

CANTON WEKE OTIENO

SECURITY ENGINEER TRACK

STUDENT TRACKING NUMBER; ADC-SE01-24010

CYBER SHUJAA

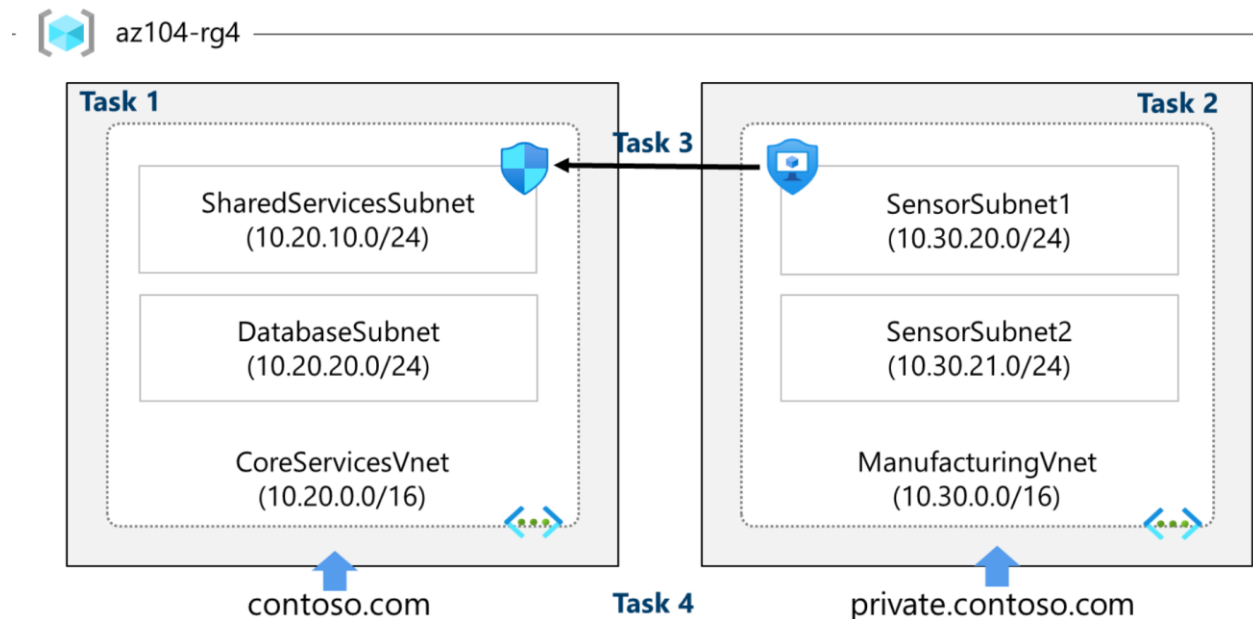
INSTRUCTOR: DR. PAULA

LAB 04 - IMPLEMENT VIRTUAL NETWORKING

This lab focuses on virtual networking. It covers the basics of virtual networking and subnetting. It provide practical guidance on how to protect your network with network security groups and application security group.

Azure Virtual Network (VNet) is a service that provides the fundamental building block for your private network in Azure. With Azure VNet, you can create a logically isolated network that is dedicated to your Azure account. An instance of the service, known as a virtual network, enables many types of Azure resources to securely communicate with each other, the internet, and on-premises networks. These Azure resources include virtual machines (VMs), Azure App Services, and Azure Kubernetes Service (AKS), among others. Each VNet you create can be customized to fit your needs, with options for configuring subnets, route tables, and security settings. With the capacity to create subnets, implement network security rules, and route traffic, a virtual network functions similarly to a conventional network that you may run in your own datacenter. On the other hand, it offers the further advantages of the Azure infrastructure.

Architecture diagram



This report is divided into four sections where each section describes how a particular task and configuration is done within the Azure platform, it contains how to create a virtual network with

subnets using the portal, how to create a virtual network and subnets using a template, how to create and configure communication between an Application Security Group and a Network Security Group and finally how to configure public and private Azure DNS zones.

At the of the report everyone will be able to use the tools to efficiently manage and extend cloud infrastructure by laying out a complete path for establishing a secure and reliable Azure networking environment through these detailed activities.

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

This task illustrates how to create a basic network architecture that links different Azure resources, such as virtual machines and application services, so they can safely communicate inside a designated network area.

Instructions include;

- Sign in to the Azure portal - <https://portal.azure.com>.
- Search for and select Virtual Networks.
- Select Create on the Virtual networks page.
- Complete the Basics tab for the CoreServicesVnet

The screenshot shows the 'Create virtual network' page in the Azure portal, specifically the 'Basics' tab. The breadcrumb navigation at the top reads 'Home > Virtual networks >'. The title of the page is 'Create virtual network' followed by a three-dot menu icon. Below the title, there are tabs for 'Basics', 'Security', 'IP addresses', 'Tags', and 'Review + create'. The 'Basics' tab is currently selected. Under the heading 'your resources.', there are two dropdown menus: 'Subscription *' with the value 'Azure for Students' and 'Resource group *' with the value '(New) az104-rg4'. A 'Create new' link is visible below the resource group dropdown. The 'Instance details' section contains two more dropdown menus: 'Virtual network name *' with the value 'CoreServicesVnet' and 'Region *' with the value '(US) East US'. A 'Deploy to an Azure Extended Zone' link is located below the region dropdown. At the bottom of the form, there are three buttons: 'Previous' (disabled), 'Next' (disabled), and 'Review + create' (active). In the bottom right corner, there is a 'Give feedback' link.

- Move to the IP Addresses tab.

- **Option** **Value**
- **IPv4 address space** Replace the prepopulated IPv4 address space with 10.20.0.0/16 (separate the entries)
- Select + Add a subnet. Complete the name and address information for each subnet. Be sure to select Add for each new subnet. Be sure to delete the default subnet - either before or after creating the other subnets.

[Home](#) > [Virtual networks](#) >

Create virtual network ...

Basics Security IP addresses Tags Review + create

Add IPv4 address space | ▾

10.20.0.0/16 [Delete address space](#)

10.20.0.0/16 /16 ▾

10.20.0.0 - 10.20.255.255 65,536 addresses

+ Add a subnet

Subnets	IP address range	Size	NAT gateway
SharedServicesSubnet	10.20.15.0 - 10.20.15.255	/24 (256 addresses)	- edit delete

[Previous](#) [Next](#) [Review + create](#)

- To finish creating the CoreServicesVnet and its associated subnets, select **Review + create**.
- Verify your configuration passed validation, and then select **Create**.

Home > CoreServicesVnet-1719056266777 | Overview ✨ ...

Deployment

Search ✕ «

Delete Cancel Redeploy Download Refresh

Overview

Inputs

Outputs

Template

✓ Your deployment is complete

Deployment name : CoreServicesVnet-1719056266... Start time : 6/22/2024, 2:38:35 PM
Subscription : Azure for Students Correlation ID : 3fb6574b-f5d5-4f7f-aacb-3d95...
Resource group : az104-rg4

> Deployment details

✓ Next steps

Go to resource

Give feedback

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- Wait for the virtual network to deploy and then select **Go to resource**.
- Take a minute to verify the **Address space** and the **Subnets**. Notice your other choices in the **Settings** blade.

Home > CoreServicesVnet-1719056266777 | Overview >

CoreServicesVnet ✨ ☆ ...

Virtual network

Search ✕ «

Move Delete Refresh Give feedback

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

> Settings

> Monitoring

> Automation

> Help

Essentials

Resource group (move)
[az104-rg4](#)

Location (move)
East US

Subscription (move)
[Azure for Students](#)

Subscription ID
4f3c0128-9784-4d96-90c6-34c866282c32

Tags (edit)
[Add tags](#)

Address space
10.20.0.0/16

DNS servers
[Azure provided DNS service](#)

Flow timeout
[Configure](#)

BGP community string
[Configure](#)

Virtual network ID
5f1043a5-6598-49fe-bd93-23c255d4f566

[JSON View](#)

CoreServicesVnet | Address space ☆ ...

Virtual network

Search

Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Settings
Address space
Connected devices
Subnets
Bastion
DDoS protection

The address space for a virtual network is composed of one or more non-overlapping address ranges that are specified in CIDR notation. The address range you define can be public or private (RFC 1918). [Learn more](#)

Address space	Address range	Address count
10.20.0.0/16	10.20.0.0 - 10.20.255.255	65,536
<input type="text" value="Add additional address range"/>		

Peered virtual network address space

Peering name	Peered to	Address space	Address range
No results.			

Home > CoreServicesVnet-1719056266777 | Overview > CoreServicesVnet > az104-rg4 > CoreServicesVnet

CoreServicesVnet | Subnets ☆ ...

Virtual network

Search

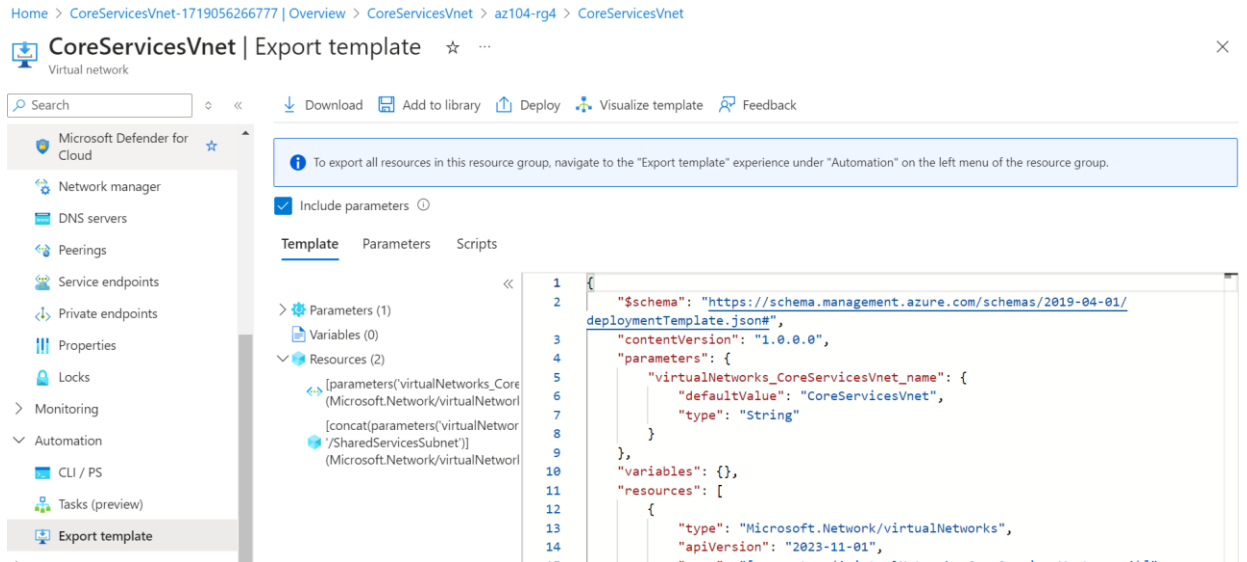
+ Subnet + Gateway subnet Refresh Manage users Delete

Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Settings
Address space
Connected devices
Subnets
Bastion
DDoS protection
Firewall
Microsoft Defender for Cloud

Search subnets

Name ↑↓	IPv4 ↑↓	IPv6 ↑↓	Available IPs ↑↓	Delegated to ↑↓	Security group ↑↓	Route table ↗
SharedServicesSubnet	10.20.15.0/24	-	251	-	-	-

- In the **Automation** section, select **Export template**, and then wait for the template to be generated.



- **Download** the template.
- Navigate on the local machine to the **Downloads** folder and **Extract all** the files in the downloaded zip file.
- Before proceeding, ensure you have the **template.json** file. You will use this template to create the ManufacturingVnet in the next task.

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

In Task 2, an Azure Resource Manager (ARM) template was used to create a virtual network and associated subnets. This technique demonstrates the benefits of infrastructure as code, enabling effective automation and replication of network setups across many contexts. It also demonstrates how templates may be used to swiftly deploy scalable and consistent network configurations that follow the guidelines and regulations of an organization, decreasing the possibility of manual errors and streamlining the deployment procedure.

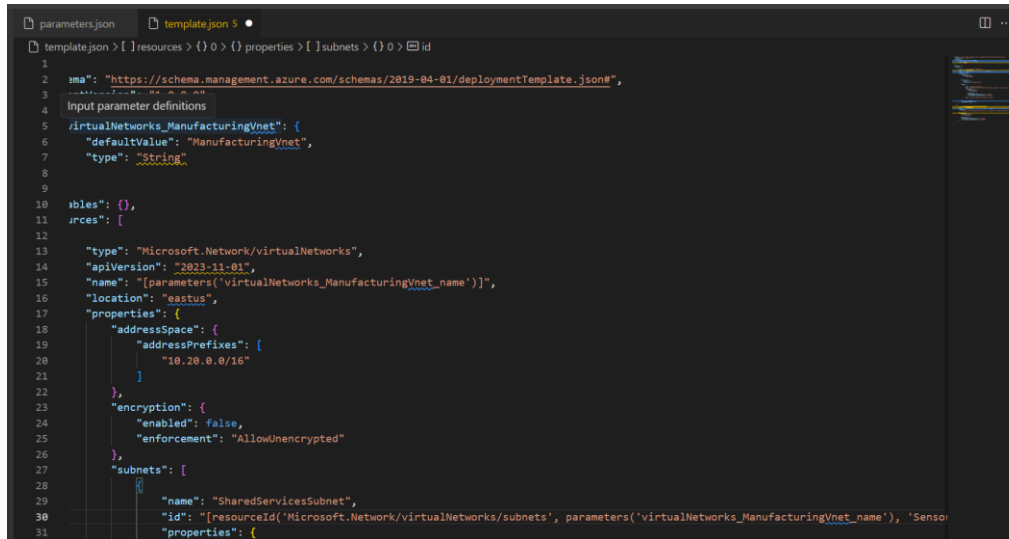
Instruction and screenshots

- Locate the template.json file exported in the previous task. It should be in your Downloads folder.
- Edit the file using the editor of your choice. Many editors have a change all occurrences feature. If you are using Visual Studio Code be sure you are working in a

trusted window and not in the restricted mode. Consult the architecture diagram to verify the details.

Make changes for the ManufacturingVnet virtual network

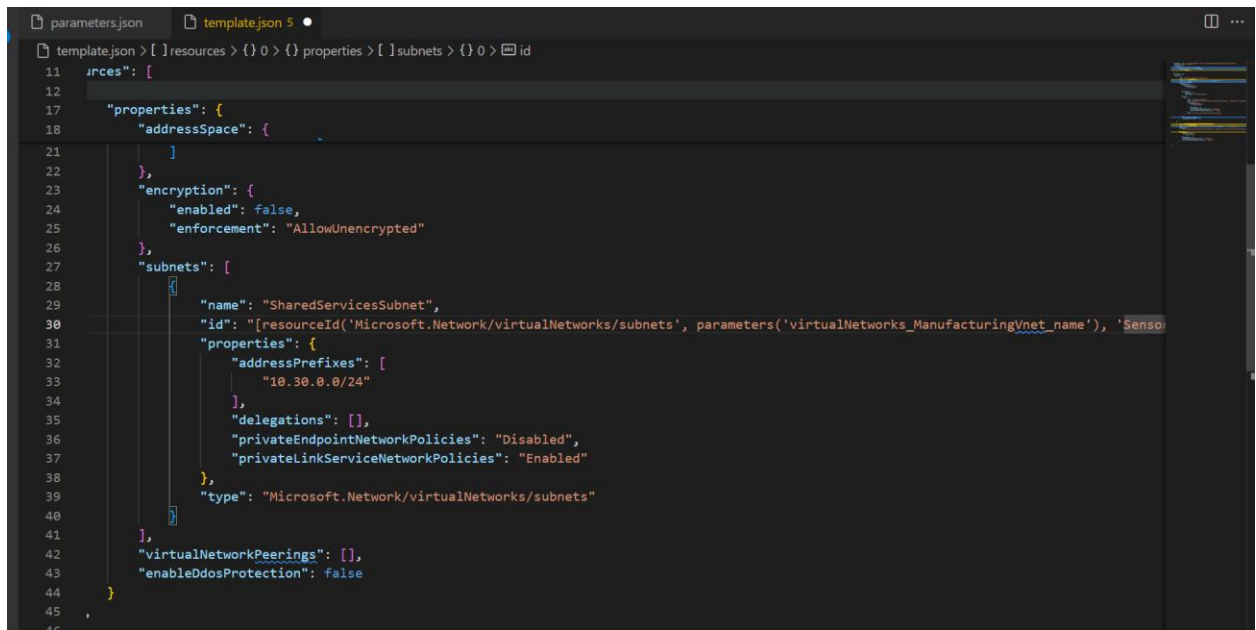
- Replace all occurrences of CoreServicesVnet with ManufacturingVnet.
- Replace all occurrences of 10.20.0.0 with 10.30.0.0.



```
1  template.json > [ ] resources > [ ] 0 > [ ] properties > [ ] subnets > [ ] 0 > [ ] id
2  "schema": "https://schema.management.azure.com/schemas/2019-04-01/deploymentTemplate.json#",
3  "contentVersion": "1.0.0",
4  "inputParameterDefinitions": {
5    "virtualNetworks_ManufacturingVnet": {
6      "defaultValue": "ManufacturingVnet",
7      "type": "String"
8    }
9  },
10 "variables": {},
11 "resources": [
12   {
13     "type": "Microsoft.Network/virtualNetworks",
14     "apiVersion": "2023-11-01",
15     "name": "[parameters('virtualNetworks_ManufacturingVnet_name')]",
16     "location": "eastus",
17     "properties": {
18       "addressSpace": {
19         "addressPrefixes": [
20           "10.20.0.0/16"
21         ]
22       },
23       "encryption": {
24         "enabled": false,
25         "enforcement": "AllowUnencrypted"
26       },
27       "subnets": [
28         {
29           "name": "SharedServicesSubnet",
30           "id": "[resourceId('Microsoft.Network/virtualNetworks/subnets', parameters('virtualNetworks_ManufacturingVnet_name'), 'SensorSubnet1')]",
31           "properties": {
```

Make changes for the ManufacturingVnet subnets

- Change all occurrences of SharedServicesSubnet to SensorSubnet1.
- Change all occurrences of 10.20.10.0/24 to 10.30.20.0/24.
- Change all occurrences of DatabaseSubnet to SensorSubnet2.
- Change all occurrences of 10.20.20.0/24 to 10.30.21.0/24.
- Read back through the file and ensure everything looks correct.
- Be sure to Save your changes

A screenshot of a code editor with a dark theme. The editor shows a file named 'template.json' with a JSON structure for a virtual network subnet. The JSON is partially expanded, showing properties like 'addressSpace', 'encryption', and 'subnets'. The 'subnets' array contains one object with properties like 'name', 'id', 'properties', and 'type'. The 'id' property is a function call: '[resourceId('Microsoft.Network/virtualNetworks/subnets', parameters('virtualNetworks_ManufacturingVnet_name'), 'Sense...)]'. The 'properties' object includes 'addressPrefixes' with the value '10.30.0.0/24', 'delegations' as an empty array, 'privateEndpointNetworkPolicies' as 'Disabled', and 'privateLinkServiceNetworkPolicies' as 'Enabled'. The 'type' is 'Microsoft.Network/virtualNetworks/subnets'. The editor has line numbers on the left and a file explorer on the right.

```
11 "resources": [  
12  
17   "properties": {  
18     "addressSpace": {  
21       ]  
22     },  
23     "encryption": {  
24       "enabled": false,  
25       "enforcement": "AllowUnencrypted"  
26     },  
27     "subnets": [  
28       {  
29         "name": "SharedServicesSubnet",  
30         "id": "[resourceId('Microsoft.Network/virtualNetworks/subnets', parameters('virtualNetworks_ManufacturingVnet_name'), 'Sense...)]",  
31         "properties": {  
32           "addressPrefixes": [  
33             "10.30.0.0/24"  
34           ],  
35           "delegations": [],  
36           "privateEndpointNetworkPolicies": "Disabled",  
37           "privateLinkServiceNetworkPolicies": "Enabled"  
38         },  
39         "type": "Microsoft.Network/virtualNetworks/subnets"  
40       }  
41     ],  
42     "virtualNetworkPeerings": [],  
43     "enableDdosProtection": false  
44   },  
45 ],  
46 }
```

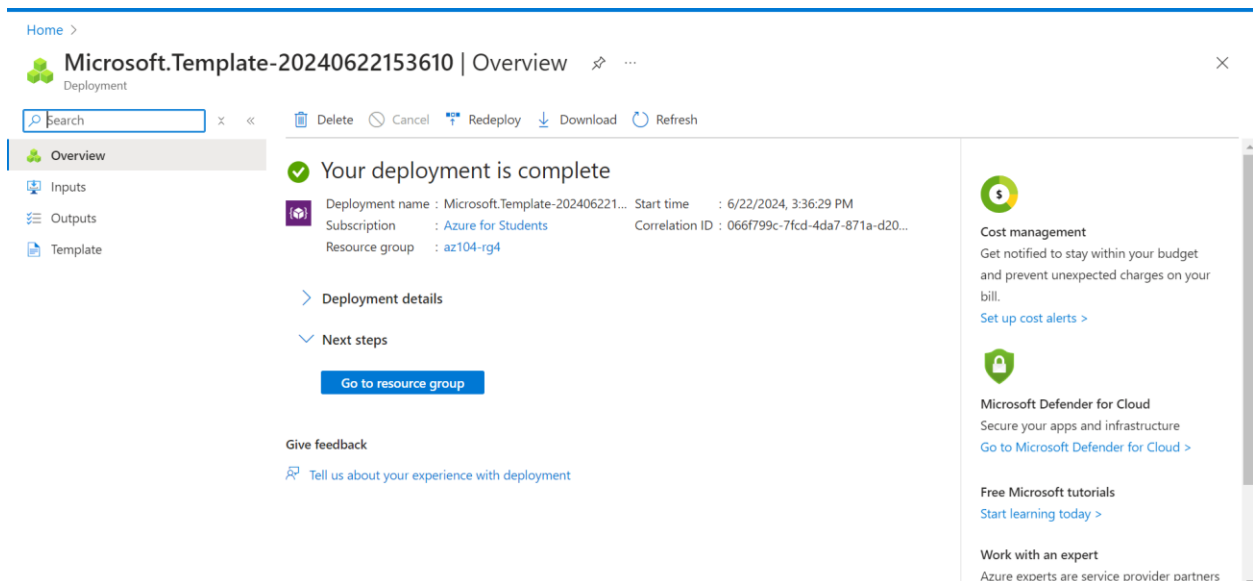
Make changes to the parameters file

- Locate the parameters.json file exported in the previous task. It should be in your Downloads folder.
- Edit the file using the editor of your choice.
- Replace the one occurrence of CoreServicesVnet with ManufacturingVnet.
- Save your changes.

```
parameters.json • template.json 5
parameters.json > {} parameters > {} virtualNetworks_ManufacturingVnet
1 {
2   "$schema": "https://schema.management.azure.com/schemas/2015-01-01/deploymentParameters.json#",
3   "contentVersion": "1.0.0.0",
4   "parameters": {
5     "virtualNetworks_ManufacturingVnet": {
6       "value": null
7     }
8   }
9 }
```

Deploy the custom template

- In the portal, search for and select Deploy a custom template.
- Select Build your own template in the editor and then Load file.
- Select the templates.json file with your Manufacturing changes, then select Save.
- Select Review + create and then Create.
- Wait for the template to deploy, then confirm (in the portal) the Manufacturing virtual network and subnets were created.



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

In this task, in involves creating an Application Security Group and a Network Security Group. The NSG has an inbound security rule that allows traffic from the ASG. The NSG will also

contain an outbound rule that denies access to the internet. It will also prevent your applications from illegal access and guarantee that your network is compliant and safe.

Instructions

- Create the Application Security Group (ASG)
- In the Azure portal, search for and select Application security groups.
- Click Create and provide the basic information.

[Home](#) > [Application security groups](#) >

Create an application security group

...

Basics
Project details

Subscription *

Azure for Students

Resource group *

az104-rg4

[Create new](#)

Instance details

Name *


asg-web

Region *







East US

Click **Review + create** and then after the validation click **Create**.

Home >

Microsoft.ApplicationSecurityGroup | Overview  ...


Deployment


Search   Delete  Cancel  Redeploy  Download  Refresh


Overview

Inputs

Outputs

Template 

 Your deployment is complete

 Deployment name : Microsoft.ApplicationSecurityG... Start time : 6/22/2024, 3:49:04 PM

Subscription : Azure for Students Correlation ID : 92b37f3f-b2df-4150-a2c5-928a...


Resource group : az104-rg4


> Deployment details

< Next steps

[Go to resource](#)


Give feedback

 Tell us about your experience with deployment

 Deployment succeeded


Deployment 'Microsoft.ApplicationSecurityGroup' to resource group 'az104-rg4' was successful.

[Go to resource](#) [Go to resource group](#)

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Create the Network Security Group and associate it with the ASG subnet

- In the Azure portal, search for and select Network security groups.
- Select + Create and provide information on the Basics tab.
- Click Review + create and then after the validation click Create.

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

Home > Microsoft.NetworkSecurityGroup-20240622155202 | Overview

Deployment

Search x << Delete Cancel Redeploy Download Refresh

Overview

Inputs

Outputs

Template

✓ Your deployment is complete

Deployment name : Microsoft.NetworkSecurityGro... Start time : 6/22/2024, 3:52:58 PM

Subscription : Azure for Students Correlation ID : 4b52f951-5ced-4cfa-9814-630f...

Resource group : az104-rg4

> Deployment details

✓ Next steps

[Go to resource](#)

Give feedback

[Tell us about your experience with deployment](#)

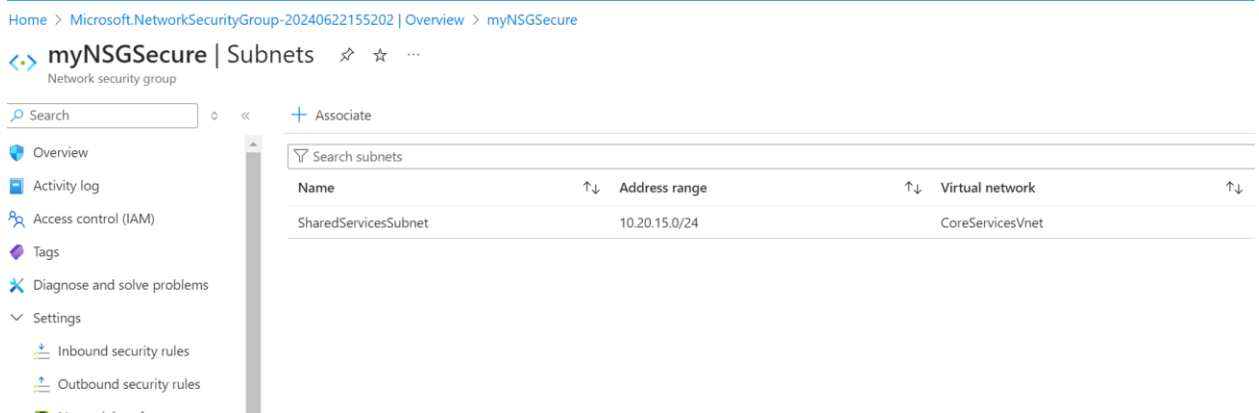
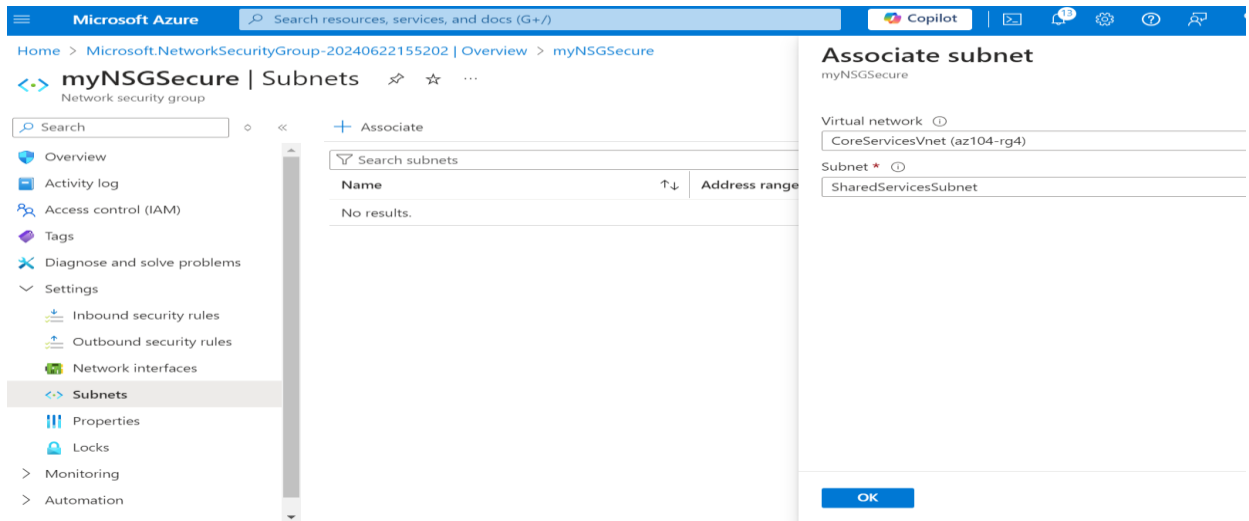
Cost man:
Get notific
and preve
bill.
[Set up cos](#)

Microsoft
Secure yoi
[Go to Mic](#)

Free Micr
[Start learn](#)

Work with

- After the NSG is deployed, click Go to resource.
- Under Settings click Subnets and then Associate.
- Click OK to save the association.



Configure an inbound security rule to allow ASG traffic

- Continue working with your NSG. In the Settings area, select Inbound security rules.
- Review the default inbound rules. Notice that only other virtual networks and load balancers are allowed access.

Home > Microsoft.NetworkSecurityGroup-20240622155202 | Overview > myNSGSecure

myNSGSecure | Inbound security rules

Network security group

Search

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

Network security group security rules are evaluated by priority using the combination of source, source port, destination, destination port, and protocol to allow or deny the traffic. A security rule can't have the same priority and direction as an existing rule. You can't delete default security rules, but you can override them with rules that have a higher priority. [Learn more](#)

Filter by name

Port == all

Priority	Name	Port
65000	AllowVnetInBound	Any
65001	AllowAzureLoadBalanc...	Any
65500	DenyAllInBound	Any

Add inbound security rule

myNSGSecure

Source

Application security group

Source application security groups

asg-web

No application security groups found

Source port ranges

*

Destination

Any

Service

Custom

Destination port ranges

80,443

Protocol

Add Cancel

Give feedback

- Select + Add.
- On the Add inbound security rule blade, use the following information to add an inbound port rule. This rule allows ASG traffic. When you are finished, select Add.

Home > Microsoft.NetworkSecurityGroup-20240622155202 | Overview > myNSGSecure

myNSGSecure | Inbound security rules

Network security group

Search

- Overview
- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems
- Settings
 - Inbound security rules**
 - Outbound security rules
- Network interfaces
- Subnets
- Properties
- Locks
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Filter by name

Port == all Protocol == all Source == all Destination == all Action == all

Priority	Name	Port	Protocol	Source	Destination	Action
100	AllowASG	80,443	TCP	asg-web	Any	Allow
65000	AllowVnetInBound	Any	Any	VirtualNetwork	VirtualNetwork	Allow
65001	AllowAzureLoadBalanc...	Any	Any	AzureLoadBalancer	Any	Allow
65500	DenyAllInBound	Any	Any	Any	Any	Deny

Configure an outbound NSG rule that denies Internet access

- After creating your inbound NSG rule, select Outbound security rules.
- Notice the AllowInternetOutboundRule rule. Also notice the rule cannot be deleted and the priority is 65001.
- Select + Add and then configure an outbound rule that denies access to the internet. When you are finished, select Add

The screenshot shows the Azure portal interface for a Network Security Group (NSG) named 'myNSGSecure'. The left sidebar contains navigation options: Activity log, Access control (IAM), Tags, Diagnose and solve problems, Settings, Inbound security rules, Outbound security rules (selected), Network interfaces, Subnets, Properties, Locks, and Monitoring. The main pane displays a table of outbound security rules. Above the table, there is a search bar and filter buttons for Port, Protocol, Source, Destination, and Action. A text box explains that rules are evaluated by priority and direction, and that default rules cannot be deleted but can be overridden.

Priority	Name	Port	Protocol	Source	Destination	Action
4096	AllowAnyCustom8080...	8080	Any	Any	Internet	Allow
65000	AllowVnetOutBound	Any	Any	VirtualNetwork	VirtualNetwork	Allow
65001	AllowInternetOutBound	Any	Any	Any	Internet	Allow
65500	DenyAllOutBound	Any	Any	Any	Any	Deny

Task 4: Configure public and private Azure DNS zones

Azure Private DNS manages and resolves domain names in the virtual network without the need to configure a custom DNS solution. By using private DNS zones, you can use your own custom domain name instead of the Azure-provided names during deployment. In this task it involves configuring and maintaining domain name services to translate domain names to IP addresses and provide smooth access to the services and applications from inside a virtual network (VNet) as well as from outside the network.

Instructions

- In the portal, search for and select DNS zones.
- Select + Create.
- Configure the Basics tab.

[Home](#) > [DNS zones](#) >

Create a DNS Zone ...

Basics DNS Zone Editor Tags Review + Create

your resources.

Subscription * ⓘ Azure for Students ✓

Resource group * ⓘ az104-rg4 ✓

[Create new](#)

Instance details

☐ This zone is a child of an existing zone already hosted in Azure DNS ⓘ

Name * contoso2.com

Resource group location * ⓘ (US) East US ✓


- Select Review create and then Create.


[Home](#) >


 **contoso2.com_1719062378051** | Overview ⚙️ ...


Deployment

× <<  Delete  Cancel  Redeploy  Download  Refresh

 Overview

 Inputs

 Outputs

 Template

✓ Your deployment is complete

 Deployment name : contoso2.com_1719062378051 Start time : 6/22/2024, 4:19:57 PM

Subscription : Azure for Students Correlation ID : 32712380-e921-4d83-8419-3a...

Resource group : az104-rg4

> Deployment details

✓ Next steps

[Go to resource](#)



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- Wait for the DNS zone to deploy and then select Go to resource.

- On the Overview blade notice the names of the four Azure DNS name servers assigned to the zone. Copy one of the name server addresses. You will need it in a future step.

Home > contoso2.com_1719062378051 | Overview >

contoso2.com DNS zone

Search

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Settings

DNS Management

Monitoring

Automation

Help

Essentials

Resource group (move) az104-rg4

Location (move) Global

Subscription (move) Azure for Students

Subscription ID 4f3c0128-9784-4d96-90c6-34c866282c32

Recordsets 2

Tags (edit) Add tags

Max number of record sets 10000

Name server 1 ns1-34.azure-dns.com.

Name server 2 ns2-34.azure-dns.net.

Name server 3 ns3-34.azure-dns.org.

Name server 4 ns4-34.azure-dns.info.

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- Select + Record set. You add a virtual network link record for each virtual network that needs private name-resolution support

Home > contoso2.com_1719062378051 | Overview > contoso2.com

contoso2.com | Recordsets

Search

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Settings

DNS Management

Recordsets

Monitoring

Automation

Help

A record set is a collection of records in a zone that have the same name. Records are automatically fetched in batches of 100 as you scroll through the existing records.

Search

Fetches 2 record set(s).

Name	Type	TTL
@	NS	17280
@	SOA	3600

Add record set

contoso2.com

Name www

Type A - Address record

Alias record set No

TTL * 1

TTL unit Hours

IP address 10.1.1.4

Add Cancel

- Select OK and verify contoso.com has an A record set named www.
- Open a command prompt, and run the following command

- Verify the host name `www.contoso.com` resolves to the IP address you provided. This confirms name resolution is working correctly.

Configuring a private DNS zone

A private DNS zone provides name resolution services within virtual networks. A private DNS zone is only accessible from the virtual networks that it is linked to and can't be accessed from the internet.

Steps

- In the portal, search for and select Private dns zones.
- Select + Create.
- On the Basics tab of Create private DNS zone, enter the information as listed in the table below:
- Select Review create and then Create.

The screenshot shows the Azure portal interface for a private DNS zone named `private.contoso.com`. The left sidebar contains navigation links: Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Settings, Monitoring, Automation, and Help. The main content area is titled 'private.contoso.com Private DNS zone' and includes a search bar and action buttons: Record set, Move, Delete zone, and Refresh. Below these are 'Essentials' details: Resource group (az104-rg4), Subscription (Azure for Students), and Subscription ID (4f3c0128-9784-4d96-90c6-34c866282c32). A table at the bottom lists record sets, with one entry for the '@' symbol, SOA type, 3600 TTL, and a value containing email, host, refresh, retry, expire, minimum TTL, and serial number. The 'Auto registered' column for this entry is 'False'.

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

- Select Review create and then Create.
- Wait for the DNS zone to deploy and then select Go to resource.
- Notice on the Overview blade there are no name server records.

- Select + Virtual network links and then select + Add
- Select OK and wait for the link to create.
- From the Overview blade select + Record set. You would now add a record for each virtual machine that needs private name-resolution support.

home > NoMarketplace-20240622163944 | Overview >

private.contoso.com Private DNS zone

Search + Record set → Move ▾ Delete zone Refresh

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Settings

Virtual network links

Properties

Locks

Monitoring

Automation

Help

Essentials

Resource group (move)
[az104-rg4](#)

Subscription (move)
[Azure for Students](#)

Subscription ID
4f3c0128-9784-4d96-90c6-34c866282c32

Tags (edit)
[Add tags](#)

Record sets

You can search for record sets that have been loaded on this page. If you don't see what you're looking for, you can try scrolling to allow more record sets to load.

Search record sets

Name	Type	TTL	Value
@	SOA	3600	Email: azureprivatedns-host.microsoft.com Host: azureprivatedns.net Refresh: 3600 Retry: 300 Expire: 2419200 Minimum TTL: 10 Serial number: 1

Add record set

private.contoso.com

Name
sensorvm ✓

Type
A - Address record ▾

TTL *
1 ✓

TTL unit
Hours ▾

IP address
10.1.1.4aa

0.0.0.0

OK

home > NoMarketplace-20240622163944 | Overview >

private.contoso.com Private DNS zone

Search + Record set → Move ▾ Delete zone Refresh

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Settings

Virtual network links

Properties

Locks

Monitoring

Automation

Help

Essentials

Resource group (move)
[az104-rg4](#)

Subscription (move)
[Azure for Students](#)

Subscription ID
4f3c0128-9784-4d96-90c6-34c866282c32

Tags (edit)
[Add tags](#)

Record sets

You can search for record sets that have been loaded on this page. If you don't see what you're looking for, you can try scrolling to allow more record sets to load.

Search record sets

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

CONCLUTION

This report provides a detailed roadmap for setting up a robust and secure Azure networking environment, equipping cloud engineer with the skills to manage and scale cloud infrastructure effectively.