Міністерство освіти і науки України

Карпатський національний університет

імені В.Стефаника

Факультет математики та інформатики

Кафедра інформаційних технологій

Інформатика і програмування
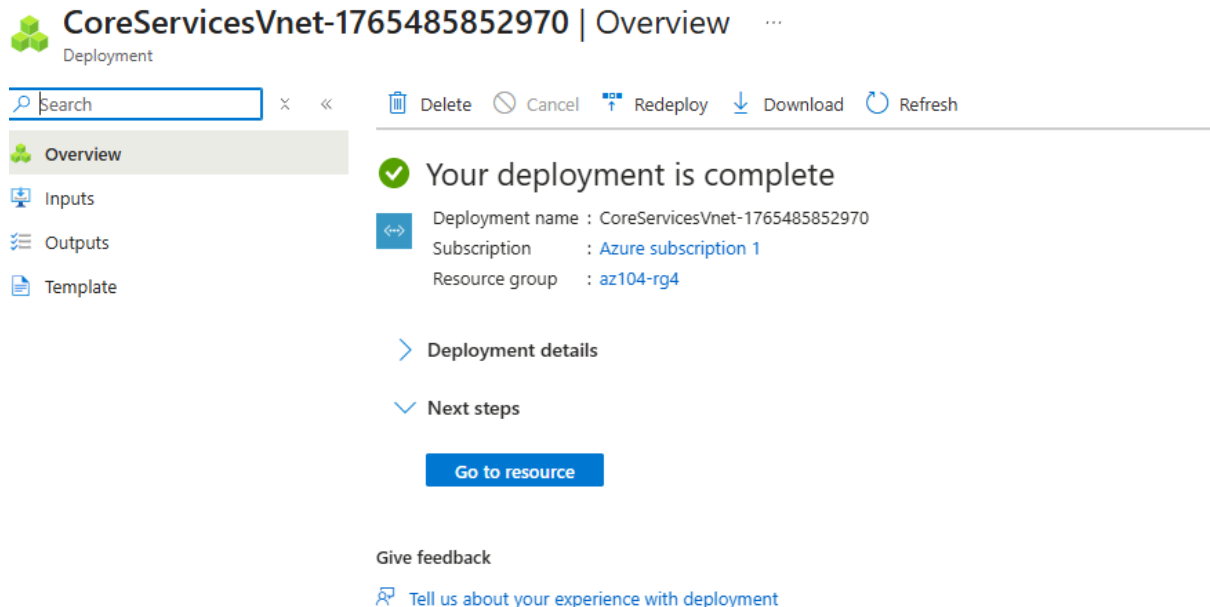

Лабораторна робота No 4

Тема: Implement Virtual Networking

Виконав: Прокутко В.В

Група ІПЗ-43

Дата: 12 грудня 2025

Викладач: Поварчук Д.Д

Івано-Франківськ – 2025

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

The organization plans a large amount of growth for core services. In this task, you create the virtual network and the associated subnets to accommodate the existing resources and planned growth. In this task, you will use the Azure portal.

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

In this task, you create the ManufacturingVnet virtual network and associated subnets. The organization anticipates growth for the manufacturing offices so the subnets are sized for the expected growth. For this task, you use a template to create the resources.

Microsoft.Template-20251212160742 | Overview
Deployment

- Search
- Overview
- Inputs
- Outputs
- Template

🗑 Delete ⊘ Cancel ↻ Redeploy ⬇ Download ↻ Refresh

✓ Your deployment is complete

Deployment name : Microsoft.Template-20251212160742
Subscription : Azure subscription 1
Resource group : az104-rg4

Start time : 12/12/2025, 16:07:55
Correlation ID : d0c832d6-453a-48b1-acb9-b026cfddd9e8

> Deployment details

∨ Next steps

Go to resource group

Give feedback

⊠ Tell us about your experience with deployment

Home >

CreateApplicationSecurityGroupBladeViewModel | Overview
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 : 12/12/2025, 16:11:07
Correlation ID : 2a7b8509-7327-44e9-aac2-351c1faa4e7e

> 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.
Set up cost alerts >

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Bash

parameters.json

FILES
▸ .azure
▸ .Azure

CoreServicesVnet   No Results
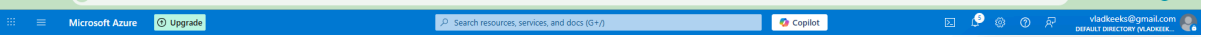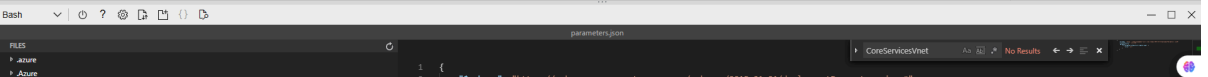
Home > myNSGSecure

myNSGSecure | Subnets
Network security group

- Search
- Overview
- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems
- Resource visualizer
- Settings
  - Inbound security rules
  - Outbound security rules
  - Network interfaces
  - Subnets
  - Properties
  - Locks
- Monitoring
- Automation
- Help

✓ **Saving subnet**
Successfully saved network security group for subnet 'SharedServicesSubnet'.

╋ Associate

Search subnets

Name	↑↓	Address range	↑↓	Virtual network	↑↓
SharedServicesSubnet		10.20.0.0/24		CoreServicesVnet	⋯

⊠ Give feedback

Add or remove favorites by pressing Ctrl+Shift+F

Bash

parameters.json

FILES
▸ .azure
▸ .Azure

CoreServicesVnet   No Results
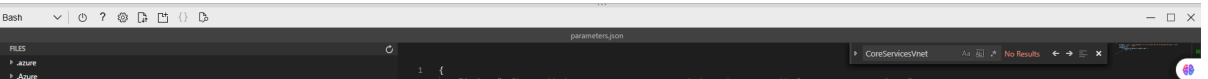
vladkeeks [~]$

Task 3: Create and configure communication between an Application Security Group and a Network Security Group
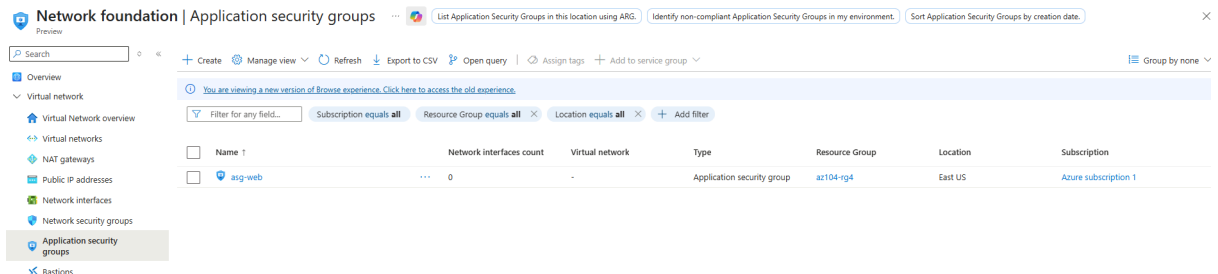
Task 4: Configure public and private Azure DNS zones

In this task, you will create and configure public and private DNS zones.

private.contoso.com ☆ ...
Private DNS zone

- 🔵 Overview
- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems
- Resource visualizer
- > Settings
- > DNS Management
- > Monitoring
- > Automation
- > Help

↑ Import   ↓ Export   → Move ∨   ⟳ Refresh   🗑 Delete   Give feedback

∧ **Essentials**

Resource group (move)	: az104-rg4	Recordsets	: 1
Location	: Global	Virtual Network Links	: 0
Subscription (move)	: Azure subscription 1	Virtual Network Links With Regist...	: 0
Subscription ID	: 9889ebc0-ca1f-4e0d-8116-0764f6dbd196		
Tags (edit)	: Add tags		

Monitoring   Capabilities   Tutorials   Tools + SDKs   Recommendations (0)

Azure Monitor Tools

🟩 **Get alerted to issues**	📊 **Get started with Log Analytics**	🔮 **Monitor at scale with Insights**
Create alerts to monitor resource health, usage, cost and more.	Leverage the value of the data in Azure Monitoring Logs and perform complex operations with minimal code.	Get visibility into the resource's performance and health, accounting for different processes and interconnected dependencies.

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private.contoso.com | Recordsets ☆ ...
Private DNS zone

- 🔵 Overview
- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems
- Resource visualizer
- Settings
- ∨ DNS Management
  - 📄 Recordsets
  - 🔗 Virtual Network Links
- > Monitoring
- > Automation
- > Help

➕ Add   ⟳ Refresh   🗑 Delete   Give feedback

A record set is a collection of records in a zone that have the same name and are the same type. Record Sets will be automatically fetched in batches of 100 as you scroll through the existing record sets. Learn more

🔍 Search

Fetched 2 record set(s).

0 record sets selected

Name	Type	TTL	Value	Auto registered		
sensorvm	A	3600	10.1.1.4	False	✏️	🗑
@	SOA	3600	Email: azureprivatedns-host.microsoft.com Host: azureprivatedns.net Refresh: 3600 Retry: 300 Expire: 2419200 Minimum TTL: 10 Serial number: 1	False	✏️	🗑