

Név: Péter Bence

Neptun kód: X89O8X

Tantárgy: Korszerű hálózati alkalmazások

Fontos: Ügyeljen arra, hogy az elnevezésekben használja saját Neptun kódját azonosításra. Csak azok a képernyőképek fogadhatók el, amelyek **teljes képernyőről készülnek**, és a látható elnevezések közül **legalább egy tartalmazza a Neptun kódot**.

Az elkészítéshez szükséges összes beállítási képet is tartalmazza a dokumentum.

Feladatok:

1. Mit jelent a Network Security Group és az Application security group kifejezés? Mutassa be a működésüket szövegesen és egy egyszerű példán keresztül képernyőképek segítségével.
2. Mutassa be az Azure Firewall működését szövegesen és egy egyszerű példán keresztül képernyőképek segítségével.
3. A félév során tanult Azure szolgáltatásokhoz keressen AWS-en elérhető alternatívákat. Válasszon ki egy Azure – AWS szolgáltatás párost és mutassa be a különbségeket.

1. Feladat:

A Network Security Group (NSG) és az Application Security Group (ASG) olyan biztonsági eszközök, amelyeket az Azure felhőalapú környezetben használnak a hálózati és alkalmazási szintű védelem biztosítására.

Az NSG egy logikai tűzfal, amely a hálózati rétegben működik. Az NSG beállításokat lehetővé teszik az Azure Virtual Network-on belüli forgalom szűrésére, engedélyezésére és blokkolására. Az NSG-k lehetővé teszik az adminisztrátorok számára, hogy az egyes VM-ekre vonatkozó szabályokat hozzanak létre a belső és külső hálózati forgalomhoz. Az NSG-k lehetővé teszik a forgalom irányítását és szűrését, így védelmet nyújtanak a kiberfenyegetések ellen.

Az ASG egy olyan biztonsági funkció, amely az alkalmazási réteg védelmét szolgálja. Az ASG-k lényegében csoportok olyan VM-ekkel, szolgáltatásokkal vagy alkalmazásokkal, amelyek közös biztonsági szabályokat osztanak meg. Az ASG-k használata lehetővé teszi az adminisztrátorok számára, hogy egyedi szabályokat hozzanak létre az alkalmazásokra, és könnyen kezeljék azokat. Az ASG-k használata különösen fontos az olyan alkalmazások esetében, amelyek nagy forgalmat bonyolítanak le és könnyen célba vehetők a kiberbűnözők által.

Az NSG és az ASG együttműködése védelmet biztosít az Azure felhőben található rendszerek és alkalmazások számára. Az NSG a hálózati forgalmat szűri, míg az ASG a szolgáltatásokat vagy alkalmazásokat védi. Ezek az eszközök nélkülözhetetlenek az Azure felhőben található alkalmazások és rendszerek biztonságának biztosításához.

Workspaces Applications

in Konzider hálózati alkalmazás x Network and Application Service x Create virtual network - Microsoft Azure +

May 6 5:12 PM https://portal.azure.com#create/Microsoft.VirtualNetwork-ARM

Microsoft Azure

Search resources, services, and docs (S+)

Home Virtual networks

Create virtual network

Basics Security IP addresses Tags Review + create

Azure Virtual Network (VNet) is the fundamental building block for your private network in Azure. VNet enables many types of Azure resources, such as Azure Virtual Machines (VM), to securely communicate with each other, the internet, and on-premises networks. VNet is similar to a traditional network that you'd operate in your own data center but brings with it additional benefits of Azure's infrastructure such as scale, availability, and isolation.

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: Azure for Students (0b94373d-85cc-4196-a21b-f54870c3e000)

Resource group: A2LAB_XB90BX

Create new

Instance details

Virtual network name: XB90BX_VirtualNetwork

Region: (US East US)

Deploy to an edge zone

Previous Next Review + create

Give feedback

Workspaces Applications

in Konzider hálózati alkalmazás x Network and Application Service x Edit subnet - Microsoft Azure +

May 6 5:16 PM https://portal.azure.com#create/Microsoft.VirtualNetwork-ARM

Microsoft Azure

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Home Virtual networks

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 an IP address space

0.0.0.0/16

10.0.0.0 - 10.0.255.255 (65536 addresses)

+ Add a subnet ...

Subnets	IP address range	Size	NAT gateway
default	10.0.0.0 - 10.0.255.255	/24 (256 addresses)	-

A NAT gateway is recommended for outbound internet access from subnets. Edit the subnet to add a NAT gateway. Learn more ↗

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 ↗

IP address space: 10.0.0.0/16
10.0.0.0 - 10.0.255.255 (65536 addresses)

Subnet details

Subnet template: Default

Name: default

Starting address: 10.0.0.0

Subnet size: /24 (256 addresses)

IP address space: 10.0.0.0 - 10.0.0.255 (256 addresses)

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

Network security group: None
Create new

Route table: None

Save Cancel

Workspaces Applications May 6 5:19 PM

in Körzeli hálózat alkalmazások Network and Application Services Create virtual network - Microsoft Azure

Microsoft Azure Search resources, services, and docs (G+)

Home Virtual networks Create virtual network

Basics Security IP addresses Tags Review + create

View automation template

Basics

Subscription: Azure for Students
Resource Group: AZLAB_X90BX
Name: X90BX_VirtualNet
Region: East US

Security

Azure Bastion: Disabled
Azure Firewall: Disabled
Azure DDoS Network Protection: Disabled

IP addresses

Address space: 10.0.0.0/16 (65536 addresses)
Subnet: default (10.0.0.0/24) (256 addresses)

Tags

Previous Next Create Give feedback

Workspaces Applications May 6 5:20 PM

in Körzeli hálózat alkalmazások Network and Application Services X90BX_VirtualNet - Microsoft Azure

https://portal.azure.com/review/HubsExtension/deploymentDetailsBlade/-/overview/1/d/2fsubscriptions%2fd9a373d-85cc-4196-a2fb-f5487c3a0c8%2fresourceGroups%2fAzLab_X90BX%2fproviders%2fMicrosoft.Resources%2fddeployments%2f

Microsoft Azure perembenyebi@hall szembenyebi@stan.yettemi@o...

Home X90BX_VirtualNet | Overview

Deployment: Deployment name: X90BX_VirtualNet Subscription: Azure for Students (8c8337d-85cc-4196-a2fb-f5487c3a0c8) Resource group: AZLAB_X90BX

Deployment details: Resource: X90BX_VirtualNet

Give feedback: Tell us about your experience with deployment

Application Service: All Services (99+) Marketplace (25) Documentation (99+) Azure Active Directory (6) Resources (0)

Resource Groups (0)

Services: Application security groups, App server instances for SAP solutions, Azure Database for MySQL servers, Enterprise applications, Application gateways

Marketplace: IBM WebSphere Application Server Cluster on Azure VMs, IBM WebSphere Application Single Instance on Azure ..., Fortinet FortiWeb Web Application Firewall (WAF), IBM WebSphere Application Server Base 9.0.5.x Image

Documentation: Azure application security groups overview, Securely managed web applications - Azure Architecture Center, Configure Java application hosting options on Azure - Azure Archit..., Create a self-signed public certificate to authenticate your applica..., Configure Java apps - Azure App Service, AZ-500: Secure your data and applications - Training, Basic web application - Azure Reference Architectures

Azure Active Directory: Application Insights Configuration Service, Azure Application Change Service, Azure Application Change Service, Skype for Business Application Configuration Ser..., Skype for Business PowerShell Server Application, RPA - Machine Management Relay Service - Appl...

Continue searching in Azure Active Directory

Searching 1 of 1 subscriptions. Change Give feedback

https://portal.azure.com/#blade/HubsExtension/BrowseResourceBlade/resourceType/Microsoft.Network/applicationSecurityGroups

Workspaces Applications May 6 5:20 PM

in Körzeli hálózati alakma... Network and Application Security Application security group... + Microsoft Azure Search resources, services, and docs (S+)

Application security groups

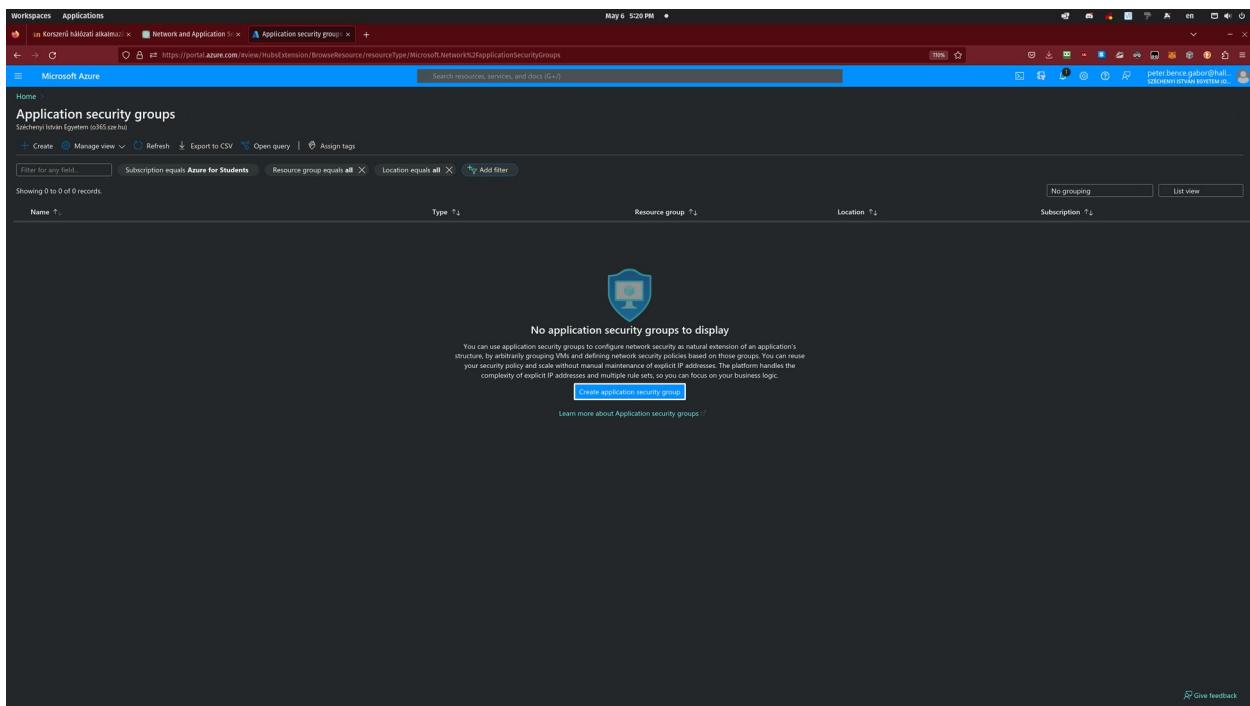
No application security groups to display

You can use application security groups to configure network security as natural extension of an application's structure, by arbitrarily grouping VMs and defining network security policies based on those groups. You can reuse your security policies and access management across multiple resources and subscriptions. This allows you to reduce the complexity of explicit IP addresses and multiple rule sets, so you can focus on your business logic.

Create application security group

Learn more about Application security groups

Give feedback



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in Körzeli hálózati alakma... Network and Application Security Create an application security group AZLAB_X890BX - Microsoft... + Microsoft Azure Search resources, services, and docs (S+)

Create an application security group

Basics Tags Review + create

Project details

Subscription * Azure for Students (db94373d-85cc-4196-a21b-f54870c3a0c6)

Resource group * AZLAB_X890BX

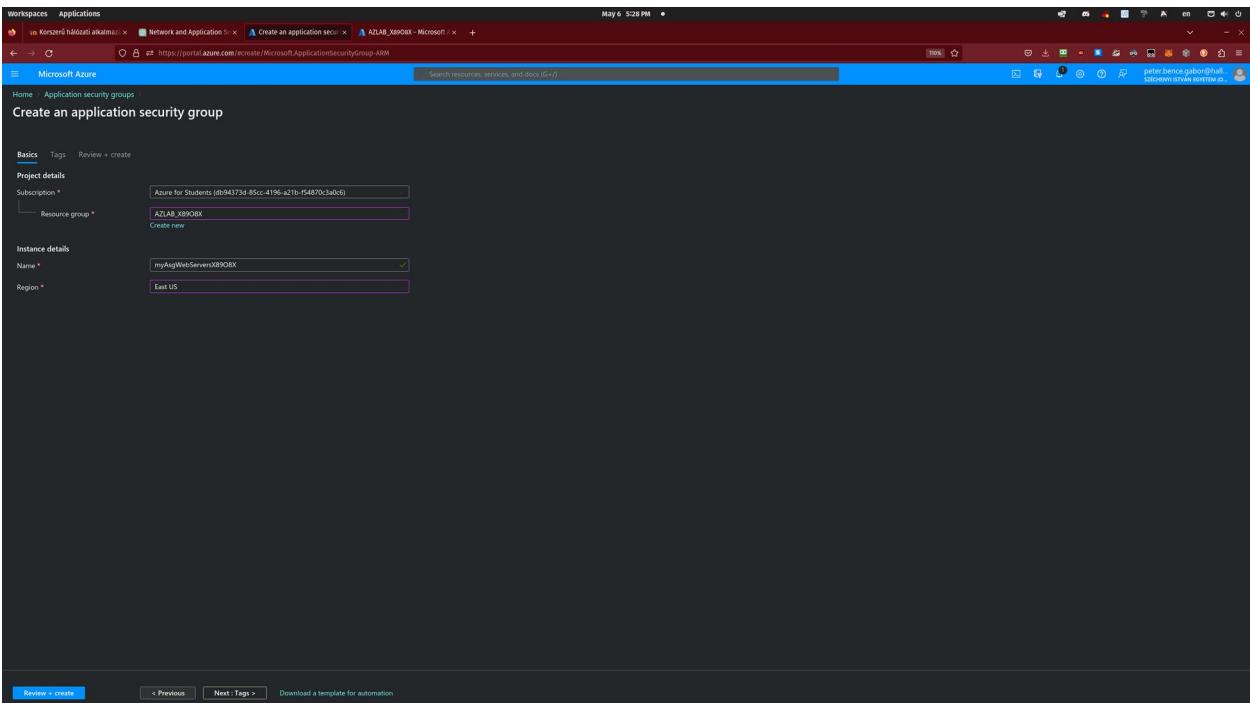
Create new

Instance details

Name * myAsgWebServerX890BX

Region * East US

Review + create < Previous Next: Tags > Download a template for automation



Workspaces Applications May 6 5:28 PM

in Konzider hálózati alakulás... Network and Application Security Create an application security group Microsoft Azure https://portal.azure.com/create/Microsoft.ApplicationSecurityGroup-A9B8

Microsoft Azure Search resources, services, and docs (G+)

Create an application security group

Validation passed

Basics Tags Review + create

Summary

Basics

Subscription: Azure for Students

Resource group: AZLAB_X90BX

Location: East US

Name: myLogWebServerx90BX

Create < Previous Next > Download a template for automation

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in Konzider hálózati alakulás... Network and Application Security Network security groups Microsoft Azure https://portal.azure.com/review/HubsExtension/BrowseResource/resourceType/Microsoft.Network%2fNetworkSecurityGroups

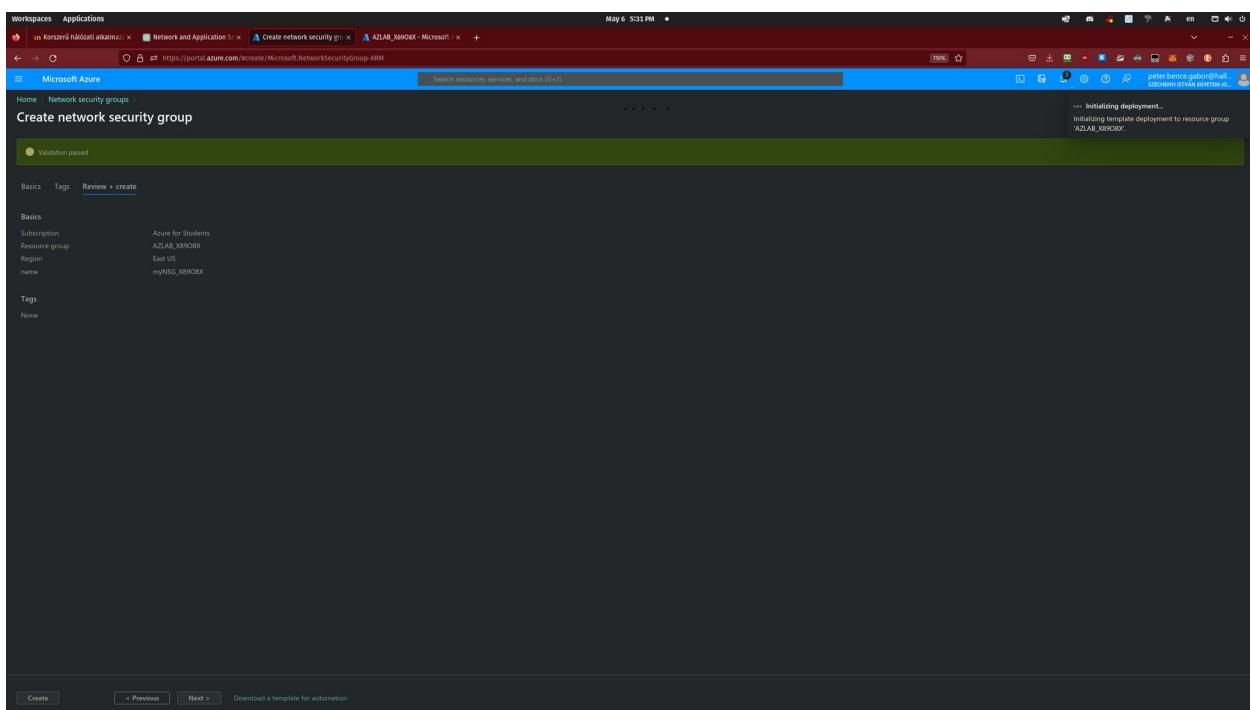
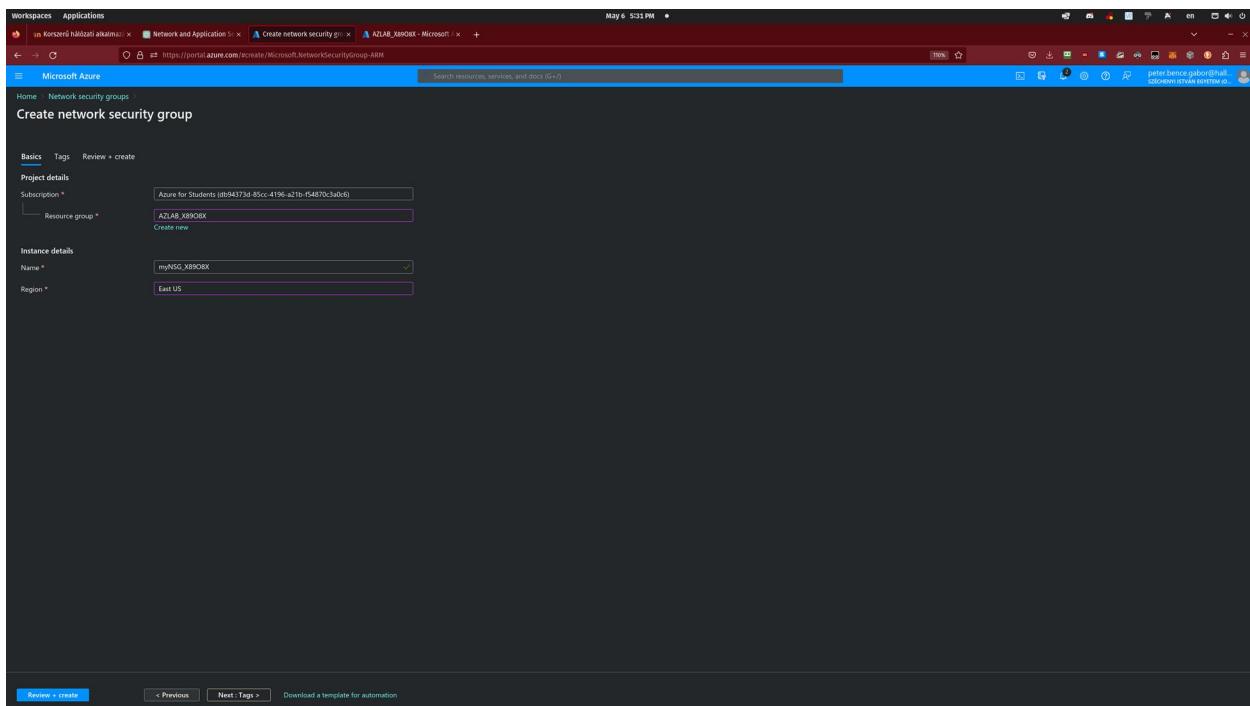
Microsoft Azure Search resources, services, and docs (G+)

Network security groups

Showing 1 to 4 of 4 records.

Name	Resource group	Location	Subscription
X90BX-vm1-msg	X90BX-resource	East US	Azure for Students
X90BX-vm2-msg	X90BX-resource	East US	Azure for Students
X90BX-vm1msg588	X90BX-resource	East US	Azure for Students
X90BX-vm2msg982	X90BX-resource	East US	Azure for Students

< Previous Page 1 of 1 Next > Give feedback



Workspaces Applications May 6 5:32 PM

in Konzér hálózati alkalmazás Network and Application Security myNSG_X89O8X - Microsoft AZLAB_X89O8X - Microsoft +

Microsoft Azure https://portal.azure.com/#@solis.sze.hu/resource/subscriptions/d0a373d4-85cc-4f96-a21b-f5a870c3a0c6/resourceGroups/AZLAB_X89O8X/providers/Microsoft.Network/networkSecurityGroups/myNSG_X89O8X/overview

Search resources, services, and docs (S+)

myNSG_X89O8X Network security group

Overview Activity log Access control (IAM) Tags Diagnose and solve problems Settings Inbound security rules Outbound security rules Network interfaces Subnets Properties Locks Monitoring Alerts Diagnostic settings Logs NSG flow logs Automation Tasks (preview) Export template Help Effective security rules Support + Troubleshooting

Resource group (scope): AZLAB_X89O8X Location: East US Subscription (scope): Azure for Students Subscription ID: d0a373d4-85cc-4f96-a21b-f5a870c3a0c6 Tags (edit): Click here to add tags

Custom security rules: 0 inbound, 0 outbound Associated with: 0 subnets, 0 network interfaces

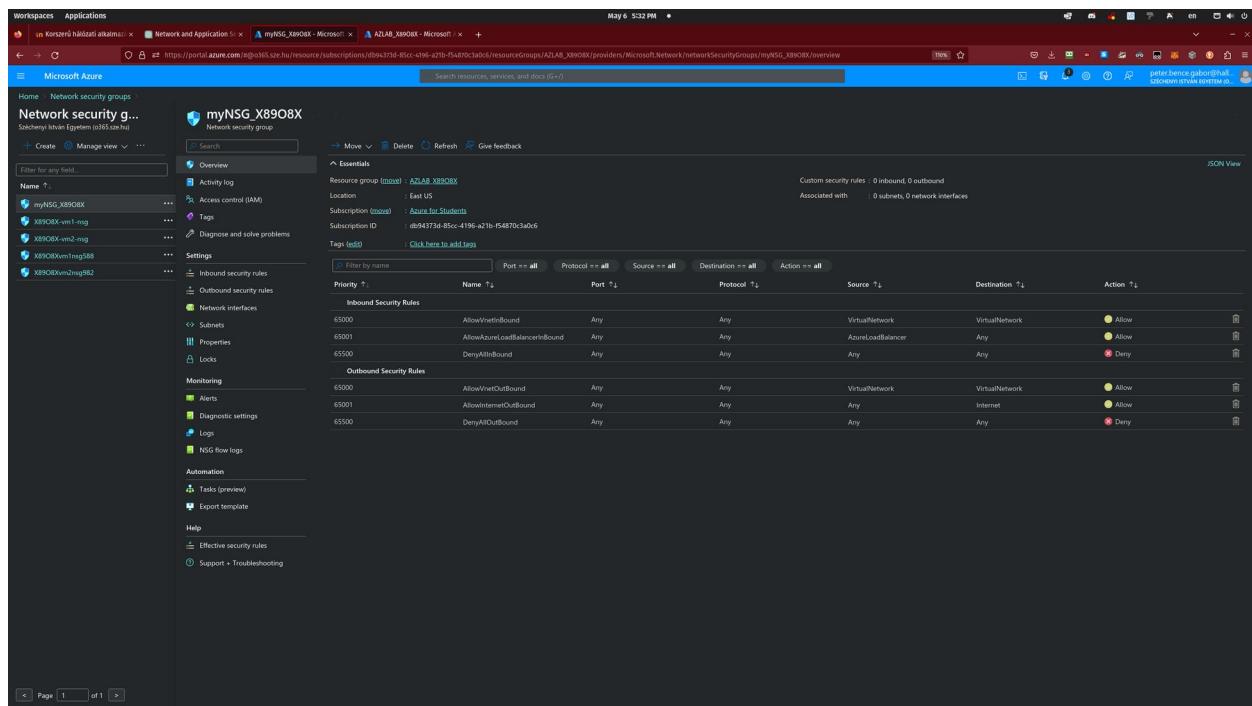
Inbound Security Rules

Priority ↑	Name ↑	Port = all	Protocol = all	Source = all	Destination = all	Action = all
65000	AllowVnetInBound	Any	Any	VirtualNetwork	VirtualNetwork	Allow
65001	AllowAzureLoadBalancerInBound	Any	Any	AzureLoadBalancer	Any	Allow
65500	DenyAllInBound	Any	Any	Any	Any	Deny

Outbound Security Rules

Priority ↑	Name ↑	Port = all	Protocol = all	Source = all	Destination = all	Action = all
65000	AllowVnetOutBound	Any	Any	VirtualNetwork	VirtualNetwork	Allow
65001	AllowInternetOutBound	Any	Any	Any	Internet	Allow
65500	DenyAllOutBound	Any	Any	Any	Any	Deny

Page 1 of 1



Workspaces Applications May 6 5:34 PM

in Konzér hálózati alkalmazás Network and Application Security myNSG_X89O8X - Microsoft AZLAB_X89O8X - Microsoft +

Microsoft Azure https://portal.azure.com/#@solis.sze.hu/resource/subscriptions/d0a373d4-85cc-4f96-a21b-f5a870c3a0c6/resourceGroups/AZLAB_X89O8X/providers/Microsoft.Network/networkSecurityGroups/myNSG_X89O8X/subnets

Search resources, services, and docs (S+)

myNSG_X89O8X Network security group

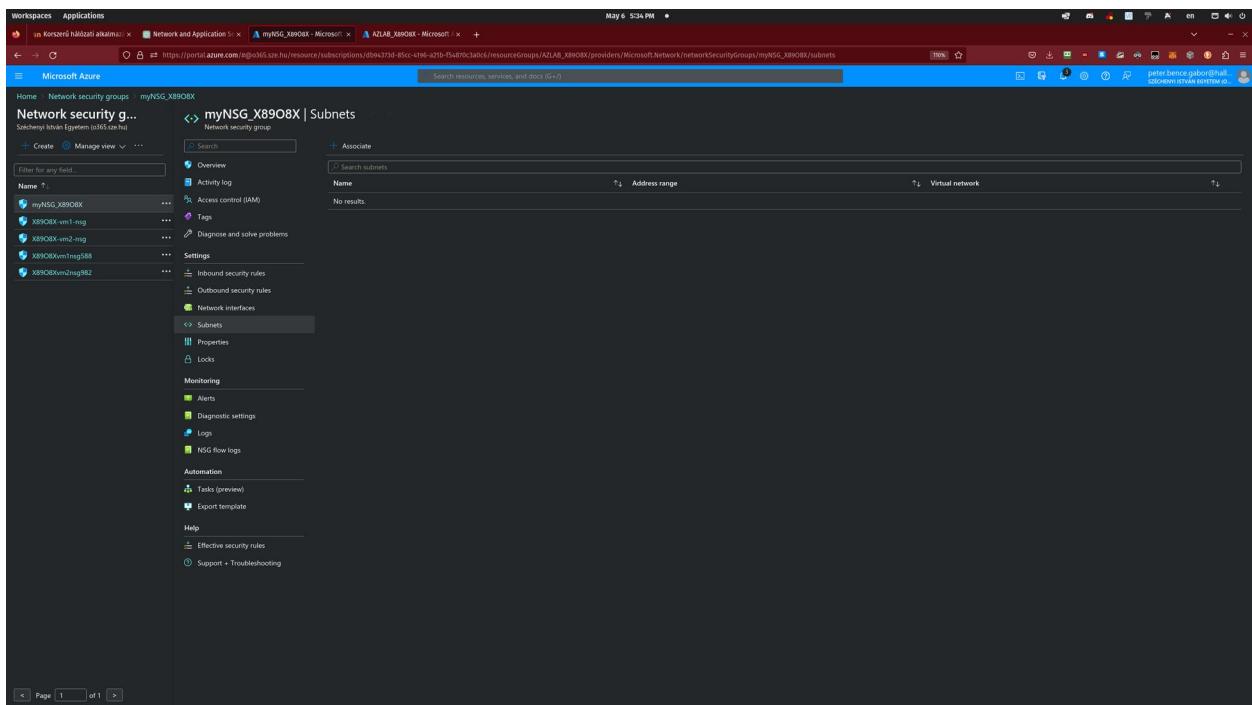
Overview Activity log Access control (IAM) Tags Diagnose and solve problems Settings Inbound security rules Outbound security rules Network interfaces Subnets Properties Locks Monitoring Alerts Diagnostic settings Logs NSG flow logs Automation Tasks (preview) Export template Help Effective security rules Support + Troubleshooting

Associate

Search subnets

Name ↑	Address range ↑	Virtual network ↑
No results.		

Page 1 of 1



Workspaces Applications

in Körzéri hálózati alkalmazás... Network and Application Security Associate subnet - Microsoft AZLAB_X890BX - Microsoft

https://portal.azure.com/#go/056.size.hu/resource/subscriptions/d80a373d-85cc-4196-a2fb-f54b70c3a0c6/resourceGroups/AZLAB_X890BX/providers/Microsoft.Network/networkSecurityGroups/myNSG_X890BX/subnets

May 6 5:34 PM

Microsoft Azure

Home Network security groups myNSG_X890BX

Network security group myNSG_X890BX | Subnets

Szűkítési lehetőségek (0/355 szám)

+ Create Manage view ...

Filter for any field.

Name ↑

- myNSG_X890BX
- X890BX-vm1-nsg
- X890BX-vm2-nsg
- X890BxVm1msg588
- X890BxVm2msg982

... Create

Associate subnet

myNSG_X890BX

Virtual network * X890BX VirtualNet (AZLAB_X890BX)

Subnet * default

Address range

No results.

Search subnets

Name ↑ Address range ↓ Vert ↓

Activity log

Tags

Diagnose and solve problems

Settings

- Inbound security rules
- Outbound security rules
- Network interfaces
- Subnets
- Properties
- Logs
- NSG flow logs

Monitoring

- Alerts
- Diagnostic settings
- Logs
- NSG flow logs

Automation

- Tasks (preview)
- Export template

Help

- Effective security rules
- Support + Troubleshooting

OK

Page 1 of 1

Workspaces Applications

in Körzéri hálózati alkalmazás... Network and Application Security Add inbound security rule AZLAB_X890BX - Microsoft

https://portal.azure.com/#go/056.size.hu/resource/subscriptions/d80a373d-85cc-4196-a2fb-f54b70c3a0c6/resourceGroups/AZLAB_X890BX/providers/Microsoft.Network/networkSecurityGroups/myNSG_X890BX/inboundSecurityRules

May 6 5:37 PM

Microsoft Azure

Home Network security groups myNSG_X890BX

Network security group myNSG_X890BX | Inbound security rules

Szűkítési lehetőségek (0/355 szám)

+ Create Manage view ...

Filter for any field.

Name ↑

- myNSG_X890BX
- X890BX-vm1-nsg
- X890BX-vm2-nsg
- X890BxVm1msg588
- X890BxVm2msg982

... Create

Add Hide default rules Refresh Delete Give feedback

Network security group security rules are evaluated by priority using the combination of source, source port, destination, destination port, and protocol to allow or deny the traffic. A security rule can't be overridden with rules that have a higher priority. Learn more ↗

Priority ↑	Name ↑	Port ↑	Protocol ↑	Source ↑	Destination ↑	Action ↑
65000	AllowVnftBound	Any	Any	VirtualNetwork		
65001	AllowAzuLoadBalancedLBBound	Any	Any	AzureLoadBalancer		
65500	DenyHttpBound	Any	Any	Any		

Source ○ Any

Source port ranges * ○

Destination ○ Application security group myAppWebServerX890BX

Destination application security groups myAppWebServerX890BX

No application security groups found

Service ○ Custom

Destination port ranges * ○ 80,443

Protocol ○ Any TCP UDP ICMP

Action ○ Allow Deny

Priority ○ 100

Name * Allow-Web-All

Description

Add Cancel Give feedback

Page 1 of 1

Workspaces Applications

in Körzeti hálózati alakulat: Network and Application Security Add inbound security rule AZLAB_X890BX - Microsoft

Microsoft Azure

myNSG_X890BX

Network security groups

Add inbound security rule

Search

Overview Activity log Access control (IAM) Tags Diagnose and solve problems Settings Inbound security rules Outbound security rules Network interfaces Subnets Properties Locks Monitoring Alerts Diagnostic settings Logs NSG flow logs Automation Tasks (preview) Export template Help Effective security rules Support + Troubleshooting

May 6 5:38 PM

myNSG_X890BX | Inbound security rules

Network security group rules are evaluated by priority using the combination of source port, destination, destination port, and protocol to allow or deny the traffic. A security rule can't be overridden with rules that have a higher priority. Learn more.

Priority	Name	Port	Protocol	Source	Destination	Action
100	Allow-Web-All	80:443	TCP	Any	Virtuális hálózat	Allow
65000	AllowAzureLoadBalancerInbound	Any	Any	AzureLoadBalancer	Allow	
65500	DenyAllInbound	Any	Any	Any	Deny	

Add inbound security rule

Source: Any

Source port range: 1-65535

Destination: Application security group: myAppWebServersX890BX

Destination application security groups: myAppWebServersX890BX

Service: Custom

Destination port ranges: 3389

Protocol: TCP

Action: Allow

Priority: 110

Name: Allow-RDP-All

Description:

Add Cancel Give feedback

Workspaces Applications

in Körzeti hálózati alakulat: Network and Application Security Create a virtual machine AZLAB_X890BX - Microsoft

Microsoft Azure

Create a virtual machine

Project details

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

Subscription: Azure for Students (db94373d-85cc-4196-a21b-f54870c3ebd5)

Resource group: AZLAB_X890BX

Create new

Instance details

Virtual machine name: myVmWebX890BX

Region: (US) East US

Availability options: No infrastructure redundancy required

Security type: Standard

Image: Windows Server 2022 Datacenter - Azure Edition Core - x64 Gen2

VM architecture: Arm64

Run with Azure Spot discount: Standard_E2s_v3 - 2 vcpus, 16 GiB memory (\$159.14/month)

Size: Standard_E2s_v3 - 2 vcpus, 16 GiB memory (\$159.14/month)

Administrator account

Username: StudentX890BX

Password: *

Confirm password: *

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

Select inbound ports: Select one or more ports

Review + create < Previous Next : Disks > Give feedback

Workspaces Applications

in Körzéri hálózati alkalmazás | Network and Application Service | Create a virtual machine | AZLAB_X860BX - Microsoft | +

Microsoft Azure

Home Virtual machines

Create a virtual machine

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 (Encryption at host is not registered for the selected subscription. Learn more about enabling disk feature ↗)

OS disk

OS disk type * Standard HDD (locally-redundant storage) The selected VM size supports premium disks. We recommend Premium SSD for high IOPS workloads. Virtual machines with Premium SSD disks qualify for the 99.9% connectivity SLA.

Delete with VM

Key management Platform-managed key Ultra disk is supported in Availability Zone(s) 1,2,3 for the selected VM size Standard (E2s_v3)

Enable Ultra Disk compatibility

Data disks for myVmWebX860BX

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

Create and attach a new disk Attach an existing disk

Advanced

[Review + create](#) [< Previous](#) [Next : Networking >](#) [Give feedback](#)

https://ms.portal.azure.com/#create/Microsoft.VirtualMachine-Arm

Workspaces Applications

in Körzéri hálózati alkalmazás | Network and Application Service | Create a virtual machine | AZLAB_X860BX - Microsoft | +

Microsoft Azure

Home Virtual machines

Create a virtual machine

Basics Disks Networking Management Monitoring Advanced Tags Review + create

Define network connectivity for your virtual machine by configuring network interface card (NIC) settings. You can control ports, inbound and outbound connectivity with security group rules, or place behind an existing load balancing solution. [Learn more ↗](#)

Network interface

When creating a virtual machine, a network interface will be created for you.

Virtual network * X860BX_VirtualNet [Create new](#)

Subnet * default (10.0.0.0/24) [Manage subnet configuration](#)

Public IP [Create new](#) myVmWebX860BX-ip [Delete public IP and NIC when VM is deleted](#)

NIC network security group [None](#) [Basic](#) [Advanced](#) The selected subnet 'default (10.0.0.0/24)' is already associated to a network security group 'myNSG_X860BX'. We recommend managing connectivity to this virtual machine via the existing network security group instead of creating a new one here.

Load balancing [Place this virtual machine in the backend pool of an existing Azure load balancing solution. Learn more ↗](#)

Place this virtual machine behind an existing load balancing solution?

[Review + create](#) [< Previous](#) [Next : Management >](#) [Give feedback](#)

https://ms.portal.azure.com/#create/Microsoft.VirtualMachine-Arm

Workspaces Applications May 6 5:46 PM

in Konzervi hálózati alkalmazás Network and Application Site Create a virtual machine - Microsoft AZLAB_X890BX - Microsoft +

Microsoft Azure Search resources, services, and docs (en)

Home Virtual machines Create a virtual machine

Basics Disks Networking Management Monitoring Advanced Tags Review + create

Configure monitoring options for your VM.

Alerts

Enable recommended alert rules

Diagnostics

Boot diagnostics Enable with managed storage account (recommended) Enable with custom storage account Disable

Enable OS guest diagnostics

Review + create < Previous Next : Advanced > Give feedback

Workspaces Applications May 6 5:46 PM

in Konzervi hálózati alkalmazás Network and Application Site Create a virtual machine - Microsoft AZLAB_X890BX - Microsoft +

Microsoft Azure Search resources, services, and docs (en)

Home Virtual machines Create a virtual machine

Validation passed

Price

1 X Standard E2s v3 by Microsoft 0.2180 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 of the marketplace offering(s) or other Microsoft services. Microsoft does not provide rights for third-party offerings. See the Azure Marketplace Terms for additional details.

Basics

Subscription Azure for Students

Resource group AZLAB_X890BX

Virtual machine name studentx890bx

Region East US

Availability options No infrastructure redundancy required

Security type Standard

Image Windows Server 2022 Datacenter, Azure Edition Core - Gen2

VM architecture x64

Size Standard E2s v3 (2 vcpus, 16 GB memory)

Username studentx890bx

Already have a Windows license? No

Azure Spot No

Disks

OS disk type Standard HDD LRS

Use managed disks Yes

Delete OS disk with VM Enabled

ephemeral OS disk No

Networking

Virtual network X890BX_VirtualNet

Subnet default (10.0.0.0/24)

Create < Previous Next > Download a template for automation Give feedback

Workspaces Applications

in Konzol hálózati alkalmazás | Network and Application Site | Create a virtual machine - Microsoft | AZLAB_X890BX - Microsoft | +

<https://portal.azure.com/create/Microsoft.VirtualMachine-ARM>

Microsoft Azure

Home Virtual machines

Create a virtual machine

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

Subscription *

Resource group * Create new

Instance details

Virtual machine name *

Region *

Availability options No infrastructure redundancy required

Security type

Image * Windows Server 2022 Datacenter: Azure Edition Core - x64 Gen2

See all images | Configure VM generation

VM architecture Arm64 x64

! Arm64 is not supported with the selected image

Run with Azure Spot discount

Size * See all sizes

Administrator account

Username *

Password *

Confirm password *

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

[Review + create](#) [< Previous](#) [Next : Disks >](#) [Give feedback](#)

Workspaces Applications

in Konzol hálózati alkalmazás | Network and Application Site | Create a virtual machine - Microsoft | AZLAB_X890BX - Microsoft | +

<https://portal.azure.com/create/Microsoft.VirtualMachine-ARM>

Microsoft Azure

Home Virtual machines

Create a virtual machine

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 ! Encryption at host is not registered for the selected subscription. Learn more about enabling this feature.

OS disk

OS disk type * The selected VM size supports premium disks. We recommend Premium SSD for hyper-IOPS workloads. Virtual machines with Premium SSD disks qualify for the 99.9% availability SLA.

Delete with VM

Key management

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

Data disks for myVMMgmtX890BX

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
0	Temporary disk	10	Premium SSD	None	<input checked="" type="checkbox"/>

[Create and attach a new disk](#) [Attach an existing disk](#)

Advanced

[Review + create](#) [< Previous](#) [Next : Networking >](#) [Give feedback](#)

Workspaces Applications

in Konzervál hálózati alkalmazás Network and Application Site Create a virtual machine - Microsoft AZLAB_X90BX - Microsoft +

Microsoft Azure

Home Virtual machines Create a virtual machine

Basics Disks Networking Management Monitoring Advanced Tags Review + create

Define network connectivity for your virtual machine by configuring network interface card (NIC) settings. You can control ports, inbound and outbound connectivity with security group rules, or place behind an existing load balancing solution. Learn more ↗

Network interface

When creating a virtual machine, a network interface will be created for you.

Virtual network * X90BX_VirtualNet Create now

Subnet * default (10.0.0.0/24) Manage subnet configuration

Public IP * (new) myVMGmnX90BX-ip Create now

NIC network security group * None Basic Advanced

The selected subnet "default (10.0.0.0/24)" is already associated to a network security group "myNSG-X90BX". We recommend managing connectivity to this virtual machine via the existing network security group instead of creating a new one here.

Delete public IP and NIC when VM is deleted

Enable accelerated networking

Load balancing

You can place this virtual machine in the backend pool of an existing Azure load balancing solution. Learn more ↗

Place this virtual machine behind an existing load balancing solution?

Review + create < Previous Next : Management > Give feedback

Workspaces Applications

in Konzervál hálózati alkalmazás Network and Application Site Create a virtual machine - Microsoft AZLAB_X90BX - Microsoft +

Microsoft Azure

Home Virtual machines Create a virtual machine

Validation passed

Price

1 X Standard E2s v3 by Microsoft Subscription credits apply 0.2180 USD/hr Pricing for other VM sizes Terms of use | Privacy policy

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.

Basics

Subscription Azure for Students Resource group AZLAB_X90BX Virtual machine name myVMGmnX90BX Region East US Availability options No infrastructure redundancy required Security type Standard Image Windows Server 2022 Datacenter: Azure Edition Core - Gen2 VM architecture v2s v3 Size Standard E2s v3 (2 vcpus, 16 GB memory) Username StudentX90BX Already have a Windows license? No Azure Spot No

Disks

OS disk type Standard HDD LRS Use managed disks Yes Delete OS disk with VM Enabled Ephemeral OS disk No

Networking

Virtual network X90BX_VirtualNet Subnet default (10.0.0.0/24)

Create < Previous Next > Download a template for automation Give feedback

Workspaces Applications

in Körzéri hálózati alkalmazás | Network and Application Site | myVmWebX908X - Microsoft | My Dashboard - Microsoft | +

Microsoft Azure

Search resources, services, and docs (S+)

Virtual machines myVmWebX908X

Virtual machine myVmWebX908X | Networking

Create Switch to classic ...

Search Filter for any field ...

Name ?

myVmMgmtX908X myVmWebX908X

Tags

Diagnose and solve problems

Settings Networking

Connect Windows Admin Center

Disk Size

Microsoft Defender for Cloud

Advisor recommendations

Extensions + applications Availability + scaling

Configuration Identity Properties Locks

Bastion Auto-shutdown Backup Disaster recovery Updates Inventory Change tracking Automate Configuration management (Preview) Policies Run command

IP configuration ipconfig (Primary)

Network Interface: myVmWebX908X152 Virtual network/subnet: X908X_VirtualNet/default Effective security rules Troubleshoot VM connection issues Topology

NIC Public IP: 20.106.135.255 NIC Private IP: 10.0.0.4 Accelerated networking Enabled

Inbound port rules Outbound port rules Application security groups Load balancing

Network security group myNSG_X908X (attached to subnet default)

Impact 3 features: 3 network interface(s)

Priority Name Port Protocol Source Destination Action

100 Allow-Web-All 80,443 TCP Any myAgWebServersX908X Allow

110 Allow-RDP-All 3389 TCP Any myAgWebServersX908X Allow

65000 AllowUnrestrictedAny Any Any VirtualNetwork VirtualNetwork Allow

65001 AllowAzureLoadBalancing Any Any AzureLoadBalances Any Allow

65500 DenyAllInbound Any Any Any Any Deny

Add inbound port rule

Need help? Understand Azure load balancing

Quickstart: Create a public load balancer to load balance Virtual Machines

Quickstart: Direct web traffic with Azure Application Gateway

Checking for additional rules...

< Page 1 of 1 >

Workspaces Applications

in Körzéri hálózati alkalmazás | Network and Application Site | Configure the application | My Dashboard - Microsoft | +

Microsoft Azure

Search resources, services, and docs (S+)

Virtual machines myVmWebX908X

Virtual machine myVmWebX908X | Networking

Create Switch to classic ...

Search Filter for any field ...

Name ?

myVmMgmtX908X myVmWebX908X

Tags

Diagnose and solve problems

Settings Networking

Connect Windows Admin Center

Disk Size

Microsoft Defender for Cloud

Advisor recommendations

Extensions + applications Availability + scaling

Configuration Identity Properties Locks

Bastion Auto-shutdown Backup Disaster recovery Updates Inventory Change tracking Automate Configuration management (Preview) Policies Run command

IP configuration ipconfig (Primary)

Network Interface: myVmWebX908X152 Virtual network/subnet: X908X_VirtualNet/default Effective security rules Troubleshoot VM connection issues Topology

NIC Public IP: 20.106.135.255 NIC Private IP: 10.0.0.4 Accelerated networking Enabled

Inbound port rules Outbound port rules Application security groups Load balancing

Configure the application security groups

myVmWebX908X152

Save Discard

Showing only application security groups in the same region as the network interface. If you choose more than one application security group, they must all exist in the same virtual network.

Application security groups myAgWebServersX908X

< Page 1 of 1 >

Workspaces Applications

In Körzéri hálózati alkalmazás | Network and Application Site | Configure the application | My Dashboard - Microsoft | +

Microsoft Azure

Home Virtual machines myVMgmtX89O8X

Virtual machines

Sokszínű általános szolgáltatások | myVMgmtX89O8X

myVMgmtX89O8X | Networking

Virtual machine

Create Switch to classic ...

Search

Feedback Attach network interface Detach network interface

Name: myVMgmtX89O8X

IP configuration: ipconfig (Primary)

Network Interface: myvmmgmtx89o8x38 Effective security rules Troubleshoot VM connection issues Topology

Virtual network/subnet: X89O8X_VirtualNet/default NIC Public IP: 20.85.227.67 NIC Private IP: 10.0.0.5 Accelerated networking: Enabled

Filter for any field...

Name ?:

myVMgmtX89O8X myVmWebX89O8X

Tags

Diagnose and solve problems

Settings

Networking Connect Windows Admin Center Disk Size Microsoft Defender for Cloud Advisor recommendations Extensions + applications Availability + scaling Configuration Identity Properties Locks

Operations

Bastion Auto-shutdown Backup Disaster recovery Updates Inventory Change tracking Automate Configuration management (Preview) Policies Run command

< Page 1 of 1 >

Configure the application security groups

myVMgmtX89O8X38

Save Discard

Showing only application security groups in the same region as the network interface. If you connect more than one application security group, they must all exist in the same virtual network.

Application security groups myAsgWebServerX89O8X Filter the application security groups

Application security group(s) that can be used myAsgWebServerX89O8X Resource group: AZLAB_X89O8X

Workspaces Applications

In Körzéri hálózati alkalmazás | Network and Application Site | Run Command Script - Microsoft | My Dashboard - Microsoft | +

Microsoft Azure

Home Virtual machines myVmWebX89O8X

Virtual machines

Sokszínű általános szolgáltatások | myVMgmtX89O8X

myVmWebX89O8X | Run command

Virtual machine

Create Switch to classic ...

Search

Run Command uses the VM agent to let you run a script inside this virtual machine. This can be helpful for troubleshooting and recovery, and for general management tasks.

Name: myVmWebX89O8X

Description

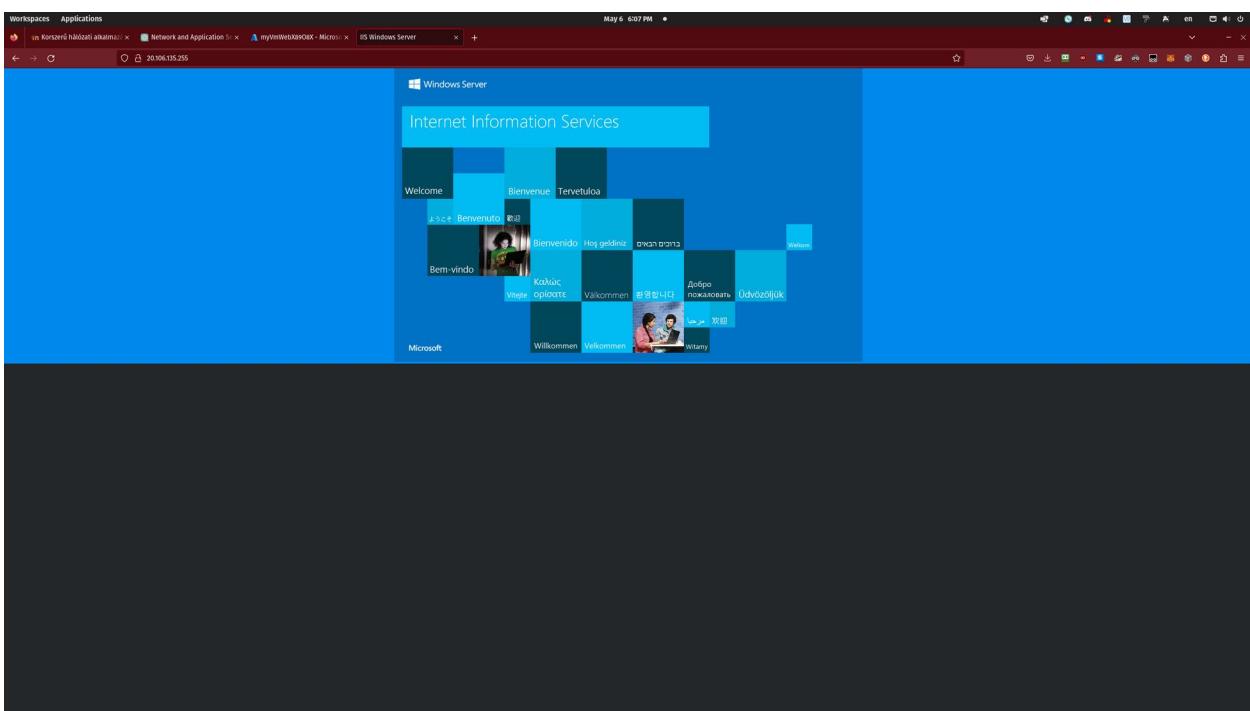
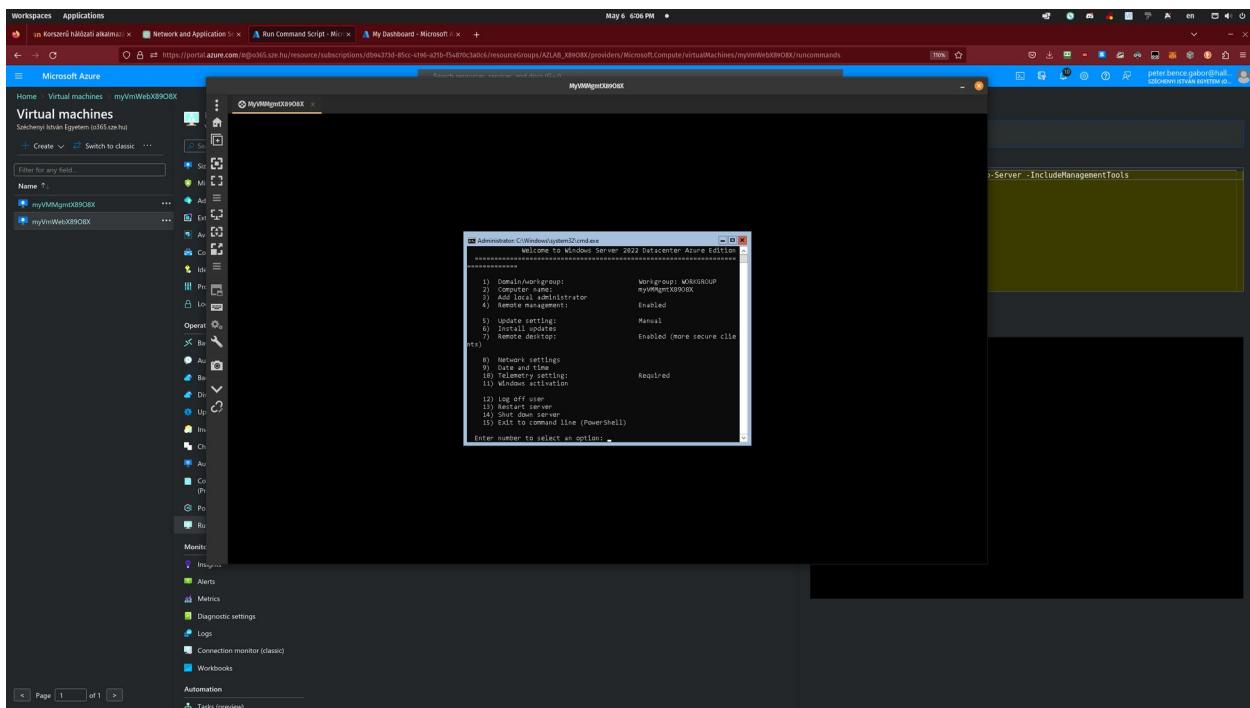
Name	Description
RunPowerShellScript	Executes a PowerShell script
DisableNLA	Disable Network Level Authentication
DisableWindowsUpdate	Disable Windows Update Automatic Updates
EnableAdminAccount	Enable administrator account
EnableEMS	Enable EMS
EnableRemotePS	Enable remote PowerShell
EnableWindowsUpdate	Enable Windows Update Automatic Updates
IPConfig	List IP configuration
RDSettings	Verify RDP Listener Settings
ResetRDPCert	Restore RDP Authentication mode to defaults
SetRDPPort	Set Remote Desktop port

Run PowerShell Script

PowerShell Script

```
1 Install-WindowsFeature -name Web-Server -IncludeManagementTools
```

Run



2. Feladat

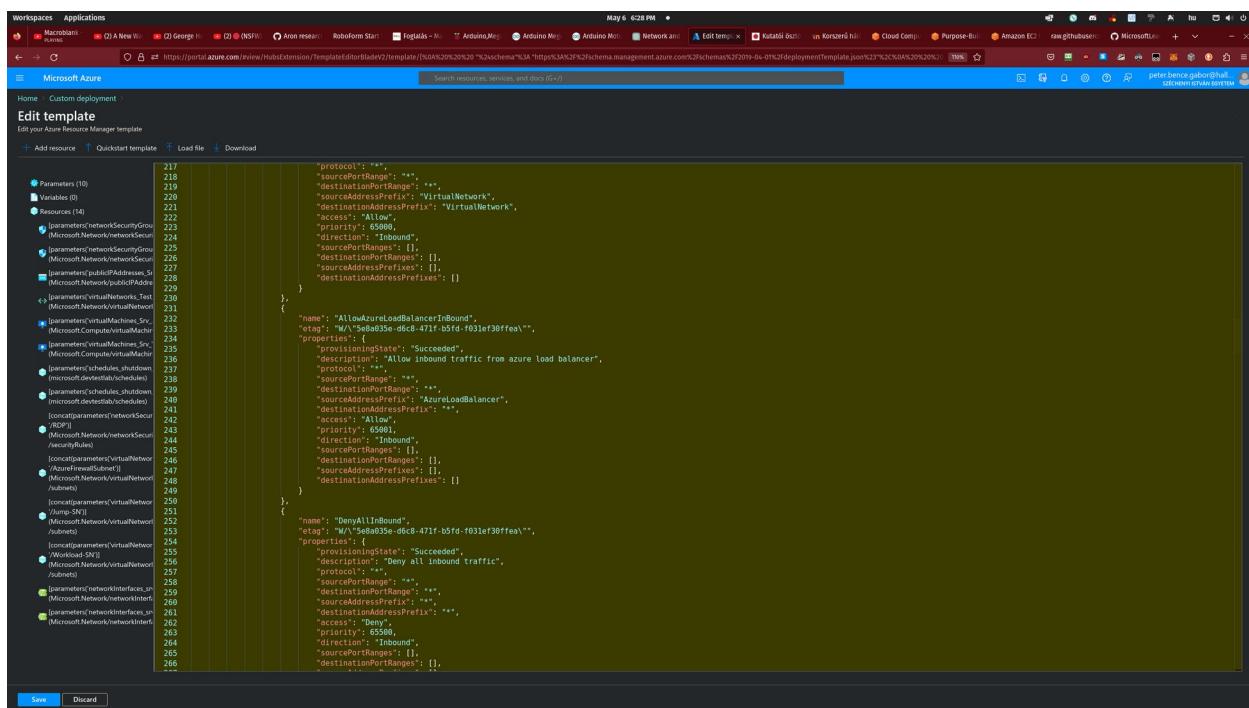
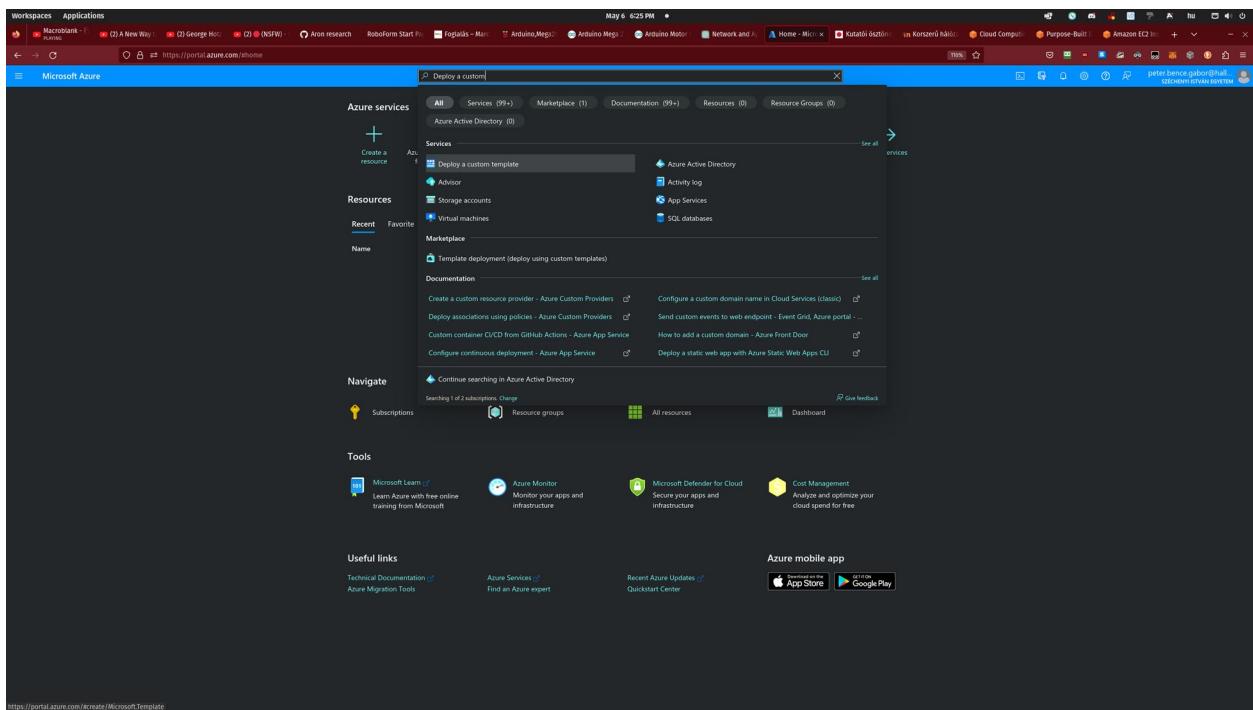
Az Azure Firewall az Azure felhőalapú tűzfal szolgáltatása, amelyet a Microsoft fejlesztett ki a virtuális hálózatok védelmére. Az Azure Firewall lehetővé teszi az adminisztrátorok számára, hogy egy központi helyről kezeljék és figyeljék az Azure-ban futó virtuális hálózatokat.

Az Azure Firewall a hálózati szinten működik, és képes szabályokat definiálni a hálózati forgalom irányítására és szűrésére. Az Azure Firewall számos előre definiált szabályt tartalmaz, amelyek lehetővé teszik az adminisztrátorok számára, hogy a hálózati forgalomra vonatkozó szabályokat egyszerűen konfigurálják, például szűrhetik az internetes forgalmat vagy csak engedélyezhetik a bizonyos IP-címekről érkező forgalmat.

Az Azure Firewall a következő szűrőtechnológiákat alkalmazza:

1. Alkalmazás-szintű szűrés (Application Filtering): Az Azure Firewall képes az alkalmazásokat, szolgáltatásokat és protokollokat azonosítani és szabályozni, és blokkolni azokat, amelyek nem felelnek meg a beállított szabályoknak.
2. Hálózati szintű szűrés (Network Filtering): Az Azure Firewall képes a hálózati forgalmat szűrni, figyelni és logolni a hálózatban. Az adminisztrátorok konfigurálhatnak szabályokat, hogy csak bizonyos forrásokról vagy célok ról engedélyezett forgalmat engedjenek át.
3. Webhely-filtet (Web Filtering): Az Azure Firewall képes szűrni a webhelyeket és azok tartalmát. Az adminisztrátorok beállíthatnak szabályokat, hogy bizonyos webhelyeket blokkoljanak vagy engedélyezzenek.

Az Azure Firewall lehetővé teszi az adminisztrátorok számára, hogy védelmi stratégiáikat centralizáltan kezeljék az Azure-ban, így javítva az Azure hálózati biztonságát. A tűzfal képes a kiberfenyegetések elleni védelemre, a hálózati forgalom irányítására és szűrésére, valamint a felhőszolgáltatások és alkalmazások biztonságának biztosítására az Azure felhőben.



Workspaces Applications May 6 6:29 PM

Microbotan (Q) A New Web (Q) George H (Q) (NSFL) (Q) Aron rese... RoboForm Start Fogalás - M Arduino Me... Arduino Mo... Network and Custom (Q) Kutatói ösztön Korszerű hálózat Cloud Comp Purpose-Buil... Amazon EC2 raw.githubusercontent.com Microsoft Edge

Microsoft Azure https://portal.azure.com/create/Microsoft.Template

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

Custom deployment

Deploy from a custom template

Validation Passed

Select a template Basics Review + create

Summary

Customized template 14 resources

Terms Azure Marketplace Terms Azure Marketplace

By clicking "Create," (a) I agree to the applicable legal terms associated with the offering; (b) authorize Microsoft to charge or bill my current payment method for the fees associated with the offering(s), including applicable taxes, with the same billing frequency as my Azure subscription, until I disconnect use of the offering(s); and (c) agree that, if the offering is a marketplace offering, Microsoft may share my contact information and other details of such deployment with the publisher of that offering.

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Basics

Subscription Azure for Students

Resource group AZ200_A008_XB0DX

Region East US

Virtual Machine: Srv_Jump_name Srv_Jump

Virtual Machine: Srv_Work_name Srv_Work

Virtus Networks: Test_FW_VN_name Test_FW_VN

Network Interfaces: svr_jump121_name svr_jump121

Network Interfaces: svr_work267_name svr_work267

Public IP Addresses: Srv_Jump_PIP_name Srv_Jump_PIP

Network Security Groups: Srv_Jump_ms... Srv_Jump_ms...

Network Security Groups: Srv_Work_ms... Srv_Work_ms...

Schedules: shutdown_computervm_sv... shutdown_computervm-srv-jump

Schedules: shutdown_computervm_sv_w... shutdown_computervm-srv-work

Create < Previous Next >

Workspaces Applications May 6 6:29 PM

Microbotan (Q) A New Web (Q) George H (Q) (NSFL) (Q) Aron rese... RoboForm Start Fogalás - M Arduino Me... Arduino Mo... Network and Custom (Q) Kutatói ösztön Korszerű hálózat Cloud Comp Purpose-Buil... Amazon EC2 raw.githubusercontent.com Microsoft Edge

Microsoft Azure https://portal.azure.com/review/HubExtension/BrowseResource/ResourceType/Microsoft.Network%2FAzureFirewalls

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

Firewalls

+ Create Manage view Refresh Export to CSV Open query Assign tags

Filter for any field... Subscription equals Azure for Students Resource group equals all Location equals all Add filter

No grouping List view

Showing 0 of 0 records

Name	Type	Resource group	Location	Subscription
------	------	----------------	----------	--------------

No firewalls to display

Cloud-native network security to protect your Azure Virtual Network resources

Create firewall

Learn more about Azure Firewall

Give feedback

Workspaces Applications May 6 6:31 PM

Microsoft Azure https://portal.azure.com/create/Microsoft.AzureFirewall-Arm Search resources, services, and docs (G+/)

Home Firewalls Create a firewall

Basics Tags Review + create

Azure Firewall is a managed cloud-based network security service that protects your Azure Virtual Network resources. It is a fully stateful firewall as a service with built-in high availability and unrestricted cloud scalability. You can centrally create, enforce, and log application and network connectivity policies across subscriptions and virtual networks. Azure Firewall uses a static public IP address for your virtual network resources allowing outside traffic originating from your virtual network. The service is fully integrated with Azure Monitor for logging and analytics. [Learn more](#)

Project details

Subscription * Azure for Students (0b94375d-85cc-419c-a2fb-f548f0c3a06)

Resource group * AZ500LAB08_X99OBX

Create new

Instance details

Name * Test-FW01-X99OBX

Region * East US

Availability zone (None)

Premium firewalls support additional capabilities, such as SSL termination and iDPs. Additional costs may apply. [Learn more](#)

Firewall SKU Standard Basic Premium

Firewall management Use a Firewall Policy to manage this firewall Use Firewall rules (classic) to manage this firewall

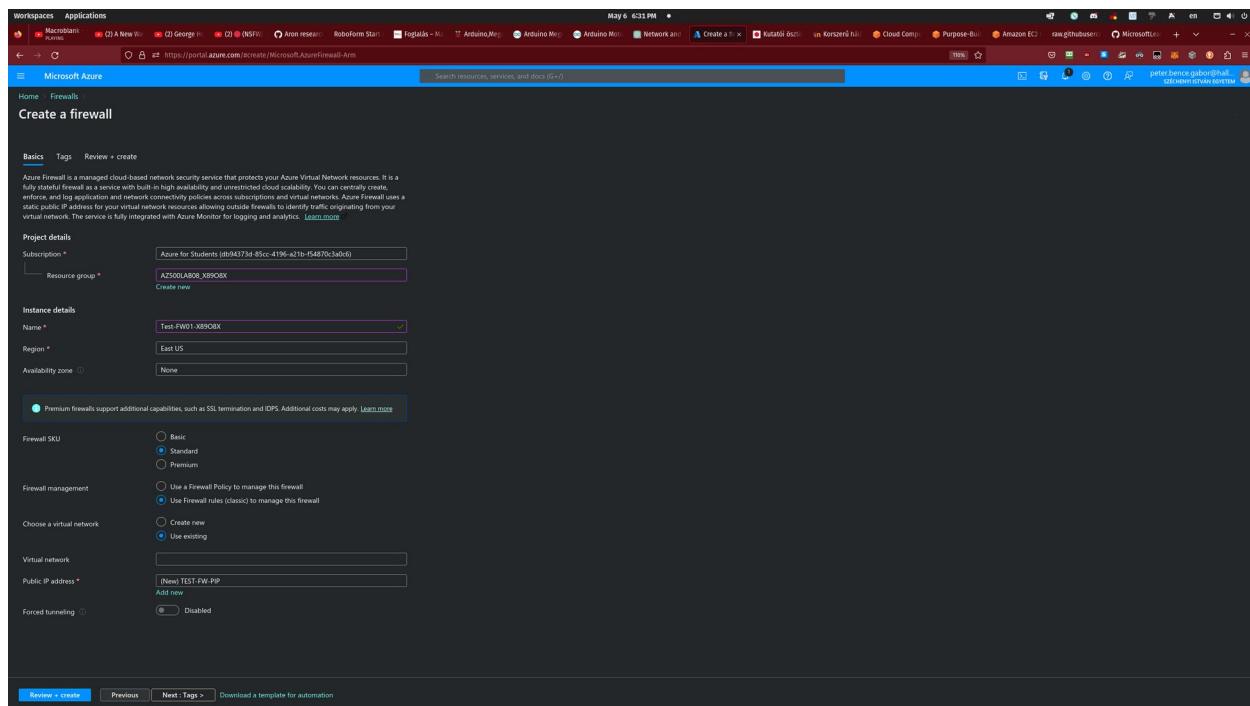
Choose a virtual network Create new Use existing

Virtual network Test-FW-VN (AZ500LAB08_X99OBX)

Public IP address * (New) TEST-FW-PIP Add new

Forced tunneling Enabled Disabled

Review + create Previous Next : Tags > Download a template for automation



Workspaces Applications May 6 6:31 PM

Microsoft Azure https://portal.azure.com/create/Microsoft.AzureFirewall-Arm Search resources, services, and docs (G+/)

Home Firewalls Create a firewall

Basics Tags Review + create

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Availability zone (None)

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Firewall management Use a Firewall Policy to manage this firewall Use Firewall rules (classic) to manage this firewall

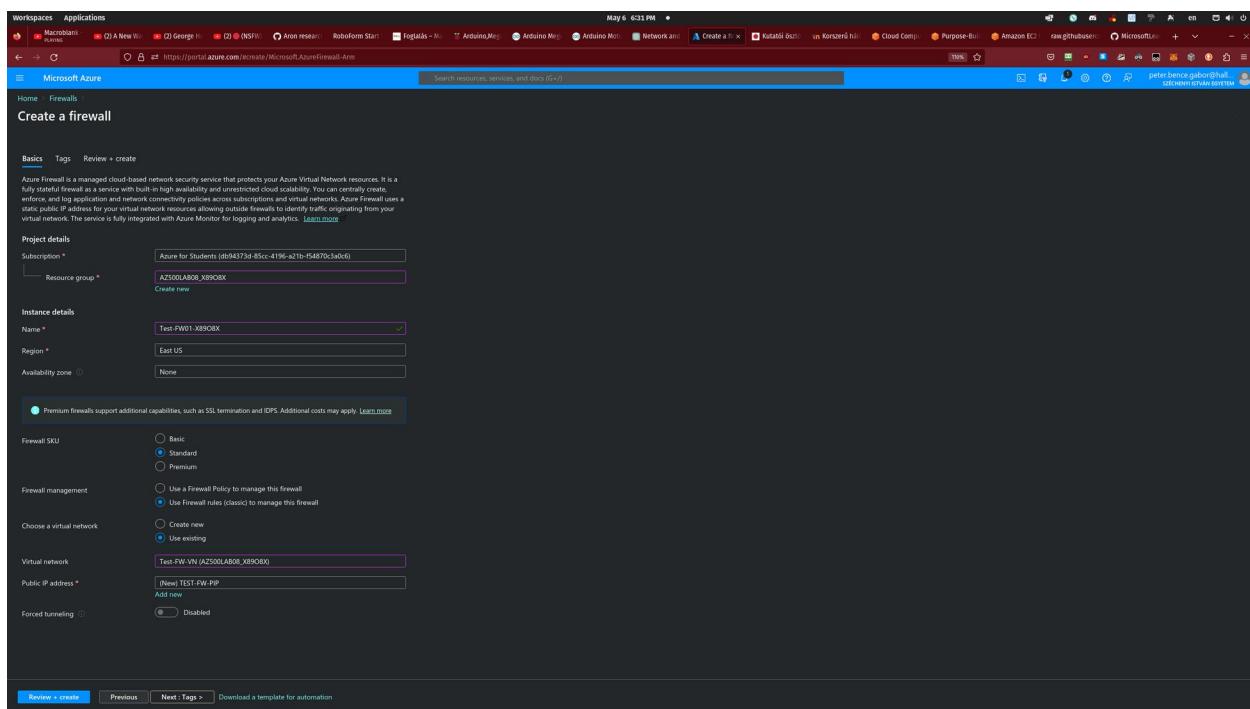
Choose a virtual network Create new Use existing

Virtual network Test-FW-VN (AZ500LAB08_X99OBX)

Public IP address * (New) TEST-FW-PIP Add new

Forced tunneling Enabled Disabled

Review + create Previous Next : Tags > Download a template for automation



Workspaces Applications May 6 6:31 PM

Microsoft Azure https://portal.azure.com/create/Microsoft.AzureFirewall.Arm Search resources, services, and docs (S+)

Create a firewall

Validation passed

Basics Tags Review + create

Summary

Basic

Subscription: Azure for Students
Resource group: AZ500LAB08_X990BX
Region: East US
Azure Firewall SKU: Standard
Virtual network: Test-FW-VN
Address space: 10.0.0.16
Forwarded public IP address: TEST-FW-PIP
Availability zone: None

Tags

Resource type Name Value

No results

Create Previous Next Download a template for automation

Workspaces Applications May 6 6:32 PM

Microsoft Azure https://portal.azure.com/#resource/subscriptions/0f9a373d-45cc-4196-a21b-54807c3a26 Overview Search resources, services, and docs (S+)

TEST-FW-PIP Public IP address

Overview Associate Dissociate Delete Move Refresh Open in mobile

Activity log

Tags

Essentials

SKU: Standard
Tier: Regional
IP address: 20.85.246.106
DNS name: -
Associated to: Test-FW1-X990BX
Virtual machine: -
Routing preference: Microsoft network

Resource group (more): AZ500LAB08_X990BX
Location (more): East US
Subscription (more): Azure for Students
Subscription ID: 0e940736-85cc-4196-a21b-54807c3a26

Tags (edit): Click here to add tags

Get Started Properties Tutorials

Use public IP addresses for public connections to Azure resources

Associate to a resource: Associate your public IP address to an Azure resource such as an Azure Load Balancer or a network interface.

Configure a public IP address: Configure a DNS site name, and alias record for your public IP address.

Protect IP address: Choose the right DDoS protection level for your IP address.

Associate IP Configure Protect

Monitoring Insights Alerts Metrics Diagnostic settings

Automation Tasks (preview) Export template

Support & troubleshooting New Support Request

Workspaces Applications May 6 6:32 PM

Microsoft Azure https://portal.azure.com/#view/Microsoft_Extensions/BrowseResource/resourceType/Microsoft.Network/routeTables

Route tables Search resources, services, and docs (S+)

Home Route tables

Subscription-level filters Create Manage view Refresh Export to CSV Open query Assign tags

Filter for any field Subscription equals Azure for Students Resource group equals all Location equals all Add filter

Showing 0 to 0 of 0 records.

Name ↑ Resource group ↑ Location ↑ Subscription ↑

No route tables to display

Create a route table when you need to override Azure's default routing. For example, you can route traffic to a network virtual appliance or to your on-premises network for inspection. A route table contains routes and is associated to one or more subnets.

Create route table Learn more ↗

Give feedback

Workspaces Applications May 6 6:33 PM

Microsoft Azure https://portal.azure.com/#create/Microsoft.RouteTable-ARM

Search resources, services, and docs (S+)

Home Route tables Create Route table

Basics Tags Review + create

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

Subscription * Azure for Students (d094373d-85cc-4196-a2fb-f54870c3a0x6)

Resource group * AZ500LAB08_X89O8X Create new

Instance details Region * East US Name * Firewall-route-X89O8X Propagate gateway routes * Yes No

Review + create < Previous Next : Tags >

Workspaces Applications May 6 6:33 PM

Microbotan A New Web George H (NSFW) Aron research RoboForm Start Fogtakás - M Arduino Me Arduino Net Network and Firewall route-XB90BX Microsoft Edge screenshot captured you can paste the image from the clipboard.

Microsoft Azure https://portal.azure.com/#create/Microsoft.RouteTable-ARM

Search resources, services, and docs (G+)

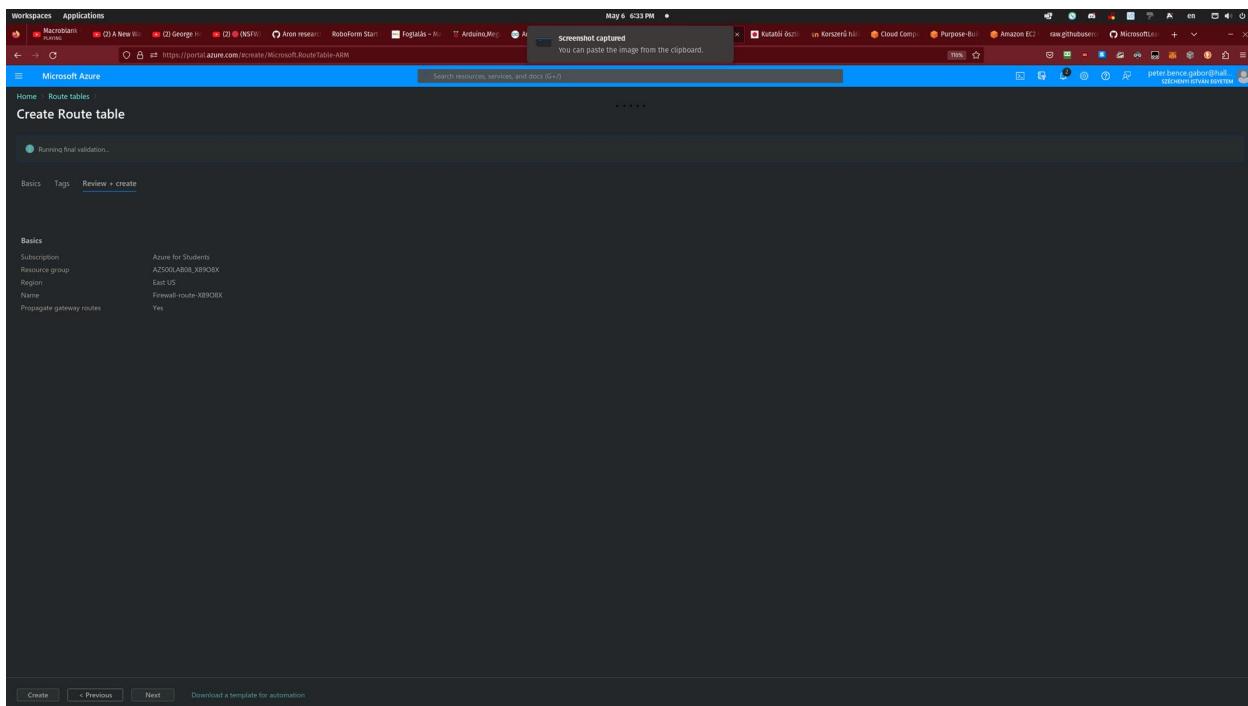
Home Route tables Create Route table

Running final validation...

Basics Tags Review + create

Subscription: Azure for Students
Resource group: AZ500LAB08_XB90BX
Region: East US
Name: Firewall-route-XB90BX
Propagate gateway routes: Yes

Create < Previous Next > Download a template for automation



Workspaces Applications May 6 6:36 PM

Microbotan A New Web George H (NSFW) Aron research RoboForm Start Fogtakás - M Arduino Me Arduino Net Network and Firewall route-XB90BX Microsoft Edge

Microsoft Azure https://portal.azure.com/#view/HubsExtension/BrowseResource/resourceType/Microsoft.Network%2frouteTables

Search resources, services, and docs (G+)

Home Route tables Széchenyi Irányító Egység

+ Create Manage view Refresh Export to CSV Open query Assign tags

Filter for any field... Subscription equals Azure for Students Resource group equals all Location equals all Add filter

No grouping List view

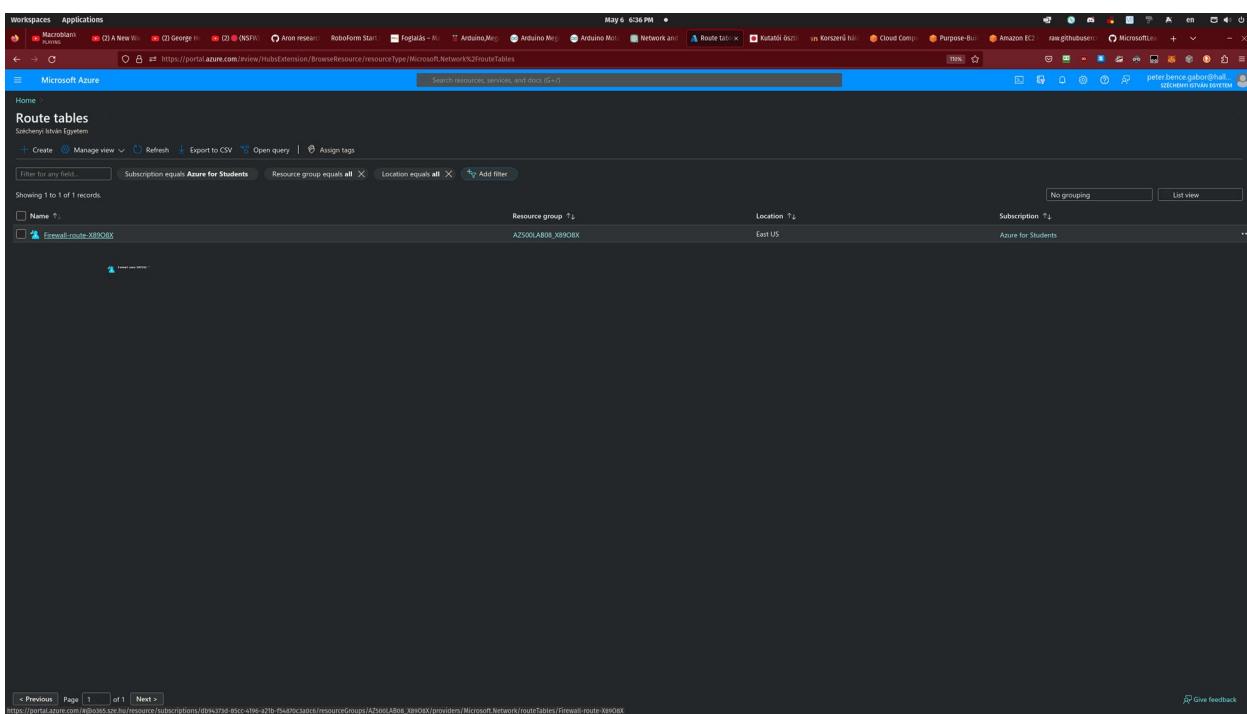
Showing 1 to 1 of 1 records

Name	Resource group	Location	Subscription
Firewall-route-XB90BX	AZ500LAB08_XB90BX	East US	Azure for Students

< Previous Page 1 of 1 Next >

https://portal.azure.com/#resource/subscriptions/0bba37d8-85c2-4f98-87fb-5a4ab0c3a0e/resourceGroups/AZ500LAB08_XB90BX/providers/Microsoft.Network/routeTables/Firewall-route-XB90BX

Give feedback



Workspaces Applications

Microsoft Azure https://portal.azure.com/#@o365.sze.hu/resource/subscriptions/d9a4373d-85cc-4f96-a21b-f5a870c3ab6/resourceGroups/AZ500LAB08_X90BX/providers/Microsoft.Network/RouteTables/Firewall-route-X90BX/subnets

May 6 6:36 PM

Microsoft Azure Firewall-route-X90BX

Route tables Firewall-route-X90BX | Subnets

Route table

Overview Activity log Access control (IAM) Tags Diagnose and solve problems Settings Configuration Routes Subnets Properties Locks Monitoring Alerts Automation Tasks (preview) Export template Support + troubleshooting Effective routes New Support Request

Name: Firewall-route-X90BX

Search subnets: Name Address range Virtual network Security group

No results.

< Page 1 of 1 >

Workspaces Applications

Microsoft Azure https://portal.azure.com/#@o365.sze.hu/resource/subscriptions/d9a4373d-85cc-4f96-a21b-f5a870c3ab6/resourceGroups/AZ500LAB08_X90BX/providers/Microsoft.Network/RouteTables/Firewall-route-X90BX/subnets

May 6 6:37 PM

Microsoft Azure Firewall-route-X90BX | Subnets

Route table

Overview Activity log Access control (IAM) Tags Diagnose and solve problems Settings Configuration Routes Subnets Properties Locks Monitoring Alerts Automation Tasks (preview) Export template Support + troubleshooting Effective routes New Support Request

Name: Firewall-route-X90BX

Search subnets: Name Address range Virtual network Security group

No results.

Associate subnet

FIREWALL-ROUTE-X90BX

Virtual network: Test-FW-VN (AZ500LAB08_X90BX)

Subnet: Workload-SN

OK

< Page 1 of 1 >

Workspaces Applications

Microsoft Azure https://portal.azure.com/#@okt6.sze.hu/resource/subscriptions/d094373d-85cc-4f9e-a21b-f5a870c3ab04/resourceGroups/AZ500LAB08_X89O8X/providers/Microsoft.Network/RouteTables/Firewall-route-X89O8X/routes May 6 6:38 PM

Microsoft Azure

Home Route tables Firewall-route-X89O8X

Route tables Szigetvári László Egyetem Firewall-route-X89O8X | Routes

Route table

+ Create Manage view ⋮

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Overview Activity log Access control (IAM) Tags Diagnose and solve problems Settings Configuration Routes Subnets Properties Locks Monitoring Alerts Automation Tasks (preview) Export template Support + troubleshooting Effective routes New Support Request

Name: Firewall-route-X89O8X

Address prefix: No results.

Next hop type: Next hop IP address:

< Page 1 of 1 >

Workspaces Applications

Microsoft Azure https://portal.azure.com/#@okt6.sze.hu/resource/subscriptions/d094373d-85cc-4f9e-a21b-f5a870c3ab04/resourceGroups/AZ500LAB08_X89O8X/providers/Microsoft.Network/RouteTables/Firewall-route-X89O8X/routes May 6 6:39 PM

Microsoft Azure

Home Route tables Firewall-route-X89O8X

Route tables Szigetvári László Egyetem Firewall-route-X89O8X | Routes

Route table

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+ Add Refresh Give feedback

Overview Activity log Access control (IAM) Tags Diagnose and solve problems Settings Configuration Routes Subnets Properties Locks Monitoring Alerts Automation Tasks (preview) Export template Support + troubleshooting Effective routes New Support Request

Name: Firewall-route-X89O8X

Address prefix: No results.

Next hop type: Next hop IP address:

Add route

Route name: FW-DG-X89O8X

Destination address prefix: IP Addresses

0.0.0.0/0

Next hop type: Virtual appliance

Next hop address: 20.85.246.106

Ensure you have IP forwarding enabled on your virtual appliance. You can enable this by navigating to the respective network interface's IP address settings.

Add

< Page 1 of 1 >

Workspaces Applications

Macroblani (2) A New Web (2) George H. (2) (NSFW) Aron research RoboForm Start Foglalkoz - M. Arduino.Meg. Arduino.Mot. Network and Test-FW01-X89O8X x Katalin össz. in Korszerű háló Cloud Comp. Purpose-Built Amazon EC2 raw.githubusercontent.com Microsoft.Lab +

Microsoft Azure

Home Test-FW01-X89O8X | Rules (classic)

Firewall

Search Refresh

This firewall can be managed by Azure Firewall Manager.

NAT rule collection Network rule collection Application rule collection

+ Add application rule collection

Priority Name Action Rules

No results

Azure infrastructure application rule collection is enabled by default. Learn more

Tags

Settings DNS Rules (classic) Public IP configuration Threat intelligence Firewall Manager Properties Locks Monitoring Metrics Diagnostic settings Logs Automation Tasks (preview) Export template Help Resource health Support + Troubleshooting

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https://portal.azure.com/#@el05.sze.hu/resource/subscriptions/d9a37f6-85c2-4f96-d21b-f54b7c3a6c6/resourceGroups/2Z50LA808_X89O8X/providers/Microsoft.Network/azurfirewalls/Test-FW01-X89O8X/rules

Workspaces Applications

Macroblani (2) A New Web (2) George H. (2) (NSFW) Aron research RoboForm Start Foglalkoz - M. Arduino.Meg. Arduino.Mot. Network and Test-FW01-X89O8X x Katalin össz. in Korszerű háló Cloud Comp. Purpose-Built Amazon EC2 raw.githubusercontent.com Microsoft.Lab +

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Firewall

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Tags

Settings DNS Rules (classic) Public IP configuration Threat intelligence Firewall Manager Properties Locks Monitoring Metrics Diagnostic settings Logs Automation Tasks (preview) Export template Help Resource health Support + Troubleshooting

Add application rule collection

Name * App-Coll01-X89O8X Priority * 200 Action * Allow

Rules FQDN tags

name	Source type	Source	FQDN tags
	IP address	* 192.168.10.1, 192.168.10.24, 192.1...	0 selected

FQDN tags may require additional configuration. Learn more

Target FQDNs

name	Source type	Source	ProtocolPort	Target FQDNs
AllowGH	IP address	10.0.2.0/24	http:80, https:443	www.bing.com
	IP address	* 192.168.10.1, 192.168.10.0/...	http:80, https:443, msogp1...	www.microsoft.com, * micros...

msogp1 SQL should be enabled in proxy mode. This may require additional configuration. Learn more

Add

May 6 6:46 PM

https://portal.azure.com/#@el05.sze.hu/resource/subscriptions/d9a37f6-85c2-4f96-d21b-f54b7c3a6c6/resourceGroups/2Z50LA808_X89O8X/providers/Microsoft.Network/azurfirewalls/Test-FW01-X89O8X/rules

Workspaces Applications May 6 6:46 PM

Microsoft Azure https://portal.azure.com/#resource/subscriptions/d0fa37f0-85cc-4f9e-a21b-75a870c1ab04/resourceGroups/AZ501LAB08_1X80BX/providers/Microsoft.Network/azurfw/Test-FW01-X80BX/rules

Test-FW01-X80BX | Rules (classic)

Firewall

Updating firewall

Overview Activity log Access control (IAM) Tags

NAT rule collection Network rule collection Application rule collection

+ Add network rule collection

Priority Name Action Rules

No results

Settings DNS Rules (classic) Public IP configuration Threat intelligence Firewall Manager Properties Locks Monitoring Metrics Diagnostic settings Logs Automation Tasks (preview) Export template Help Resource health Support + Troubleshooting

https://portal.azure.com/#

Workspaces Applications May 6 6:47 PM

Microsoft Azure https://portal.azure.com/#resource/subscriptions/d0fa37f0-85cc-4f9e-a21b-75a870c1ab04/resourceGroups/AZ501LAB08_1X80BX/providers/Microsoft.Network/azurfw/Test-FW01-X80BX/rules

Test-FW01-X80BX | Rules (classic)

Firewall

Updating firewall

Overview Activity log Access control (IAM) Tags

NAT rule collection Network rule collection Application rule collection

+ Add network rule collection

Priority Name

No results

Settings DNS Rules (classic) Public IP configuration Threat intelligence Firewall Manager Properties Locks Monitoring Metrics Diagnostic settings Logs Automation Tasks (preview) Export template Help Resource health Support + Troubleshooting

Add network rule collection

Name * Net-Call01-X80BX Priority * 200 Action * Allow

Rules IP Addresses

Name	Protocol	Source type	Source	Destination type	Destination Address	Destination Ports
AllowDNS	UDP	IP address	10.0.2.0/24	IP address	79.244.0.3,209,244	53
		IP address	*, 192.168.10.1, 192.	IP address	*	8080, 8080-8090

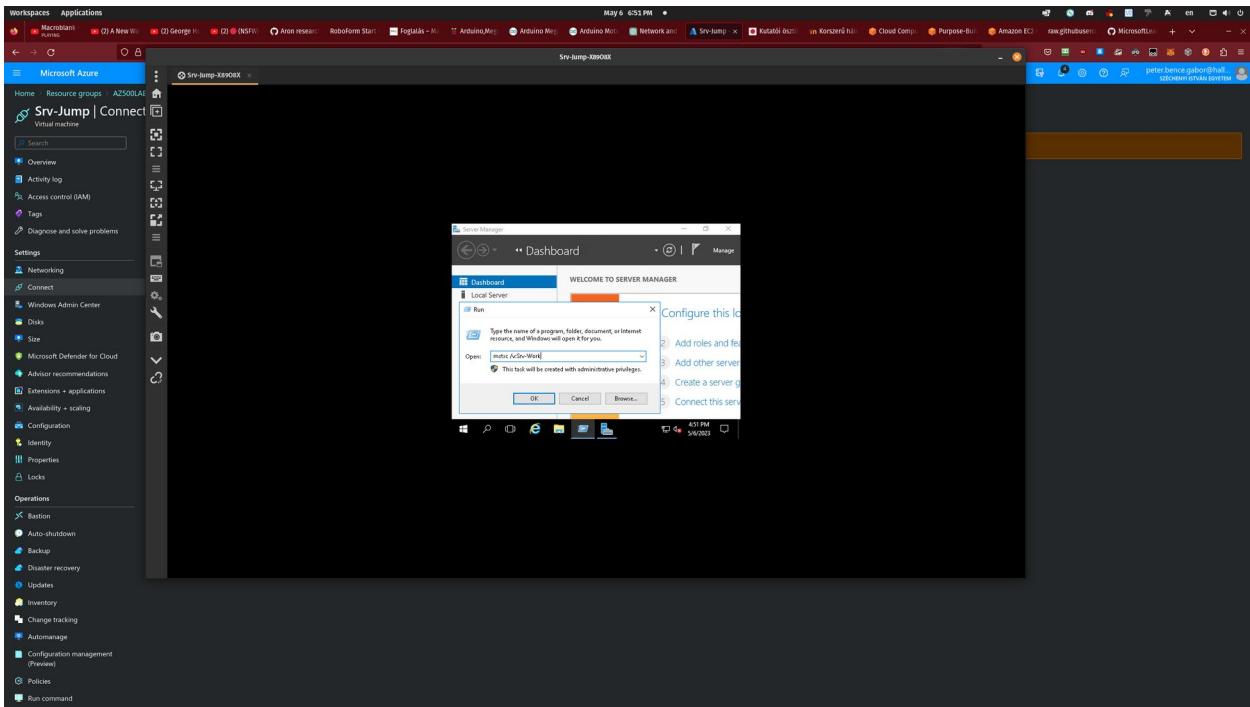
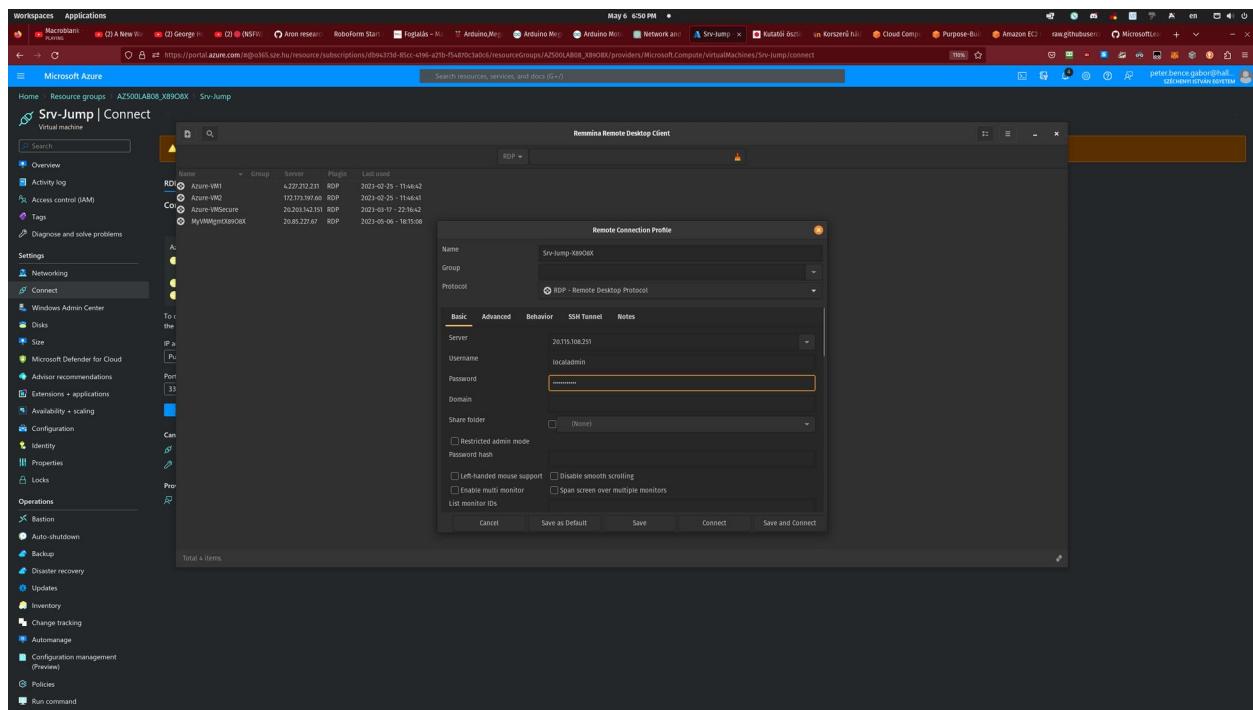
Service Tags

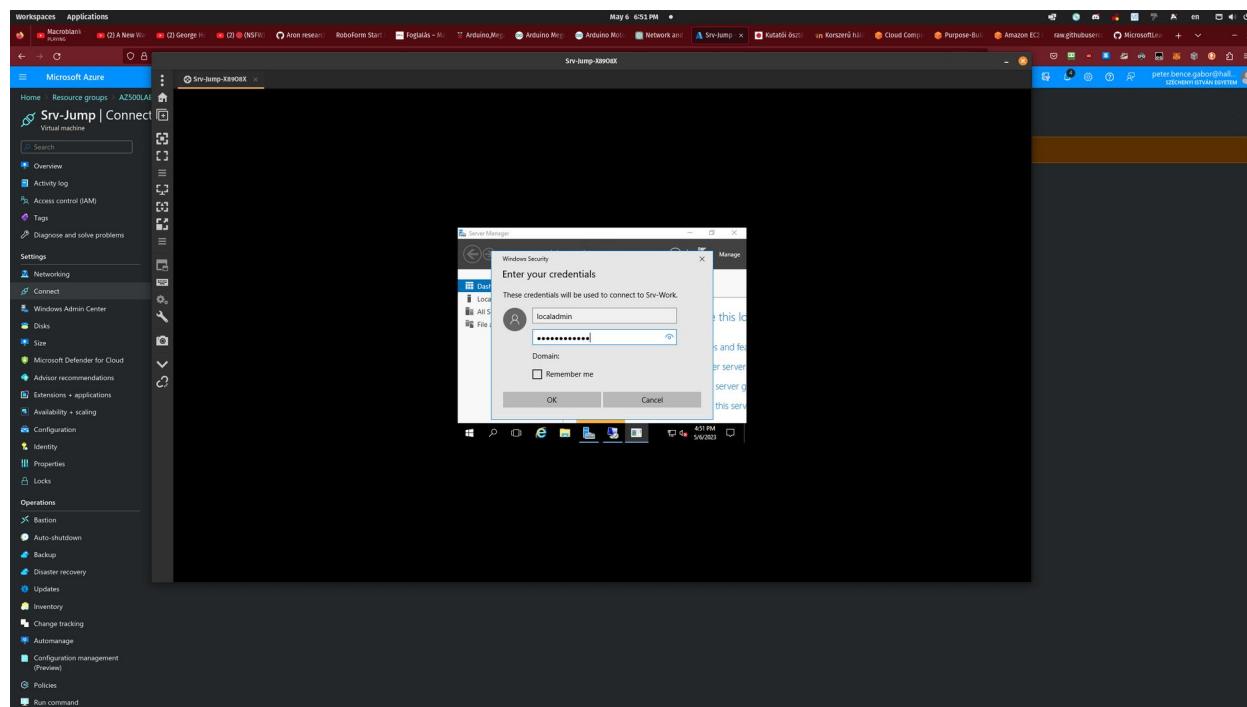
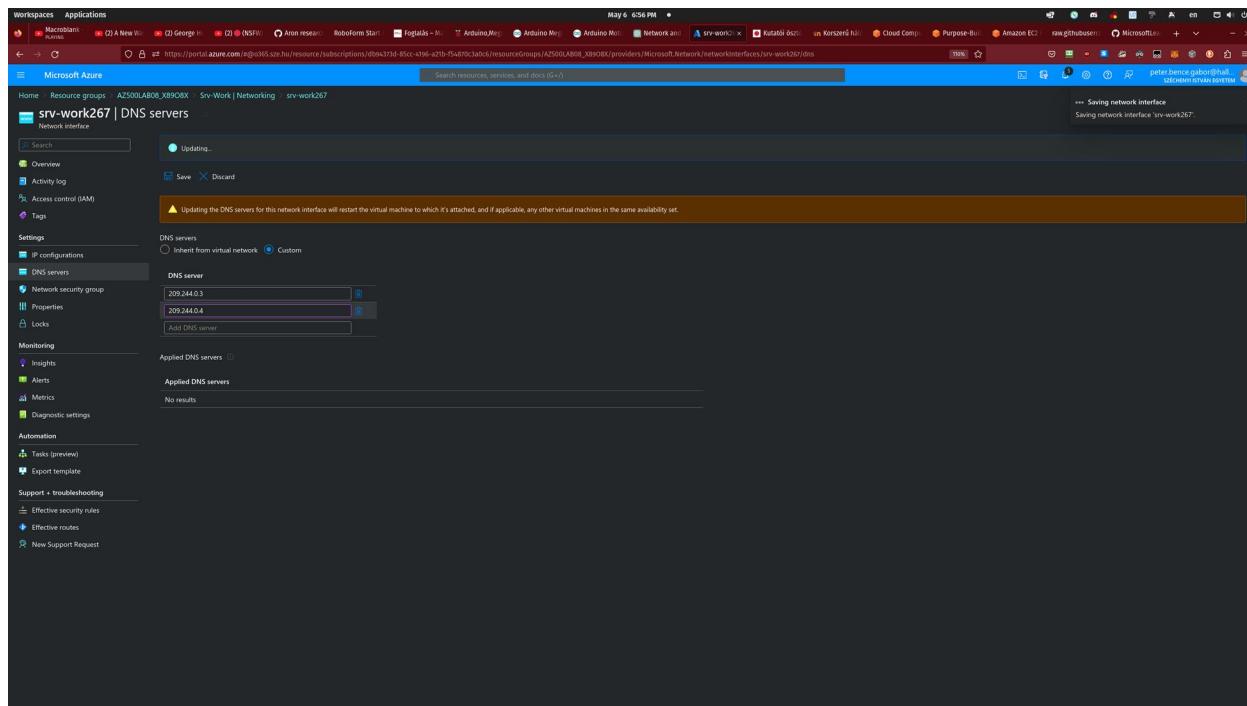
Name	Protocol	Source type	Source	Service Tags	Destination Ports
		IP address	*, 192.168.10.1, 192.168	0 selected	8080, 8080-8090

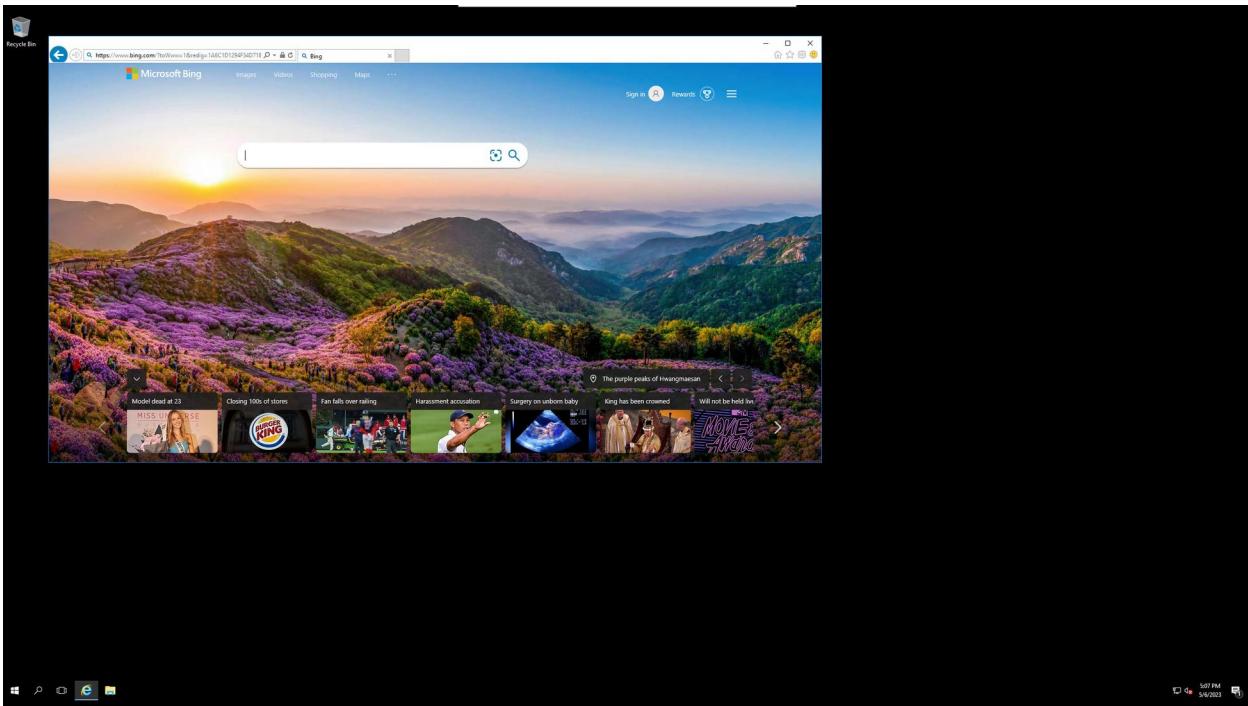
FQDNs

Name	Protocol	Source type	Source	Destination FQDNs	Destination Ports
		IP address	*, 192.168.10.1, 192.168	time.windows.com	8080, 8080-8090

Add







3. Feladat

Az Azure és az AWS minden felhőszolgáltató nagy hangsúlyt fektet az adatbázis szolgáltatásokra, és minden platform rendelkezik MySQL adatbázis szolgáltatással. Az Azure és az AWS MySQL adatbázis szolgáltatása között azonban vannak különbségek, amelyek befolyásolhatják, hogy melyik szolgáltató a legmegfelelőbb egy adott felhasználó számára.

Az Azure MySQL és az AWS MySQL adatbázis szolgáltatások közötti különbségek:

1. Ár: Mindkét szolgáltató kínál ingyenes és fizetős verziókat az adatbázis szolgáltatásokhoz, de az árak és a díjcsomagok eltérőek lehetnek. Az árakat befolyásolhatja a felhasznált erőforrások száma, a szolgáltatás minősége, az adattárolás és a szolgáltató helye.
2. Skálázhatóság: Az AWS MySQL szolgáltatása általában nagyobb skálázhatóságot kínál, mint az Azure MySQL. Az AWS-ben az RDS (Relational Database Service) lehetővé teszi a felhasználók számára, hogy egyszerűen növeljék vagy csökkentsék az adatbázisuk méretét és teljesítményét, míg az Azure-ban a MySQL adatbázis szolgáltatások alapvetően csak a rendelkezésre álló erőforrásokon belül skálázhatók.
3. Rugalmasság: Az Azure MySQL szolgáltatása rugalmasabb konfigurációs lehetőségeket kínál a felhasználók számára, amelyek lehetővé teszik az adatbázisok testreszabását az üzleti igényekhez. Az Azure-ban a felhasználók képesek testre szabni a géptípust, a memória méretét és az adattároló típusát az adatbázis igényeinek megfelelően.
4. Integráció: Az Azure és az AWS minden felhőszolgáltatója számos más felhőszolgáltatást kínál, amelyekkel az adatbázisok integrálhatók. Az Azure kínál egyéb Microsoft szolgáltatásokat, például a Power BI-t és az Azure Active Directory-t, míg az AWS integrálható az Amazon S3 tároló szolgáltatással.

Összességében minden felhőszolgáltató erős adatbázis szolgáltatást kínál, de az árak, a skálázhatóság, a rugalmasság és az integráció terén vannak eltérések, amelyek befolyásolhatják a választást az adott felhasználói igényeknek.