**How to Deploy an ASP.NET Web App to Azure with SQL Database Using Visual Studio**

# **Overview**

In this scenario you will use a Visual Studio to deploy your web app with a database to Azure App Service.

# **Pre-Requisites**

* An active Azure Subscription.
* Install Microsoft Visual Studio 2019 with the ASP.NET and web development workload.

**Run the application on a local machine**

The ASP.NET app is displayed in a default browser.

A screenshot of a social media post

Description automatically generated

A screenshot of a cell phone

Description automatically generated

The app uses a database context to connect with the database. So, the database context uses a connection string named ***SchoolContext***. The connection string is set in the ***Web.config*** file.

A screenshot of a computer

Description automatically generated

**Publish to Azure with SQL Database**

In the **Solution Explorer**, right-click your **ContosoUniversity** project and select **Publish**.

A screenshot of a computer

Description automatically generated

A screenshot of a computer screen

Description automatically generated

Make sure that **Microsoft Azure App Service** is selected and click **Create Profile**.

A screenshot of a computer screen

Description automatically generated

**Sign-in to Azure**

In the **Create App Service** dialog, click **Add an account**, and then sign into your Azure subscription. If you’re already signed into a Microsoft account, make sure that account holds your Azure subscription. In this case, I’ve already signed into my Microsoft account.

A screenshot of a computer screen

Description automatically generated

**Configure the web app name**

You can keep the generated web app name or change it to another unique name. The web app name is used as part of the default URL for your app (<app\_name>.azurewebsites.net, where <app\_name> is your web app name).

A screenshot of a cell phone screen with text

Description automatically generated

**Create a resource group**

A resource group is a logical container into which Azure resources like web apps, databases, and storage accounts are deployed and managed.

Next to **Resource Group**, click **New**. Name the resource group **ContosoAppRG** and click **OK**.

A screenshot of a cell phone

Description automatically generated

**Create a Hosting Plan**

A Hosting Plan specifies the location, size and features of the web server farm that hosts your web app.

Hosting plans define:

* Region (for example: West US, East US, or North Europe)
* Instance size (small, medium, or large)
* Scale count (1 to 20 instances)
* SKU (Free, Shared, Basic, Standard, or Premium)

Next to **Hosting Plan**, click **New**.

**Hosting Plan:** ContosoUniversity2020Plan (Hosting plans)

**Location:** West US (Azure regions)

**Size:** S1 (Pricing tiers)

A screenshot of a cell phone

Description automatically generated

**Create a SQL Server instance**

Before creating a database, you need an Azure SQL Database logical server. A logical server contains a group of databases managed as a group.

Click **Create a SQL Database**.

A screenshot of a cell phone

Description automatically generated

In the **Azure SQL Database** dialog, Click **New** next to **Database server**.

A unique server name is generated. This name is used as part of the default URL for your logical server, <server\_name>.database.windows.net. You can change the server name, but for this tutorial, keep the generated value.

Add an administrator username and password. For password complexity requirements, please see [Password Policy](https://docs.microsoft.com/en-us/sql/relational-databases/security/password-policy?view=sql-server-ver15).

Remember this username and password. You need them to manage the logical server instance later.

A screenshot of a cell phone screen with text

Description automatically generated

A screenshot of a cell phone screen with text

Description automatically generated

Click **OK**. Don’t close the **Azure SQL Database** dialog yet.

**Create an Azure SQL Database**

In the **Azure SQL Database** dialog:

* Keep the default generated **Database name**.
* In **Connection string name**, type ***SchoolContext***. This name must match the connection string that is referenced in the ***Web.config*** file.
* Select **OK**.

A screenshot of a cell phone

Description automatically generated

The **Create App Service** dialog shows the resources you’ve configure. Click **Create**.

A screenshot of a cell phone

Description automatically generated

Click **Publish** to deploy your ASP.NET app to Azure App Service.

A screenshot of a computer screen

Description automatically generated

Once the wizard finishes creating the Azure resources, it publishes your web app to Azure. So, your default browser is launched with the URL to the deployed app.

A screenshot of a social media post

Description automatically generated

Click the **Create New** button which is under the **Students** page to add a student name and enrollment date.

A screenshot of a computer

Description automatically generatedCongratulations! Your data driven ASP.NET app is running live in Azure App Service.

**Next Steps:**

* <https://docs.microsoft.com/en-us/azure/app-service/overview-security>
* [Buy and configure an SSL certificate for Azure App Service](https://docs.microsoft.com/en-us/azure/app-service/web-sites-purchase-ssl-web-site)
* [Buy a custom domain name for Azure App Service](https://docs.microsoft.com/en-us/azure/app-service/manage-custom-dns-buy-domain)

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*