

Develop Azure Compute Solutions

└ 1.2 Implement Azure App Service Web Apps

└ 1.2.1 Create an Azure App Service Web App

1. What is Azure App Service and when should it be used?
2. How do you create an App Service Web App using the Azure CLI?
3. How do you create an App Service Plan and what are the pricing tiers?
4. What runtime stacks and OS options are supported?
5. How do you configure deployment credentials?
6. How do you deploy code to App Service (e.g., ZIP, GitHub Actions, Azure DevOps)?
7. How do you configure environment variables and app settings?
8. How do you assign a custom domain and configure HTTPS?
9. What is the role of App Service managed identity?
10. What are the basic scaling options available (manual, autoscale)?

1. What is Azure App Service and when should it be used?

A PaaS for hosting web apps and APIs. Supports .NET, Node.js, Python, Java, PHP.

Use when: You need quick deployment, scaling, custom domains, or managed identity.

2. How do you create an App Service Web App using Azure CLI?

```
az group create --name myRG --location eastus
```

```
az appservice plan create --name myPlan --resource-group myRG --sku B1 --is-linux
```

```
az webapp create --resource-group myRG --plan myPlan --name mywebapp123 --runtime "DOTNET|7.0"
```

Creates a Linux-based .NET 7 Web App in Basic tier.

3. What is an App Service Plan and how do tiers differ?

Defines compute resources for Web Apps.

Tiers:

- F1 (Free): Shared, limited
- B1 (Basic): Dedicated, no autoscale
- S1 (Standard): Autoscale, staging slots
- P1V3 (Premium): VNET, better scaling
- I1 (Isolated): Private VNET, high compliance

4. What OS and runtime stacks are supported?

OS: Linux or Windows

Runtimes: .NET, Node.js, Java, Python, PHP, Ruby, Static HTML

Selected via --runtime (e.g., "DOTNET|6.0" or "NODE|18-lts")

5. How do you deploy code to Web Apps?

- ZIP Deploy: `az webapp deployment source config-zip`
- GitHub Actions: `az webapp deployment github-actions add`
- Azure DevOps: Use App Service deploy task
- Local Git: Configure via Portal or CLI

6. How do you configure app settings and connection strings?

```
az webapp config appsettings set --name <app-name> --resource-group <rg> --settings KEY=VALUE
az webapp config connection-string set --name <app-name> --resource-group <rg> --settings connStr=... --connection-string-type SQLAzure
```

Stored securely and available as environment variables.

7. How do you bind a custom domain and enable HTTPS?

- Add domain via `az webapp config hostname add`
 - Enable HTTPS: `az webapp update --https-only true`
 - Use App Service-managed certs or upload custom certs
-

8. What is the purpose and setup of managed identity in App Service?

Grants the app access to Azure resources without secrets.

```
az webapp identity assign --name <app-name> --resource-group <rg>
```

Assign roles to this identity for access (e.g., Key Vault).

9. How does scaling work in App Service?

- Manual: Set instance count (Standard+)
 - Autoscale: Use Azure Monitor rules (CPU, schedule)
Configured via Portal or ARM/CLI (`az monitor autoscale`)
-

10. What diagnostic/logging options are available?

- App logs: `az webapp log config`
- Live logs: `az webapp log tail`
- App Insights: Enable via Portal or `az monitor app-insights component create`