

# 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
- 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

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

## Create virtual network ...

Basics Security IP addresses Tags Review + create

[View automation template](#)

### Basics

Subscription	P9-Real Hands-On Labs
Resource Group	1-2032f5de-playground-sandbox
Name	CoreServicesVnet
Region	East US

### Security

Azure Bastion	Disabled
Azure Firewall	Disabled
Azure DDoS Network Protection	Disabled

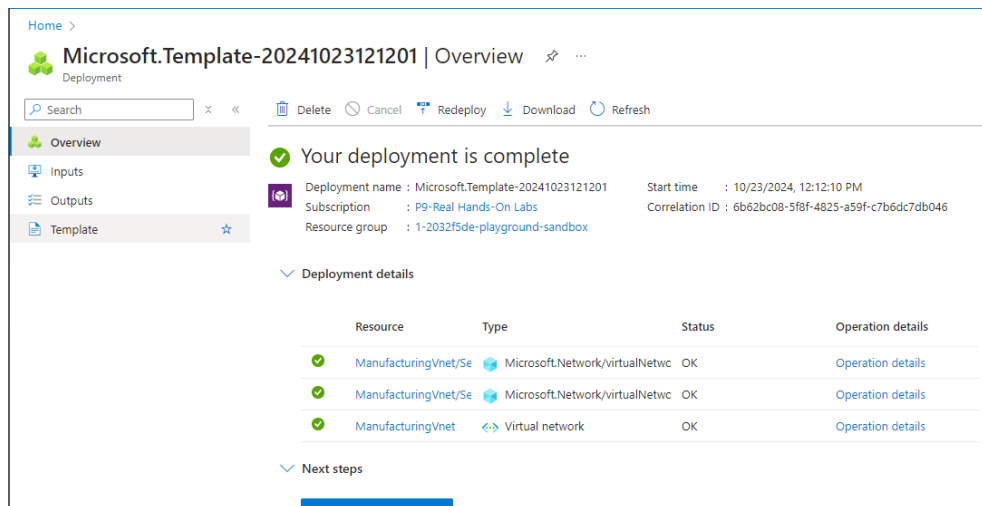
### IP addresses

Address space	10.20.0.0/16 (65 536 addresses)
Subnet	SharedServicesSubnet (10.20.10.0/24) (256 addresses)
Subnet	DatabaseSubnet (10.20.20.0/24) (256 addresses)

### Tags

I created a **Virtual Network** and it's **subnets** according to the requirements in the lab and downloaded a `template.json`.

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



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Your deployment is complete

Deployment name : Microsoft.Template-20241023121201 Start time : 10/23/2024, 12:12:10 PM

Subscription : P9-Real Hands-On Labs Correlation ID : 6b62bc08-5f8f-4825-a59f-c7b6dc7db046

Resource group : 1-2032f5de-playground-sandbox

Deployment details

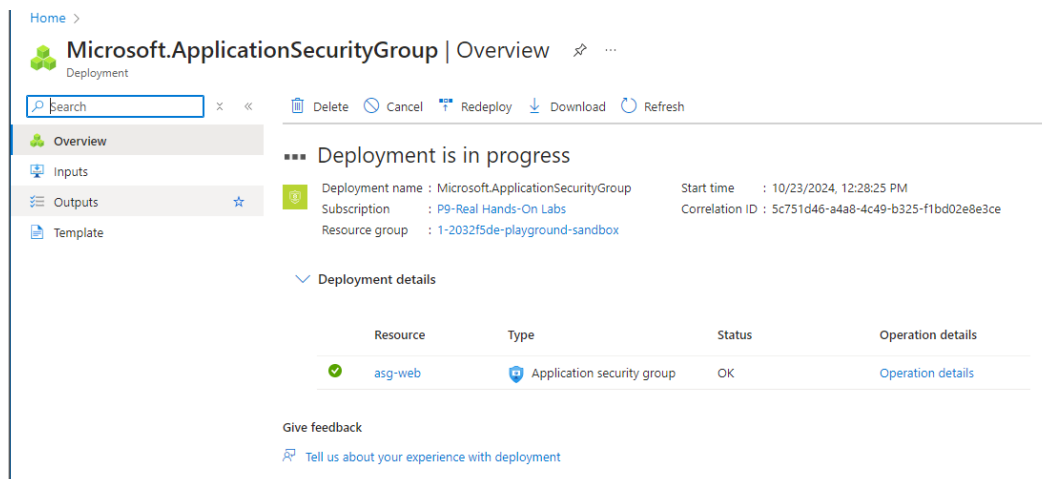
Resource	Type	Status	Operation details
ManufacturingVnet/Se	Microsoft.Network/virtualNetwork	OK	<a href="#">Operation details</a>
ManufacturingVnet/Se	Microsoft.Network/virtualNetwork	OK	<a href="#">Operation details</a>
ManufacturingVnet	Virtual network	OK	<a href="#">Operation details</a>

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I make all the necessary changes in template.json and parameters.json deployed this custom template.

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



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Deployment is in progress

Deployment name : Microsoft.ApplicationSecurityGroup Start time : 10/23/2024, 12:28:25 PM

Subscription : P9-Real Hands-On Labs Correlation ID : 5c751d46-a4a8-4c49-b325-f1bd02e8e3ce

Resource group : 1-2032f5de-playground-sandbox

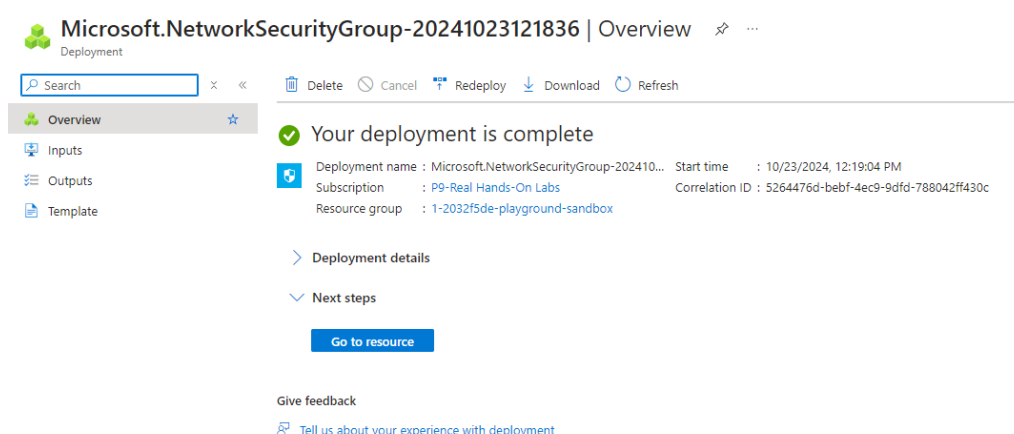
Deployment details

Resource	Type	Status	Operation details
asg-web	Application security group	OK	<a href="#">Operation details</a>

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Created an Application Security Group



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Your deployment is complete

Deployment name : Microsoft.NetworkSecurityGroup-202410... Start time : 10/23/2024, 12:19:04 PM

Subscription : P9-Real Hands-On Labs Correlation ID : 5264476d-bebf-4ec9-9dfd-788042ff430c

Resource group : 1-2032f5de-playground-sandbox

Deployment details

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Created a Network Security Group

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

4096	DenyAnyCustom8080Outb...	8080	Any	Any	Internet	Deny	
65000	AllowVnetOutBound	Any	Any	VirtualNetwork	VirtualNetwork	Allow	
65001	AllowInternetOutBound	Any	Any	Any	Internet	Allow	
65500	DenyAllOutBound	Any	Any	Any	Any	Deny	

After creating an Application Security Group I configured inbound and outbound security rules to allow ASG traffic and deny Internet access

## Task 4: Configure public and private Azure DNS zones

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**contos0.com\_1729676357644** | Overview ...

Deployment

Search  x << Delete Cancel Redeploy Download Refresh

**Overview**

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Your deployment is complete

Deployment name : contos0.com\_1729676357644 Start time : 10/23/2024, 12:39:30 PM

Subscription : P9-Real Hands-On Labs Correlation ID : aa1abed8-8865-444a-92b1-351dd8bea0c5

Resource group : 1-2032f5de-playground-sandbox

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**private.contos0.com\_1729676808072** | Overview ...

Deployment

Search  x << Delete Cancel Redeploy Download Refresh

**Overview**

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Your deployment is complete

Deployment name : private.contos0.com\_1729676808072 Start time : 10/23/2024, 12:47:03 PM

Subscription : P9-Real Hands-On Labs Correlation ID : 02ef8527-b079-4f32-b6f9-80ac21a232be

Resource group : 1-2032f5de-playground-sandbox

> Deployment details

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I configured public and private DNS zones and add a record set for each one with required values from the lab.

```
Server:      ns1-05.azure-dns.com.  
Address:     13.107.236.5#53  
  
** server can't find www.contoso.com: REFUSED  
  
c:\cloud [ ~ ]$ nslookup www.contos0.com ns1-05.azure-dns.com.  
Server:      ns1-05.azure-dns.com.  
Address:     13.107.236.5#53  
  
Name:   www.contos0.com  
Address: 10.1.1.4  
  
c:\cloud [ ~ ]$
```

I verified that contoso.com (contos0.com in my case) has an A record set named www, so this confirms that name resolution is working correctly.

Name	Type	TTL	Value	Auto registered	
sensorvm	A	3600	10.1.1.4	False	