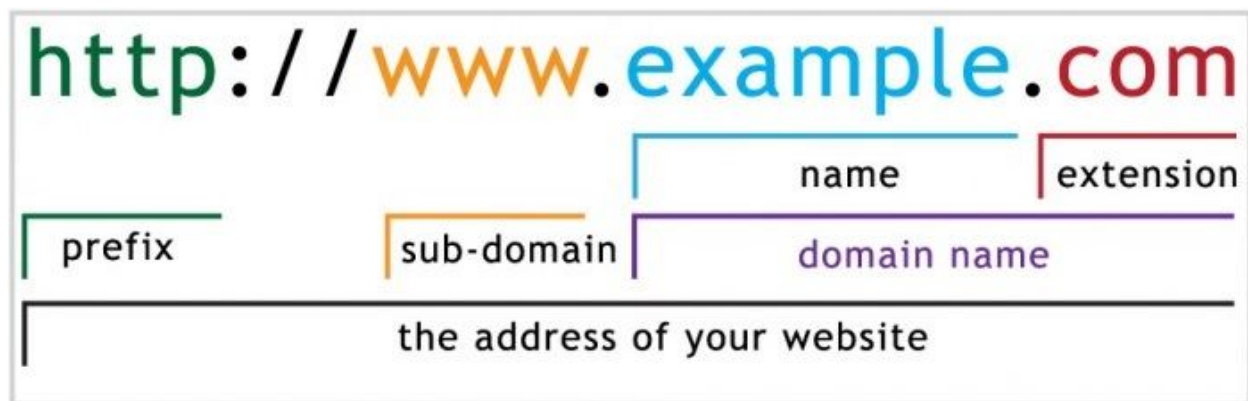
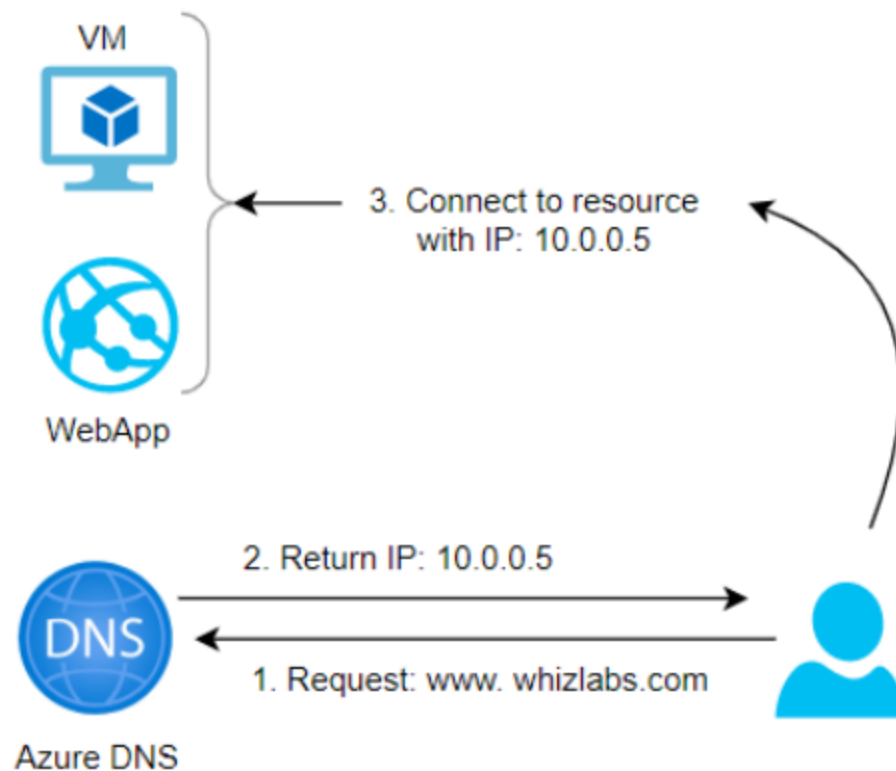




Stories 19: Azure DNS

DNS

DNS stands for Domain Name System. It is a decentralized naming system for computers, services, or any resource connected to the internet or a private network. DNS translates domain names, which are human-readable addresses (e.g., devops.com), into IP addresses (e.g., 192.0.2.1) that computers use to identify each other on the network.



1. **Domain Names:** Domain names are hierarchical labels used to identify resources on the internet. They consist of multiple parts separated by dots, such as "www.example.com". The right-most label (e.g., ".com") is the top-

level domain (TLD), and the left-most label is the most specific, typically identifying a specific host or service.

2. **DNS Resolution:** When you type a domain name into a web browser or any network-aware application, your device needs to know the corresponding IP address to establish a connection. It sends a DNS query to a **DNS resolver**, which is usually provided by your internet service provider (ISP) or configured in your network settings.
3. **DNS Resolver:** The DNS resolver is responsible for finding the IP address associated with the requested domain name. It can resolve the query in several ways:
 - If the resolver has the IP address cached from a previous query, it returns the cached result.
 - If not cached, the resolver queries other DNS servers in a hierarchical manner until it finds a server that can provide the IP address.
 - If the requested domain name is authoritative (i.e., it is responsible for providing IP addresses for its domain), the resolver queries the authoritative DNS server directly.
4. **DNS Server Hierarchy:** DNS operates in a hierarchical structure, with different types of DNS servers:
 - **Root DNS Servers:** They are the top-level servers in the DNS hierarchy and maintain information about the top-level domains (TLDs).
 - **TLD DNS Servers:** They manage information about specific top-level domains (e.g., .com, .org, .net).



- **Authoritative DNS Servers:** They are responsible for storing and providing IP addresses for specific domains. For example, the authoritative DNS server for "example.com" stores the IP address associated with "[www.example.com](#)".
5. **DNS Records:** DNS servers store resource records (RRs) that contain information about domain names. The most common types of DNS records include:
- **A Record:** Maps a domain name to an IPv4 address.
 - **AAAA Record:** Maps a domain name to an IPv6 address.
 - **CNAME Record:** Maps an alias (subdomain) to another domain name.
 - **MX Record:** Specifies the mail server responsible for accepting email on behalf of the domain.
 - **TXT Record:** Contains text information associated with the domain, often used for verification or authentication purposes.

- **NS** (Name Server) records are an essential component of the Domain Name System (DNS). These records specify the authoritative name servers for a domain, indicating which DNS servers are responsible for providing authoritative answers for that domain

Azure doesn't directly offer domain registration services like some other providers such as GoDaddy or Namecheap. However, Azure does provide services for hosting DNS zones (Azure DNS) and managing DNS records for domains that you've registered through other domain registrars.

1. **Purchase Domain from Registrar:** You would purchase your domain name from a domain registrar like GoDaddy, Namecheap, Google Domains, or others. These registrars specialize in domain registration and often provide additional services like email hosting, website builders, and DNS management.
2. **Manage DNS with Azure DNS:** Once you've purchased your domain name from a registrar, you can use Azure DNS to manage the DNS records for your domain. Azure DNS allows you to create, update, and delete DNS records such as A records, CNAME records, MX records, etc.

DNS Zone in Azure

DNS zone is a container that holds the DNS records for a particular domain, allowing you to manage and resolve DNS queries for that domain. Azure DNS provides a scalable, reliable, and high-performance DNS service for hosting DNS zones in the Azure cloud.

Here's how DNS zones work in Azure:

Creating a DNS Zone: To use Azure DNS, you first need to create a DNS zone for your domain. You can create a new DNS zone directly in the Azure portal by specifying the domain name you want to manage. Once created, the DNS zone will be associated with your Azure subscription.

Managing DNS Records: After creating a DNS zone, you can manage the DNS records for your domain within the Azure portal. DNS records are used to map domain names to IP addresses (A records), specify mail servers (MX records), define aliases (CNAME records), and more. Azure DNS supports various types of DNS records, allowing you to configure your DNS zone according to your requirements.

DNS Resolution: Once your DNS zone is configured with the necessary DNS records, Azure DNS handles DNS resolution for your domain. When a DNS query is received for a domain name hosted in your DNS zone, Azure DNS responds with the appropriate DNS records based on the configured settings.

Integration with Azure Services: Azure DNS seamlessly integrates with other Azure services, allowing you to link DNS records to Azure resources such as Azure Virtual Machines, Azure Web Apps, Azure Traffic Manager, Azure Load Balancer, and more. This makes it easy to point your domain to various Azure services and manage DNS settings alongside your Azure infrastructure.

Lab : Create a Server and map with a domain name . Domain registrater is godaddy , move to azure DNS .

Solution :

Step 1 : purchase a domain

example.com

step 2: create a Dns zone in Azure with same name as your domain

example.com

Microsoft Azure

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DNS zones

Default Directory (devopsdigitalidentity.onmicrosoft.com)

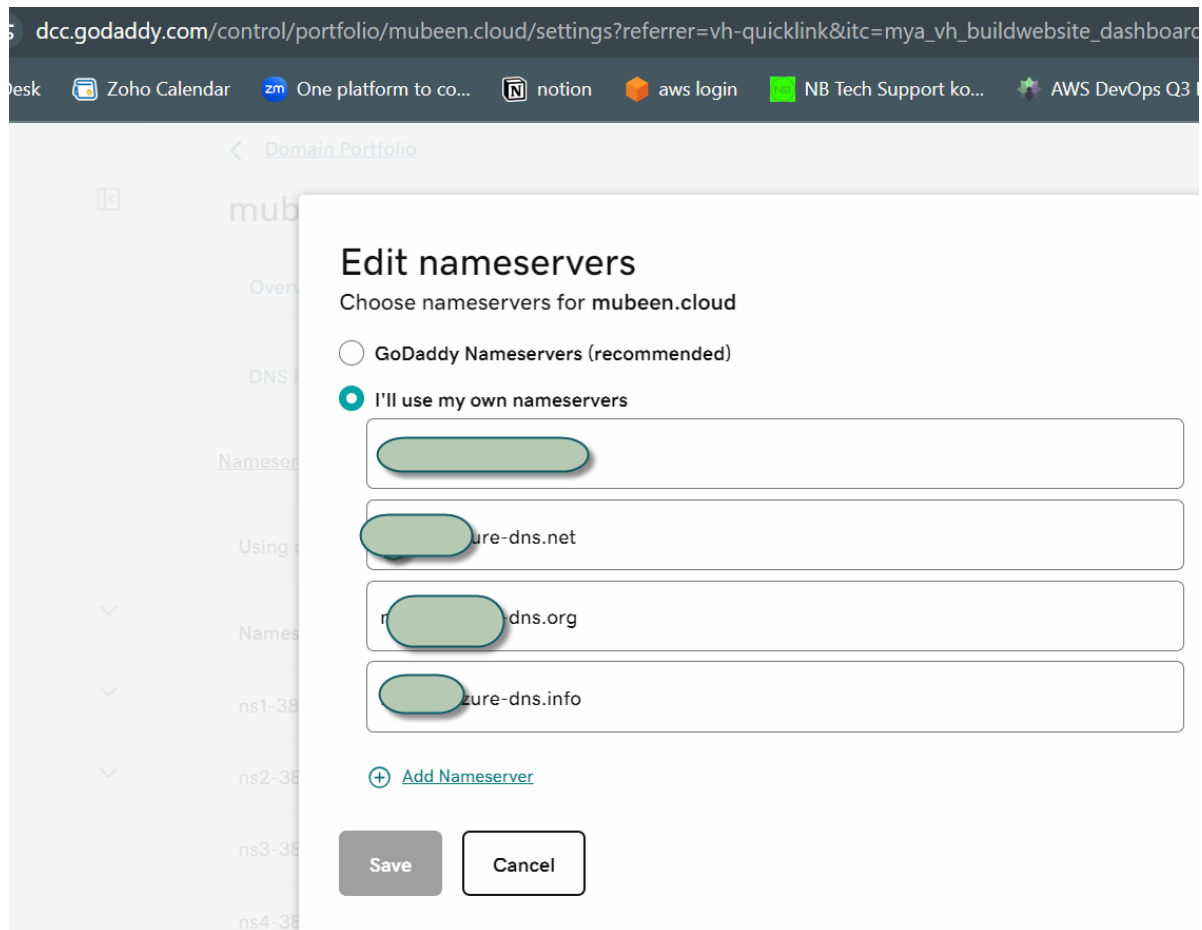
[+ Create](#) [Manage view](#) [Refresh](#) [Export to CSV](#) [Open query](#) [Assign tags](#)

[Subscription equals all](#) [Resource group equals all](#) [Location equals all](#) [Add filter](#)

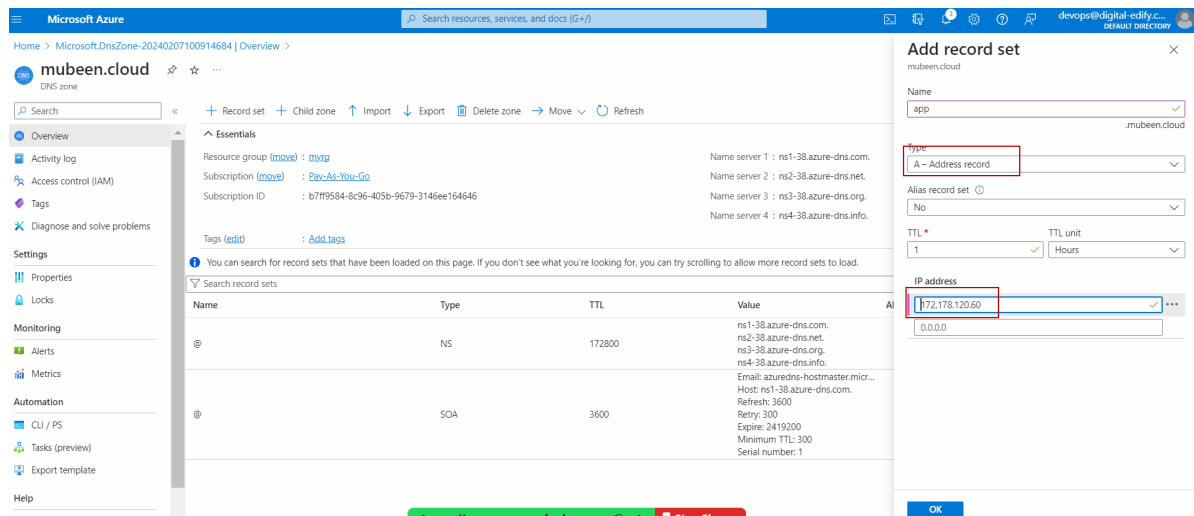
Showing 0 to 0 of 0 records.

Name	Numb...	Resource group	Location
<div><div></div><div><h4>No dns zones to display</h4><p>Azure DNS is a hosting service for DNS domains that provides name resolution by using Microsoft Azure infrastructure. By hosting your domains in Azure, you can manage your DNS records by using the same credentials, APIs, tools, and billing as your other Azure services.</p><div>Create dns zone<div>Create</div>Learn more</div></div></div>			

Step 3: Copy the Name Servers of azure to Registrar (godaddy)

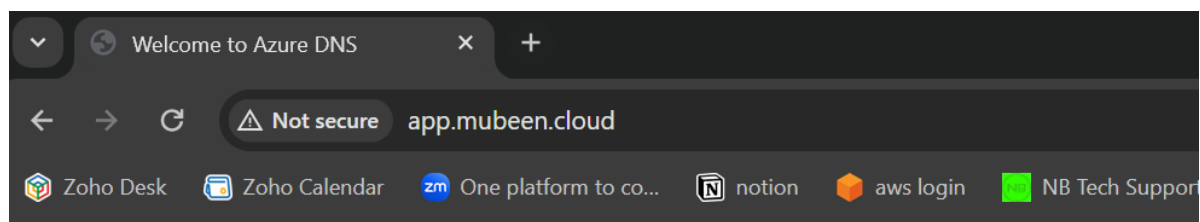


step 4: Add a A Record (Alias Record) provide subdomain app and the ip address of your server or any service



Step 5: Verify with domain name

app.mubeen.cloud



Welcome to Azure DNS

This is a placeholder for your content. You can replace this text with whatever you want to display.