learn more](#)

+ Add a subnet

10.0.0.0/16

Delete address space

10.0.0.0

/16

10.0.0.0 - 10.0.255.255

65,536 addresses

Subnets	IP address range	Size	NAT gateway		
subnet1	10.0.0.0 - 10.0.0.255	/24 (256 addresses)	-	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
subnet2	10.0.1.0 - 10.0.1.255	/24 (256 addresses)	-	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
subnet3	10.0.2.0 - 10.0.2.255	/24 (256 addresses)	-	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>

Add IPv4 address space



3)-Virtual machine



- You need to deploy and configure Virtual Machines (VMs) within Microsoft Azure. The deployment process includes choosing the appropriate VM sizes, selecting a region, configuring the operating system, and assigning networking settings (public and private IPs).

Create a virtual machine

Help me create a low cost VM Help me create a VM optimized for high availability Help me choose the right VM size for my workload

Subscription * ⓘ Azure for Students

Resource group * ⓘ RG-FinalProject-UKSOUTH Create new

Instance details

Virtual machine name * ⓘ VM1-Fp

Region * ⓘ (Europe) UK South

Availability options ⓘ No infrastructure redundancy required

Security type ⓘ Trusted launch virtual machines Configure security features

Image * ⓘ Windows Server 2019 Datacenter - x64 Gen2 See all images | Configure VM generation

VM architecture ⓘ Arm64 x64
i Arm64 is not supported with the selected image.

Run with Azure Spot discount ⓘ

Size * ⓘ Standard_B2aS_v2 - 2 vcpus, 1 GiB memory (US\$14.45/month) (free service... See all sizes

Enable Hibernation ⓘ
i Hibernate is not supported by the size that you have selected. Choose a size that is compatible with Hibernate to enable this feature. [Learn more](#)

Administrator account

Username * ⓘ FP

Password *
Confirm password *

Create a virtual machine

...

Help me create a low cost VM

Help me create a VM optimized for high availability

Help me choose the right VM size for my workload

Basics Disks Networking Management Monitoring Advanced Tags Review + create

Azure VMs have one operating system disk and a temporary disk for short-term storage. You can attach additional data disks. The size of the VM determines the type of storage you can use and the number of data disks allowed. [Learn more](#)

VM disk encryption

Azure disk storage encryption automatically encrypts your data stored on Azure managed disks (OS and data disks) at rest by default when persisting it to the cloud.

Encryption at host

i Encryption at host is not registered for the selected subscription. [Learn more](#)

OS disk

OS disk size

Image default (127 GiB)

OS disk type *

Premium SSD (locally-redundant storage)

Delete with VM

Key management

Platform-managed key

Enable Ultra Disk compatibility

Ultra disk is supported in Availability Zone(s) 1,2,3 for the selected VM size Standard_B2s_v2.

Data disks for VM1-Fp

You can add and configure additional data disks for your virtual machine or attach existing disks. This VM also comes with a temporary disk.

LUN	Name	Size (GiB)	Disk type	Host caching	Delete with VM <input type="checkbox"/>
-----	------	------------	-----------	--------------	---

[Create and attach a new disk](#)

[Attach an existing disk](#)

4)-Active directory



- Azure AD is responsible for managing user identities and controlling access to resources within Azure. The goal is to create users, assign them to groups, and apply role-based access control (RBAC) to manage permissions

Users

Egypt University of Informatics

Azure Active Directory is now Microsoft Entra ID.							
All users		Search					
	Display name	User principal name	User type	On-premises sync	Identities	Company name	Creation type
	16201910413	16201910413_alex.edu.eg...	Guest	No	EUIEG.onmicrosoft.com		Invitation
	AA Aamena Ahmed Ismail Mohamed	24-101118@students.eui....	Member	Yes	EUIEG.onmicrosoft.com	Egypt University OF Informatics	
	AY Abanob Younan	abanob.younan@eui.edu....	Member	Yes	EUIEG.onmicrosoft.com	Egypt University OF Informatics	
	AS Albanoub Sifean	Albanoub.Sifean@eui.edu....	Member	Yes	EUIEG.onmicrosoft.com	Egypt University OF Informatics	
	AM Abass, Maya Emad Abass Ibrahim	ma30106120200469@de...	Member	Yes	EUIEG.onmicrosoft.com	DEPI	
	AA Abbas, Abdelrhman Mahmoud Abb	aa30309140201192@depi...	Member	Yes	EUIEG.onmicrosoft.com	DEPI	
	AA Abbas, Ali Emad Abbas Mohammed	aa29901012428797@depi...	Member	Yes	EUIEG.onmicrosoft.com	DEPI	
	AE abbas, eissa islam eissa abbas	ea30201140103519@depi...	Member	Yes	EUIEG.onmicrosoft.com	DEPI	
	AM Abbas, Mariam Zaki Mohammed Al	ma30301010128808@de...	Member	Yes	EUIEG.onmicrosoft.com	DEPI	
	AW Abbass Wael Abbass Ibrahim Elshei	23-101008@students.eui....	Member	Yes	EUIEG.onmicrosoft.com	Egypt University OF Informatics	
	AA Abdallah, Aya Mohamed Abdallah	aa30307191601982@depi...	Member	Yes	EUIEG.onmicrosoft.com	DEPI	

Groups | All groups

Egypt University of Informatics



X



<



New group



Download groups



Refresh



Manage view



Delete



Got feedback?

Overview

All groups

Deleted groups

Diagnose and solve problems

Settings

General

Expiration

Naming policy

Activity

Privileged Identity Management

Access reviews

Audit logs

Bulk operation results

Troubleshooting + Support

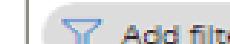
New support request



Microsoft Entra has a simpler, integrated experience for managing all your Identity and Access Management needs. Try the new Microsoft Entra admin center! [Learn more](#)



Search



Add filter

Search mode Contains

177 groups found

<input type="checkbox"/>	Name	Object Id	Group type	Membership type	Email
<input type="checkbox"/>	2	7de7e254-a18d-4cce-81cc-b3f4d2e54866	Microsoft 365	Assigned	2@EUI.edu.eg
<input type="checkbox"/>	3D Modelling Lecture	2ef51e90-661b-4dc8-a5ea-bc3144d4bdad	Microsoft 365	Assigned	II@EUI.edu.eg
<input type="checkbox"/>	3Ds max (Group A)	a0de07f2-164e-4635-8574-29234122826b	Microsoft 365	Assigned	3Dsmax@EUI.edu.eg
<input type="checkbox"/>	7amada	d4a14e1d-cf2c-4f6f-a246-7bf9985e903a	Microsoft 365	Assigned	7amada@EUI.edu.eg
<input type="checkbox"/>	A1 License for Faculty	438a4b09-f424-4805-b947-9ba822439b46	Security	Dynamic	
<input type="checkbox"/>	A1 License for student	cfcdf985-27cc-4c1d-bc40-97315ae0f5ac	Security	Dynamic	
<input type="checkbox"/>	A3 License	d10dece5-5238-41fc-b1e2-95dc60358357	Microsoft 365	Dynamic	A3License@EUI.edu.eg

5)-Storage account



- **We create storage account to create a file share which enables users to access files securely from any location and any device.**

Create a storage account

...

Basics

Advanced

Networking

Data protection

Encryption

Tags

Review + create

Azure Storage is a Microsoft-managed service providing cloud storage that is highly available, secure, durable, scalable, and redundant. Azure Storage includes Azure Blobs (objects), Azure Data Lake Storage Gen2, Azure Files, Azure Queues, and Azure Tables. The cost of your storage account depends on the usage and the options you choose below. [Learn more about Azure storage accounts](#)

Project details

Select the subscription in which to create the new storage account. Choose a new or existing resource group to organize and manage your storage account together with other resources.

Subscription *

Azure for Students

Resource group *

RG-FinalProject-UKSOUTH

[Create new](#)

Instance details

Storage account name * ⓘ

fpstorage1234

Region * ⓘ

(Europe) UK South

[Deploy to an Azure Extended Zone](#)

Primary service ⓘ

Azure Blob Storage or Azure Data Lake Storage Gen 2

Performance * ⓘ

Standard: Recommended for most scenarios (general-purpose v2 account)

Premium: Recommended for scenarios that require low latency.

Redundancy * ⓘ

Locally-redundant storage (LRS)



-File share

New file share ...

[Basics](#) [Backup](#) [Review + create](#)

Name *

Access tier *

Performance

Maximum I/O/s ⓘ 20000

Maximum capacity 100 TiB

 ahmed ...
SMB File share

X Q

Connect Upload Refresh Add directory Delete share Change tier Edit quota Give feedback

Overview

Diagnose and solve problems

Storage account : [storage12](#)

Access Control (IAM)

Resource group ([move](#)) : [RG-FinalProject-UKSOUTH](#)

Browse

Location : UK South

Operations

Subscription ([move](#)) : [Azure for Students](#)

Snapshots

Subscription ID : [9376af56-0e07-49e9-b0e9-b7d43d129dc0](#)

Backup

Properties Capabilities (2) Tutorials

Size

Maximum storage (GiB) : 102400

Used storage capacity (GiB) : 0

Access tier : Transaction optimized

Performance

IOPS : 20000

Throughput (MiB/sec) : Varies by region. Learn more [\[?\]](#)

Backup

Snapshots : 2 snapshots

Last modified : 10/22/2024, 12:07:08 AM

Backup : Configured

Essentials

Share URL : <https://storage12.file.core.windows.net/ahmed>

Redundancy : Locally-redundant storage (LRS)

Configuration modified : 10/20/2024, 5:11:08 AM

Feature status

Soft delete : 14 days

Large file shares : Enabled

Identity-based access

Directory service : Not configured

Domain : -

SMB protocol settings

Security profile : Maximum compatibility

SMB protocol versions : -

SMB channel encryption : -

Authentication mechanisms : -

Kerberos ticket encryption : -

6)-Recovery Services Vault



- **The Recovery Services Vault provides a centralized location for managing backups of Azure virtual machines, SQL databases, and on-premises servers. It ensures that your critical data is securely backed up and can be restored when needed.**

Create Recovery Services vault

* Basics Redundancy Encryption Vault properties Networking Tags Review + create

Project Details

Select the subscription and the resource group in which you want to create the vault.

Subscription * ⓘ

Azure for Students

Resource group * ⓘ

RG-FinalProject-UKSOUTH

[Create new](#)

Instance Details

Vault name * ⓘ

BACKUP-RSV

Region * ⓘ

UK South



Cross Subscription Restore is enabled by default for all vaults. Visit vault 'Properties' to disable the same. [Learn more](#).

- VM backup



[Home](#) > Microsoft.RecoveryServicesV2-1729369166105 | [Overview](#) > BACKUP-RSV

 BACKUP-RSV | Backup

Recovery Services vault

 Search

 Overview

 Activity log

Access control (IAM)

 Tags

Diagnose and solve problems

◀ [Settings](#)

 Identity

Networking

 Properties

 Locks

Getting started

 Backup

 Site Recovery

✓ Protected items

Backup Items



Where is your workload running?

Azure

What do you want to backup?

 Virtual machine

Step: Configure Backup

Backup

Give feedback

 Help improve this page

Configure backup

BACKUP-RSV

- Policy sub type *
- Enhanced
- ✓ Multiple backups per day
 - ✓ Up to 30 days operational tier retention
 - ✓ Support for Trusted Launch Azure VM
 - ✓ Support for VMs with Ultra Disks and Premium SSD v2
- Standard
- ✓ Once-a-day backup
 - ✓ Up to 5 days operational tier retention

Backup policy *

(new) EnhancedPolicy-m2ghvitf

Edit this policy

i Protecting a VM with enhanced policy can incur additional snapshot charges. Please note that once you enable a VM backup with enhanced policy, changing to standard policy type is not possible. [Learn more](#).

Policy details

Full backup

Backup frequency
Daily at 8:00 AM UTC

Instant restore

Retain instant recovery snapshot(s) for 7 day(s)

Retention of daily backup point

Retain backup taken every day at 8:00 AM for 30 Day(s)

Consistency type

Application or file-system consistent

Virtual machines

Name	Resource group	Disks	Include future disks
VM1-Fp	rg-finalproject-uksouth	VM1-Fp_Osdisk_1_745880cb805a4447acbd842c04c3ad26	<input checked="" type="checkbox"/>

Add



-File share backup

BACKUP-RSV | Backup ☆ ...

Recovery Services vault

Search

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Settings

Identity

Networking

Properties

Locks

Getting started

Backup

Site Recovery

Where is your workload running?

Azure

What do you want to backup?

Azure file share

Step: Configure Backup

Backup

Give feedback

Help improve this page

This screenshot shows the Azure Backup interface for a Recovery Services vault named "BACKUP-RSV". The left sidebar contains navigation links for Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Settings (with Identity, Networking, Properties, and Locks sub-options), Getting started (with Backup and Site Recovery sub-options), and a Search bar. The main panel is titled "Step: Configure Backup" and includes sections for "Where is your workload running?" (set to "Azure") and "What do you want to backup?" (set to "Azure file share"). A large blue "Backup" button is prominently displayed at the bottom of this section.

Configure backup

BACKUP-RSV

Storage Account *

fptstorage1234



Select

FileShares to Backup

Name	Azure File Share Type
designs	-
Add	

Policy details

Backup policy * ⓘ

(new) DailyPolicy-m2gmr3gb



[Edit this policy](#)

Full backup

Backup frequency

Daily at 7:30 PM UTC

Retention of daily backup point

Retain backup taken every day at 7:30 PM for 30 Day(s)

7)-Web application



App Service Web Apps lets you quickly build, deploy, and scale enterprise-grade web, mobile, and API apps running on any platform. Meet rigorous performance, scalability, security and compliance requirements while using a fully managed platform to perform infrastructure maintenance. [Learn more](#)

Project Details

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

Subscription * ⓘ

Azure for Students

Resource Group * ⓘ

RG-FinalProject-UKSOUTH

[Create new](#)

Instance Details

Name

FileUploadApp1

-agfaaxadghcSeacx.ualsouth-01.azurewebsites.net

Unique default hostname (preview) on. [More about this update](#)

Publish *

Code Container

Runtime stack *

.NET 8 (LTS)

Operating System *

Linux Windows

Region *

UK South

 Not finding your App Service Plan? Try a different region or select your App Service Environment.

Pricing plans

App Service plan pricing tier determines the location, features, cost and compute resources associated with your app. [Learn more](#)

Windows Plan (UK South) * ⓘ

(New) ASP-RGFinalProjectUKSOUTH-bcb8

[Create new](#)

Configure your new project

ASP.NET Core Web App (Model-View-Controller)

C#

Linux

macOS

Windows

Cloud

Service

Web

Project name

FileUploadApp1

Location

C:\Users\Top system\source\repos

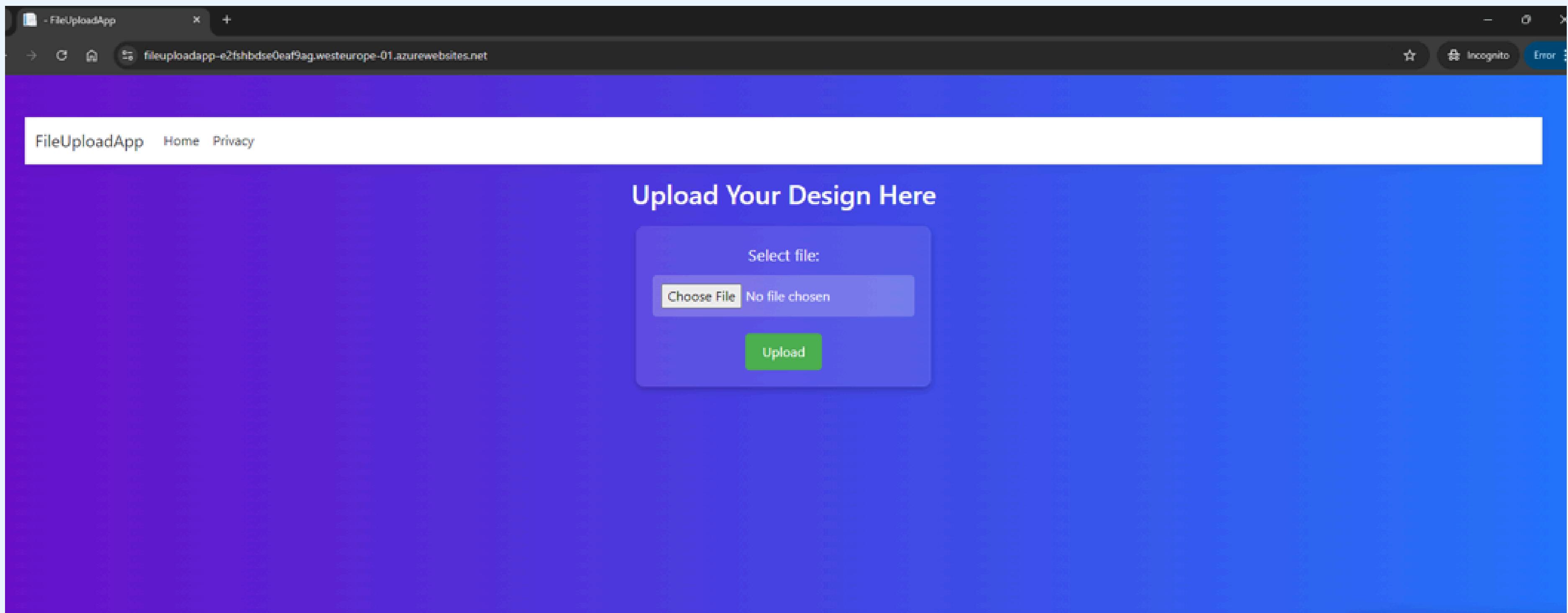
...

Solution name ⓘ

FileUploadApp1

Place solution and project in the same directory

Project will be created in "C:\Users\Top system\source\repos\FileUploadApp1\FileUploadApp1\"



Thank You!

