

SERVER MIGRATION

AZURE-AWS

Presented by Dhavanisha jegannathan

INTRODUCTION

The project focuses on migrating Azure Virtual Machines (VMs) and their associated configurations to Amazon Web Services (AWS) instances. This migration ensures a seamless transition of workloads from Azure to AWS, leveraging AWS's extensive infrastructure and services. By using AWS Application Migration Service, the migration process is simplified, enabling automated replication, minimal downtime, and secure data transfer between the two platforms.

OVERVIEW

Project Objective:

- Transfer Virtual Machines hosted on Azure to AWS EC2 instances while maintaining data integrity, service availability, and minimal disruption to ongoing operations.

Source Platform:

- Azure: Includes Virtual Machines, Resource Groups, and Networking components.

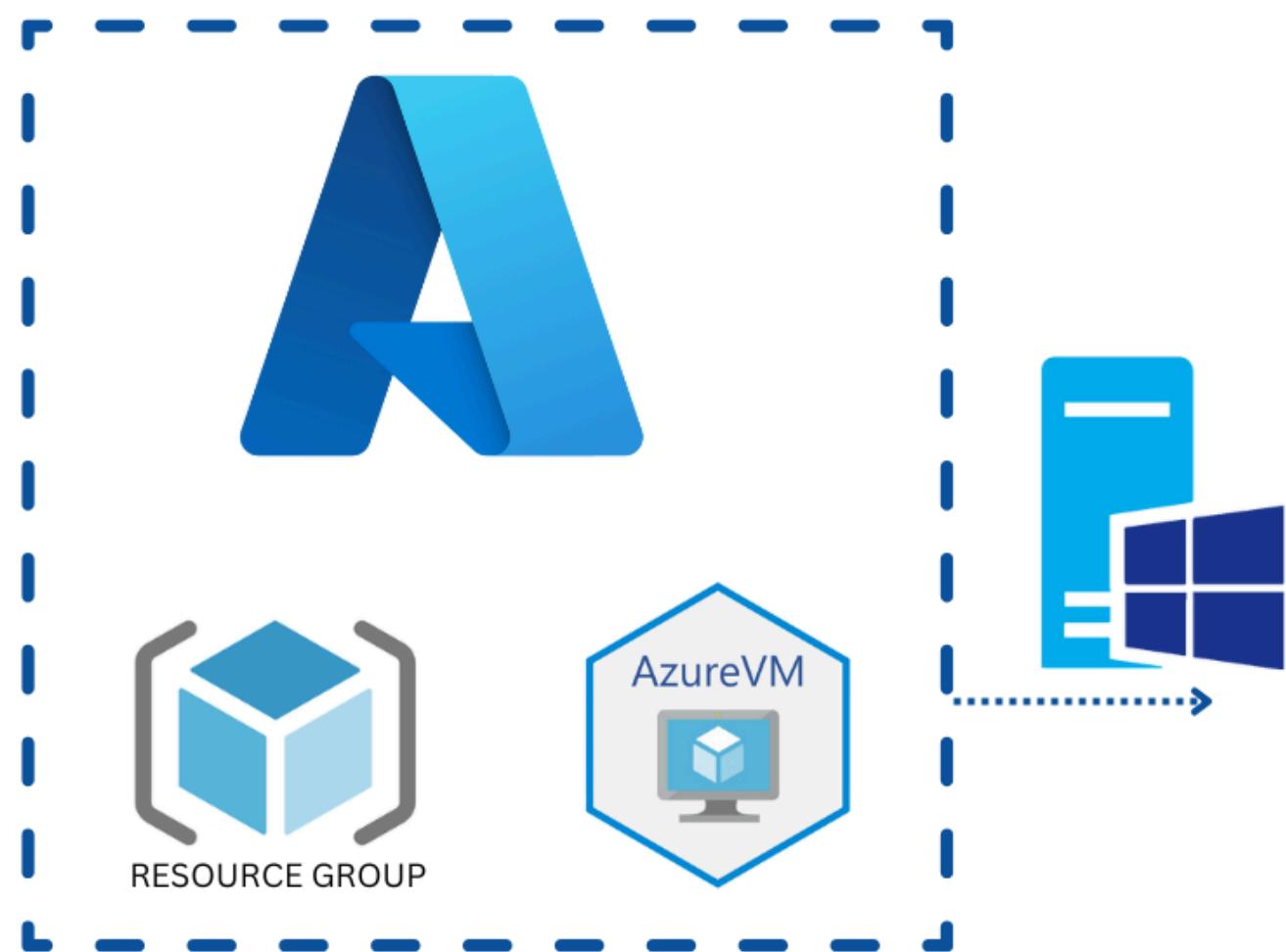
Target Platform:

- AWS: Primarily using EC2 for hosting, along with Amazon VPC for networking.

Key Tool Used:

- AWS Application Migration Service: Facilitates automated replication and migration of workloads from Azure to AWS with ease and reliability.

SOURCE PLATFORM



TARGET PLATFORM



AWS Application
Migration Service



Amazon
EC2



AMAZON VPC

Home > Resource groups >

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 * ⓘ

Free Trial

Resource group * ⓘ

azure-appserver

Resource details

Region * ⓘ

(Asia Pacific) Central India

[Review + create](#)[< Previous](#)[Next : Tags >](#)

open azure portal, create resource group.

← → ⌂ portal.azure.com/#create/Microsoft.VirtualMachine-ARM

Microsoft Azure Upgrade Search resources, services, and docs (G+/-) Copilot 6 ⓘ 🔍 ⚙️ ⓘ 🔍 dhavanisha.jpk@outloo... DEFAULT DIRECTORY (DHAVANIS...)

Home > Virtual machines >

Create a virtual machine

Validation passed

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	Free Trial
Resource group	azure-appserver
Virtual machine name	azure-appserver-vm
Region	Central India
Availability options	Availability zone
Zone options	Self-selected zone
Availability zone	1
Security type	Trusted launch virtual machines
Enable secure boot	Yes
Enable vTPM	Yes
Integrity monitoring	No
Image	Windows Server 2022 Datacenter: Azure Edition - Gen2
VM architecture	x64
Size	Standard B1s (1 vcpu, 1 GiB memory)
Enable Hibernation	No
Username	Dhavanisha
Public inbound ports	RDP
Already have a Windows license?	No
Azure Spot	No

Disks

OS disk size Image default

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

Create a virtual machine

azure-appserver-vm | Connect ☆ ...

Virtual machine

Search



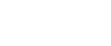
Refresh



Troubleshoot



More Options



Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Connect

Connect

Bastion

Windows Admin Center

Networking

Network settings

Load balancing

Application security groups

Network manager

Settings

Disks

Extensions + applications

Operating system

Configuration



Connecting using

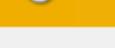
Public IP address | 4.2



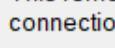
Remote Desktop Connection



Admin username



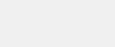
Port (change)



Just-in-time policy



Most common



Native RDP



Select



Download RDP file



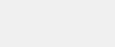
Unknown publisher



Type: Remote Desktop Connection



Remote computer: 4.240.102.98



Don't ask me again for connections to this computer



Show Details

Connect

Cancel



More ways to connect (4)

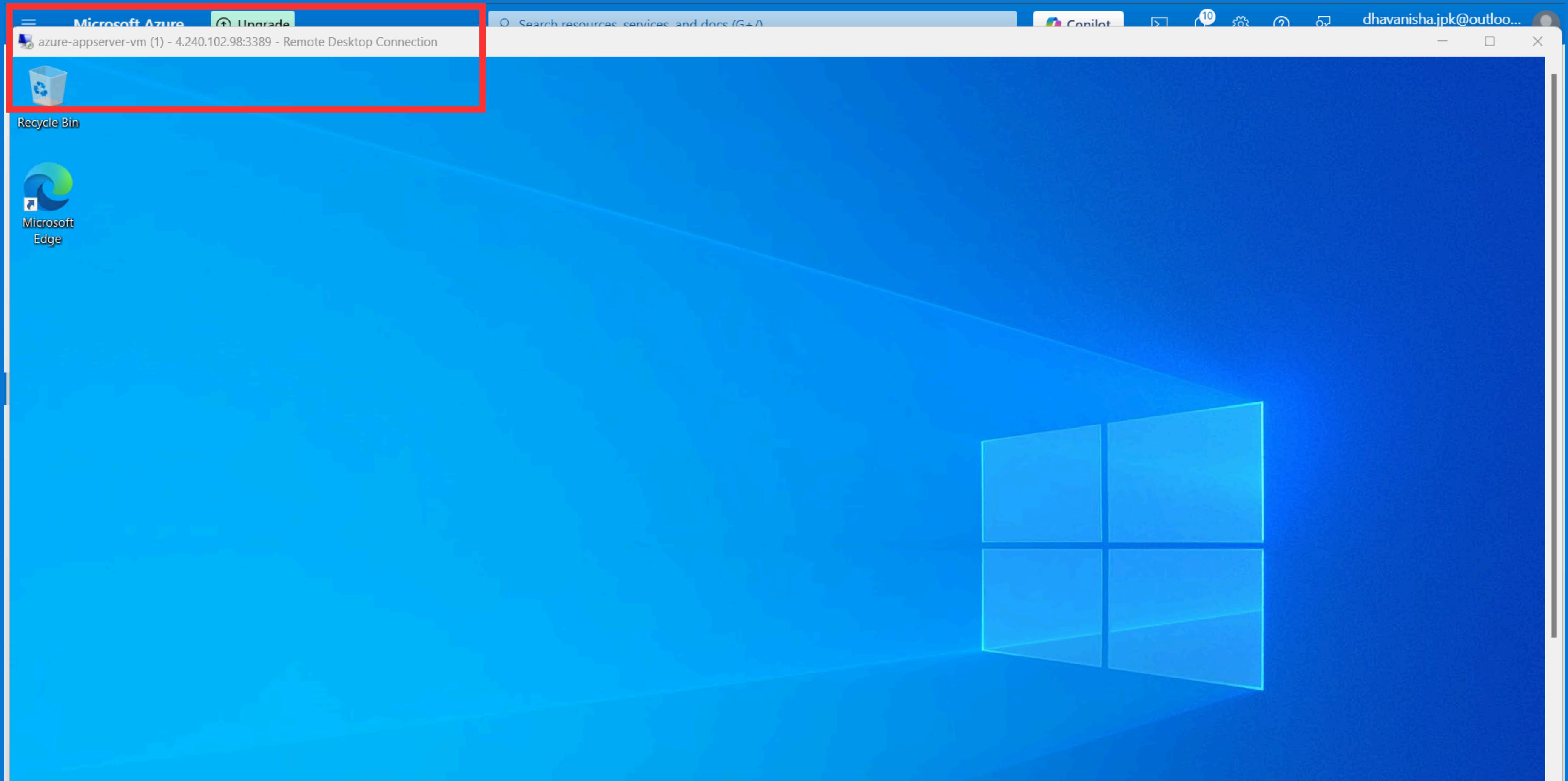
More ways to connect (4)

The screenshot shows a Microsoft Edge browser window with the title "Welcome to Microsoft Edge". The address bar contains the search term "nginx". Below the search bar is a dropdown menu listing various search suggestions related to "nginx", such as "nginx - Bing Search", "Nginx", "nginx download", "nginx server", "nginx docker", "nginx tutorial", "nginx proxy manager", "nginx windows", and "nginx latest version". At the bottom of this menu are buttons for "History", "Favorites", and "Tabs". To the right of the search bar, there are icons for "New tab", "New incognito tab", "New tab with add-ons", and "New tab with extensions".

Below the search bar, there are two buttons labeled "Horizontal" and "Vertical".

At the bottom of the screen, there is a section titled "Pick a theme" with four theme options: "Default" (gray), "Icy mint" (teal), "Island getaway" (blue), and "Silly pink" (pink).

In this server, I have created a test application using nginx.



The server is opened.

<https://nginx.org/en/download.html>Celebrating [20 years](#) of nginx! Read about our journey and milestones in the [latest blog post](#).

nginx: download

Mainline version

[CHANGES](#) [nginx-1.27.3](#) [pgp](#) [nginx/Windows-1.27.3](#) [pgp](#)

Stable version

[CHANGES-1.26](#) [nginx-1.26.2](#) [pgp](#) [nginx/Windows-1.26.2](#) [pgp](#)

Legacy versions

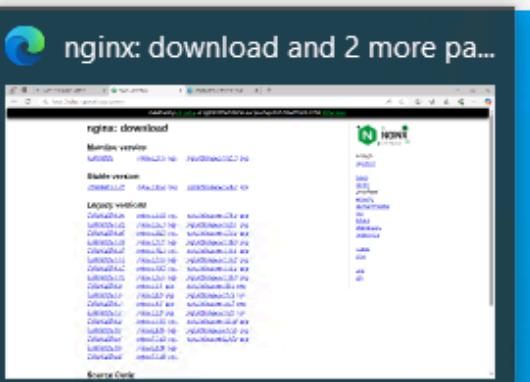
[CHANGES-1.24](#) [nginx-1.24.0](#) [pgp](#) [nginx/Windows-1.24.0](#) [pgp](#)[CHANGES-1.22](#) [nginx-1.22.1](#) [pgp](#) [nginx/Windows-1.22.1](#) [pgp](#)[CHANGES-1.20](#) [nginx-1.20.2](#) [pgp](#) [nginx/Windows-1.20.2](#) [pgp](#)[CHANGES-1.18](#) [nginx-1.18.0](#) [pgp](#) [nginx/Windows-1.18.0](#) [pgp](#)[CHANGES-1.16](#) [nginx-1.16.1](#) [pgp](#) [nginx/Windows-1.16.1](#) [pgp](#)[CHANGES-1.14](#) [nginx-1.14.2](#) [pgp](#) [nginx/Windows-1.14.2](#) [pgp](#)[CHANGES-1.12](#) [nginx-1.12.2](#) [pgp](#) [nginx/Windows-1.12.2](#) [pgp](#)[CHANGES-1.10](#) [nginx-1.10.3](#) [pgp](#) [nginx/Windows-1.10.3](#) [pgp](#)[CHANGES-1.8](#) [nginx-1.8.1](#) [pgp](#) [nginx/Windows-1.8.1](#) [pgp](#)[CHANGES-1.6](#) [nginx-1.6.3](#) [pgp](#) [nginx/Windows-1.6.3](#) [pgp](#)[CHANGES-1.4](#) [nginx-1.4.7](#) [pgp](#) [nginx/Windows-1.4.7](#) [pgp](#)[CHANGES-1.2](#) [nginx-1.2.9](#) [pgp](#) [nginx/Windows-1.2.9](#) [pgp](#)[CHANGES-1.0](#) [nginx-1.0.15](#) [pgp](#) [nginx/Windows-1.0.15](#) [pgp](#)

Downloads

 [nginx-1.27.3.zip](#)
[Open file](#)[english](#)
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[about](#)
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[security](#)
[documentation](#)[faq](#)
[books](#)
[community](#)
[enterprise](#)[x.com](#)
[blog](#)
[unit](#)
[njs](#)

This PC > Windows (C:) >			
	Name	Date modified	Type
Quick access	Packages	12/18/2024 9:37 AM	File folder
Desktop	PerfLogs	5/8/2021 8:20 AM	File folder
Downloads	Program Files	12/5/2024 4:07 AM	File folder
Documents	Program Files (x86)	12/5/2024 4:07 AM	File folder
Pictures	Temp	12/5/2024 4:20 AM	File folder
This PC	Users	12/18/2024 9:39 AM	File folder
Network	Windows	12/18/2024 9:36 AM	File folder
	WindowsAzure	12/18/2024 9:39 AM	File folder
	nginx-1.27.3	12/18/2024 9:47 AM	Compressed (zipp...) 2,057 KB

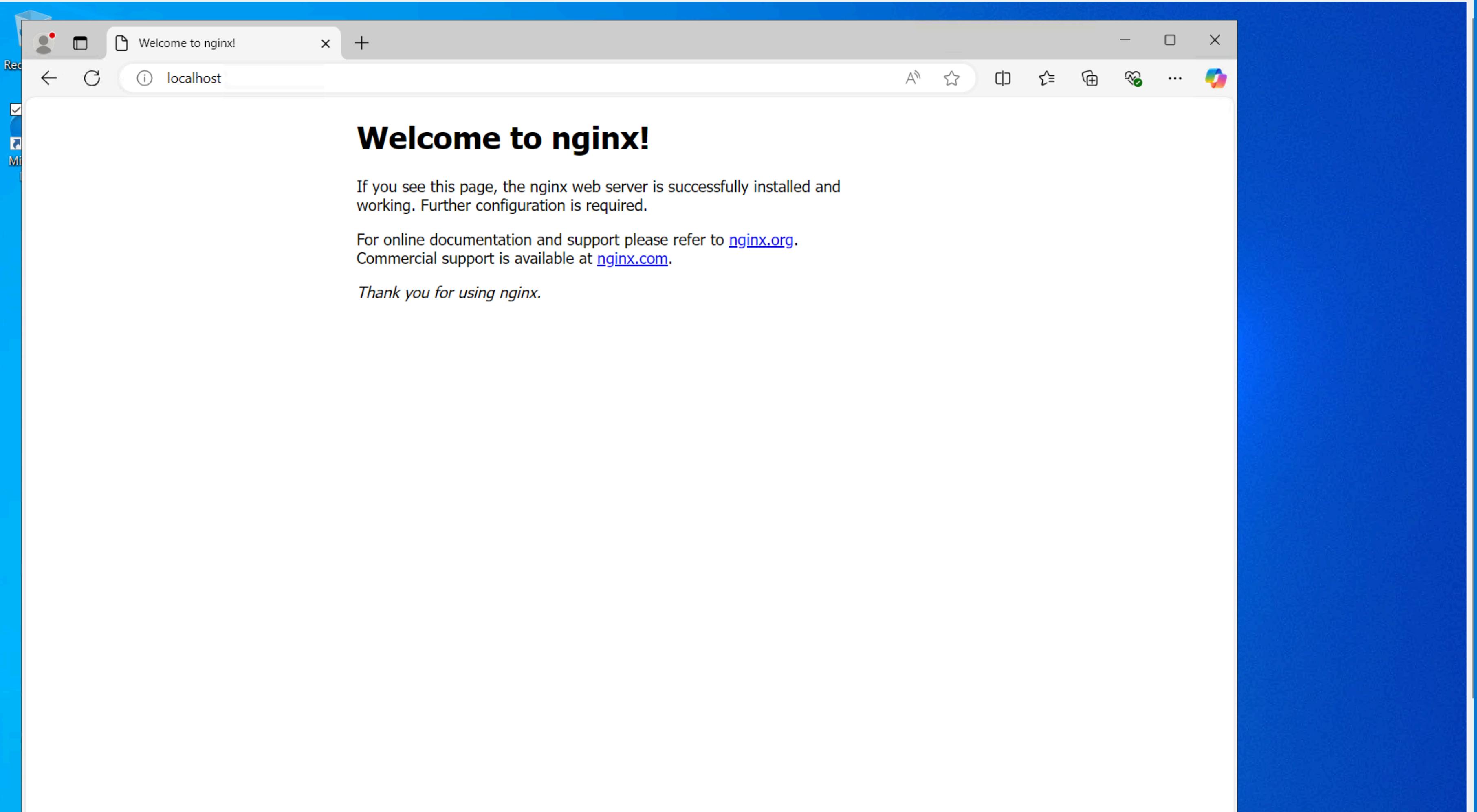
nginx: download and 2 more pages - Profile 1 - Microsoft Edge



Type here to search



9:50 AM
ENG IN 12/18/2024



azure-appserver-vm | Disks

...

X

Virtual machine

Search



Refresh

Additional settings

Feedback

Troubleshoot

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Connect

Connect

Bastion

Windows Admin Center

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Load balancing

Application security groups

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Settings

Disks

Extensions + applications

Operating system

Configuration

OS disk

Swap OS disk

Disk name	Storage type	Size (GiB)	Max IOPS	Max throughput (...)	Encryption ⓘ	Host caching ⓘ
azure-appserver-vm_OsDisk_1_e416dc9f	Premium SSD LRS	127	500	100	SSE with PMK	Read/write

Data disks

Filter by name

Showing 1 of 1 attached data disks

+ Create and attach a new disk

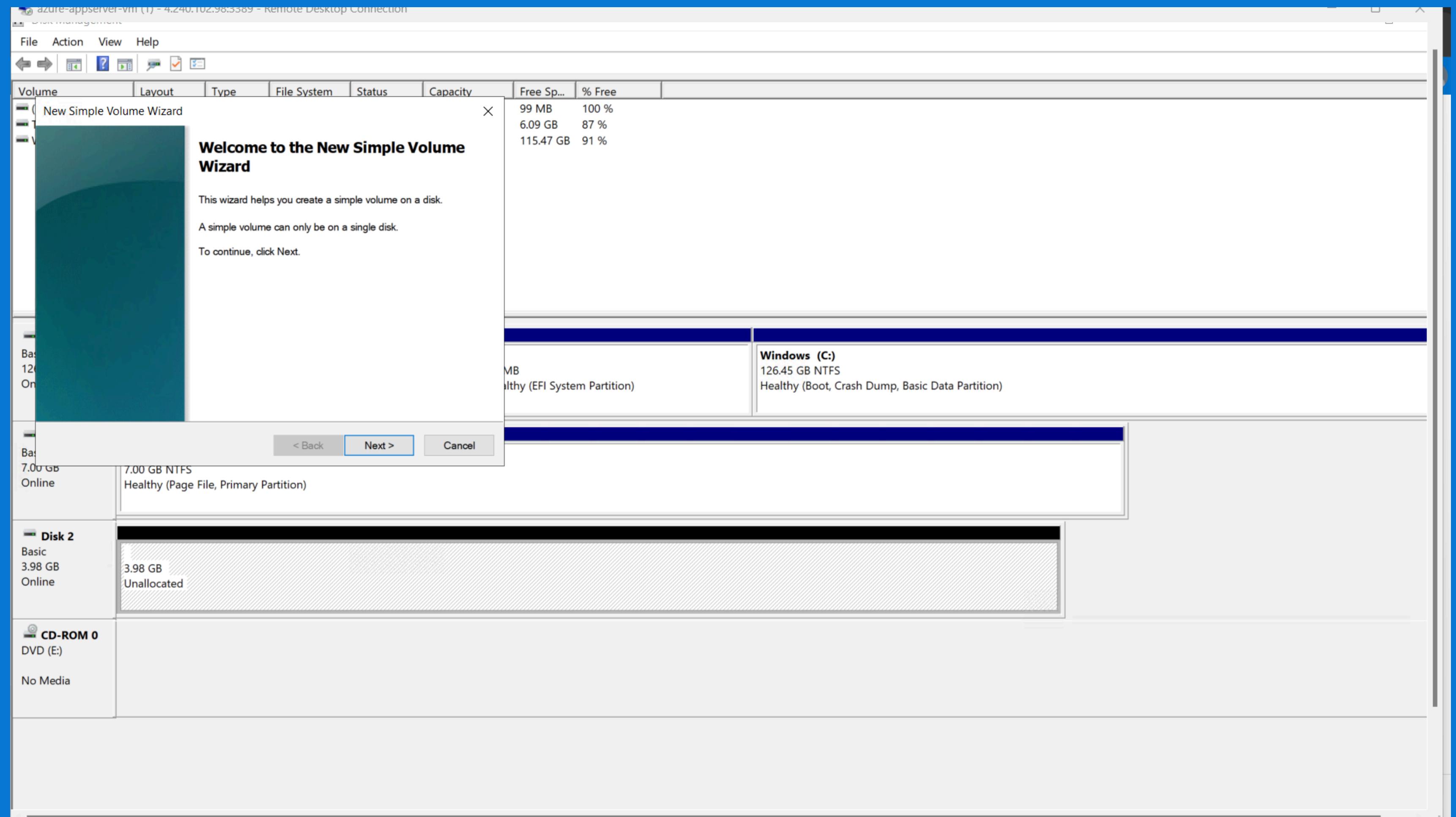
Attach existing disks

LUN ⓘ	Disk name	Storage type	Size (GiB)	Max IOPS	Max throughput (...)	Encryption ⓘ	Host caching ⓘ
1	azuredisk	Premium SSD (l...	4	120	25	Platform-managed ...	Read-only

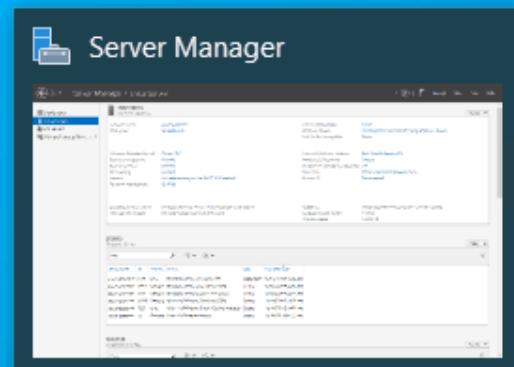
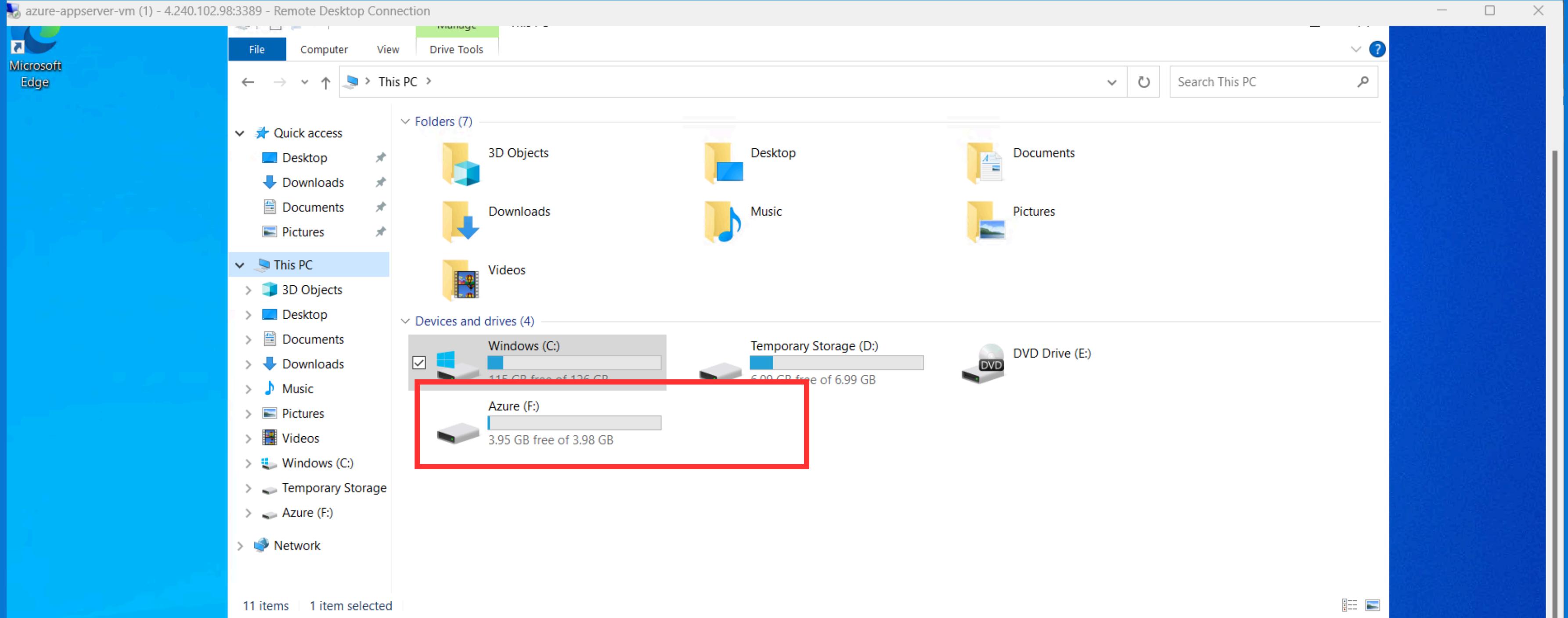
Apply

Discard changes

I had added additional disks to this server to keep some test data.



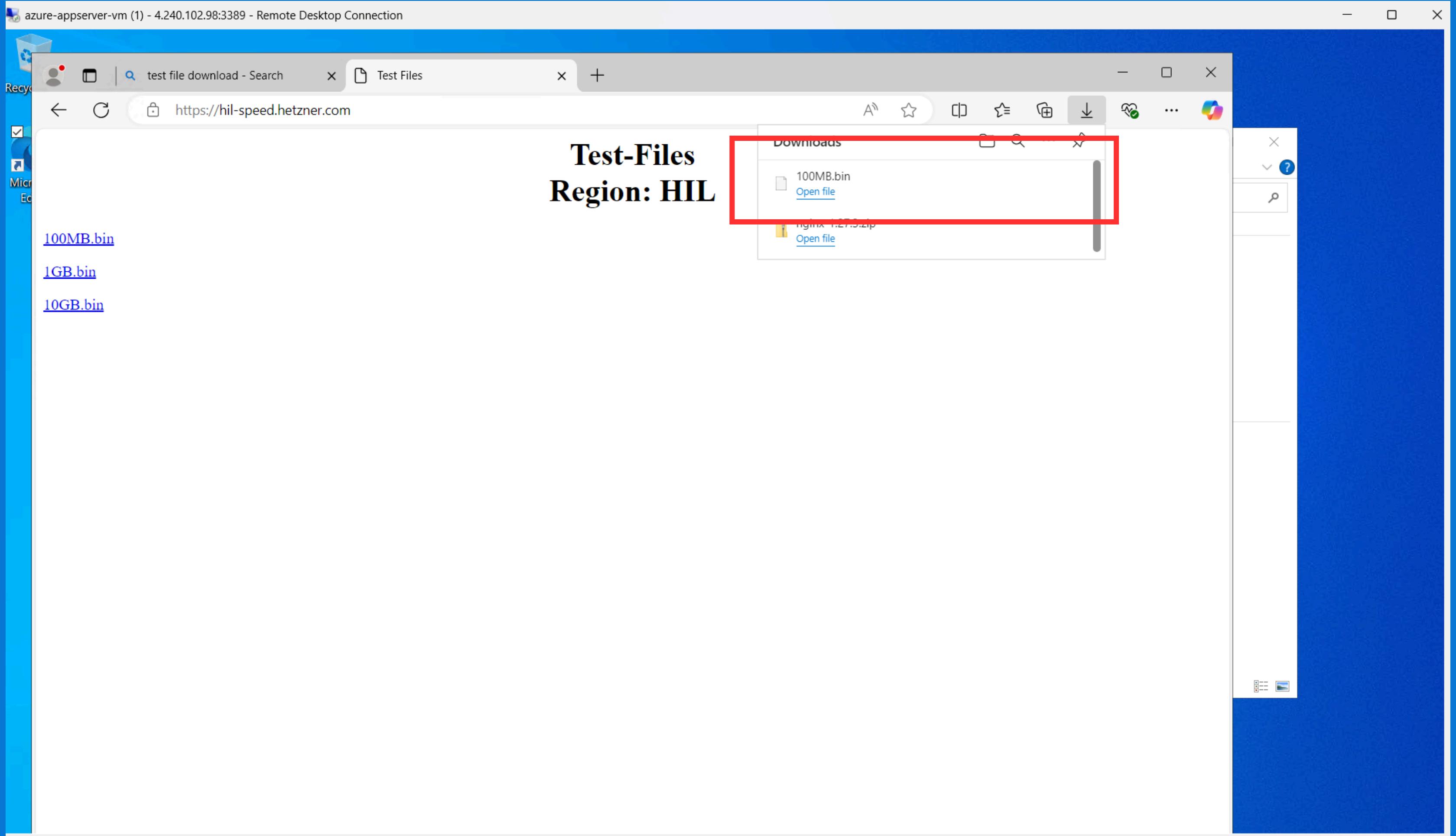
Created a new partition named Azure



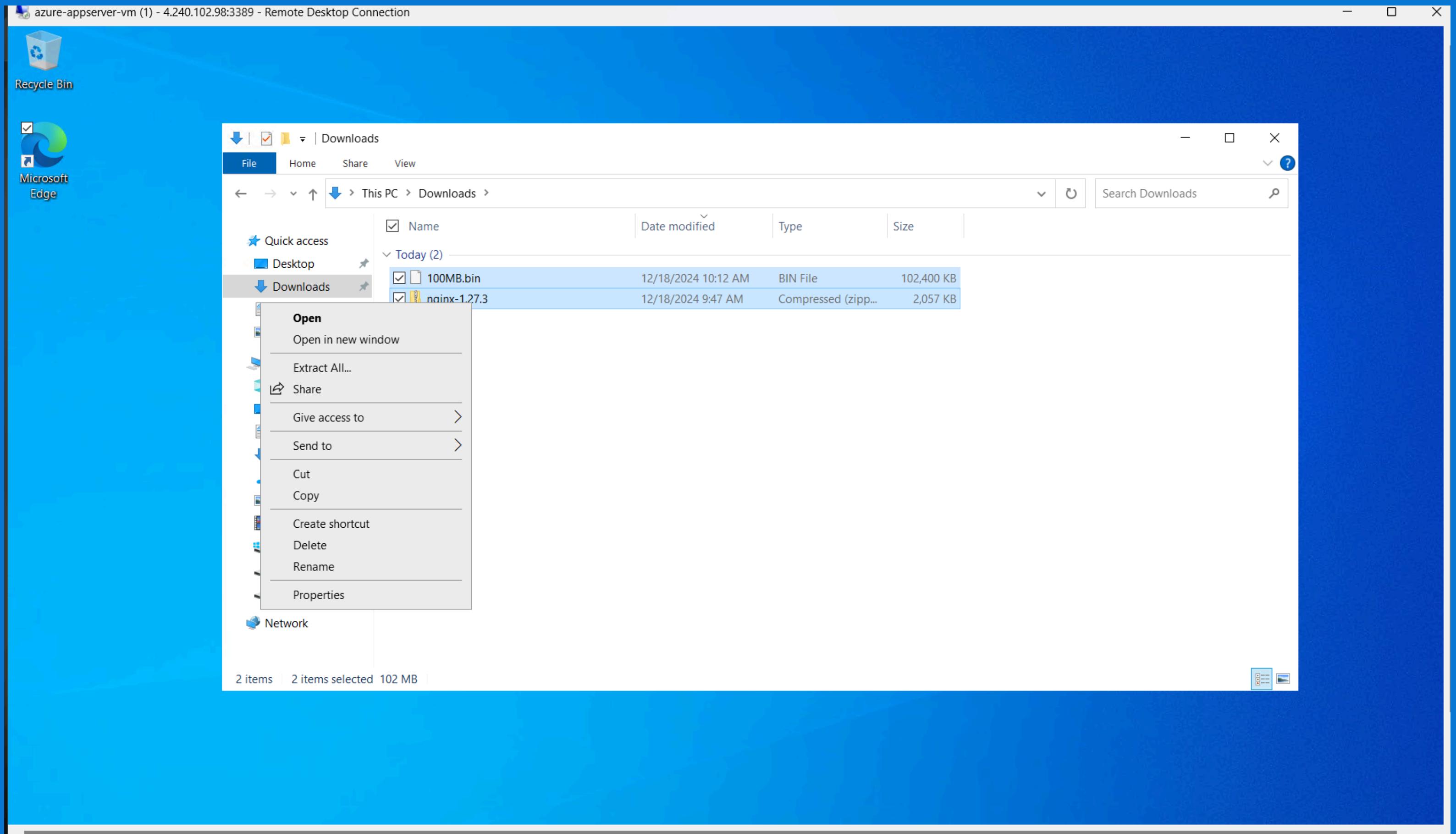
Type here to search



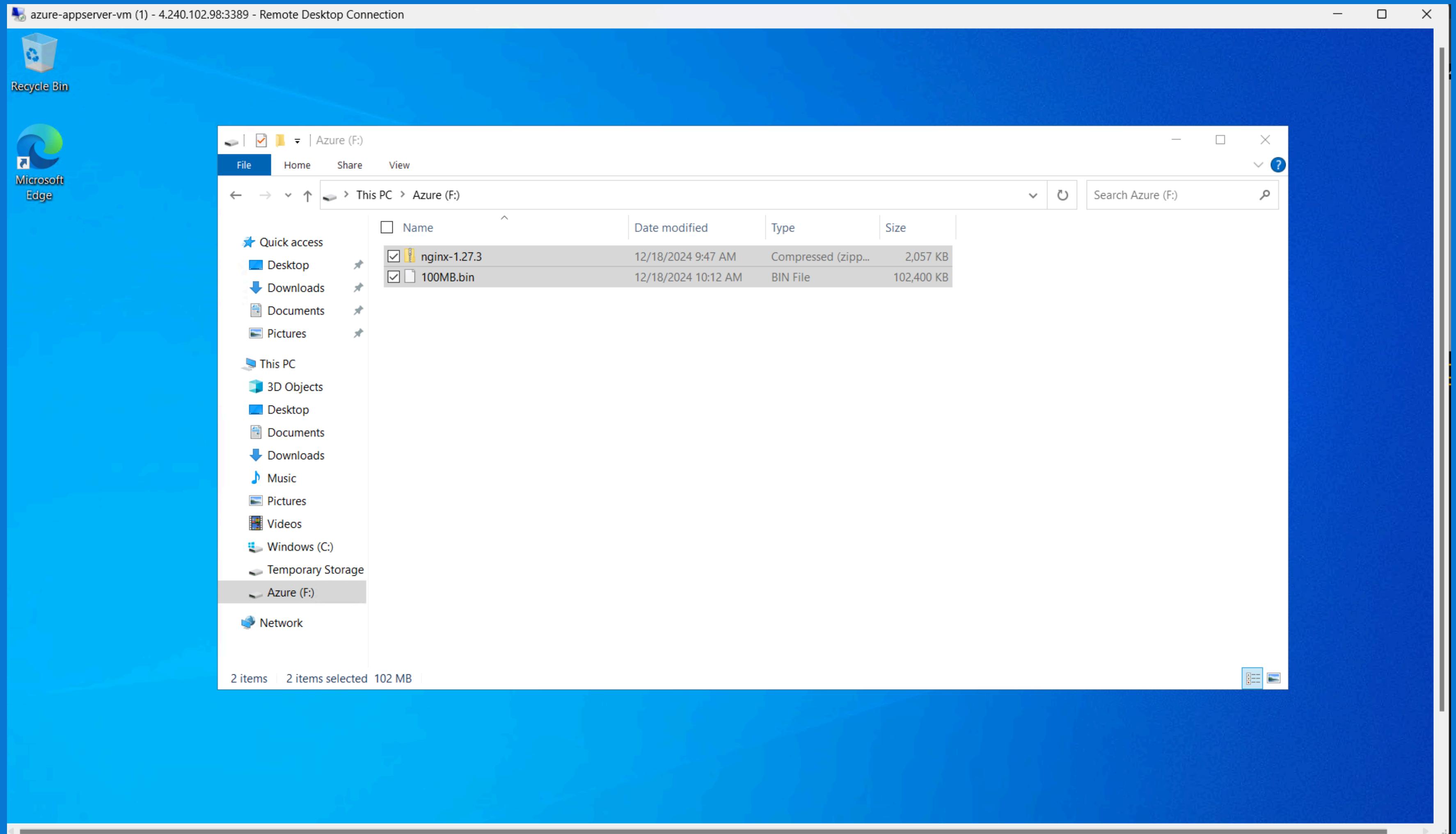
ENG 10:06 AM



I downloaded some test data (100 megabytes).



I copied both files from this location to the Azure (new disk) drive and pasted them.



azure-appserver-vm (1) - 4.240.102.98:3389 - Remote Desktop Connection

The screenshot shows a Microsoft Edge browser window titled "aws root certificate - Search". The address bar displays the URL: <https://www.bing.com/search?pglt=2083&q=aws+root+certificate&cvid=b19a47248b344a3f9e11b241ceacb40...>. The search bar also contains the query "aws root certificate". The Microsoft Bing logo is visible at the top left. The search results page shows "About 373,000 results". The first result is from "amazon.com" with the title "AWS Certification | AWS Certification Courses". Below it is another result from "theknowledgeacademy.com" with the title "AWS Associate Certifications | 40% Off - Limited Time Offer". Both results include descriptions and call-to-action buttons like "See All Available Exams" and "AWS Courses". The browser interface includes standard navigation buttons (back, forward, search, refresh), a toolbar with icons for search, copy, and tools, and a sidebar with pinned items.

Finally, I downloading an aws root certificate here.

azure-appserver-vm (1) - 4.240.102.98:3389 - Remote Desktop Connection

Recycle Bin

Amazon Trust Services Repository

https://www.amazontrust.com/repository/

Amazon Trust Services Certificate Subscriber Agreement v1.3

Relying Party Agreement

Amazon Trust Services Relying Party Agreement v1.1

Certification Authorities

The following certificate authorities are operated according to the practices described in the above CPS.
Distinguished Names are represented using the algorithm recommended in RFC 4514.

Root CAs

Distinguished Name	SHA-256 Hash of Subject Public Key Information	Self-Signed Certificate	Test URLs
CN=Amazon Root CA 1,O=Amazon,C=US	fbe3018031f9586bcbf41727e417b7d1c45c2f47f93be372a17b96b50757d5a2	DER PEM	Valid Revoked Expired
CN=Amazon Root CA 2,O=Amazon,C=US	7f4296fc5b6a4e3b35d3c369623e364ab1af381d8fa7121533c9d6c633ea2461	DER PEM	Valid Revoked Expired
CN=Amazon Root CA 3,O=Amazon,C=US	36abc32656acf645c61b71613c4bf21c787f5cabbee48348d58597803d7abc9	DER PEM	Valid Revoked Expired
CN=Amazon Root CA 4,O=Amazon,C=US	f7ecded5c66047d28ed6466b543c40e0743abe81d109254dcf845d4c2c7853c5	DER PEM	Valid Revoked Expired
CN=Starfield Services Root Certificate Authority - G2,O=Starfield Technologies\, Inc.,L=Scottsdale,ST=Arizona,C=US	2b071c59a0a0ae76b0eadb2bad23bad4580b69c3601b630c2eaf0613afa83f92	DER PEM	Valid Revoked Expired

Trust Store and Pinning Recommendations

The screenshot shows the AWS IAM 'Create user' wizard. The top navigation bar includes the AWS logo, search bar, and global navigation links. The main menu bar has tabs for VPC, EC2, RDS, IAM, CodeCommit, and S3. The current path is 'IAM > Users > Create user'. A sidebar on the left lists four steps: 'Set permissions', 'Step 3 Review and create', 'Step 4', and 'Retrieve password'. The main content area is titled 'User details'.

User name: dhavanisha
The user name can have up to 64 characters. Valid characters: A-Z, a-z, 0-9, and + = , . @ _ - (hyphen)

Provide user access to the AWS Management Console - optional
If you're providing console access to a person, it's a [best practice](#) to manage their access in IAM Identity Center.

Are you providing console access to a person?

User type:

Specify a user in Identity Center - Recommended
We recommend that you use Identity Center to provide console access to a person. With Identity Center, you can centrally manage user access to their AWS accounts and cloud applications.

I want to create an IAM user
We recommend that you create IAM users only if you need to enable programmatic access through access keys, service-specific credentials for AWS CodeCommit or Amazon Keyspaces, or a backup credential for emergency account access.

Console password:

Autogenerated password
You can view the password after you create the user.

Custom password
Enter a custom password for the user.
admin@123

• Must be at least 8 characters long
• Must include at least three of the following mix of character types: uppercase letters (A-Z), lowercase letters (a-z), numbers (0-9), and symbols ! @ # \$ % ^ & * () _ + - (hyphen) = [] { } | '

Show password

Go to the AWS console under the IAM service. Create an access and secret key.

AWS | Search [Alt+S] | Global ▾ | Dhavanisha ▾

VPC EC2 RDS IAM CodeCommit S3

IAM > Users > Create user

Step 1
Specify user details

Step 2
Set permissions

Step 3
Review and create

Step 4
Retrieve password

Review and create

Review your choices. After you create the user, you can view and download the autogenerated password, if enabled.

User details

User name	Console password type	Require password reset
dhavanisha	Custom password	No

Permissions summary

Name	Type	Used as
AWSApplicationMigrationAgentInstallationPolicy	AWS managed	Permissions policy
AWSApplicationMigrationFullAccess	AWS managed	Permissions policy

Tags - optional

Tags are key-value pairs you can add to AWS resources to help identify, organize, or search for resources. Choose any tags you want to associate with this user.

No tags associated with the resource.

Add new tag

You can add up to 50 more tags.



Search

[Alt+S]



Global ▾

Dhavanisha ▾

[VPC](#) [EC2](#) [RDS](#) [IAM](#) [CodeCommit](#) [S3](#)☰ [IAM](#) > [Users](#) > [dhavanisha](#) > Create access key

ⓘ ⓘ

✓ Access key created

This is the only time that the secret access key can be viewed or downloaded. You cannot recover it later. However, you can create a new access key any time.

- Step 1
- Access key best practices & alternatives
 - Step 2 - optional
 - Set description tag
 - Step 3
 - Retrieve access keys**

Retrieve access keys Info

Access key

If you lose or forget your secret access key, you cannot retrieve it. Instead, create a new access key and make the old key inactive.

[Access key](#)[Secret access key](#)

AKIAXQIQAJ4QBCK474LP

 ***** [Show](#)

Access key best practices

- Never store your access key in plain text, in a code repository, or in code.
- Disable or delete access key when no longer needed.
- Enable least-privilege permissions.
- Rotate access keys regularly.

For more details about managing access keys, see the [best practices for managing AWS access keys](#).

[Download .csv file](#)[Done](#)

Access and secret keys are created.

aws | Search [Alt+S] | N. California | Dhavanisha

VPC EC2 RDS IAM CodeCommit S3

Application Migration Service > Active source servers

Application Migration Service

Servers

Source servers

Applications

Waves

Global view

Launch history

MGN connectors

Import and Export

Import

Export

▼ Settings

Replication template

Launch template

Post-launch template

User preferences

AWS Migration Hub

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Release Notes

Source servers

Active source servers ▾ Filter source servers by property or value

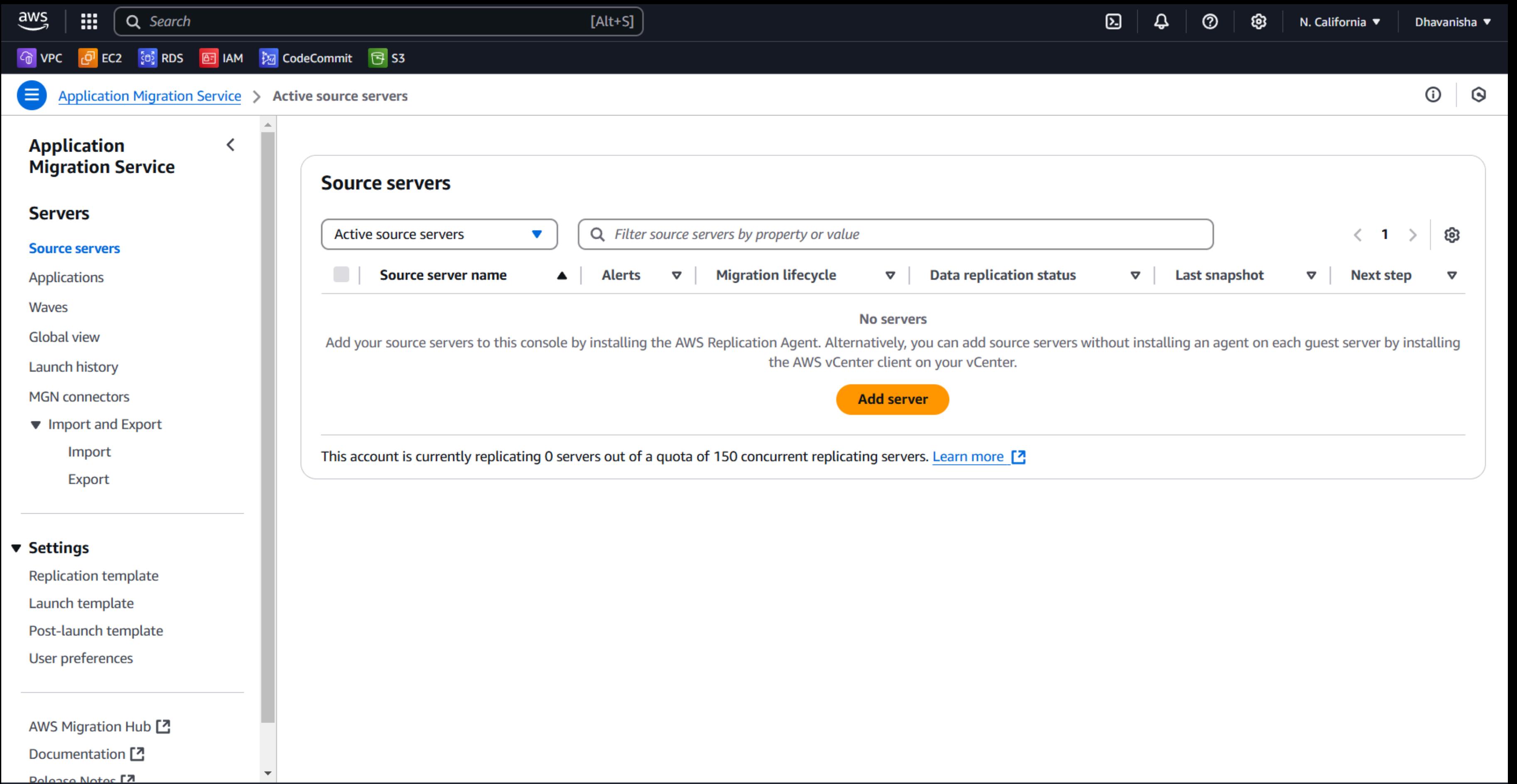
Source server name ▾ Alerts ▾ Migration lifecycle ▾ Data replication status ▾ Last snapshot ▾ Next step ▾

No servers

Add your source servers to this console by installing the AWS Replication Agent. Alternatively, you can add source servers without installing an agent on each guest server by installing the AWS vCenter client on your vCenter.

Add server

This account is currently replicating 0 servers out of a quota of 150 concurrent replicating servers. [Learn more](#)



navigate to the AWS application migration service.

us-west-1.console.aws.amazon.com/mgn/home?region=us-west-1#/editReplicationTemplate

aws | Search [Alt+S]

VPC EC2 RDS IAM CodeCommit S3

Application Migration Service > Replication template > Edit replication template

Edit replication template Info

Source servers added to this console have replication settings that control how data is sent from the source server to AWS. These settings are created automatically based on this template, and can be modified at any time for any source server or group of source servers. The defaults can be modified at any time. Changes made to defaults will only affect newly added servers.

Replication server configuration Info

Replication servers are lightweight EC2 instances launched by Application Migration Service to facilitate the transfer of blocks of data from the disks on your source servers to AWS.

Staging area subnet

The staging area subnet is the subnet within which replication servers and conversion servers are launched. By default, Application Migration Service will use the default subnet on your AWS Account.

subnet-0014e115c9d8627f8
vpc-0fa0a05ee9e4b12e1

Replication Server instance type

The replication server instance type is the default EC2 instance type to use for replication servers. The recommended best practice is to not change the replication server instance type unless there is a business need to do so.

c5.large

Volumes Info

For each disk on an added source server there is an identically-sized EBS volume attached to a replication server, and each replication server can handle replication of disks from multiple source servers.

EBS volume type (for replicating disks over 500GiB)

The default EBS Volume type to be used by the replication servers.

Faster, General Purpose SSD (gp3)

EBS encryption

This option will encrypt your replicated data at rest on the staging area subnet disks and the replicated disks.

Before adding server edit replication template, launch template, and post-launch template

The screenshot shows the AWS Application Migration Service interface. At the top, there's a navigation bar with the AWS logo, a search bar, and a keyboard shortcut [Alt+S]. On the right side of the top bar are icons for notifications, help, and account information (N. California, Dhavanisha).

Below the top bar, there's a secondary navigation bar with links to VPC, EC2, RDS, IAM, CodeCommit, and S3.

The main content area has a breadcrumb trail: Application Migration Service > Replication template > Edit replication template. There are also informational and refresh icons on the right.

The first section, "Select additional security groups", contains a dropdown menu with the option "default" selected, which is associated with the ID "sg-0d9a090fad0d5727e".

The second section, "Data routing and throttling" (with an "Info" link), describes how data flows from external servers to replication servers. It includes the following options:

- Create public IP
- Use private IP for data replication (VPN, DirectConnect, VPC peering, etc.)
- Create public IP, and use Private IP for data replication (VPN, DirectConnect, VPC peering, etc.)

There's also an unchecked checkbox for "Throttle network bandwidth (per server - in Mbps)".

The third section, "Replication resources tags" (with an "Info" link), indicates that no tags are associated with the resource. It features a blue "Add new tag" button and a note stating "You can add up to 50 more tags".

At the bottom right of the main content area are two buttons: "Cancel" and "Save template" (highlighted in orange).

The replication template is used to define the settings for replicating source servers to AWS.

AWS | Search [Alt+S] | N. California | Dhavanisha

VPC EC2 RDS IAM CodeCommit S3

Application Migration Service > ... > Edit launch template

Default EC2 Launch Template Info

Configure the default settings that will be applied to the EC2 launch template of every target server.

Default target subnet
This is the target subnet to be associated with any instance launched by this service.

subnet-0014e115c9d8627f8
vpc-0fa0a05ee9e4b12e1

Additional security groups
These are the security groups to associate with all instances launched by this service.

Select additional security groups

default X
sg-0d9a090fad0d5727e

Default instance type
This is the default instance type to be used for all instances launched by this service. This value is ignored if instance type right-sizing is active.

c5.large

EBS volume type
This is the default volume type used for EBS volumes. You can overwrite this value for small volumes, using API.

General Purpose SSD (gp3)

IOPS
General Purpose SSD (gp3) volumes support a baseline of 3,000 IOPS. Additionally, you can provision up to 500 IOPS per GiB up to a maximum of 16,000 IOPS.

3000

Min: 3000 IOPS, max: 16,000 IOPS (up to 500 IOPS per GiB).

Throughput

The launch template defines the configuration of the target EC2 instances created during the migration process.

aws | Search [Alt+S] N. California ▾ Dhavanisha ▾

VPC EC2 RDS IAM CodeCommit S3

Application Migration Service > Post-launch template

Servers

- Source servers
- Applications
- Waves
- Global view
- Launch history
- MGN connectors
- Import and Export
 - Import
 - Export

▼ Settings

- Replication template
- Launch template
- Post-launch template**
- User preferences

AWS Migration Hub

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Release Notes

Post-launch template

This feature allows you to configure and automate actions performed after the server is launched in AWS. The template controls the default post-launch settings of every newly added source server. You can modify the template or individual server settings at any time.

Changes made to the templates will only be applied to newly added source servers.

▼ Post-launch actions settings

Activate post-launch actions No	Deployment Test and cutover instances
---	---

Edit

The post-launch template defines the actions to be performed after a server is launched in AWS.



Search

[Alt+S]



N. California ▾

Dhavanisha ▾



VPC



EC2



RDS



IAM



CodeCommit



S3

Application Migration Service > Post-launch template > Edit post-launch template



Post-launch template Info

Configure actions to be executed on every server, upon server launch

Post-launch actions Info

The service can execute actions on your servers, after they are launched, using AWS Systems Manager (AWS SSM). The service will install the AWS SSM agent, and execute the actions you select.

Install the Systems Manager agent and allow executing actions on launched servers

⚠ If you do not activate this feature, this service will not install the SSM agent. Post-launch actions will not be executed on any of your servers.

[Cancel](#)[Save template](#)

aws | Search [Alt+S] | N. California ▾ Dhavanisha ▾

VPC EC2 RDS IAM CodeCommit S3

Application Migration Service > Active source servers

Migration Service

Servers

Source servers

- Applications
- Waves
- Global view
- Launch history
- MGN connectors
- ▼ Import and Export
 - Import
 - Export

Settings

- Replication template
- Launch template
- Post-launch template
- User preferences

AWS Migration Hub

Documentation

Release Notes

Source servers

Active source servers Filter source servers by property or value 1 | Source server name Alerts Migration lifecycle Data replication status Last snapshot Next step

No servers

Add your source servers to this console by installing the AWS Replication Agent. Alternatively, you can add source servers without installing an agent on each guest server by installing the AWS vCenter client on your vCenter.

Add server

This account is currently replicating 0 servers out of a quota of 150 concurrent replicating servers. [Learn more](#)

Post-launch template saved

AWS | Search [Alt+S] | N. California | Dhavanisha

VPC EC2 RDS IAM CodeCommit S3

Application Migration Service > Active source servers > Add server

Windows
 Legacy OS: Windows Server 2003, Windows Server 2008 or Windows Server 2008 R2

2. Select your replication preferences [Info](#)

Replicate all disks

3. Provide the required credentials [Info](#)
Create an IAM role or user with the AWSApplicationMigrationAgentInstallationPolicy policy.

IAM access key ID
AKIAXQIQAJ4QBCK474LP

IAM secret access key
This form does not send the secret – it only adds it to the installation command you can copy
..... [Show](#)

Session token
Session token is only required when using temporary credentials

4. User provided resource id - optional [Info](#)

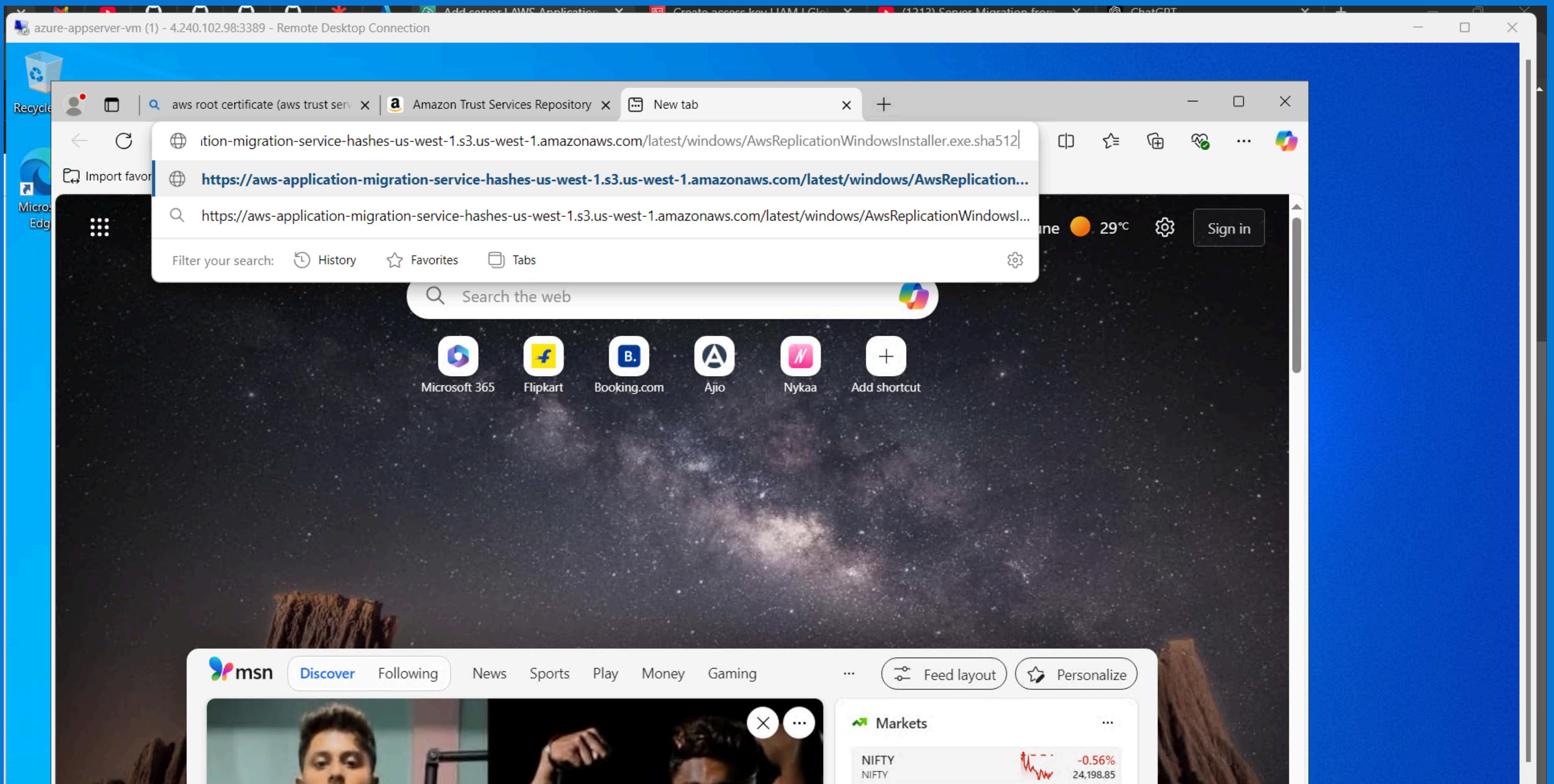
5. Download the [installer](#) onto your source server (or copy it there after downloading)
If you need to validate the installer hash, the correct hash can be found here:
<https://aws-application-migration-service-hashes-us-west-1.s3.us-west-1.amazonaws.com/latest/windows/AwsReplicationWindowsInstaller.exe.sha512>

6. Copy and input the command below into the PowerShell command-line on your source server

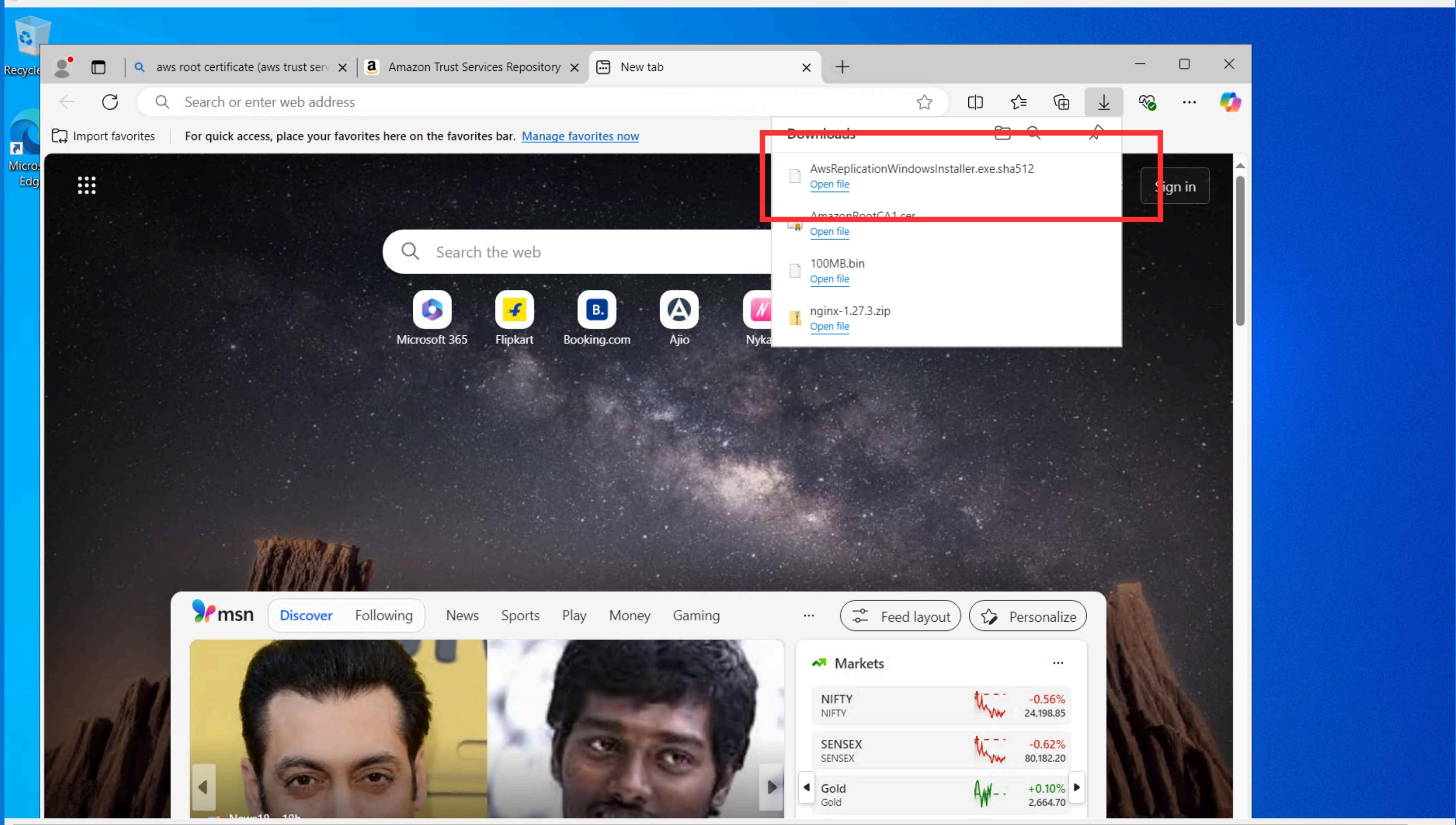
```
. \AwsReplicationWindowsInstaller.exe --region us-west-1 --aws-access-key-id AKIAXQIQAJ4QBCK474LP --aws
```

[Copy](#)

After pasting a key, you will get the link below to install an AWS replication Windows server copy that.



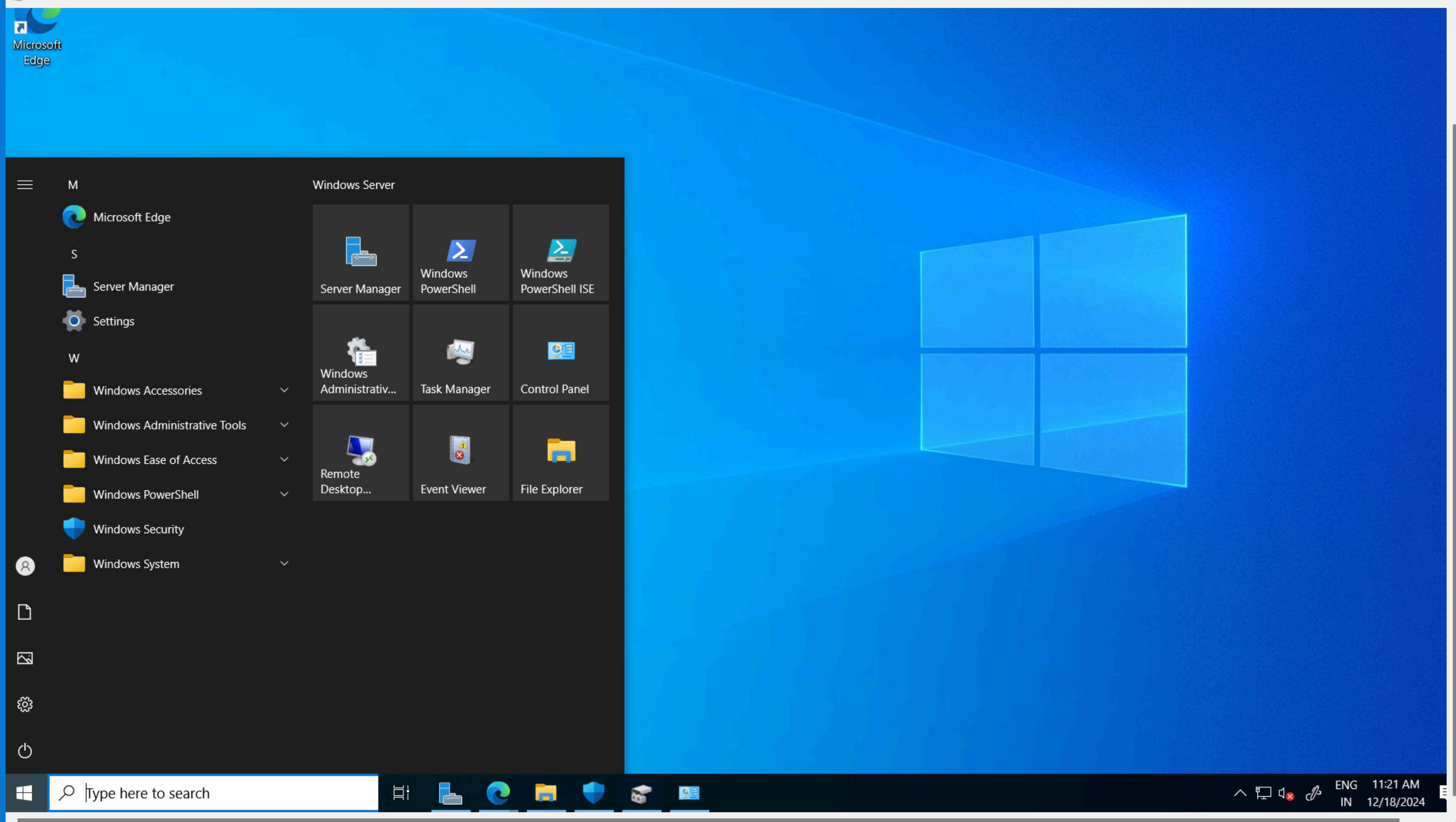
Paste in Internet Explorer on the Azure server.



downloaded an aws replication windows server.

The screenshot shows the AWS Application Migration Service interface. The user is on the 'Add server' step of the 'Active source servers' wizard. The top navigation bar includes links for VPC, EC2, RDS, IAM, CodeCommit, and S3. The main content area has a heading 'Replicate all disks'. Step 3, 'Provide the required credentials', is active. It instructs the user to create an IAM role or user with the AWSApplicationMigrationAgentInstallationPolicy policy. The 'IAM access key ID' field contains 'AKIAXQIQAJ4QBCK474LP'. The 'IAM secret access key' field is shown as a redacted string with a 'Show' button. The 'Session token' field is empty. Step 4, 'User provided resource id - optional', is below. Step 5, 'Download the installer', provides a download link: <https://aws-application-migration-service-hashes-us-west-1.s3.us-west-1.amazonaws.com/latest/windows/AwsReplicationWindowsInstaller.exe.sha512>. Step 6, 'Copy and input the command below into the PowerShell command-line on your source server', contains a command-line input field with the text: '.\AwsReplicationWindowsInstaller.exe --region us-west-1 --aws-access-key-id AKIAXQIQAJ4QBCK474LP --aws'. A 'Copy' button is next to the input field, and a tooltip 'Command copied' with a checkmark icon is displayed above it. A 'Back' button is at the bottom right.

Again, navigate to the AWS Application Migration Service. Copy the command.



Go to the Azure server.

azure-appserver-vm (1) - 4.240.102.98:3389 - Remote Desktop Connection

```
Administrator: Windows PowerShell ISE
File Edit View Tools Debug Add-ons Help
Recycle Bin Microsoft Edge
PS C:\Users\dhavanisha> cd .\Downloads
PS C:\Users\dhavanisha\Downloads>
```

open windows powerShell.

azure-appserver-vm (1) - 4.240.102.98:3389 - Remote Desktop Connection

The screenshot shows a Windows Remote Desktop session titled "azure-appserver-vm (1) - 4.240.102.98:3389 - Remote Desktop Connection". The main window is a terminal or command-line interface. On the left, there is a vertical "Quick Links" sidebar with icons for Desktop, Downloads, Documents, Pictures, This PC, 3D Objects, Desktop, and Network. The terminal window has a blue header bar with various icons. The text area contains the following command and its execution:

```
PS C:\Users\dhavanisha\Downloads> .\AwsReplicationWindowsInstaller.exe --region us-west-1 --aws-access-key-id AKIAJXQIQAJ4QBCK474LP --aws-secret-access-key UtRr8X7XoYbSYWzvmsexMU0YJVcHY
Verifying that the source server has enough free disk space to install the AWS Replication Agent (a minimum of 2 GB of free disk space is required).
Identifying volumes for replication.
Disk to replicate identified: c:0 of size 128 GiB
Disk to replicate identified: d:0 of size 7 GiB
Disk to replicate identified: f:0 of size 4 GiB
All volumes for replication were successfully identified.
Downloading the AWS Replication Agent onto the source server...
Finished.
Installing the AWS Replication Agent onto the source server...
Finished.
Syncing the source server with the Application Migration Service Console...
Finished.
The following is the source server ID: s-bfc041b98fd3320ca.
You now have 1 active source server out of a total quota of 150.
Learn more about increasing source servers limit at https://docs.aws.amazon.com/mgn/latest/ug/MGN-service-limits.html
The AWS Replication Agent was successfully installed.
The installation of the AWS Replication Agent has started.
```

At the bottom of the terminal window, it says "Completed" and shows "Ln 20 Col 35" and "100%".

Paste the command here, and the installation of the AWS replication will begin.

Screenshot of the AWS Application Migration Service console showing the 'Active source servers' page.

The top navigation bar includes links for VPC, EC2, RDS, IAM, CodeCommit, and S3. The search bar has a placeholder 'Search' and a keyboard shortcut '[Alt+S]'. The top right corner shows the region 'N. California' and the user 'Dhavanisha'.

The left sidebar under 'Application Migration Service' contains the following sections:

- Servers**
 - Source servers**
 - Applications
 - Waves
 - Global view
 - Launch history
 - MGN connectors
 - Import and Export**
 - Import
 - Export
- Settings**
 - Replication template
 - Launch template
 - Post-launch template
 - User preferences
- AWS Migration Hub

The main content area displays five migration steps with icons:

- Setup service**: Initialize the service with default replication, launch and post-launch templates.
- Import inventory - optional**: Import waves, application and server definitions, including EC2 launch template attributes.
- Replicate to AWS**:
 - Option one:** Install the replication agent on the source servers.
 - Option two:** Install the MGN connector in your data center and use it to install the replication agent across your inventory.
 - Option three:** Install the appliance in your vCenter, and activate agentless replication.
- Test**: Launch instances in EC2, to verify your applications work as expected. Post-launch actions are automatically activated.
- Cutover**: Launch cutover instances in EC2, for production. Post-launch actions are automatically activated. Finalize your migration to remove the agent from your source servers.

The 'Source servers (1)' section shows a table with one row:

Source server name	Alerts	Migration lifecycle	Data replication status	Last snapshot	Next step
azure-appserver	-	Not ready	Initial sync 0% 20 hr left	-	Wait for initial sync to complete

A red box highlights the 'Source server name' column for the 'azure-appserver' entry. A message at the bottom states: 'This account is currently replicating 1 server out of a quota of 150 concurrent replicating servers. [Learn more](#)'.

Go to the AWS console. After refreshing the page, you may see the server that you built in the Azure portal.

us-west-1.console.aws.amazon.com/mgn/home?region=us-west-1#/sourceServers

aws | Search [Alt+S]

VPC EC2 RDS IAM CodeCommit S3

Application Migration Service > Active source servers

Application Migration Service

Servers

Source servers

Applications

Waves

Global view

Launch history

MGN connectors

Import and Export

Import

Export

Settings

Replication template

Launch template

Post-launch template

User preferences

AWS Migration Hub

Documentation

Migration metrics

Alerts [Info](#)
Filter servers
Select status to filter

Data replication status [Info](#)
Filter servers
Select status to filter

Migration lifecycle [Info](#)
Filter servers
Select status to filter

Healthy
1 server, 100%

Initial sync
1 server, 100%

Not ready
1 server, 100%

How it works

Setup service

Import inventory - optional

Replicate to AWS

Test

Cutover

us-west-1.console.aws.amazon.com/mgn/home?region=us-west-1#/sourceServers

aws | Search [Alt+S]

VPC EC2 RDS IAM CodeCommit S3

Application Migration Service > Active source servers

Application Migration Service

Servers

Source servers

Applications

Waves

Global view

Launch history

MGN connectors

Import and Export

Import

Export

Settings

Replication template

Launch template

Post-launch template

User preferences

AWS Migration Hub

Documentation

Setup service

Import inventory - *optional*

Replicate to AWS

Test

Cutover

Initial the service with default replication, launch and post-launch templates.

Import waves, application and server definitions, including EC2 launch template attributes.

Option one: Install the replication agent on the source servers.
Option two: Install the MGN connector in your data center and use it to install the replication agent across your inventory.
Option three: Install the appliance in your vCenter, and activate agentless replication.

Launch instances in EC2, to verify your applications work as expected. Post-launch actions are automatically activated.

Launch cutover instances in EC2, for production. Post-launch actions are automatically activated.

Finalize your migration to remove the agent from your source servers.

Source servers (1)

Actions ▾ Replication ▾ Test and cutover ▾ Add server

Active source servers ▾ Filter source servers by property or value

Source server name ▾ Alerts ▾ Migration lifecycle ▾ Data replication status ▾ Last snapshot ▾ Next step ▾

Source server name	Alerts	Migration lifecycle	Data replication status	Last snapshot	Next step
azure-appserver	-	Not ready	Initial sync 100% creating snapshot	-	Wait for initial sync to complete

This account is currently replicating 1 server out of a quota of 150 concurrent replicating servers. [Learn more](#)

The replication takes 2-3 hours to generate.

AWS | Search [Alt+S] | N. California | Dhavanisha

VPC EC2 RDS IAM CodeCommit S3

Filter by VPC

Virtual private cloud

- Your VPCs
- Subnets
- Route tables
- Internet gateways
- Egress-only internet gateways
- DHCP option sets
- Elastic IPs
- Managed prefix lists
- NAT gateways
- Peering connections

Security

- Network ACLs
- Security groups**

PrivateLink and Lattice

- Getting started [Updated](#)
- Endpoints [Updated](#)
- Endpoint services
- Service networks [Updated](#)
- Lattice services
- Resource configurations [New](#)
- Resource gateways [New](#)

Security Groups (1/2) Info

C Actions Export security groups to CSV Create security group

Find resources by attribute or tag

Name	Security group ID	Security group name	VPC ID	Description
-	sg-0d9a090fad0d5727e	default	vpc-0fa0a05ee9e4b12e1	default VPC security group
<input checked="" type="checkbox"/> AWS Application Mig...	sg-00ab619d5d40b22e1	AWS Application Migration Service default Replication Server Security Group	vpc-0fa0a05ee9e4b12e1	Security group with AWS Application Migration Service default Replication Server

sg-00ab619d5d40b22e1 - AWS Application Migration Service default Replication Server Security Group

Details Inbound rules Outbound rules Sharing - new VPC associations - new Tags

Inbound rules (1)

C Manage tags Edit inbound rules

Search

Name	Security group rule ID	IP version	Type	Protocol	Port range

The screenshot shows the AWS Management Console interface for the EC2 service, specifically the 'Snapshots' section. The left sidebar contains navigation links for Reserved Instances, Dedicated Hosts, Capacity Reservations, Images (AMIs, AMI Catalog), Elastic Block Store (Volumes, Snapshots, Lifecycle Manager), and Network & Security (Security Groups, Elastic IPs, Placement Groups). The main content area is titled 'Snapshots (7)' and displays a table of 7 completed snapshots. The columns in the table are: Name, Snapshot ID, Volume size, Description, Storage tier, Snapshot status, and Started. The data is as follows:

Name	Snapshot ID	Volume size	Description	Storage tier	Snapshot status	Started
AWS Application Migration...	snap-05a8a491ba4d99897	4 GiB	AWS Application Migration ...	Standard	Completed	2024/12/18 17:14 GMT+
AWS Application Migration...	snap-03ad987b82e8fb3b1	4 GiB	AWS Application Migration ...	Standard	Completed	2024/12/18 17:20 GMT+
AWS Application Migration...	snap-05587caef29f7edbb	7 GiB	AWS Application Migration ...	Standard	Completed	2024/12/18 17:14 GMT+
AWS Application Migration...	snap-017b1a7df1787dff	7 GiB	AWS Application Migration ...	Standard	Completed	2024/12/18 17:20 GMT+
AWS Application Migration...	snap-0a348026fe363e9fb	128 GiB	AWS Application Migration ...	Standard	Completed	2024/12/18 17:14 GMT+
AWS Application Migration...	snap-089275cf37c6d2e90	128 GiB	AWS Application Migration ...	Standard	Pending	2024/12/18 17:20 GMT+
AWS Application Migration...	snap-03253cead363b8a79	1 GiB	AWS Application Migration ...	Standard	Completed	2024/12/18 17:05 GMT+

The replication began synchronizing in all services are ec2 instance, volume, snapshots, security group, and check there is a default virtual private cloud.

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VPC EC2 RDS IAM CodeCommit S3

Saving plans
Reserved Instances
Dedicated Hosts
Capacity Reservations

Images
AMIs
AMI Catalog

Elastic Block Store
Volumes
Snapshots
Lifecycle Manager

Network & Security
Security Groups
Elastic IPs
Placement Groups
Key Pairs
Network Interfaces

Load Balancing
Load Balancers
Target Groups
Trust Stores [New](#)

Auto Scaling
Auto Scaling Groups

Volumes (4) [Info](#)

Saved filter sets [Choose filter set](#) Search

<input type="checkbox"/>	Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot ID	Created
<input type="checkbox"/>	AWS Application Volume 1	vol-09d2b39a8a8f078fc	gp3	8 GiB	3000	125	snap-0febefef...	2024/12/18 17:06 GMT+5:30
<input type="checkbox"/>	AWS Application Volume 2	vol-08faeb2ef26fd8533	standard	4 GiB	-	-	-	2024/12/18 17:08 GMT+5:30
<input type="checkbox"/>	AWS Application Volume 3	vol-06dafb3de5713edd4	standard	7 GiB	-	-	-	2024/12/18 17:08 GMT+5:30
<input type="checkbox"/>	AWS Application Volume 4	vol-07801fea641c8774f	standard	128 GiB	-	-	-	2024/12/18 17:08 GMT+5:30

Fault tolerance for all volumes in this Region

Snapshot summary Last updated on Wed, Dec 18, 2024, 05:37:52 PM (GMT+05:30) [Edit](#)

Recently backed up volumes / Total # volumes **3 / 4**

Data Lifecycle Manager default policy for EBS Snapshots status
No default policy set up | [Create policy](#)

AWS | Search [Alt+S] | N. California | Dhavanisha

VPC EC2 RDS IAM CodeCommit S3

Application Migration Service > Source servers > azure-appserver

Application Migration Service

Servers

- Source servers
- Applications
- Waves
- Global view
- Launch history
- MGN connectors
- Import and Export
 - Import
 - Export

Settings

- Replication template
- Launch template
- Post-launch template
- User preferences

AWS Migration Hub Documentation Release Notes

Migration dashboard

Server info Tags Disks settings Replication settings Launch settings Post-launch settings

Lifecycle

Not ready Ready for testing Test in progress Ready for cutover Cutover in progress Cutover complete

Last test - Cutover -

Data replication status

Healthy (with lag)

Replication progress Initial replication finished

Replication type	Elapsed replication time
Agent based	2 hr
Total replicated storage	Last seen
138 of 138 GiB	December 18, 2024 at 19:33 (UTC+5:30)
Lag	Replication start time
14 min	December 18, 2024 at 17:08 (UTC+5:30)
Backlog	Replication instance ID
-	i-038f8c64529bbc124

The screenshot shows the AWS Application Migration Service console. The main page displays a server named "azure-appserver (s-bfc041b98fd3320ca)". A modal dialog is open, titled "Launch test instance for 1 server". The dialog contains the following text:

You are about to launch EC2 instance for 1 server.
These instances will be launched according to the Launch Settings you have configured for them. Launched instances accrue EC2 charges as per your AWS account's rates. [Learn more](#)

▼ The action will be applied to the following servers
azure-appserver

At the bottom right of the dialog are two buttons: "Cancel" and "Launch".

The background of the console shows the "Lifecycle" section with "Not ready" status and "Launch status" set to "-". It also shows "Data replication status" as "Healthy (with lag)".

Launch the test instances to ensure that all data and applications are in place.

AWS | Search [Alt+S] | N. California | Dhavanisha

VPC EC2 RDS IAM CodeCommit S3

Application Migration Service > Source servers > azure-appserver

Application Migration Service

Servers

Source servers

Applications

Waves

Global view

Launch history

MGN connectors

Import and Export

Import

Export

Settings

Replication template

Launch template

Post-launch template

User preferences

AWS Migration Hub

Documentation

Release Notes

Launch job mgnjob-b26b3908256807695 created
Starting to launch test instance for 1 server.

View job details X

azure-appserver (s-bfc041b98fd3320ca)

Actions ▾ Replication ▾ Test and cutover ▾

Next actions Info

Lagging
Complete testing and mark as 'Ready for cutover'

Migration dashboard Server info Tags Disks settings Replication settings Launch settings Post-launch settings

Lifecycle Info

Not ready Ready for testing Test in progress Ready for cutover Cutover in progress Cutover complete

Launch status: Waiting

Last test: Job ID: mgnjob-b26b3908256807695 Started: December 18, 2024 at 19:38 (UTC+5:30)

Cutover: -

Data replication status Info

Application
Migration Service

Servers

- Source servers
- Applications
- Waves
- Global view

Launch history

- MGN connectors
- ▼ Import and Export
 - Import
 - Export

▼ Settings

- Replication template
- Launch template
- Post-launch template
- User preferences

AWS Migration Hub

Documentation

Release Notes

Job: mgnjob-b26b3908256807695

Details

Type

Launch

Status

Completed

Initiated by

Launch test instances

Start time

December 18, 2024 at 19:38 (UTC+5:30)

Completed time

December 18, 2024 at 19:55 (UTC+5:30)

Job log (8) Info

Filter job log by property or value

< 1 2 >

Time

Event

Additional data

December 18, 2024 at 19:38 (UTC+5:30)

Job started

December 18, 2024 at 19:38 (UTC+5:30)

Started taking snapshot

Source server : [azure-appserver](#)

December 18, 2024 at 19:39 (UTC+5:30)

Finished taking snapshot

Source server : [azure-appserver](#)

December 18, 2024 at 19:39 (UTC+5:30)

Conversion started

Source server : [azure-appserver](#)Source server : [azure-appserver](#)

It was created successfully.

The screenshot shows the AWS EC2 Instances page. The left sidebar is collapsed. The main header includes the AWS logo, a search bar with the placeholder "Search" and a keyboard shortcut "[Alt+S]", and navigation icons for CloudShell, Feedback, and various services like VPC, EC2, RDS, IAM, CodeCommit, and S3. The top right corner shows the region "N. California" and the user "Dhavanisha".

The main content area is titled "Instances (3)" with an "Info" link. It displays the following table:

<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IP
<input type="checkbox"/>	AWS Application...	i-038f8c64529bbc124	Running	c5.large	3/3 checks passed	View alarms +	us-west-1a	ec2-3-10
<input type="checkbox"/>	azure-appserver	i-0960c4d14596bbacf	Running	c5.large	Initializing	View alarms +	us-west-1a	-
<input type="checkbox"/>	AWS Application...	i-078bf586f96016d5b	Terminated	m4.large	-	View alarms +	us-west-1a	-

Below the table, a section titled "Select an instance" is visible. The bottom of the page includes standard footer links: CloudShell, Feedback, © 2024, Amazon Web Services, Inc. or its affiliates., Privacy, Terms, and Cookie preferences.

Go to the instance After refreshing the page, we can see that the instance has been created.

The screenshot shows the AWS EC2 Instances page. The left sidebar is collapsed. The main content area displays the following:

Instances (1/3) [Info](#) Last updated less than a minute ago

Find Instance by attribute or tag (case-sensitive) All states ▾

Instances (1/3) [Info](#)

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IP
AWS Application Server	i-038f8c64529bbc124	Running	c5.large	3/3 checks passed	View alarms +	us-west-1a	ec2-3-10
azure-appserver	i-0960c4d14596bbacf	Running	c5.large	3/3 checks passed	View alarms +	us-west-1a	-
AWS Application Server	i-078bf586f96016d5b	Terminated	m4.large	-	View alarms +	us-west-1a	-

i-0960c4d14596bbacf (azure-appserver)

Details Status and alarms Monitoring Security Networking Storage Tags

Instance summary [Info](#)

Instance ID i-0960c4d14596bbacf	Public IPv4 address -	Private IPv4 addresses 172.31.30.211
IPv6 address -	Instance state Running	Public IPv4 DNS -
Hostname type IP name: ip-172-31-30-211.us-west-1.compute.internal	Private IP DNS name (IPv4 only) ip-172-31-30-211.us-west-1.compute.internal	

The public IP address is not associated with the server.

AWS | Search [Alt+S] | N. California ▾ | Dhavanisha ▾

VPC EC2 RDS IAM CodeCommit S3

VPC > Elastic IP addresses > Associate Elastic IP address

Associate Elastic IP address Info

Choose the instance or network interface to associate to this Elastic IP address (13.56.48.140)

Elastic IP address: 13.56.48.140

Resource type
Choose the type of resource with which to associate the Elastic IP address.

Instance
 Network interface

⚠️ If you associate an Elastic IP address with an instance that already has an Elastic IP address associated, the previously associated Elastic IP address will be disassociated, but the address will still be allocated to your account. [Learn more](#)

If no private IP address is specified, the Elastic IP address will be associated with the primary private IP address.

Instance

i-0960c4d14596bbacf

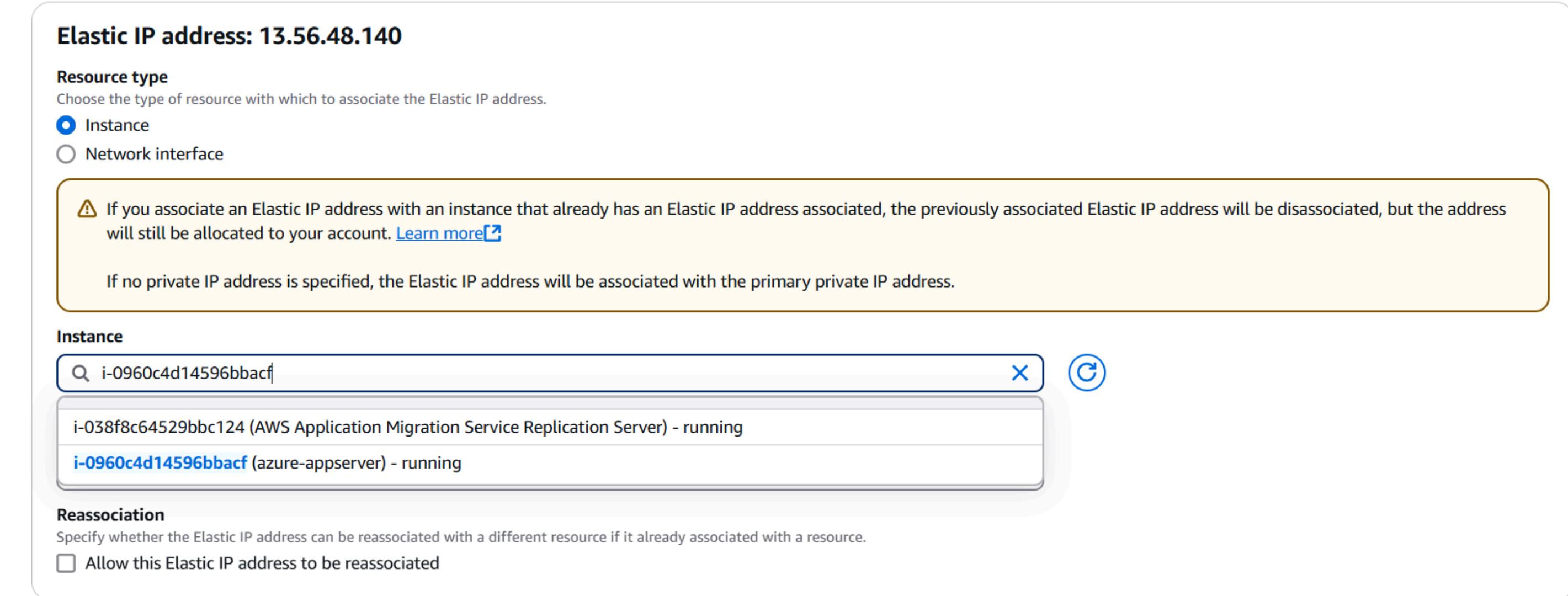
i-038f8c64529bbc124 (AWS Application Migration Service Replication Server) - running

i-0960c4d14596bbacf (azure-appserver) - running

Reassociation
Specify whether the Elastic IP address can be reassigned to a different resource if it is already associated with a resource.

Allow this Elastic IP address to be reassigned

Cancel **Associate**



Navigate to the elastic IP address and associate the instance with it.

The screenshot shows the AWS EC2 Instances page with two instances listed:

Instance ID	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 IP	Elastic IP	IPv6 IPs	Monitoring
i-0960c4d14596bbacf	3/3 checks passed	View alarms	us-west-1a	ec2-3-101-63-54.us-west-1.compute.amazonaws.com	3.101.63.54	-	-	disabled
i-0960c4d14596bbacf	3/3 checks passed	View alarms	us-west-1a	ec2-13-56-48-140.us-west-1.compute.amazonaws.com	13.56.48.140	13.56.48.140	-	disabled
-	-	View alarms	us-west-1a	-	-	-	-	disabled

The instance details page for **i-0960c4d14596bbacf (azure-appserver)** is shown. The **Details** tab is selected. The **Public IPv4 address** section is highlighted with a red box:

Public IPv4 address
13.56.48.140 | [open address](#)

Other visible details include:

- Instance ID:** i-0960c4d14596bbacf
- IPv6 address:** -
- Instance state:** Running
- Private IPv4 addresses:** 172.31.30.211
- Public IPv4 DNS:** ec2-13-56-48-140.us-west-1.compute.amazonaws.com | [open address](#)

A public IP address is formed.

Connect to instance Info

Connect to your instance i-0960c4d14596bbacf (azure-appserver) using any of these options

Session Manager

RDP client

EC2 serial console

Instance ID

i-0960c4d14596bbacf (azure-appserver)

Connection Type

Connect using RDP client

Download a file to use with your RDP client and retrieve your password.

Connect using Fleet Manager

To connect to the instance using Fleet Manager Remote Desktop, the SSM Agent must be installed and running on the instance. For more information, see [Working with SSM Agent](#)

You can connect to your Windows instance using a remote desktop client of your choice, and by downloading and running the RDP shortcut file below:

[!\[\]\(8b80316e8e650f6fed9b8156545797c1_img.jpg\) Download remote desktop file](#)

When prompted, connect to your instance using the following username and password:

Public DNS

ec2-13-56-48-140.us-west-1.compute.amazonaws.com

Username Info

Administrator

Password [Get password](#)

(i) If you've joined your instance to a directory, you can use your directory credentials to connect to your instance.

Cancel

Now connect the instance.

AWS | Search [Alt+S] | N. California | Dhavanisha

VPC EC2 RDS IAM CodeCommit S3

EC2 Instances i-0960c4d14596bbacf Connect to instance

Connect to instance Info

Connect to your instance i-0960c4d14596bbacf (azure-appserver) using any of these options

Session Manager **RDP client** **EC2 serial console**

Instance ID
i-0960c4d14596bbacf (azure-appserver)

Connection Type

Connect using RDP client
Download a file to use with your RDP client and retrieve your password.

You can connect to your Windows instance using a remote desktop client.

[Download remote desktop file](#)

When prompted, connect to your instance using the following username and password:

Public DNS
ec2-13-56-48-140.us-west-1.compute.amazonaws.com

Password [Get password](#)

If you've joined your instance to a directory, you can use your directory credentials to connect to your instance.

Username Info
 Administrator

Remote Desktop Connection

The publisher of this remote connection can't be identified. Do you want to connect anyway?

This remote connection could harm your local or remote computer. Do not connect unless you know where this connection came from or have used it before.

Publisher: Unknown publisher
Type: Remote Desktop Connection
Remote computer: ec2-13-56-48-140.us-west-1.compute.amazonaws.com

Don't ask me again for connections to this computer

Show Details **Connect** **Cancel**

Cancel

AWS | Search [Alt+S] | N. California | Dhavanisha

VPC EC2 RDS IAM CodeCommit S3

EC2 > Security Groups > sg-0d9a090fad0d5727e - default

Instances (1/3) Info

Find Instance by attribute or tag (case-insensitive)

Name	Instance ID
azure-appserver	i-0960c4d14596bbacf
AWS Application...	i-038f8c645
AWS Application...	i-078bf586f

User name: Dhavanisha

Password: *****

Remember me

OK Cancel

Windows Security

Enter your credentials

These credentials will be used to connect to 13.56.48.140.

Instance state Actions Launch instances

Public IP	Availability Zone	Alarm status	Status check
ec2-13-5	us-west-1a	6/3 checks passed	View alarms +
ec2-3-10	us-west-1a	6/3 checks passed	View alarms +
-	us-west-1a	6/3 checks passed	View alarms +

i-0960c4d14596bbacf (azure-appserver)

Details Status and alarms Monitoring Security Networking Storage Tags

Instance summary Info

Instance ID: i-0960c4d14596bbacf

IPv6 address: -

Public IPv4 address copied: 13.56.48.140 | [open address](#)

Private IPv4 addresses: 172.31.30.211

Public IPv4 DNS: ec2-13-56-48-140.us-west-1.compute.amazonaws.com | [open address](#)

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The screenshot shows the AWS Management Console interface for EC2. The left sidebar navigation bar includes links for VPC, EC2, RDS, IAM, CodeCommit, and S3. The main content area displays a 'Remote Desktop Connection' window titled '13.56.48.140 - Remote Desktop Connection'. Inside this window, the Windows Server Manager is open, showing a message about trying Windows Admin Center and Azure Arc. Below this message, there's a 'WHAT'S NEW' section with two items: 'Create a server group' and 'Connect this server to cloud services'. A 'LEARN MORE' button is also present. In the bottom right corner of the main window, a separate dialog box appears, stating: 'This Windows Server 2022 Datacenter Azure Edition VM is deactivated...'. It explains that the VM has been deactivated because it is not running on Azure or a supported Azure Stack hypervisor, and provides instructions to enable Azure benefits via the Windows Admin Center. An 'OK' button is at the bottom of this dialog.

Server is opened. Go verify the data.

13.56.48.140 - Remote Desktop Connection



Recycle Bin



Microsoft
Edge

Shutdown Event Tracker

Why did the computer shut down unexpectedly?

Other (Unplanned)

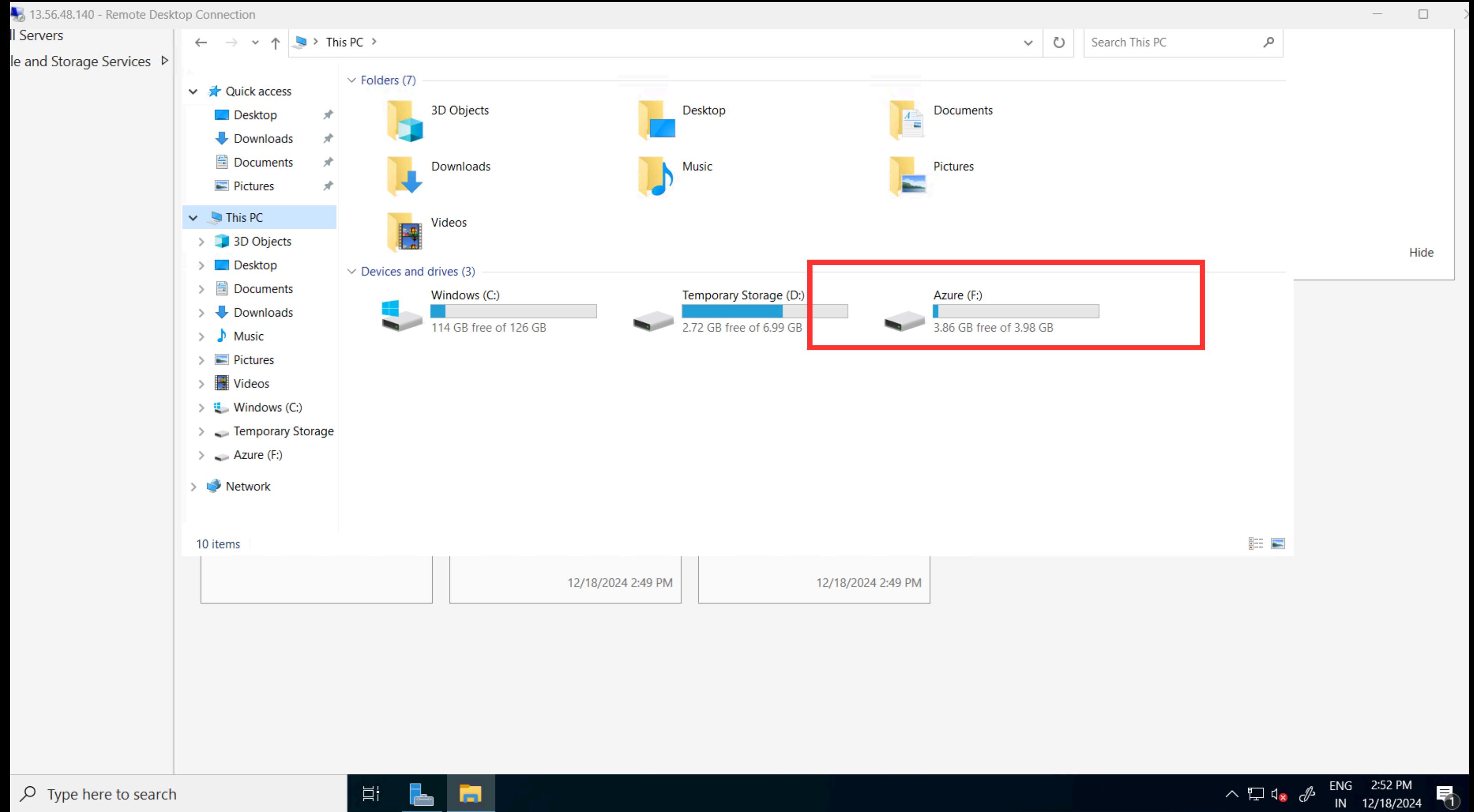
A shutdown or restart for an unknown reason

Problem Id

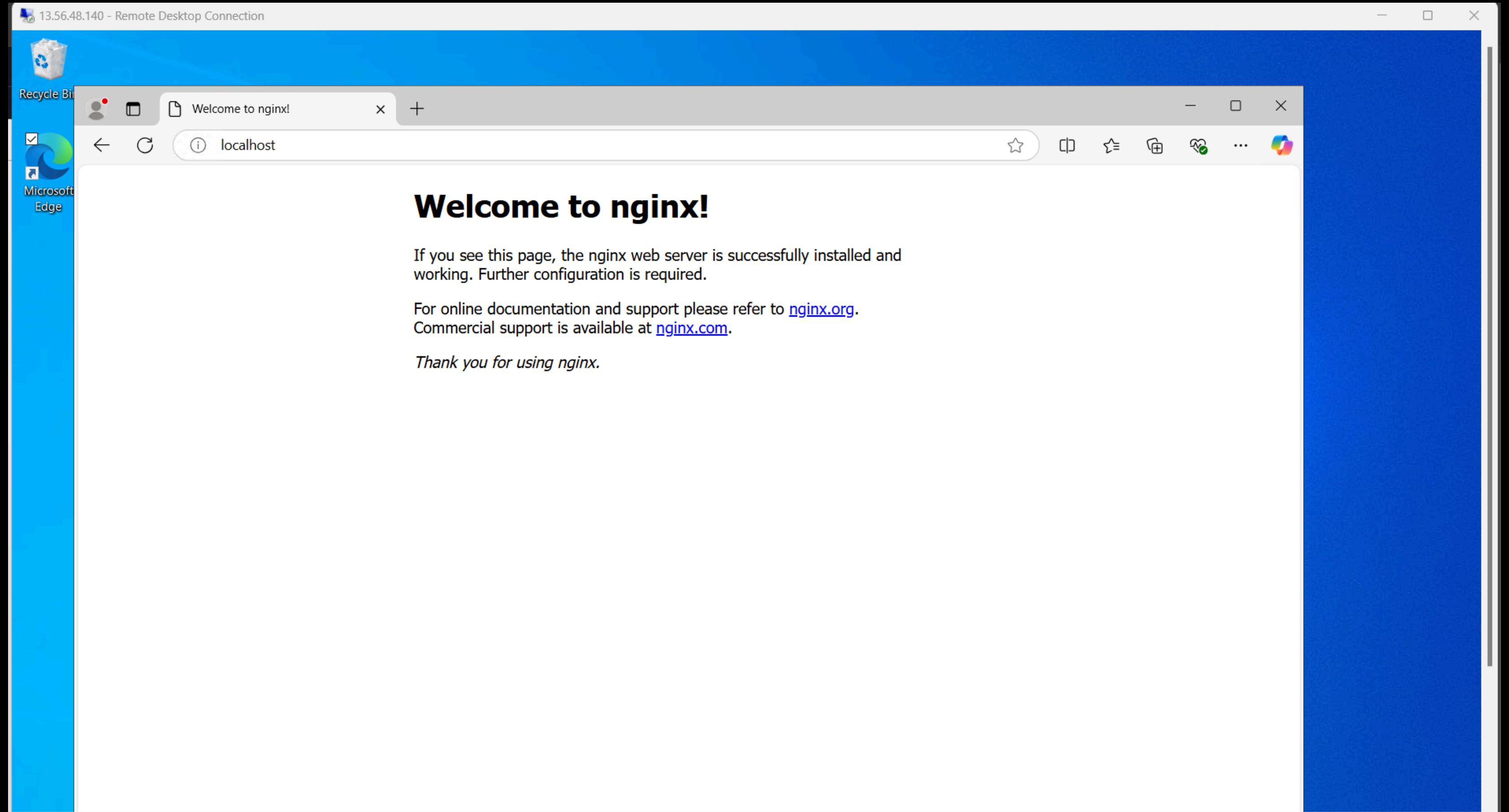
Comment: (This field is REQUIRED for the reason you selected)

OK

Cancel



Here, you can see the generated disk in Azure server.



Nginx is also working.

The screenshot shows the AWS Application Migration Service console. The main page displays a migration task for an 'azure-appserver' with a status of 'Launched'. A modal dialog is open, titled 'Mark 1 server as "Ready for cutover"', with the following content:

- You are about to mark 1 server as having been tested and ready for cutover.
- Test instances continue to accrue EC2 charges until terminated. You can terminate these instances now, or later from the "Test and cutover" menu.
- A checkbox is checked, labeled 'Yes, terminate launched instances (recommended)'.
- The action will be applied to the following servers: 'azure-appserver'.

At the bottom of the modal are 'Cancel' and 'Continue' buttons, and a note: 'Started: December 18, 2024 at 19:38 (UTC+5:30)'. The background of the console shows other sections like 'Migration dashboard', 'Lifecycle', and 'Data replication status'.

Then again navigate to aws console next step is mark as "ready for cutover" this step will do terminate your test instance

Screenshot of the AWS Application Migration Service (AMS) console showing the migration progress for an Azure app server.

The navigation bar includes links to VPC, EC2, RDS, IAM, CodeCommit, and S3.

The breadcrumb trail shows: Application Migration Service > ... > azure-appserver

The left sidebar menu includes:

- Application Migration Service
- Servers
 - Source servers
 - Applications
 - Waves
 - Global view
 - Launch history
 - MGN connectors
 - Import and Export
 - Import
 - Export
- Settings
 - Replication template
 - Launch template
 - Post-launch template
 - User preferences
- AWS Migration Hub
- Documentation
- Release Notes

The main content area displays the following sections:

- Next actions**:
 - Launched (green checkmark)
 - Terminate launched instance; Launch cutover instance
- Migration dashboard**: A tabbed interface with tabs: Migration dashboard (selected), Server info, Tags, Disks settings, Replication settings, Launch settings, and Post-launch settings.
- Lifecycle**: A timeline showing the migration status:
 - Not ready
 - Ready for testing
 - Test in progress
 - Ready for cutover** (highlighted in blue)
 - Cutover in progress
 - Cutover complete
- Data replication status**:
 - Healthy
 - Replication progress: Initial replication finished (green checkmark)
 - Replication type: Agent based
 - Elapsed replication time: 3 hr

The "ready for cutover" state is for launching the final instance in AWS

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VPC EC2 RDS IAM CodeCommit S3

EC2 > Security Groups > sg-0d9a090fad0d5727e - default

Instances (1/3) Info Last updated less than a minute ago

Find Instance by attribute or tag (case-sensitive)

All states

Actions Launch instances

Name Instance ID Instance state Instance type Status check Alarm status Availability Zone Public IP

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IP
AWS Application	i-038f8c64529bbc124	Running	c5.large	3/3 checks passed	View alarms +	us-west-1a	ec2-3-10
azure-appserver	i-0960c4d14596bbacf	Terminated	c5.large	-	View alarms +	us-west-1a	-
AWS Application	i-078bf586f96016d5b	Terminated	m4.large	-	View alarms +	us-west-1a	-

Instances

Instances

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts

Capacity Reservations

Images

AMIs

AMI Catalog

Elastic Block Store

Volumes

Snapshots

Lifecycle Manager

Network & Security

Security Groups

Elastic IPs

Placement Groups

i-0960c4d14596bbacf (azure-appserver)

Details Status and alarms Monitoring Security Networking Storage Tags

Instance summary

Instance ID: i-0960c4d14596bbacf

Public IPv4 address: -

Private IPv4 addresses: -

IPv6 address: -

Instance state: Terminated

Public IPv4 DNS: -

Hostname type: -

Its terminating the test instance.

The screenshot shows the AWS Application Migration Service (AMS) console. The top navigation bar includes the AWS logo, search bar, and various service links like VPC, EC2, RDS, IAM, CodeCommit, and S3. The user is signed in as 'Dhavanisha' from the N. California region.

In the left sidebar, under 'Application Migration Service', there are several sections: 'Servers' (Source servers, Applications, Waves, Global view, Launch history), 'MGN connectors', and 'Import and Export' (Import, Export). Below these are 'Settings' (Replication template, Launch template, Post-launch template, User preferences), 'AWS Migration Hub' (Documentation, Release Notes), and 'Documentation'.

The main content area shows a migration job named 'azure-appserver (s-bfc041b98fd3320ca)'. A prominent green banner at the top indicates: 'Launch job mgnjob-b5e59847907a43c16 created' and 'Starting to launch cutover instance for 1 server.' Below this, there are tabs for 'Actions', 'Replication', and 'Test and cutover'.

The 'Migration dashboard' tab is selected, displaying the 'Lifecycle' section. The lifecycle stages are: Not ready, Ready for testing, Test in progress, Ready for cutover, Cutover in progress (which is currently active), and Cutover complete. The 'Launch status' is 'Waiting'. The 'Last test' information shows a job ID of 'mgnjob-b26b3908256807695' started on December 18, 2024 at 19:38 (UTC+5:30). The 'Cutover' information shows a job ID of 'mgnjob-b5e59847907a43c16' started on December 18, 2024 at 20:34 (UTC+5:30). The 'Data replication status' is 'Healthy'.

The next step is to launch the cutover instance, which is the final instance for launching.

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VPC EC2 RDS IAM CodeCommit S3

Application Migration Service > Launch history > Job: mgnjob-b5e59847907a43c16

Application Migration Service

Servers

- Source servers
- Applications
- Waves
- Global view

Launch history

- MGN connectors
- Import and Export
 - Import
 - Export

Settings

- Replication template
- Launch template
- Post-launch template
- User preferences

AWS Migration Hub

Documentation

Release Notes

Job: mgnjob-b5e59847907a43c16

Details

Type	Status	Initiated by
Launch	Completed	Launch cutover instances
Start time	Completed time	
December 18, 2024 at 20:34 (UTC+5:30)	December 18, 2024 at 20:51 (UTC+5:30)	

Job log (8) Info

Filter job log by property or value

Time	Event	Additional data
December 18, 2024 at 20:34 (UTC+5:30)	Job started	
December 18, 2024 at 20:34 (UTC+5:30)	Started taking snapshot	Source server : azure-appserver
December 18, 2024 at 20:35 (UTC+5:30)	Finished taking snapshot	Source server : azure-appserver
December 18, 2024 at 20:35 (UTC+5:30)	Conversion started	Source server : azure-appserver
		Source server : azure-appserver
		Source server : azure-appserver
		Source server : azure-appserver

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VPC EC2 RDS IAM CodeCommit S3

Application Migration Service > Launch history > Job: mgnjob-b5e59847907a43c16

Application Migration Service

Servers

- Source servers
- Applications
- Waves
- Global view

Launch history

- MGN connectors
- Import and Export
 - Import
 - Export

Settings

- Replication template
- Launch template
- Post-launch template
- User preferences

AWS Migration Hub Documentation Release Notes

Start time: December 18, 2024 at 20:34 (UTC+5:30) Completed time: December 18, 2024 at 20:51 (UTC+5:30)

Job log (8) Info Filter job log by property or value 1 2 >

Time	Event	Additional data
December 18, 2024 at 20:34 (UTC+5:30)	Job started	
December 18, 2024 at 20:34 (UTC+5:30)	Started taking snapshot	Source server : azure-appserver
December 18, 2024 at 20:35 (UTC+5:30)	Finished taking snapshot	Source server : azure-appserver
December 18, 2024 at 20:35 (UTC+5:30)	Conversion started	Source server : azure-appserver
December 18, 2024 at 20:46 (UTC+5:30)	Conversion succeeded	Source server : azure-appserver Conversion Server instance ID: i-0f56dac902eacab44
December 18, 2024 at 20:46 (UTC+5:30)	Started launching test/ cutover EC2 instance	Source server : azure-appserver
December 18, 2024 at 20:51 (UTC+5:30)	Successfully launched test/ cutover EC2 instance	Source server : azure-appserver Test/ cutover instance ID: i-01d853959b63e3f8e

Screenshot of the AWS EC2 Instances page showing the launch of an instance named "azure-appserver".

The instance table is highlighted with a red box:

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IP
AWS Application Server 1	i-038f8c64529bbc124	Running	c5.large	3/3 checks passed	View alarm	us-west-1a	ec2-3-10
azure-appserver	i-0960c4d14596bbacf	Terminated	c5.large	-	View alarm	us-west-1a	-
AWS Application Server 2	i-0f56dac902eacab44	Terminated	m4.large	-	View alarm	us-west-1a	-
azure-appserver	i-01d853959b63e3f8e	Running	c5.large	3/3 checks passed	View alarm	us-west-1a	-

The instance details page for "i-01d853959b63e3f8e (azure-appserver)" is shown, with the "Details" tab selected. Key information includes:

- Instance summary:** Instance ID: i-01d853959b63e3f8e
- Networking:** Public IPv4 address: -; Private IPv4 addresses: 172.31.21.131
- Security:** Instance state: Running
- Storage:** Public IPv4 DNS: -

The final instance launched successfully.

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VPC EC2 RDS IAM CodeCommit S3

VPC > Elastic IP addresses > Associate Elastic IP address

Associate Elastic IP address Info

Choose the instance or network interface to associate to this Elastic IP address (13.56.48.140)

Elastic IP address: 13.56.48.140

Resource type
Choose the type of resource with which to associate the Elastic IP address.

Instance
 Network interface

⚠️ If you associate an Elastic IP address with an instance that already has an Elastic IP address associated, the previously associated Elastic IP address will be disassociated, but the address will still be allocated to your account. [Learn more](#)

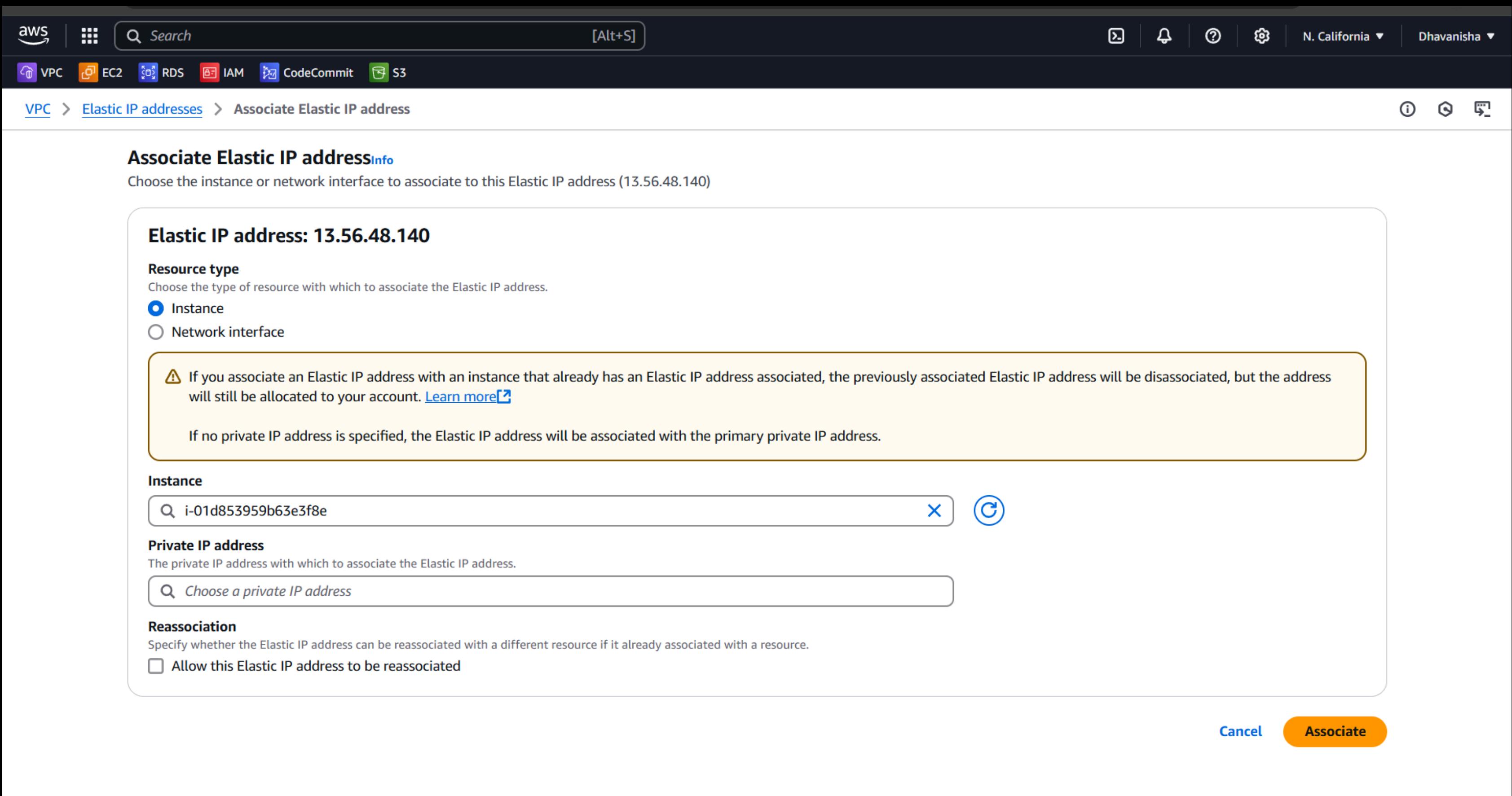
If no private IP address is specified, the Elastic IP address will be associated with the primary private IP address.

Instance
 X ⟳

Private IP address
The private IP address with which to associate the Elastic IP address.

Reassociation
Specify whether the Elastic IP address can be reassigned to a different resource if it is already associated with a resource.
 Allow this Elastic IP address to be reassigned

Cancel **Associate**



Again, there is no public IP in the new server, therefore I added the same elastic IP to that server.

Screenshot of the AWS Application Migration Service console showing the 'Active source servers' page.

The top navigation bar includes the AWS logo, search bar, and account information for N. California and Dhavanisha.

The left sidebar shows the 'Application Migration Service' navigation path and various settings options like 'Source servers', 'Import and Export', and 'Settings'.

The main content area displays five steps: 'Setup service', 'Import inventory - optional', 'Replicate to AWS', 'Test', and 'Cutover'. Each step has a corresponding icon and a brief description.

The 'Source servers (1)' section lists one active server:

Source server name	Alerts	Migration lifecycle	Data replication status	Last snapshot	Next step
azure-appserver	Launched	Cutover in progress	Healthy	27 minutes ago	Finalize cutover

A red box highlights the 'Data replication status' and 'Last snapshot' columns for the listed server.

At the bottom, a message states: "This account is currently replicating 1 server out of a quota of 150 concurrent replicating servers." with a "Learn more" link.

Finally, the server was launched in a healthy state.

The screenshot shows the AWS Application Migration Service (AMS) console. The user is in the 'Active source servers' section for a server named 'azure-appserver'. A modal dialog box is open, prompting the user to 'Finalize cutover for 1 server'. The dialog contains a warning message: 'You are about to finalize cutover for 1 server. This action cannot be reversed. This will cause all replicated data to be discarded, and all AWS resources used for data replication to be terminated.' Below the message, it says 'The action will be applied to the following servers: azure-appserver'. At the bottom of the dialog are two buttons: 'Cancel' and 'Finalize' (highlighted in orange). The background of the AMS interface shows the 'Lifecycle' tab with 'Not ready' status, 'Launch status' (Launched, First boot: Succeeded), and 'Last test' (Job ID: mgnjob-b26b3908256807695, Started: December 18, 2024 at 19:38 (UTC+5:30)). The 'Data replication status' is listed as 'Healthy'. The top navigation bar includes the AWS logo, search bar, and various AWS services like VPC, EC2, RDS, IAM, CodeCommit, and S3.

The next stage is to finalize the cutover.



Search

[Alt+S]



N. California ▾

Dhavanisha ▾

[VPC](#) [EC2](#) [RDS](#) [IAM](#) [CodeCommit](#) [S3](#)

Application Migration Service > Active source servers > azure-appserver

Cutover finalized
Cutover finalized for 1 server.

azure-appserver (s-bfc041b98fd3320ca)

Actions ▾ Replication ▾ Test and cutover ▾

Next actions Info

Launched

Mark as archived

Migration dashboard Server info Tags Disks settings Replication settings Launch settings Post-launch settings

Lifecycle Info

Not ready > Ready for testing > Test in progress > Ready for cutover > Cutover in progress > **Cutover complete**

Launch status
Launched
First boot: Succeeded
[View in EC2 console](#)

Last test
Job ID: [mgnjob-b26b3908256807695](#)
Started: December 18, 2024 at 19:38 (UTC+5:30)

Cutover
Job ID: [mgnjob-b5e59847907a43c16](#)
Started: December 18, 2024 at 20:34 (UTC+5:30)
Finalized: December 18, 2024 at 21:04 (UTC+5:30)

AWS Migration Hub ↗ Documentation ↗ Release Notes ↗

After the finalizing the cutover, the Azure virtual machine will be disconnected, allowing the machines to function independently.

AWS | Search [Alt+S] | N. California | Dhavanisha

VPC EC2 RDS IAM CodeCommit S3

EC2 Instances i-01d853959b63e3f8e Connect to instance

Connect to instance [Info](#)

Connect to your instance i-01d853959b63e3f8e (azure-appserver) using any of these options

Session Manager **RDP client** EC2 serial console

Instance ID [i-01d853959b63e3f8e \(azure-appserver\)](#)

Connection Type

Connect using RDP client
Download a file to use with your RDP client and retrieve your password.

You can connect to your Windows instance using a remote desktop connection.

[Download remote desktop file](#)

The publisher of this remote connection can't be identified. Do you want to connect anyway?

This remote connection could harm your local or remote computer. Do not connect unless you know where this connection came from or have used it before.

Publisher: Unknown publisher
Type: Remote Desktop Connection
Remote computer: ec2-13-56-48-140.us-west-1.compute.amazonaws.com

Don't ask me again for connections to this computer

Show Details Connect Cancel

Public DNS [ec2-13-56-48-140.us-west-1.compute.amazonaws.com](#)

Username [Administrator](#)

If you've joined your instance to a directory, you can use your directory credentials to connect to your instance.

Cancel

Now connecting the instance with the same RDP.

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VPC EC2 RDS IAM CodeCommit S3

EC2 Instances i-01d853959b63e3f8e Connect to instance

Connect to instance Info

Connect to your instance i-01d853959b63e3f8e (azure-appserver) using any of the following methods:

Session Manager **RDP client** **EC2 serial console**

Instance ID
i-01d853959b63e3f8e (azure-appserver)

Connection Type

Connect using RDP client
Download a file to use with your RDP client and retrieve your password.

You can connect to your Windows instance using a remote desktop client of your choice. You will be prompted for a password when you connect.

[Download remote desktop file](#)

When prompted, connect to your instance using the following username and password:

Public DNS
ec2-13-56-48-140.us-west-1.compute.amazonaws.com

Username Info
 Administrator ▾

Password [Get password](#)

If you've joined your instance to a directory, you can use your directory credentials to connect to your instance.

Cancel

Windows Security

Enter your credentials

These credentials will be used to connect to 13.56.48.140.

Dhavanisha
Password

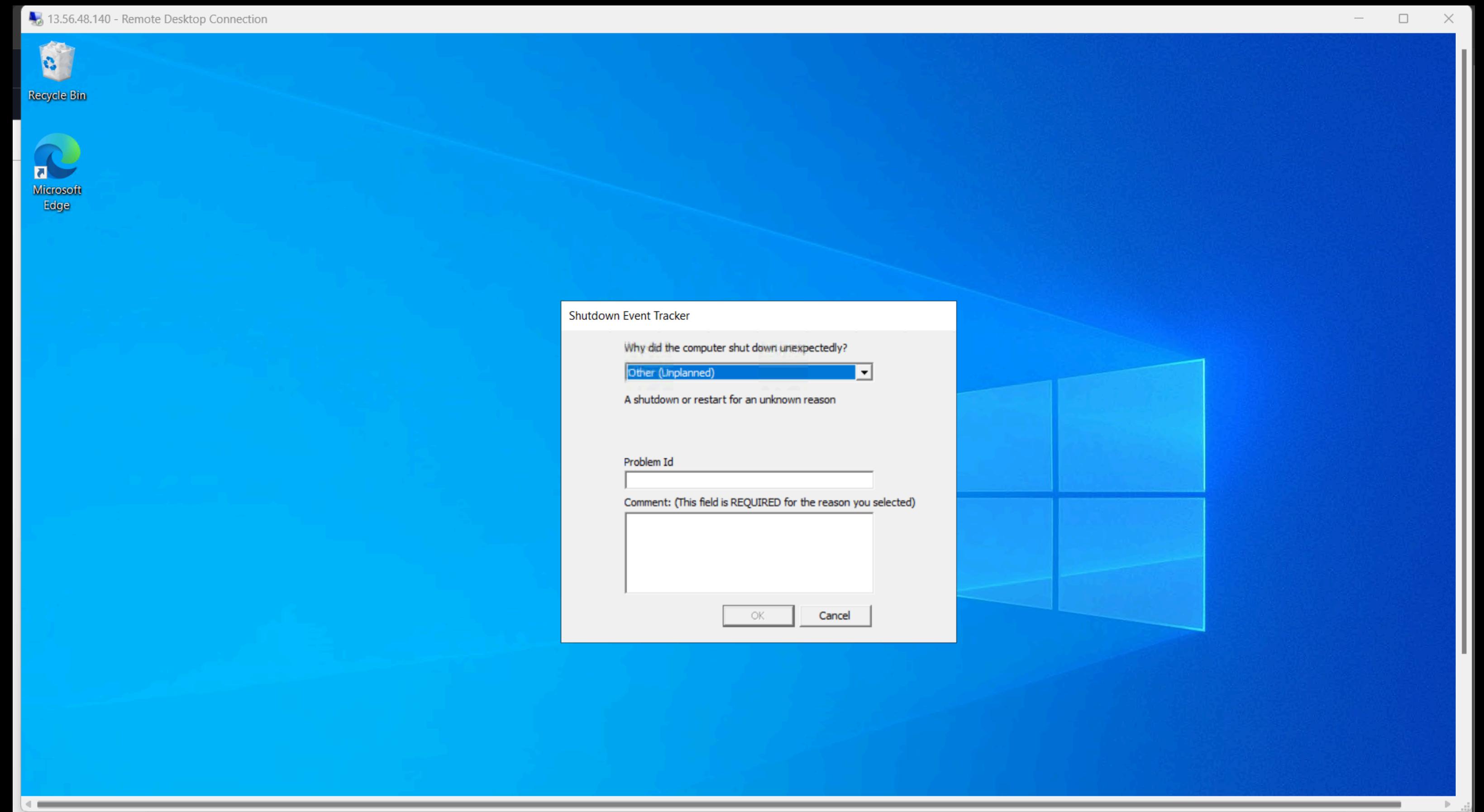
DESKTOP-OOA9QJB\DHAVANISHA

Remember me

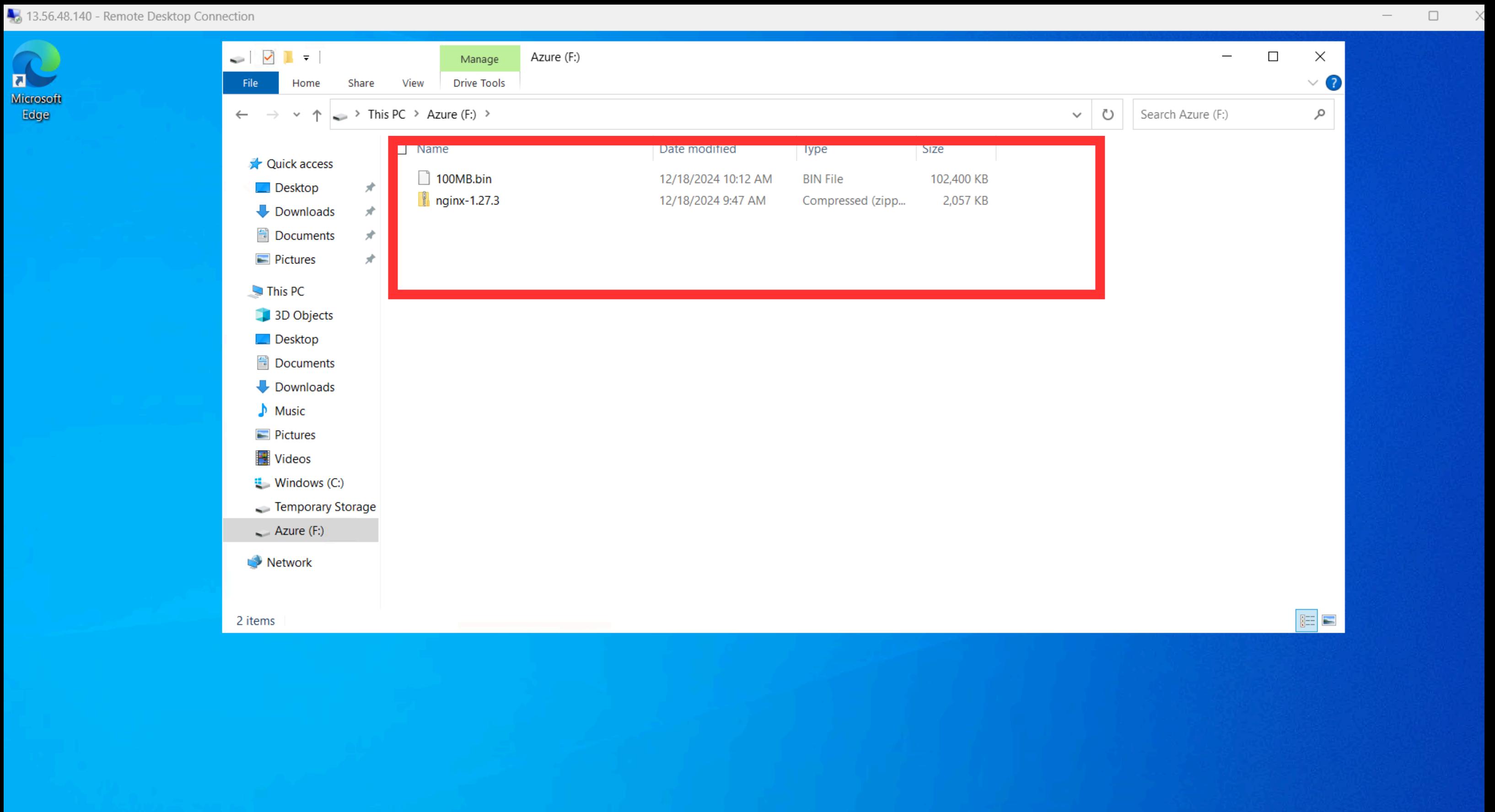
More choices

OK Cancel

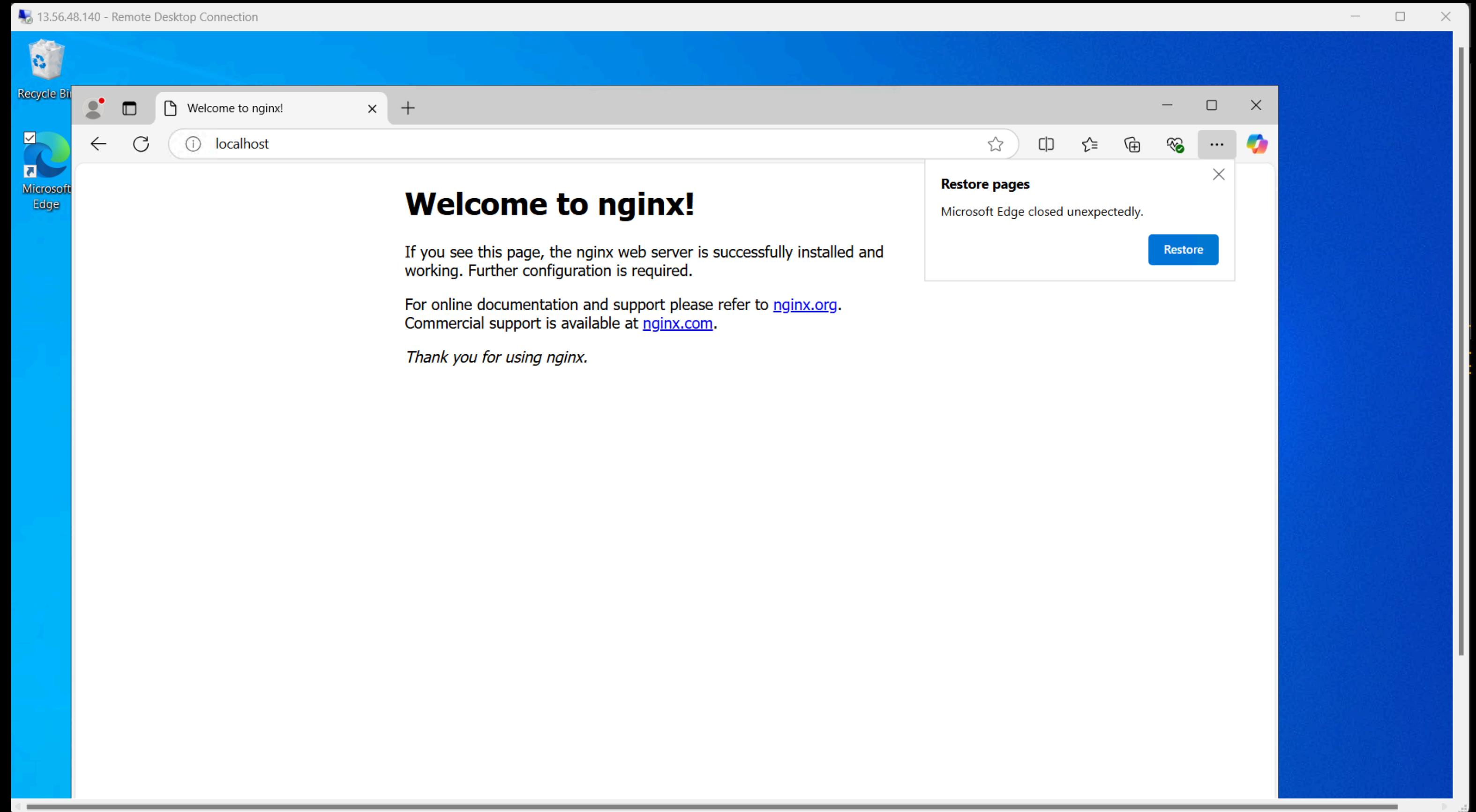
using the same username and password



successfully migrated the server with no downtime.



navigate to file explorer This is our test data, which is accessible here.



Finally, validate nginx. Yes, it is functioning.

CONCLUSION

This project successfully migrated Virtual Machines from Azure to AWS using the AWS Application Migration Service. The process was efficient, with minimal downtime and ensured data integrity. By moving to AWS, the workloads now benefit from a scalable and cost-effective environment, ready to support future needs. This migration demonstrates how automation simplifies cloud transitions while maintaining business operations smoothly.

THANK YOU



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