

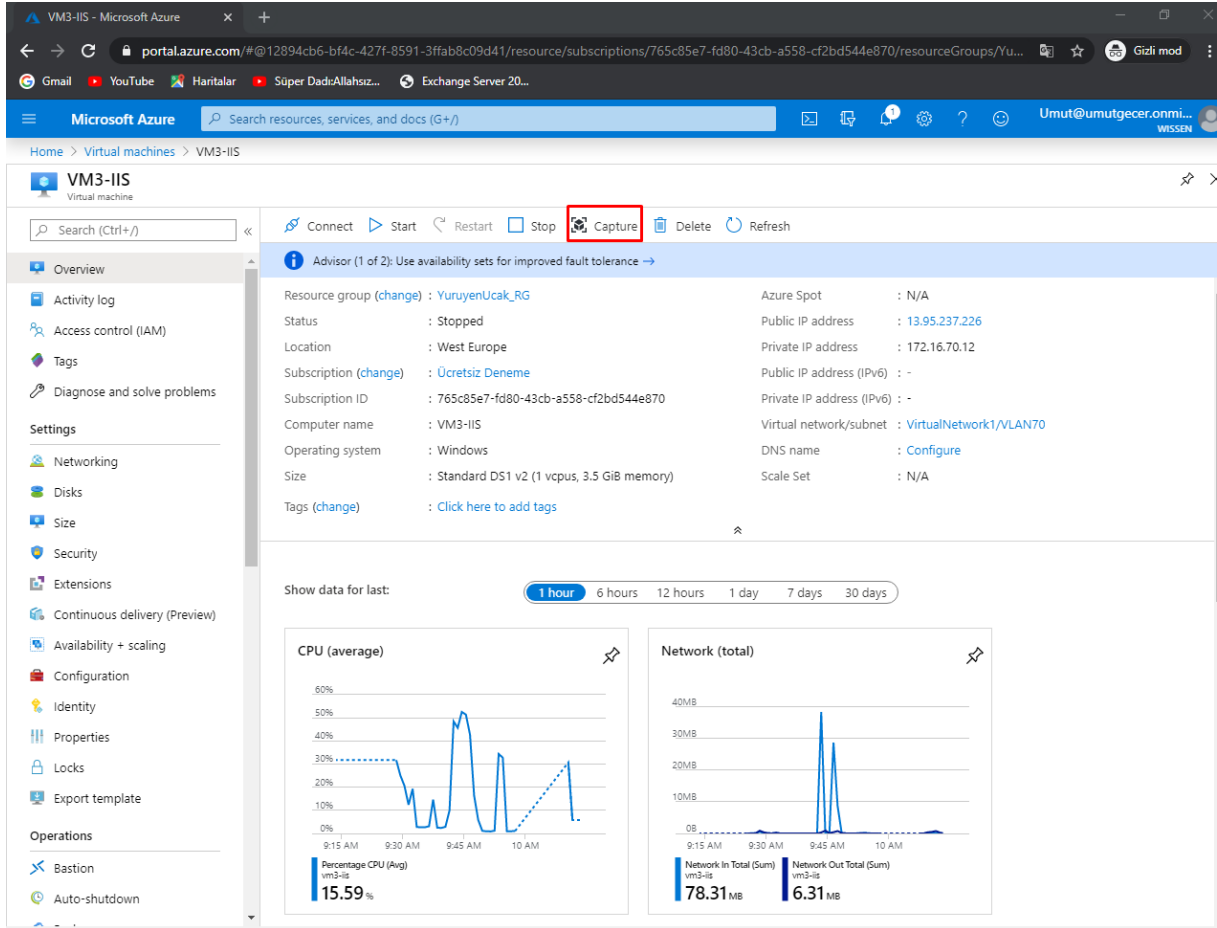
SCALING WITH AZURE VIRTUAL MACHINE SCALE SETS

Umut Geçer

Önceki projelerden kalma IIS Server duruyor. Onu kullanacağız.

IIS Server'a remote attık. Sysprep klasörünü arattık sysprep app'ini açtık.

Generalize > Shut Down yaptık. Sysprep tamamlanınca:



İşlemi uygulanır. IIS kurulu olan sunucumuzun imajını yakalamış olduk.

Microsoft Azure

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

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WISSEN

Home > Virtual machines > VM3-IIS > Create image

Create image

Before creating an image, use "sysprep /generalize" to prepare the Windows guest OS on the virtual machine. If you create an image from a virtual machine that hasn't been generalized, any virtual machines created from that image won't start. Click here to learn more.

Name *

VM3-IIS-image-20200110101404

Resource group *

YuruyenUcak_RG

Create new

Before creating the image, this virtual machine will be deallocated automatically

☐ Automatically delete this virtual machine after creating the image

Zone resiliency

On Off

Capturing a virtual machine image will make the virtual machine unusable. This action cannot be undone.

Type the virtual machine name *

VM3-IIS

Create

Microsoft Azure

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WISSEN

Home > Virtual machine scale sets > Create virtual machine scale set

Create virtual machine scale set

Preview the new create experience →

BASICS

Virtual machine scale set name *

WebServer

Operating system disk image *

Windows Server 2016 Datacenter

Browse all public and private images

Subscription *

Ucretsiz Deneme

Resource group *

Select existing...

Create new

Location *

(Europe) West Europe

Availability zone

None

Username *

Password *

Confirm password *

INSTANCES

Instance count *

2

Instance size *

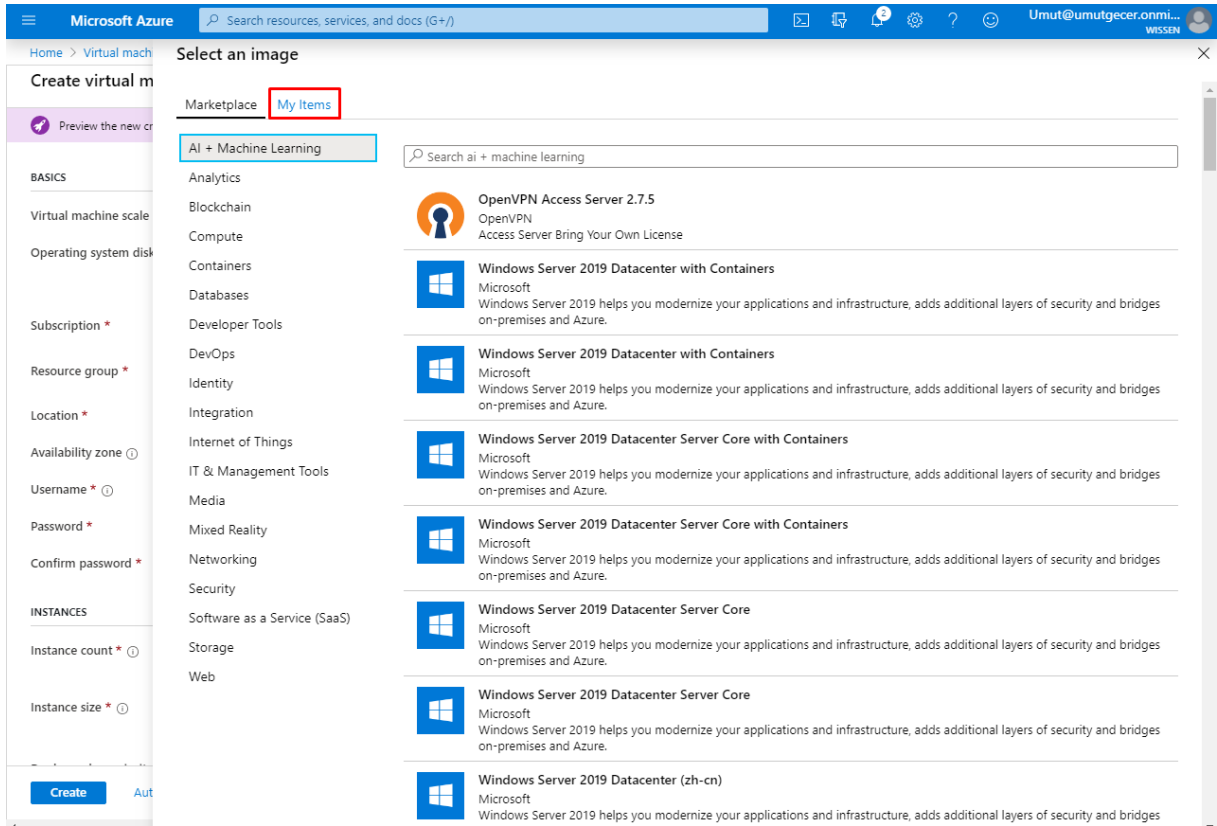
Standard D51 v2

1 vcpu, 3.5 GiB memory

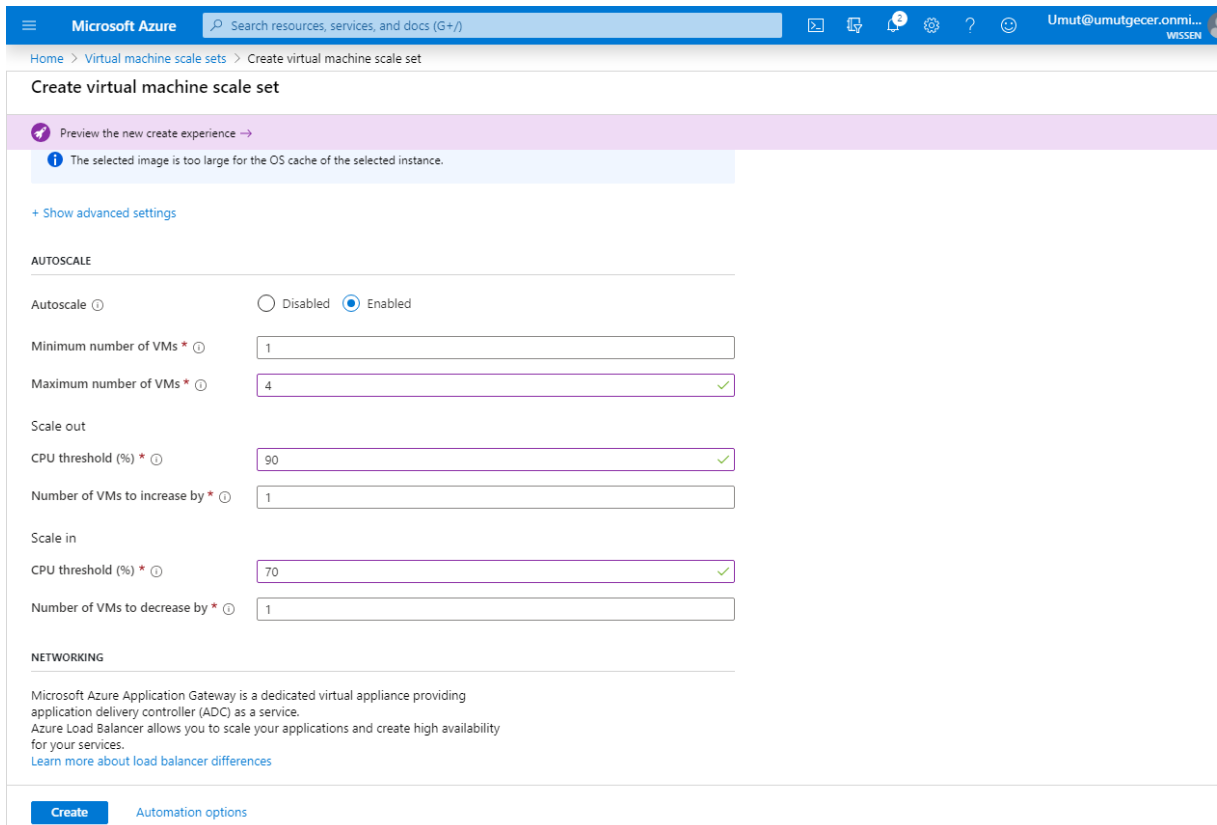
Change size

Create

Automation options



My items kısmından yakalamış olduğumuz VM3-IIS imajını seçeriz.



Cpu kullanımı %90 olursa ek VM devreye girer, %70 olursa bir VM devreden çıkar.

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

Home > Virtual machine scale sets > Create virtual machine scale set

Create virtual machine scale set

Preview the new create experience →

Public IP address name * Projelb_IP ✓

Domain name label * projelbip ✓
.westeurope.cloudapp.azure.com

Configure virtual networks

Virtual network * VirtualNetwork1
[Create new](#)

Subnet * VLAN70 (172.16.70.0/25)
[Manage subnet configuration](#)

Public IP address per instance ☐ On ☒ Off

Accelerated networking ☐ On ☒ Off

i The selected VM size does not support accelerated networking.

NIC network security group ☐ None ☒ Basic ☐ Advanced

Public inbound ports * ☐ None ☒ Allow selected ports

*Select inbound ports
HTTP (80), RDP (3389)

! This will allow all IP addresses to access your virtual machine. This is only

[Create](#) [Automation options](#)

Scale setimizi oluřtururuz.

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

Home > Virtual machine scale sets

Virtual machine scale sets

Wissen

[+](#) Add [≡](#) Edit columns [↻](#) Refresh [🏷](#) Assign tags [▶](#) Start [↺](#) Restart ☐ Stop [🗑](#) Delete

Subscriptions: Ücretsiz Deneme

Filter by name... All resource groups All locations All tags No grouping

1 items

Name ↑↓	Status	Instances	Azure Spot eviction p...	Resource group ↑↓	Location ↑↓	Subscription ↑↓
<input type="checkbox"/> WebServer	0 out of 2 succeeded	0 → 1	-	YuruyenUcak_RG	West Europe	Ücretsiz Deneme

Listelendiđini görürüz. Mavi WebServer yazısına tıklayarak sayfaya gideriz.

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

Home > Virtual machine scale sets > WebServer - Instances

WebServer - Instances

Virtual machine scale set

Search (Ctrl+/)

Start Restart Deallocate Reimage Delete Upgrade Refresh Protection Policy

Search virtual machine instances

Name	Status	Protection policy	Latest model
<input type="checkbox"/> WebServer_0	Running		Yes

Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems

Settings

- Instances
- Networking
- Scaling
- Storage
- Operating system
- Security
- Size
- Extensions
- Continuous delivery (Preview)
- Configuration
- Upgrade policy
- Health and repair
- Identity
- Properties
- Locks

Ve sunucumuz oluřtu.

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

Home > Load balancers > WebServerlb - Inbound NAT rules

WebServerlb - Inbound NAT rules

Load balancer

Search (Ctrl+/)

+ Add

Search inbound NAT rules

Name	IP ver...↑↓	Destination	Target	Service	
natpool.0	IPv4	51.105.237.230	WebServer (instance 0)	Custom (TCP/50000)	...

Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems

Settings

- Frontend IP configuration
- Backend pools
- Health probes
- Load balancing rules
- Inbound NAT rules
- Properties
- Locks
- Export template

Monitoring

- Alerts
- Metrics

Support + troubleshooting

- New support request

Bir adet de Load Balancer'ımız oluřtu.

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

Home > Load balancers > WebServerlb - Inbound NAT rules

WebServerlb - Inbound NAT rules

Load balancer

Search (Ctrl+/) << + Add

Search inbound NAT rules

Name	IP ver...↑↓	Destination	Target	Service	↑↓
natpool.0	IPv4	51.105.237.230	WebServer (instance 0)	Custom (TCP/50000)	...

Remote Desktop Connection

Computer: 51.105.237.230:50000

User name: None specified

You will be asked for credentials when you connect.

Show Options Connect Help

Overview

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Properties

Locks

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Bağlandı.

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

Home > Load balancers > WebServerlb - Inbound NAT rules

WebServerlb - Inbound NAT rules

Load balancer

Search (Ctrl+/) << + Add

Search inbound NAT rules

Name	IP ver...↑↓	Destination	Target	Service	↑↓
natpool.0	IPv4	51.105.237.230	WebServer (instance 0)	Custom (TCP/50000)	...

Windows Server

Internet Information Services

Welcome Bienvenue Tervetuloa

ようこそ Benvenuto 歓迎

Bem-vindo

Bienvenido Hoş geldiniz ברוכים הבאים

Vitejte Καλώς ορίσαστε Välkommen 환영합니다 Добро пожаловать Üdvözlö

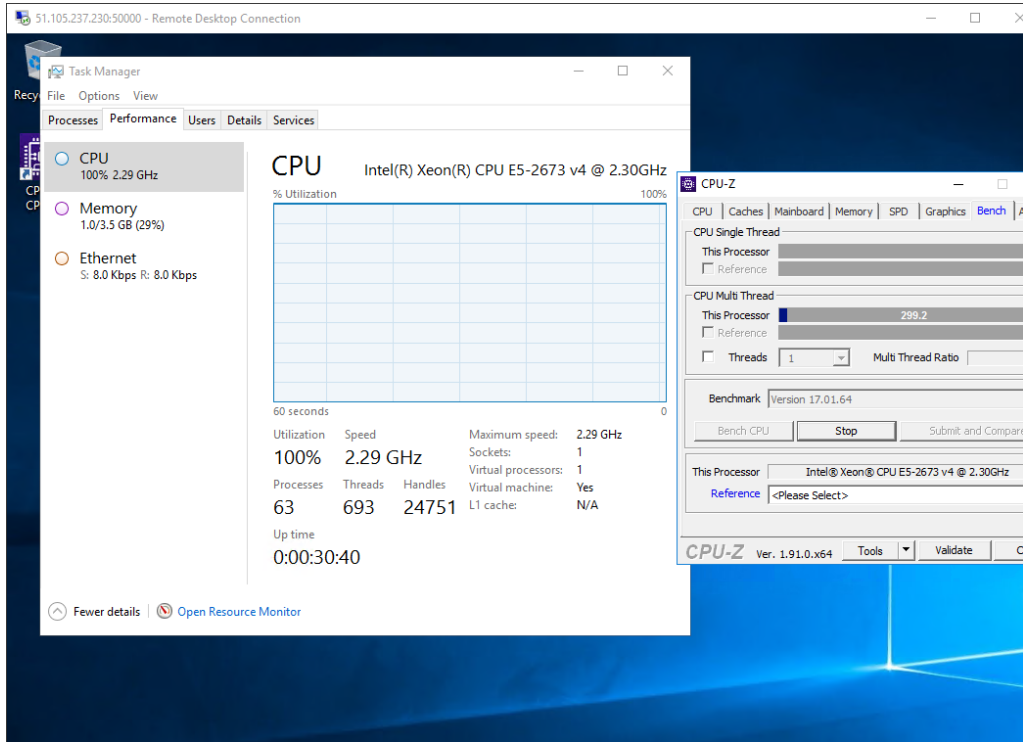
IP'sini web server'a yazdık. Web Server bile çalışıyor.

Sanal makinede CPU_Z indirdik. Bench > Stress Cpu yazdık

Task Manager'da CPU kullanımının %100 olduğunu gördük

Azure portala yani fiziksel bilgisayarımıza dönüp, yeni bir instance oluşturup oluşturmadığını gözlemleyeceğiz.

Koyduğumuz kurala göre, bir instance %90 CPU ile 5 dktan fazla çalışırsa yeni bir instance daha oluşacaktı. 5-10 dk arası bir sürede olmasını bekliyoruz.



The screenshot shows the Microsoft Azure portal interface. The top navigation bar includes the Microsoft Azure logo, a search bar, and user information. The main content area is titled "WebServer - Instances" and shows a table of virtual machine instances. The table has columns for Name, Status, Protection policy, and Latest model. There are three instances listed: WebServer_0 (Running), WebServer_2 (Creating (Running)), and WebServer_3 (Creating (Starting)).

Name	Status	Protection policy	Latest model
WebServer_0	Running		Yes
WebServer_2	Creating (Running)		Yes
WebServer_3	Creating (Starting)		Yes

Veee instance'lar oluştu. IP'leri aynı portları farklı instance'lar listelendi.

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

Home > WebServerlb - Inbound NAT rules

WebServerlb - Inbound NAT rules

Search (Ctrl+/) << + Add

Search inbound NAT rules

Name	↑↓ IP ver...↑↓	Destination	↑↓ Target	↑↓ Service	↑↓
natpool.0	IPv4	51.105.237.230	WebServer (instance 0)	Custom (TCP/50000)	...
natpool.2	IPv4	51.105.237.230	WebServer (instance 2)	Custom (TCP/50001)	...
natpool.3	IPv4	51.105.237.230	WebServer (instance 3)	Custom (TCP/50002)	...
natpool.4	IPv4	51.105.237.230	WebServer (instance 4)	Custom (TCP/50003)	...
natpool.5	IPv4	51.105.237.230	WebServer (instance 5)	Custom (TCP/50004)	...

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Settings

Frontend IP configuration

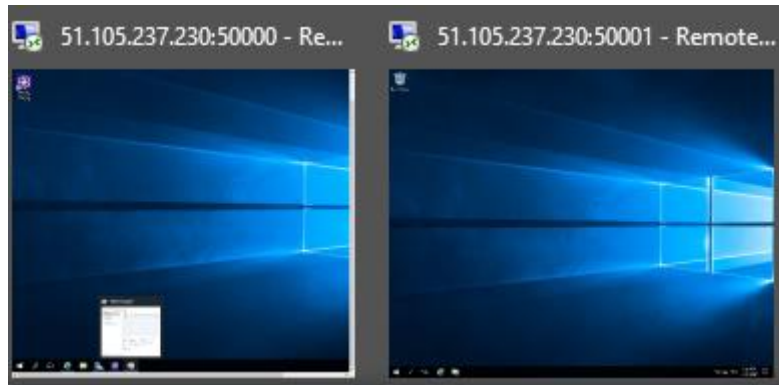
Backend pools

Health probes

Load balancing rules

Inbound NAT rules

NAT Rule'lar da geldi.



Farklı port numarası ile IP'si aynı, iki ayrı instance'a giriş yapıp, CPU kullanımlarını gözlemledik.

Zamanla oluşan instance'lar silindi.

Microsoft Azure

Search resources, services, and docs (G+)

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Home > WebServer - Scaling

WebServer - Scaling

Virtual machine scale set

Search (Ctrl+/)

Overview

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Scaling

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Operating system

Security

Size

Extensions

Continuous delivery (Preview)

Configuration

Upgrade policy

Health and repair

Identity

Properties

Locks

Export template

Save Discard Refresh

Custom autoscale

Autoscale setting name: cpuaautoscalewebserver

Resource group: YuruyenUcak_RG

Instance count: 2

Default Profile1

Delete warning: The very last or default recurrence rule cannot

Scale mode: ☒ Scale based on a metric ☐ Scale to a specific value

Scale out

When: WebServer (Average) P

Scale in

When: WebServer (Average) P

+ Add a rule

Instance limits: Minimum 1 Maximum 4

Schedule: This scale condition is executed when none of the

+ Add a scale condition

Scale rule

VMName: All values

If you select multiple values for a dimension, autoscale will aggregate the metric across the selected values, not evaluate the metric for each values individually.

Percentage CPU (Avg) webserver

Enable metric divide by instance count

Operator: Greater than Metric threshold to trigger scale action: 90 %

Duration (in minutes): 2

Time grain (in mins): 1 Time grain statistic: Average

Action

Operation: Increase count by

Instance count: 1 Cool down (minutes): 1

Update Delete

Kuralımızı daha spesifik hale getirebiliriz. Önce 5 dkydı, şimdi 2 dkya çektik.

Gözlemledik ve yine oldu.