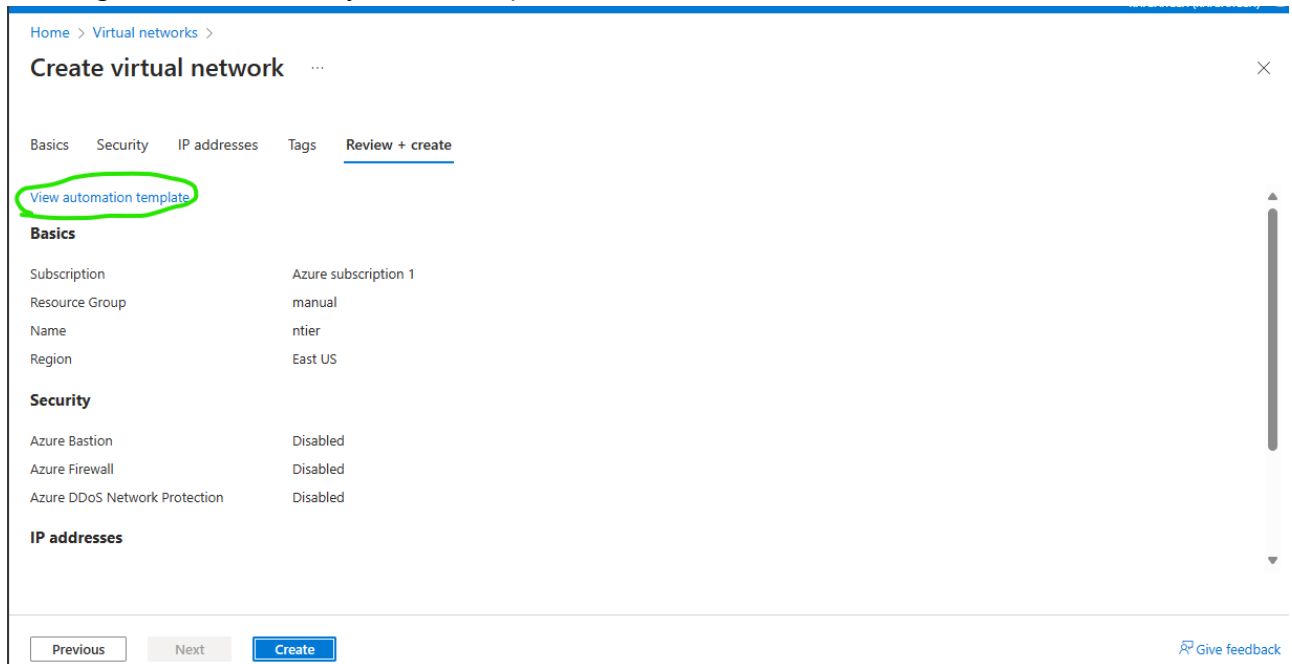


## ARM Templates

- Creating a network manually from azure portal



- Azure creates an ARM Template for any activity done from portal

- Now lets create virtual network.

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

# Create virtual network ...

[Basics](#)   [Security](#)   [IP addresses](#)   [Tags](#)   [Review + create](#)

[View automation template](#)

## Basics

Subscription	Azure subscription 1
Resource Group	manual
Name	ntier
Region	East US

## Security

Azure Bastion	Disabled
Azure Firewall	Disabled
Azure DDoS Network Protection	Disabled

## IP addresses

[Previous](#)   [Next](#)   **Create**

- When we create any resource from azure portal it creates a deployment at resource group/subscription level

Home > [ntier-1716003245187 | Overview](#) > manual

**manual** | Deployments ☆ ...

Resource group

Search   Refresh   Cancel   Redeploy   Delete   View template

Filter by deployment name or resources in the deployment...

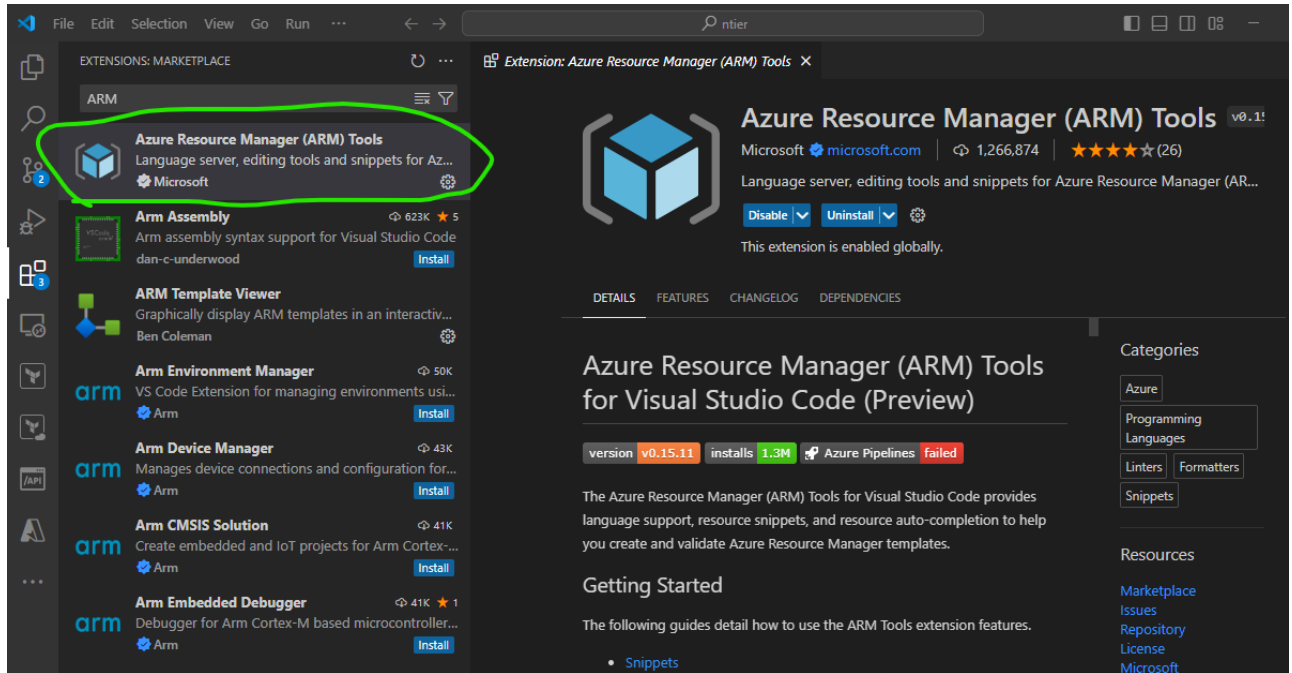
Deployment name	Status	Last modified	Duration	Relate
ntier-1716003245187	✓ Succeeded	5/18/2024, 9:04:26 AM	10 seconds, 215 milliseconds	Relate

Settings: **Deployments**, Security, Deployment stacks, Policies, Properties, Locks, Cost Management

- We will be creating ARM Templates to be deployed at resource group level.

## DevSetup

- Ensure [Refer Here](#) ARM Tools extension is installed in visual studio code

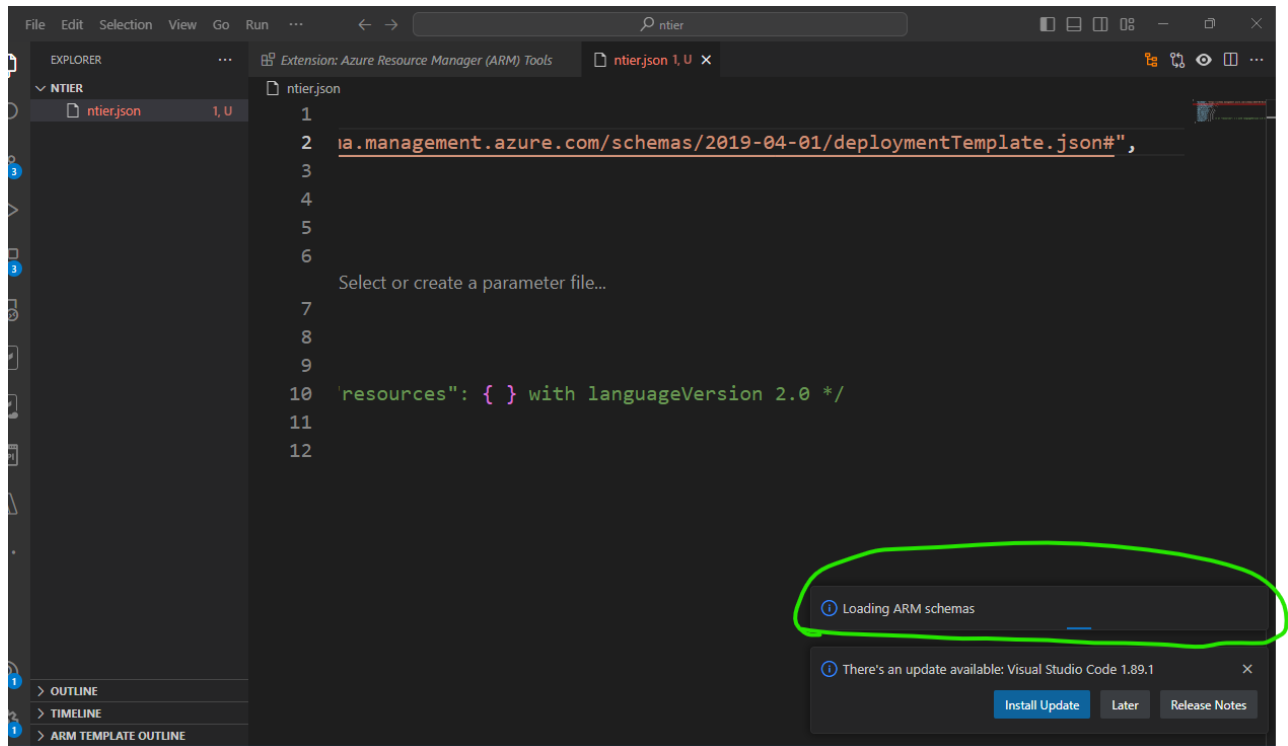


## Syntax

- [Refer Here](#) for ARM Template syntax
- Create a json file `main.json` with the following content

```
{
  "$schema": "https://schema.management.azure.com/schemas/2019-04-01/deploymentTemplate.json#",
  "contentVersion": "",
  "resources": [ ]
}
```

- and wait till the arm schemas are loaded

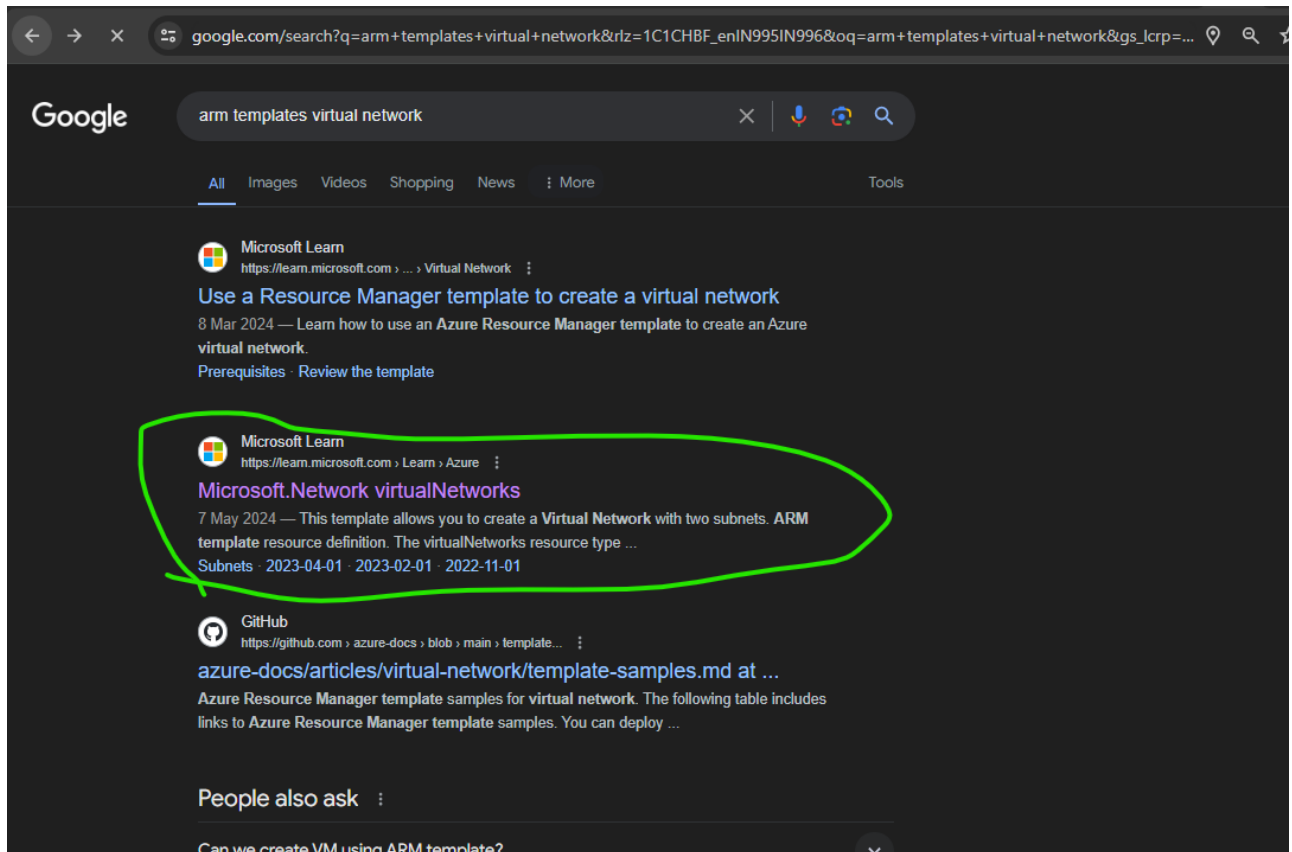


- Every resource will have type, apiversion and properties
- Azure Defines resources to be used by arm templates or bicep [Refer Here](#)

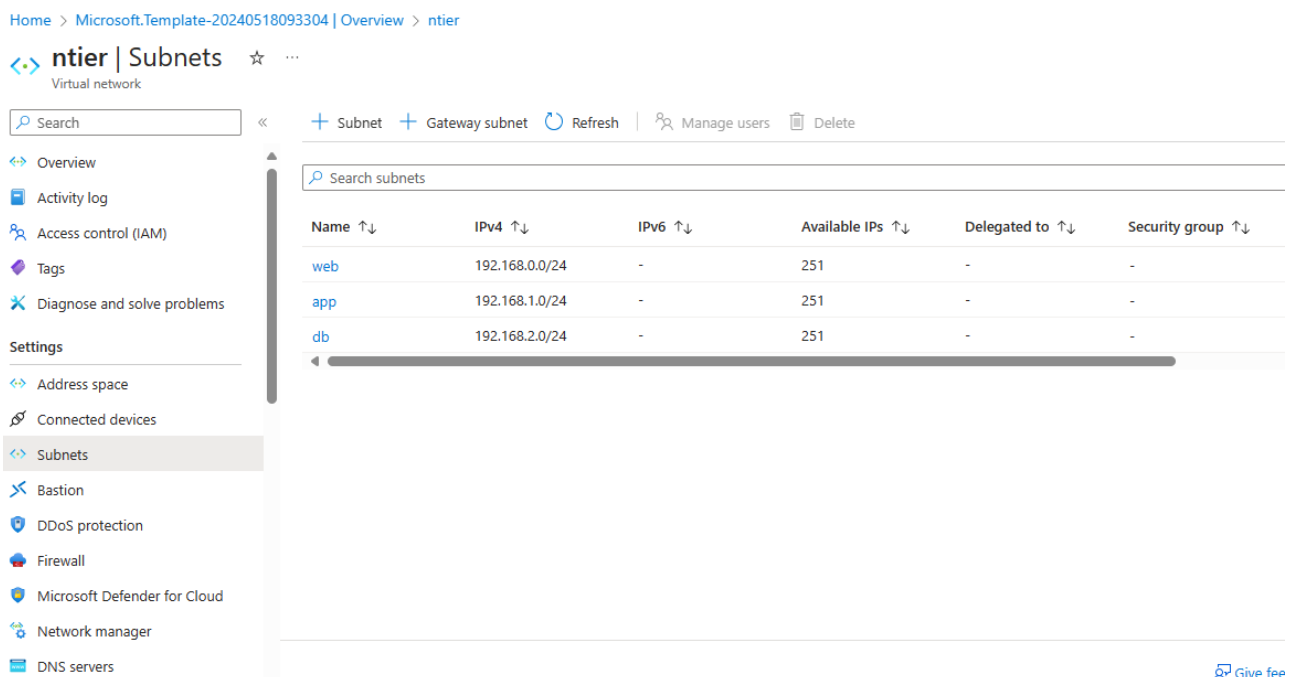
## Create a virtual network

- inputs:
  - name
  - location
  - address space

- [Refer Here](#) for docs



- [Refer Here](#) for resource providers in Azure
- type of resource `<provider>/<resource-type>`
- [Refer Here](#) for the changes done to create a template
- Deploy arm template from portal [Refer Here](#)



- Parameters in ARM Templates are the inputs that can be passed during deployment [Refer Here](#)
- Functions in arm templates [Refer Here](#)

- Adding parameters for subnet names and address spaces [Refer Here](#) for changes

☰
Search resources, services, and docs (G+)

Home >

## Custom deployment

Deploy from a custom template

New! Deployment Stacks let you manage the lifecycle of your deployments. Try it now →

### Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription \* ⓘ

Resource group \* ⓘ  [Create new](#)

### Instance details

Region \* ⓘ

Network Address ⓘ

Subnet Address List ⓘ

Subnet Names ⓘ

- resource copy [Refer Here](#)

```
{
  "$schema": "https://schema.management.azure.com/schemas/2019-04-01/deploymentTemplate.json#",
  "contentVersion": "1.0.0.0",
  "parameters": {
    "networkAddress": {
      "type": "array",
      "metadata": {
        "description": "network address range"
      },
      "defaultValue": ["10.0.0.0/16"]
    },
    "subnetAddressList": {
      "type": "array",
      "metadata": {
        "description": "subnet cidr ranges"
      },
      "defaultValue": ["10.0.0.0/24", "10.0.1.0/24", "10.0.2.0/24"]
    },
    "subnetNames": {
      "type": "array",
      "metadata": {
```

```

        "description": "subnet names"
      },
      "defaultValue": ["web", "business", "database"]
    }
  },
  "functions": [],
  "variables": {},
  "resources": [
    {
      "name": "ntier",
      "type": "Microsoft.Network/virtualNetworks",
      "apiVersion": "2023-04-01",
      "location": "[resourceGroup().location]",
      "tags": {
        "displayName": "ntier"
      },
      "properties": {
        "addressSpace": {
          "addressPrefixes": "[parameters('networkAddress')]"
        }
      }
    },
    {
      "type": "Microsoft.Network/virtualNetworks/subnets",
      "apiVersion": "2023-04-01",
      "name": "[format('ntier/{0}', parameters('subnetNames')[n()])]",
      "properties": {
        "addressPrefix": "[parameters('subnetAddressList')[copyIndex()]]"
      },
      "copy": {
        "name": "subnetcopy",
        "count": "[length(parameters('subnetNames'))]"
      },
      "dependsOn": [
        "[resourceId('Microsoft.Network/virtualNetworks', 'ntier')]"
      ]
    }
  ],
  "outputs": {}
}

```