🌐 Azure DNS – Overview

💡 What is Azure DNS?

Azure DNS is a **hosting service for DNS domains** that provides **name resolution** using Microsoft Azure infrastructure. It allows you to manage your DNS records in Azure just like other Azure resources.

🔑 Key Features

Feature	Description
DNS Zone Hosting	Host your DNS domains and manage DNS records
High Availability	Built on Azure's global network for reliable DNS service
Low Latency	Uses Azure's global DNS servers for fast query responses
Integration	Seamlessly integrates with Azure services (VMs, App Services, etc.)
Security	Supports DNSSEC for domain security (in preview)
Standard DNS Record Types	Supports A, AAAA, CNAME, MX, TXT, SRV, NS, PTR records
Private DNS Zones	Manage DNS zones privately within virtual networks

📌 What Does Azure DNS Do?

- Hosts **DNS zones** (domains) and manages **DNS records** (mapping domain names to IP addresses or other domains).

- Enables your applications, services, and users to **resolve domain names** to the correct IP addresses.

- Supports **public DNS zones** (accessible over the internet).

- Supports **private DNS zones** for internal name resolution inside Azure VNets.

🌎 Types of DNS Zones

Zone Type	Description
Public DNS Zone	Domain name accessible globally via the internet DNS system
Private DNS Zone	Domain name accessible only within one or more Azure VNets

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🛠️ Use Cases

- Host custom domains for websites or services running on Azure VMs or App Services.

- Internal name resolution between VMs or services in an Azure VNet using private DNS zones.

- Simplify DNS management by keeping it integrated with your Azure environment.

- Implement DNS failover or routing with Azure Traffic Manager combined with Azure DNS.

🔄 How Azure DNS Works

1. You register a domain name with a domain registrar.

2. Delegate your domain's DNS zone to Azure DNS by updating the domain's name servers to Azure's name servers.

3. Create and manage DNS records inside your Azure DNS zone.

4. DNS queries to your domain are answered by Azure's DNS servers.

💡 Benefits

- Fully managed service with no infrastructure to maintain.

- Scales automatically with traffic.

- Provides secure and reliable DNS resolution.

- Single pane of glass to manage DNS along with other Azure resources.