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# Lab: Set Up Azure DNS for a Public DNS Zone

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## Lab Objectives

- Create a Resource Group
  - Create an Azure DNS Zone (for your domain)
  - Add DNS records (A, CNAME, MX) to the DNS zone
  - Delegate your domain registrar to Azure DNS (conceptual step)
  - Validate DNS resolution
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## Prerequisites

- Azure subscription
  - Access to a domain registrar (optional, for real domain delegation)
  - Basic understanding of DNS concepts
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## Step-by-Step Guide

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### Step 1: Create a Resource Group

1. Sign in to the [Azure Portal](#).

2. Search for **Resource groups** > Click **Create**.
  3. Fill in:
    - **Resource group name:** AzureDNSLabRG
    - **Region:** Any (e.g., East US)
  4. Click **Review + create**, then **Create**.
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## Step 2: Create an Azure DNS Zone

1. Search for **DNS zones** in the portal.
  2. Click **Create DNS zone**.
  3. Fill in:
    - **Subscription:** Your subscription
    - **Resource group:** AzureDNSLabRG
    - **Name:** myexamplelab.com (replace with your domain or test domain)
    - Leave **Tags** blank (optional).
  4. Click **Review + create**, then **Create**.
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## Step 3: View Azure DNS Name Servers

1. After the DNS zone is created, open it.
2. Under **Settings**, click **Name servers**.
3. Note the list of Azure DNS name servers (e.g., ns1-xx.azure-dns.com).

You will need to update your domain registrar's name server settings to point here if you own the domain.

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## Step 4: Add DNS Records

Let's add some common records:

### Add an A Record (maps name to IPv4 address)

1. In your DNS zone, click **+ Record set**.
2. Set:
  - **Name:** `www`
  - **Type:** `A`
  - **TTL:** default (3600)
  - **IP address:** `13.82.50.116` (example Azure VM/public IP)
3. Click **OK**.

### Add a CNAME Record (alias)

1. Click **+ Record set**.
2. Set:
  - **Name:** `blog`
  - **Type:** `CNAME`
  - **TTL:** default (3600)
  - **Alias:** `www.myexamplelab.com`
3. Click **OK**.

### Add an MX Record (for mail exchange)

1. Click **+ Record set**.
  2. Set:
    - **Name:** (leave blank for root)
    - **Type:** **MX**
    - **TTL:** default
    - **Value:** **10 mailserver.myexamplelab.com**
  3. Click **OK**.
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## Step 5: Delegate Your Domain to Azure DNS (Conceptual)

If you own the domain **myexamplelab.com** at your registrar:

- Login to your domain registrar's portal.
- Find DNS settings for name servers.
- Replace existing name servers with Azure DNS name servers you noted earlier.

This step lets DNS queries for your domain be answered by Azure DNS.

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## Step 6: Validate DNS Resolution

You can validate DNS records with tools:

- Using Azure Cloud Shell or your terminal:

```
nslookup www.myexamplelab.com
nslookup blog.myexamplelab.com
nslookup -type=MX myexamplelab.com
```

- Use online DNS checkers like <https://dnschecker.org>
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## Summary

Task	Description
Create Resource Group	Logical container for DNS resources
Create DNS Zone	Host DNS zone for your domain
Add DNS Records	Manage mappings to IPs and aliases
Delegate Domain	Update registrar to Azure DNS servers
Validate DNS	Confirm DNS records propagate

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## Cleanup

To avoid charges:

- Delete the resource group:

```
az group delete --name AzureDNSLabRG --yes --no-wait
```

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