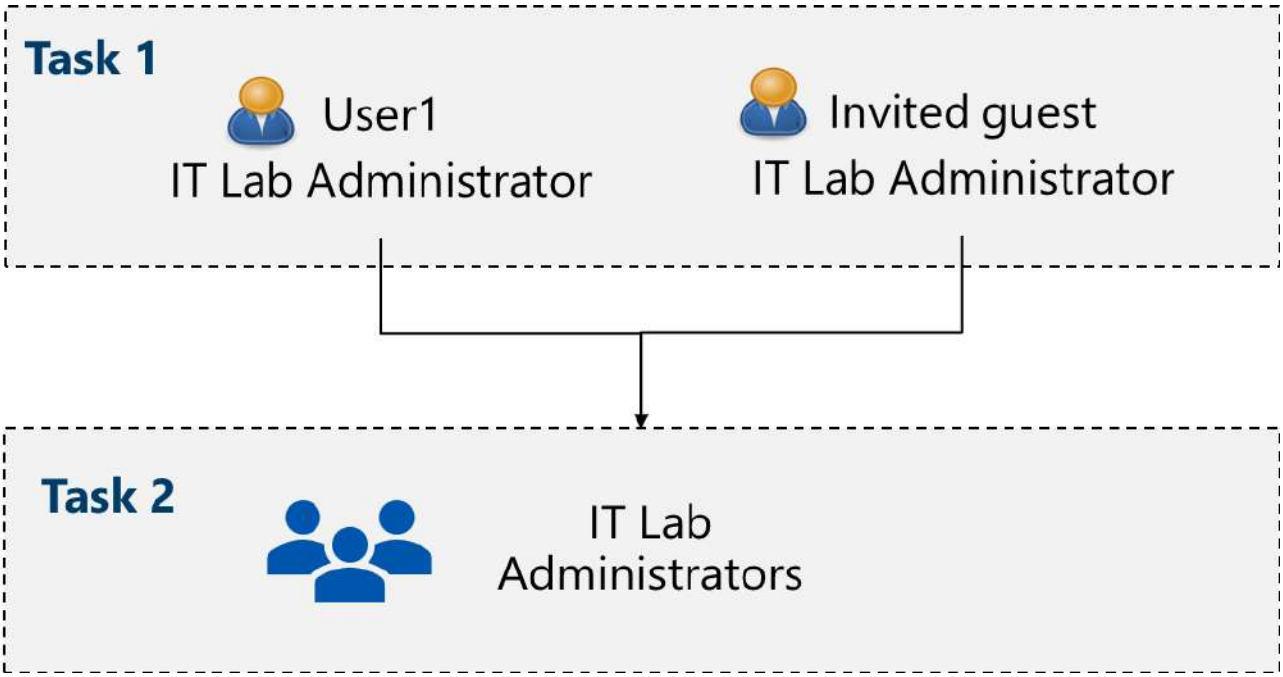
Lab 01 - Manage Microsoft Entra ID Identities

Lab scenario

Your organization is building a new lab environment for pre-production testing of apps and services. A few engineers are being hired to manage the lab environment, including the virtual machines. To allow the engineers to authenticate by using Microsoft Entra ID, you have been tasked with provisioning users and groups. To minimize administrative overhead, membership of the groups should be updated automatically based on job titles.

Architecture diagram



Job skills

- Task 1: Create and configure user accounts.
- Task 2: Create groups and add members.

Task 1: Create and configure user accounts

Noto624879

All services > Default Directory | Users > Users >

Create new user

Create a new internal user in your organization

Basics

User principal name	az104-user1@kosarsofia0909gmail.onmicrosoft.com
Display name	az104-user1
Mail nickname	az104-user1
Password	••••••••••
Account enabled	Yes

Properties

Country or region	United States
User type	Member
Job title	IT Lab Administrator
Department	IT
Usage location	United States

Assignments

Administrative units

Create | < Previous | Next >

2 users found

Display name	User principal name	User type	Is Agent	On-premises sy...	Ide
A az104-user1	az104-user1@kos...	Member	No	No	ko
CK Софія Косар	kosarsofia0909_g...	Member	No	No	Mi

Home > Users >

Invite external user

Invite an external user to collaborate with your organization

Basics | Properties | Assignments | **Review + invite**

Basics

Email	romanwdwd@gmail.com
Display name	Roman
Send invite message	Yes
Message	Welcome to Azure and our group project
Cc recipient	
Invite redirect URL	https://myapplications.microsoft.com/?tenantid=dc8e1fa9-78a0-4c7f-aabb-56aba4175e7f

Properties

User type	Guest
Job title	IT Lab Administrator
Department	IT
Usage location	United States

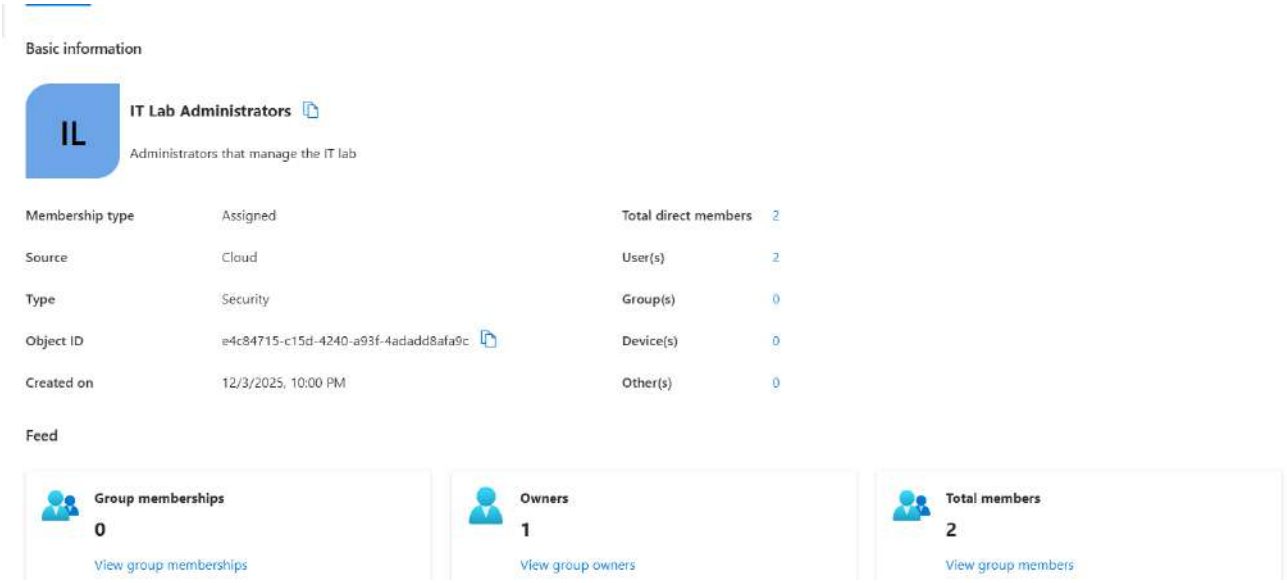
Assignments

Invite | < Previous | Next >

Display name	User principal name	User type	Is Agent	On-premises sy...	Identities	Company name
az104-user1	az104-user1@kos...	Member	No	No	kosarsofia0909gmail.on...	
Roman	romanwdwd_gmai...	Guest	No	No	kosarsofia0909gmail.on...	
Софія Косар	kosarsofia0909_g...	Member	No	No	MicrosoftAccount	

Task 2: Create groups and add members

Name	Object Id	Group type	Membership type	Email
IT Lab Administrators	e4c84715-c15d-4240-a93f-4adadd8afa9c	Security	Assigned	

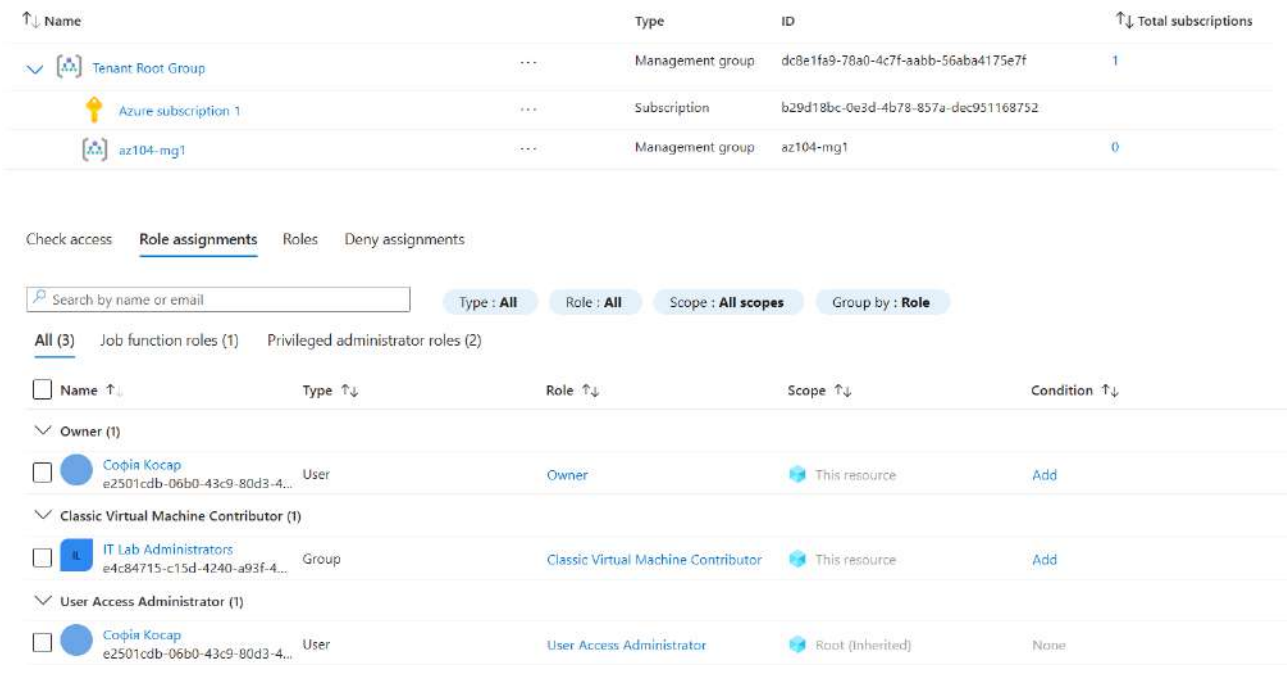


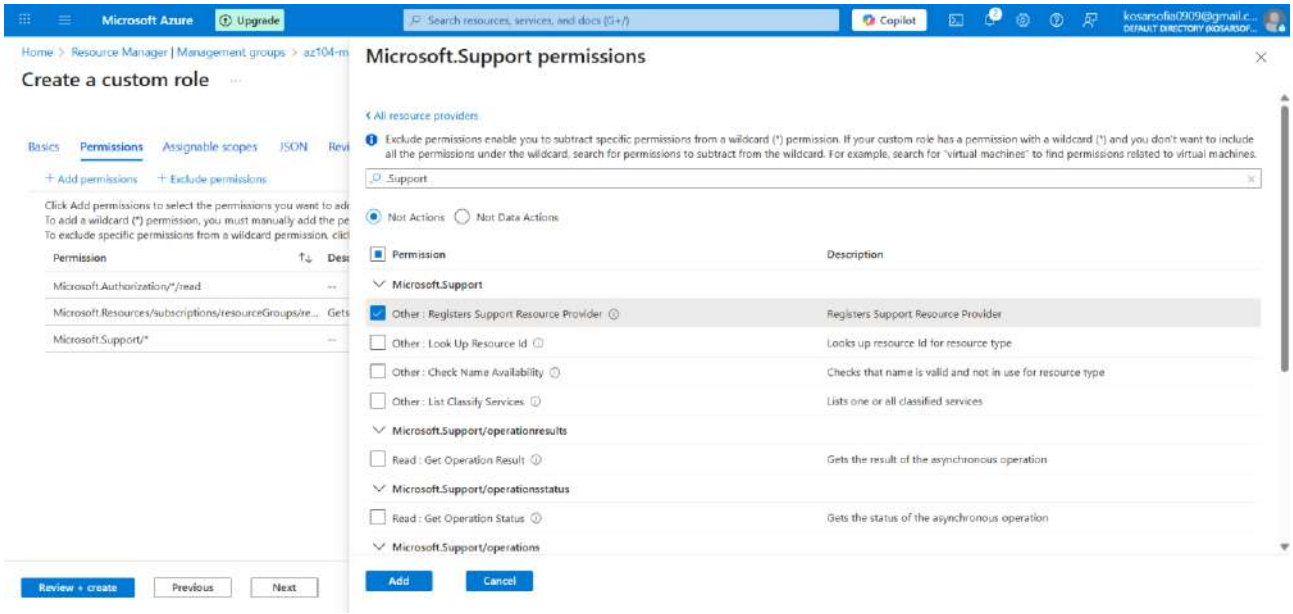
Lab 02a - Manage Subscriptions and RBAC

Lab introduction

In this lab, you learn about role-based access control. You learn how to use permissions and scopes to control what actions identities can and cannot perform. You also learn how to make subscription management easier using management groups.

This lab requires an Azure subscription. Your subscription type may affect the availability of features in this lab. You may change the region, but the steps are written using **East US**.





Show Microsoft Cloud menu ger | Management groups > az104-mg1 | Access control (IAM) >

Create a custom role ...

You have successfully created the custom role "Custom Support Request". It may take the system a few minutes to display your role everywhere.

OK

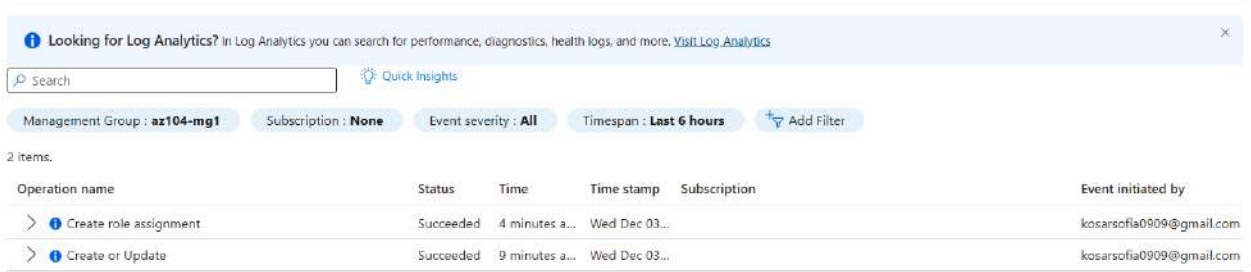
Role name	Custom Support Request
Role description	A custom contributor role for support requests.

Permissions

Action	Microsoft.Authorization/*/read
Action	Microsoft.Resources/subscriptions/resourceGroups/read
Action	Microsoft.Support/*
NotAction	Microsoft.Support/register/action

Assignable Scopes

Scope	/providers/Microsoft.Management/managementGroups/az104-mg1



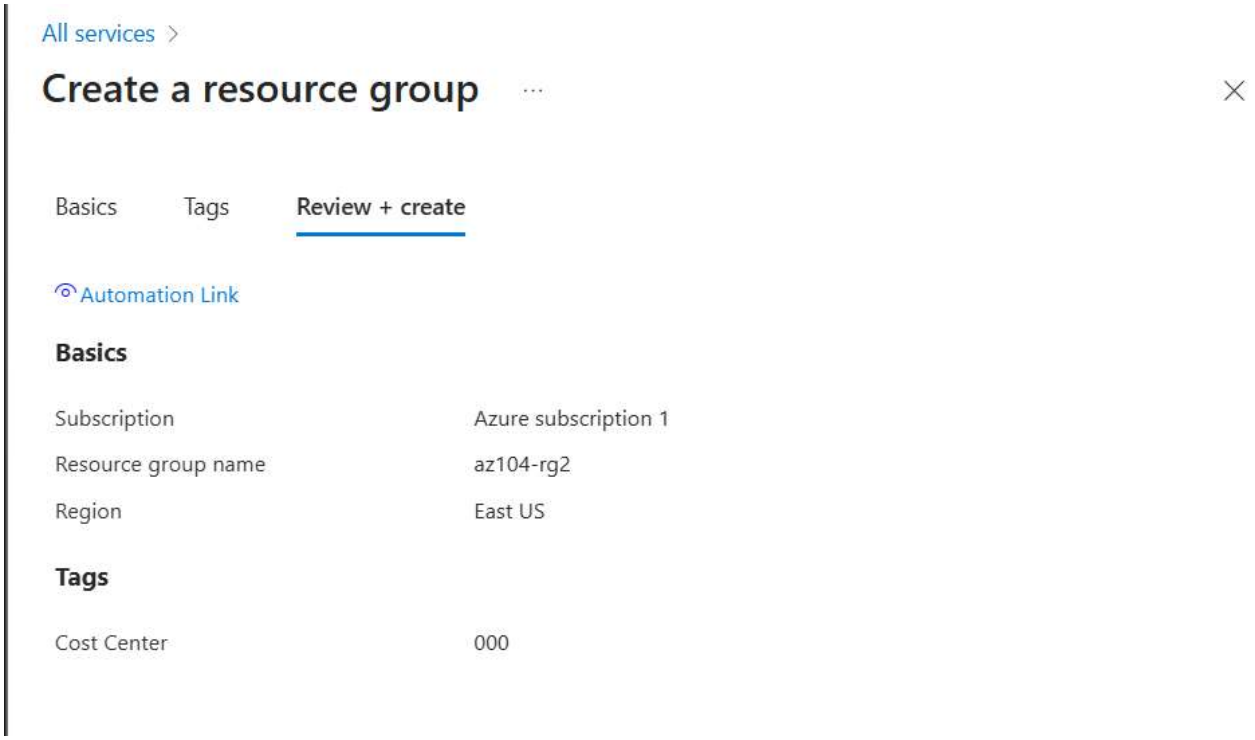
Lab 02b - Manage Governance via Azure Policy

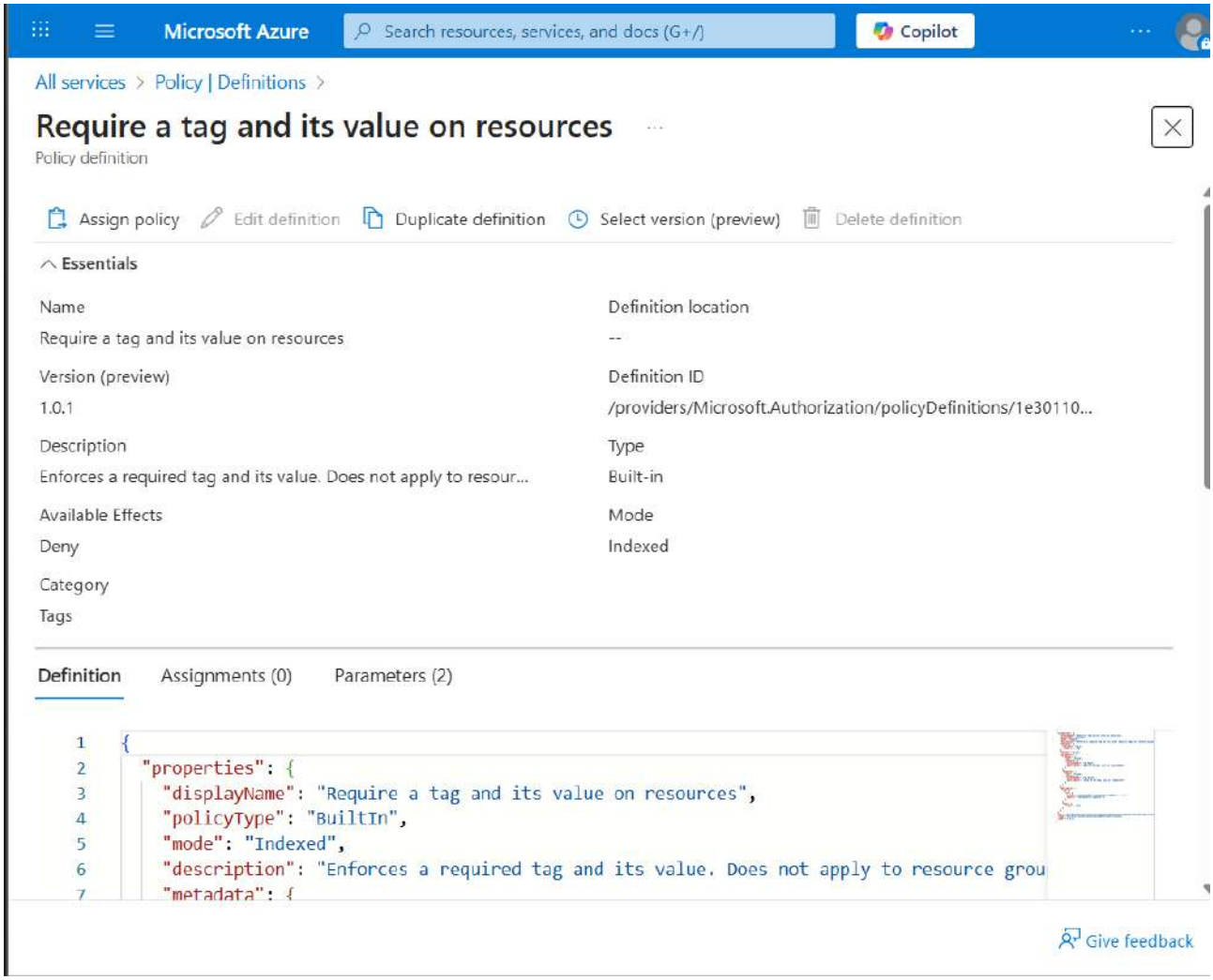
Lab introduction

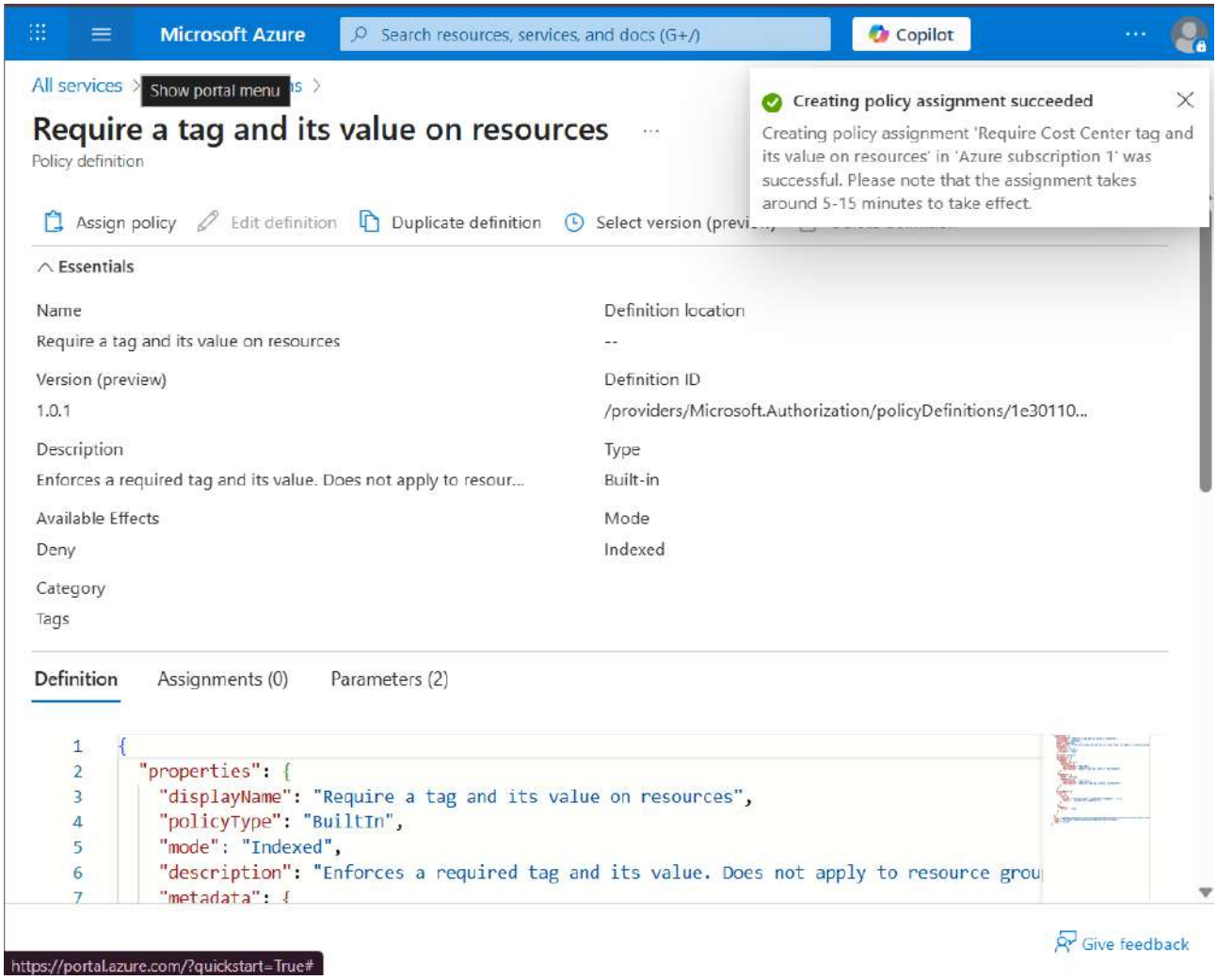
In this lab, you learn how to implement your organization's governance plans. You learn how Azure policies can ensure operational decisions are enforced across the organization. You learn how to use resource tagging to improve reporting.

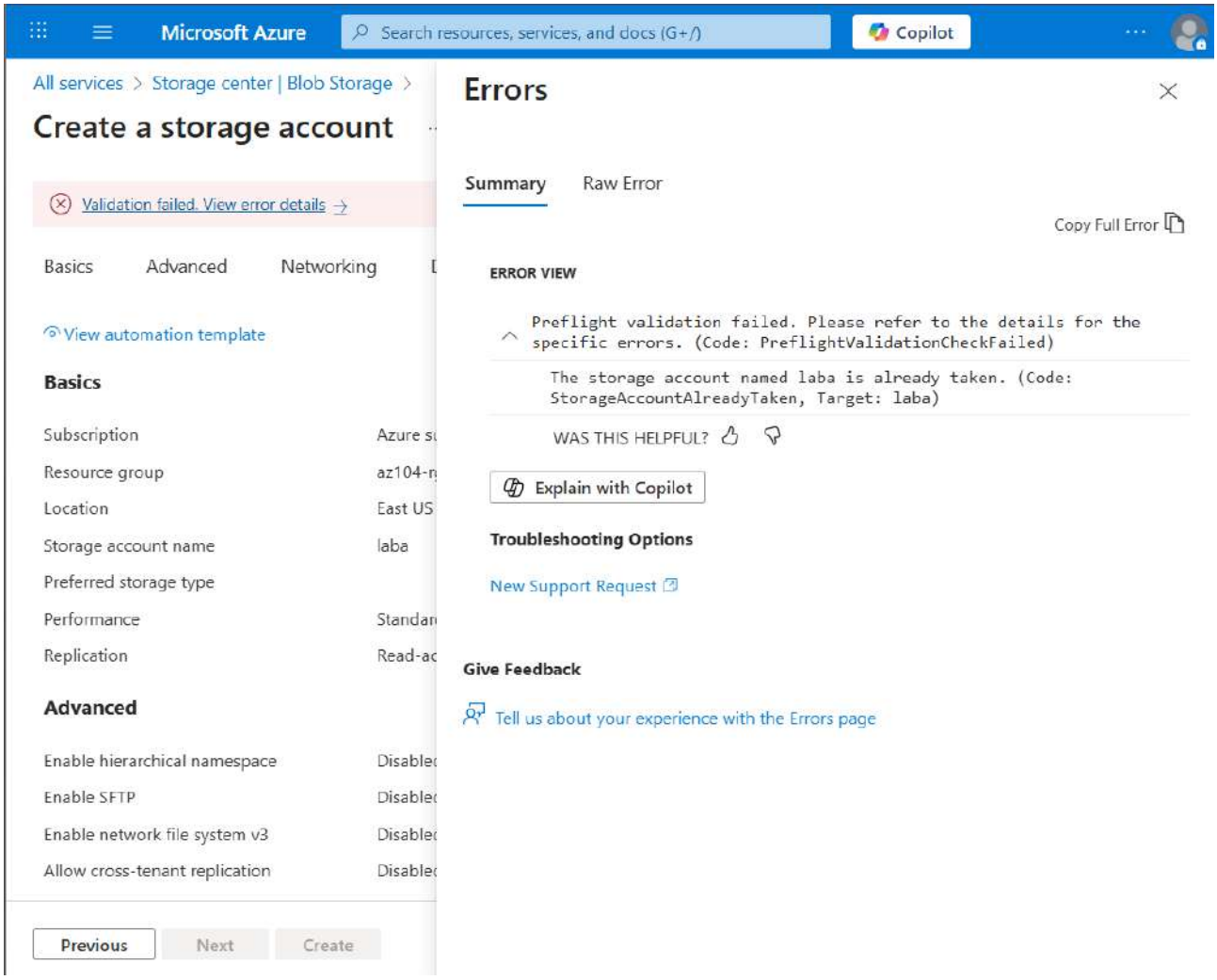
This lab requires an Azure subscription. Your subscription type may affect the availability of features in this lab. You may change the region, but the steps are written using **East US**.

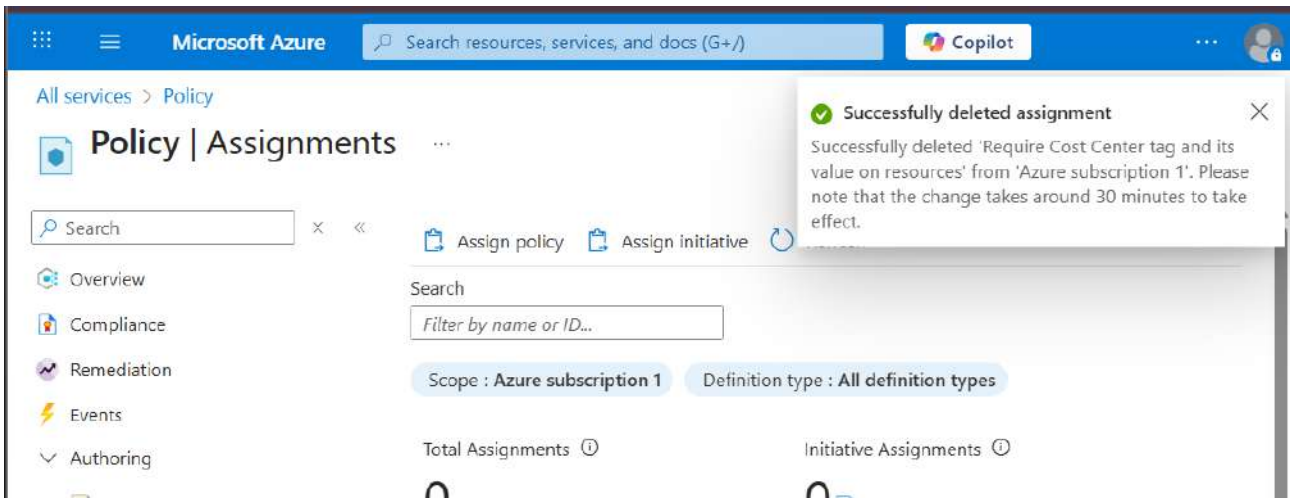
Task 1: Assign tags via the Azure portal

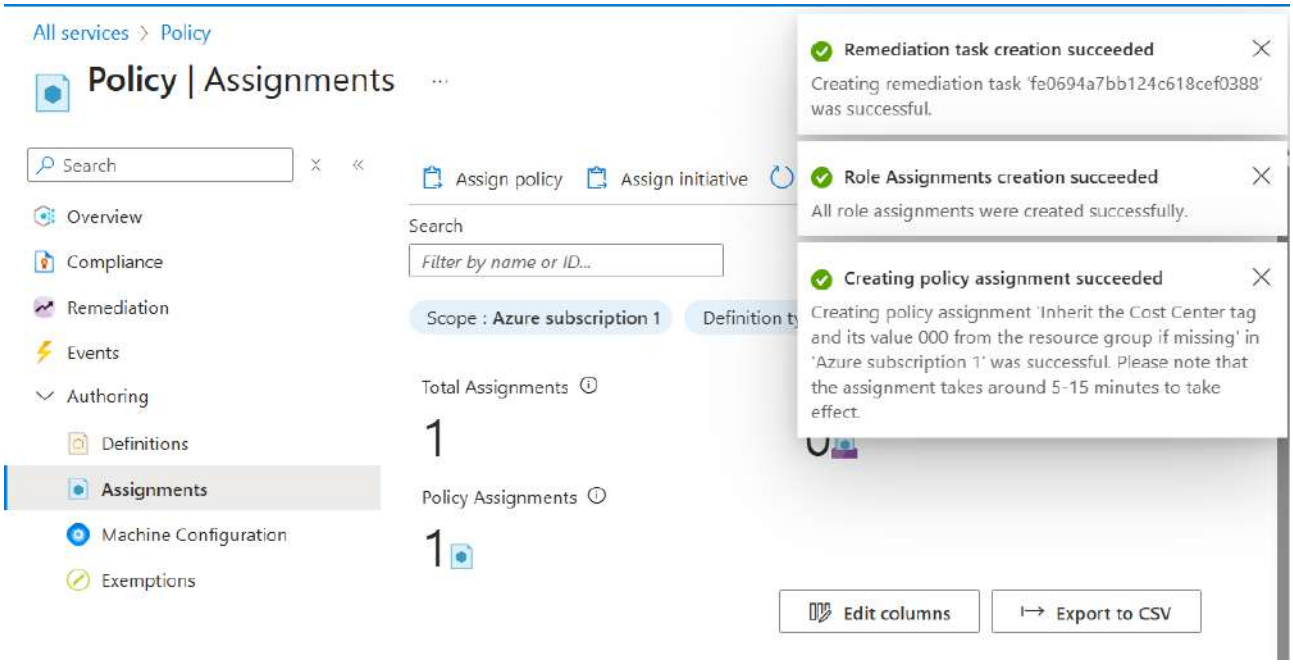


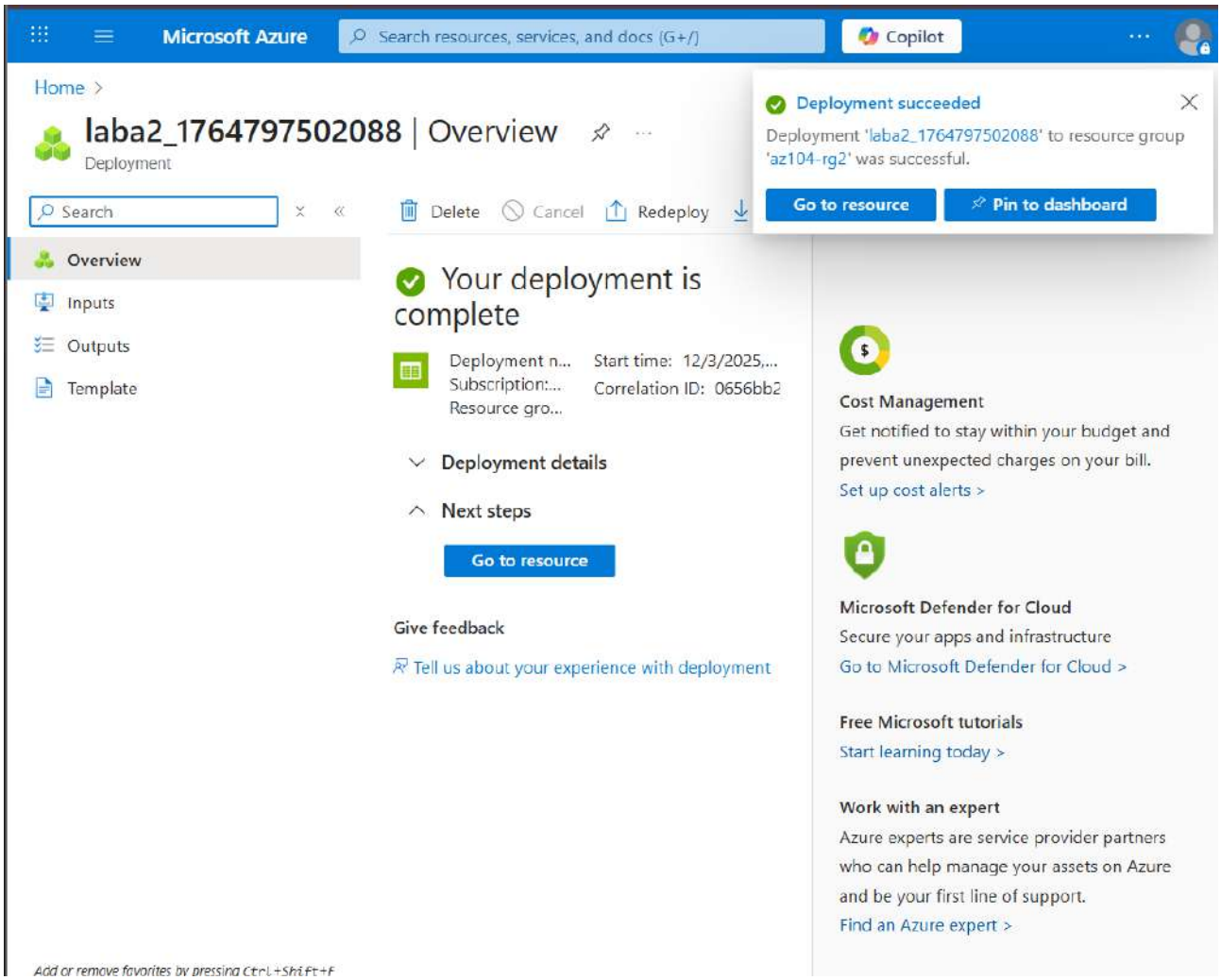

Microsoft Azure
Search resources, services, and docs (G+/)
Copilot
All services > Policy | Definitions >
Require a tag and its value on resources
Policy definition
Assign policy
Edit definition
Duplicate definition
Select version (preview)
Delete definition
Essentials
Name
Require a tag and its value on resources
Version (preview)
1.0.1
Description
Enforces a required tag and its value. Does not apply to resour...
Available Effects
Deny
Category
Tags
Definition location
--
Definition ID
/providers/Microsoft.Authorization/policyDefinitions/1e30110...
Type
Built-in
Mode
Indexed
Definition
Assignments (0)
Parameters (2)
{
"properties": {
"displayName": "Require a tag and its value on resources",
"policyType": "BuiltIn",
"mode": "Indexed",
"description": "Enforces a required tag and its value. Does not apply to resource grou
"metadata": {
Give feedback

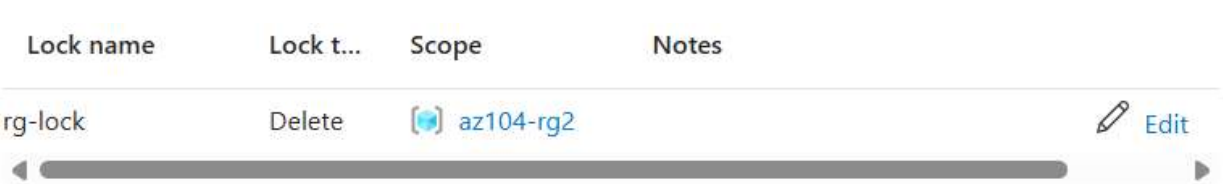

Microsoft Azure
Search resources, services, and docs (G+/)
Copilot
All services
Show portal menu
Creating policy assignment succeeded
Creating policy assignment 'Require Cost Center tag and its value on resources' in 'Azure subscription 1' was successful. Please note that the assignment takes around 5-15 minutes to take effect.
Require a tag and its value on resources
Policy definition
Assign policy
Edit definition
Duplicate definition
Select version (previ
Essentials
Name
Require a tag and its value on resources
Definition location
--
Version (preview)
1.0.1
Definition ID
/providers/Microsoft.Authorization/policyDefinitions/1e30110...
Description
Enforces a required tag and its value. Does not apply to resour...
Type
Built-in
Available Effects
Deny
Mode
Indexed
Category
Tags
Definition
Assignments (0)
Parameters (2)
{
"properties": {
"displayName": "Require a tag and its value on resources",
"policyType": "BuiltIn",
"mode": "Indexed",
"description": "Enforces a required tag and its value. Does not apply to resource grou
"metadata": {
Give feedback
https://portal.azure.com/?quickstart=True#

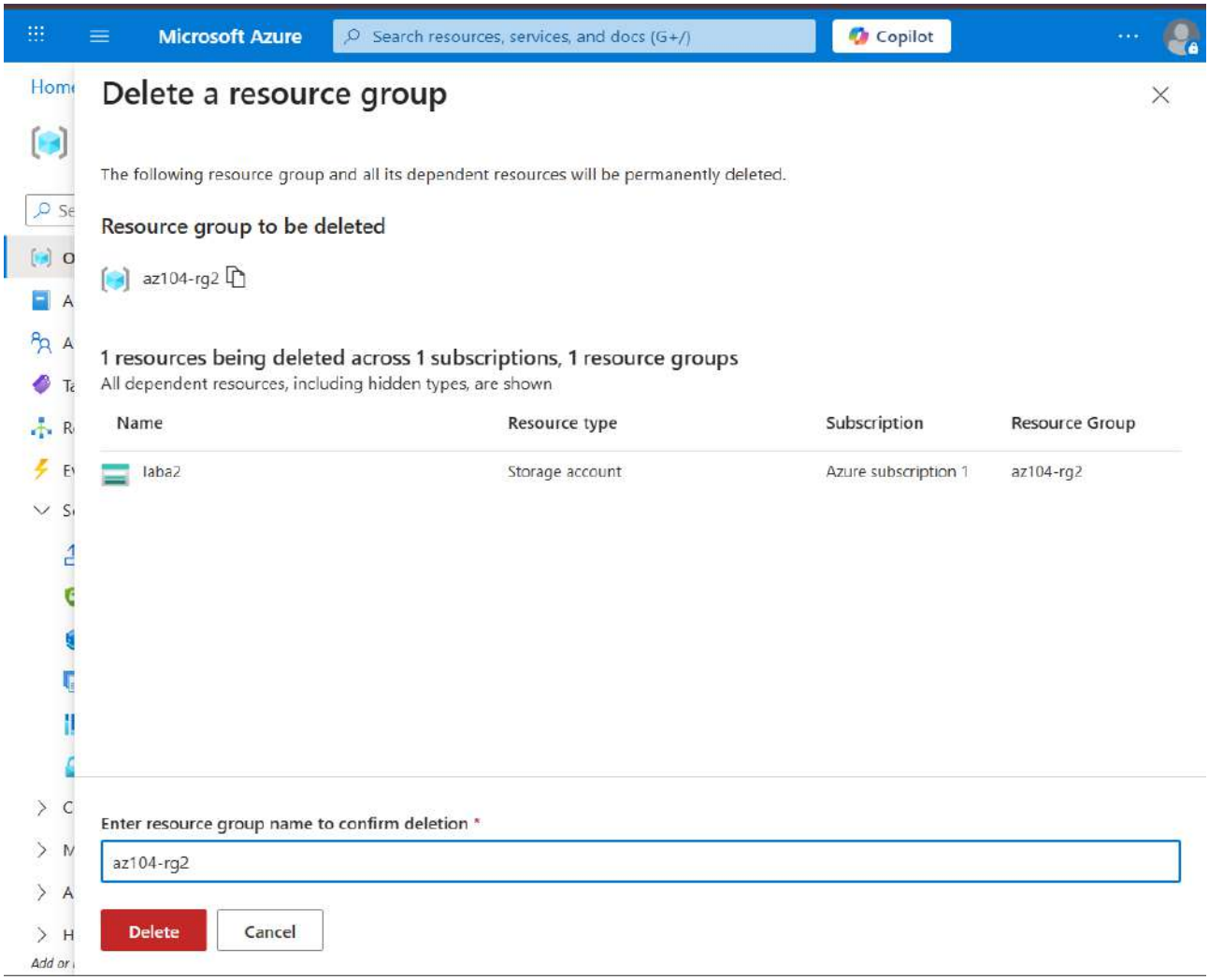

Microsoft Azure
Search resources, services, and docs (G+/)
Copilot
All services > Storage center | Blob Storage >
Create a storage account
Validation failed. View error details
Basics
Advanced
Networking
View automation template
Basics
Subscription
Resource group
Location
East US
Storage account name
laba
Preferred storage type
Performance
Replication
Advanced
Enable hierarchical namespace
Enable SFTP
Enable network file system v3
Allow cross-tenant replication
Previous
Next
Create
Errors
Summary
Raw Error
Copy Full Error
ERROR VIEW
Preflight validation failed. Please refer to the details for the specific errors. (Code: PreflightValidationCheckFailed)
The storage account named laba is already taken. (Code: StorageAccountAlreadyTaken, Target: laba)
WAS THIS HELPFUL?
Explain with Copilot
Troubleshooting Options
New Support Request
Give Feedback
Tell us about your experience with the Errors page


Microsoft Azure
Search resources, services, and docs (G+/)
Copilot
All services > Policy
Policy | Assignments
Search
Overview
Compliance
Remediation
Events
Authoring
Assign policy
Assign initiative
Search
Filter by name or ID...
Scope : Azure subscription 1
Definition type : All definition types
Total Assignments
Initiative Assignments
Successfully deleted assignment
Successfully deleted 'Require Cost Center tag and its value on resources' from 'Azure subscription 1'. Please note that the change takes around 30 minutes to take effect.


All services > Policy
Policy | Assignments
Search
Overview
Compliance
Remediation
Events
Authoring
Definitions
Assignments
Machine Configuration
Exemptions
Assign policy
Assign initiative
Search
Filter by name or ID...
Scope : Azure subscription 1
Total Assignments
1
Policy Assignments
1
Edit columns
Export to CSV
Remediation task creation succeeded
Creating remediation task 'fe0694a7bb124c618cef0388' was successful.
Role Assignments creation succeeded
All role assignments were created successfully.
Creating policy assignment succeeded
Creating policy assignment 'Inherit the Cost Center tag and its value 000 from the resource group if missing' in 'Azure subscription 1' was successful. Please note that the assignment takes around 5-15 minutes to take effect.

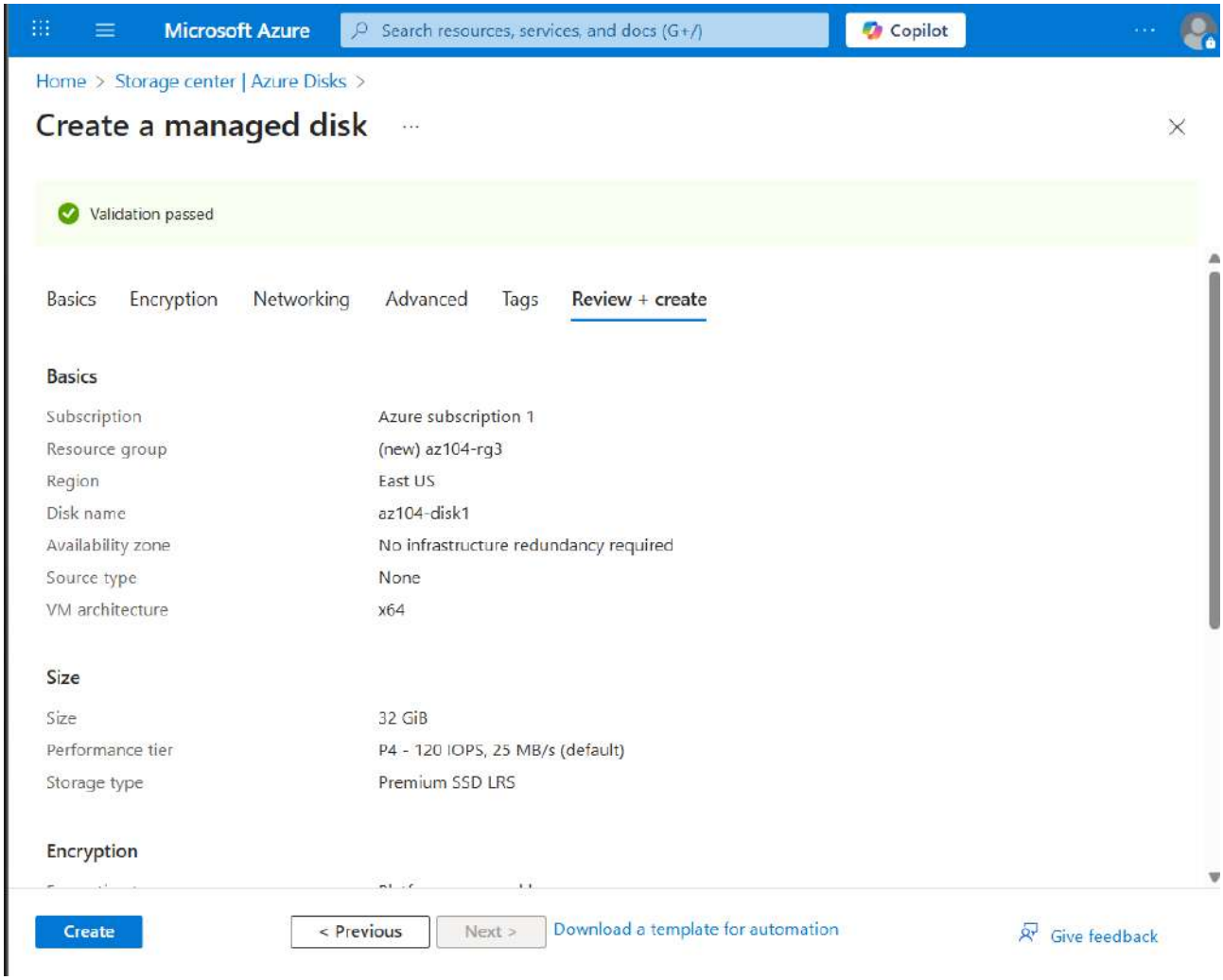

Microsoft Azure
Search resources, services, and docs (G+/)
Copilot
Home >
laba2_1764797502088 | Overview
Deployment
Search
Overview
Inputs
Outputs
Template
Delete
Cancel
Redeploy
Your deployment is complete
Deployment n...
Subscription:...
Resource gro...
Start time: 12/3/2025,...
Correlation ID: 0656bb2
Deployment details
Next steps
Go to resource
Give feedback
Tell us about your experience with deployment
Deployment succeeded
Deployment 'laba2_1764797502088' to resource group 'az104-rg2' was successful.
Go to resource
Pin to dashboard
Cost Management
Get notified to stay within your budget and prevent unexpected charges on your bill.
Set up cost alerts >
Microsoft Defender for Cloud
Secure your apps and infrastructure
Go to Microsoft Defender for Cloud >
Free Microsoft tutorials
Start learning today >
Work with an expert
Azure experts are service provider partners who can help manage your assets on Azure and be your first line of support.
Find an Azure expert >
Add or remove favorites by pressing Ctrl+Shift+F

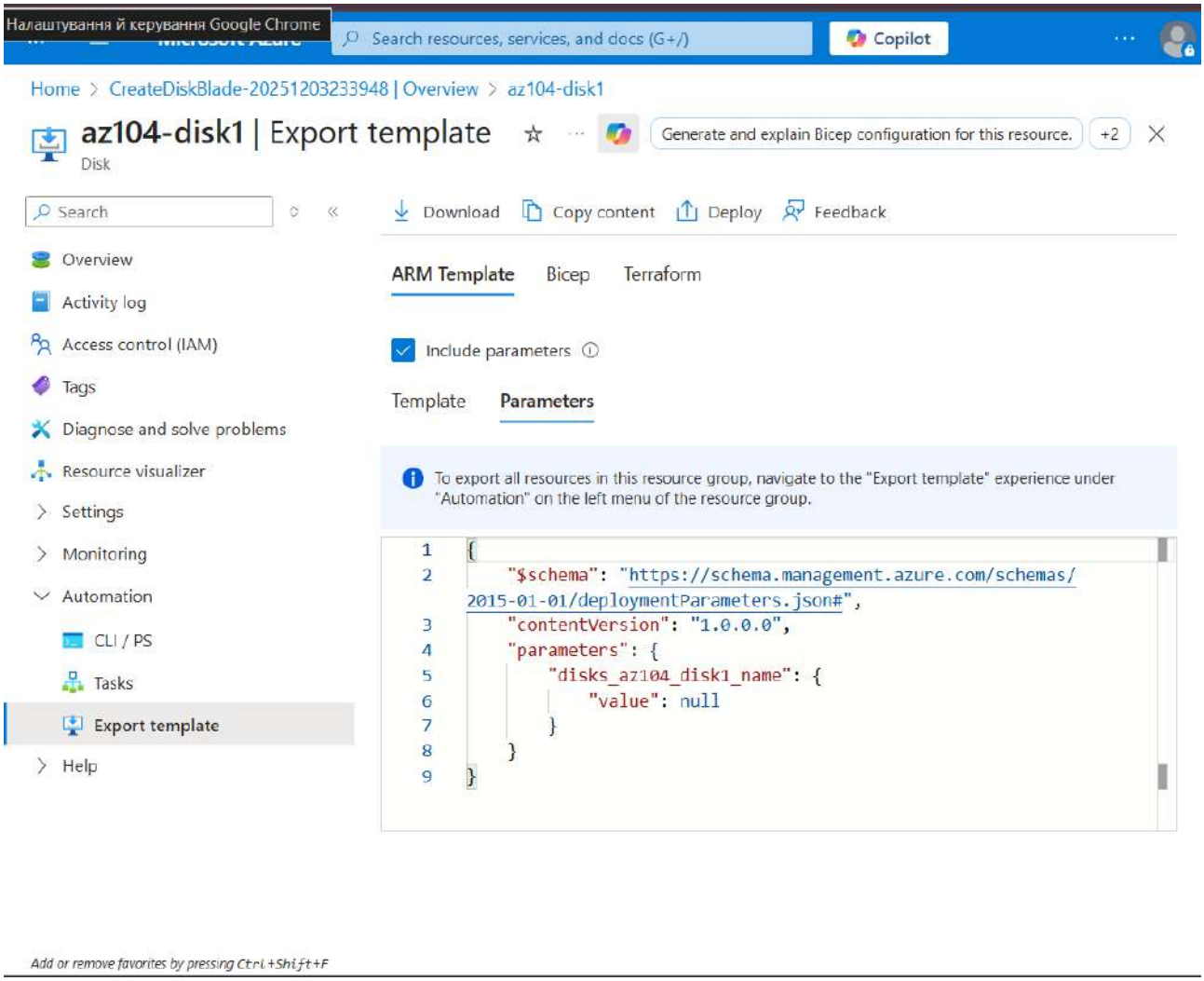

Lock name
Lock t...
Scope
Notes
rg-lock
Delete
az104-rg2
Edit

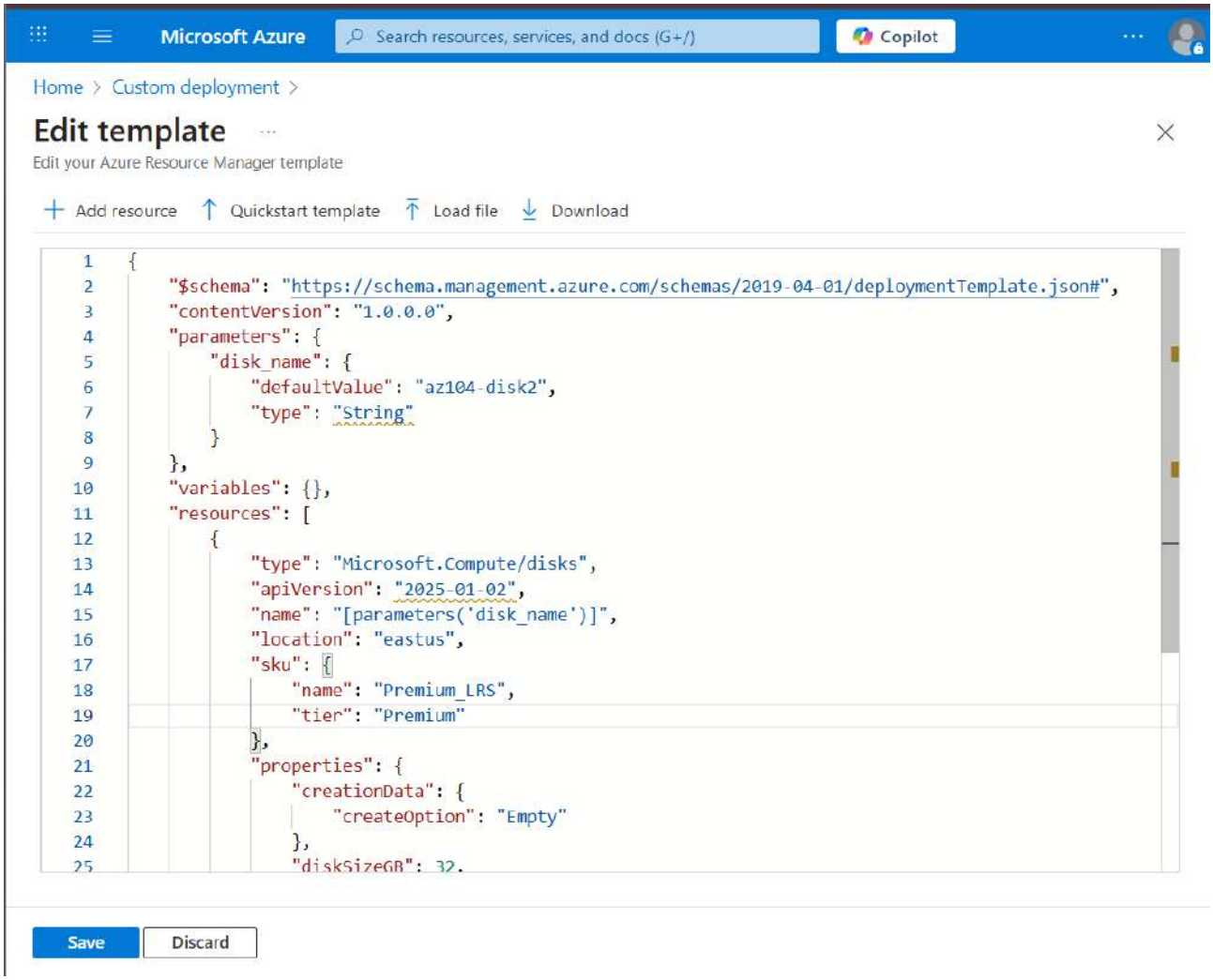


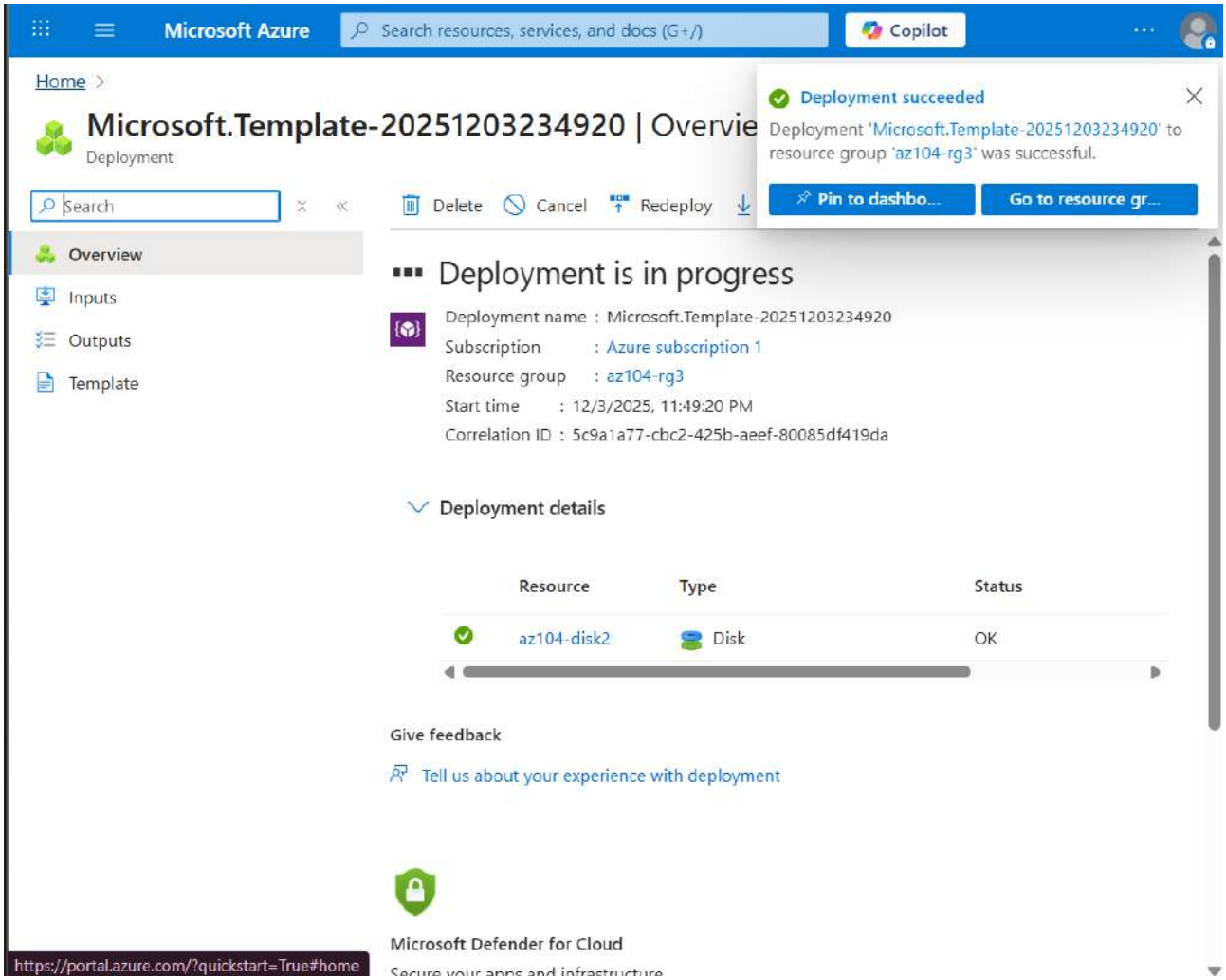
Lab 03 - Manage Azure resources by using Azure Resource Manager Templates

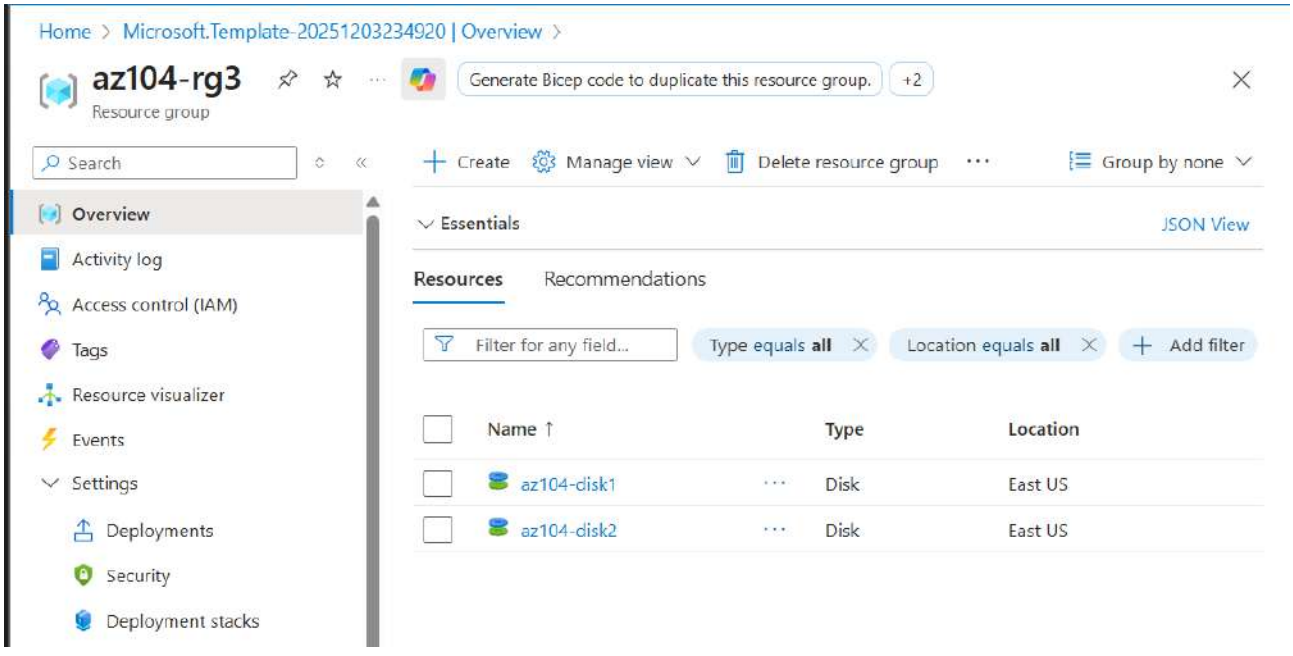
Task 1: Create an Azure Resource Manager template


Microsoft Azure
Search resources, services, and docs (G+/)
Copilot
Home > Storage center | Azure Disks >
Create a managed disk
Validation passed
Basics
Encryption
Networking
Advanced
Tags
Review + create
Basics
Subscription
Azure subscription 1
Resource group
(new) az104-rg3
Region
East US
Disk name
az104-disk1
Availability zone
No infrastructure redundancy required
Source type
None
VM architecture
x64
Size
Size
32 GiB
Performance tier
P4 - 120 IOPS, 25 MB/s (default)
Storage type
Premium SSD LRS
Encryption
Create
< Previous
Next >
Download a template for automation
Give feedback

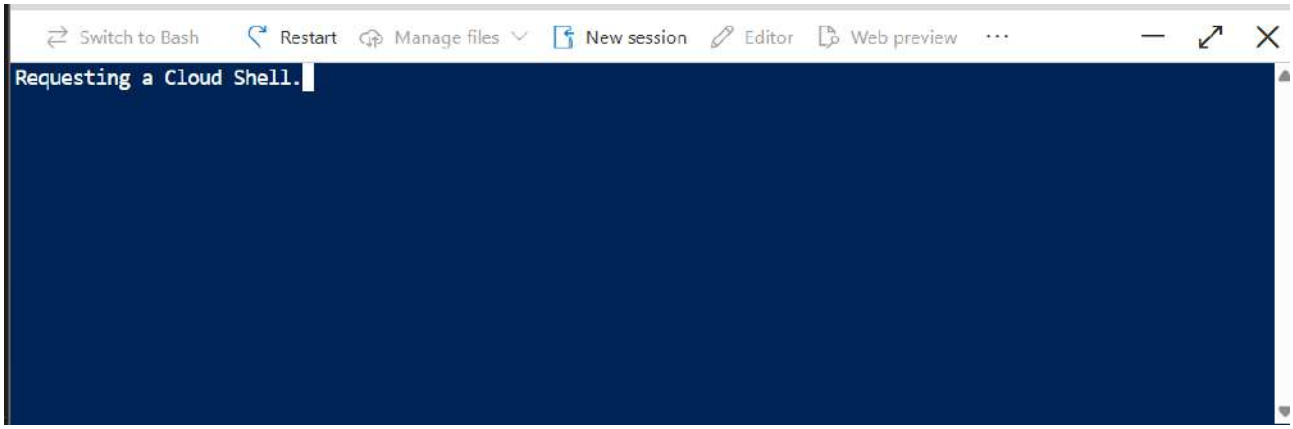

Налаштування й керування Google Chrome
Search resources, services, and docs (G+/)
Copilot
Home > CreateDiskBlade-20251203233948 | Overview > az104-disk1
az104-disk1 | Export template
Disk
Generate and explain Bicep configuration for this resource.
+2
Search
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Resource visualizer
Settings
Monitoring
Automation
CLI / PS
Tasks
Export template
Help
Download
Copy content
Deploy
Feedback
ARM Template
Bicep
Terraform
Include parameters
Template
Parameters
To export all resources in this resource group, navigate to the "Export template" experience under "Automation" on the left menu of the resource group.
{
"$schema": "https://schema.management.azure.com/schemas/2015-01-01/deploymentParameters.json#",
"contentVersion": "1.0.0.0",
"parameters": {
"disks_az104_disk1_name": {
"value": null
}
}
}
Add or remove favorites by pressing Ctrl+Shift+F

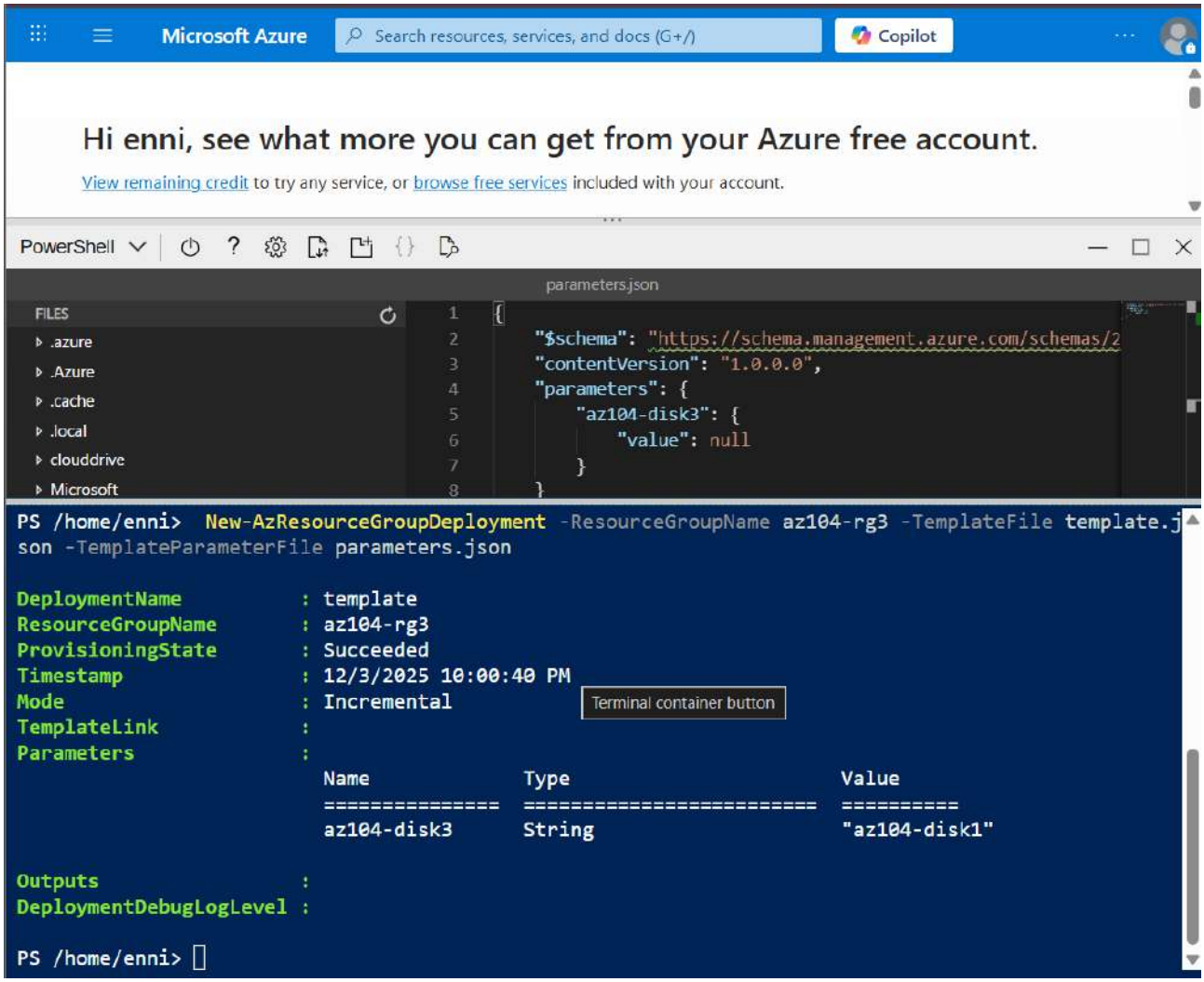

Microsoft Azure
Search resources, services, and docs (G+/)
Copilot
Home > Custom deployment >
Edit template
Edit your Azure Resource Manager template
Add resource
Quickstart template
Load file
Download
{
"$schema": "https://schema.management.azure.com/schemas/2019-04-01/deploymentTemplate.json#",
"contentVersion": "1.0.0.0",
"parameters": {
"disk_name": {
"defaultValue": "az104-disk2",
"type": "String"
}
},
"variables": {},
"resources": [
{
"type": "Microsoft.Compute/disks",
"apiVersion": "2025-01-02",
"name": "[parameters('disk_name')]",
"location": "eastus",
"sku": {
"name": "Premium_LRS",
"tier": "Premium"
},
"properties": {
"creationData": {
"createOption": "Empty"
},
"diskSizeGB": 32,
Save
Discard

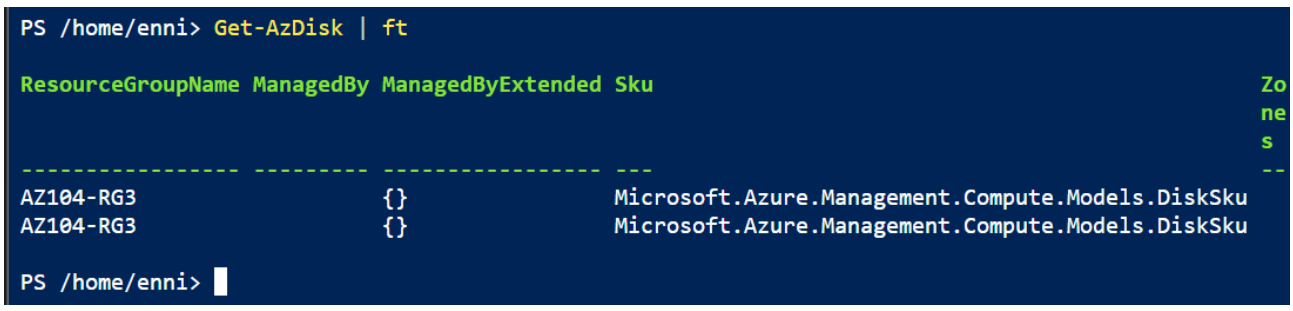




Task 3: Configure the Cloud Shell and deploy a template with PowerShell





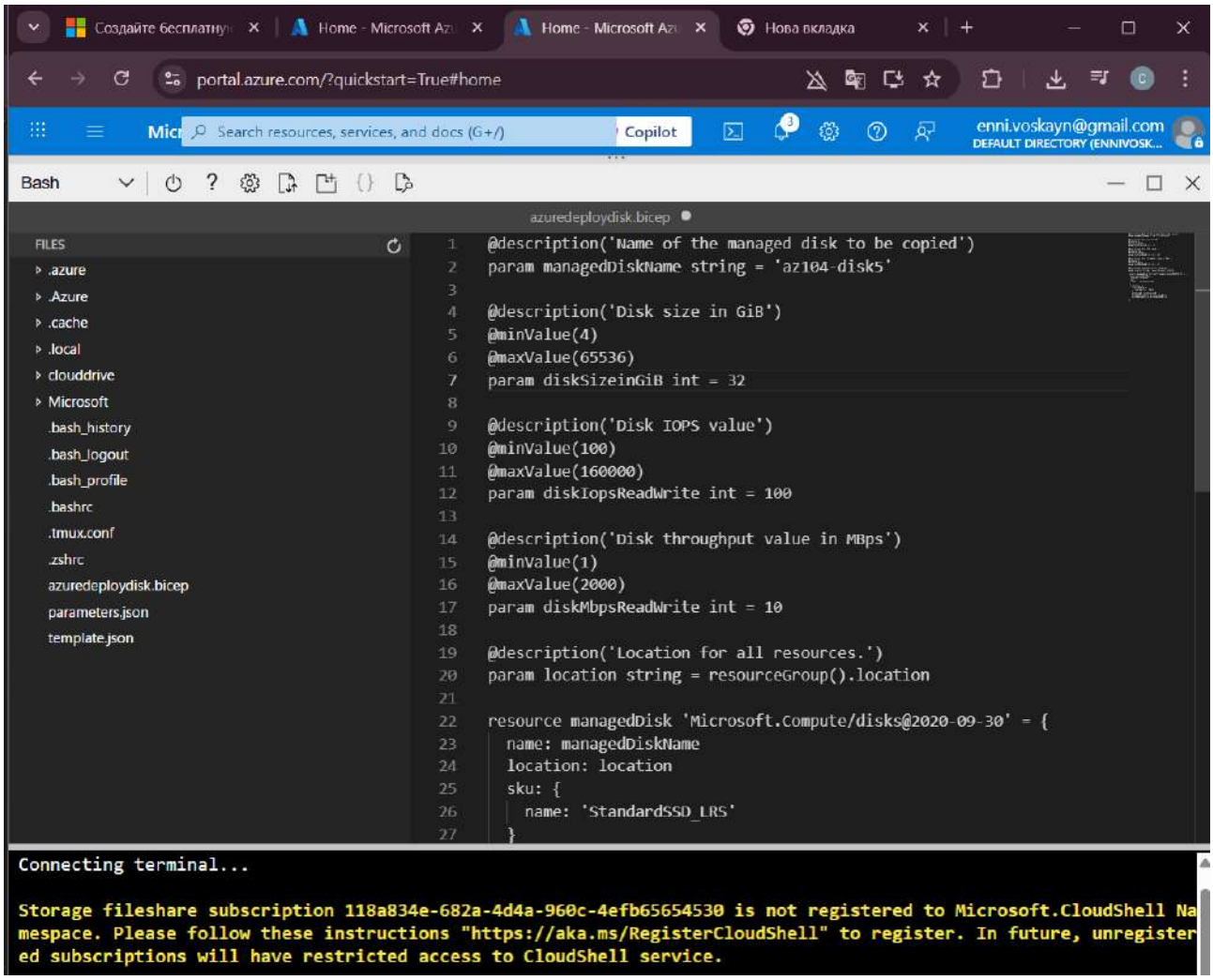


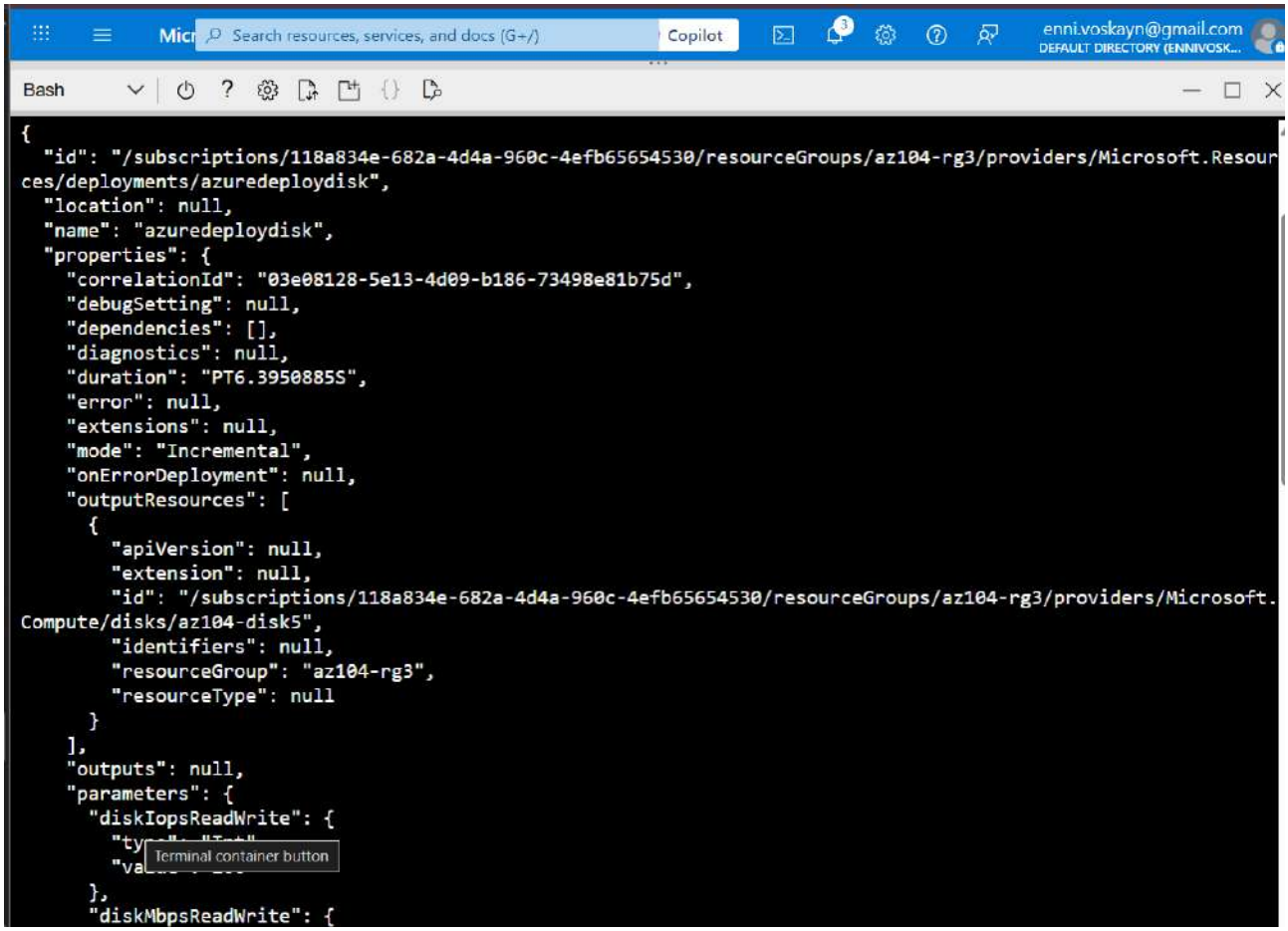
Task 4: Deploy a template with the CLI

```
}
enni [ ~ ]$  az disk list --resource-group az104-rg3 --output table
Name         ResourceGroup    Location    Zones    Sku          SizeGb    ProvisioningState
-----------  ---------------  ----------  -------  -----------  --------  -------------------
az104-disk1  az104-rg3        eastus               Premium_LRS  32        Succeeded
az104-disk2  az104-rg3                            Premium_LRS  32        Succeeded
enni [ ~ ]$
```

Terminal container button

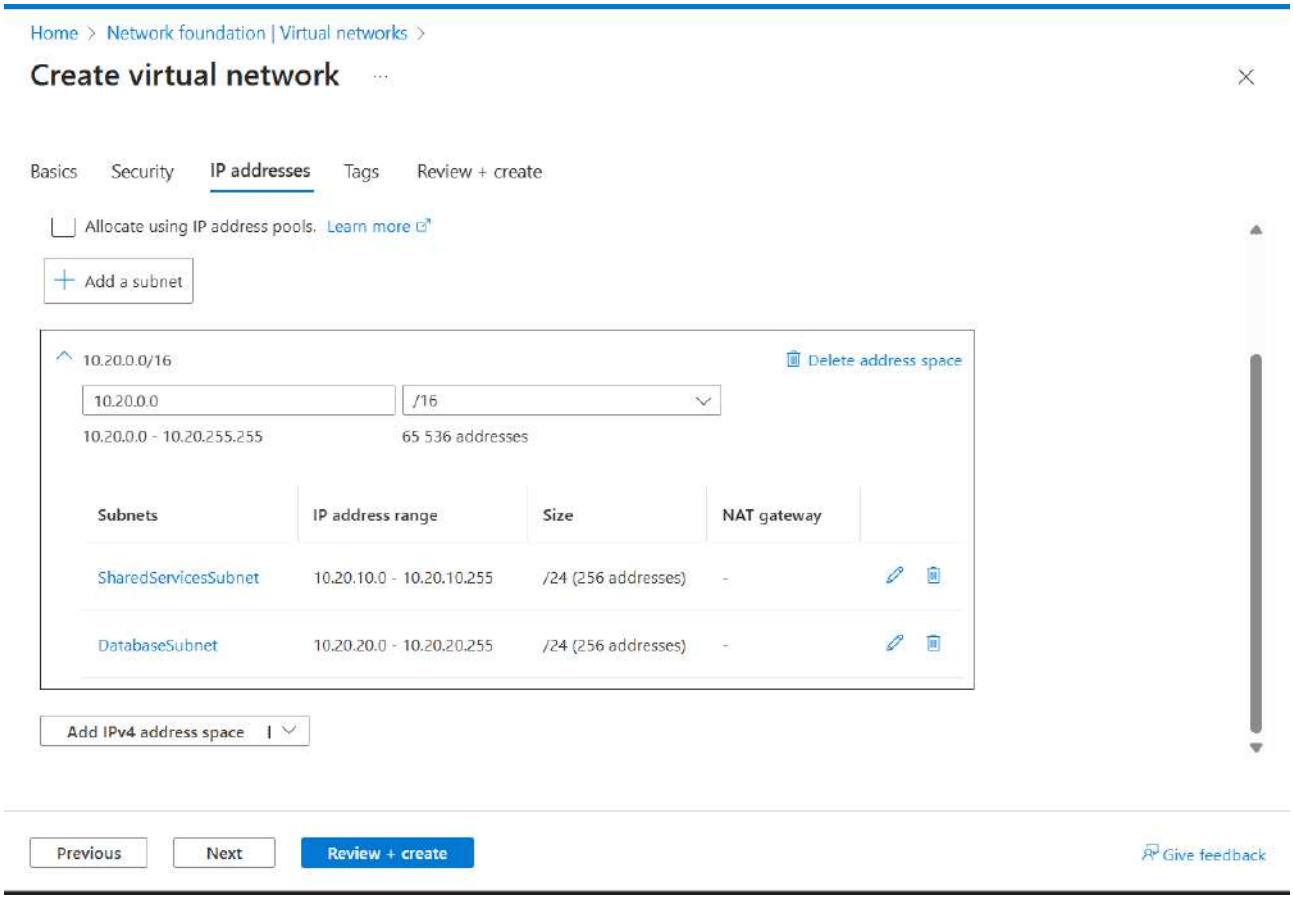
Task 5: Deploy a resource by using Azure Bicep

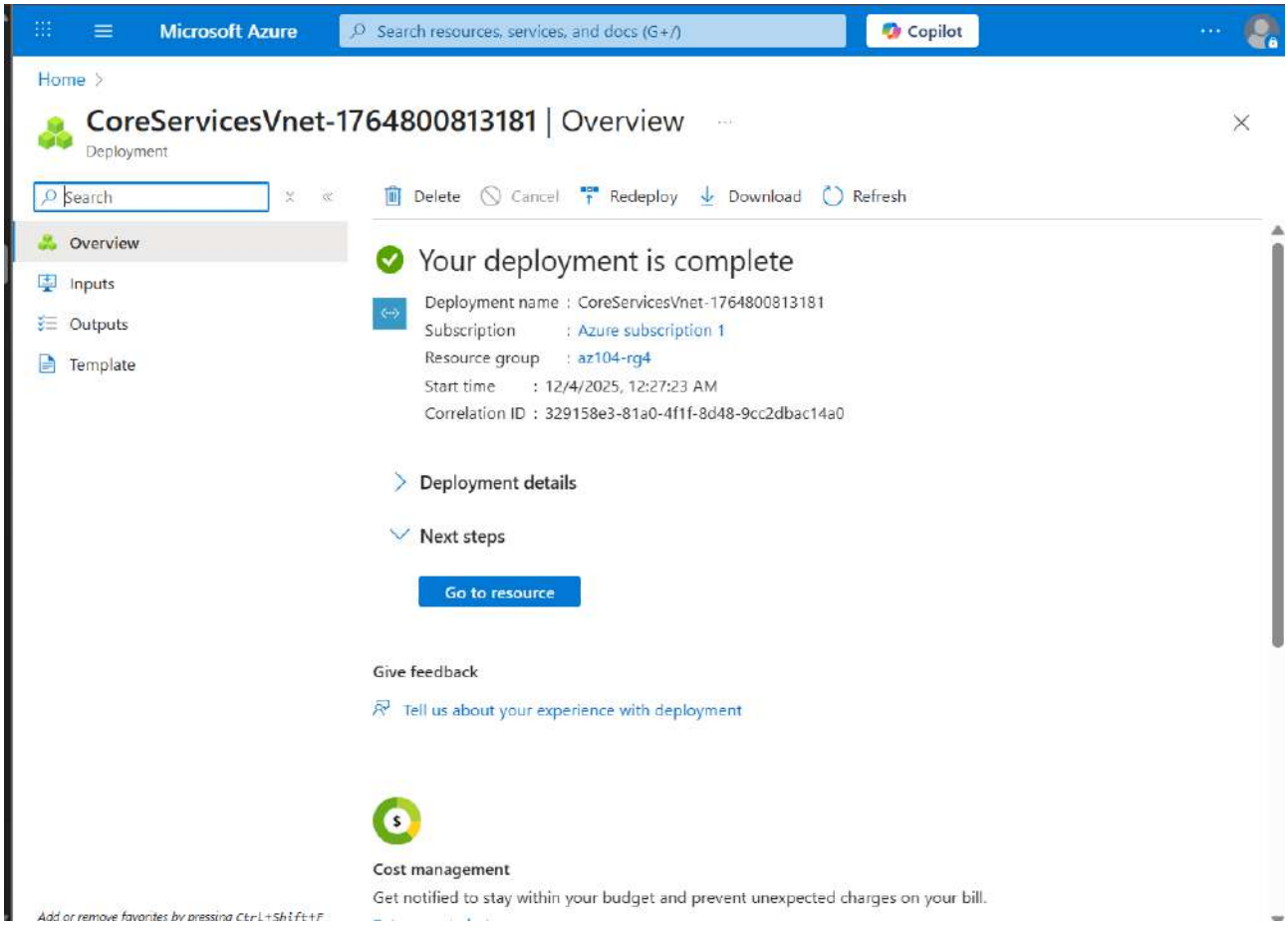




Lab 04 - Implement Virtual Networking

Task 1: Create a virtual network with subnets using the portal





Task 2: Create a virtual network and subnets using a template

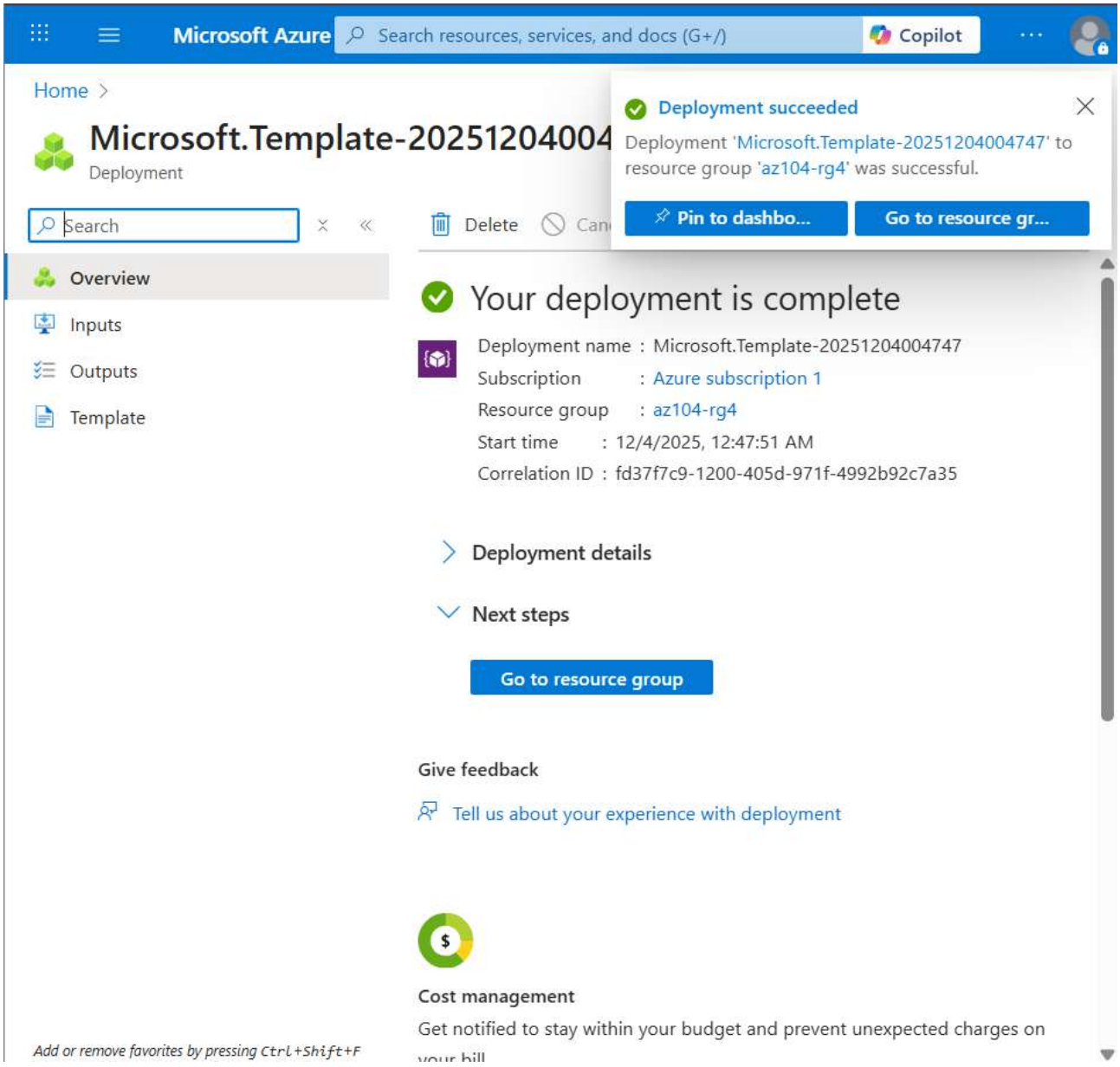
Edit template

Edit your Azure Resource Manager template

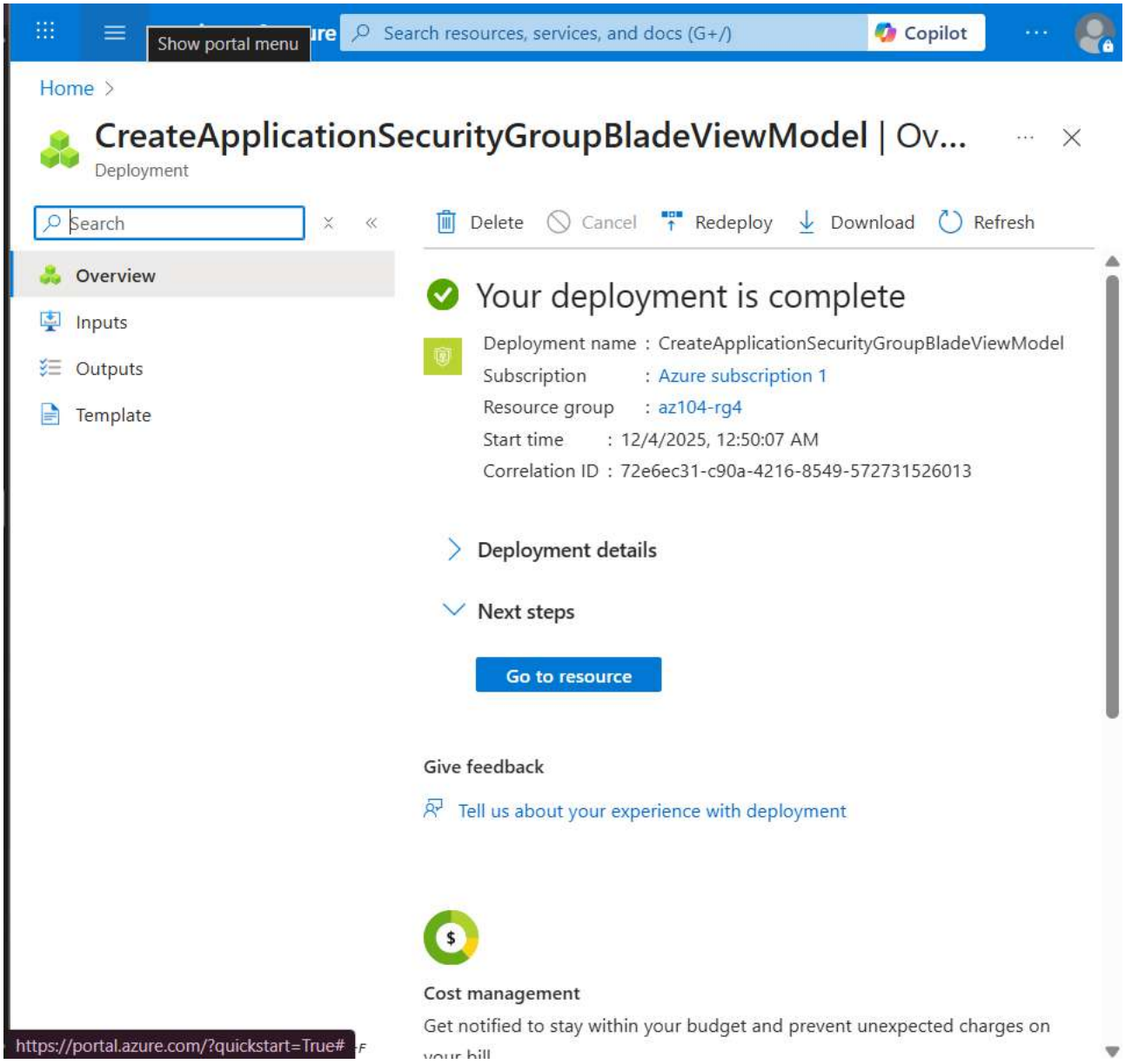
Add resource | Quickstart template | Load file | Download

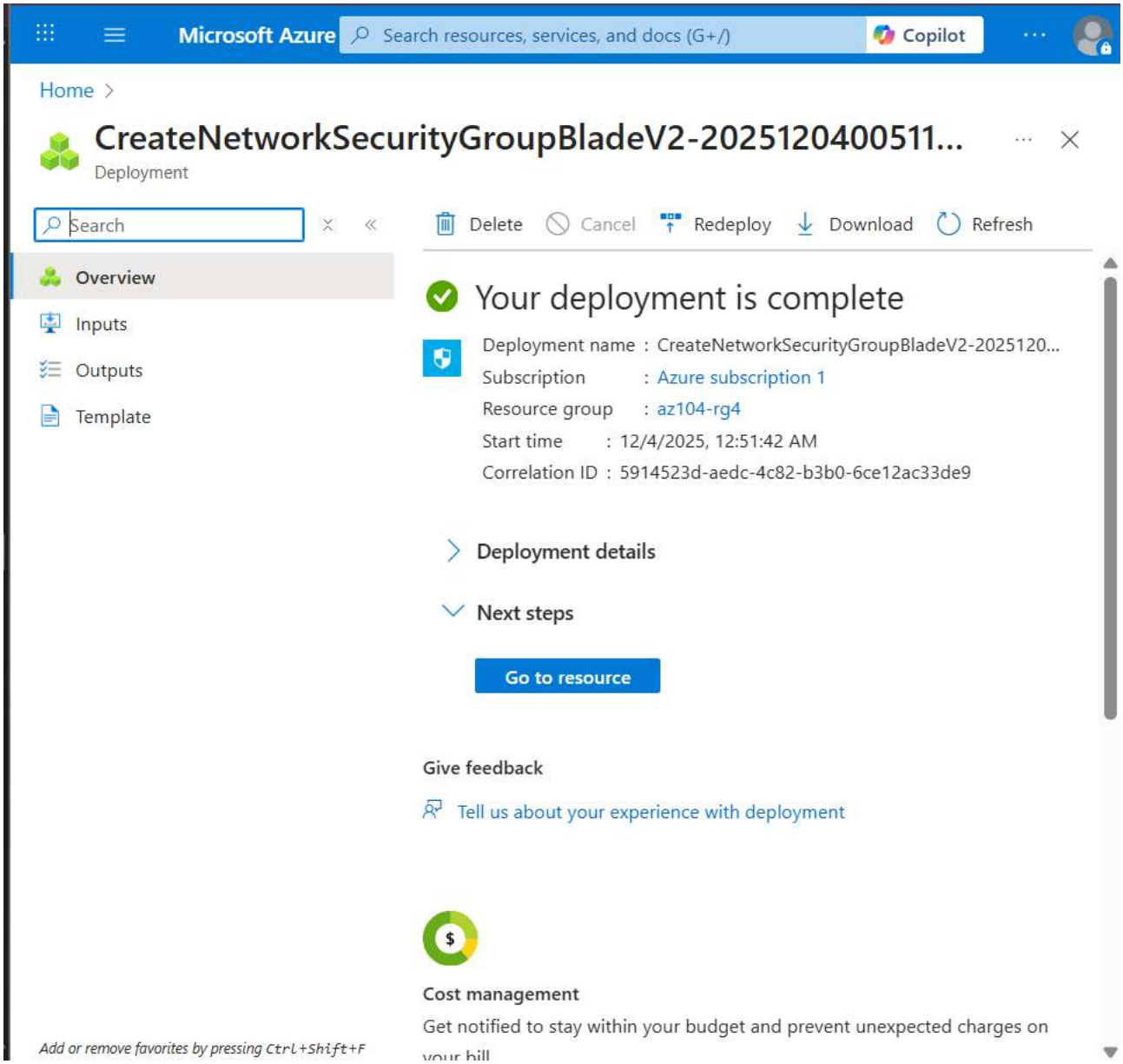
```
{
    "$schema": "https://schema.management.azure.com/schemas/2019-04-01/deploymentTemplate.json#",
    "contentVersion": "1.0.0.0",
    "parameters": {
        "virtualNetworks_ManufacturingVnet_name": {
            "defaultValue": "ManufacturingVnet",
            "type": "String"
        }
    },
    "variables": {},
    "resources": [
        {
            "type": "Microsoft.Network/virtualNetworks",
            "apiVersion": "2024-07-01",
            "name": "[parameters('virtualNetworks_ManufacturingVnet_name')]",
            "location": "eastus",
            "properties": {
                "addressSpace": {
                    "addressPrefixes": [
                        "10.30.0.0/16"
                    ]
                },
                "encryption": {
                    "enabled": false,
```

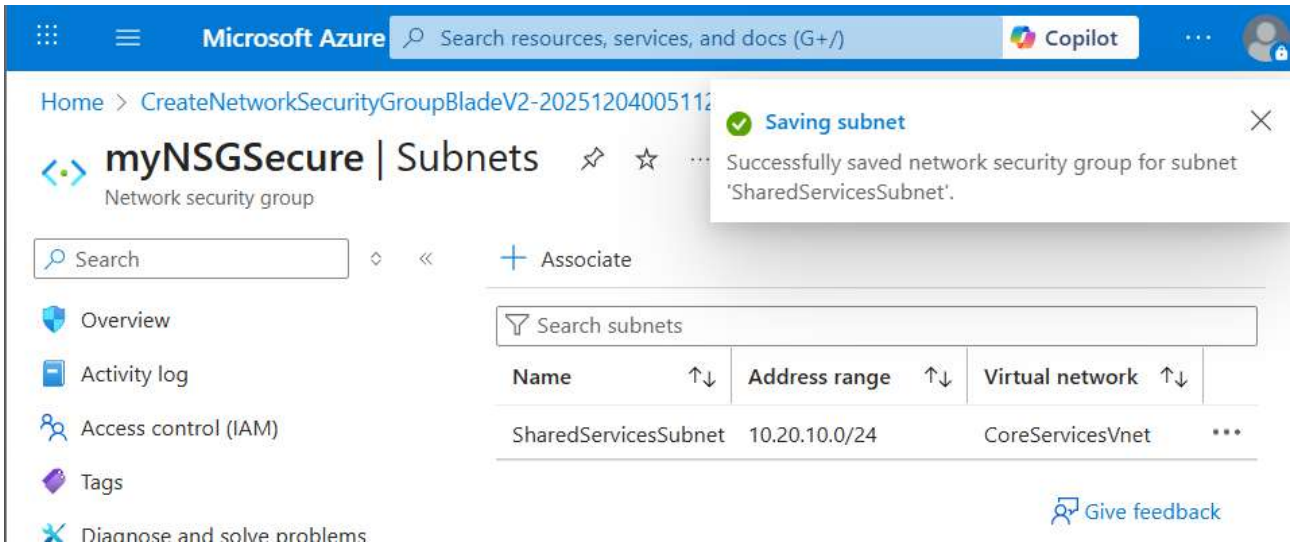
Save | Discard

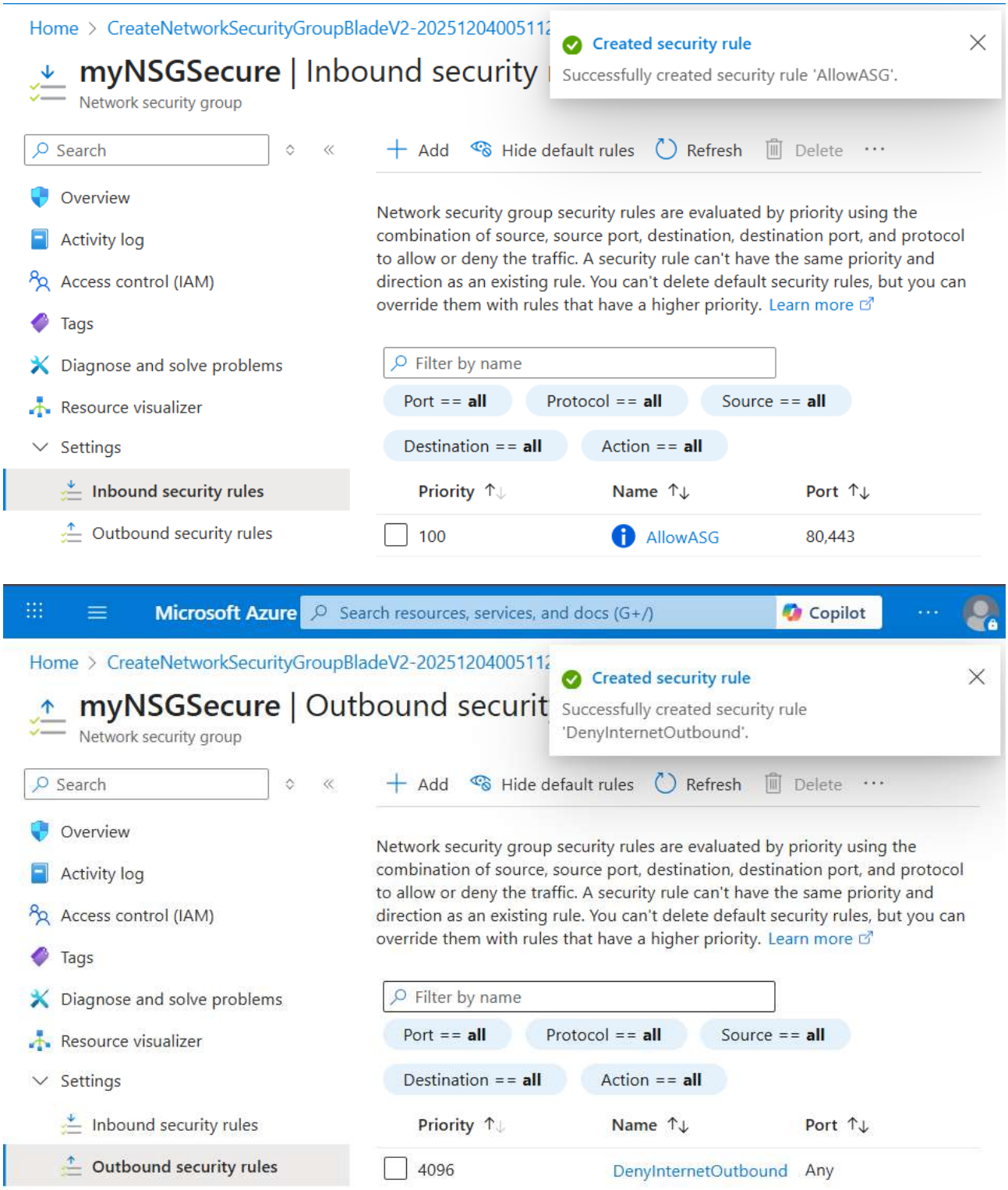


Task 3: Create and configure communication between an Application Security Group and a Network Security Group

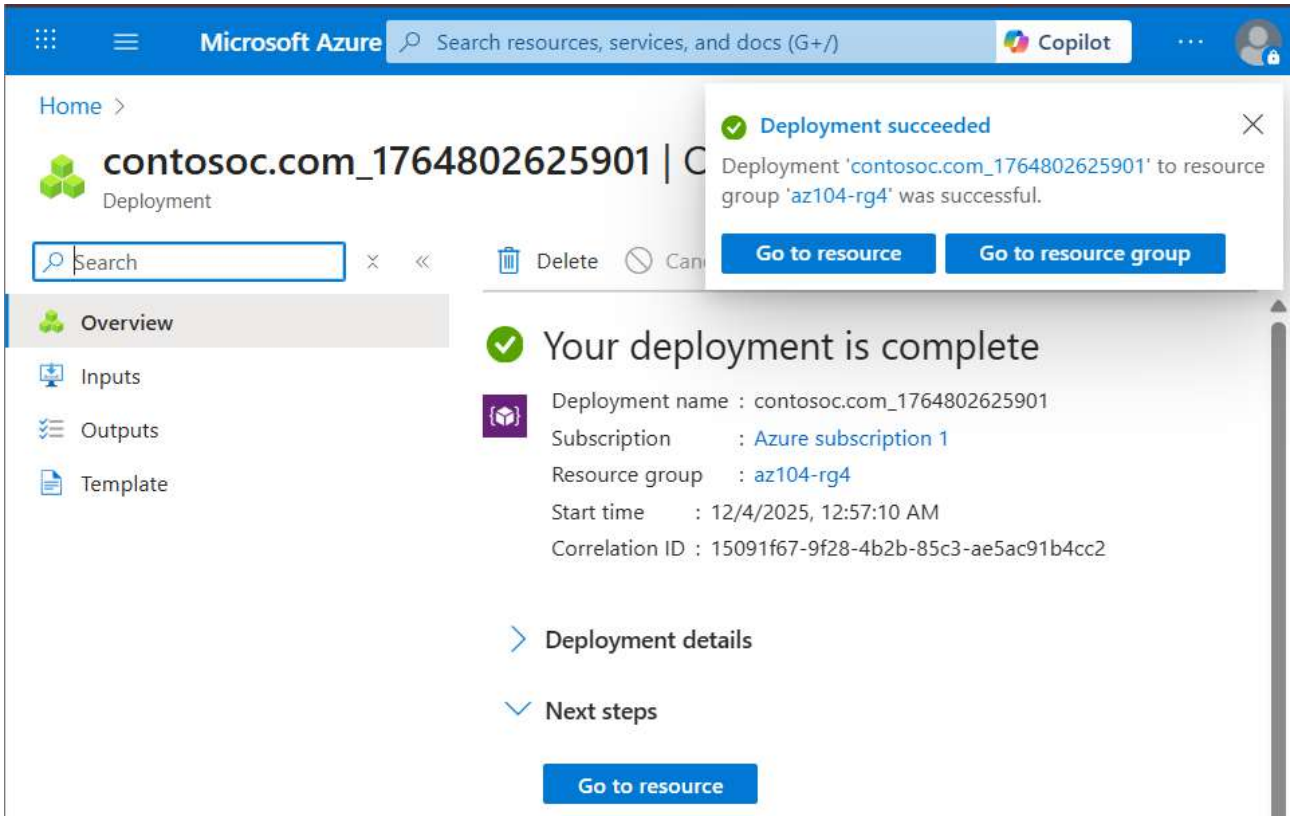

Show portal menu
Search resources, services, and docs (G+/)
Copilot
Home
CreateApplicationSecurityGroupBladeViewModel | Ov...
Deployment
Search
Overview
Inputs
Outputs
Template
Delete
Cancel
Redeploy
Download
Refresh
Your deployment is complete
Deployment name : CreateApplicationSecurityGroupBladeViewModel
Subscription : Azure subscription 1
Resource group : az104-rg4
Start time : 12/4/2025, 12:50:07 AM
Correlation ID : 72e6ec31-c90a-4216-8549-572731526013
Deployment details
Next steps
Go to resource
Give feedback
Tell us about your experience with deployment
Cost management
Get notified to stay within your budget and prevent unexpected charges on
https://portal.azure.com/?quickstart=True#


Microsoft Azure
Search resources, services, and docs (G+/)
Copilot
Home
CreateNetworkSecurityGroupBladeV2-2025120400511...
Deployment
Search
Overview
Inputs
Outputs
Template
Delete
Cancel
Redeploy
Download
Refresh
Your deployment is complete
Deployment name : CreateNetworkSecurityGroupBladeV2-2025120...
Subscription : Azure subscription 1
Resource group : az104-rg4
Start time : 12/4/2025, 12:51:42 AM
Correlation ID : 5914523d-aedc-4c82-b3b0-6ce12ac33de9
Deployment details
Next steps
Go to resource
Give feedback
Tell us about your experience with deployment
Cost management
Get notified to stay within your budget and prevent unexpected charges on your bill
Add or remove favorites by pressing Ctrl+Shift+F

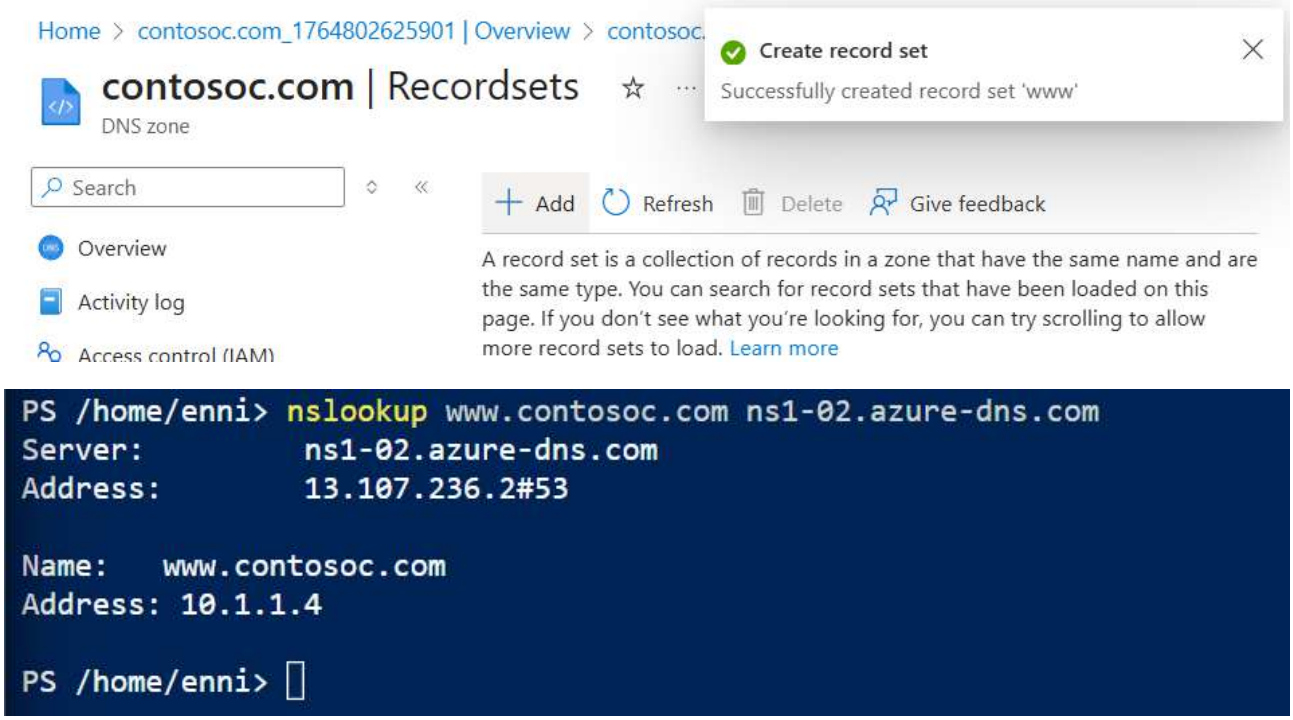

Microsoft Azure
Search resources, services, and docs (G+/)
Copilot
Home
CreateNetworkSecurityGroupBladeV2-20251204005112
myNSGSecure | Subnets
Network security group
Saving subnet
Successfully saved network security group for subnet 'SharedServicesSubnet'.
Search
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Associate
Search subnets
Name
Address range
Virtual network
SharedServicesSubnet
10.20.10.0/24
CoreServicesVnet
Give feedback



Task 4: Configure public and private Azure DNS zones



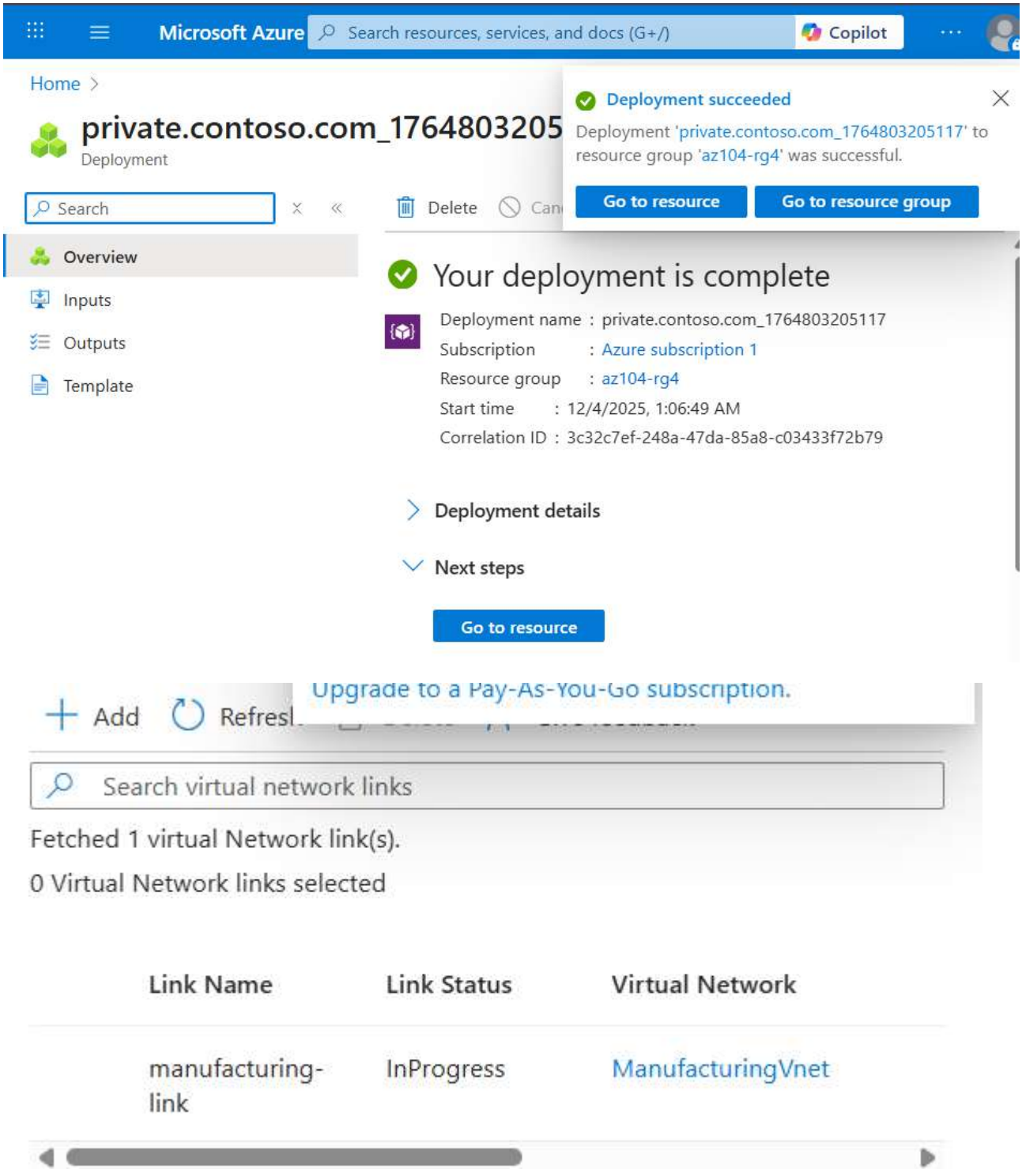
ns1-02.azure-dns.com.

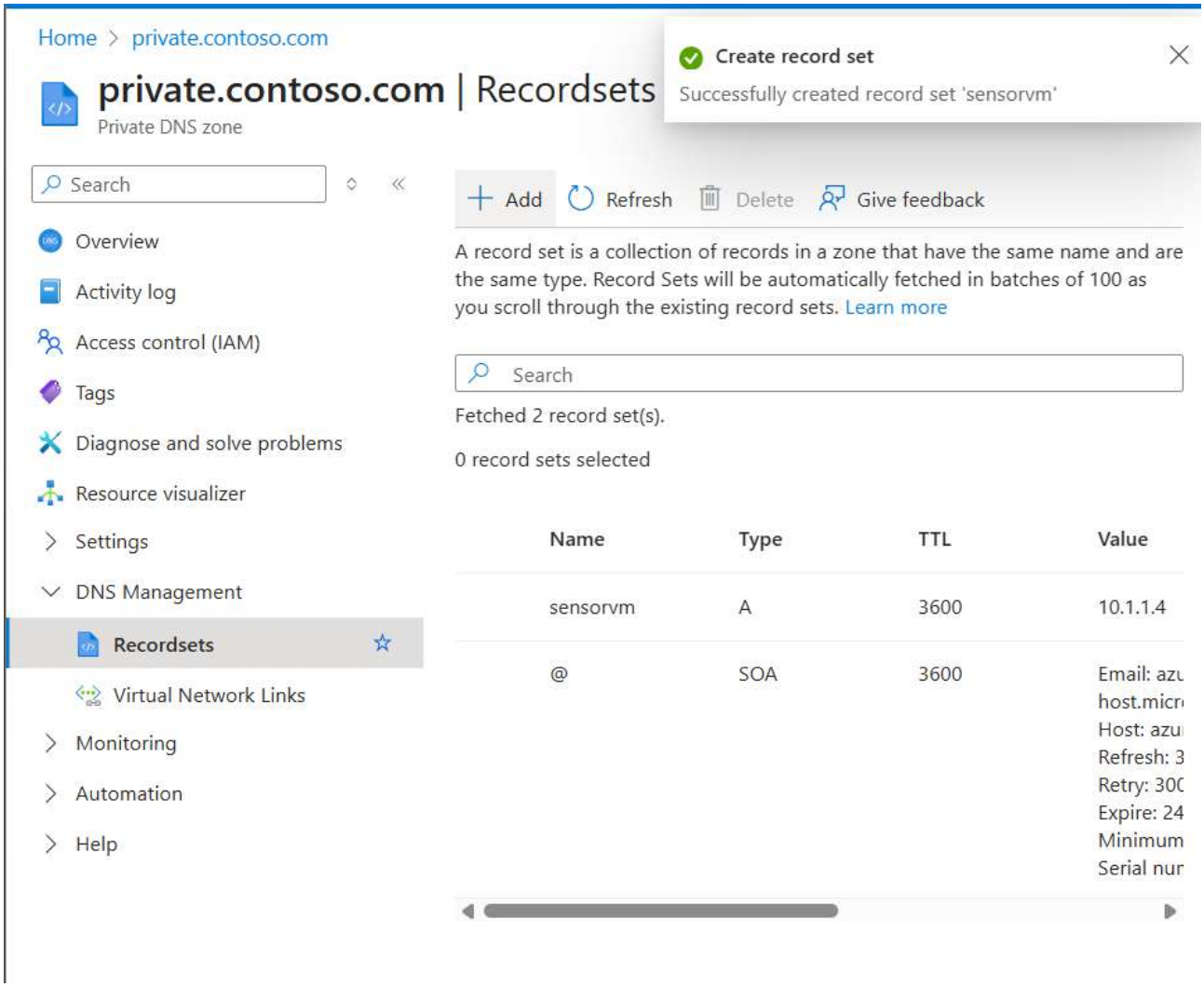



```
PS /home/enni> nslookup www.contosoc.com ns1-02.azure-dns.com
Server:         ns1-02.azure-dns.com
Address:        13.107.236.2#53

Name:   www.contosoc.com
Address: 10.1.1.4

PS /home/enni>
```

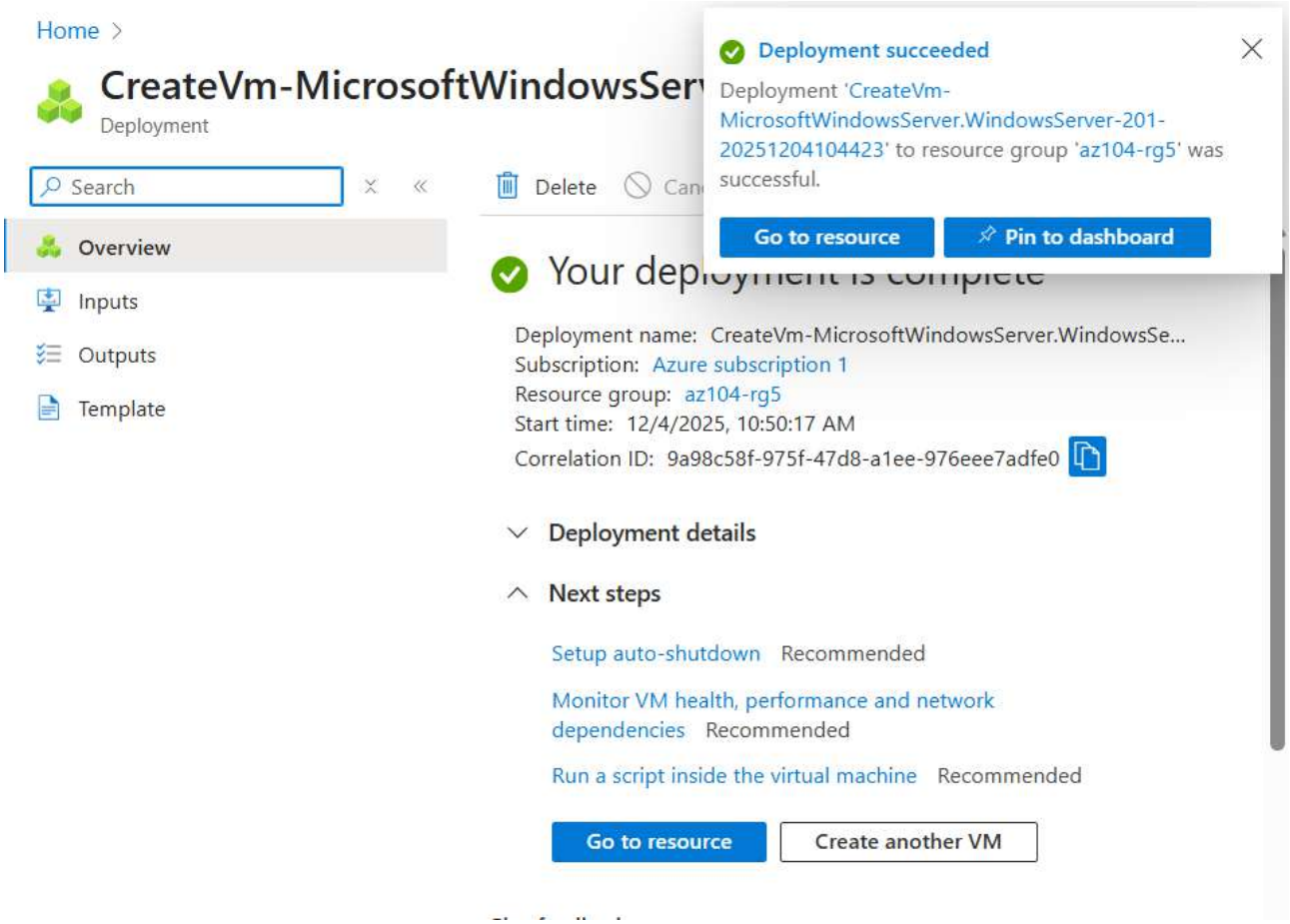

Microsoft Azure
Search resources, services, and docs (G+/)
Copilot
Home
private.contoso.com_1764803205
Deployment
Deployment succeeded
Deployment 'private.contoso.com_1764803205117' to resource group 'az104-rg4' was successful.
Go to resource
Go to resource group
Search
Delete
Overview
Inputs
Outputs
Template
Your deployment is complete
Deployment name : private.contoso.com_1764803205117
Subscription : Azure subscription 1
Resource group : az104-rg4
Start time : 12/4/2025, 1:06:49 AM
Correlation ID : 3c32c7ef-248a-47da-85a8-c03433f72b79
Deployment details
Next steps
Go to resource
Add
Refresh
Upgrade to a Pay-As-You-Go subscription.
Search virtual network links
Fetched 1 virtual Network link(s).
0 Virtual Network links selected
Link Name
Link Status
Virtual Network
manufacturing-link
InProgress
ManufacturingVnet



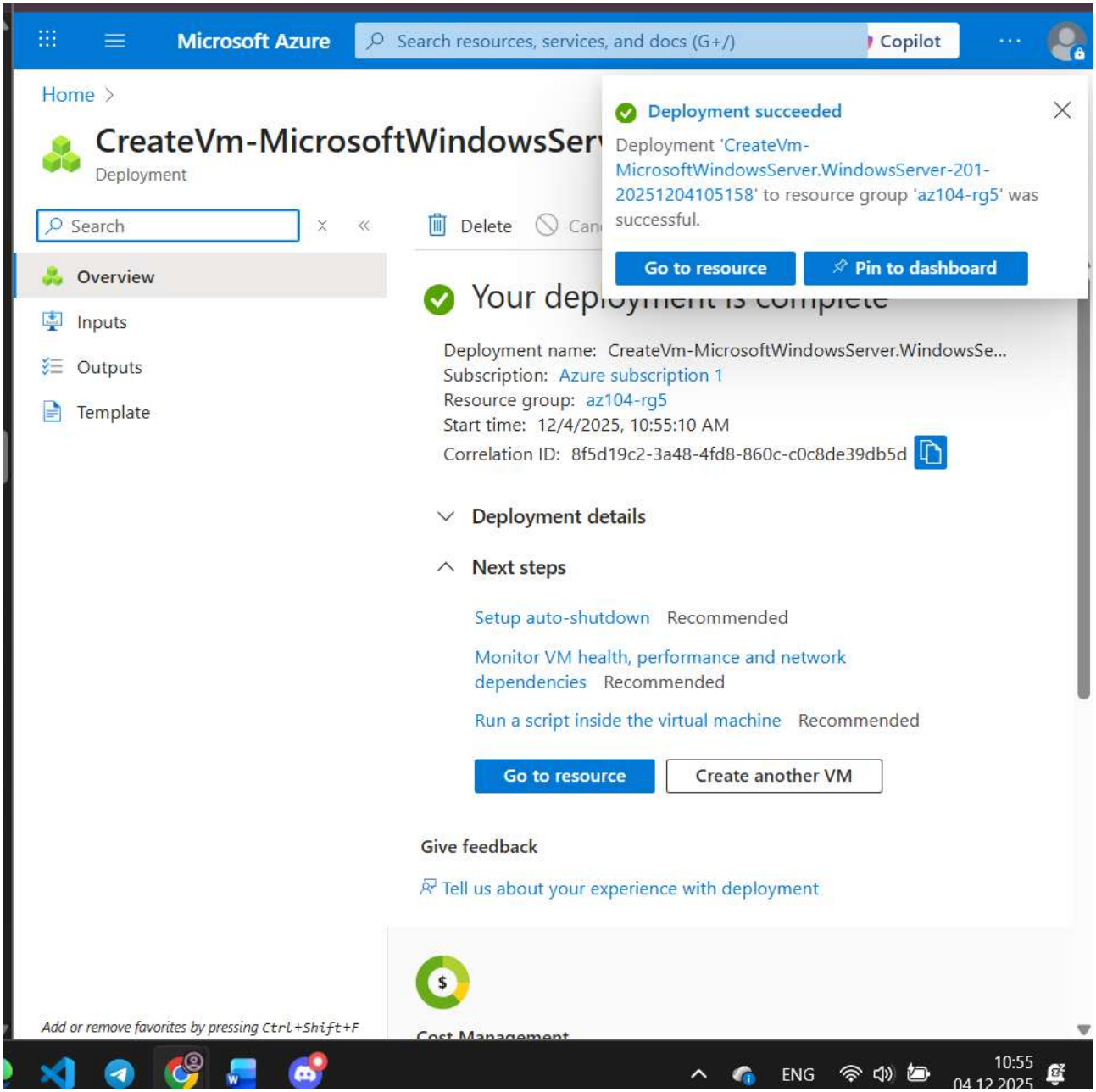
Lab 05 - Implement Intersite Connectivity

Task 1: Create a core services virtual machine and virtual network

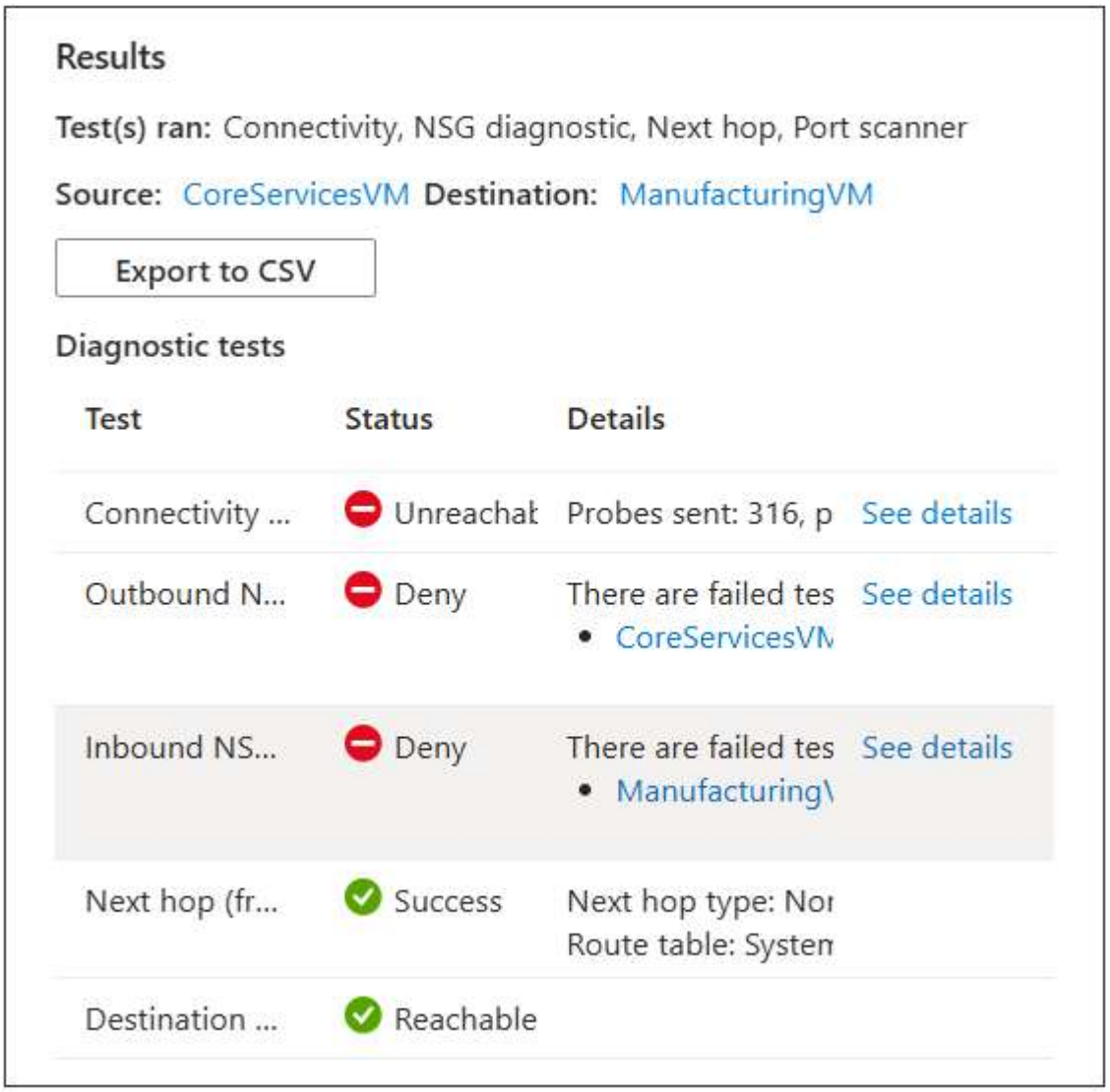
Zxc123@zxCzxC



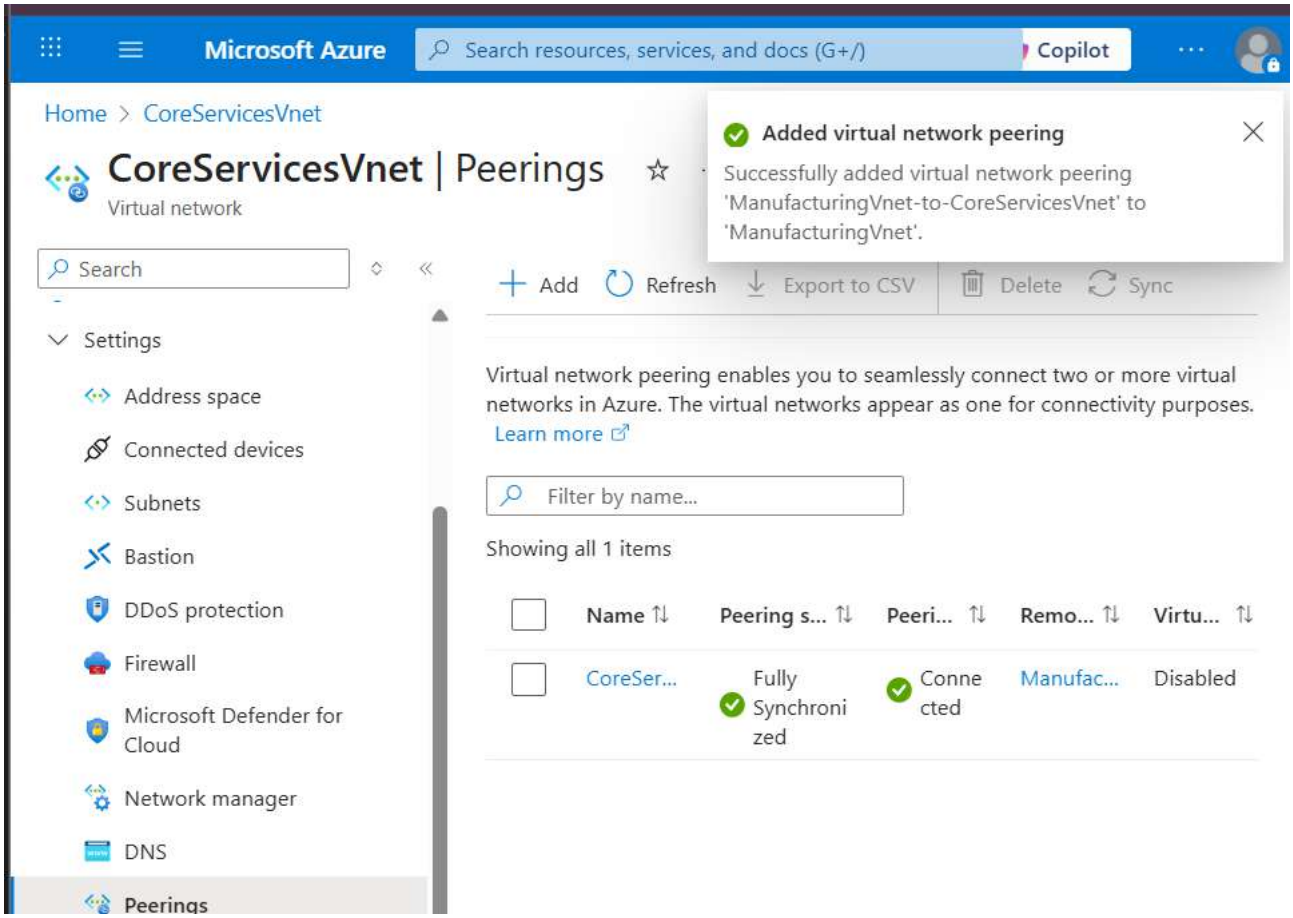
Task 2: Create a virtual machine in a different virtual network

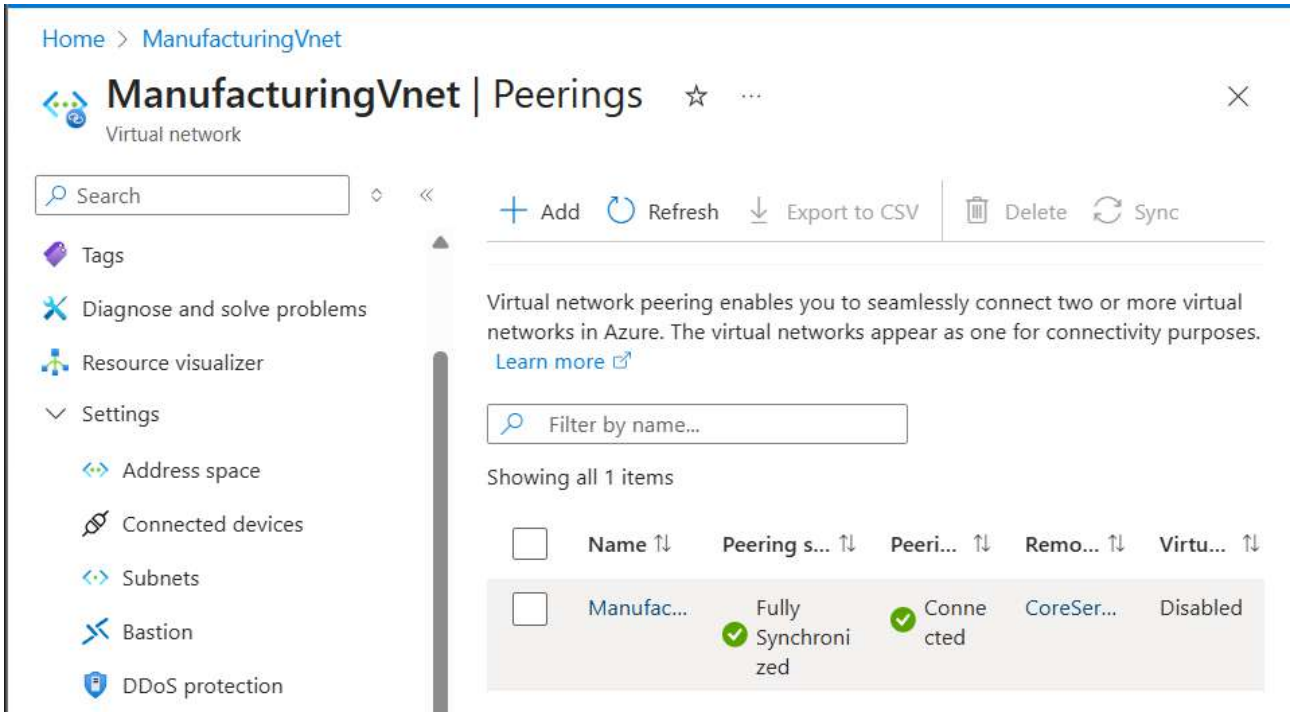


Task 3: Use Network Watcher to test the connection between virtual machines



Connectivity test shows **Unreachable**. This makes sense because the virtual machines are in different virtual networks.

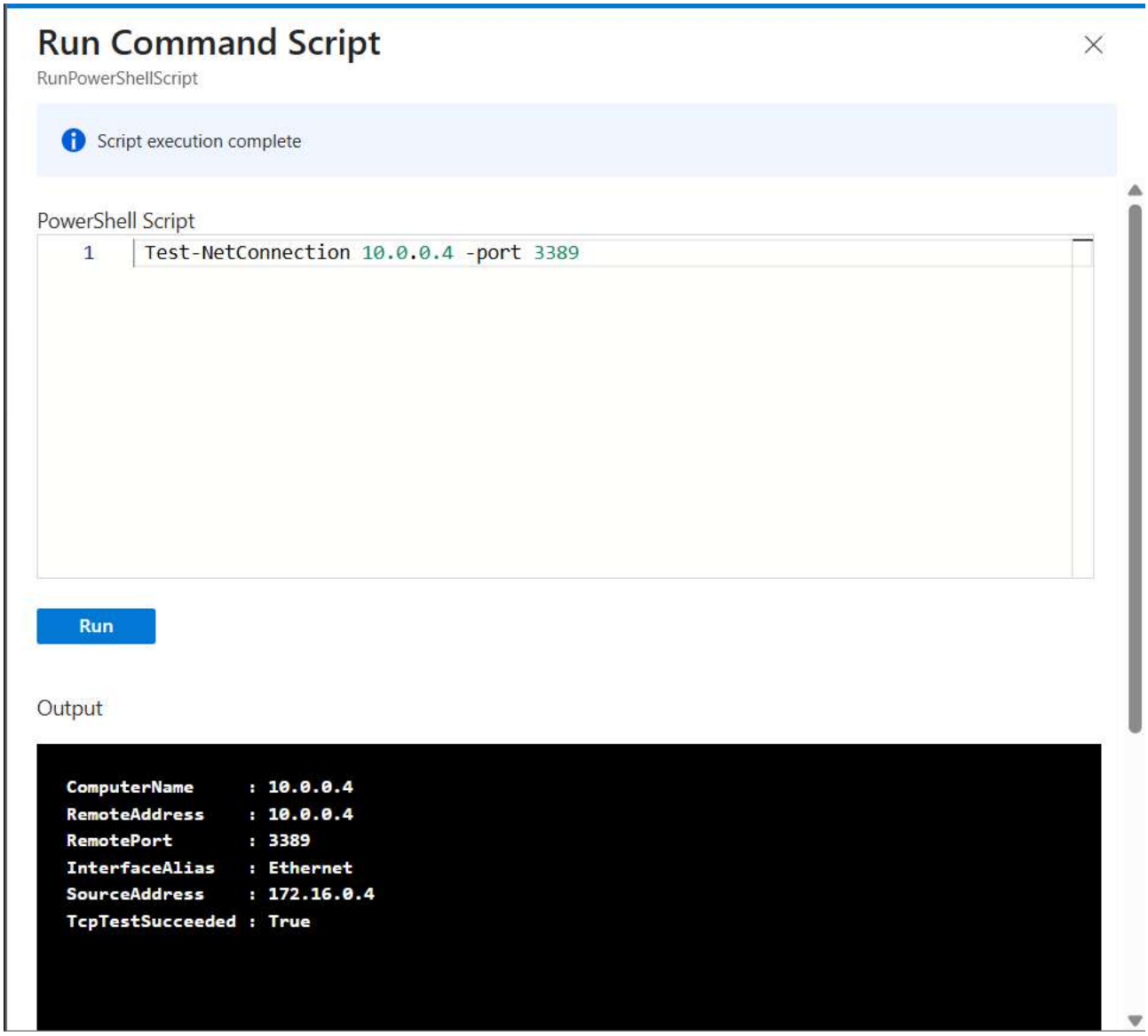




Task 5: Use Azure PowerShell to test the connection between virtual machines

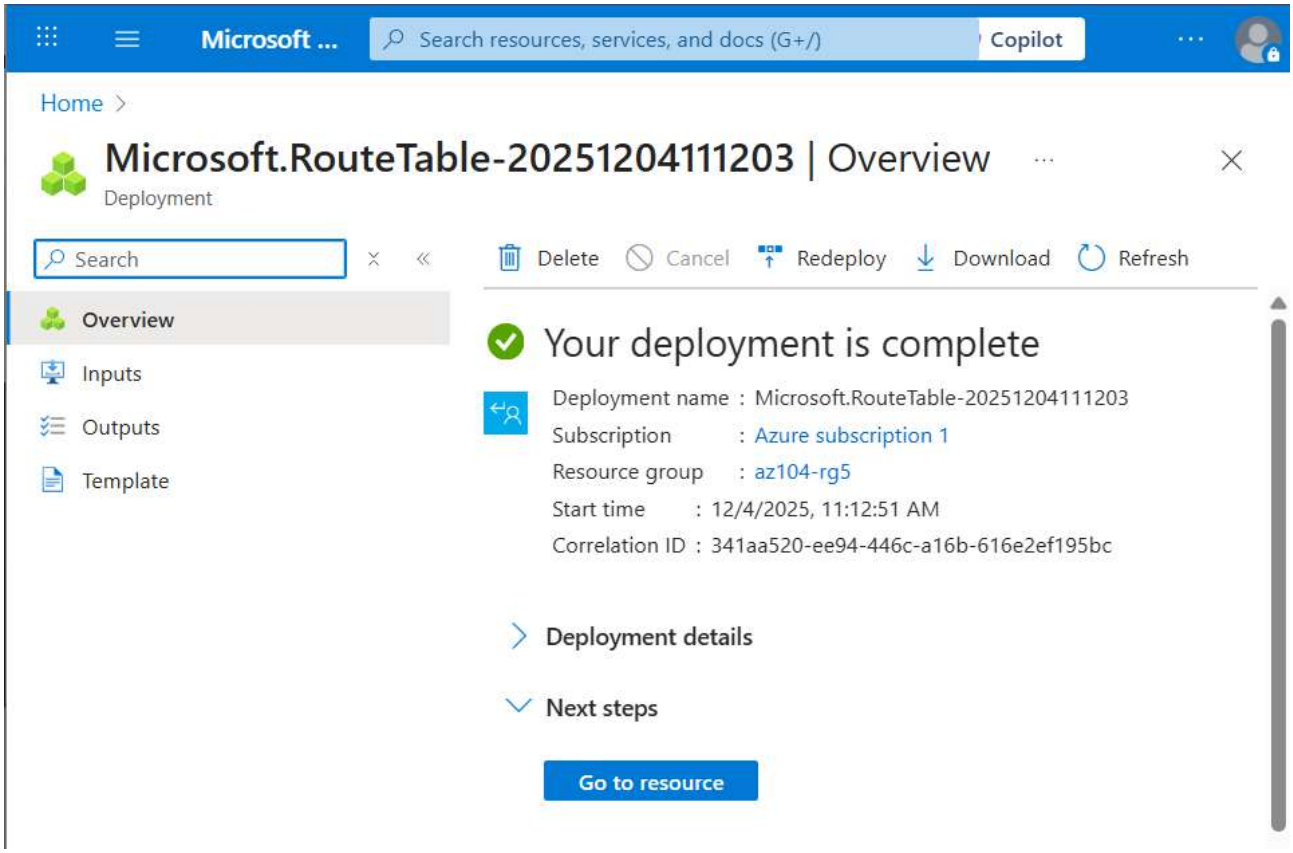
Private IP address

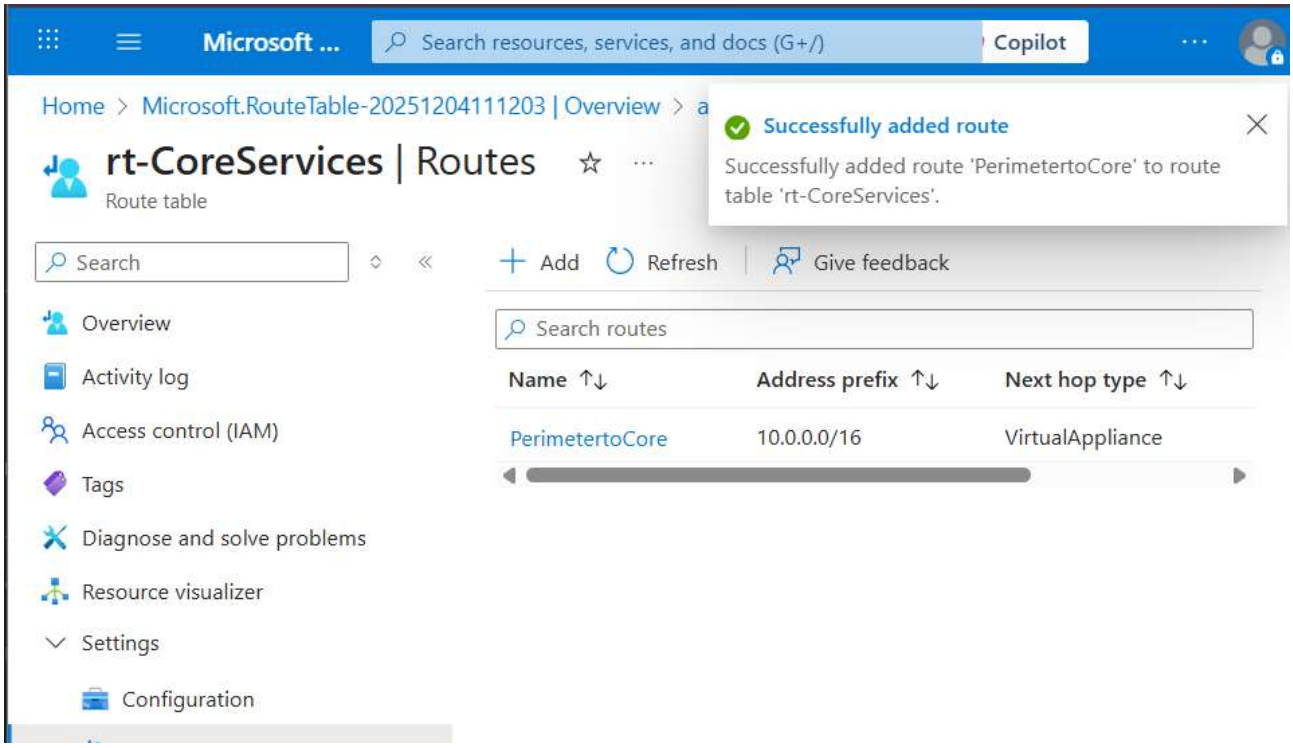
10.0.0.4

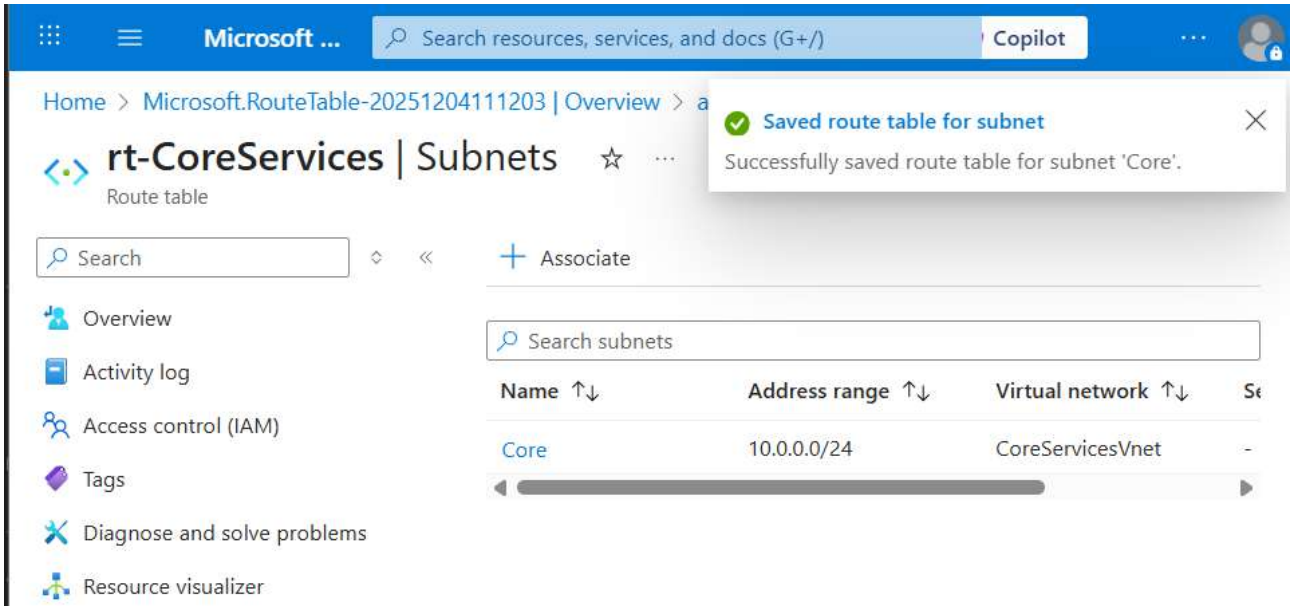


Task 6: Create a custom route

Name	IPv4	IPv6	Available IP
Core	10.0.0.0/24	-	250
perimeter	10.0.1.0/24	-	251

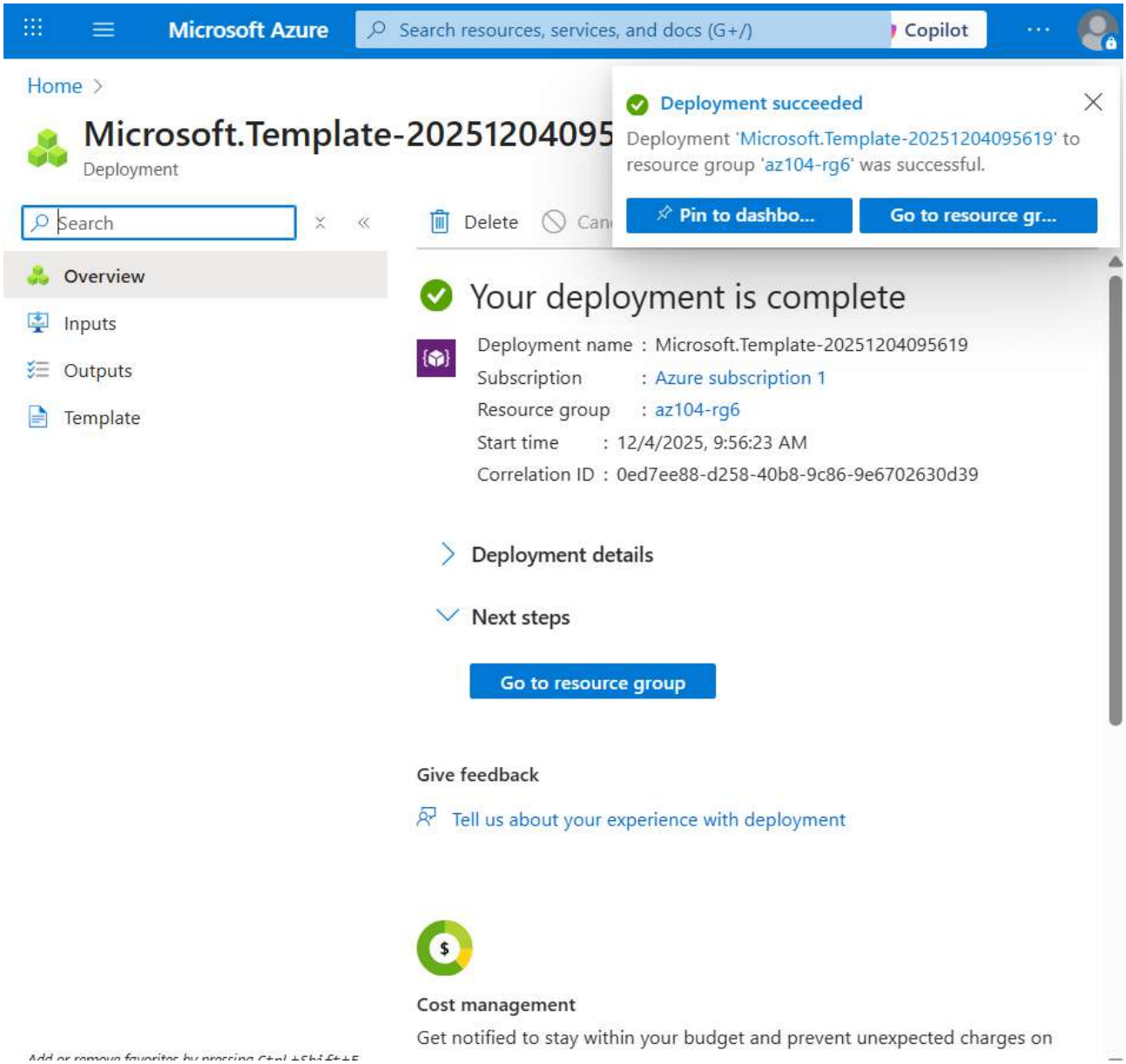

Microsoft ...
Search resources, services, and docs (G+/)
Copilot
Home
Microsoft.RouteTable-20251204111203 | Overview
Deployment
Search
Overview
Inputs
Outputs
Template
Delete
Cancel
Redeploy
Download
Refresh
Your deployment is complete
Deployment name : Microsoft.RouteTable-20251204111203
Subscription : Azure subscription 1
Resource group : az104-rg5
Start time : 12/4/2025, 11:12:51 AM
Correlation ID : 341aa520-ee94-446c-a16b-616e2ef195bc
Deployment details
Next steps
Go to resource


Microsoft ...
Search resources, services, and docs (G+/)
Copilot
Home
Microsoft.RouteTable-20251204111203 | Overview
Successfully added route
Successfully added route 'PerimetertoCore' to route table 'rt-CoreServices'.
rt-CoreServices | Routes
Route table
Search
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Resource visualizer
Settings
Configuration
Add
Refresh
Give feedback
Search routes
Name
Address prefix
Next hop type
PerimetertoCore
10.0.0.0/16
VirtualAppliance

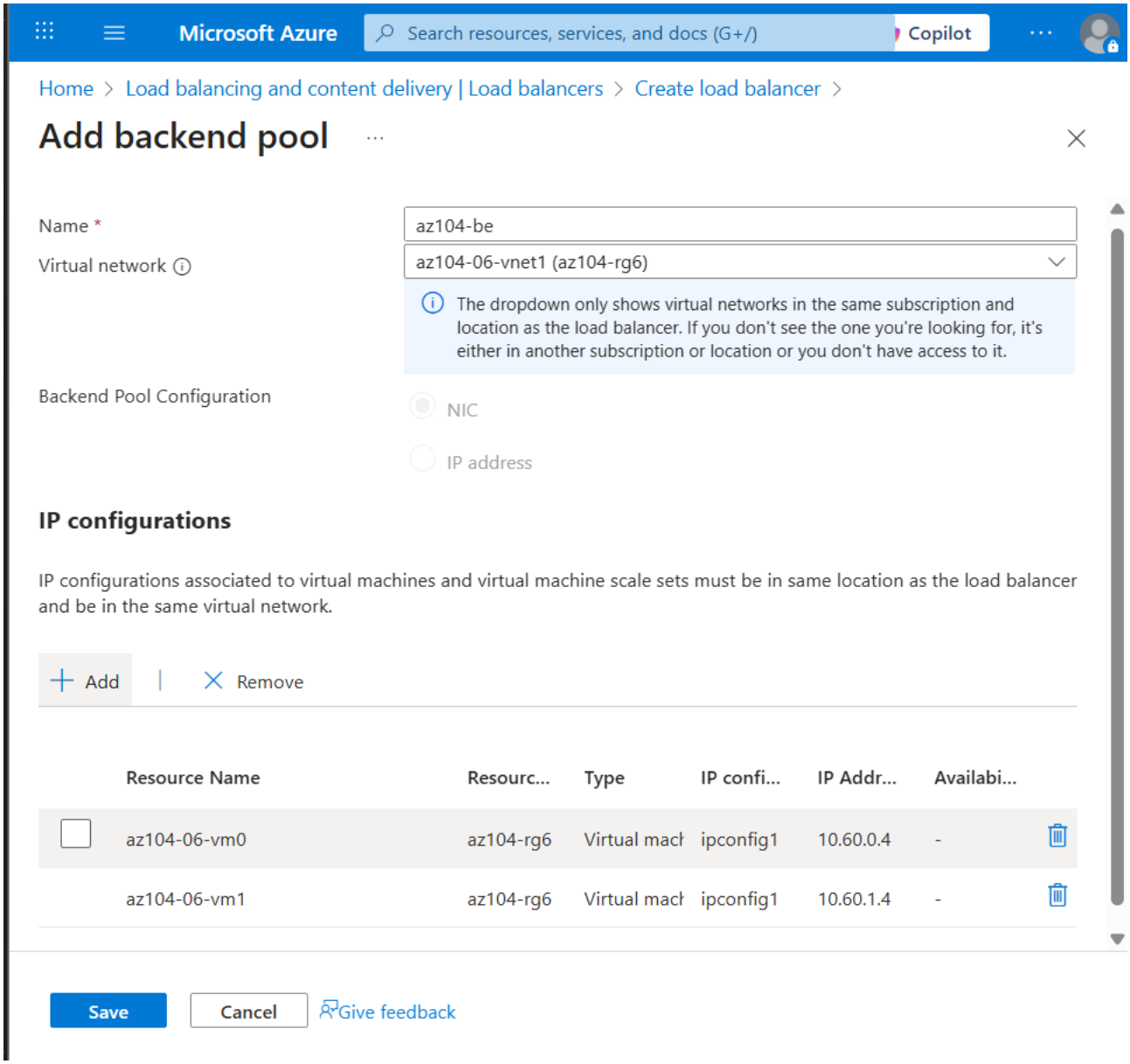


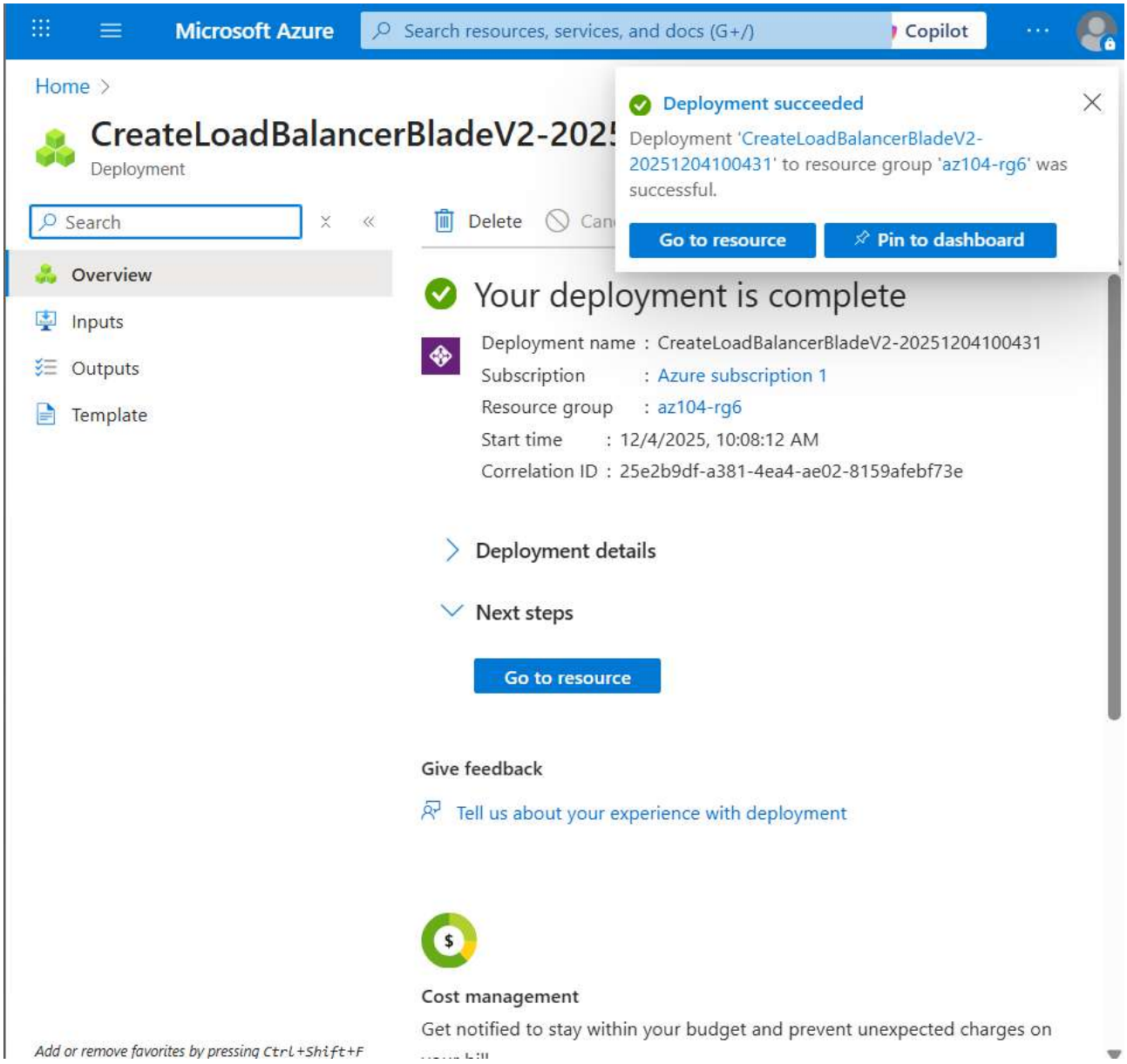
Lab 06 - Implement Network Traffic Management

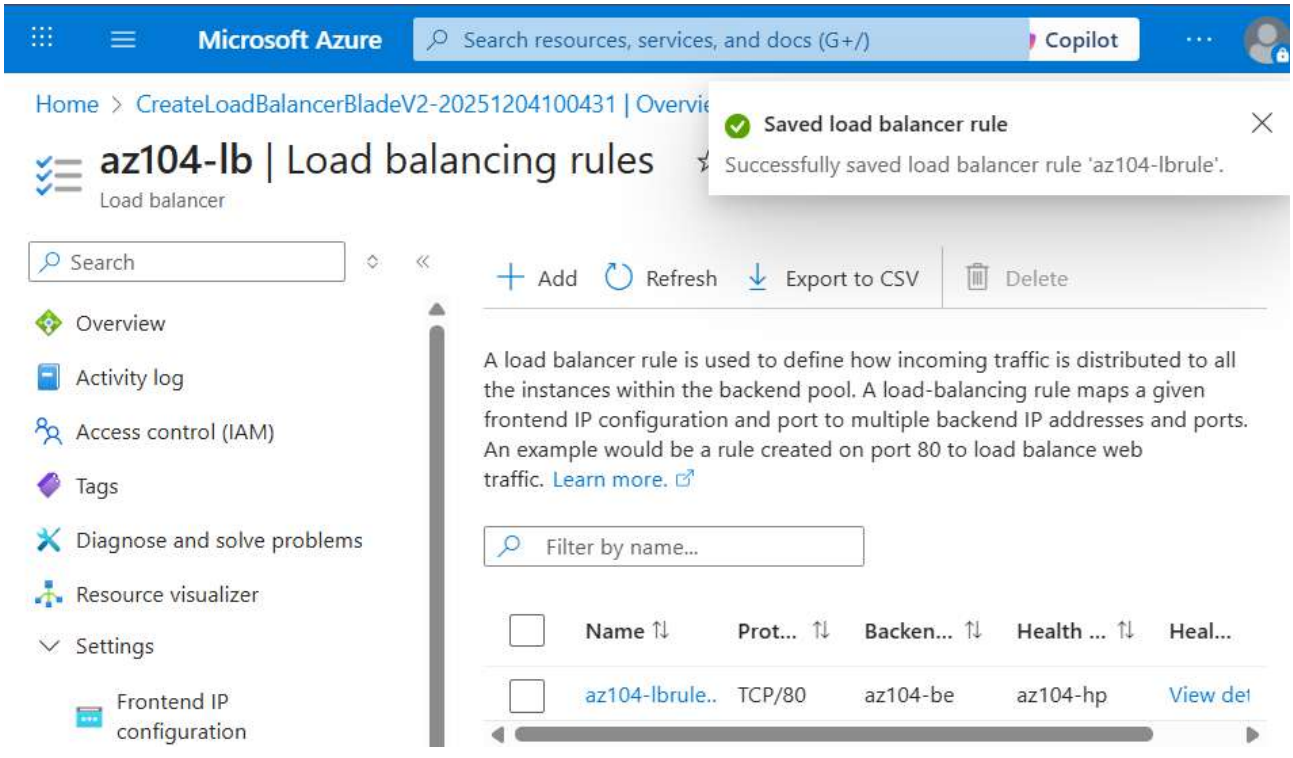
Task 1: Use a template to provision an infrastructure

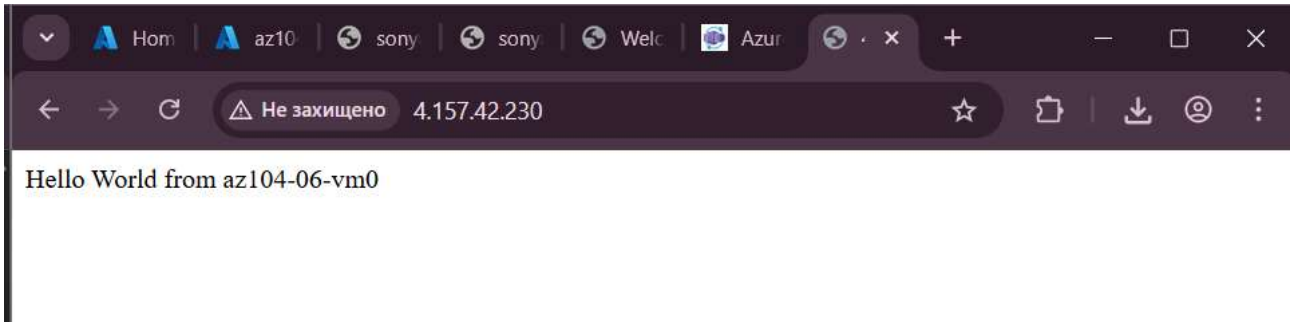


Task 2: Configure an Azure Load Balancer

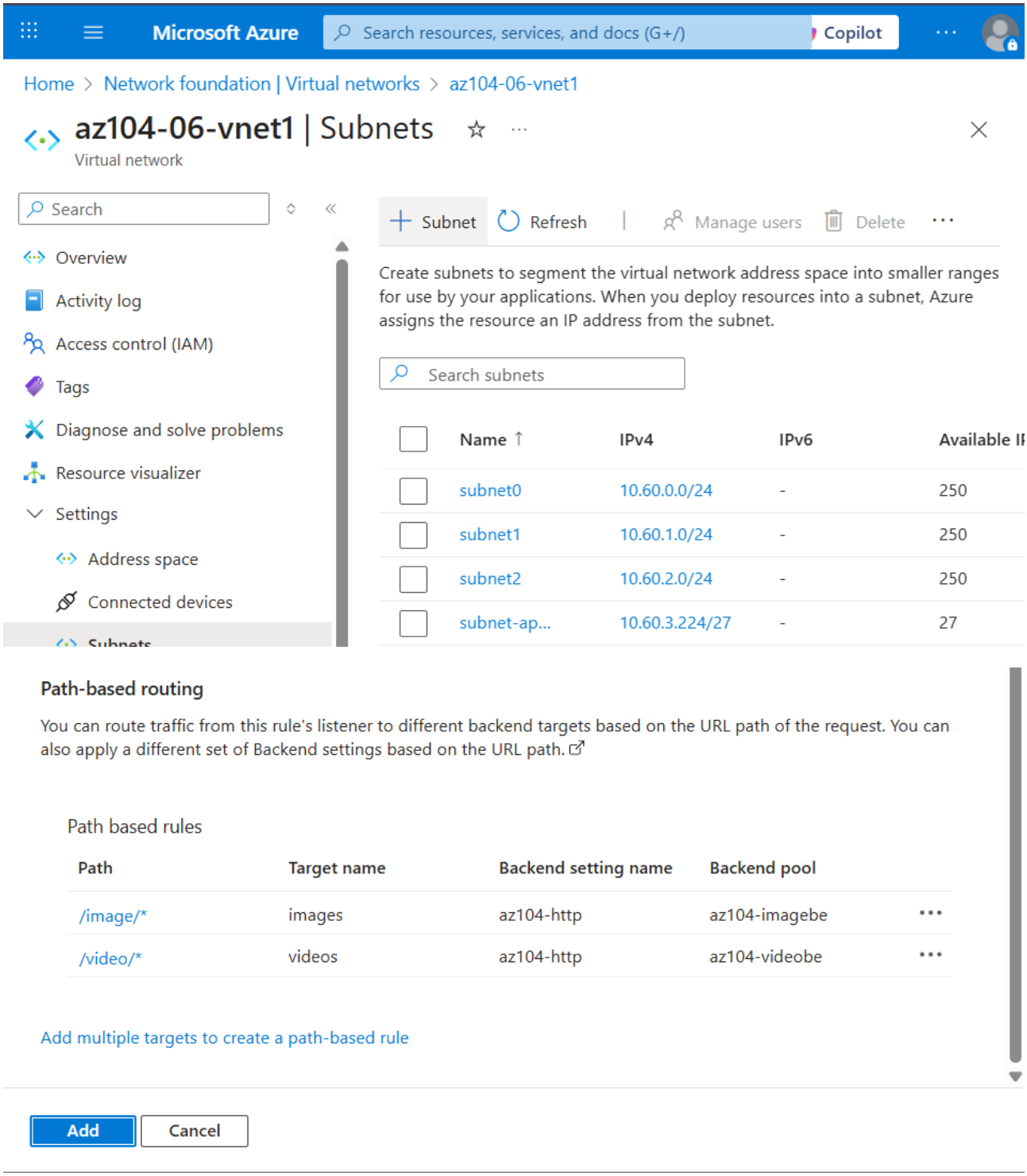

Microsoft Azure
Search resources, services, and docs (G+/)
Copilot
Home > Load balancing and content delivery | Load balancers > Create load balancer >
Add backend pool
Name *
az104-be
Virtual network
az104-06-vnet1 (az104-rg6)
The dropdown only shows virtual networks in the same subscription and location as the load balancer. If you don't see the one you're looking for, it's either in another subscription or location or you don't have access to it.
Backend Pool Configuration
NIC
IP address
IP configurations
IP configurations associated to virtual machines and virtual machine scale sets must be in same location as the load balancer and be in the same virtual network.
Add
Remove
Resource Name
Resourc...
Type
IP confi...
IP Addr...
Availabi...
az104-06-vm0
az104-rg6
Virtual mach
ipconfig1
10.60.0.4
-
az104-06-vm1
az104-rg6
Virtual mach
ipconfig1
10.60.1.4
-
Save
Cancel
Give feedback

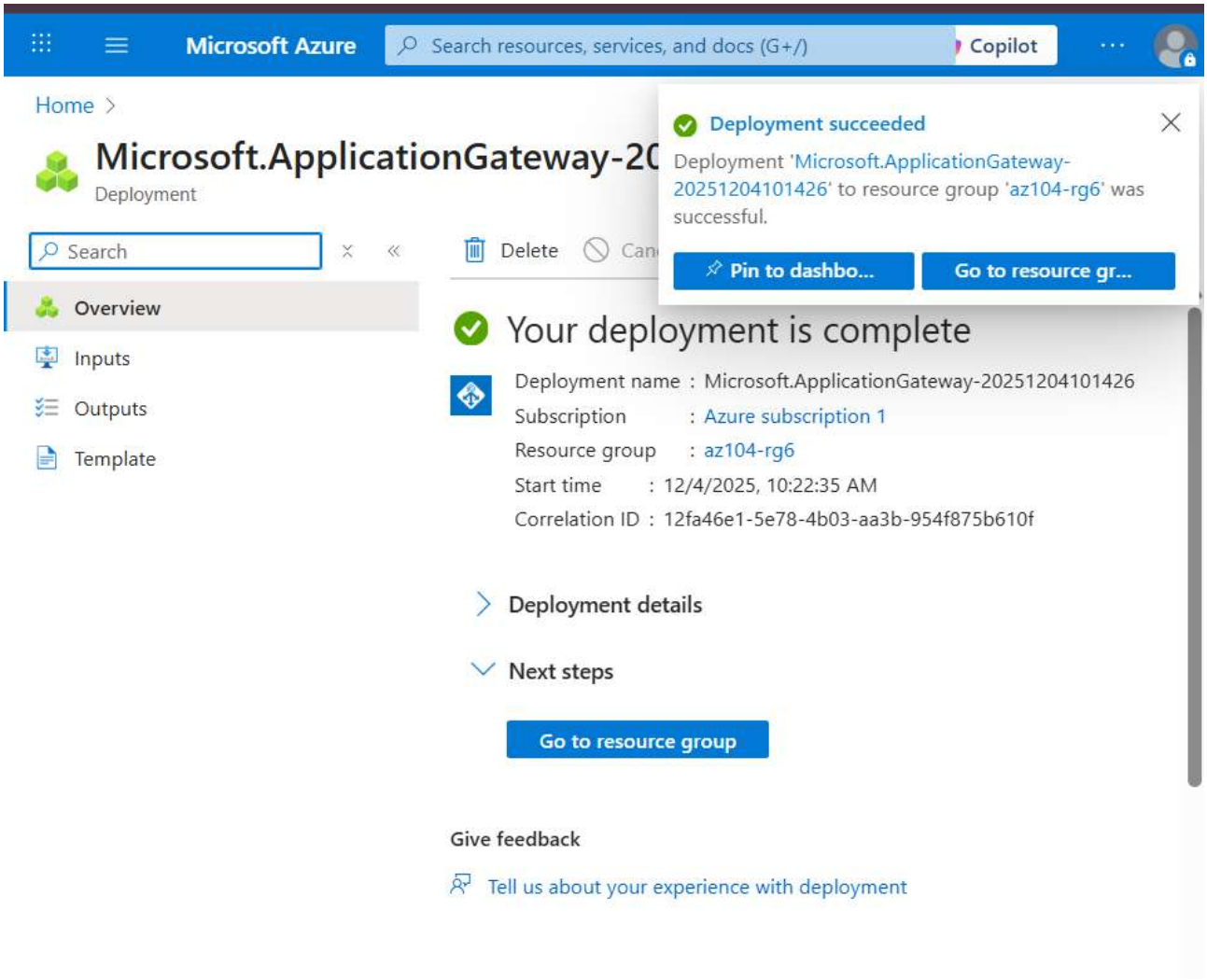

Microsoft Azure
Search resources, services, and docs (G+/)
Copilot
Home
CreateLoadBalancerBladeV2-2025
Deployment
Search
Overview
Inputs
Outputs
Template
Delete
Deployment succeeded
Deployment 'CreateLoadBalancerBladeV2-20251204100431' to resource group 'az104-rg6' was successful.
Go to resource
Pin to dashboard
Your deployment is complete
Deployment name : CreateLoadBalancerBladeV2-20251204100431
Subscription : Azure subscription 1
Resource group : az104-rg6
Start time : 12/4/2025, 10:08:12 AM
Correlation ID : 25e2b9df-a381-4ea4-ae02-8159afebf73e
Deployment details
Next steps
Go to resource
Give feedback
Tell us about your experience with deployment
Cost management
Get notified to stay within your budget and prevent unexpected charges on
Add or remove favorites by pressing Ctrl+Shift+F

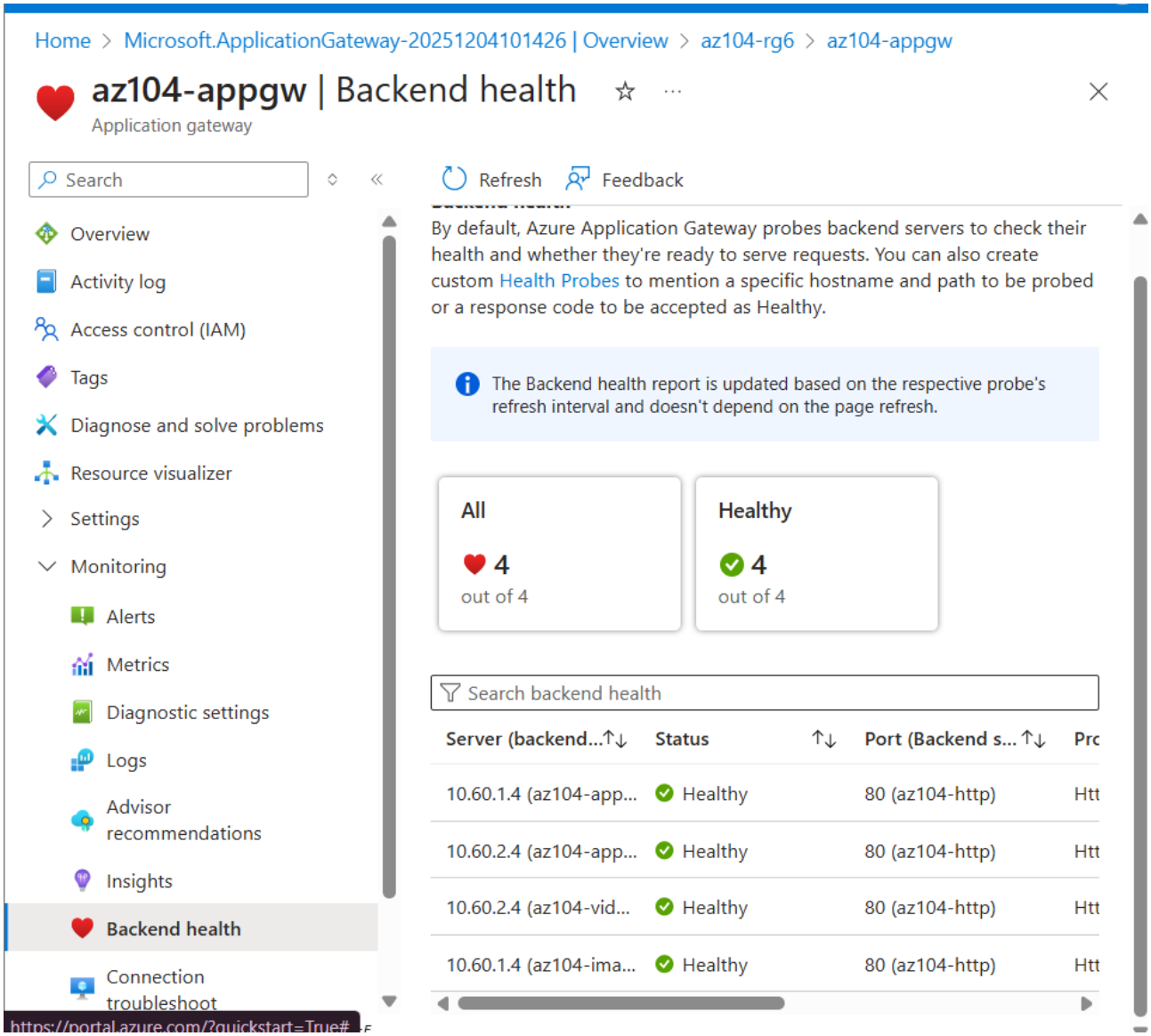

Microsoft Azure
Search resources, services, and docs (G+/)
Copilot
Home > CreateLoadBalancerBladeV2-20251204100431 | Overvie
az104-lb | Load balancing rules
Load balancer
Saved load balancer rule
Successfully saved load balancer rule 'az104-lbrule'.
Search
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Resource visualizer
Settings
Frontend IP configuration
Add
Refresh
Export to CSV
Delete
A load balancer rule is used to define how incoming traffic is distributed to all the instances within the backend pool. A load-balancing rule maps a given frontend IP configuration and port to multiple backend IP addresses and ports. An example would be a rule created on port 80 to load balance web traffic. Learn more.
Filter by name...
Name
Prot...
Backen...
Health ...
Heal...
az104-lbrule..
TCP/80
az104-be
az104-hp
View det

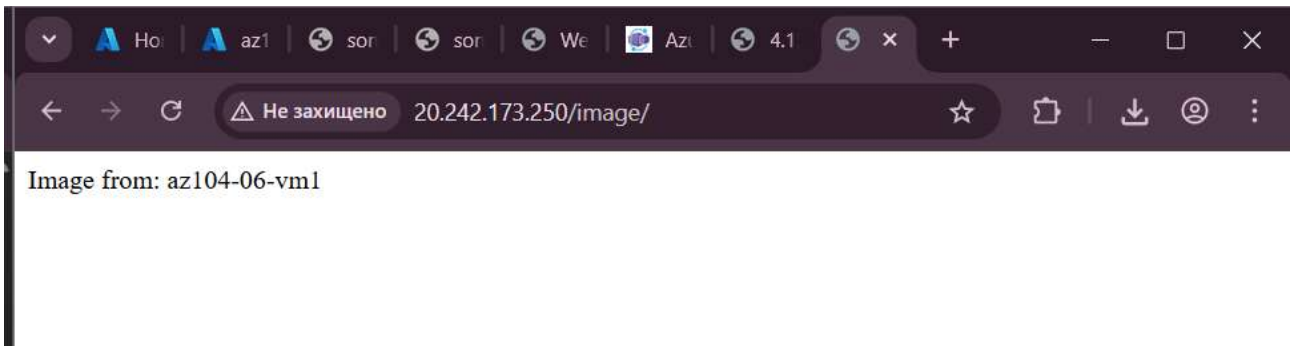


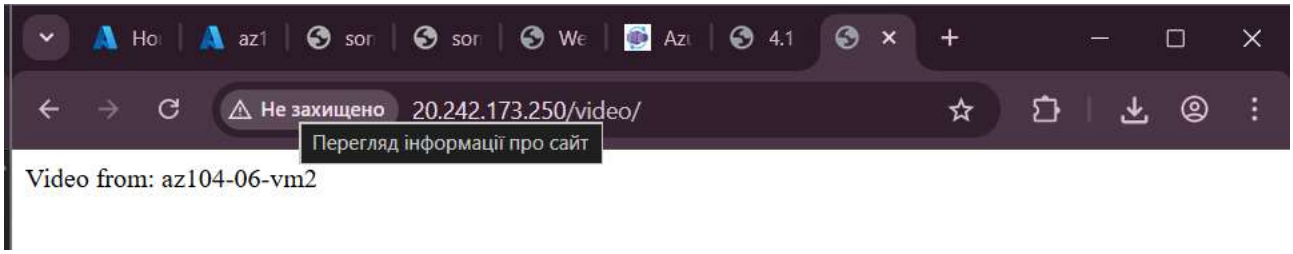
Task 3: Configure an Azure Application Gateway




Microsoft Azure
Search resources, services, and docs (G+/)
Copilot
Home
Microsoft.ApplicationGateway-20
Deployment
Search
Overview
Inputs
Outputs
Template
Delete
Deployment succeeded
Deployment 'Microsoft.ApplicationGateway-20251204101426' to resource group 'az104-rg6' was successful.
Pin to dashbo...
Go to resource gr...
Your deployment is complete
Deployment name : Microsoft.ApplicationGateway-20251204101426
Subscription : Azure subscription 1
Resource group : az104-rg6
Start time : 12/4/2025, 10:22:35 AM
Correlation ID : 12fa46e1-5e78-4b03-aa3b-954f875b610f
Deployment details
Next steps
Go to resource group
Give feedback
Tell us about your experience with deployment

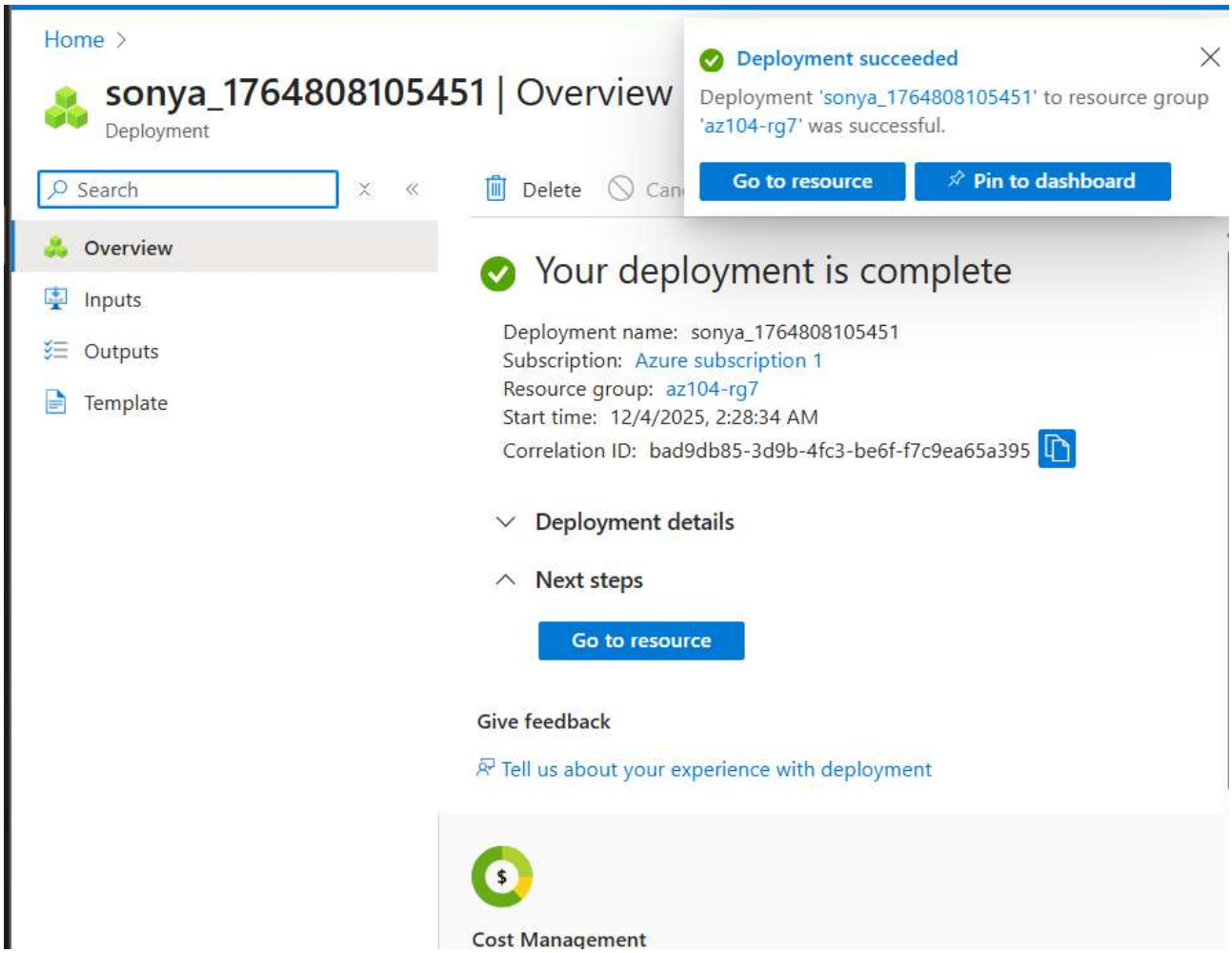

Home > Microsoft.ApplicationGateway-20251204101426 | Overview > az104-rg6 > az104-appgw
az104-appgw | Backend health
Application gateway
Search
Refresh
Feedback
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Resource visualizer
Settings
Monitoring
Alerts
Metrics
Diagnostic settings
Logs
Advisor recommendations
Insights
Backend health
Connection troubleshoot
By default, Azure Application Gateway probes backend servers to check their health and whether they're ready to serve requests. You can also create custom Health Probes to mention a specific hostname and path to be probed or a response code to be accepted as Healthy.
The Backend health report is updated based on the respective probe's refresh interval and doesn't depend on the page refresh.
All
4
out of 4
Healthy
4
out of 4
Search backend health
Server (backend...
Status
Port (Backend s...
10.60.1.4 (az104-app...
Healthy
80 (az104-http)
10.60.2.4 (az104-app...
Healthy
80 (az104-http)
10.60.2.4 (az104-vid...
Healthy
80 (az104-http)
10.60.1.4 (az104-ima...
Healthy
80 (az104-http)

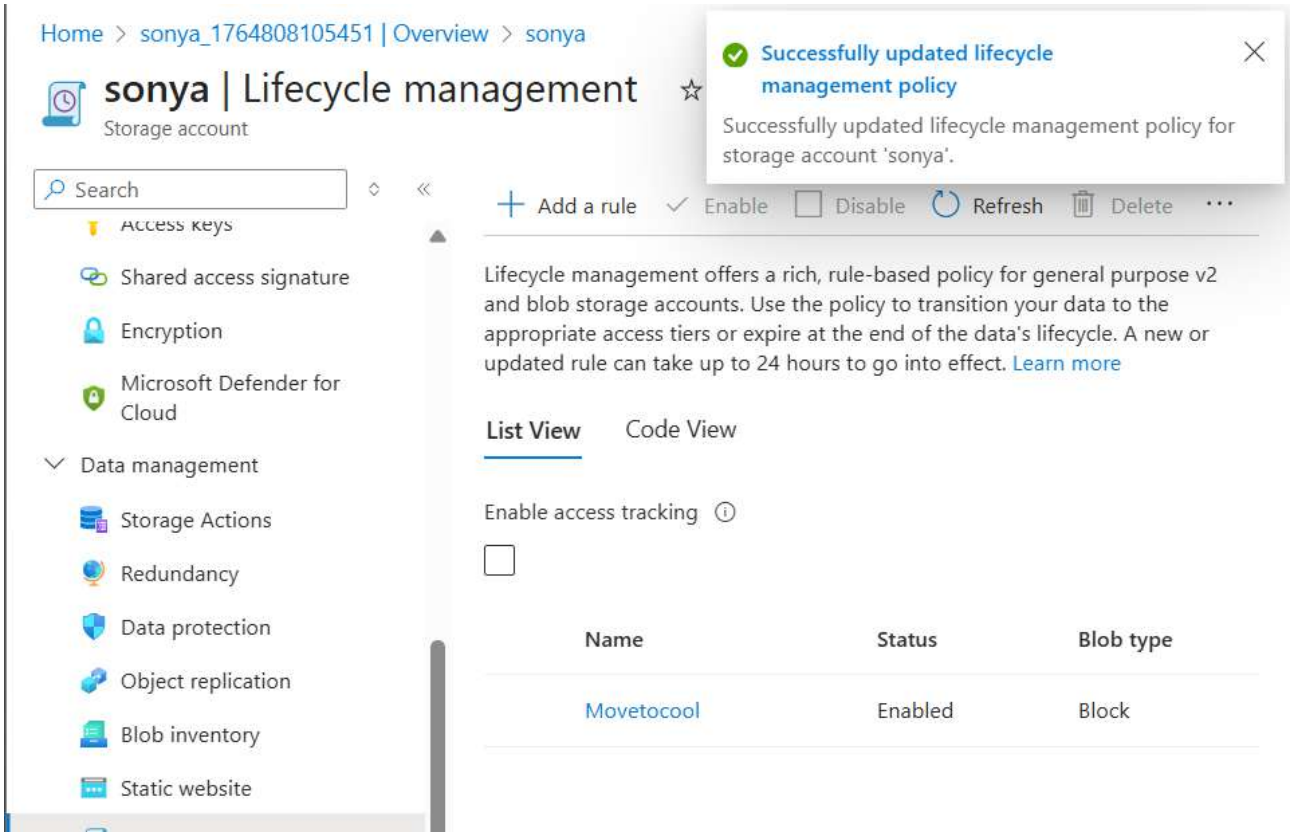

Не захищено
20.242.173.250/image/
Image from: az104-06-vm1

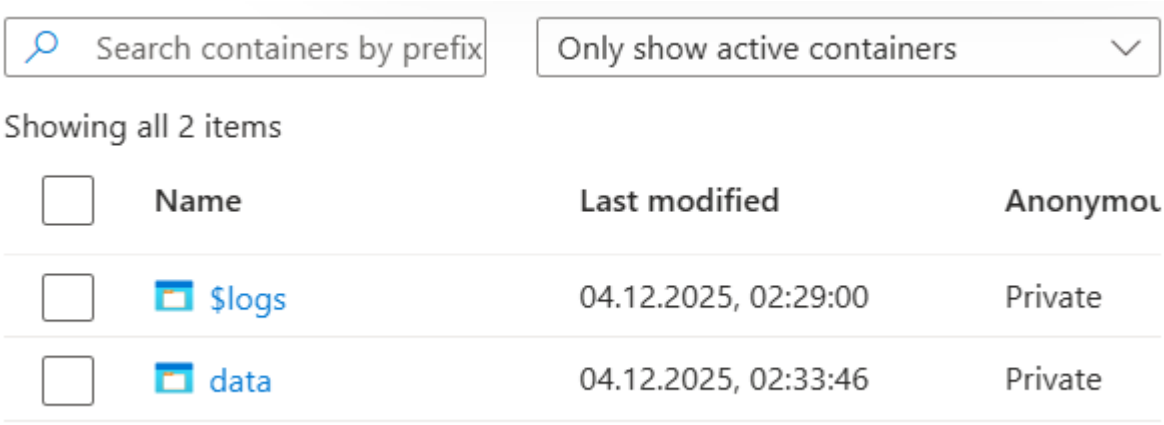

Не захищено
20.242.173.250/video/
Перегляд інформації про сайт
Video from: az104-06-vm2

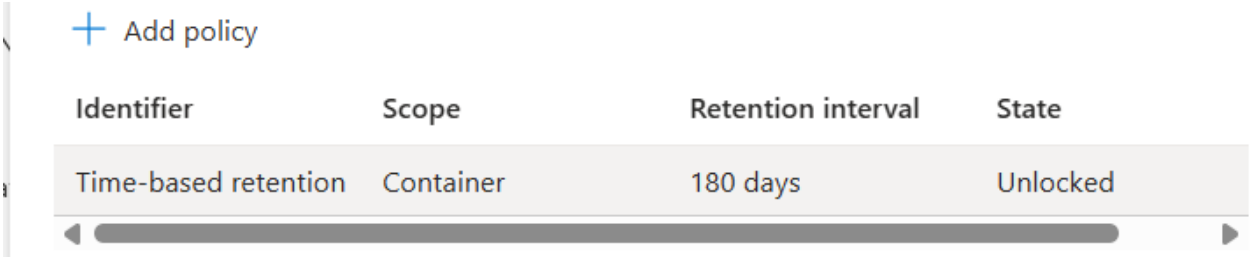
Lab 07 - Manage Azure Storage

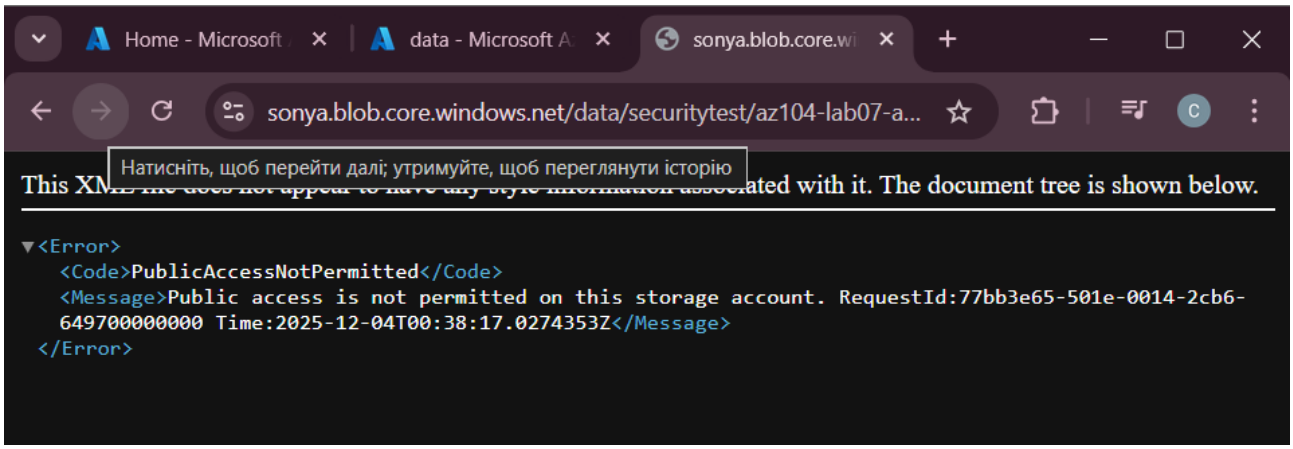
Task 1: Create and configure a storage account.



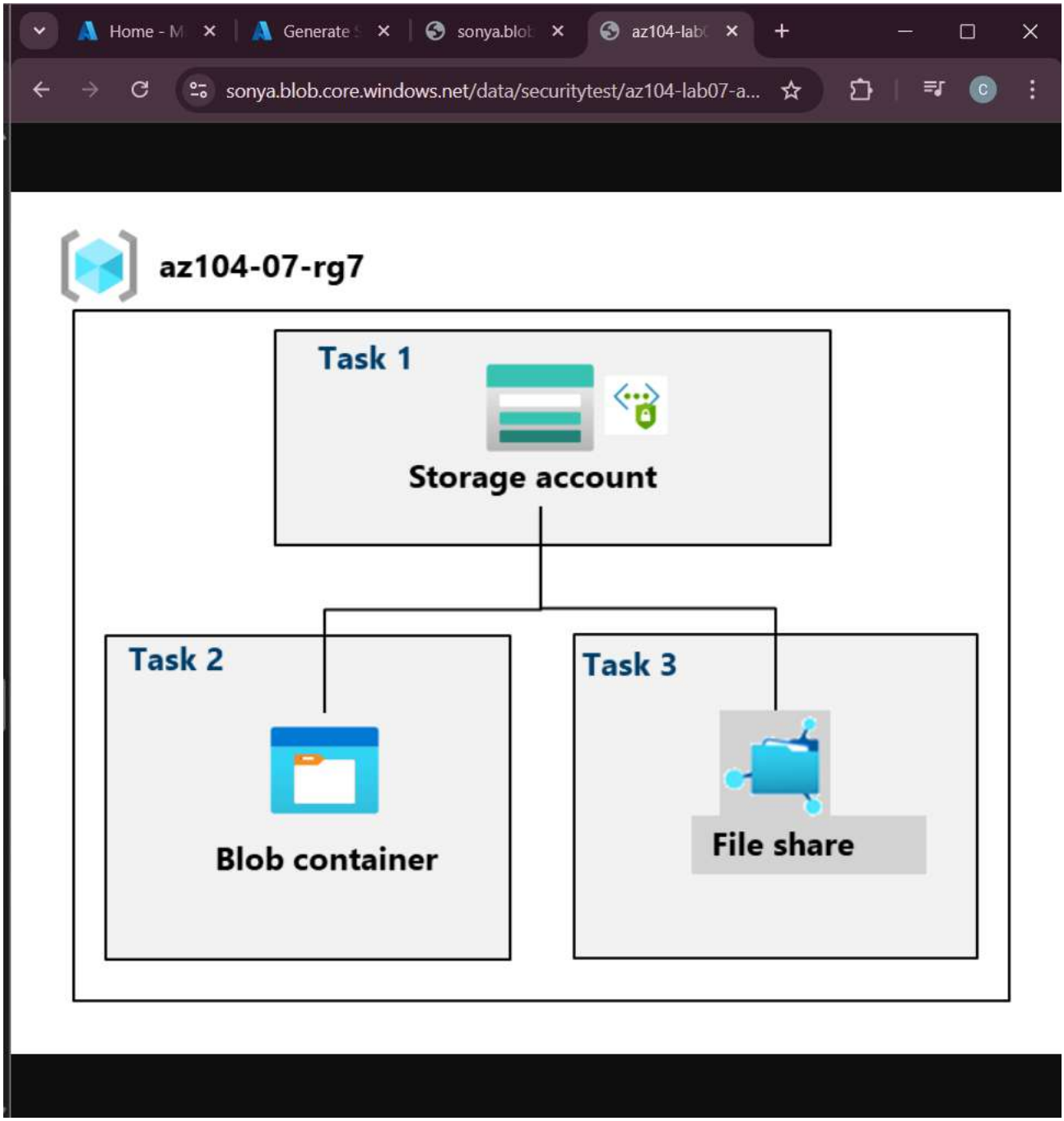




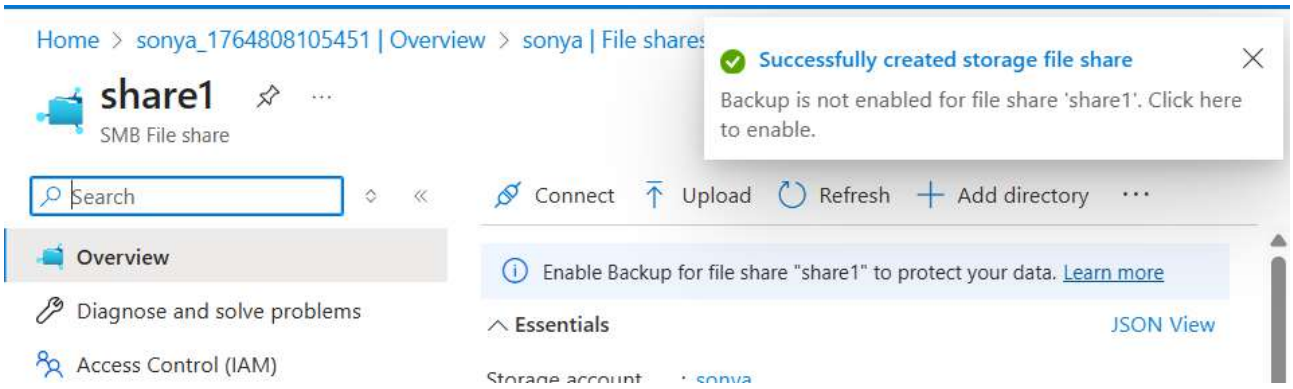


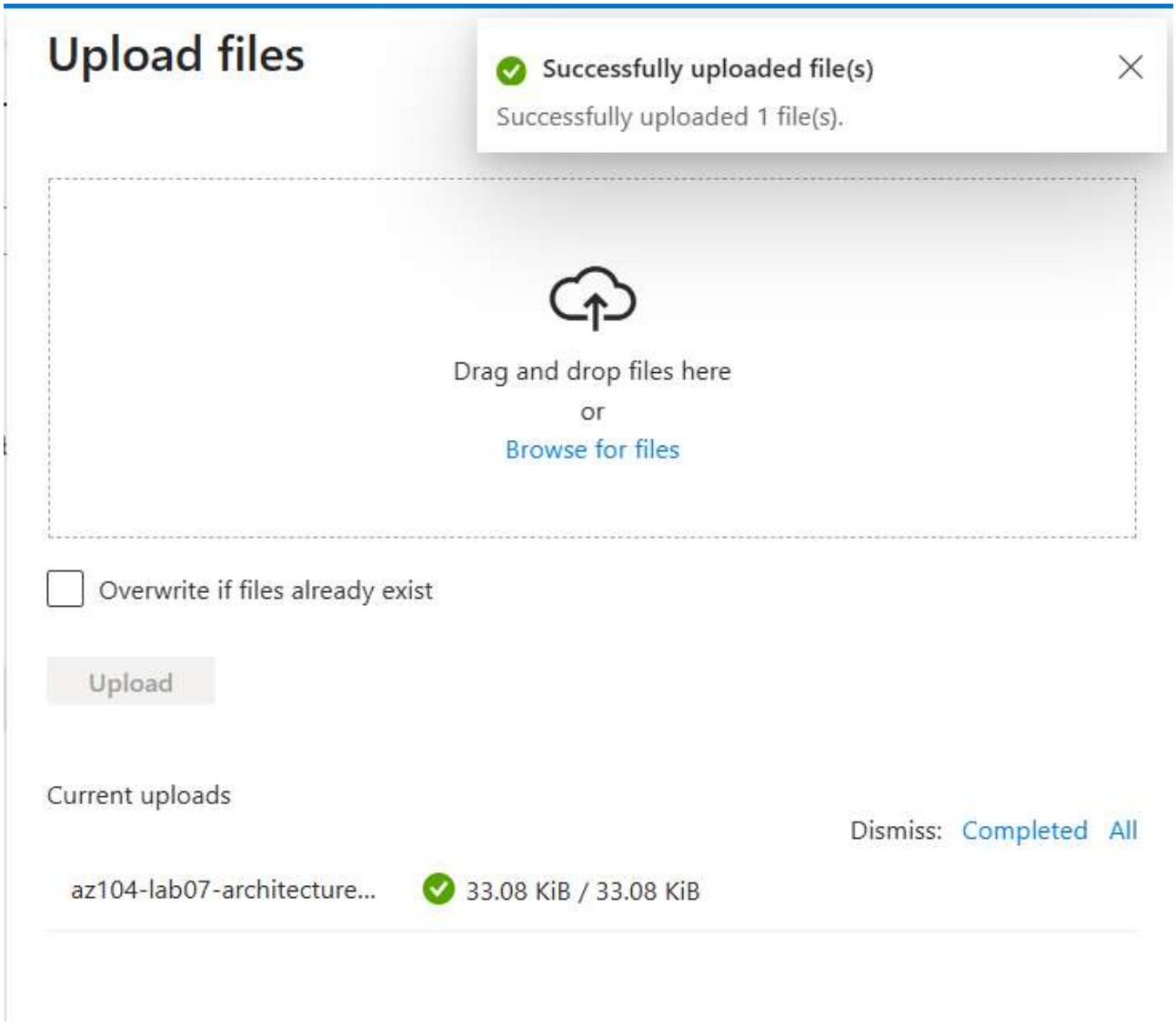


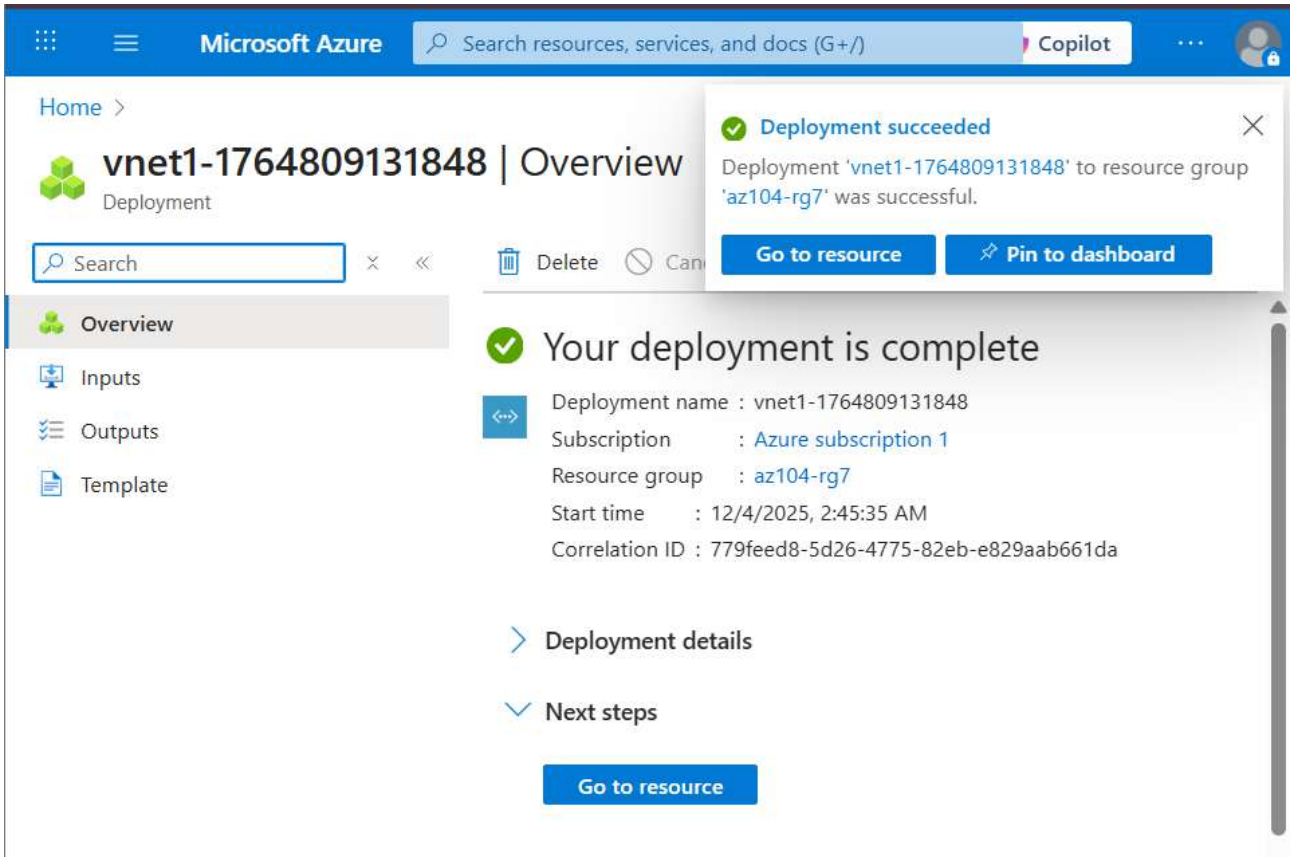
https://sonya.blob.core.windows.net/data/securitytest/az104-lab07-architecture-diagram.png?sp=r&st=2025-12-03T00:23:56Z&se=2025-12-05T08:38:56Z&spr=https&sv=2024-11-04&sr=b&sig=fAsQJwCeciPqmB3dURbKzVNWet26GhH51oBipn6SD%2Bo%3D

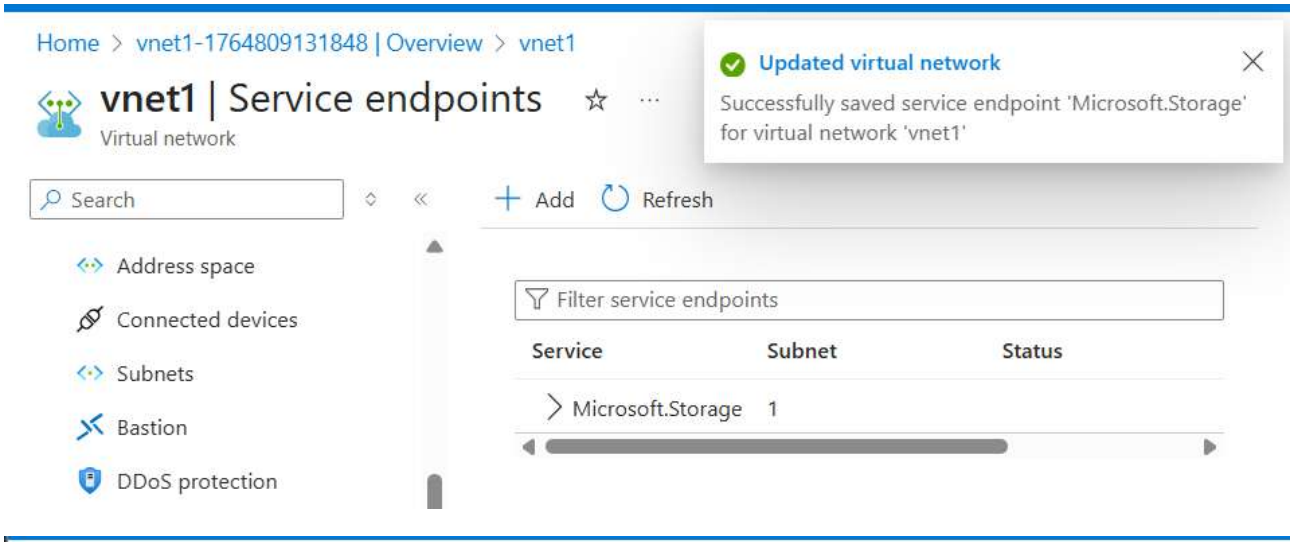


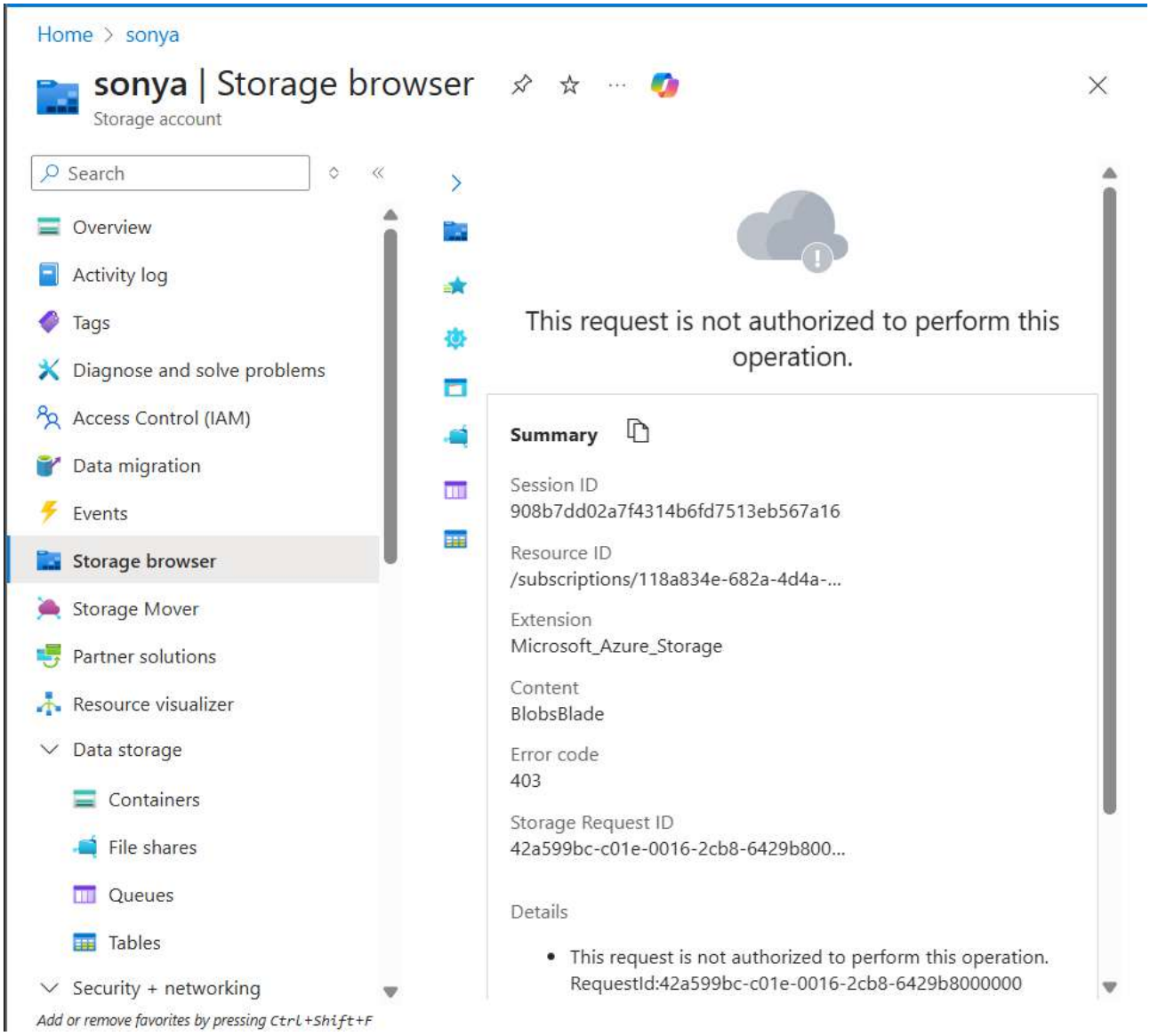
Task 3: Create and configure an Azure File storage



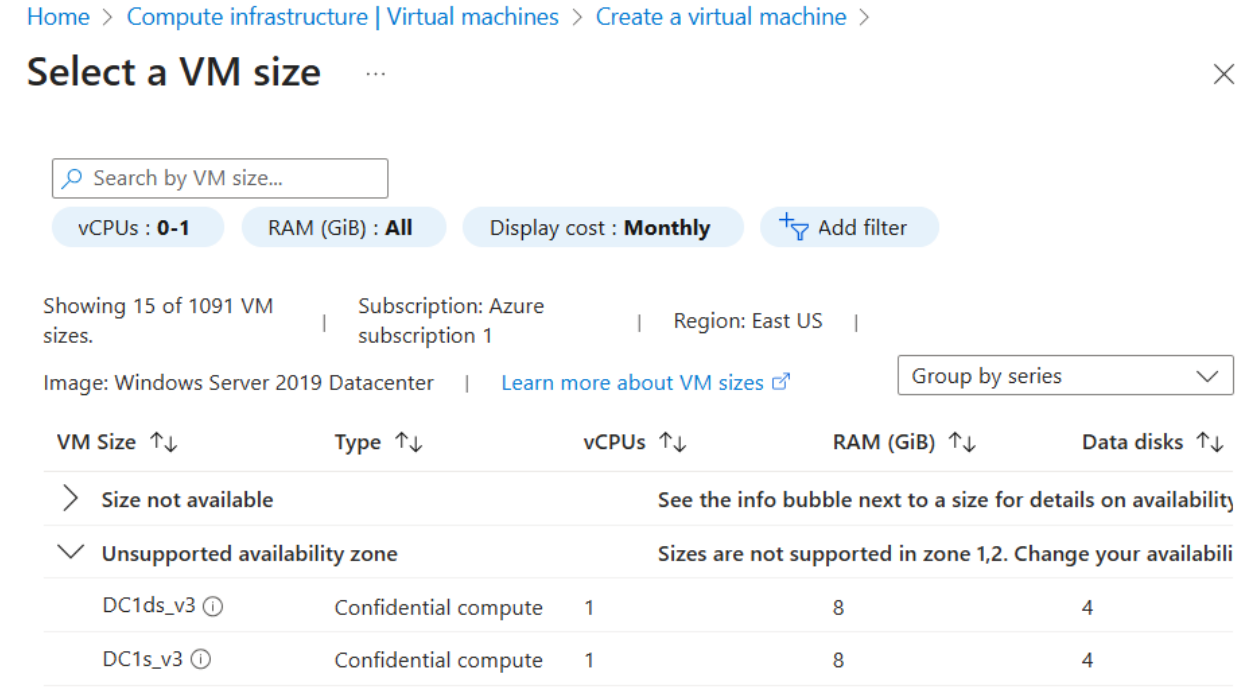

Upload files
Successfully uploaded file(s)
Successfully uploaded 1 file(s).
Drag and drop files here
or
Browse for files
Overwrite if files already exist
Upload
Current uploads
Dismiss: Completed All
az104-lab07-architecture...
33.08 KiB / 33.08 KiB


Microsoft Azure
Search resources, services, and docs (G+/)
Copilot
Home
vnet1-1764809131848 | Overview
Deployment
Deployment succeeded
Deployment 'vnet1-1764809131848' to resource group 'az104-rg7' was successful.
Go to resource
Pin to dashboard
Search
Delete
Overview
Inputs
Outputs
Template
Your deployment is complete
Deployment name : vnet1-1764809131848
Subscription : Azure subscription 1
Resource group : az104-rg7
Start time : 12/4/2025, 2:45:35 AM
Correlation ID : 779feed8-5d26-4775-82eb-e829aab661da
Deployment details
Next steps
Go to resource


Home > vnet1-1764809131848 | Overview > vnet1
vnet1 | Service endpoints
Virtual network
Updated virtual network
Successfully saved service endpoint 'Microsoft.Storage' for virtual network 'vnet1'
Search
Add
Refresh
Address space
Connected devices
Subnets
Bastion
DDoS protection
Filter service endpoints
Service
Subnet
Status
Microsoft.Storage
1

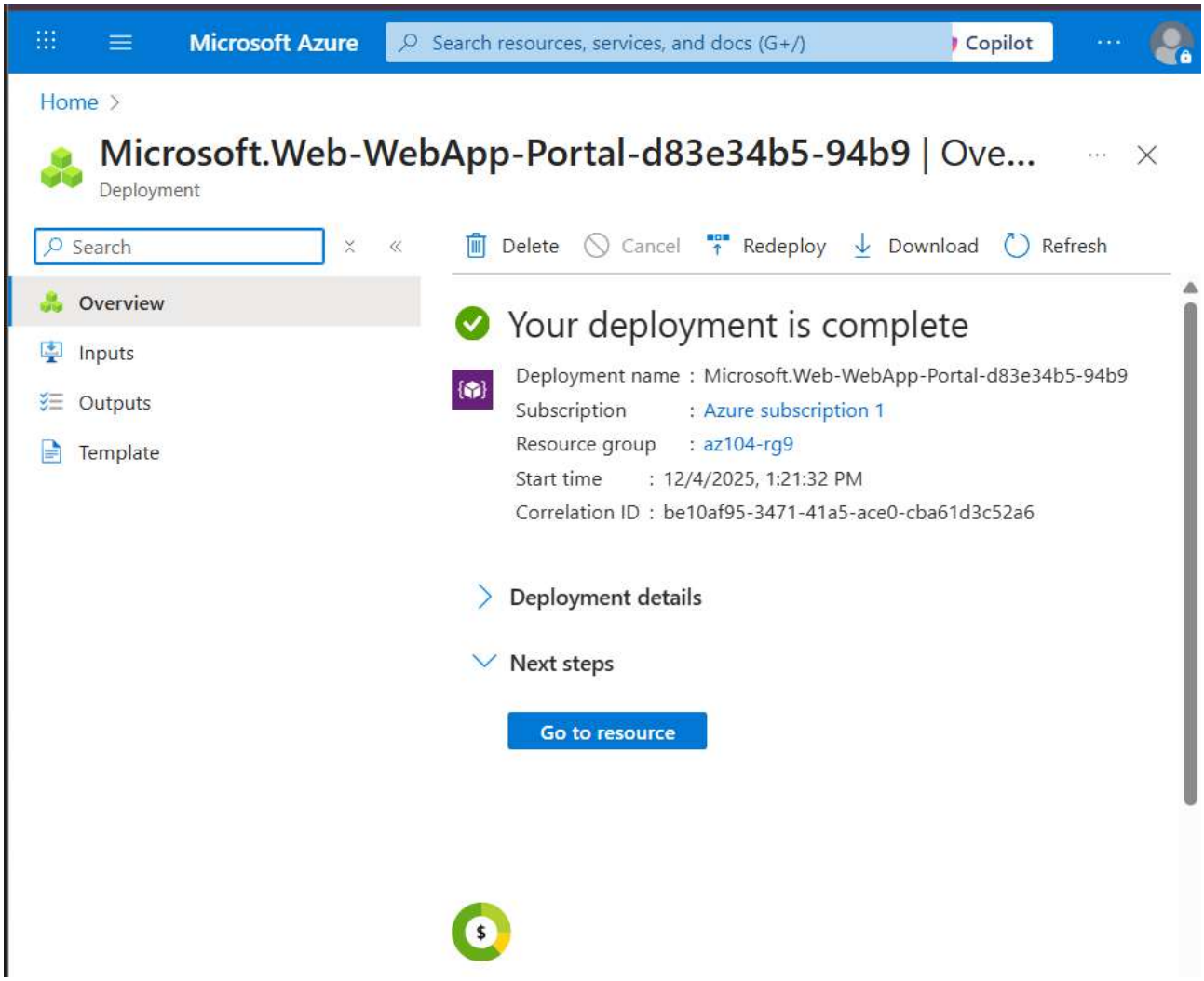

Home > sonya
sonya | Storage browser
Storage account
Search
Overview
Activity log
Tags
Diagnose and solve problems
Access Control (IAM)
Data migration
Events
Storage browser
Storage Mover
Partner solutions
Resource visualizer
Data storage
Containers
File shares
Queues
Tables
Security + networking
Add or remove favorites by pressing Ctrl+Shift+F
This request is not authorized to perform this operation.
Summary
Session ID
908b7dd02a7f4314b6fd7513eb567a16
Resource ID
/subscriptions/118a834e-682a-4d4a-...
Extension
Microsoft_Azure_Storage
Content
BlobsBlade
Error code
403
Storage Request ID
42a599bc-c01e-0016-2cb8-6429b800...
Details
This request is not authorized to perform this operation. RequestId:42a599bc-c01e-0016-2cb8-6429b8000000

Lab 08 - Manage Virtual Machines



Lab 09a - Implement Web Apps

Task 1: Create and configure an Azure web app


Microsoft Azure
Search resources, services, and docs (G+/)
Copilot
Home
Microsoft.Web-WebApp-Portal-d83e34b5-94b9 | Ove...
Deployment
Search
Overview
Inputs
Outputs
Template
Delete
Cancel
Redeploy
Download
Refresh
Your deployment is complete
Deployment name : Microsoft.Web-WebApp-Portal-d83e34b5-94b9
Subscription : Azure subscription 1
Resource group : az104-rg9
Start time : 12/4/2025, 1:21:32 PM
Correlation ID : be10af95-3471-41a5-ace0-cba61d3c52a6
Deployment details
Next steps
Go to resource

Microsoft Azure

Your web app is running and waiting for your content

Your web app is live, but we don't have your content yet. If you've already deployed, it could take up to 5 minutes for your content to show up, so come back soon.

Built with PHP

Home > sonya

sonya | Deployment slots

Web App

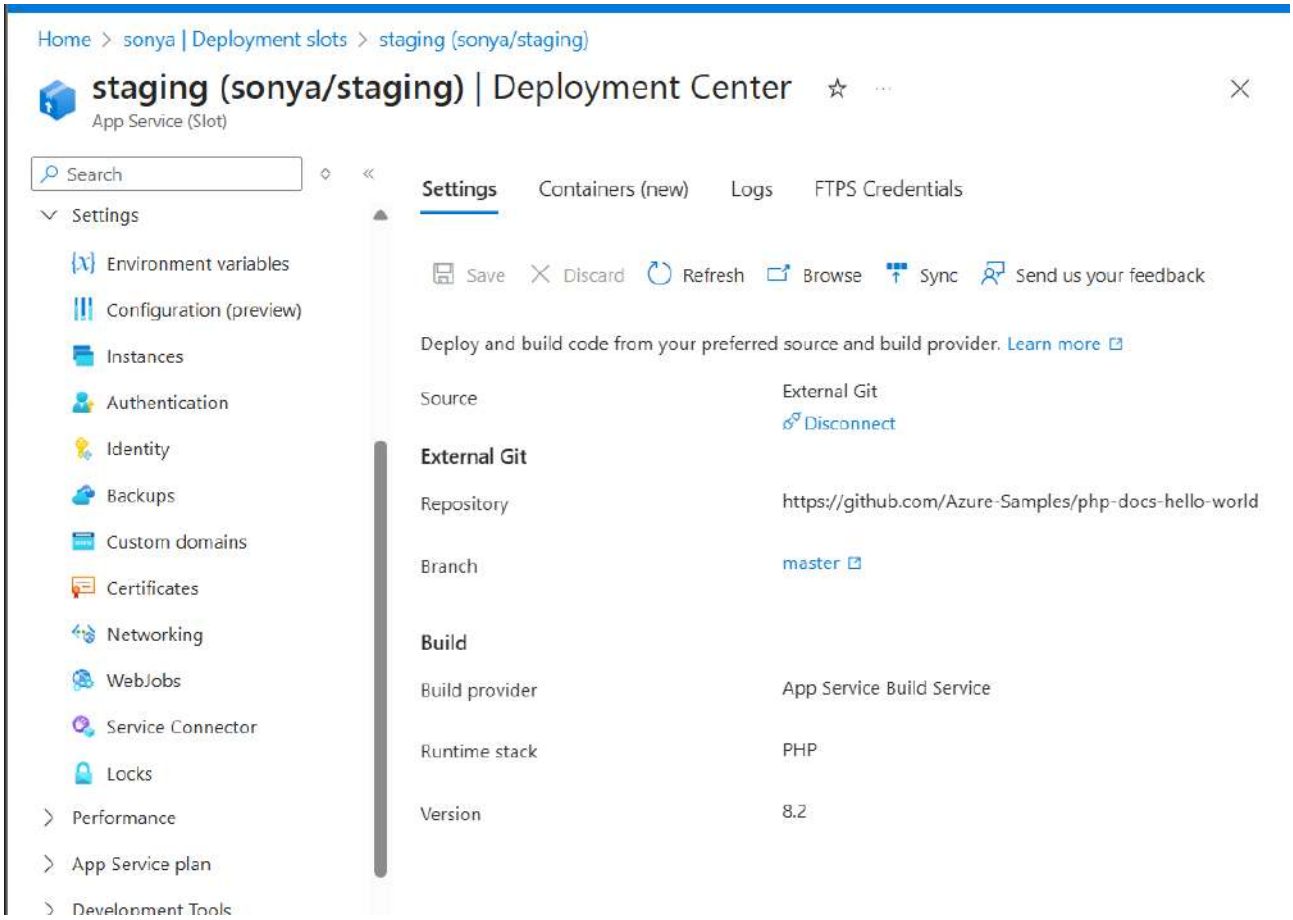
Search

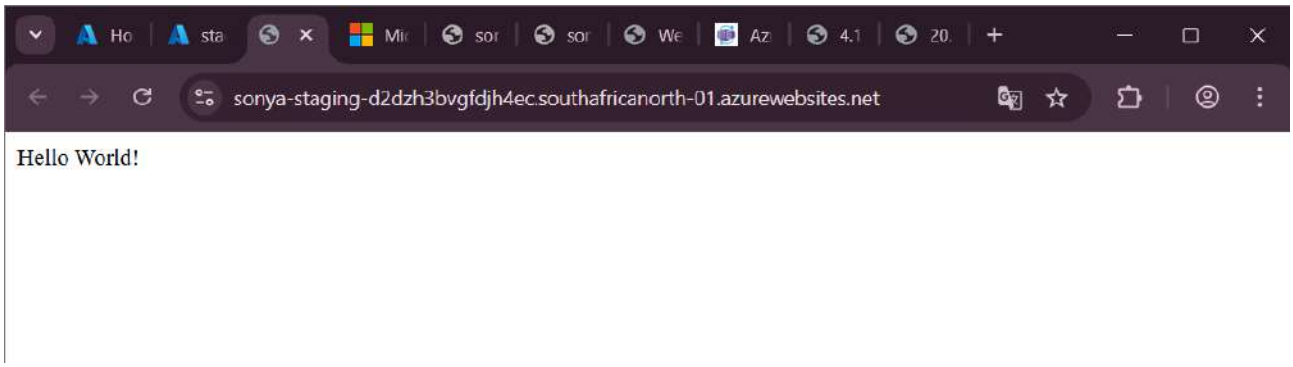
Save | Discard | Add | Swap | Logs | Refresh | ...

- Overview
- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems
- Microsoft Defender for Cloud
- Events (preview)

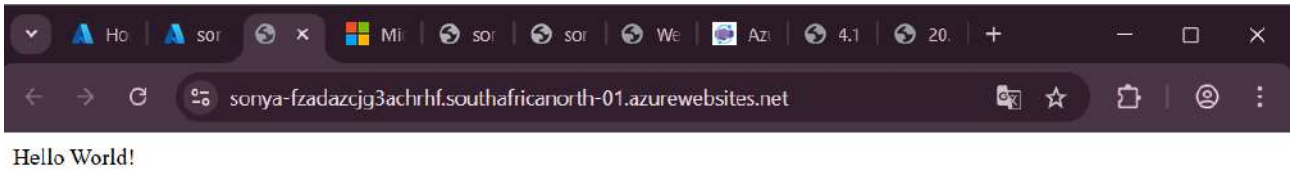
Deployment slots are live apps with their own hostnames. App content and configurations elements can be swapped between two deployment slots, including the production slot.

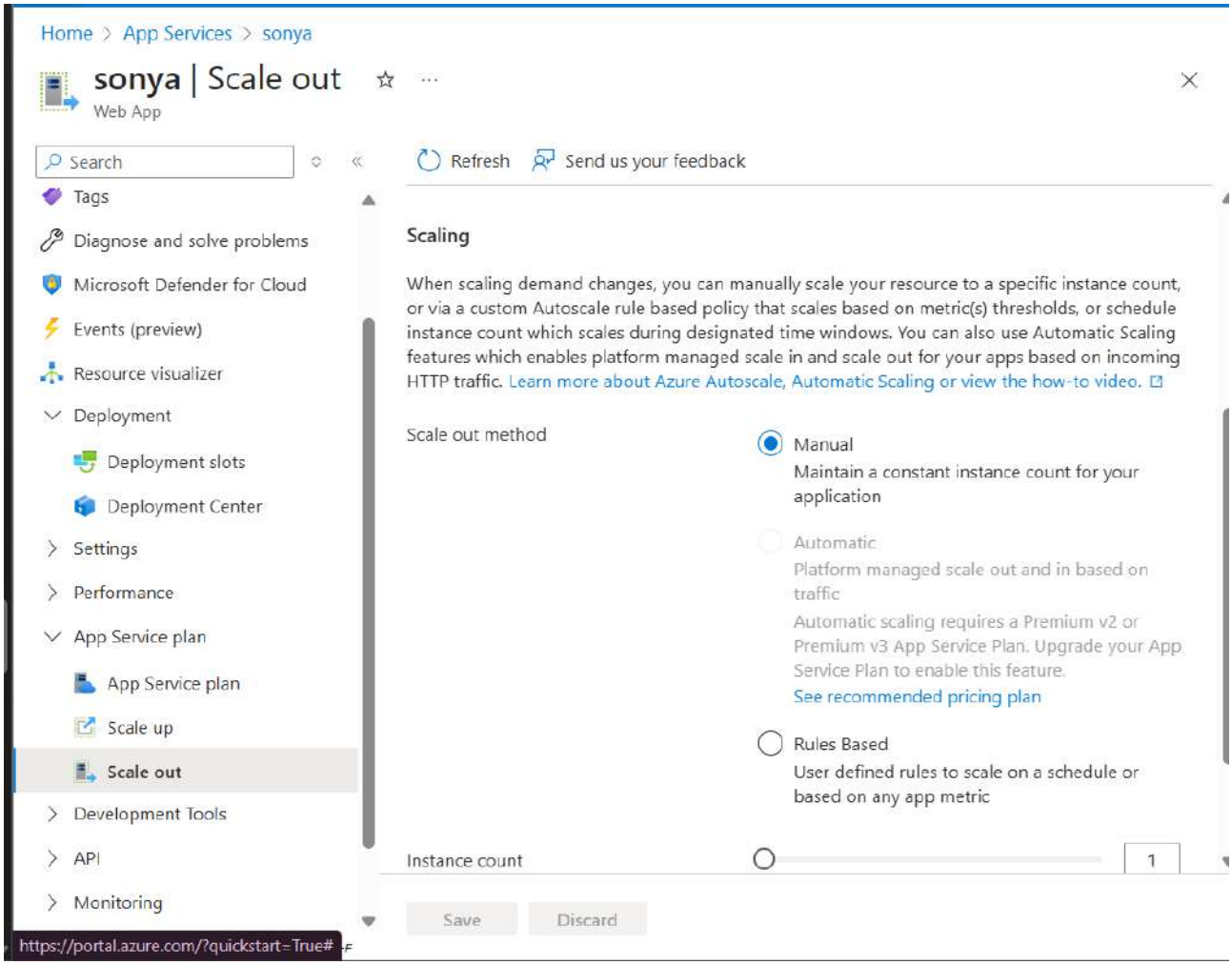
Name	Status	App service plan	Traffi
sonya PRODUCTION	Running	ASP-az104rg9-9c26	100
sonya-staging	Running	ASP-az104rg9-9c26	0

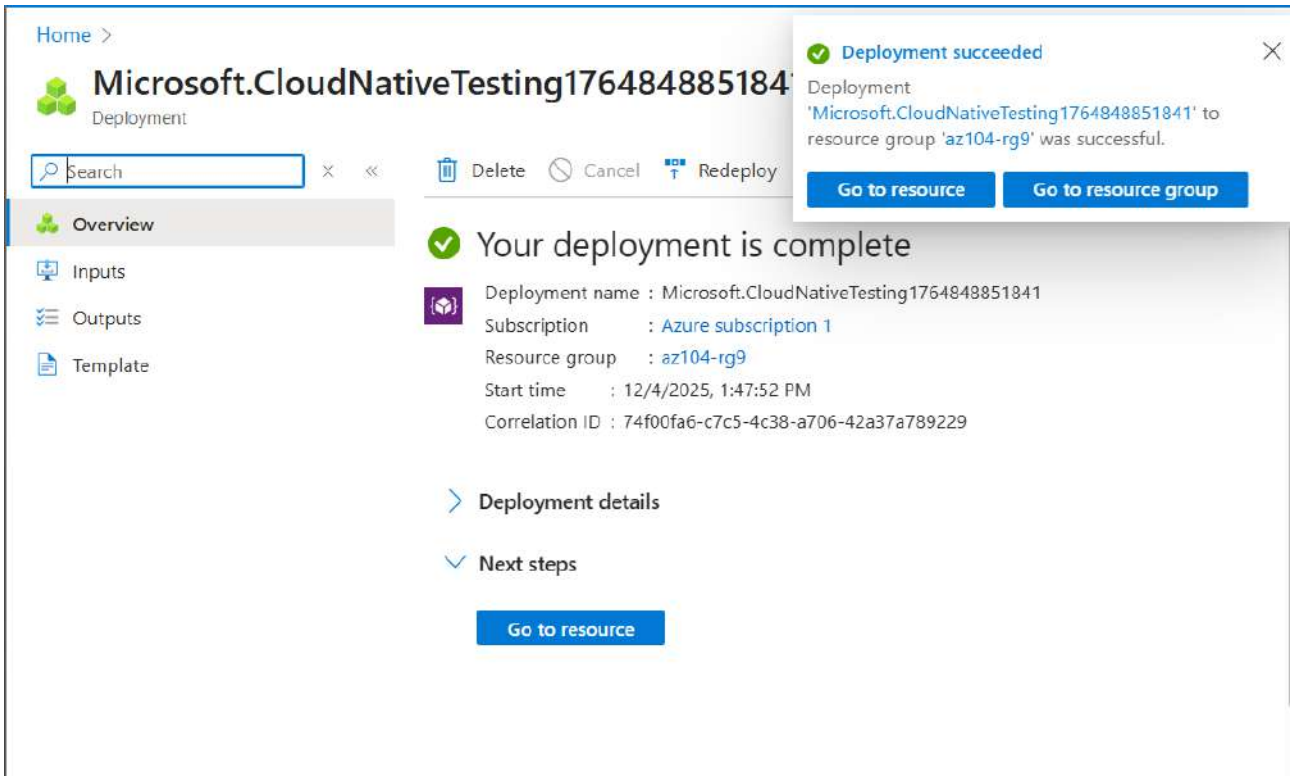




Task 4: Swap deployment slots




Home > App Services > sonya
sonya | Scale out
Web App
Search
Refresh
Send us your feedback
Tags
Diagnose and solve problems
Microsoft Defender for Cloud
Events (preview)
Resource visualizer
Deployment
Deployment slots
Deployment Center
Settings
Performance
App Service plan
App Service plan
Scale up
Scale out
Development Tools
API
Monitoring
Scaling
When scaling demand changes, you can manually scale your resource to a specific instance count, or via a custom Autoscale rule based policy that scales based on metric(s) thresholds, or schedule instance count which scales during designated time windows. You can also use Automatic Scaling features which enables platform managed scale in and scale out for your apps based on incoming HTTP traffic. Learn more about Azure Autoscale, Automatic Scaling or view the how-to video.
Scale out method
Manual
Maintain a constant instance count for your application
Automatic
Platform managed scale out and in based on traffic
Automatic scaling requires a Premium v2 or Premium v3 App Service Plan. Upgrade your App Service Plan to enable this feature.
See recommended pricing plan
Rules Based
User defined rules to scale on a schedule or based on any app metric
Instance count
1
Save
Discard
https://portal.azure.com/?quickstart=True#


Home >
Microsoft.CloudNativeTesting1764848851841
Deployment
Search
Overview
Inputs
Outputs
Template
Delete
Cancel
Redeploy
Deployment succeeded
Deployment 'Microsoft.CloudNativeTesting1764848851841' to resource group 'az104-rg9' was successful.
Go to resource
Go to resource group
Your deployment is complete
Deployment name : Microsoft.CloudNativeTesting1764848851841
Subscription : Azure subscription 1
Resource group : az104-rg9
Start time : 12/4/2025, 1:47:52 PM
Correlation ID : 74f00fa6-c7c5-4c38-a706-42a37a789229
Deployment details
Next steps
Go to resource

Home > App Services >

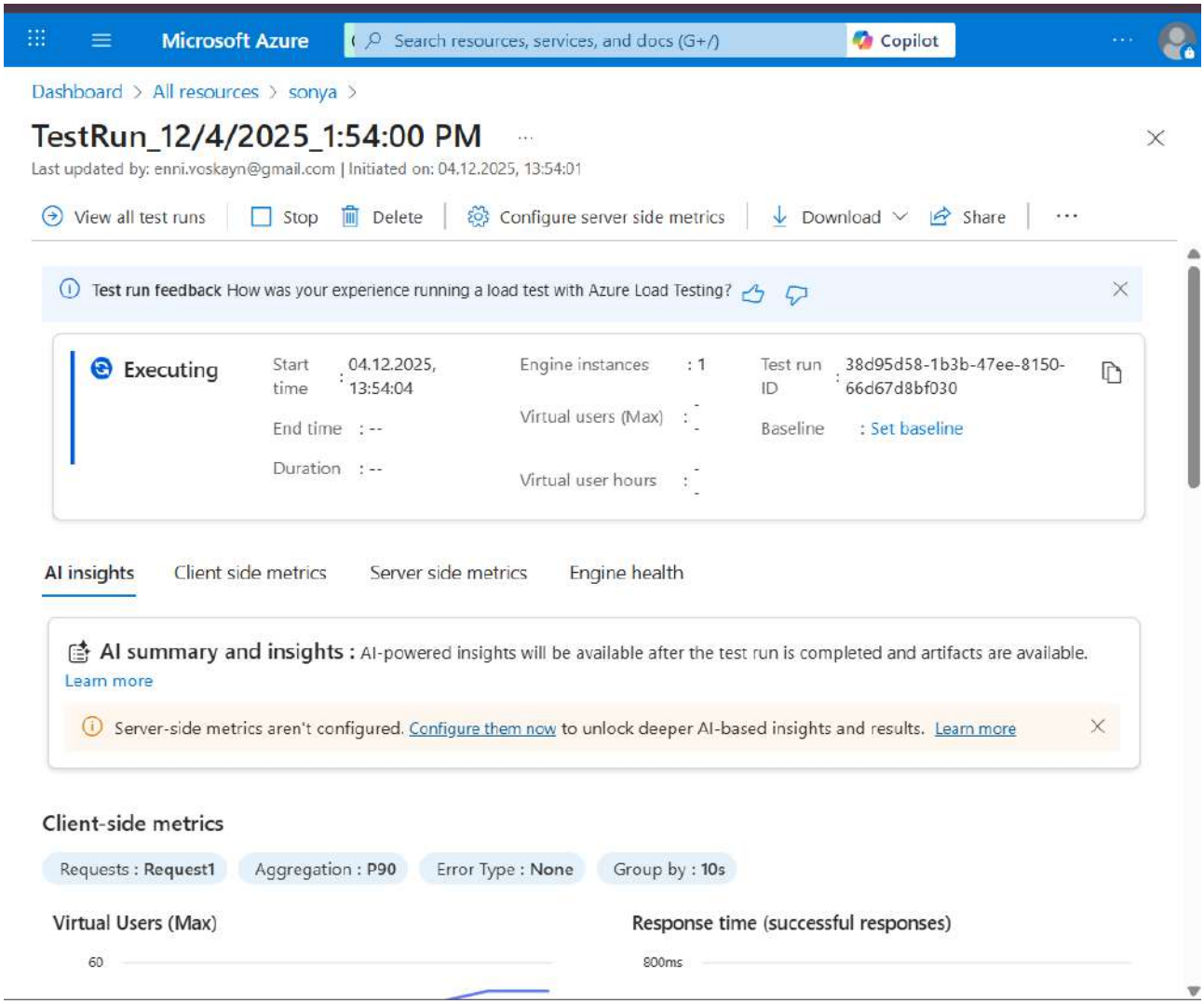
Create Web App

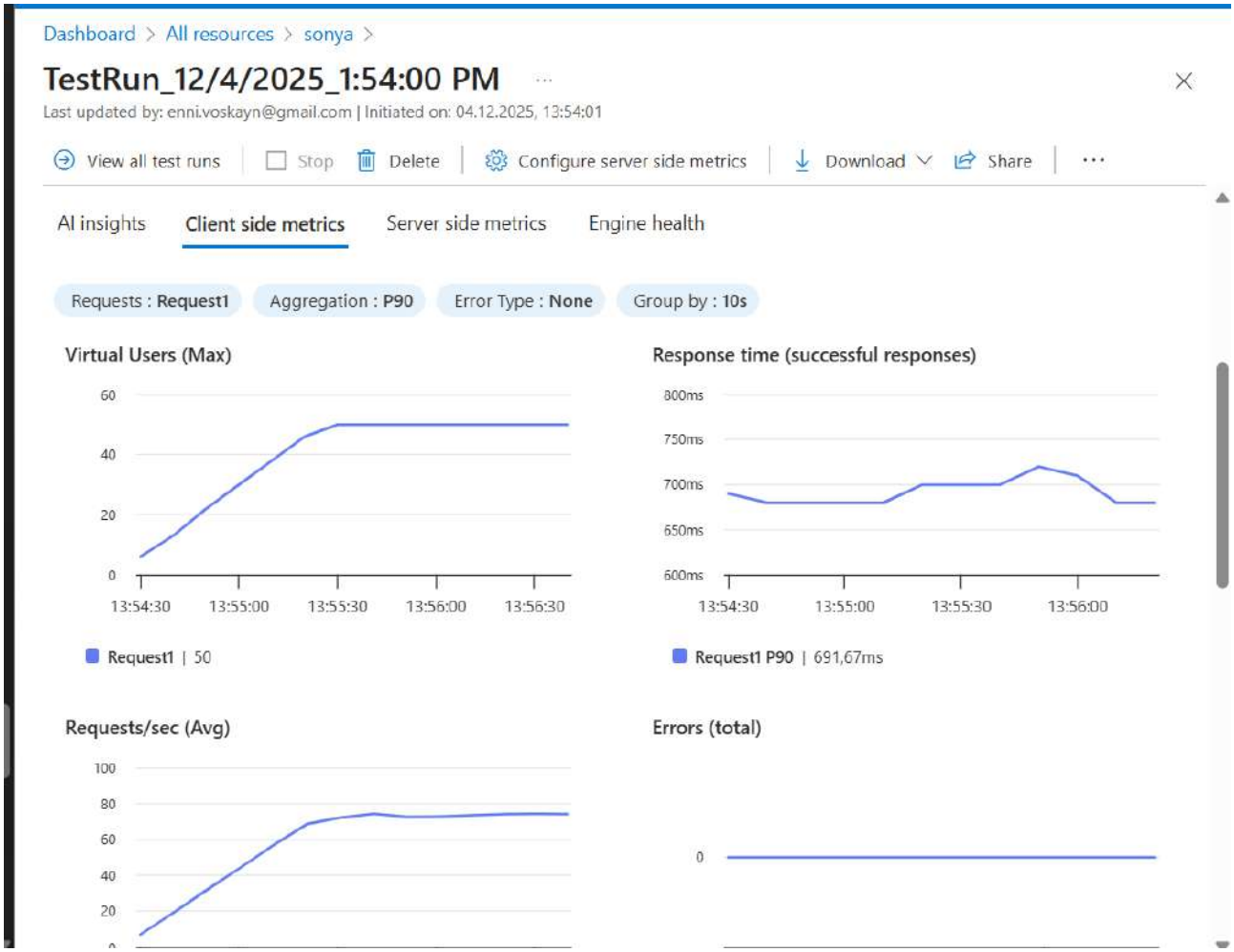
deploymentName: Microsoft.Web-WebApp-Portal-d8f55ee8-b282
deploymentStatusCode: -1
details: {"code":"InvalidTemplateDeployment","message":"The template deployment 'Microsoft.Web-WebApp-Portal-d8f55ee8-b282' is not valid according to the validation procedure. The tracking id is 'ee5729af-307c-470b-a150-8f0c03361304'. See inner errors for details.","details":[{"code":"ValidationForResourceFailed","message":"Validation failed for a resource. Check 'Error.Details[0]' for more information.","details":
[{"code":"SubscriptionIsOverQuotaForSku","message":"Operation cannot be completed without additional quota.
\r\nAdditional details - Location: \r\nCurrent Limit (PremiumMV3 VMs): 0 \r\nCurrent Usage: 0\r\nAmount required for this deployment (PremiumMV3 VMs): 1 \r\n(Minimum) New Limit that you should request to enable this deployment: 1.
\r\nNote that if you experience multiple scaling operations failing (in addition to this one) and need to accommodate the aggregate quota requirements of these operations, you will need to request a higher quota limit than the one currently displayed."}]}]}
error: {"code":"InvalidTemplateDeployment","details":[{"code":"ValidationForResourceFailed","message":"Validation failed for a resource. Check 'Error.Details[0]' for more information.","details":
[{"code":"SubscriptionIsOverQuotaForSku","message":"Operation cannot be completed without additional quota.
\r\nAdditional details - Location: \r\nCurrent Limit (PremiumMV3 VMs): 0 \r\nCurrent Usage: 0\r\nAmount required for this deployment (PremiumMV3 VMs): 1 \r\n(Minimum) New Limit that you should request to enable this deployment: 1.
\r\nNote that if you experience multiple scaling operations failing (in addition to this one) and need to accommodate the aggregate quota requirements of these operations, you will need to request a higher quota limit than the one currently displayed."}]}],"message":"The template deployment 'Microsoft.Web-WebApp-Portal-d8f55ee8-b282' is not valid according to the validation procedure. The tracking id is 'ee5729af-307c-470b-a150-8f0c03361304'. See inner errors for details."}
expected: true
location: East US
notificationTimestamp: "2025-12-04T01:12:16.048Z"
resourceGroupName: az104-rg9
stage: 6
subscriptionId: 118a834e-682a-4d4a-960c-4efb65654530

Basics | Database | Deployment | Networking | Monitor + secure | Tags | **Review + create**

Summary

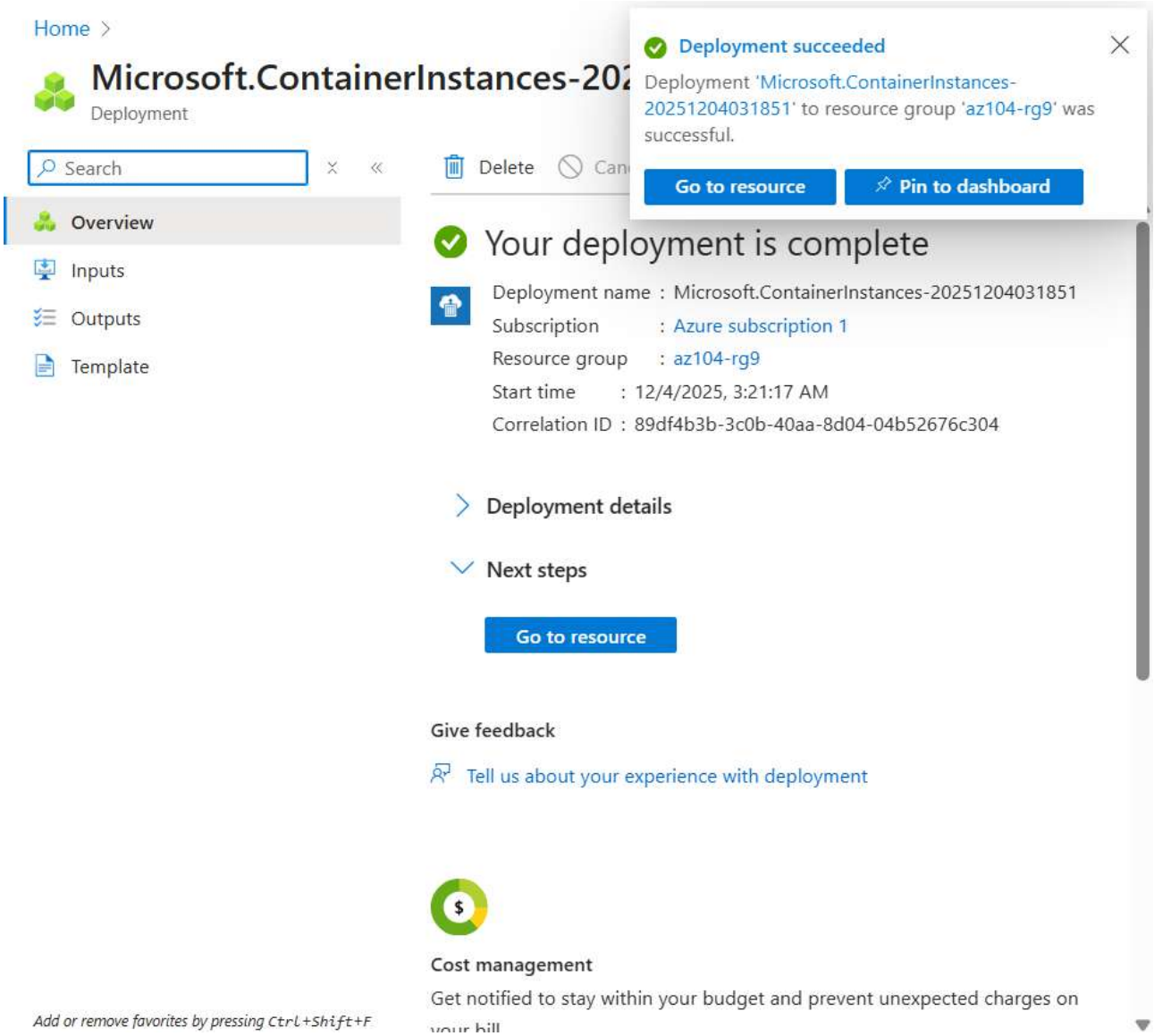
Create | < Previous | Next > | Download a template for automation

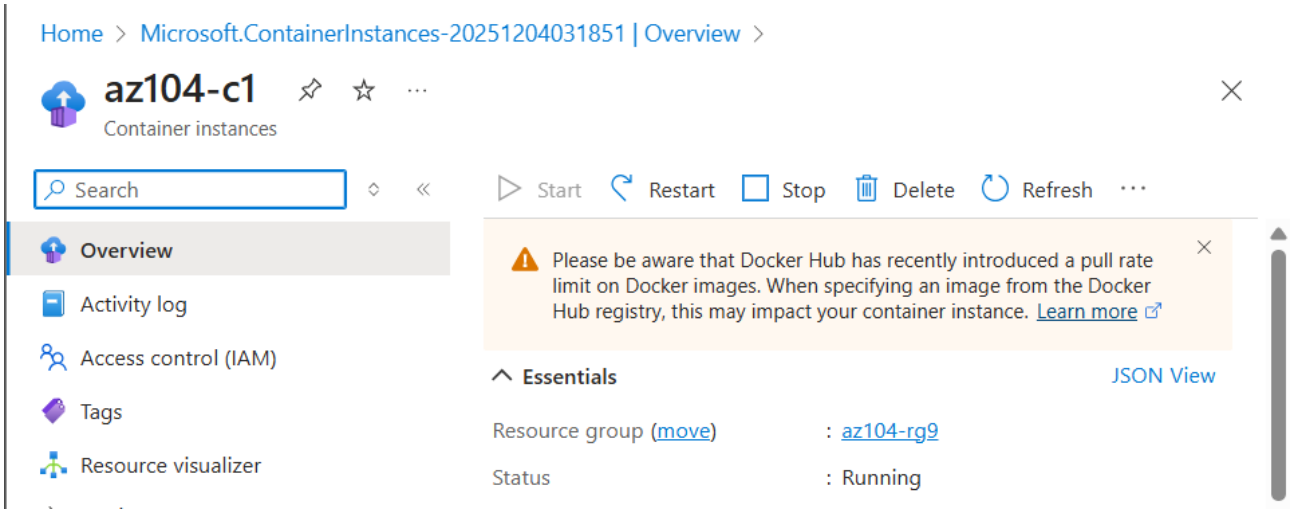

Microsoft Azure
Search resources, services, and docs (G+/)
Copilot
Dashboard > All resources > sonya >
TestRun_12/4/2025_1:54:00 PM
Last updated by: enni.voskayn@gmail.com | Initiated on: 04.12.2025, 13:54:01
View all test runs
Stop
Delete
Configure server side metrics
Download
Share
Test run feedback How was your experience running a load test with Azure Load Testing?
Executing
Start time : 04.12.2025, 13:54:04
End time : --
Duration : --
Engine instances : 1
Virtual users (Max) : -
Virtual user hours : -
Test run ID : 38d95d58-1b3b-47ee-8150-66d67d8bf030
Baseline : Set baseline
AI insights
Client side metrics
Server side metrics
Engine health
AI summary and insights : AI-powered insights will be available after the test run is completed and artifacts are available.
Learn more
Server-side metrics aren't configured. Configure them now to unlock deeper AI-based insights and results. Learn more
Client-side metrics
Requests : Request1
Aggregation : P90
Error Type : None
Group by : 10s
Virtual Users (Max)
60
Response time (successful responses)
800ms

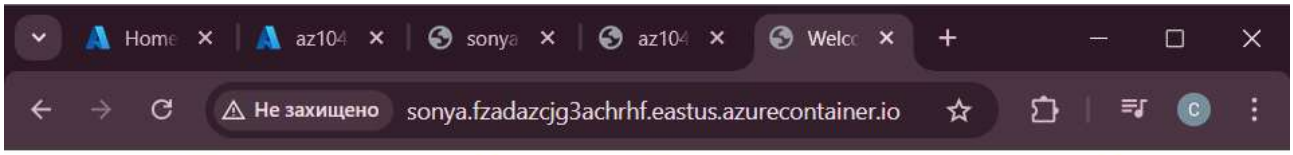


Lab 09b - Implement Azure Container Instances

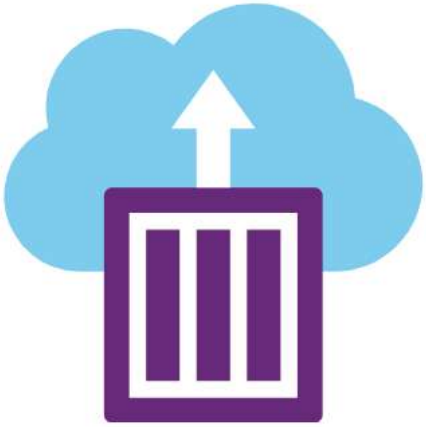
Task 1: Deploy an Azure Container Instance using a Docker image

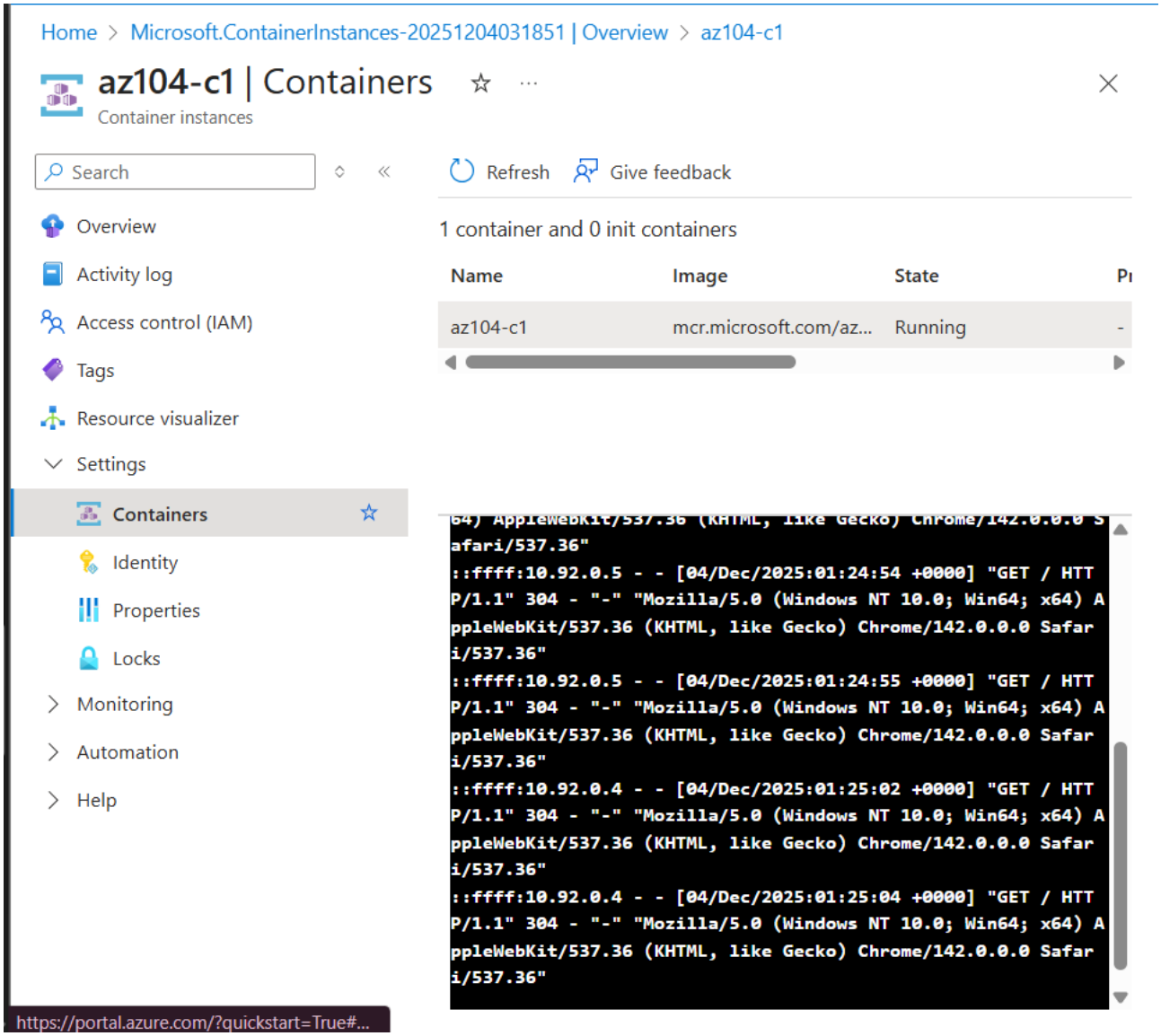

Home
Microsoft.ContainerInstances-202
Deployment
Search
Overview
Inputs
Outputs
Template
Delete
Deployment succeeded
Deployment 'Microsoft.ContainerInstances-20251204031851' to resource group 'az104-rg9' was successful.
Go to resource
Pin to dashboard
Your deployment is complete
Deployment name : Microsoft.ContainerInstances-20251204031851
Subscription : Azure subscription 1
Resource group : az104-rg9
Start time : 12/4/2025, 3:21:17 AM
Correlation ID : 89df4b3b-3c0b-40aa-8d04-04b52676c304
Deployment details
Next steps
Go to resource
Give feedback
Tell us about your experience with deployment
Cost management
Get notified to stay within your budget and prevent unexpected charges on
Add or remove favorites by pressing Ctrl+Shift+F


Home > Microsoft.ContainerInstances-20251204031851 | Overview
az104-c1
Container instances
Search
Overview
Activity log
Access control (IAM)
Tags
Resource visualizer
Start
Restart
Stop
Delete
Refresh
Please be aware that Docker Hub has recently introduced a pull rate limit on Docker images. When specifying an image from the Docker Hub registry, this may impact your container instance. Learn more
Essentials
JSON View
Resource group (move) : az104-rg9
Status : Running



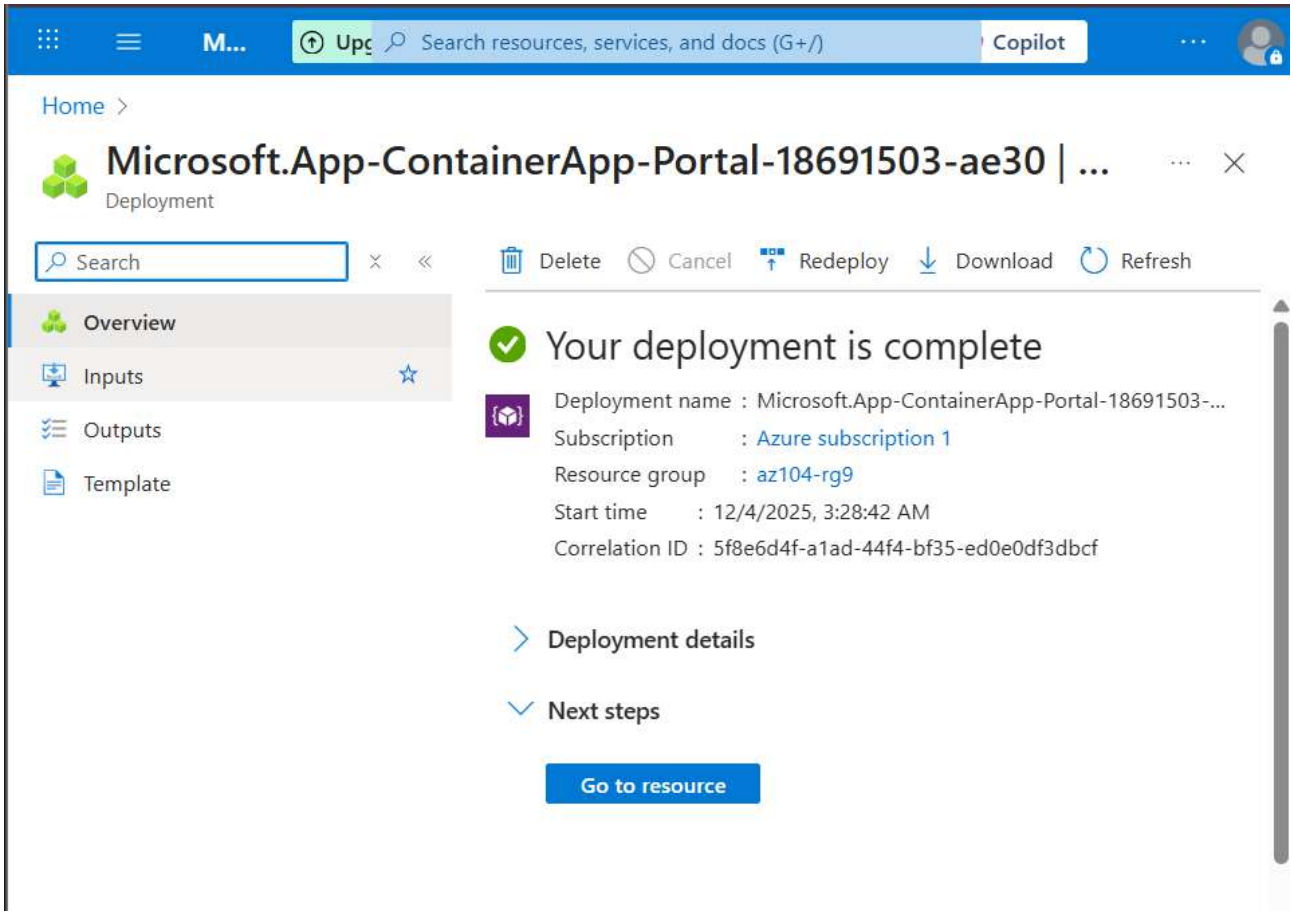
Welcome to Azure Container Instances!

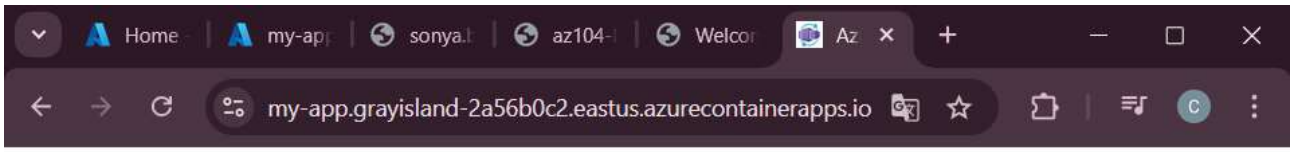




Lab 09c - Implement Azure Container Apps

Task 1: Create and configure an Azure Container App and environment





Microsoft Azure

Your container app is running with a Hello World image

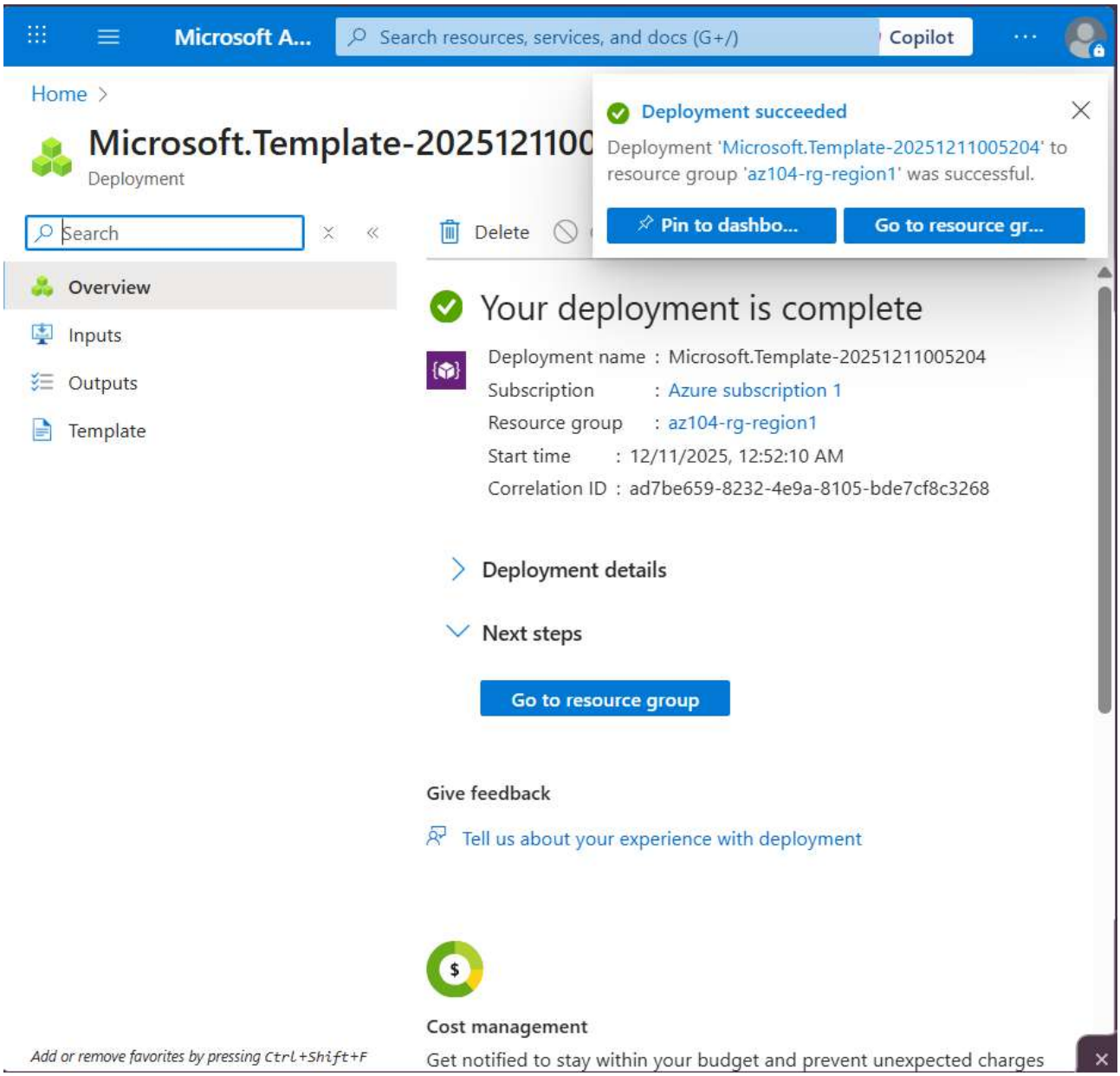
Azure Container Apps is a serverless container solution for apps and microservices that helps you:

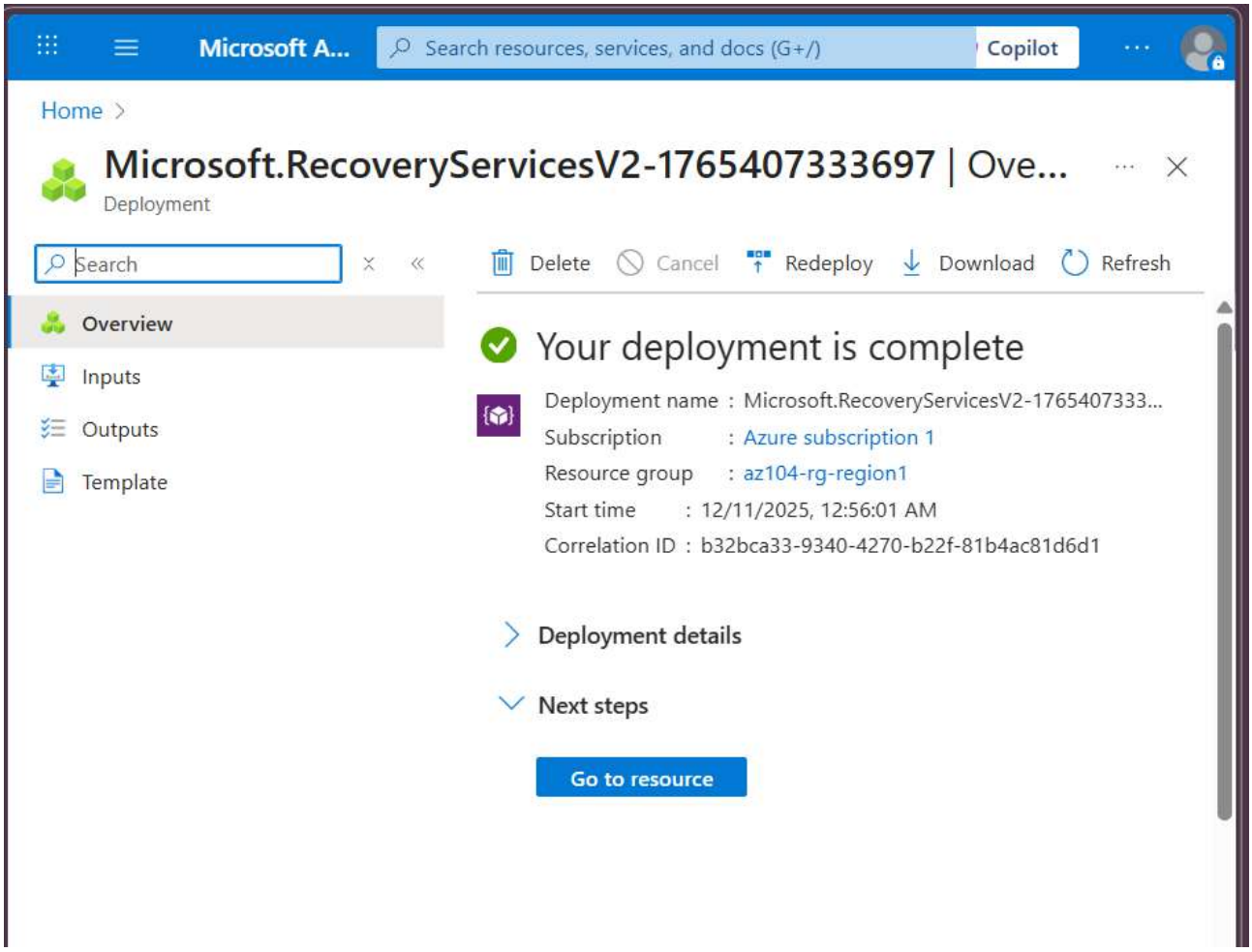
- Simplify your container deployments
- Manage less infrastructure
- Scale automatically on demand

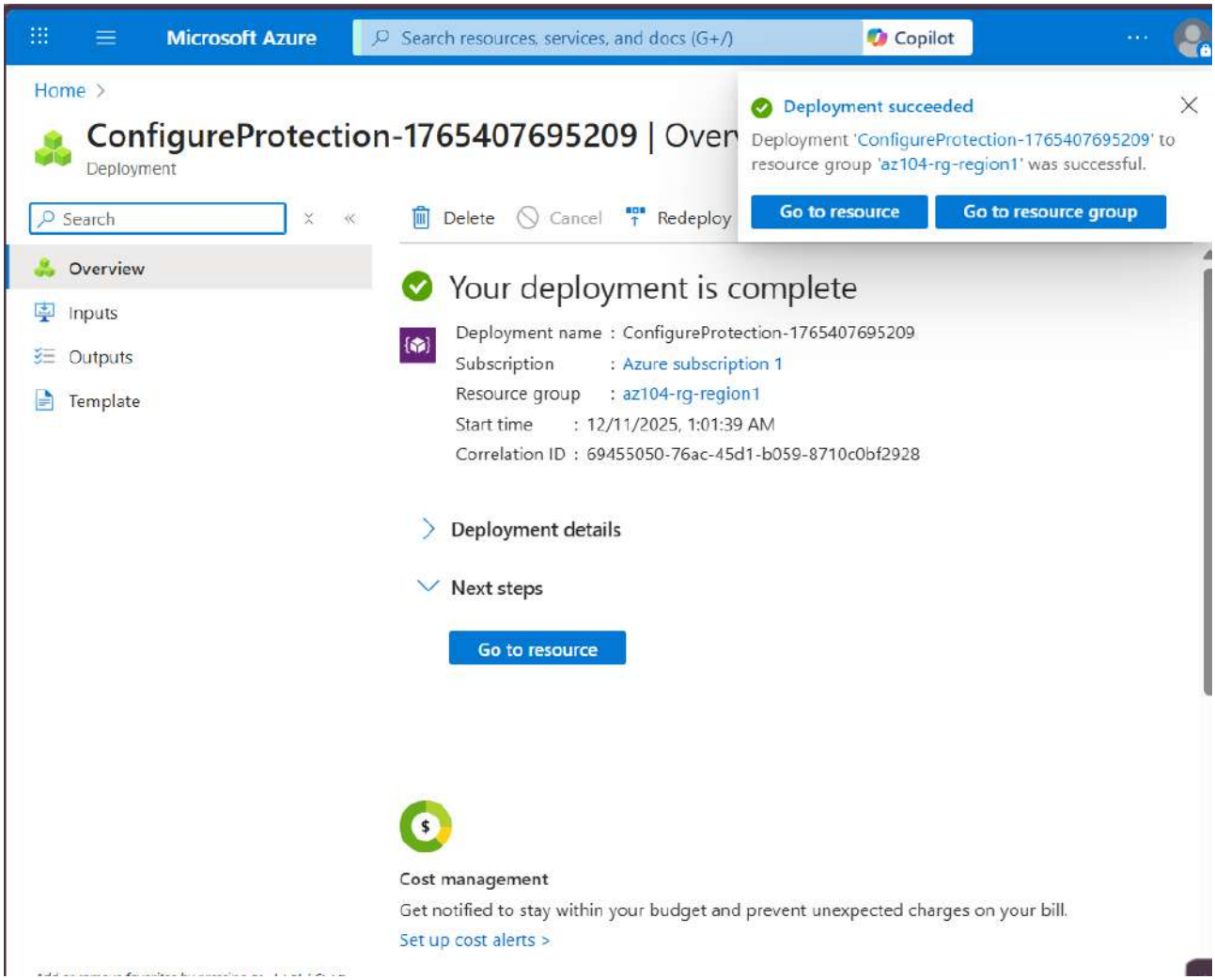
Learn more.

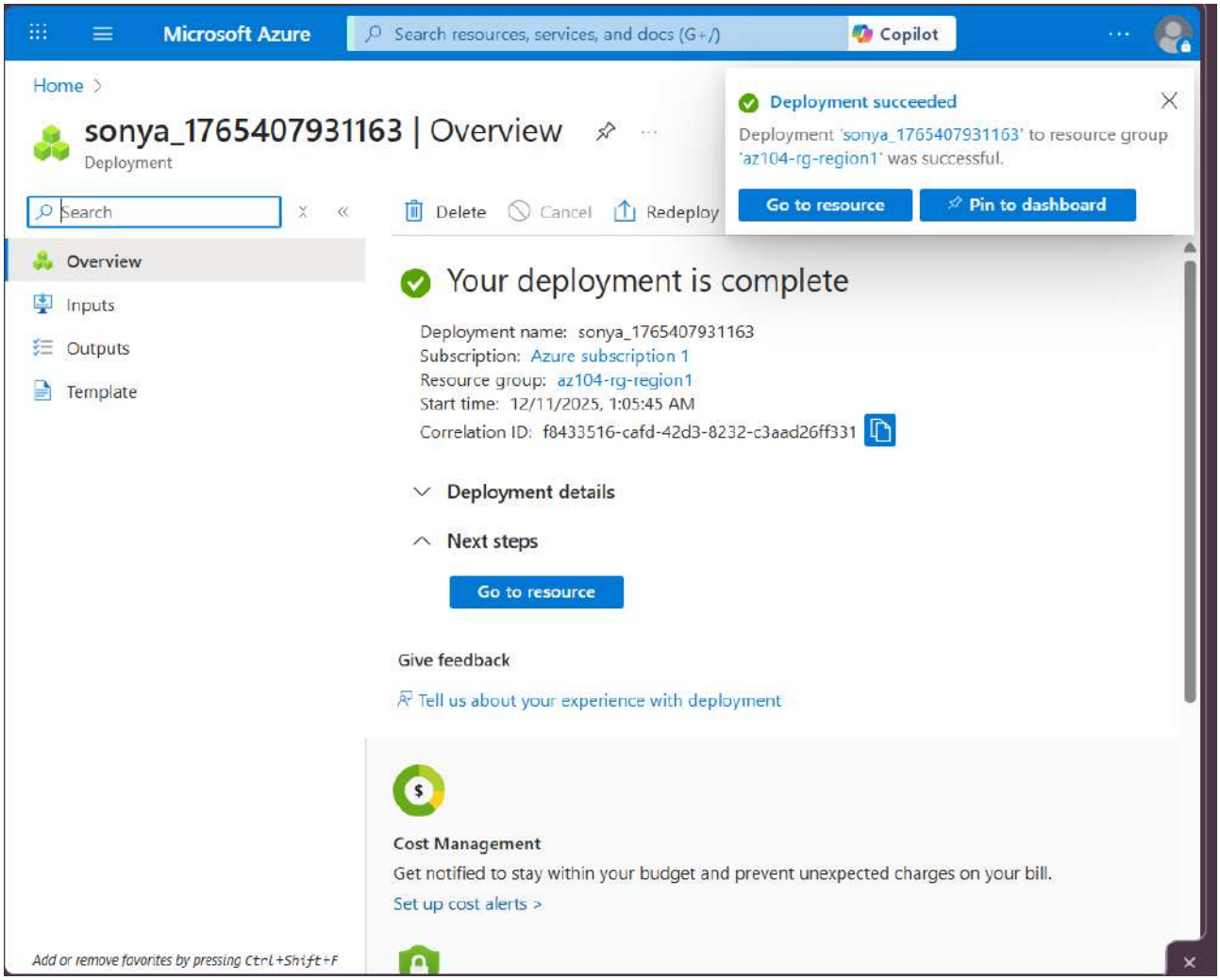
Lab 10 - Implement Data Protection

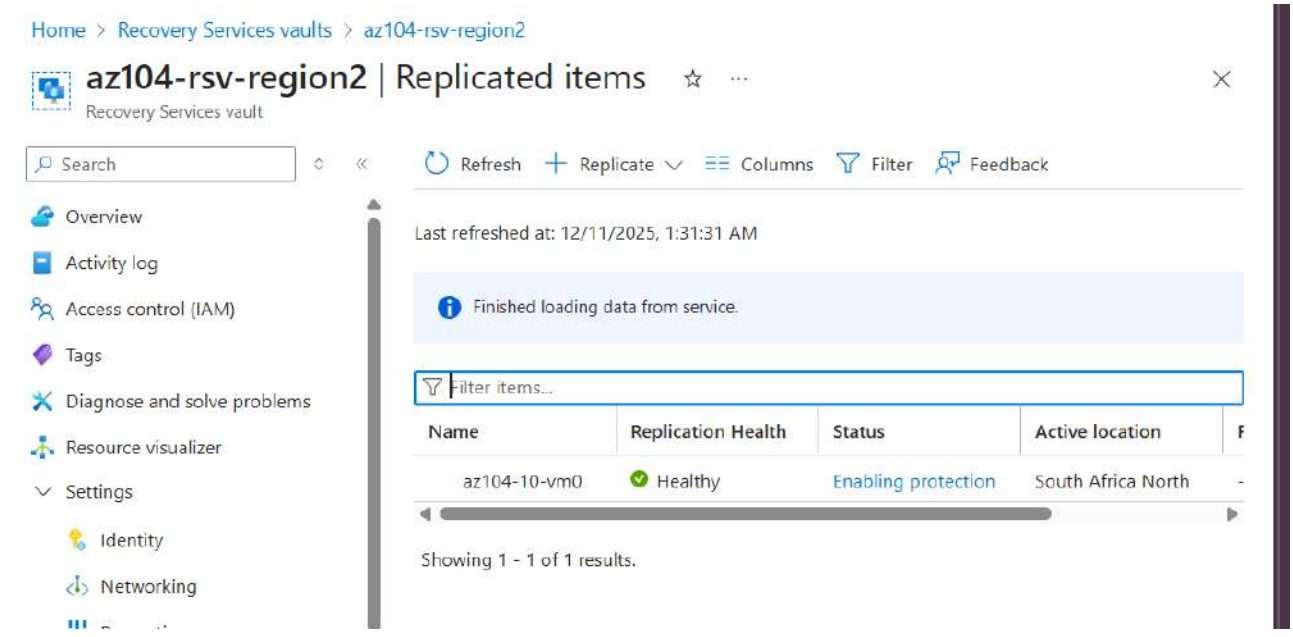
Task 1: Use a template to provision an infrastructure




Microsoft A...
Search resources, services, and docs (G+/)
Copilot
Home
Microsoft.RecoveryServicesV2-1765407333697 | Ove...
Deployment
Search
Overview
Inputs
Outputs
Template
Delete
Cancel
Redeploy
Download
Refresh
Your deployment is complete
Deployment name : Microsoft.RecoveryServicesV2-1765407333...
Subscription : Azure subscription 1
Resource group : az104-rg-region1
Start time : 12/11/2025, 12:56:01 AM
Correlation ID : b32bca33-9340-4270-b22f-81b4ac81d6d1
Deployment details
Next steps
Go to resource

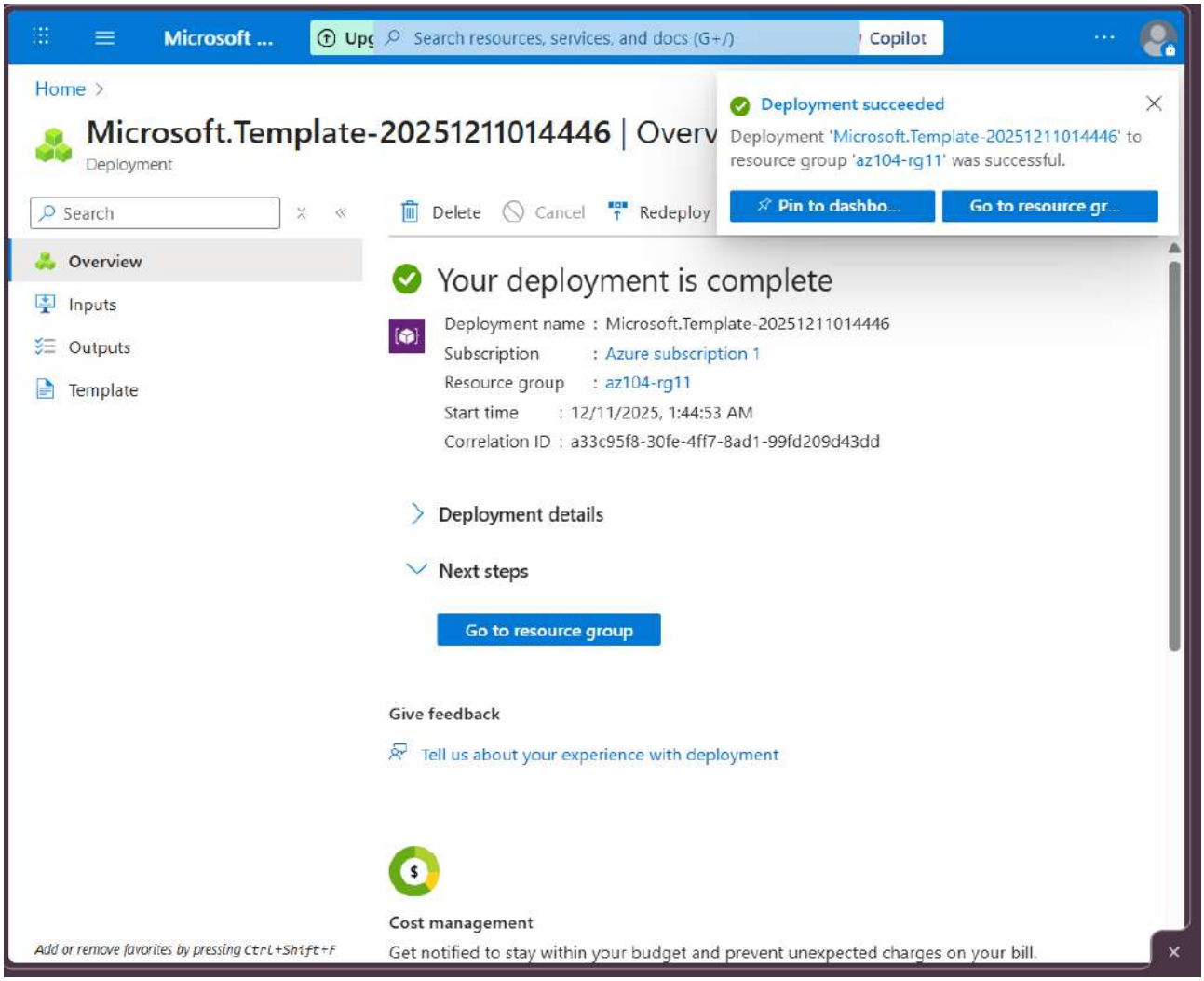

Microsoft Azure
Search resources, services, and docs (G+/)
Copilot
Home >
ConfigureProtection-1765407695209 | Over
Deployment
Deployment succeeded
Deployment 'ConfigureProtection-1765407695209' to resource group 'az104-rg-region1' was successful.
Go to resource
Go to resource group
Search
Delete
Cancel
Redeploy
Overview
Inputs
Outputs
Template
Your deployment is complete
Deployment name : ConfigureProtection-1765407695209
Subscription : Azure subscription 1
Resource group : az104-rg-region1
Start time : 12/11/2025, 1:01:39 AM
Correlation ID : 69455050-76ac-45d1-b059-8710c0bf2928
Deployment details
Next steps
Go to resource
Cost management
Get notified to stay within your budget and prevent unexpected charges on your bill.
Set up cost alerts >

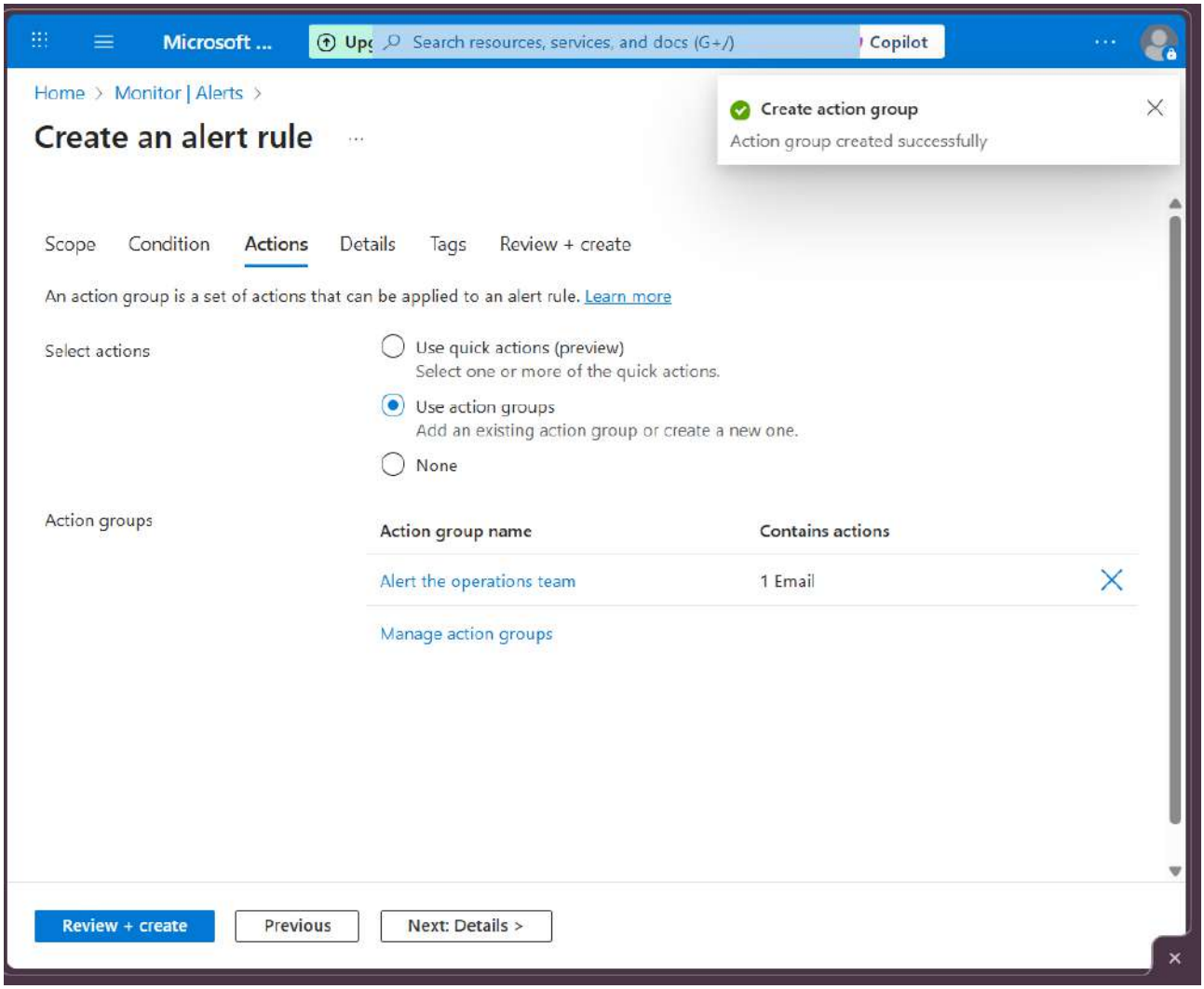


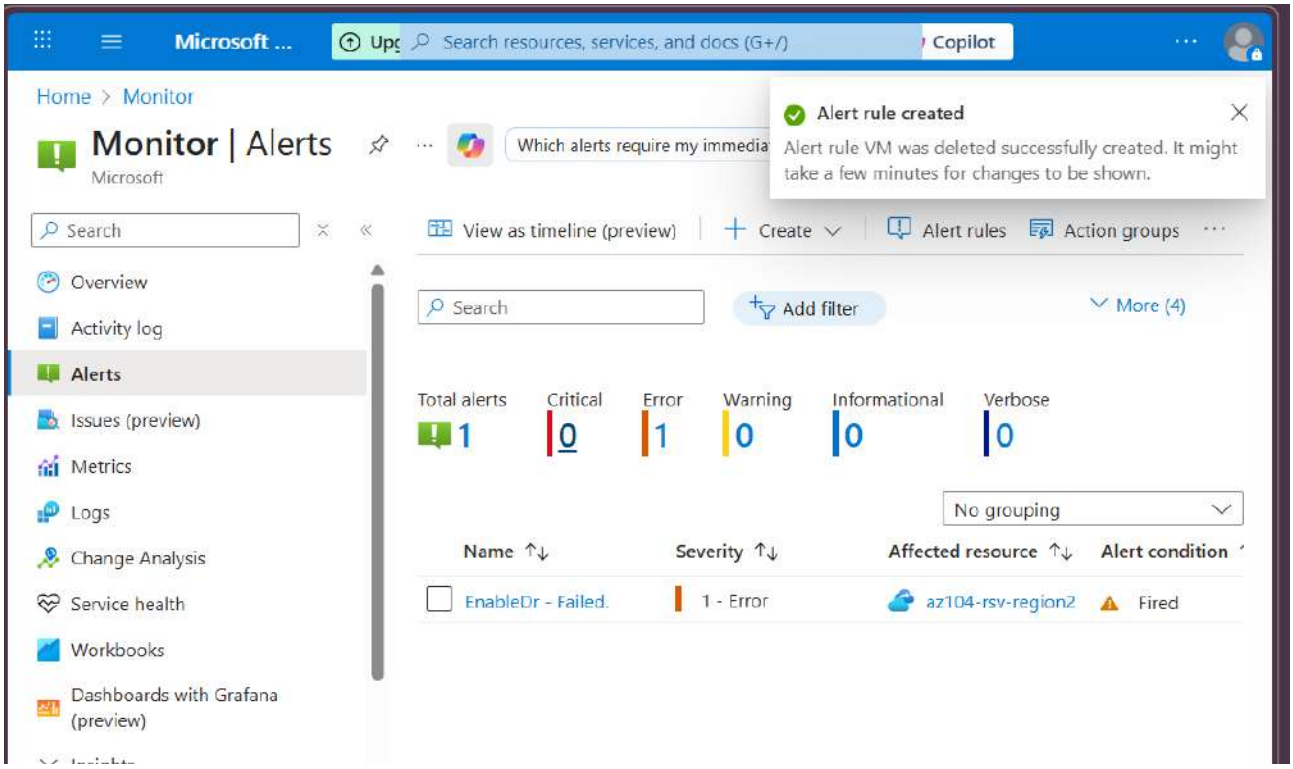


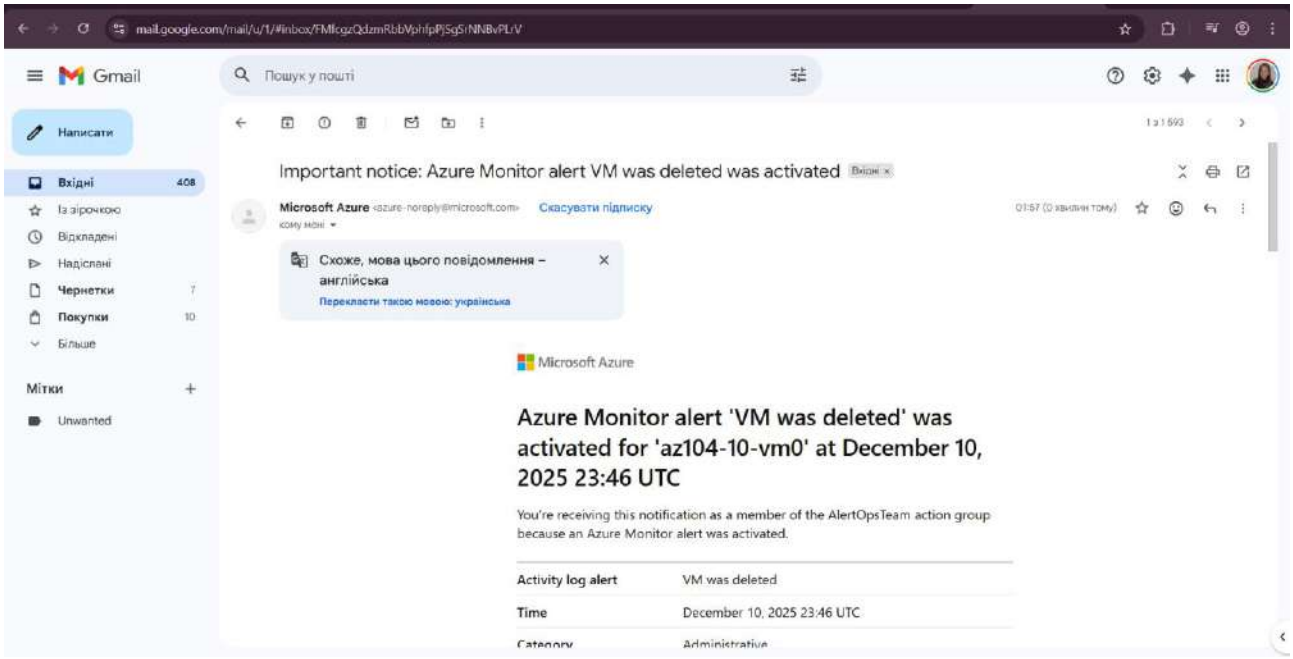
Lab 11 - Implement Monitoring

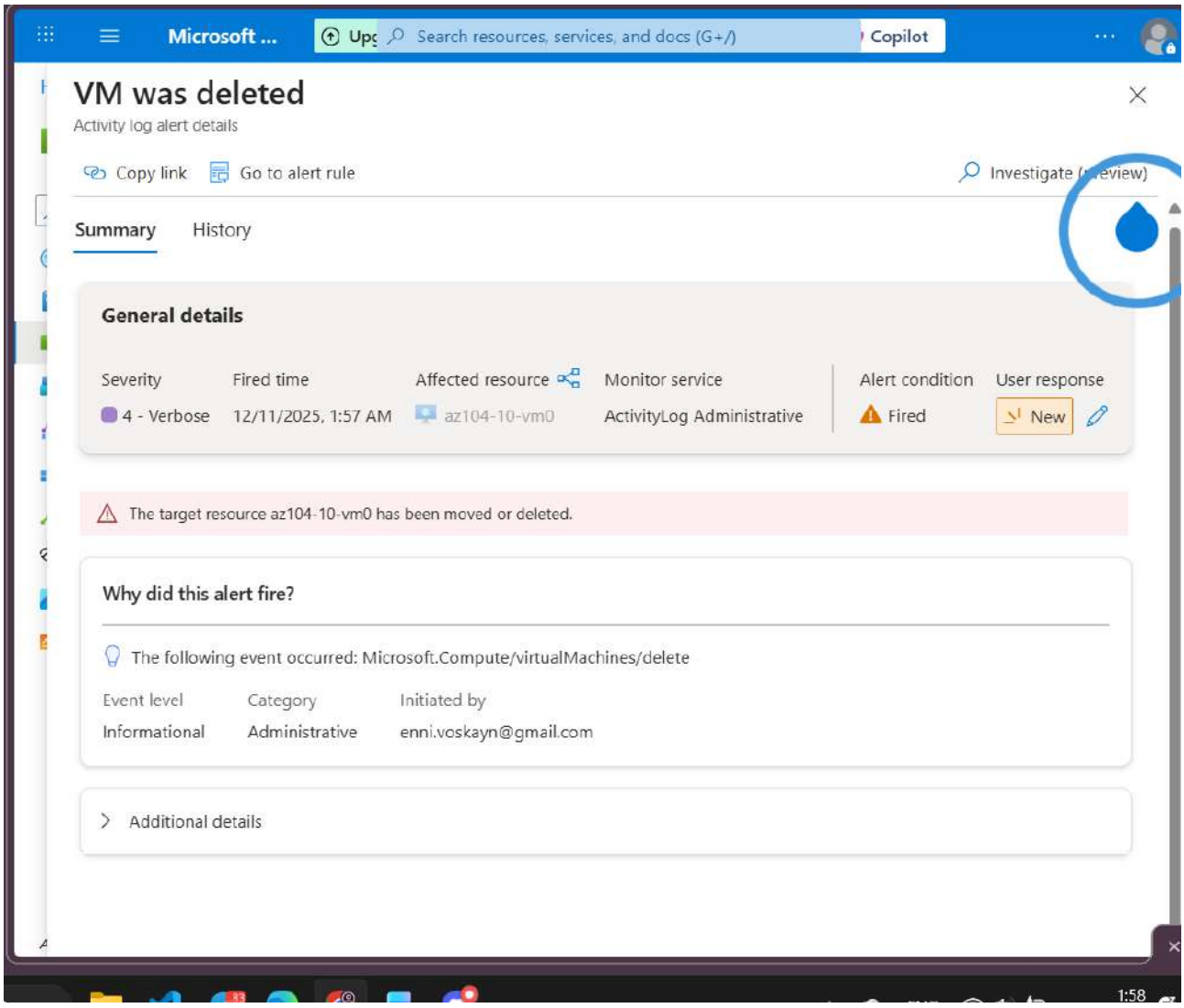
Task 1: Use a template to provision an infrastructure

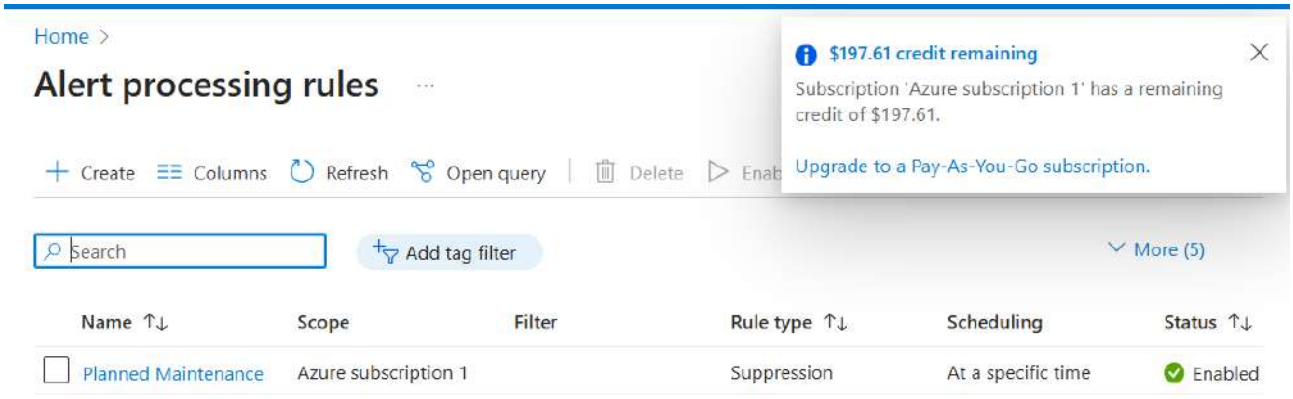

Microsoft ...
Search resources, services, and docs (G+/)
Copilot
Home >
Microsoft.Template-20251211014446 | Overv
Deployment
Deployment succeeded
Deployment 'Microsoft.Template-20251211014446' to resource group 'az104-rg11' was successful.
Pin to dashbo...
Go to resource gr...
Search
Delete
Cancel
Redeploy
Overview
Inputs
Outputs
Template
Your deployment is complete
Deployment name : Microsoft.Template-20251211014446
Subscription : Azure subscription 1
Resource group : az104-rg11
Start time : 12/11/2025, 1:44:53 AM
Correlation ID : a33c95f8-30fe-4ff7-8ad1-99fd209d43dd
Deployment details
Next steps
Go to resource group
Give feedback
Tell us about your experience with deployment
Cost management
Get notified to stay within your budget and prevent unexpected charges on your bill.
Add or remove favorites by pressing Ctrl+Shift+F


Microsoft ...
Search resources, services, and docs (G+/)
Copilot
Home > Monitor | Alerts >
Create an alert rule
Create action group
Action group created successfully
Scope
Condition
Actions
Details
Tags
Review + create
An action group is a set of actions that can be applied to an alert rule. Learn more
Select actions
Use quick actions (preview)
Select one or more of the quick actions.
Use action groups
Add an existing action group or create a new one.
None
Action groups
Action group name
Contains actions
Alert the operations team
1 Email
Manage action groups
Review + create
Previous
Next: Details >


Microsoft ...
Search resources, services, and docs (G+/)
Copilot
Home > Monitor
Monitor | Alerts
Microsoft
Alert rule created
Alert rule VM was deleted successfully created. It might take a few minutes for changes to be shown.
Search
Overview
Activity log
Alerts
Issues (preview)
Metrics
Logs
Change Analysis
Service health
Workbooks
Dashboards with Grafana (preview)
View as timeline (preview)
Create
Alert rules
Action groups
Search
Add filter
More (4)
Total alerts
1
Critical
0
Error
1
Warning
0
Informational
0
Verbose
0
No grouping
Name
Severity
Affected resource
Alert condition
EnableDr - Failed.
1 - Error
az104-rsv-region2
Fired


Gmail
Пошук у пошті
Написати
Вхідні 408
Із зірочкою
Відкладені
Надіслані
Чернетки 7
Покупки 10
Більше
Мітки
Unwanted
Important notice: Azure Monitor alert VM was deleted was activated
Microsoft Azure <azure-noreply@microsoft.com>
Скасувати підписку
Схоже, мова цього повідомлення – англійська
Перекласти такою мовою: українська
Microsoft Azure
Azure Monitor alert 'VM was deleted' was activated for 'az104-10-vm0' at December 10, 2025 23:46 UTC
You're receiving this notification as a member of the AlertOpsTeam action group because an Azure Monitor alert was activated.
Activity log alert
VM was deleted
Time
December 10, 2025 23:46 UTC
Category
Administrative


Microsoft ...
Search resources, services, and docs (G+/)
Copilot
VM was deleted
Activity log alert details
Copy link
Go to alert rule
Investigate (Preview)
Summary
History
General details
Severity
4 - Verbose
Fired time
12/11/2025, 1:57 AM
Affected resource
az104-10-vm0
Monitor service
ActivityLog Administrative
Alert condition
Fired
User response
New
The target resource az104-10-vm0 has been moved or deleted.
Why did this alert fire?
The following event occurred: Microsoft.Compute/virtualMachines/delete
Event level
Informational
Category
Administrative
Initiated by
enni.voskayn@gmail.com
Additional details
1:58


Home >
Alert processing rules
$197.61 credit remaining
Subscription 'Azure subscription 1' has a remaining credit of $197.61.
Upgrade to a Pay-As-You-Go subscription.
Create
Columns
Refresh
Open query
Delete
Search
Add tag filter
More (5)
Name
Scope
Filter
Rule type
Scheduling
Status
Planned Maintenance
Azure subscription 1
Suppression
At a specific time
Enabled