MICROSOFT AZURE

NAME: HARIDHA M

DEPARTMENT: B.TECH ARTIFICAL INTELLIGNECE AND DATA SCIENCE

1.REQUESTING A CLOUD SHELL SUCCEEDED

Welcome To Azure Cloud Shell

- az vm create --resource-group "learn-1dd151f8-37c6-44cc-a975-8f08e65c30c2" --name my-vm --public-ip-sku Standard --image Ubuntu2204 --admin-username azureuser --generate-ssh-keys

- az vm extension set --resource-group "learn-1dd151f8-37c6-44cc-a975-8f08e65c30c2" --vm-name my-vm --name customScript --publisher Microsoft.Azure.Extensions --version 2.1 --settings '{"fileUris":["https://raw.githubusercontent.com/MicrosoftDocs/mslearn-welcome-to-azure/master/configure-nginx.sh"]}' --protected-settings '{"commandToExecute": "./configure-nginx.sh"}'

- sudo apt-get update
- ssh azureuser@13.64.99.197
- echo "sudo apt-get update -y
- sudo apt-get install nginx -y
- sudo systemctl start nginx
- sudo systemctl enable nginx" > setup_nginx.sh
- chmod +x setup_nginx.sh

- ./setup_nginx.sh

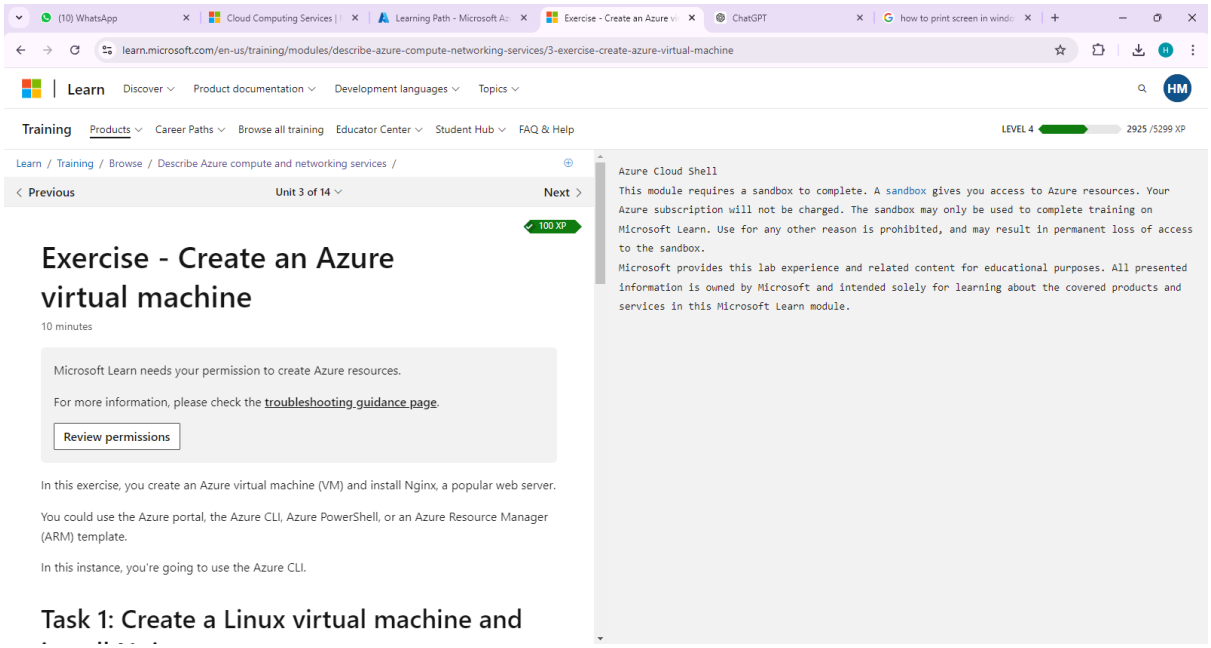
- echo "<html><body><h2>Welcome to Azure! My name is $(hostname).</h2></body></html>" | sudo tee -a /var/www/html/index.html

- sudo systemctl status nginx

- az vm open-port --resource-group "learn-1dd151f8-37c6-44cc-a975-8f08e65c30c2" --name my-vm --port 80

- az vm list-ip-addresses --resource-group "learn-1dd151f8-37c6-44cc-a975-8f08e65c30c2" --name my-vm --output table
- ssh azureuser@13.64.99.197
- sudo apt-get update
- git clone https://github.com/smhharidha/Portfolio.git
- sudo cp -r wepage1/* /var/www/html/
- sudo chown -R www-data:www-data /var/www/html
- sudo chmod -R 755 /var/www/html
- sudo systemctl restart nginx

WORKING:


learn.microsoft.com/en-us/training/modules/describe-azure-compute-networking-services/3-exercise-create-azure-virtual-machine
Learn
Discover
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Development languages
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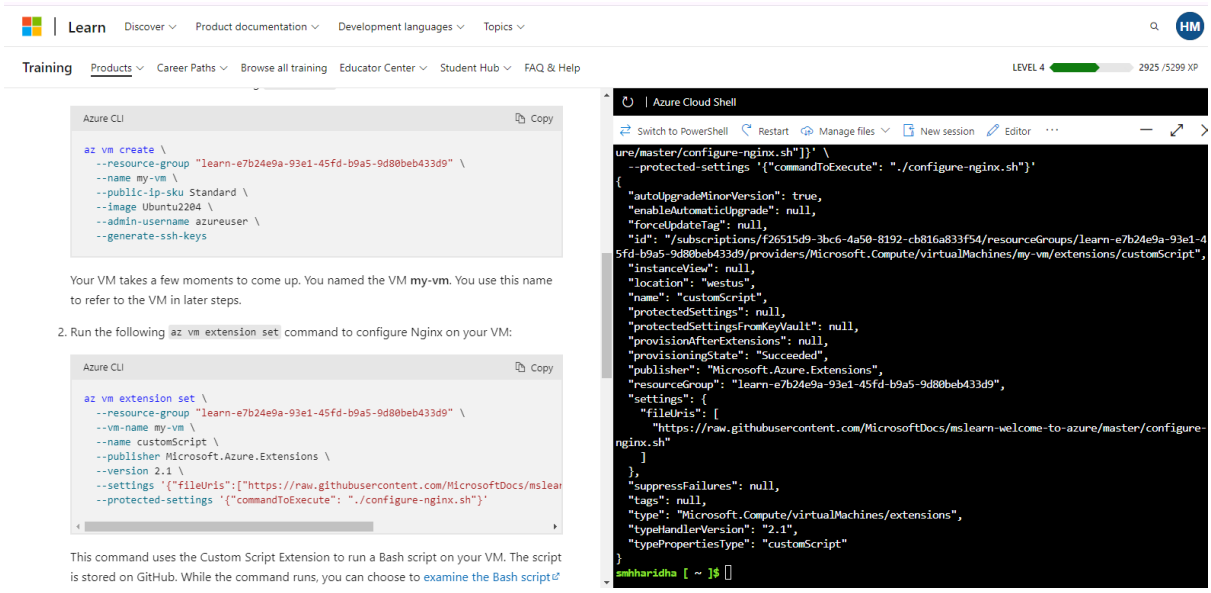
Training
Products
Career Paths
Browse all training
Educator Center
Student Hub
FAQ & Help
LEVEL 4
2925 /5299 XP
Learn / Training / Browse / Describe Azure compute and networking services /
Previous
Unit 3 of 14
Next
100 XP
Exercise - Create an Azure virtual machine
10 minutes
Microsoft Learn needs your permission to create Azure resources.
For more information, please check the troubleshooting guidance page.
Review permissions
In this exercise, you create an Azure virtual machine (VM) and install Nginx, a popular web server.
You could use the Azure portal, the Azure CLI, Azure PowerShell, or an Azure Resource Manager (ARM) template.
In this instance, you're going to use the Azure CLI.
Task 1: Create a Linux virtual machine and
Azure Cloud Shell
This module requires a sandbox to complete. A sandbox gives you access to Azure resources. Your Azure subscription will not be charged. The sandbox may only be used to complete training on Microsoft Learn. Use for any other reason is prohibited, and may result in permanent loss of access to the sandbox.
Microsoft provides this lab experience and related content for educational purposes. All presented information is owned by Microsoft and intended solely for learning about the covered products and services in this Microsoft Learn module.


Learn
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Development languages
Topics
Training
Products
Career Paths
Browse all training
Educator Center
Student Hub
FAQ & Help
LEVEL 4
2925 /5299 XP
Azure CLI
Copy
az vm create \
--resource-group "learn-e7b24e9a-93e1-45fd-b9a5-9d80beb433d9" \
--name my-vm \
--public-ip-sku Standard \
--image Ubuntu2204 \
--admin-username azureuser \
--generate-ssh-keys
Your VM takes a few moments to come up. You named the VM my-vm. You use this name to refer to the VM in later steps.
2. Run the following az vm extension set command to configure Nginx on your VM:
Azure CLI
Copy
az vm extension set \
--resource-group "learn-e7b24e9a-93e1-45fd-b9a5-9d80beb433d9" \
--vm-name my-vm \
--name customScript \
--publisher Microsoft.Azure.Extensions \
--version 2.1 \
--settings '{"fileUris":["https://raw.githubusercontent.com/MicrosoftDocs/mslear
--protected-settings '{"commandToExecute": "./configure-nginx.sh"}'
This command uses the Custom Script Extension to run a Bash script on your VM. The script is stored on GitHub. While the command runs, you can choose to examine the Bash script
Azure Cloud Shell
Switch to PowerShell
Restart
Manage files
New session
Editor
ure/master/configure-nginx.sh"]}' \
--protected-settings '{"commandToExecute": "./configure-nginx.sh"}'
{
"autoUpgradeMinorVersion": true,
"enableAutomaticUpgrade": null,
"forceUpdateTag": null,
"id": "/subscriptions/f26515d9-3bc6-4a50-8192-cb816a833f54/resourceGroups/learn-e7b24e9a-93e1-45fd-b9a5-9d80beb433d9/providers/Microsoft.Compute/virtualMachines/my-vm/extensions/customScript",
"instanceView": null,
"location": "westus",
"name": "customScript",
"protectedSettings": null,
"protectedSettingsFromKeyVault": null,
"provisionAfterExtensions": null,
"provisioningState": "Succeeded",
"publisher": "Microsoft.Azure.Extensions",
"resourceGroup": "learn-e7b24e9a-93e1-45fd-b9a5-9d80beb433d9",
"settings": {
"fileUris": [
"https://raw.githubusercontent.com/MicrosoftDocs/mslearn-welcome-to-azure/master/configure-nginx.sh"
]
},
"suppressFailures": null,
"tags": null,
"type": "Microsoft.Compute/virtualMachines/extensions",
"typeHandlerVersion": "2.1",
"typePropertiesType": "customScript"
}
smhharidha [~]$

```
az vm extension set \
  --resource-group "learn-e7b24e9a-93e1-45fd-b9a5-9d80beb433d9" \
  --vm-name my-vm \
  --name customScript \
  --publisher Microsoft.Azure.Extensions \
  --version 2.1 \
  --settings '{"fileUris":["https://raw.githubusercontent.com/MicrosoftDocs/mslear
  --protected-settings '{"commandToExecute": "./configure-nginx.sh"}'
```

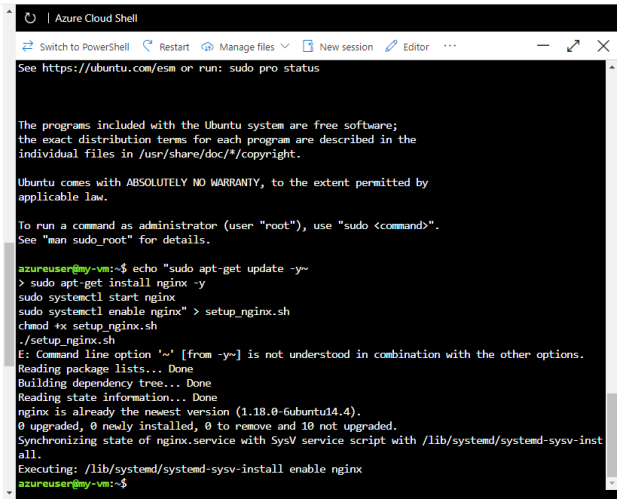
This command uses the Custom Script Extension to run a Bash script on your VM. The script is stored on GitHub. While the command runs, you can choose to examine the Bash script from a separate browser tab. To summarize, the script:

a. Runs `apt-get update` to download the latest package information from the internet. This step helps ensure that the next command can locate the latest version of the Nginx package.
b. Installs Nginx.
c. Sets the home page, */var/www/html/index.html*, to print a welcome message that includes your VM's host name.

Continue

This exercise is complete for now. The sandbox keeps running, and you come back to this point in a few units to update the network configuration so you can get to the website.

All units complete:



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az vm extension set \
  --resource-group "learn-e7b24e9a-93e1-45fd-b9a5-9d80beb433d9" \
  --vm-name my-vm \
  --name customScript \
  --publisher Microsoft.Azure.Extensions \
  --version 2.1 \
  --settings '{"fileUris":["https://raw.githubusercontent.com/MicrosoftDocs/mslear
  --protected-settings '{"commandToExecute": "./configure-nginx.sh"}'

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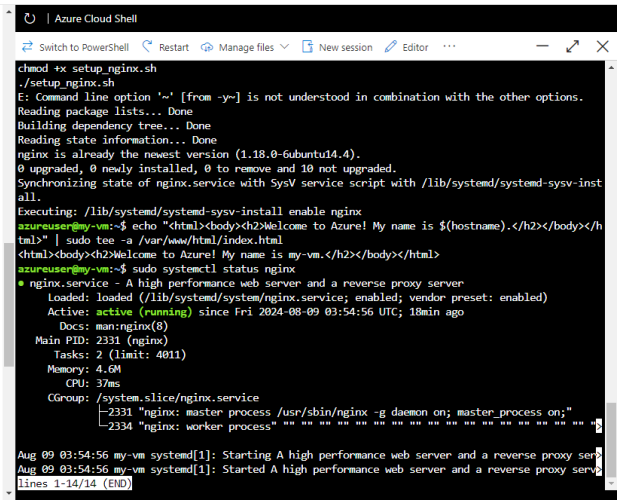
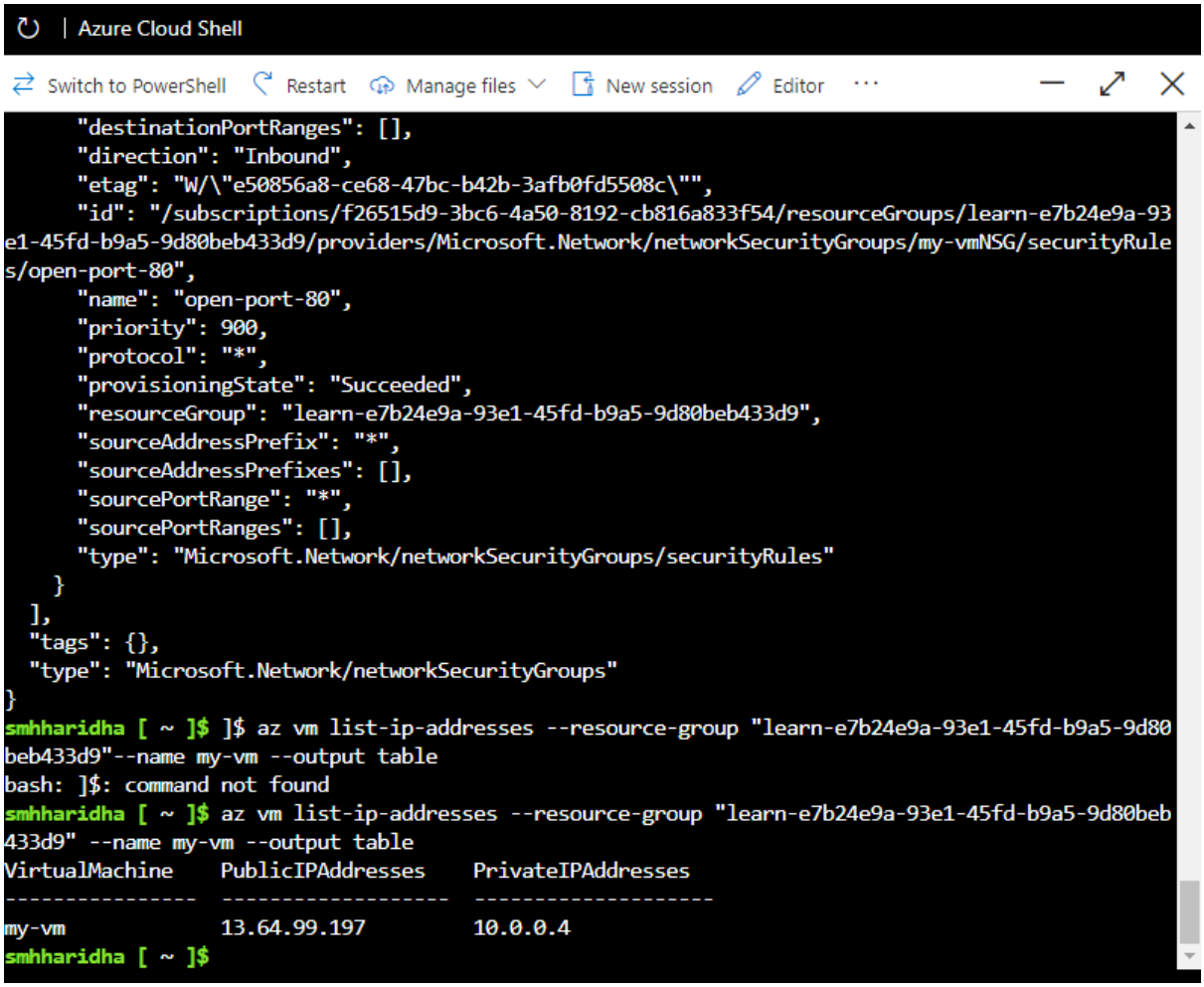
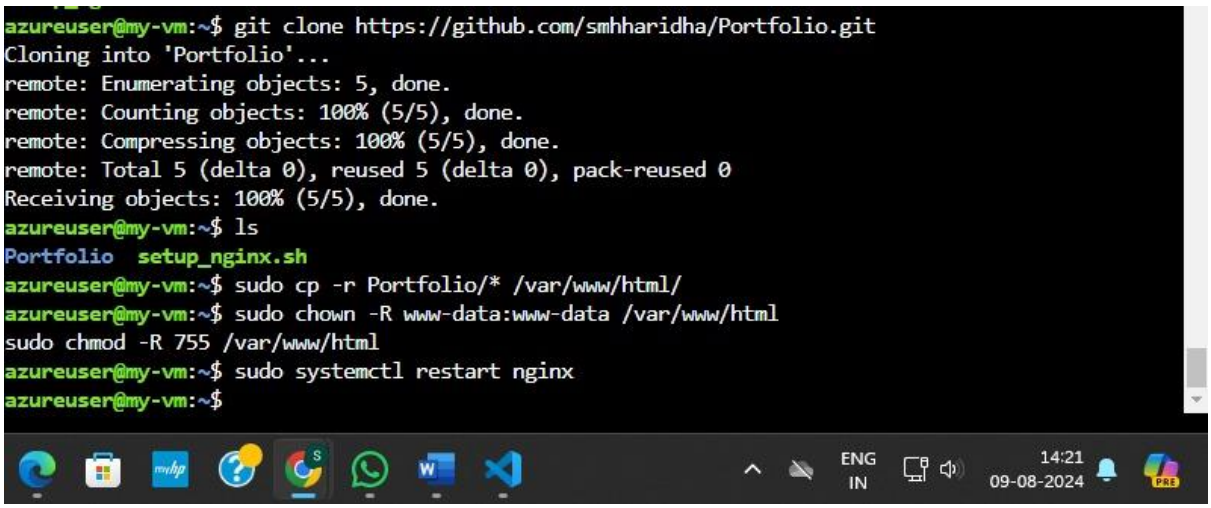
All units complete:



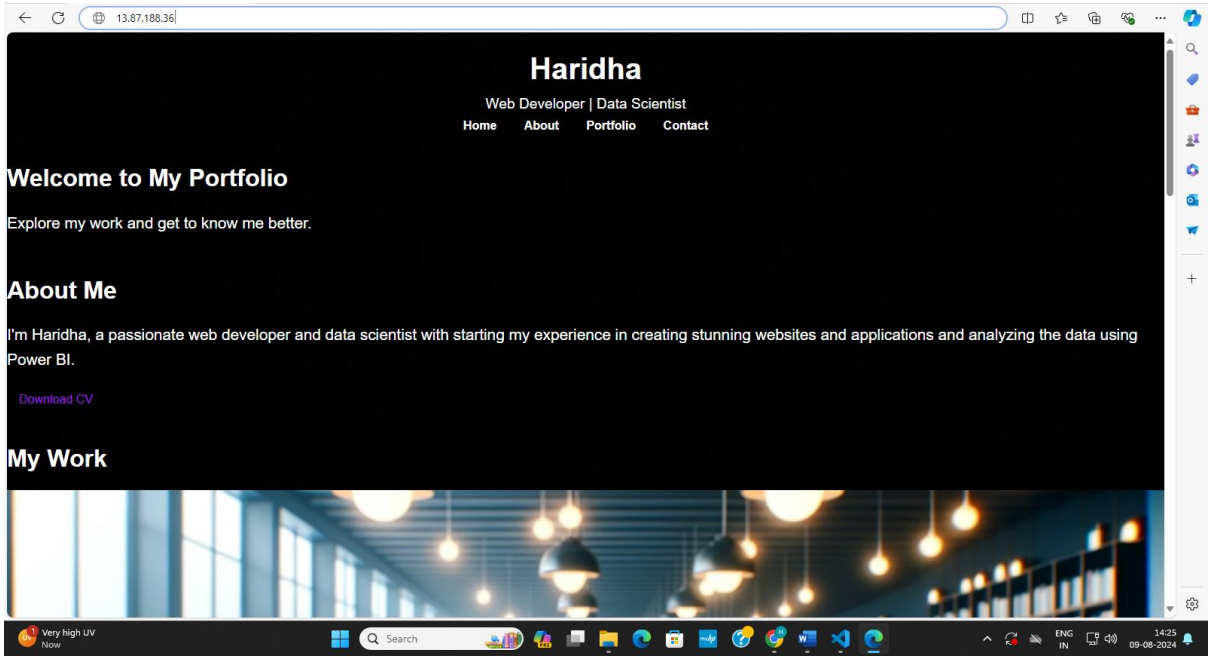

Azure Cloud Shell
Switch to PowerShell
Restart
Manage files
New session
Editor
"destinationPortRanges": [],
"direction": "Inbound",
"etag": "W/\"e50856a8-ce68-47bc-b42b-3afb0fd5508c\"",
"id": "/subscriptions/f26515d9-3bc6-4a50-8192-cb816a833f54/resourceGroups/learn-e7b24e9a-93e1-45fd-b9a5-9d80beb433d9/providers/Microsoft.Network/networkSecurityGroups/my-vmNSG/securityRules/open-port-80",
"name": "open-port-80",
"priority": 900,
"protocol": "*",
"provisioningState": "Succeeded",
"resourceGroup": "learn-e7b24e9a-93e1-45fd-b9a5-9d80beb433d9",
"sourceAddressPrefix": "*",
"sourceAddressPrefixes": [],
"sourcePortRange": "*",
"sourcePortRanges": [],
"type": "Microsoft.Network/networkSecurityGroups/securityRules"
}
],
"tags": {},
"type": "Microsoft.Network/networkSecurityGroups"
}
smhharidha [~]$]$ az vm list-ip-addresses --resource-group "learn-e7b24e9a-93e1-45fd-b9a5-9d80beb433d9"--name my-vm --output table
bash:]$: command not found
smhharidha [~]$ az vm list-ip-addresses --resource-group "learn-e7b24e9a-93e1-45fd-b9a5-9d80beb433d9" --name my-vm --output table
VirtualMachine PublicIPAddresses PrivateIPAddresses
my-vm 13.64.99.197 10.0.0.4
smhharidha [~]$

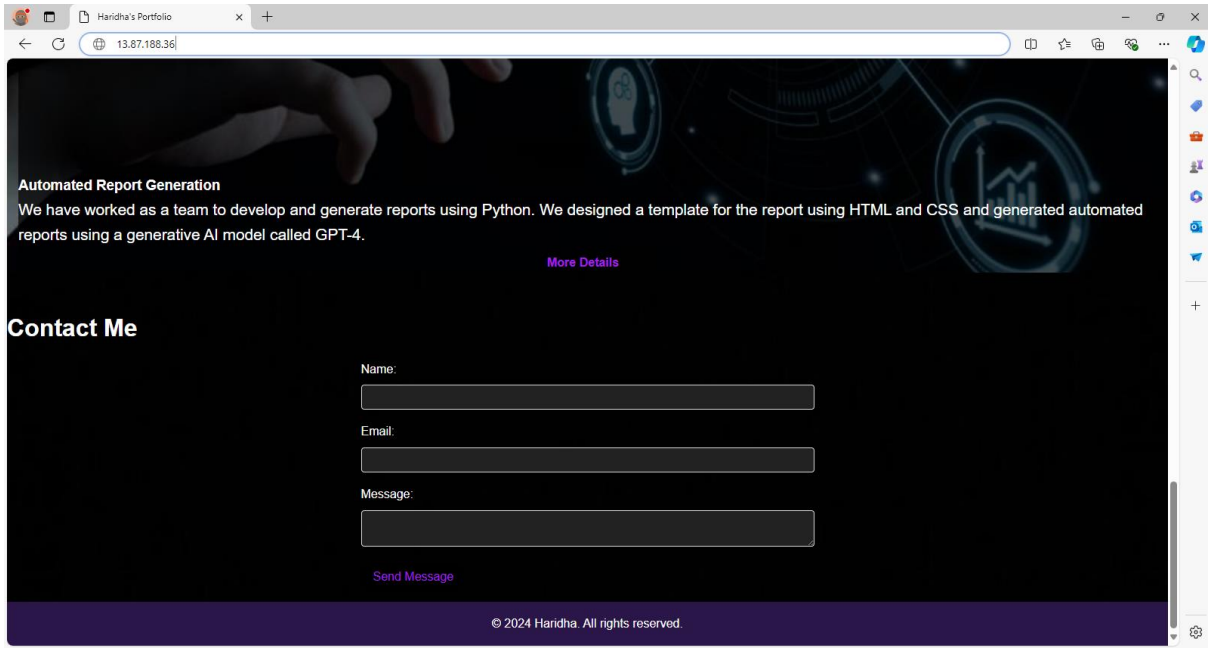

Not secure
13.64.99.197
Welcome to Azure! My name is my-vm.
Welcome to Azure! My name is my-vm.

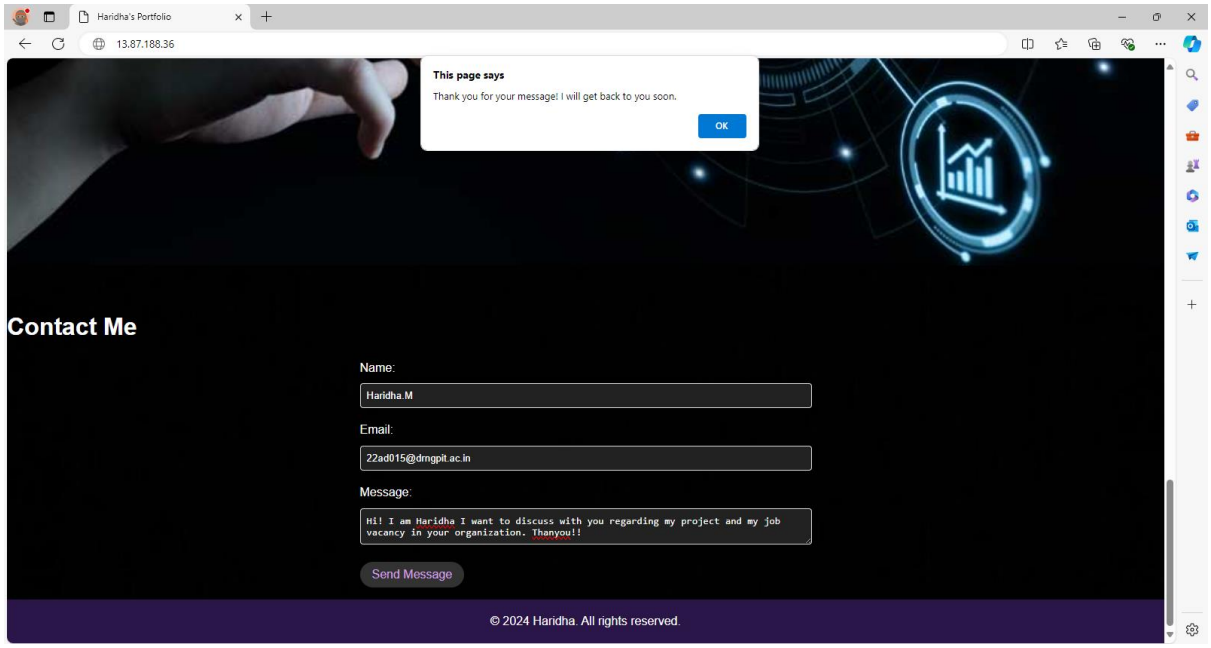
```
azureuser@my-vm:~$ git clone https://github.com/smhharidha/Portfolio.git
Cloning into 'Portfolio'...
remote: Enumerating objects: 5, done.
remote: Counting objects: 100% (5/5), done.
remote: Compressing objects: 100% (5/5), done.
remote: Total 5 (delta 0), reused 5 (delta 0), pack-reused 0
Receiving objects: 100% (5/5), done.
azureuser@my-vm:~$ ls
Portfolio  setup_nginx.sh
azureuser@my-vm:~$ sudo cp -r Portfolio/* /var/www/html/
azureuser@my-vm:~$ sudo chown -R www-data:www-data /var/www/html
sudo chmod -R 755 /var/www/html
azureuser@my-vm:~$ sudo systemctl restart nginx
azureuser@my-vm:~$
```



OUTPUT OF THE WEBPAGE:




Haridha's Portfolio
13.87.188.36
Automated Report Generation
We have worked as a team to develop and generate reports using Python. We designed a template for the report using HTML and CSS and generated automated reports using a generative AI model called GPT-4.
More Details
Contact Me
Name:
Email:
Message:
Send Message
© 2024 Haridha. All rights reserved.


Haridha's Portfolio
13.87.188.36
This page says
Thank you for your message! I will get back to you soon.
OK
Contact Me
Name:
Haridha.M
Email:
22ad015@drngpit.ac.in
Message:
Hi! I am Haridha I want to discuss with you regarding my project and my job vacancy in your organization. Thanyou!!
Send Message
© 2024 Haridha. All rights reserved.

2.DESCRIBE AZURE STORAGE SERVICES

Work with blob storage:

In this section, you will create a Blob container and upload a picture.

1. Under **Data storage**, select **Containers**.

2. Select + **Container** and complete the information.

3. Select Create.

Note:

Step 4 will need an image. If you want to upload an image you already have on your computer, continue to Step 4. Otherwise, open a new browser window and search Bing for an image of a flower. Save the image to your computer.

4. Back in the Azure portal, select the container you created, then select Upload.

5. Browse for the image file you want to upload. Select it and then select upload.

Note:

You can upload as many blobs as you like in this way. New blobs will be listed within the container.

6. Select the Blob (file) you just uploaded. You should be on the properties tab.

7. Copy the URL from the URL field and paste it into a new tab.

Change the access level of your blob:

1. Go back to the Azure portal.

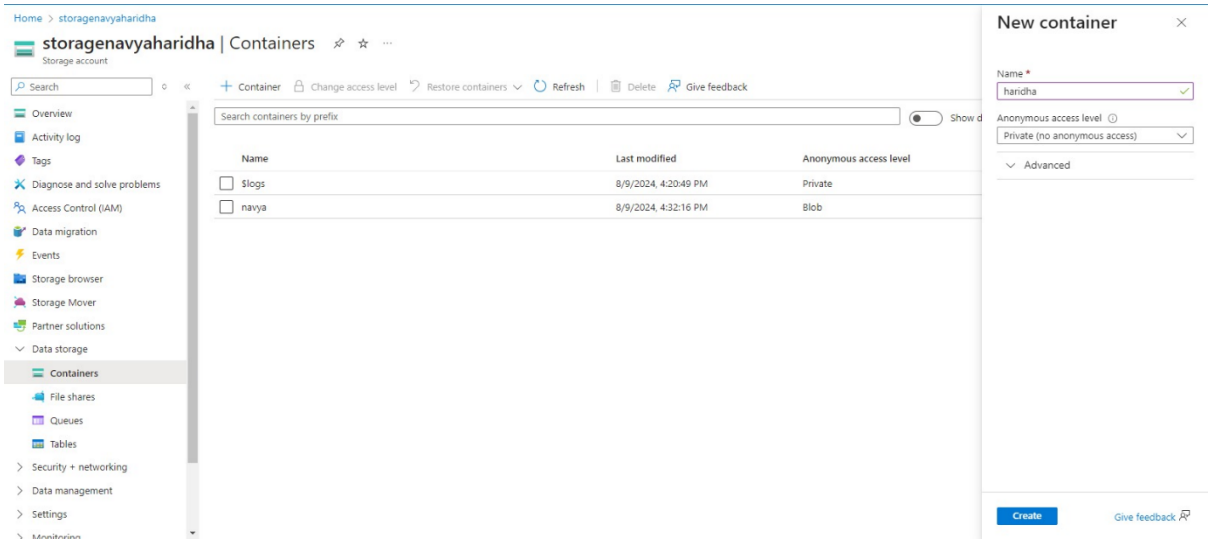
2. Select Change access level.

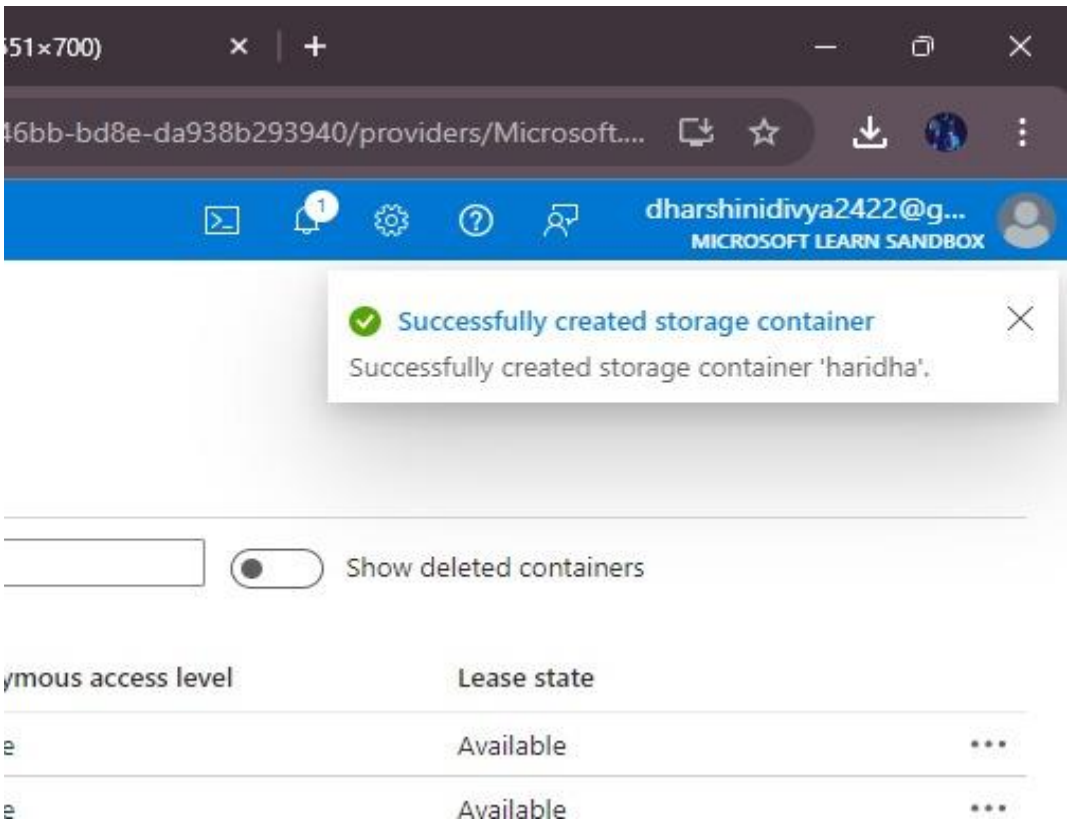
3. Set the Anonymous access level to Blob (anonymous read access for blobs only).

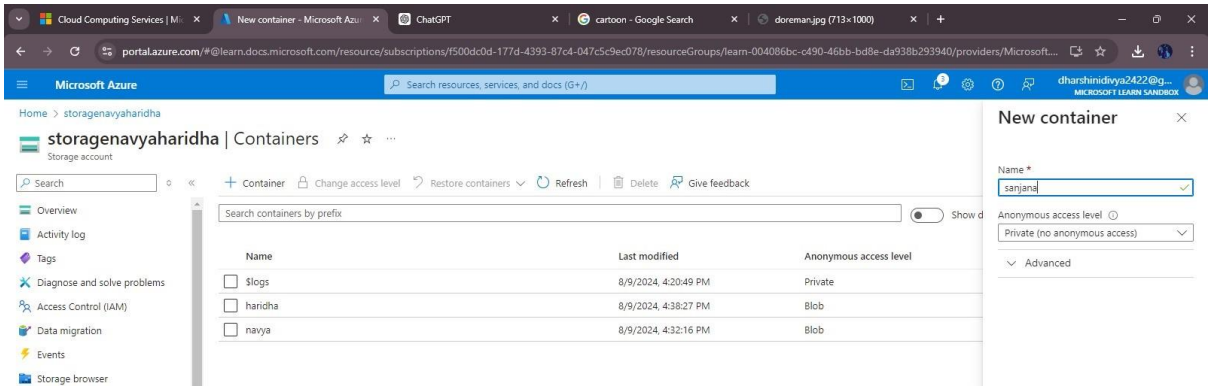
4. Select OK.

5. Refresh the tab where you attempted to access the file earlier.

WORKING:




51×700)
46bb-bd8e-da938b293940/providers/Microsoft....
dharshinidivya2422@g...
MICROSOFT LEARN SANDBOX
Successfully created storage container
Successfully created storage container 'haridha'.
Show deleted containers
ymous access level
Lease state
Available
Available


Cloud Computing Services | Mi
New container - Microsoft Azu
ChatGPT
cartoon - Google Search
doreman.jpg (713×1000)
portal.azure.com/#@learn.docs.microsoft.com/resource/subscriptions/f500dc0d-177d-4393-87c4-047c5c9ec078/resourceGroups/learn-004086bc-c490-46bb-bd8e-da938b293940/providers/Microsoft....
Microsoft Azure
Search resources, services, and docs (G+/)
dharshinidivya2422@g...
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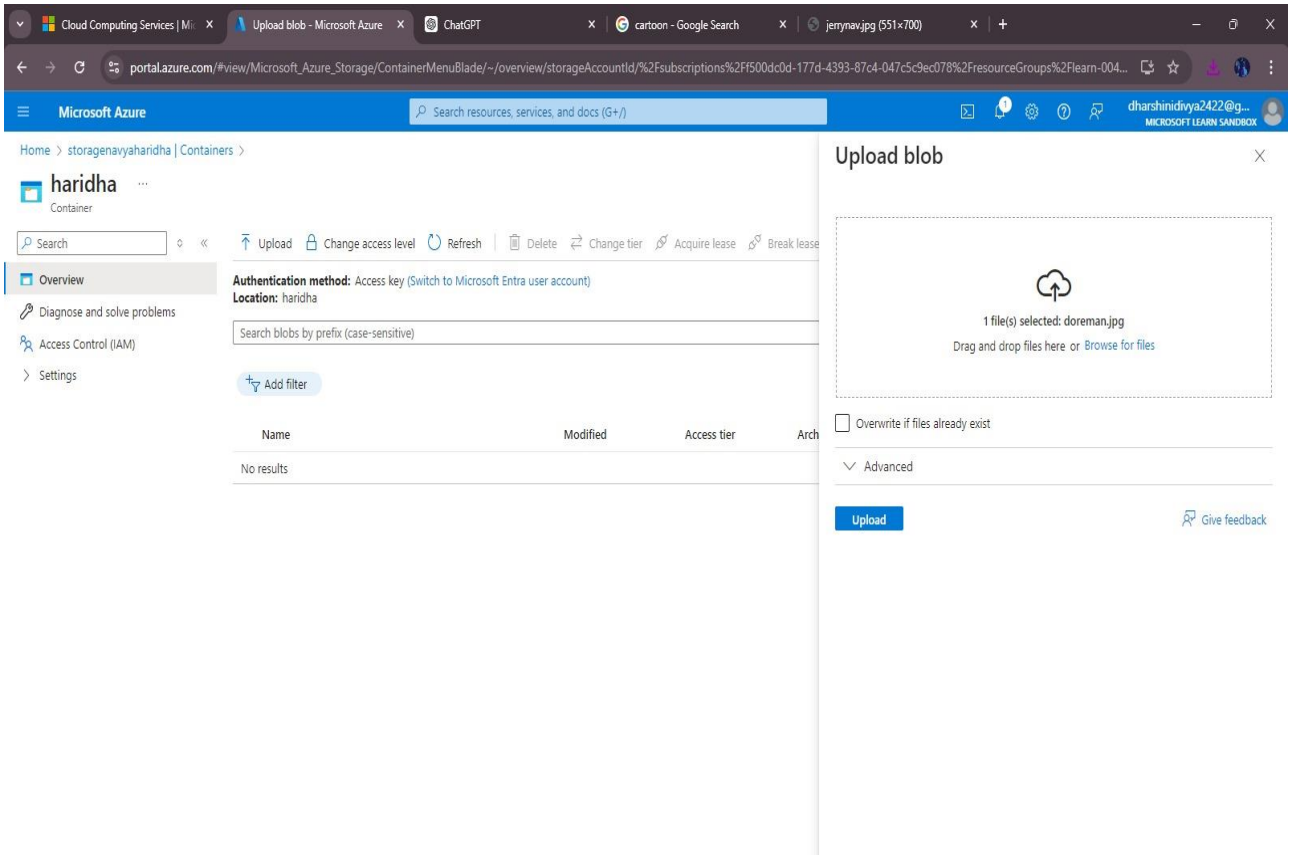
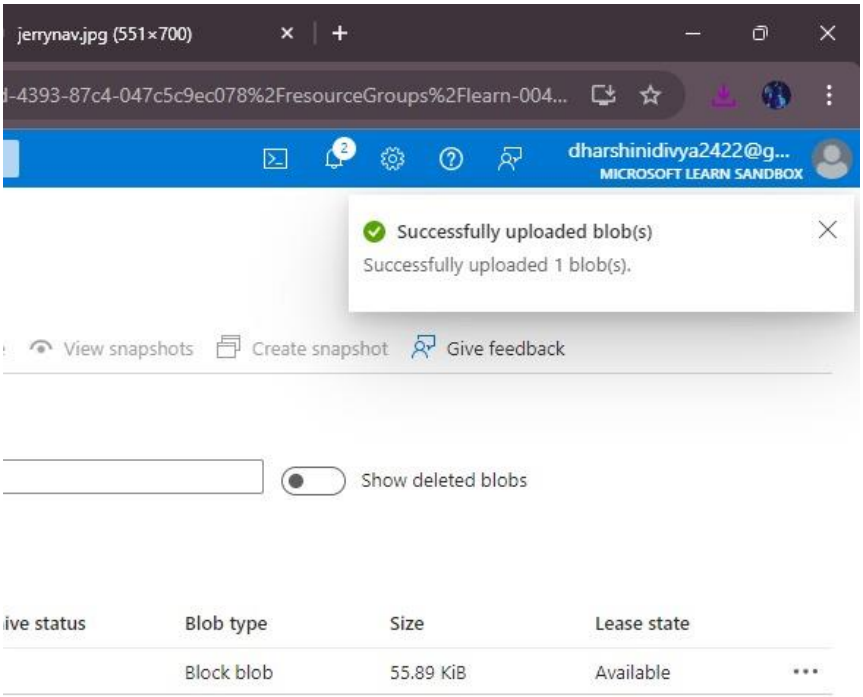
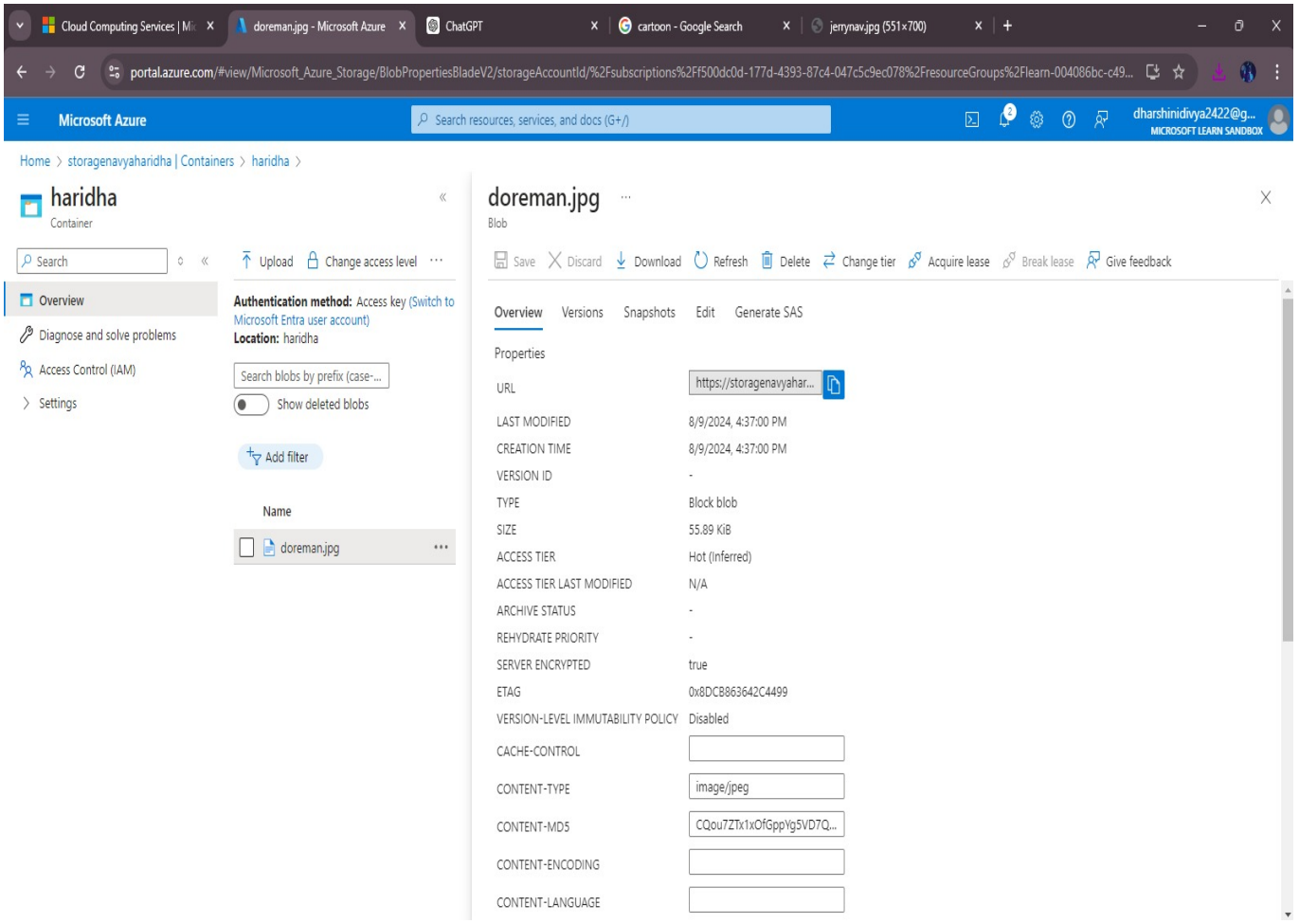
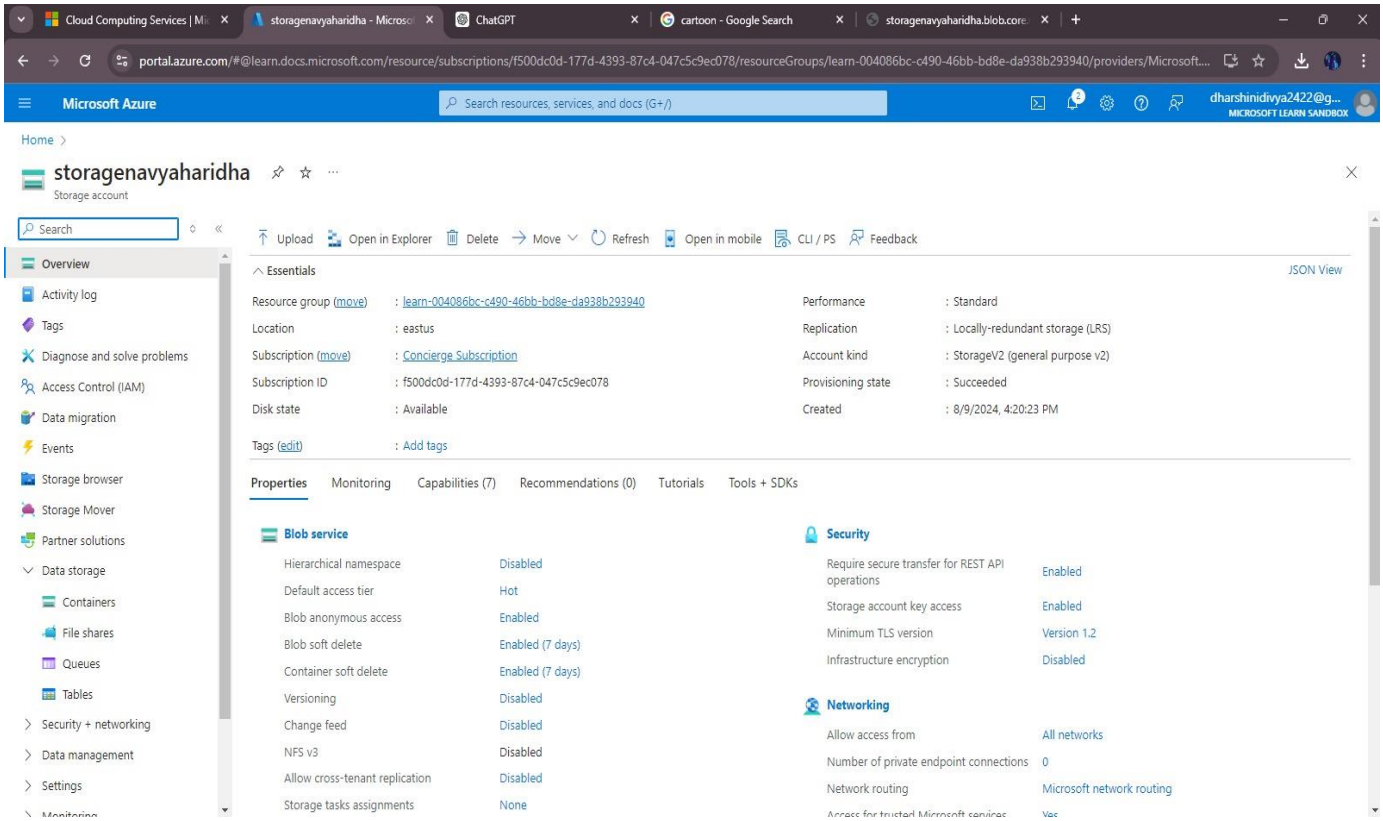
Home > storagenavyaharidha
storagenavyaharidha | Containers
Storage account
Search
Overview
Activity log
Tags
Diagnose and solve problems
Access Control (IAM)
Data migration
Events
Storage browser
Container
Change access level
Restore containers
Refresh
Delete
Give feedback
Search containers by prefix
Name
Last modified
Anonymous access level
$logs
8/9/2024, 4:20:49 PM
Private
haridha
8/9/2024, 4:38:27 PM
Blob
navya
8/9/2024, 4:32:16 PM
Blob
New container
Name *
sanjana
Anonymous access level
Private (no anonymous access)
Advanced

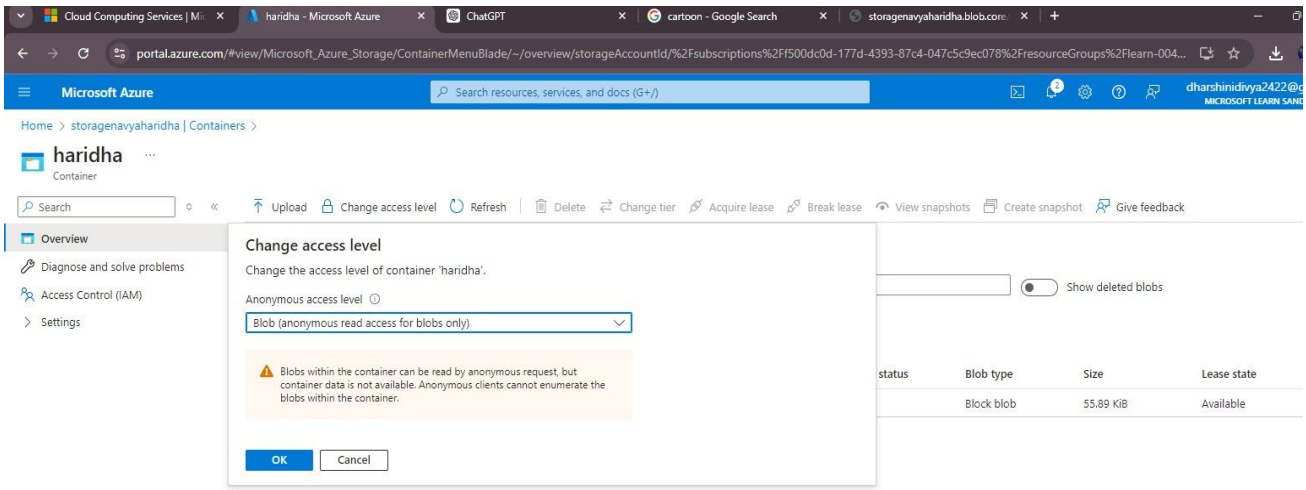

Cloud Computing Services | Mic
Upload blob - Microsoft Azure
ChatGPT
cartoon - Google Search
jerrynav.jpg (551×700)
portal.azure.com/#view/Microsoft_Azure_Storage/ContainerMenuBlade/~/overview/storageAccountId/%2Fsubscriptions%2Ff500dc0d-177d-4393-87c4-047c5c9ec078%2FresourceGroups%2Flearn-004...
Microsoft Azure
Search resources, services, and docs (G+/)
dharshinidivya2422@g...
MICROSOFT LEARN SANDBOX
Home > storagenavyaharidha | Containers >
haridha
Container
Search
Upload
Change access level
Refresh
Delete
Change tier
Acquire lease
Break lease
Overview
Diagnose and solve problems
Access Control (IAM)
Settings
Authentication method: Access key (Switch to Microsoft Entra user account)
Location: haridha
Search blobs by prefix (case-sensitive)
Add filter
Name
Modified
Access tier
Arch
No results
Upload blob
1 file(s) selected: doreman.jpg
Drag and drop files here or Browse for files
Overwrite if files already exist
Advanced
Upload
Give feedback


jerrynav.jpg (551×700)
-4393-87c4-047c5c9ec078%2FresourceGroups%2Flearn-004...
dharshinidivya2422@g...
MICROSOFT LEARN SANDBOX
Successfully uploaded blob(s)
Successfully uploaded 1 blob(s).
View snapshots
Create snapshot
Give feedback
Show deleted blobs
ive status
Blob type
Size
Lease state
Block blob
55.89 KiB
Available

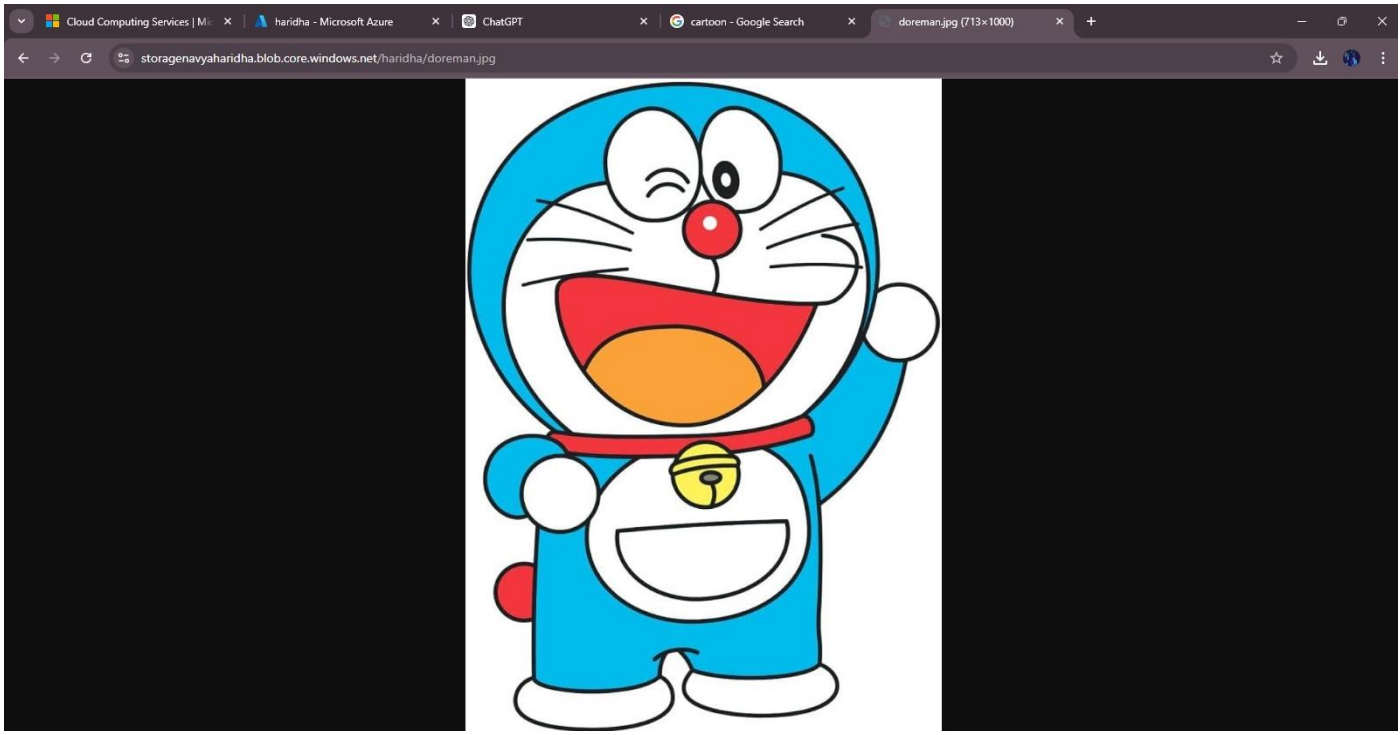

Cloud Computing Services | Mi
doreman.jpg - Microsoft Azure
ChatGPT
cartoon - Google Search
jerrynav.jpg (551×700)
portal.azure.com/#view/Microsoft_Azure_Storage/BlobPropertiesBladeV2/storageAccountId/%2Fsubscriptions%2Ff500dc0d-177d-4393-87c4-047c5c9ec078%2FresourceGroups%2Flearn-004086bc-c49...
Microsoft Azure
Search resources, services, and docs (G+/)
dharshinidivya2422@g...
MICROSOFT LEARN SANDBOX
Home > storagenavyaharidha | Containers > haridha >
haridha
Container
Search
Overview
Diagnose and solve problems
Access Control (IAM)
Settings
Upload
Change access level
Authentication method: Access key (Switch to Microsoft Entra user account)
Location: haridha
Search blobs by prefix (case-...
Show deleted blobs
Add filter
Name
doreman.jpg
doreman.jpg
Blob
Save
Discard
Download
Refresh
Delete
Change tier
Acquire lease
Break lease
Give feedback
Overview
Versions
Snapshots
Edit
Generate SAS
Properties
URL
https://storagenavyahar...
LAST MODIFIED
8/9/2024, 4:37:00 PM
CREATION TIME
8/9/2024, 4:37:00 PM
VERSION ID
-
TYPE
Block blob
SIZE
55.89 KiB
ACCESS TIER
Hot (inferred)
ACCESS TIER LAST MODIFIED
N/A
ARCHIVE STATUS
-
REHYDRATE PRIORITY
-
SERVER ENCRYPTED
true
ETAG
0x8DCB863642C4499
VERSION-LEVEL IMMUTABILITY POLICY
Disabled
CACHE-CONTROL
CONTENT-TYPE
image/jpeg
CONTENT-MD5
CQou7ZTx1xOfGppYg5VD7Q...
CONTENT-ENCODING
CONTENT-LANGUAGE


Cloud Computing Services | Mi
doreman.jpg - Microsoft Azure
ChatGPT
cartoon - Google Search
storagenavyaharidha.b
storagenavyaharidha.blob.core.windows.net/haridha/doreman.jpg
This XML file does not appear to have any style information associated with it. The document tree is shown below.
<Error>
<Code>ResourceNotFound</Code>
<Message>The specified resource does not exist. RequestId:67145e80-701e-0027-764c-ea873f000000 Time:2024-08-09T11:07:36.9602348Z</Message>
</Error>


Cloud Computing Services | Mi
storagenavyaharidha - Microsc
ChatGPT
cartoon - Google Search
storagenavyaharidha.blob.core
portal.azure.com/#@learn.docs.microsoft.com/resource/subscriptions/f500dc0d-177d-4393-87c4-047c5c9ec078/resourceGroups/learn-004086bc-c490-46bb-bd8e-da938b293940/providers/Microsoft....
Microsoft Azure
Search resources, services, and docs (G+/)
dharshinidivya2422@g...
MICROSOFT LEARN SANDBOX
Home
storagenavyaharidha
Storage account
Search
Upload
Open in Explorer
Delete
Move
Refresh
Open in mobile
CLI / PS
Feedback
Overview
Activity log
Tags
Diagnose and solve problems
Access Control (IAM)
Data migration
Events
Storage browser
Storage Mover
Partner solutions
Data storage
Containers
File shares
Queues
Tables
Security + networking
Data management
Settings
Essentials
JSON View
Resource group (move) : learn-004086bc-c490-46bb-bd8e-da938b293940
Location : eastus
Subscription (move) : Concierge Subscription
Subscription ID : f500dc0d-177d-4393-87c4-047c5c9ec078
Disk state : Available
Performance : Standard
Replication : Locally-redundant storage (LRS)
Account kind : StorageV2 (general purpose v2)
Provisioning state : Succeeded
Created : 8/9/2024, 4:20:23 PM
Tags (edit) : Add tags
Properties
Monitoring
Capabilities (7)
Recommendations (0)
Tutorials
Tools + SDKs
Blob service
Hierarchical namespace Disabled
Default access tier Hot
Blob anonymous access Enabled
Blob soft delete Enabled (7 days)
Container soft delete Enabled (7 days)
Versioning Disabled
Change feed Disabled
NFS v3 Disabled
Allow cross-tenant replication Disabled
Storage tasks assignments None
Security
Require secure transfer for REST API operations Enabled
Storage account key access Enabled
Minimum TLS version Version 1.2
Infrastructure encryption Disabled
Networking
Allow access from All networks
Number of private endpoint connections 0
Network routing Microsoft network routing


Cloud Computing Services | Mi
haridha - Microsoft Azure
ChatGPT
cartoon - Google Search
storagenavyaharidha.blob.core
portal.azure.com/#view/Microsoft_Azure_Storage/ContainerMenuBlade/~/overview/storageAccountId/%2Fsubscriptions%2Ff500dc0d-177d-4393-87c4-047c5c9ec078%2FresourceGroups%2Flearn-004...
Microsoft Azure
Search resources, services, and docs (G+/)
Home > storagenavyaharidha | Containers
haridha
Container
Search
Upload
Change access level
Refresh
Delete
Change tier
Acquire lease
Break lease
View snapshots
Create snapshot
Give feedback
Overview
Diagnose and solve problems
Access Control (IAM)
Settings
Change access level
Change the access level of container 'haridha'.
Anonymous access level
Blob (anonymous read access for blobs only)
Blobs within the container can be read by anonymous request, but container data is not available. Anonymous clients cannot enumerate the blobs within the container.
OK
Cancel
Show deleted blobs
status
Blob type
Size
Lease state
Block blob
55.89 KiB
Available

OUTPUT:


Cloud Computing Services | Mi
haridha - Microsoft Azure
ChatGPT
cartoon - Google Search
doreman.jpg (713×1000)
storagenavyaharidha.blob.core.windows.net/haridha/doreman.jpg

3. ESTIMATE WORKLOAD COSTS BY USING THE PRICING CALCULATOR

Explore the pricing calculator:

1. Go to the pricing calculator.

2. Notice the following tabs:

   - Products this is where you choose the azure services that you want to include in your estimate. you'll likely spend most of your time here.
   - Example scenarios here you'll find several *reference architectures*, or common cloud-based solutions that you can use as a starting point.
   - Saved estimates here you'll find your previously saved estimates.

3. Estimate your solution

   - Here you add each azure service that you need to the calculator. then you configure each service to fit your needs.
   - Tip
   - Make sure you have a clean calculator with nothing listed in the estimate. you can reset the estimate by selecting the trash can icon next to each item.
   - Add services to the estimate

     1. On the products tab, select the service from each of these categories:

     2. Scroll to the bottom of the page. each service is listed with its default configuration.

   - Configure services to match your requirements:

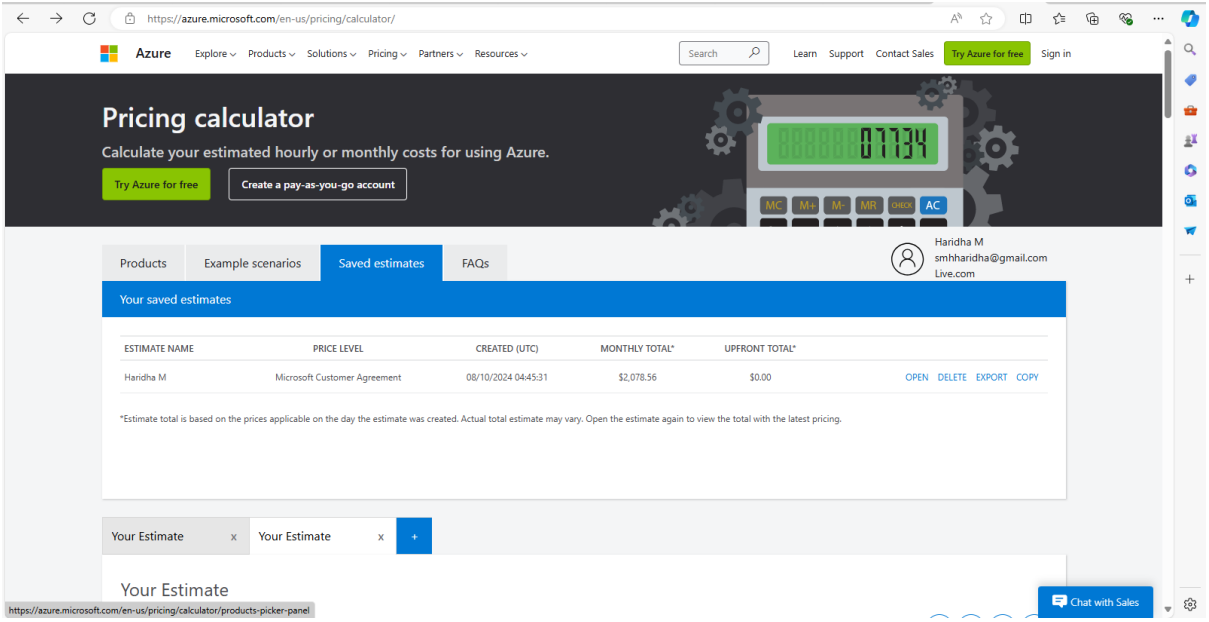
     1. Under virtual machines, set values.

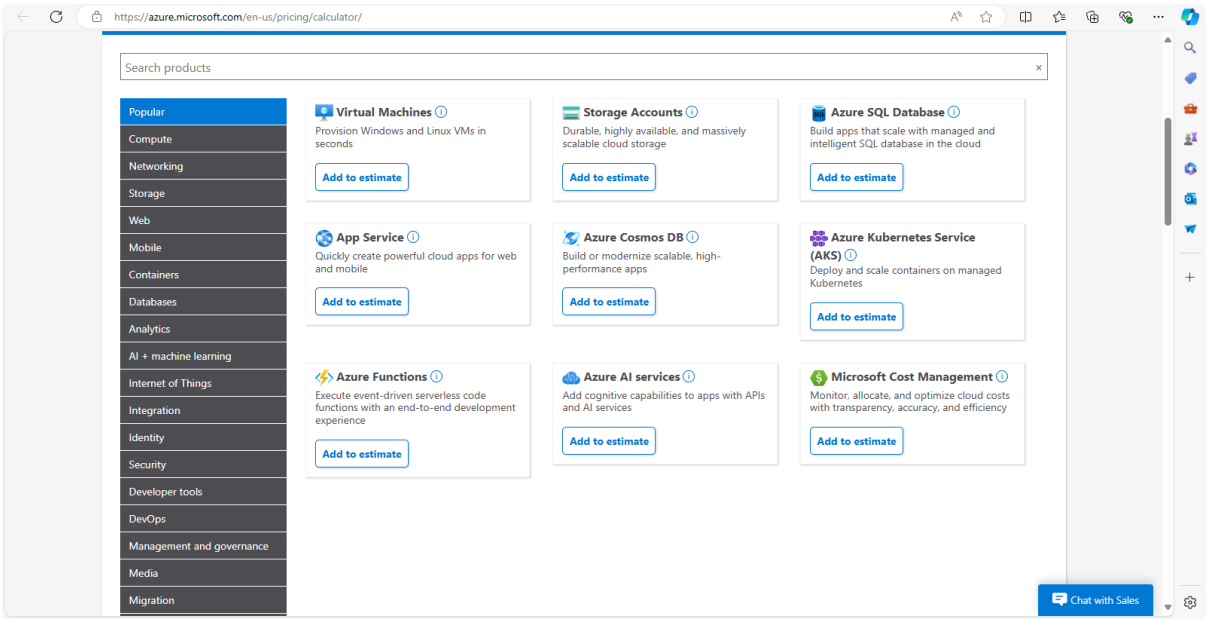
     2. Under azure sql database, set values.

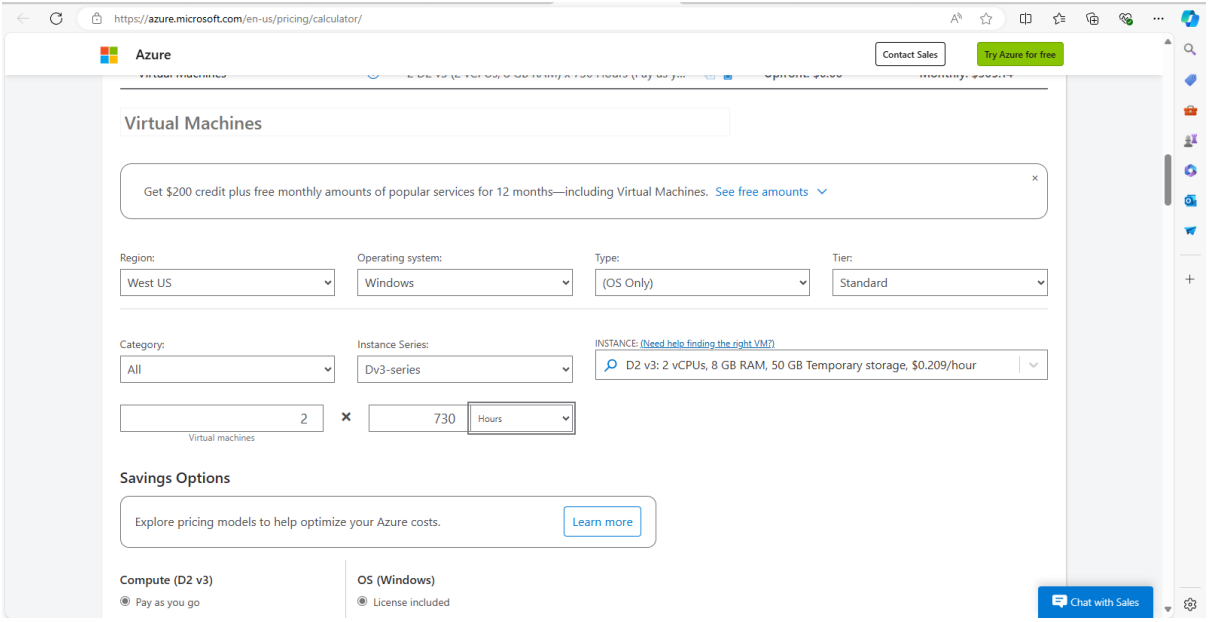
     3. Under application gateway, set values.

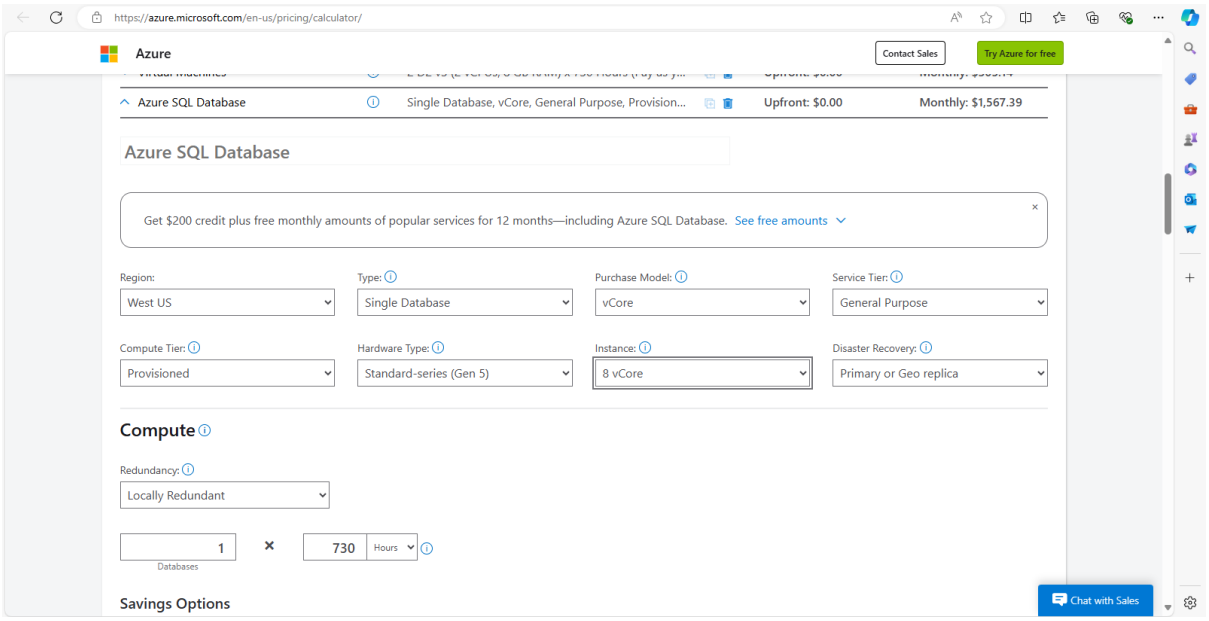
- Review, share, and save your estimate
- At the bottom of the page, you see the total estimated cost of running the solution. you can change the currency type if you want.
- At this point, you have a few options:
- Select export to save your estimate as an excel document.
- Select save or save as to save your estimate to the saved estimates tab for later.
- Select share to generate a url so you can share the estimate with your team.

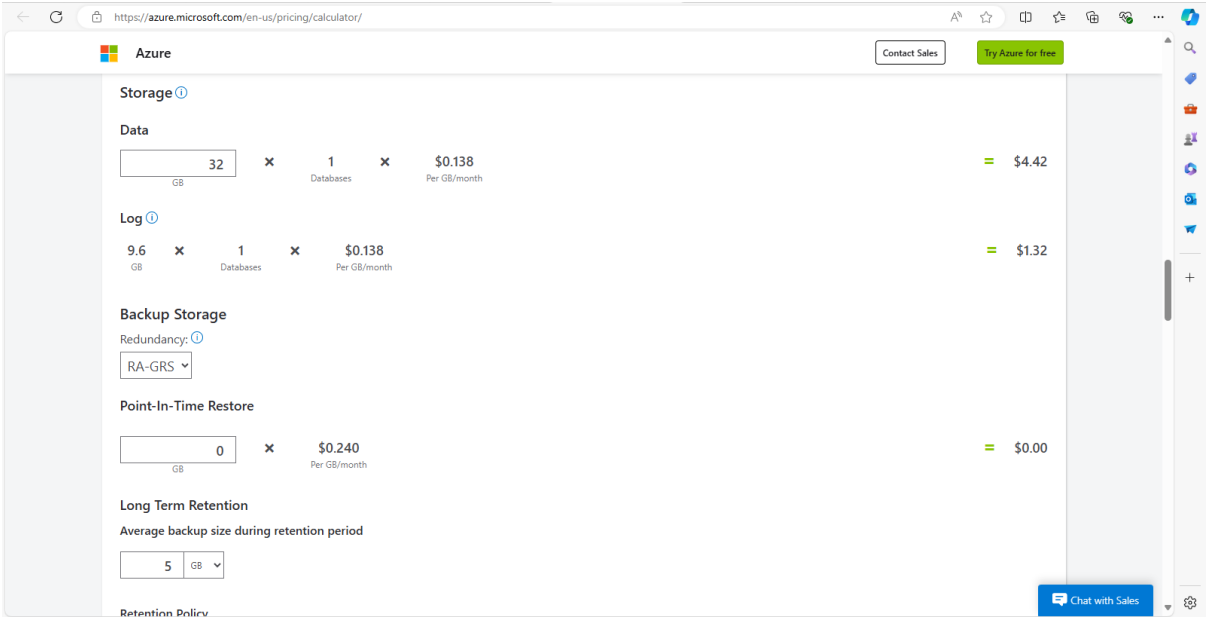
WORKING:




https://azure.microsoft.com/en-us/pricing/calculator/
Search products
Popular
Compute
Networking
Storage
Web
Mobile
Containers
Databases
Analytics
AI + machine learning
Internet of Things
Integration
Identity
Security
Developer tools
DevOps
Management and governance
Media
Migration
Virtual Machines
Provision Windows and Linux VMs in seconds
Add to estimate
Storage Accounts
Durable, highly available, and massively scalable cloud storage
Add to estimate
Azure SQL Database
Build apps that scale with managed and intelligent SQL database in the cloud
Add to estimate
App Service
Quickly create powerful cloud apps for web and mobile
Add to estimate
Azure Cosmos DB
Build or modernize scalable, high-performance apps
Add to estimate
Azure Kubernetes Service (AKS)
Deploy and scale containers on managed Kubernetes
Add to estimate
Azure Functions
Execute event-driven serverless code functions with an end-to-end development experience
Add to estimate
Azure AI services
Add cognitive capabilities to apps with APIs and AI services
Add to estimate
Microsoft Cost Management
Monitor, allocate, and optimize cloud costs with transparency, accuracy, and efficiency
Add to estimate
Chat with Sales


https://azure.microsoft.com/en-us/pricing/calculator/
Azure
Contact Sales
Try Azure for free
Virtual Machines
Get $200 credit plus free monthly amounts of popular services for 12 months—including Virtual Machines. See free amounts
Region:
West US
Operating system:
Windows
Type:
(OS Only)
Tier:
Standard
Category:
All
Instance Series:
Dv3-series
INSTANCE: (Need help finding the right VM?)
D2 v3: 2 vCPUs, 8 GB RAM, 50 GB Temporary storage, $0.209/hour
2
Virtual machines
×
730
Hours
Savings Options
Explore pricing models to help optimize your Azure costs.
Learn more
Compute (D2 v3)
Pay as you go
OS (Windows)
License included
Chat with Sales


https://azure.microsoft.com/en-us/pricing/calculator/
Azure
Contact Sales
Try Azure for free
Azure SQL Database
Single Database, vCore, General Purpose, Provision...
Upfront: $0.00
Monthly: $1,567.39
Azure SQL Database
Get $200 credit plus free monthly amounts of popular services for 12 months—including Azure SQL Database. See free amounts
Region:
West US
Type:
Single Database
Purchase Model:
vCore
Service Tier:
General Purpose
Compute Tier:
Provisioned
Hardware Type:
Standard-series (Gen 5)
Instance:
8 vCore
Disaster Recovery:
Primary or Geo replica
Compute
Redundancy:
Locally Redundant
1
Databases
730
Hours
Savings Options
Chat with Sales


https://azure.microsoft.com/en-us/pricing/calculator/
Azure
Contact Sales
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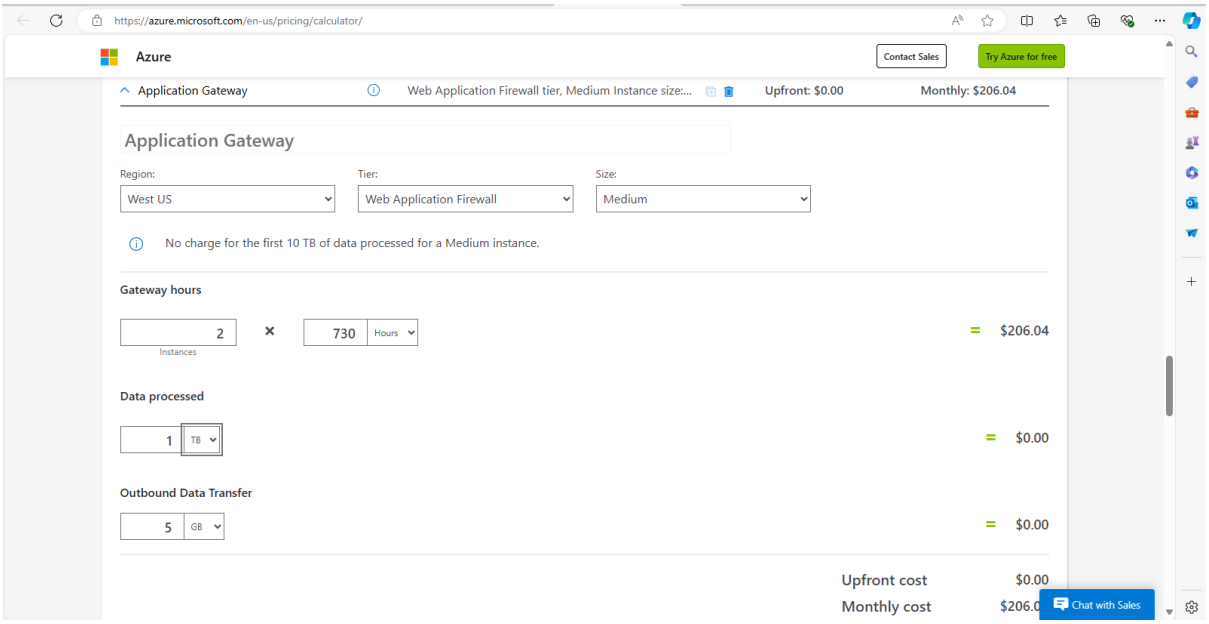
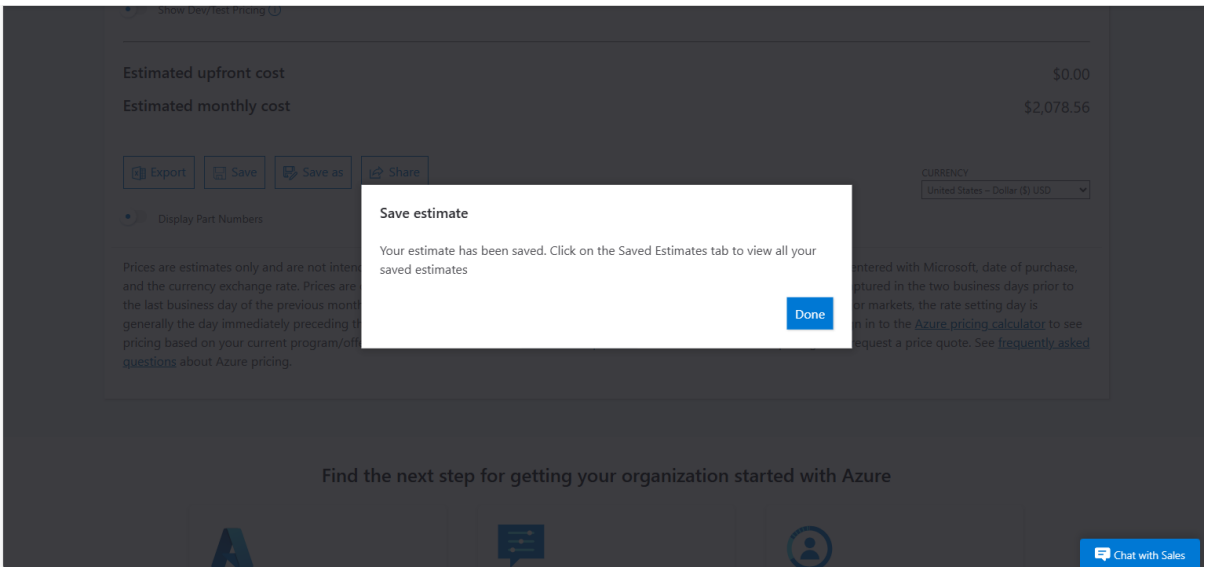
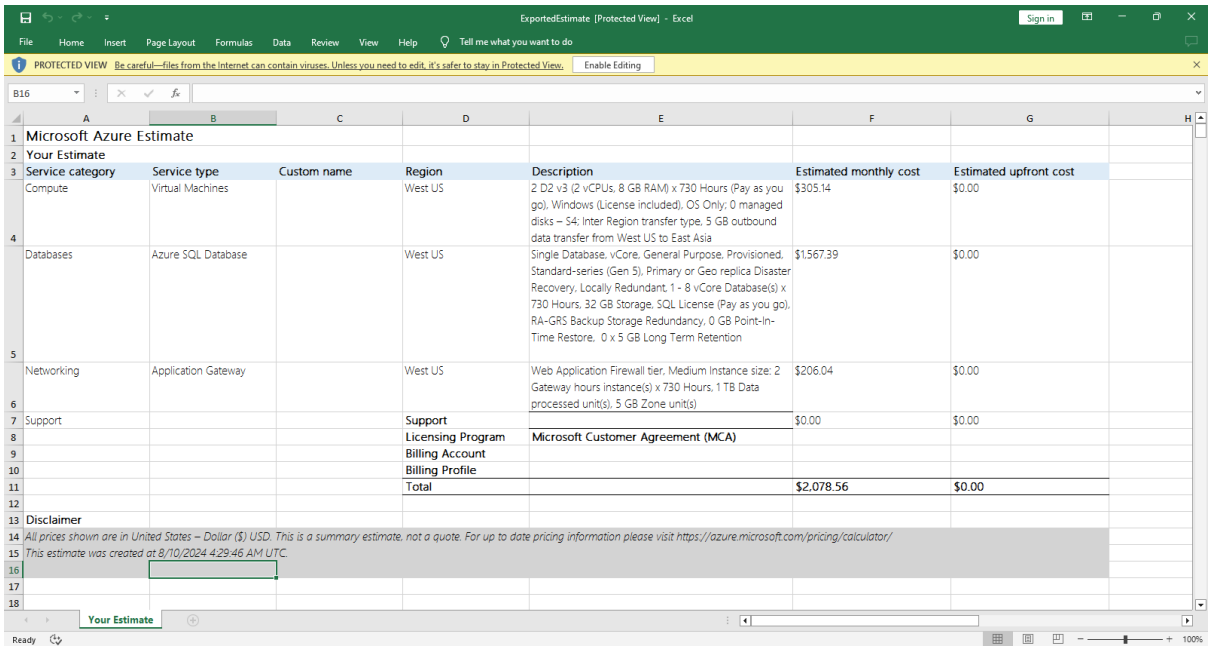
Storage
Data
32
GB
1
Databases
$0.138
Per GB/month
$4.42
Log
9.6
GB
1
Databases
$0.138
Per GB/month
$1.32
Backup Storage
Redundancy:
RA-GRS
Point-In-Time Restore
0
GB
$0.240
Per GB/month
$0.00
Long Term Retention
Average backup size during retention period
5
GB
Retention Policy
Chat with Sales


https://azure.microsoft.com/en-us/pricing/calculator/
Azure
Contact Sales
Try Azure for free
Application Gateway
Web Application Firewall tier, Medium Instance size:...
Upfront: $0.00
Monthly: $206.04
Application Gateway
Region:
West US
Tier:
Web Application Firewall
Size:
Medium
No charge for the first 10 TB of data processed for a Medium instance.
Gateway hours
2
Instances
730
Hours
= $206.04
Data processed
1
TB
= $0.00
Outbound Data Transfer
5
GB
= $0.00
Upfront cost $0.00
Monthly cost $206.0
Chat with Sales


Estimated upfront cost
$0.00
Estimated monthly cost
$2,078.56
Export
Save
Save as
Share
CURRENCY
United States – Dollar ($) USD
Display Part Numbers
Save estimate
Your estimate has been saved. Click on the Saved Estimates tab to view all your saved estimates
Done
Azure pricing calculator
frequently asked questions
Find the next step for getting your organization started with Azure
Chat with Sales

EXCEL VIEW:



ExportedEstimate [Protected View] - Excel

PROTECTED VIEW Be careful—files from the Internet can contain viruses. Unless you need to edit, it's safer to stay in Protected View. Enable Editing

	A	B	C	D	E	F	G	H
1	Microsoft Azure Estimate							
2	Your Estimate							
3	Service category	Service type	Custom name	Region	Description	Estimated monthly cost	Estimated upfront cost	
4	Compute	Virtual Machines		West US	2 D2 v3 (2 vCPUs, 8 GB RAM) x 730 Hours (Pay as you go), Windows (License included), OS Only; 0 managed disks – S4; Inter Region transfer type, 5 GB outbound data transfer from West US to East Asia	$305.14	$0.00	
5	Databases	Azure SQL Database		West US	Single Database, vCore, General Purpose, Provisioned, Standard-series (Gen 5), Primary or Geo replica Disaster Recovery, Locally Redundant, 1 - 8 vCore Database(s) x 730 Hours, 32 GB Storage, SQL License (Pay as you go), RA-GRS Backup Storage Redundancy, 0 GB Point-In-Time Restore, 0 x 5 GB Long Term Retention	$1,567.39	$0.00	
6	Networking	Application Gateway		West US	Web Application Firewall tier, Medium Instance size: 2 Gateway hours instance(s) x 730 Hours, 1 TB Data processed unit(s), 5 GB Zone unit(s)	$206.04	$0.00	
7	Support			Support		$0.00	$0.00	
8				Licensing Program	Microsoft Customer Agreement (MCA)			
9				Billing Account				
10				Billing Profile				
11				Total		$2,078.56	$0.00	
12								
13	Disclaimer							
14	*All prices shown are in United States – Dollar ($) USD. This is a summary estimate, not a quote. For up to date pricing information please visit https://azure.microsoft.com/pricing/calculator/*							
15	*This estimate was created at 8/10/2024 4:29:46 AM UTC.*							
16								
17								
18								

Your Estimate

Ready

4.COMPARE WORKLOAD COSTS USING THE TCO CALCULATOR

- Define your workloads:

Enter the specifications of your on-premises infrastructure into the TCO Calculator.

1. Go to the TCO Calculator.

2. Under **Define your workloads**, select **Add server workload** to create a row for your bank of Windows Server VMs.

3. Under **Servers**, set the value for each of these settings.

4. Select **Add server workload** to create a second row for your bank of Linux VMs. Then specify these settings.

5. Under **Storage**, select **Add storage**. Then specify these settings.

6. Under **Networking**, set **Outbound bandwidth** to **15 TB**.

7. Select **Next**.

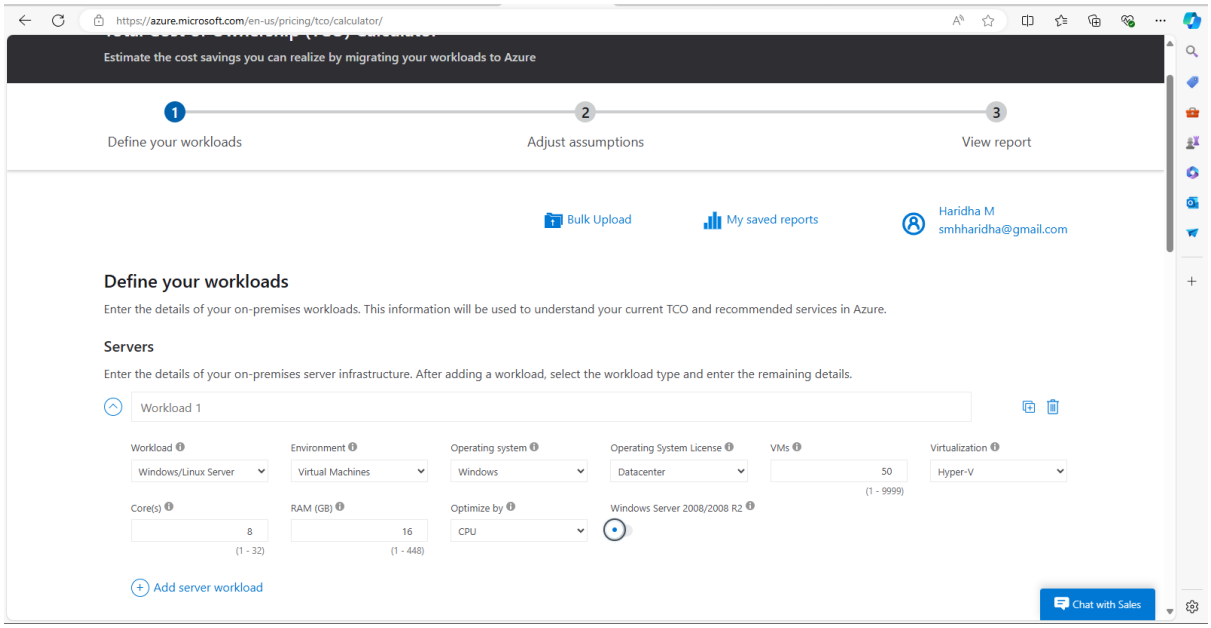
    - In practice, you would adjust any cost assumptions and make any adjustments to match your current on-premises environment.
    - At the top of the page, select your currency. This example uses US Dollar ($).
    - Select **Next**.
    - **View the report:**
    - Take a moment to review the generated report.
    - Remember, you've been tasked to investigate cost savings for your European datacenter over the next three years.

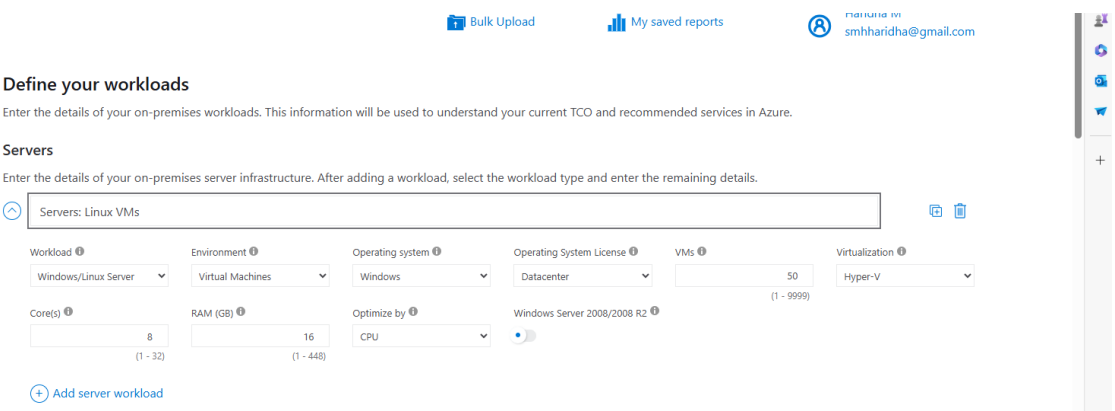
To make these adjustments:

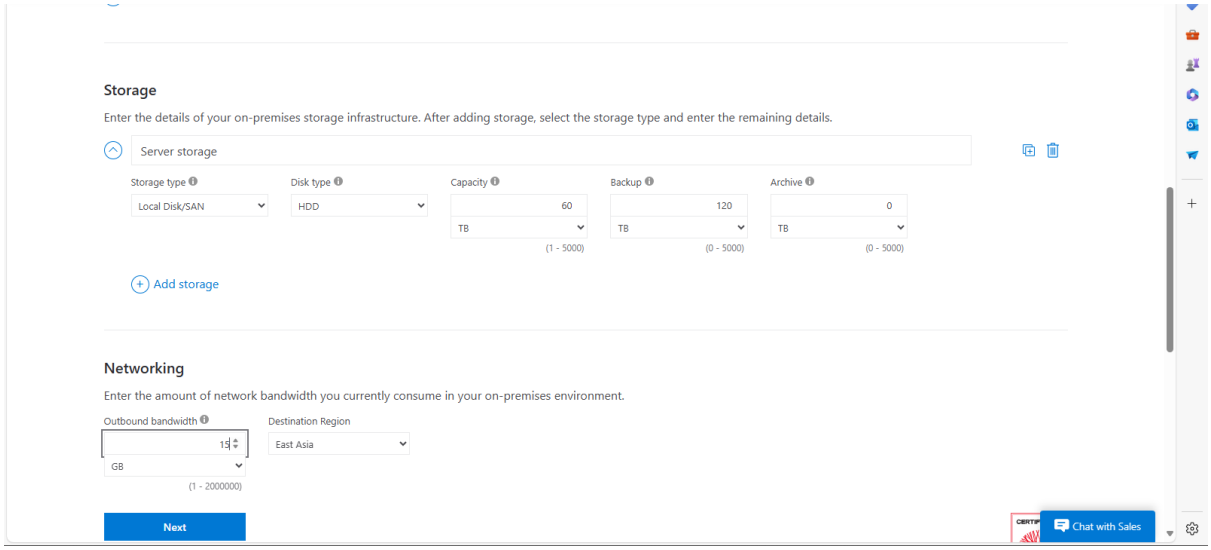
1. Set **Timeframe** to **3 Years**.
2. Set **Region** to **North Europe**.

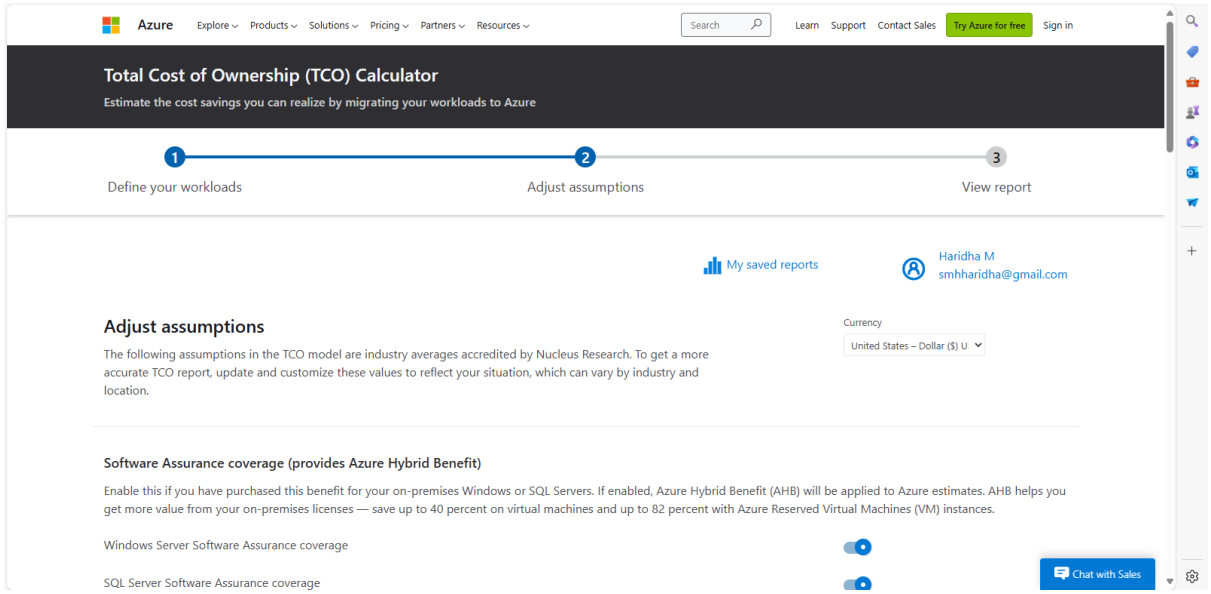
Scroll to the summary at the bottom. You see a comparison of running your workloads in the datacenter versus on Azure.

WORKING:

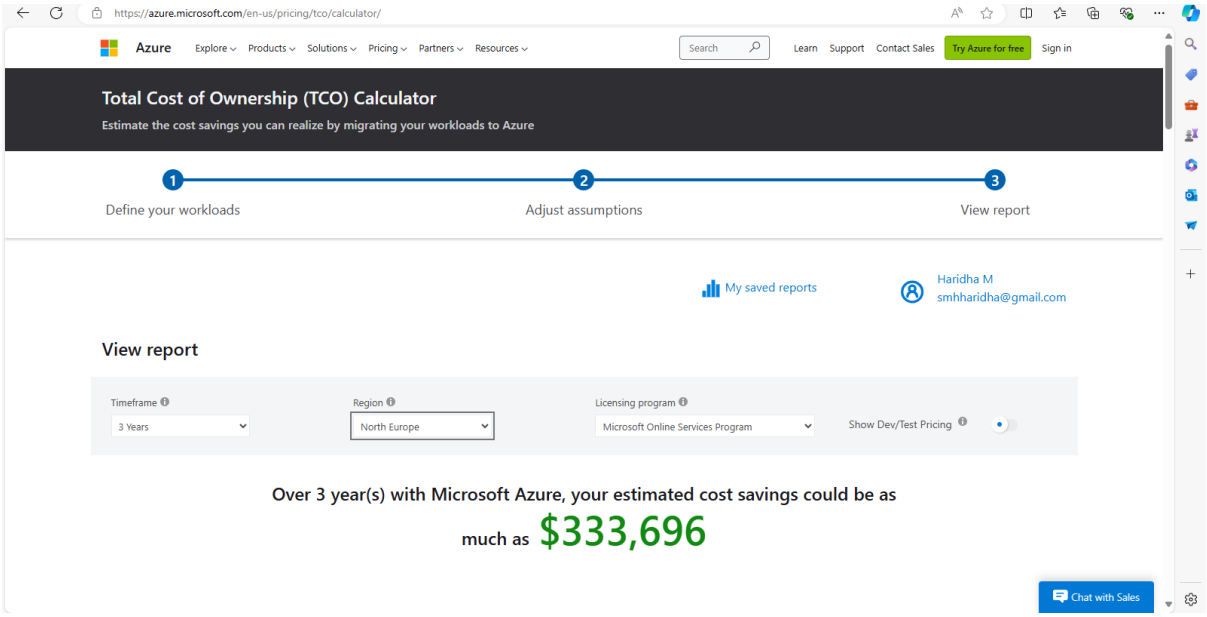


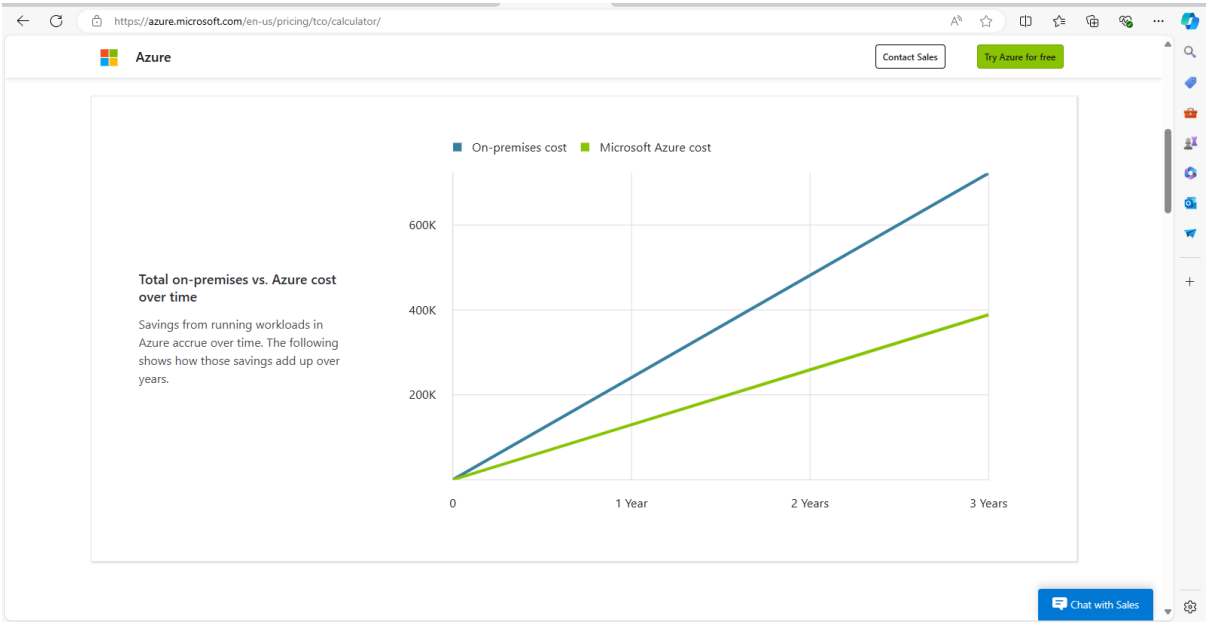


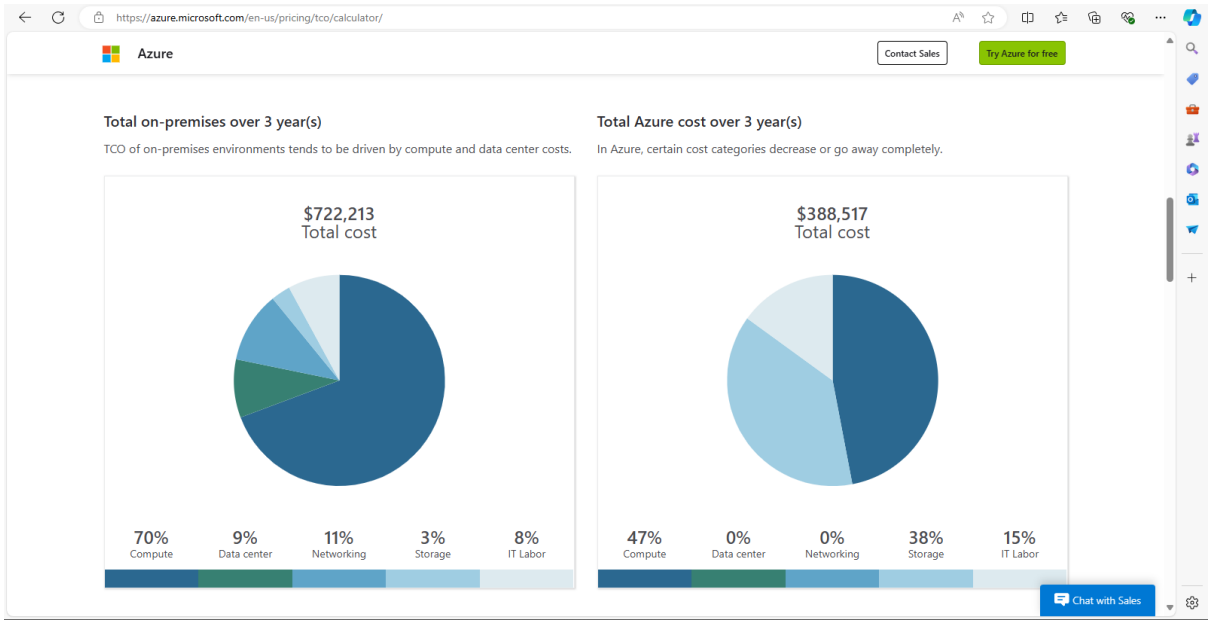

Storage
Enter the details of your on-premises storage infrastructure. After adding storage, select the storage type and enter the remaining details.
Server storage
Storage type
Local Disk/SAN
Disk type
HDD
Capacity
60
TB
(1 - 5000)
Backup
120
TB
(0 - 5000)
Archive
0
TB
(0 - 5000)
Add storage
Networking
Enter the amount of network bandwidth you currently consume in your on-premises environment.
Outbound bandwidth
15
GB
(1 - 2000000)
Destination Region
East Asia
Next
Chat with Sales

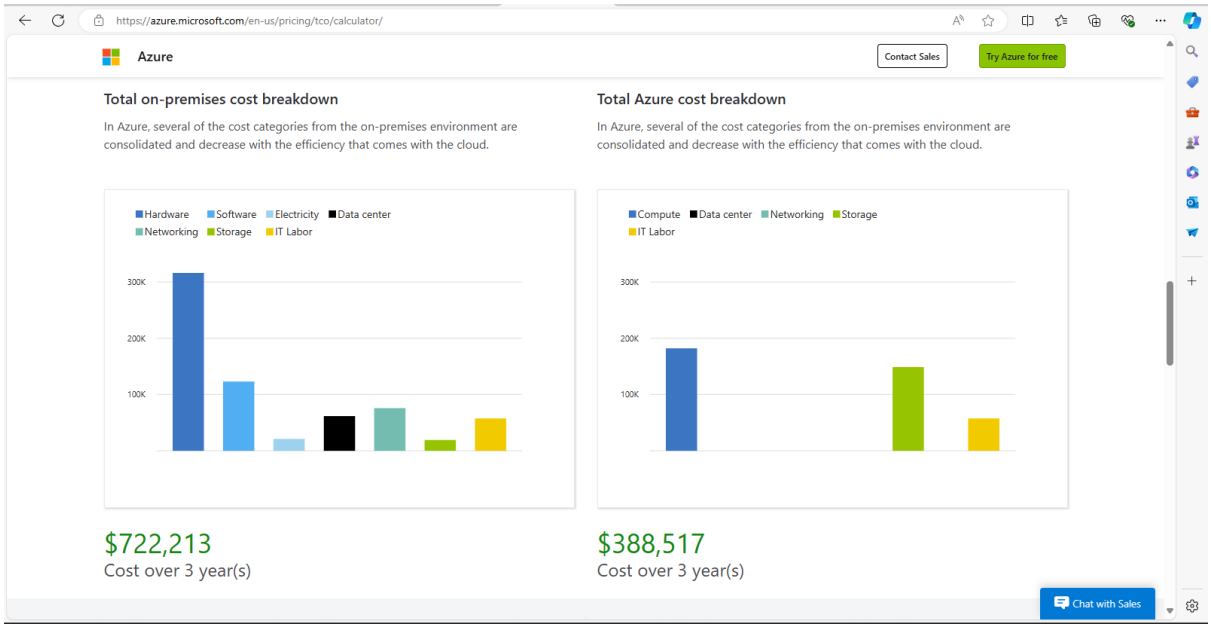

Azure
Explore
Products
Solutions
Pricing
Partners
Resources
Search
Learn
Support
Contact Sales
Try Azure for free
Sign in
Total Cost of Ownership (TCO) Calculator
Estimate the cost savings you can realize by migrating your workloads to Azure
1
Define your workloads
2
Adjust assumptions
3
View report
My saved reports
Haridha M
smhharidha@gmail.com
Adjust assumptions
The following assumptions in the TCO model are industry averages accredited by Nucleus Research. To get a more accurate TCO report, update and customize these values to reflect your situation, which can vary by industry and location.
Currency
United States – Dollar ($) U
Software Assurance coverage (provides Azure Hybrid Benefit)
Enable this if you have purchased this benefit for your on-premises Windows or SQL Servers. If enabled, Azure Hybrid Benefit (AHB) will be applied to Azure estimates. AHB helps you get more value from your on-premises licenses — save up to 40 percent on virtual machines and up to 82 percent with Azure Reserved Virtual Machines (VM) instances.
Windows Server Software Assurance coverage
SQL Server Software Assurance coverage
Chat with Sales

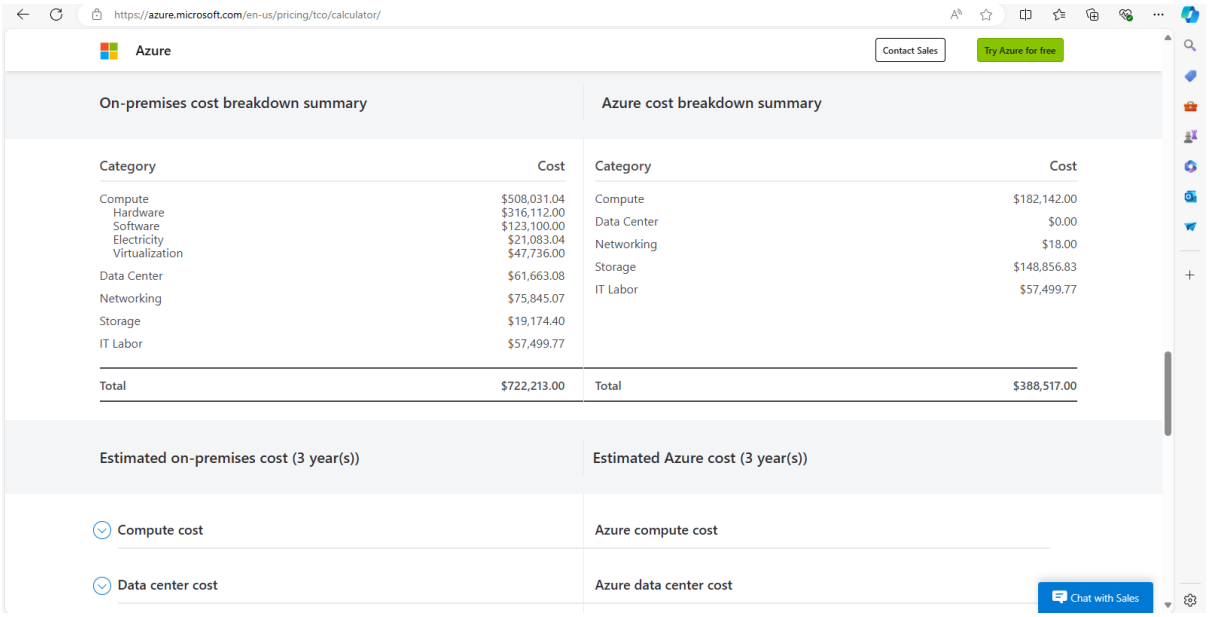
OUTPUT:

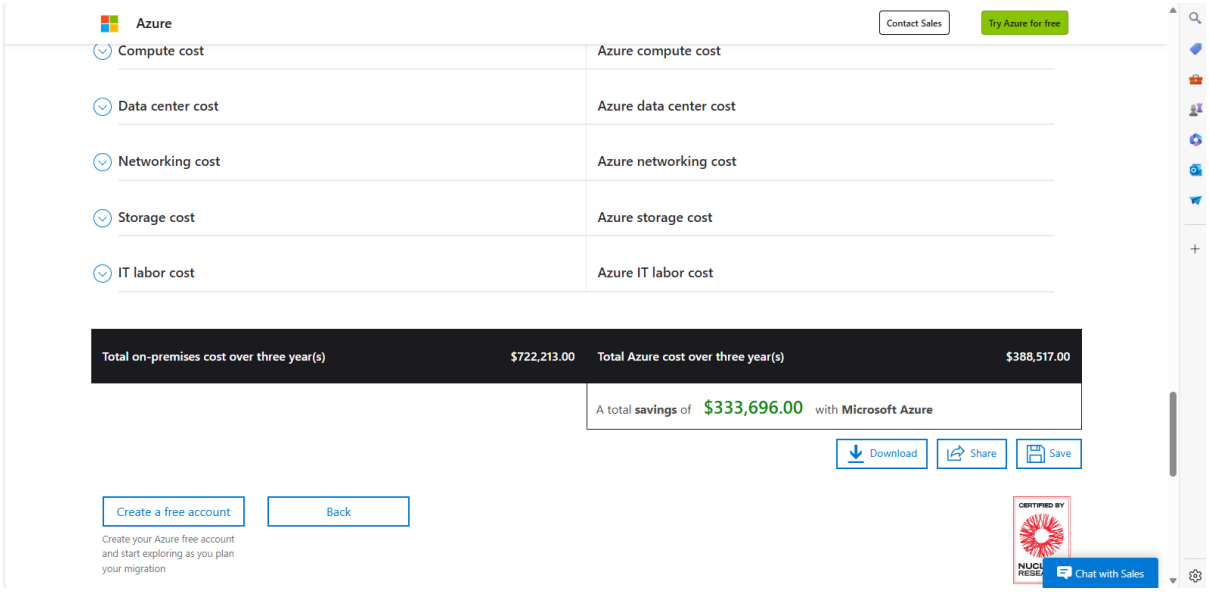

https://azure.microsoft.com/en-us/pricing/tco/calculator/
Azure
Explore
Products
Solutions
Pricing
Partners
Resources
Search
Learn
Support
Contact Sales
Try Azure for free
Sign in
Total Cost of Ownership (TCO) Calculator
Estimate the cost savings you can realize by migrating your workloads to Azure
1
Define your workloads
2
Adjust assumptions
3
View report
My saved reports
Haridha M
smhharidha@gmail.com
View report
Timeframe
3 Years
Region
North Europe
Licensing program
Microsoft Online Services Program
Show Dev/Test Pricing
Over 3 year(s) with Microsoft Azure, your estimated cost savings could be as much as $333,696
Chat with Sales


https://azure.microsoft.com/en-us/pricing/tco/calculator/
Azure
Contact Sales
Try Azure for free
On-premises cost
Microsoft Azure cost
Total on-premises vs. Azure cost over time
Savings from running workloads in Azure accrue over time. The following shows how those savings add up over years.
600K
400K
200K
0
1 Year
2 Years
3 Years
Chat with Sales


https://azure.microsoft.com/en-us/pricing/tco/calculator/
Azure
Contact Sales
Try Azure for free
Total on-premises over 3 year(s)
TCO of on-premises environments tends to be driven by compute and data center costs.
$722,213
Total cost
70%
Compute
9%
Data center
11%
Networking
3%
Storage
8%
IT Labor
Total Azure cost over 3 year(s)
In Azure, certain cost categories decrease or go away completely.
$388,517
Total cost
47%
Compute
0%
Data center
0%
Networking
38%
Storage
15%
IT Labor
Chat with Sales


https://azure.microsoft.com/en-us/pricing/tco/calculator/
Azure
Contact Sales
Try Azure for free
Total on-premises cost breakdown
In Azure, several of the cost categories from the on-premises environment are consolidated and decrease with the efficiency that comes with the cloud.
Hardware
Software
Electricity
Data center
Networking
Storage
IT Labor
300K
200K
100K
Total Azure cost breakdown
In Azure, several of the cost categories from the on-premises environment are consolidated and decrease with the efficiency that comes with the cloud.
Compute
Data center
Networking
Storage
IT Labor
300K
200K
100K
$722,213
Cost over 3 year(s)
$388,517
Cost over 3 year(s)
Chat with Sales


https://azure.microsoft.com/en-us/pricing/tco/calculator/
Azure
Contact Sales
Try Azure for free
On-premises cost breakdown summary
Azure cost breakdown summary
Category
Cost
Compute
Hardware
Software
Electricity
Virtualization
Data Center
Networking
Storage
IT Labor
Total
$508,031.04
$316,112.00
$123,100.00
$21,083.04
$47,736.00
$61,663.08
$75,845.07
$19,174.40
$57,499.77
$722,213.00
Compute
Data Center
Networking
Storage
IT Labor
Total
$182,142.00
$0.00
$18.00
$148,856.83
$57,499.77
$388,517.00
Estimated on-premises cost (3 year(s))
Estimated Azure cost (3 year(s))
Compute cost
Azure compute cost
Data center cost
Azure data center cost
Chat with Sales


Azure
Contact Sales
Try Azure for free
Compute cost
Azure compute cost
Data center cost
Azure data center cost
Networking cost
Azure networking cost
Storage cost
Azure storage cost
IT labor cost
Azure IT labor cost
Total on-premises cost over three year(s)
$722,213.00
Total Azure cost over three year(s)
$388,517.00
A total savings of $333,696.00 with Microsoft Azure
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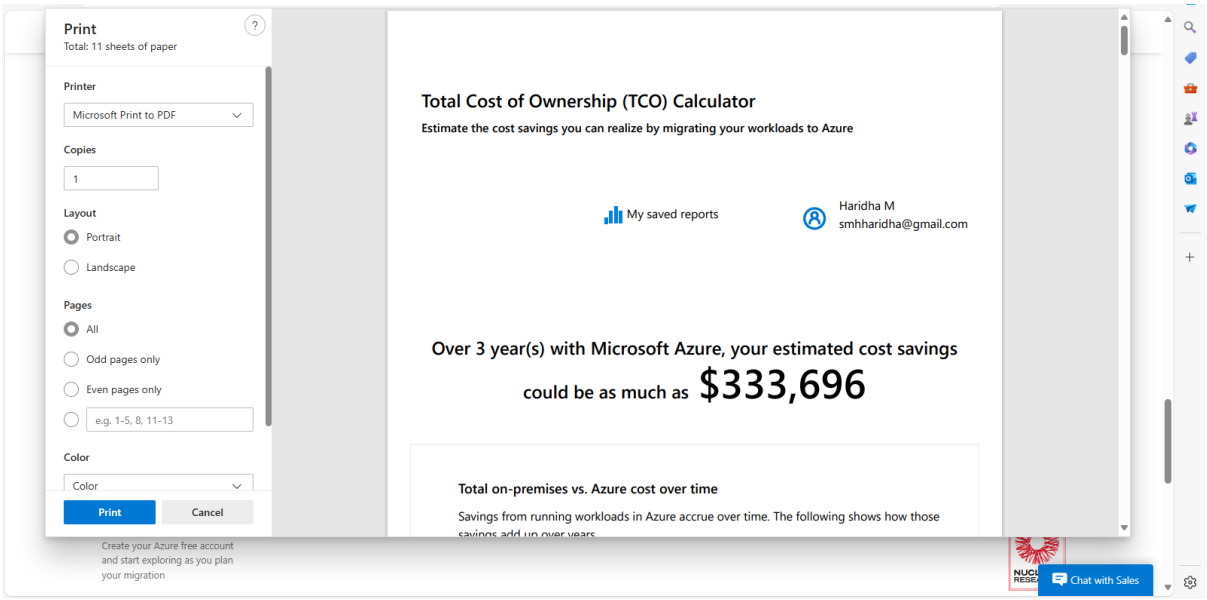
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Over 3 year(s) with Microsoft Azure, your estimated cost savings could be as much as $333,696
Total on-premises vs. Azure cost over time
Savings from running workloads in Azure accrue over time. The following shows how those
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