

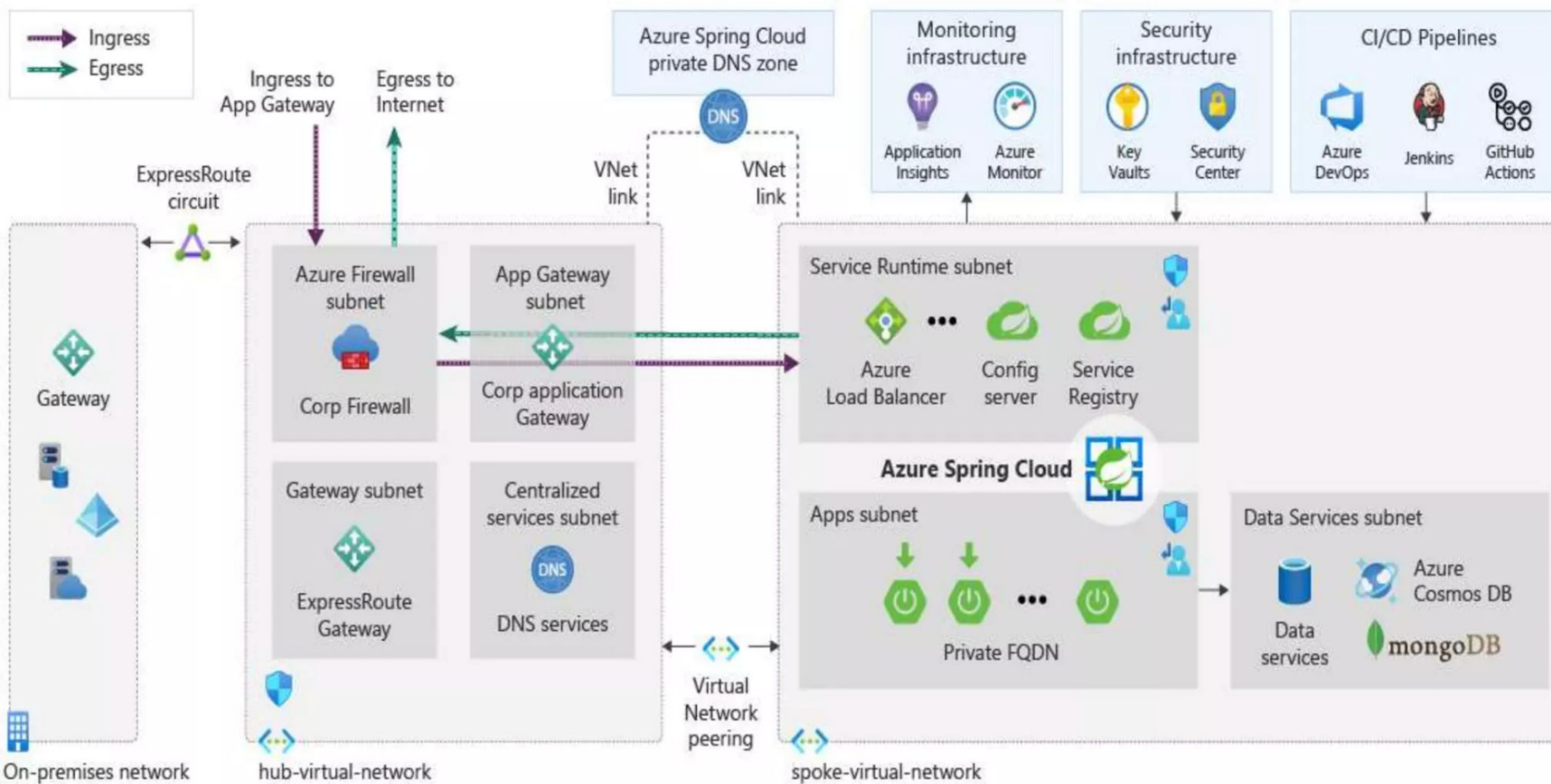
# FREE AZURE DEVOPS BOOTCAMP5

Free 30 DAYS DevOps + AZURE Bootcamp5

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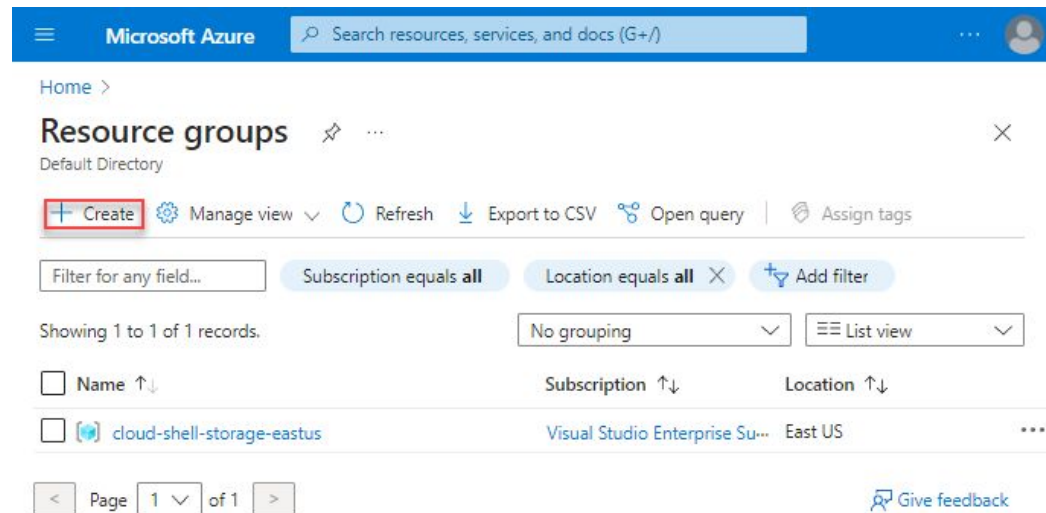


# AZURE ARCHITECTURE



# AZURE INFRA KICKSTART

## AZURE RESOURCE GROUPS



The screenshot shows the Microsoft Azure portal interface. At the top, there's a blue header with the Microsoft Azure logo and a search bar. Below the header, the 'Resource groups' page is displayed. The page title is 'Resource groups' with a star icon and a close button. Below the title, it says 'Default Directory'. There's a toolbar with buttons: '+ Create' (highlighted with a red box), 'Manage view', 'Refresh', 'Export to CSV', 'Open query', and 'Assign tags'. Below the toolbar, there's a filter section with a text input 'Filter for any field...', a button 'Subscription equals all', a button 'Location equals all', and a button 'Add filter'. Below the filter section, it says 'Showing 1 to 1 of 1 records.' There are two dropdown menus: 'No grouping' and 'List view'. Below these, there are three columns of headers: 'Name', 'Subscription', and 'Location'. The first row of data is: 'cloud-shell-storage-eastus', 'Visual Studio Enterprise Su...', and 'East US'. At the bottom, there's a pagination bar showing 'Page 1 of 1' and a 'Give feedback' link.

Home >

### Resource groups

Default Directory

[+ Create](#) [Manage view](#) [Refresh](#) [Export to CSV](#) [Open query](#) [Assign tags](#)

Filter for any field... [Subscription equals all](#) [Location equals all](#) [Add filter](#)

Showing 1 to 1 of 1 records. [No grouping](#) [List view](#)

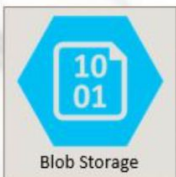
<input type="checkbox"/> Name ↑↓	Subscription ↑↓	Location ↑↓
<input type="checkbox"/> <a href="#">cloud-shell-storage-eastus</a>	Visual Studio Enterprise Su...	East US

< Page 1 of 1 >

[Give feedback](#)

# AZURE Storage Data Services

## Azure Storage Data Services



Blob Storage

Ideal for storing large unstructured files are stored, and can be accessed using the URL over HTTP/HTTPS



Files Storage

Ideal for storing highly accessible files accessed over SMB, allowing concurrent access from multiple VM's



Queue Storage

Ideal for storing millions of messages in the queue for asynchronous processing



Table Storage

Ideal for storing structured NoSQL data with no need to write complex queries

# Azure Virtual Machines

## AZURE VIRTUAL MACHINE OPTIONS

### GENERAL PURPOSE



TESTING AND  
DEVELOPMENT SMALL  
TO MEDIUM DATABASES  
LOW TRAFFIC WEB  
SERVERS

### COMPUTE OPTIMIZED



MEDIUM TRAFFIC WEB  
SERVERS BATCH  
PROCESSING  
ANALYTICS GAMING

### MEMORY OPTIMIZED



RELATIONAL DATABASE  
SERVERS MEDIUM TO  
LARGE CACHES IN-  
MEMORY ANALYTICS

### STORAGE OPTIMIZED



DATA SQL DATABASES  
DATABASES

### GPU



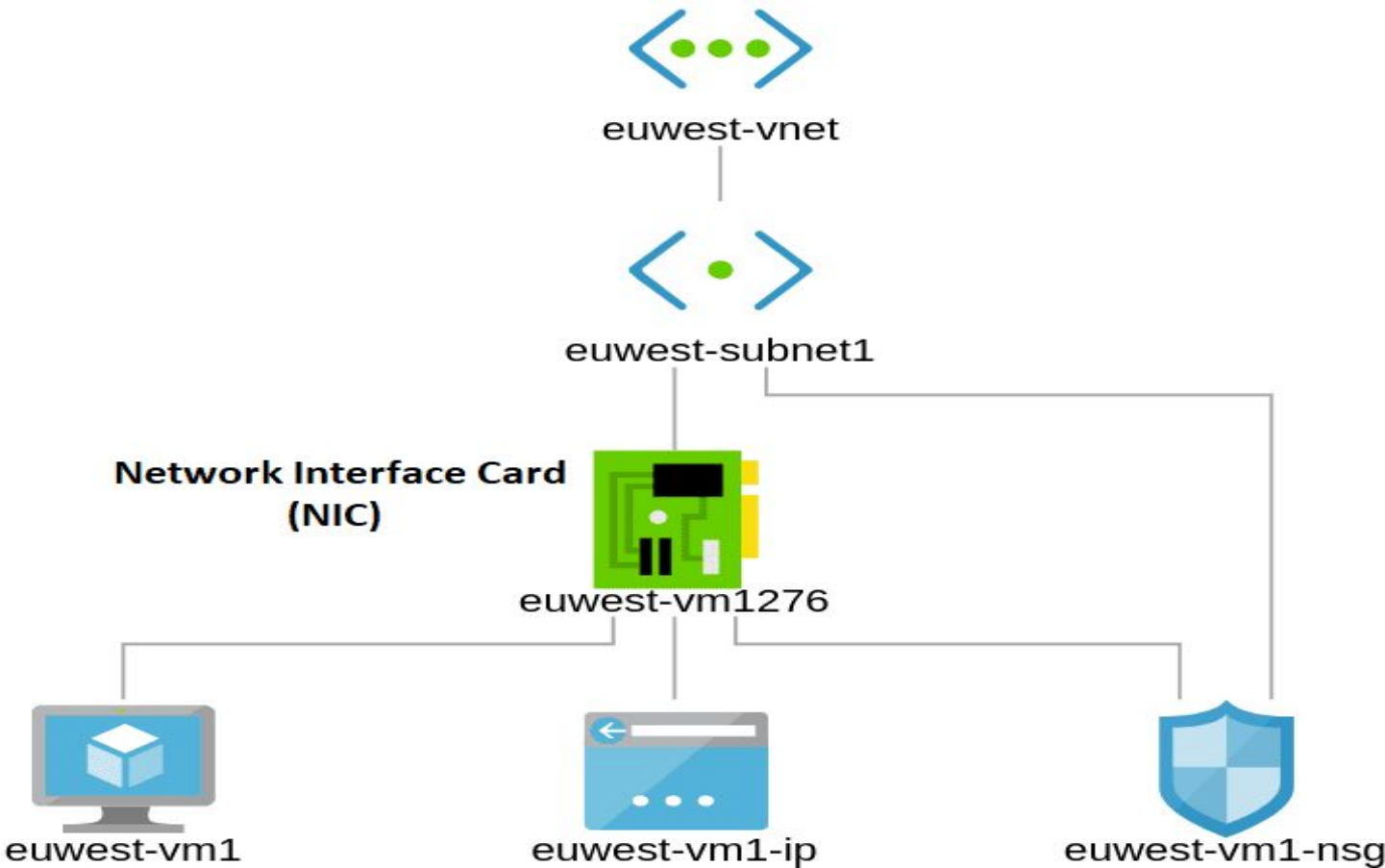
GRAPHIC-HEAVY  
WORKLOADS VIDEO  
EDITING DEEP  
LEARNING PREDICTIVE  
ANALYTICS

### HIGH PERFORMANCE COMPUTE

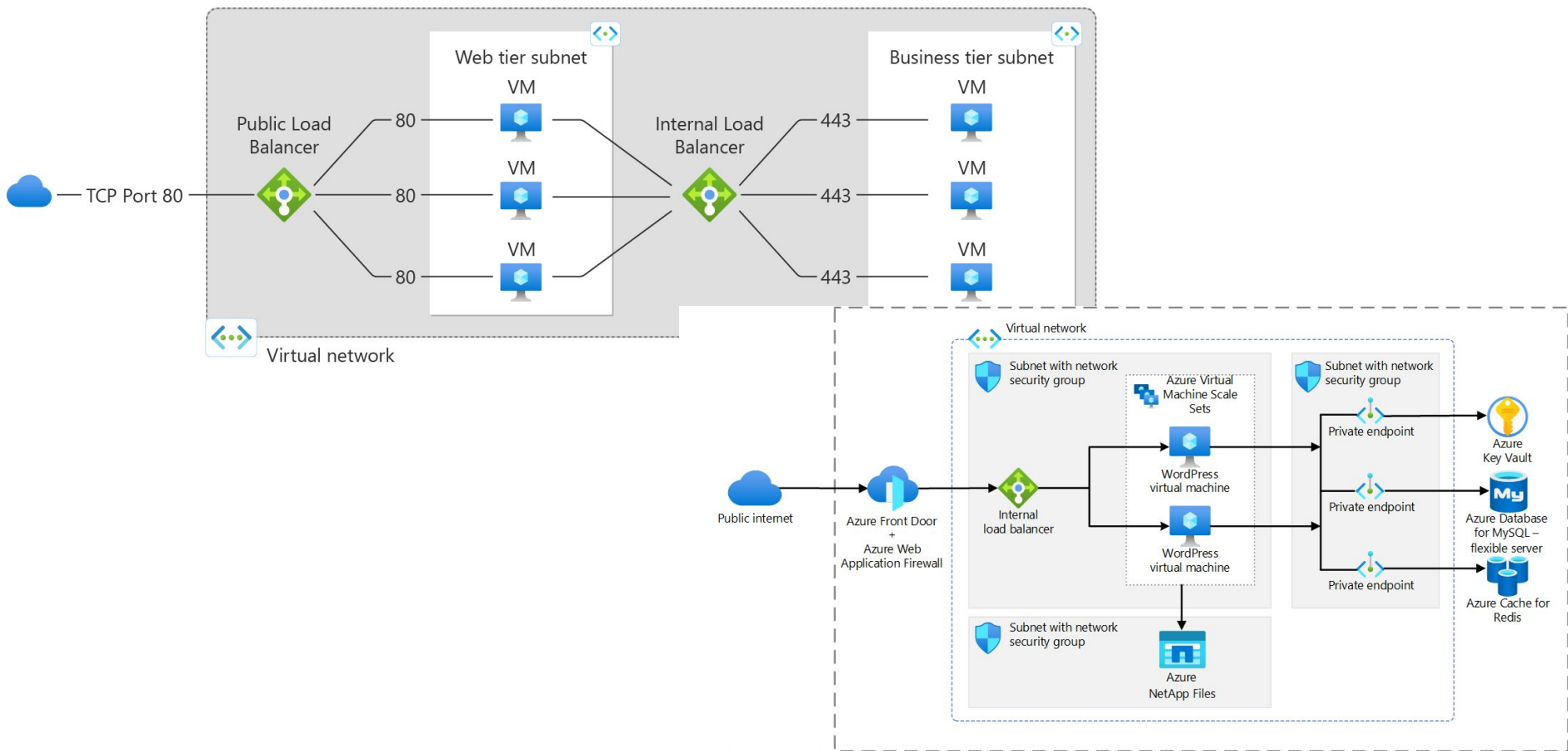


INTENSE PREDICTIVE  
SCENARIOS FINANCIAL  
RISK MODELING  
SCIENTIFIC  
SIMULATIONS

# Network Interface Card (NIC)



# Azure Load Balancers



# Azure Terraform Provider

The Azure Provider can be used to configure infrastructure in microsoft Azure using the Azure Resource Manager API's.

```
# We strongly recommend using the required_providers block to set th
# Azure Provider source and version being used
terraform {
  required_providers {
    azurerm = {
      source = "hashicorp/azurerm"
      version = "=3.0.0"
    }
  }
}

# Configure the Microsoft Azure Provider
provider "azurerm" {
  features {}
}
```

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      version = "=3.0.0"
    }
  }
}

# Configure the Microsoft Azure Provider
provider "azurerm" {
  features {}

  subscription_id = "00000000-0000-0000-0000-000000000000"
  tenant_id       = "11111111-1111-1111-1111-111111111111"
}
```

Copy



# Create the Subnets and Resource managers

```
# Create a resource group
resource "azurerm_resource_group" "example" {
  name      = "example-resources"
  location  = "West Europe"
}

# Create a virtual network within the resource group
resource "azurerm_virtual_network" "example" {
  name                = "example-network"
  resource_group_name = azurerm_resource_group.example.name
  location            = azurerm_resource_group.example.location
  address_space       = ["10.0.0.0/16"]
}
```

# Terraform Commands

## Terraform Workflow

1

init

- Used to Initialize a working directory containing terraform config files
- This is the first command that should be run after writing a new Terraform configuration
- Downloads **Providers**

2

validate

- Validates the terraform configurations files in that respective directory to ensure they are **syntactically valid and internally consistent**.

3

plan

- Creates an execution plan
- Terraform performs a refresh and determines what actions are necessary to achieve the **desired state** specified in configuration files

4

apply

- Used to apply the changes required **to reach the desired state** of the configuration.
- By default, apply scans the current directory for the configuration and applies the changes appropriately.

5

destroy

- Used to destroy the Terraform-managed infrastructure
- This will ask for confirmation before destroying.