# What is Cloud?



Internet

Cloud Provider

SaaS

PaaS

IaaS

Using someone else's server to host, process, or store data
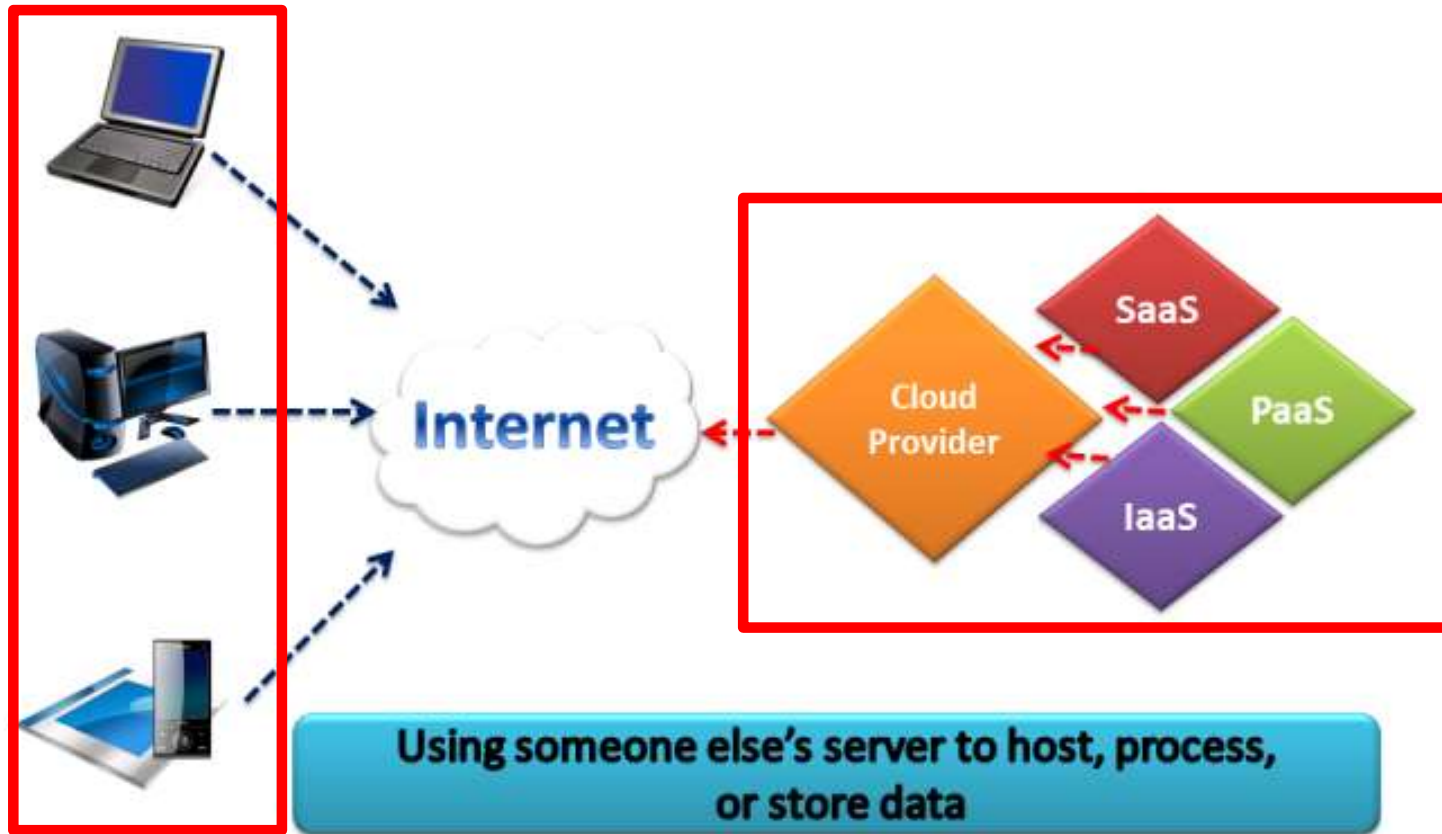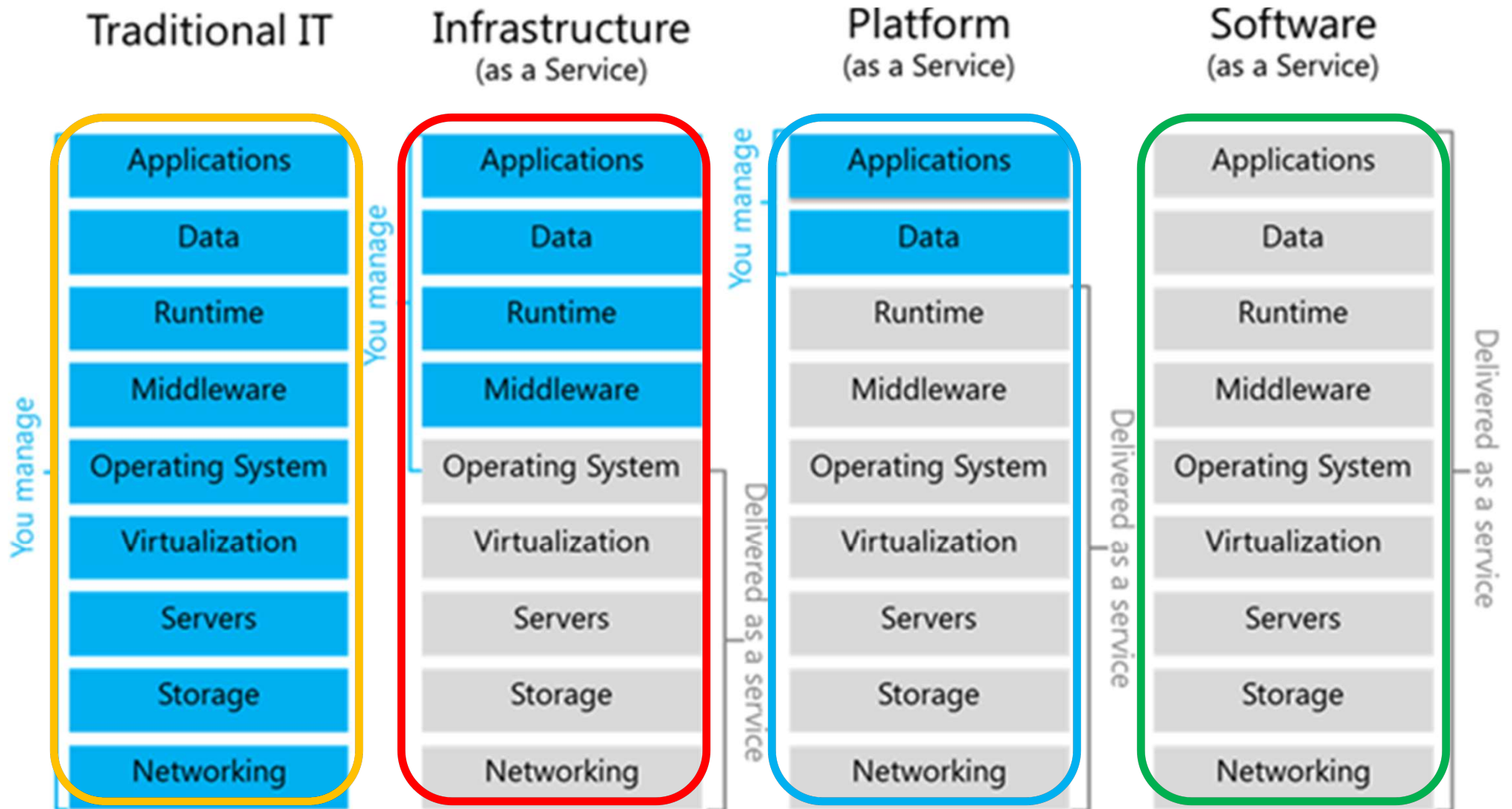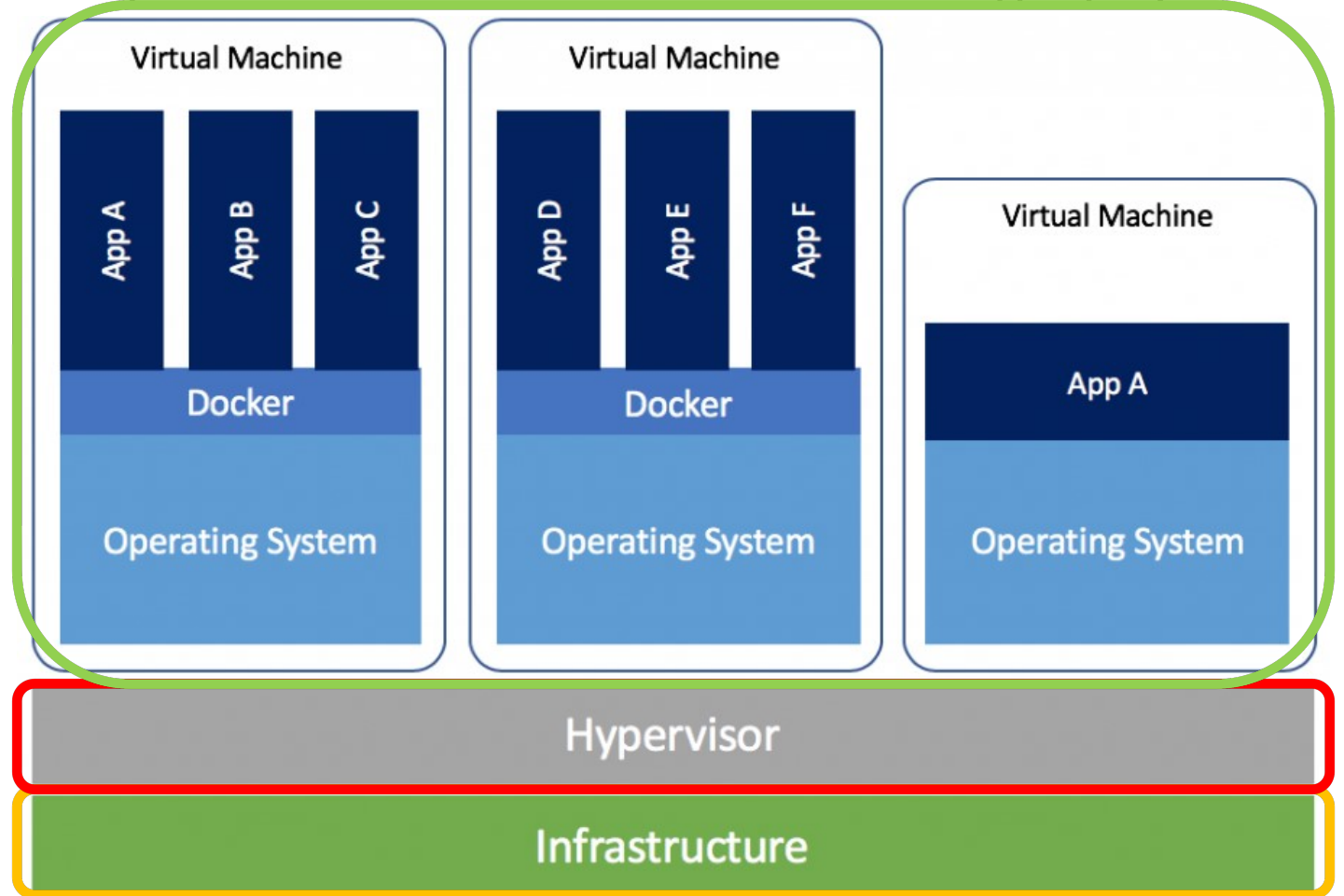
# Cloud Services Deployment Models

# Virtual Machines

- VM technology allows multiple virtual machines to run on a single physical machine
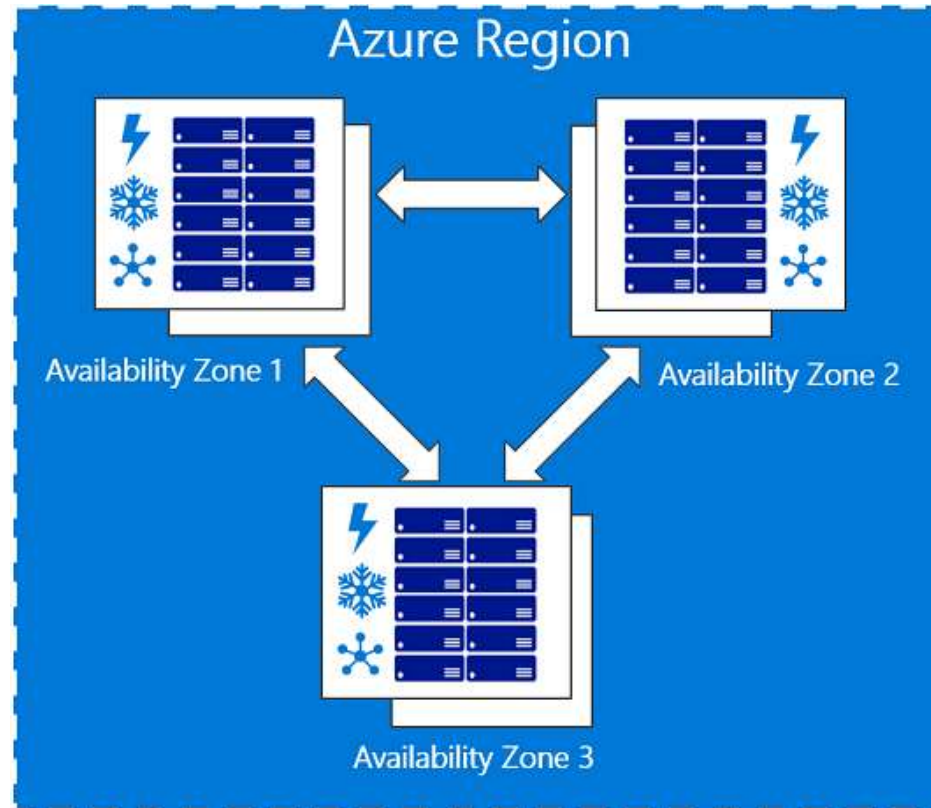
# Introduction of Microsoft Azure

- Microsoft's public cloud platform

- Azure offers a large collection of services

  - PaaS

  - IaaS

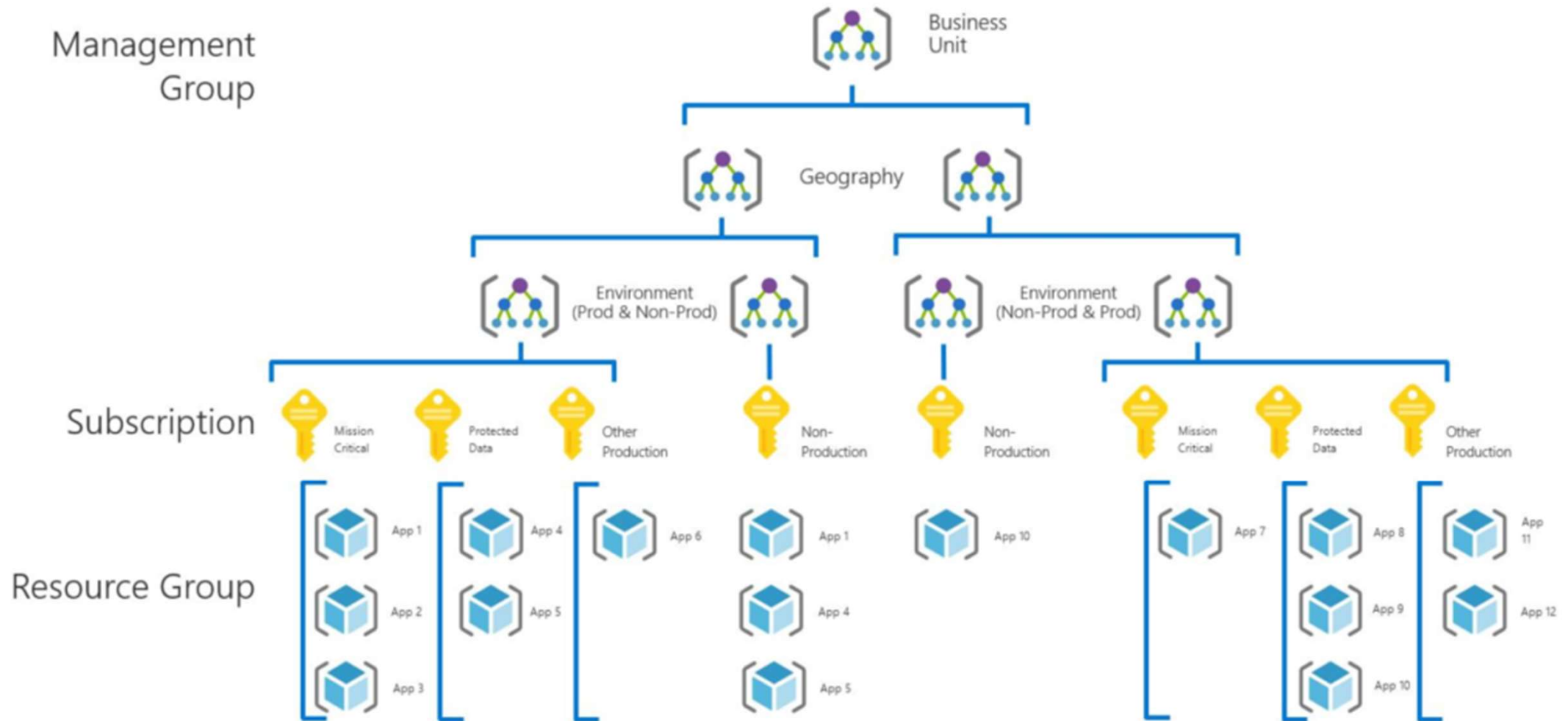  - managed database service capabilities
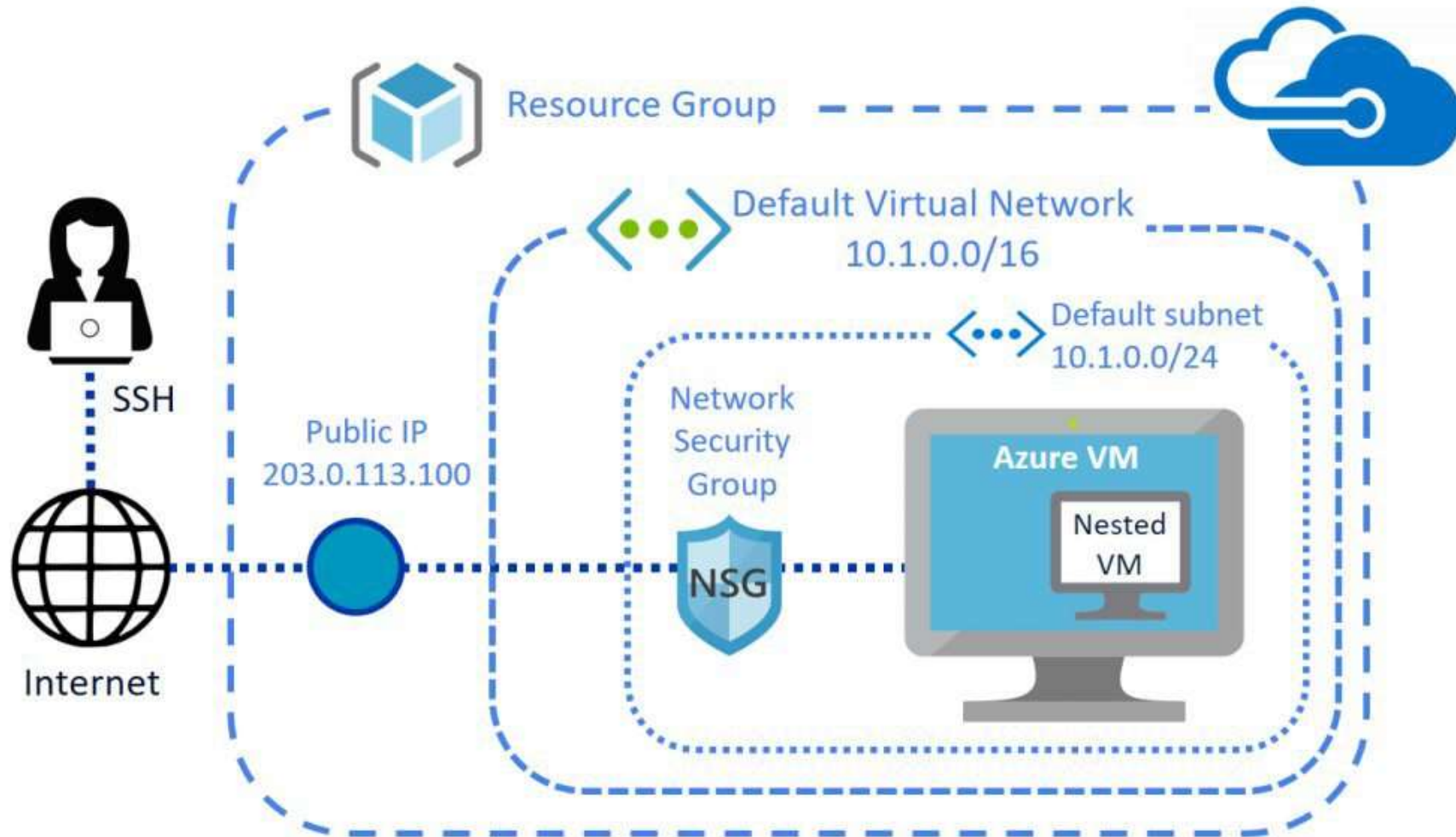
# Concept of Region & Availability Zone

# Concept of Region & Availability Zone

# Concept of Resource Group
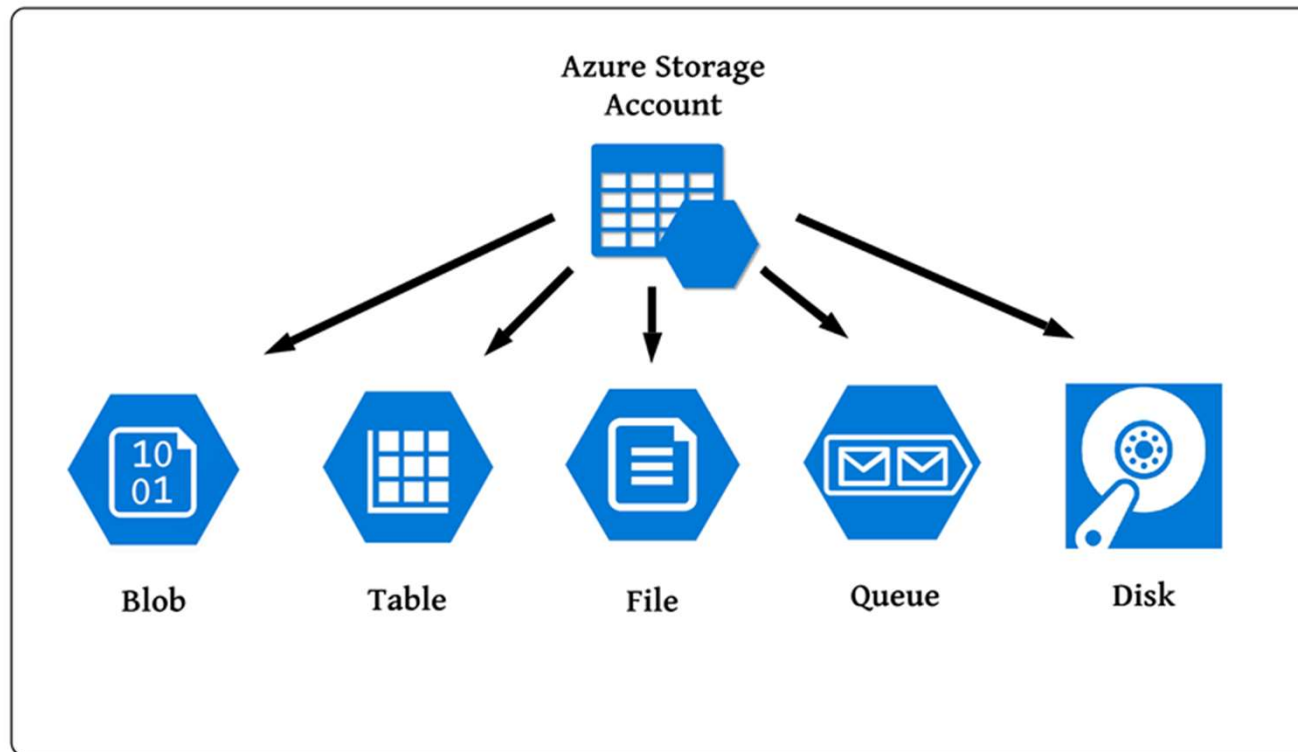
# Introduction of Azure Virtual Machine

# Azure Storage Account

**Duration: 40-60 Minute with Labs**

# Introduction to Storage Account

- Provides a unique namespace in Azure for data

# Core Storage Services



Azure Storage Account Services

**Blobs**

**Block**: Text or binary data (.log, .exe, .jpg, etc.). Up to 200GB.

**Page**: Optimized for disks (.vhd). Supports random read-write. Up to 1TB.

**Append Blob:** Writes to end of the blob (4MB max) up to 50k times (~195GB)

**File Shares**

Supports SMB 3.0 protocol.

Can be accessed like a traditional file share.

Share files between multiple Virtual Machines.

A single file share can be up to 5TB.

**Tables**

NoSQL storage of structured data (entities).

Key/value storage.

A single entity can have up to 255 properties and be up to 1MB.

**Queues**

Durable messaging.

Provides asynchronous communication between application tiers and components.

A single message can be up to 64KB.

Microsoft

# Types of Storage Accounts

| Storage Account Type | Supported Services | Supported Performance Tiers | Replication Options |
|---|---|---|---|
| BlobStorage | Blob (block blobs and append blobs only) | Standard | LRS, GRS, RA-GRS |
| General-purpose VI | Blob, File, Queue, Table, and Disk | Standard premium | LRS, GRS, RA-GRS |
| General-purpose V2 | Blob, File, Queue, Table, and Disk | Standard premium | LRS, GRS, RA-GRS, ZRS, ZGRS (preview), RA-ZGRS (preview) |
| Block blob storage | Blob (block blobs and append blobs only) | premium | LRS, ZRS (limited regions) |
| FileStorage | Files only | premium | LRS, ZRS (limited regions) |

# Securing the Data
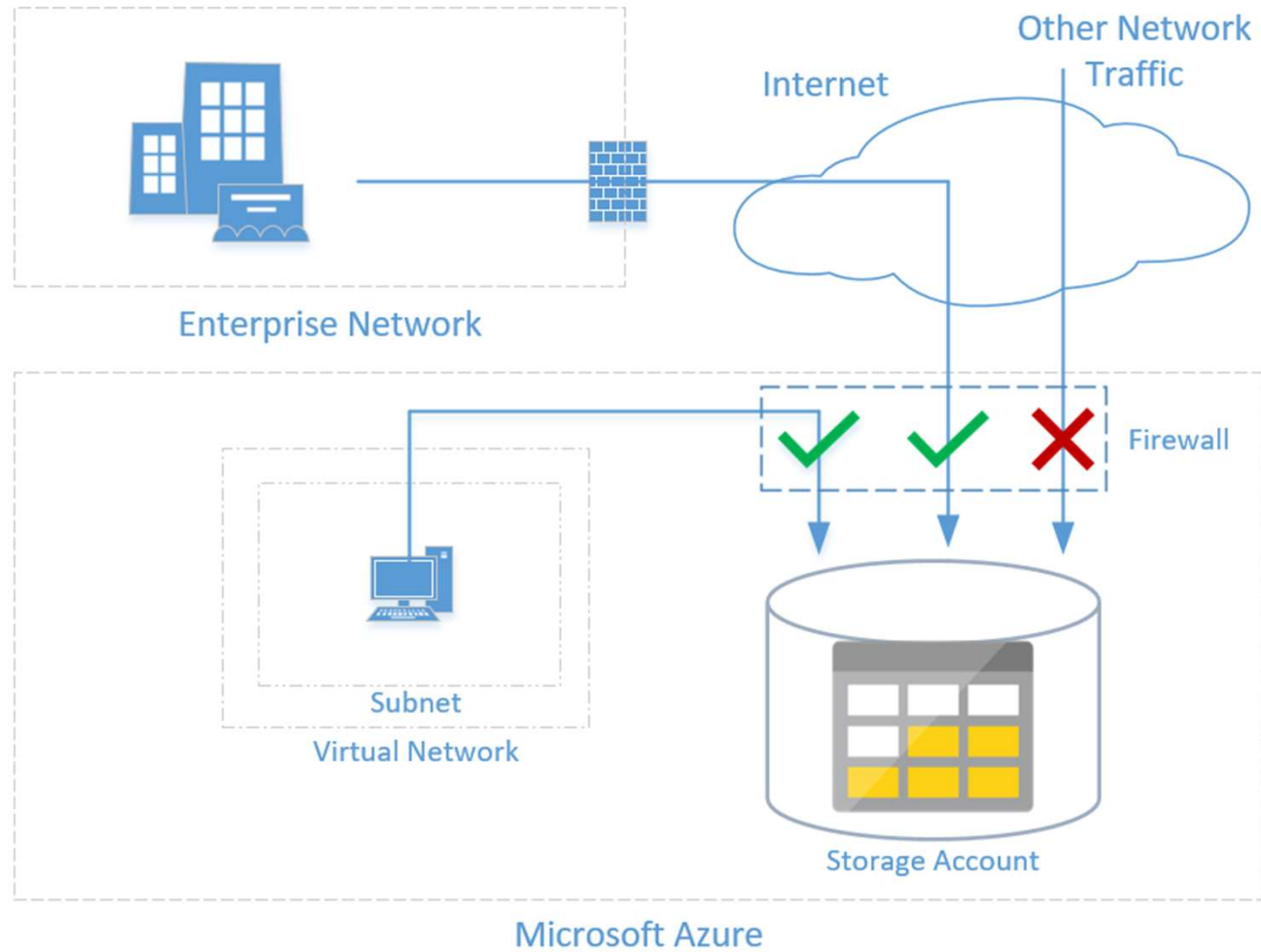
# Lab : Planning and implementing storage

# Lab: Creating and manage Storage Accounts

- Duration: 5 minutes

# Lab: Create and manage containers

- Duration: 10 minutes
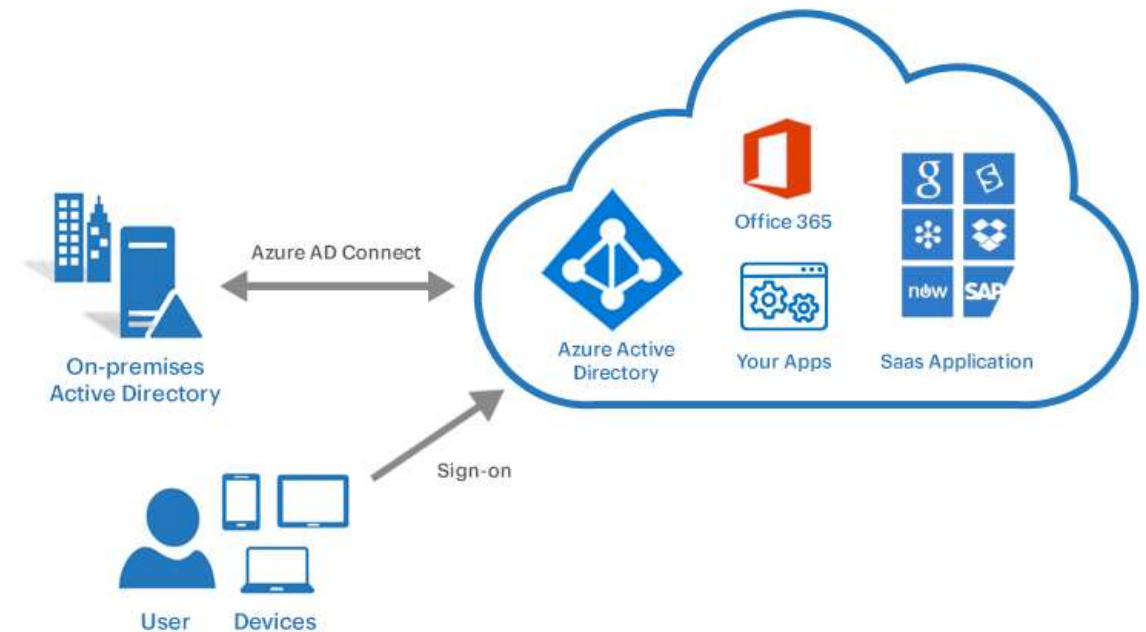
# Lab: Create & manage Blobs, Queues, Files & Tables

- Duration: 10 minutes

# Azure AD Authentication

**Duration: 1.5-2 hours including labs**

# What is Azure Active Directory?

- Cloud-based identity and access management (IAM) solution
- Provides
  - Single sign-on
  - Conditional access to guard against 99.9 percent of cybersecurity attacks.
  - Multifactor authentication

# Role Base Access Control (RBAC)

- Provides fine-grained access management of Azure resources.

- Segregates duties within team and grant only the amount of access to users that they need to perform their jobs
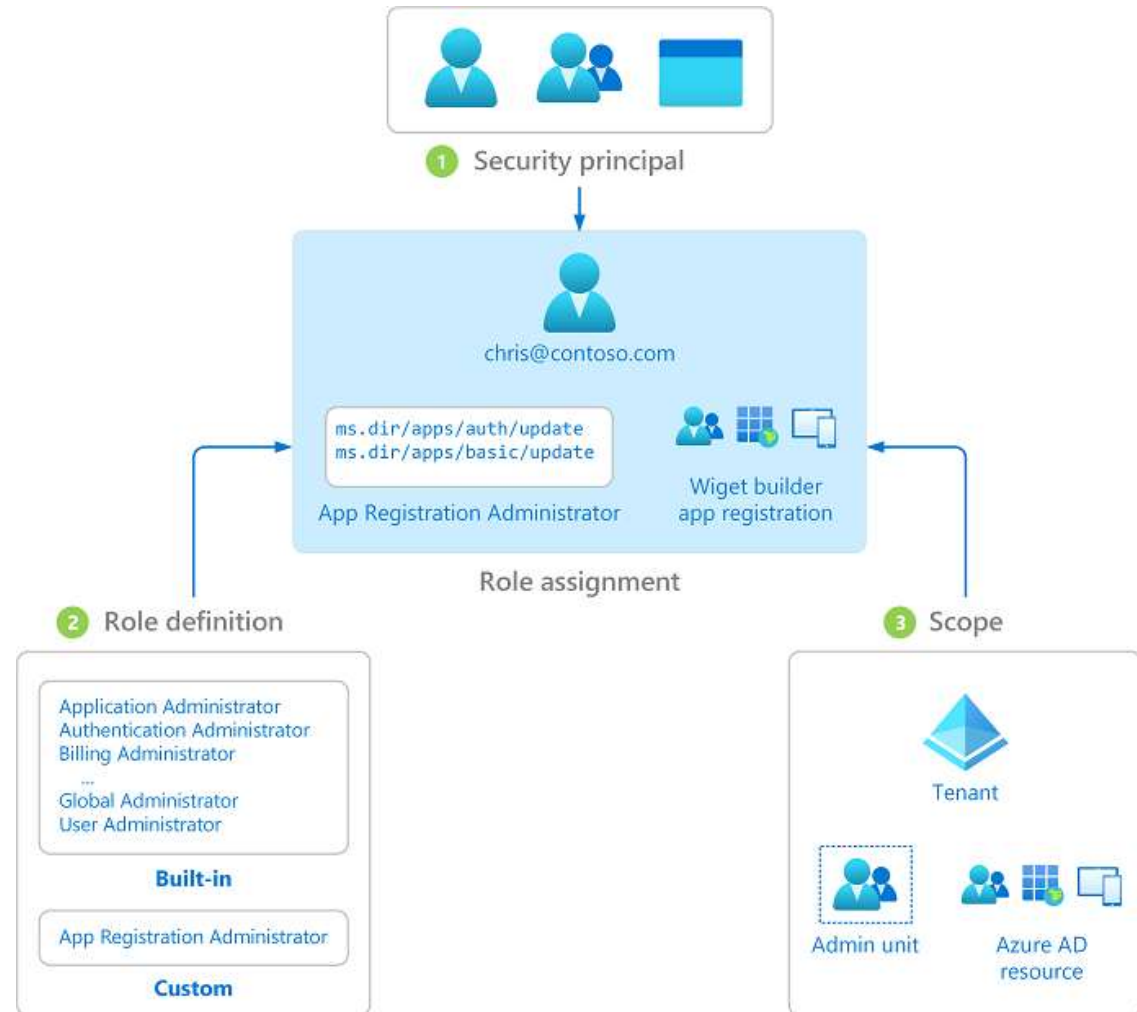
# Custom Roles (RBAC)

- If the Azure built-in roles don't meet the specific needs of your organization, you can create your own custom roles
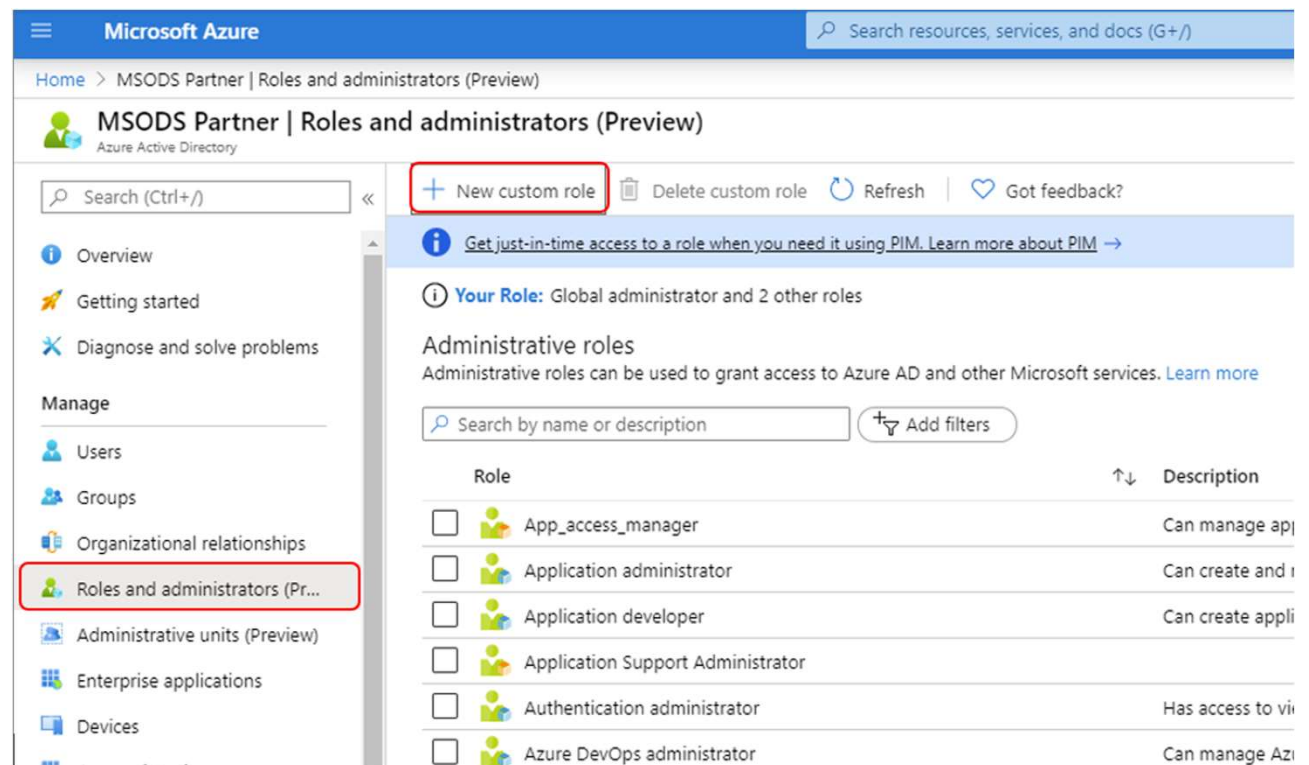
# Lab : Azure AD Authentication

- Lab: How to create user and groups?

- Lab: Implementation of permission

# Thanks