**The lecture 6**

Azure App Services and Web apps

App Service and App Service plans

Before we talk about Web Apps, let’s talk about App Service and the App Service plans.

**What is an App Service?**

The App Service is a service that hosts one of five kinds of applications:

* Web Apps
* Mobile Apps
* Logic Apps
* API Apps
* Function Apps

**So, what is an App Service plan?**

An App Service plan defines the capacity and resources to be shared among one or more app services that are assigned to that plan.

The following are some of the criteria you can define when creating an App Service plan.

* Location (such as West US)
* Instance count
* Pricing tier (such as Free, Standard, or Premium) providing distinct settings for a variety of performance and service capabilities:
* Number of cores or instance size
* Amount of memory
* Amount of storage
* Maximum number of instances
* Autoscaling options (depends on tier—automatic, manual, or none)

When you deploy your app service for the first time, you specify which App Service plan you want to use. At deployment time, you can select an App Service plan you have created or create a new App Service plan.

**How does this help you?**

With infrastructure as a service (IaaS), you can create your own virtual machines (VMs), deploy your apps to them, and deal with the IIS setup and application pools and so on. Then, every time you change an app, you have to deploy it to all the VMs again. If you scale it out, and you have four VMs or eight VMs, it just becomes more onerous. With IaaS, you are responsible for the continuing management of your service. Using App Service plans enables you to run multiple applications on one set of VMs, even if each of the applications is deployed separately.

For example, let’s say you have five websites and three mobile apps that you want to host. You could run each one on its own VM, which would require 8 VMs. If you wanted redundancy (recommended), that would require 16 VMs. Even if you select small instances, the cost adds up really quickly. Plus, you have to scale each set of VMs separately.

If you could run those eight applications on the same set of two VMs, it would be more cost-effective and easier to manage. This is what using App Service plans does for you. You set up one App Service plan with a specific VM size, number of instances, etc. Then, you deploy the eight applications, specifying the same App Service plan for each one. This results in all eight applications running on that same set of two VMs. You can deploy and update each application as needed—you don’t have to update them all at the same time.

When you create your App Service plan, the resources you requested are allocated for you. When you deploy an app to that App Service plan, it simply deploys the applications to those allocated resources.

If you decide you want to have four VMs instead of two, you simply go to the Azure portal and modify the App Service plan, changing the number of instances from two to four. It will create two more VMs and deploy your apps to them for you. If you are using small VMs and want to scale up to medium VMs, you can simply modify the Pricing Tier in the App Service plan, and it will scale up.

With web apps running in an app service using an App Service plan, the management is handled for you, and you can easily scale up and out just by changing the settings of the App Service plan.

**How to create an App Service plan in the Azure portal**

Now, I’ll show you how to create an App Service plan using the Azure portal. Later, I’ll show you how to create a web app and deploy it to an app service using that App Service plan.

**1. Log in to the** Azure portal.

**2. Click New, then click See All, as displayed in Figure 2-1.**



Figure 2-1 Go to the Marketplace to search for a resource to add.

**3.** It opens the search screen for the Marketplace (Figure 2-2). Type **app service plan** in the search box and press Enter.



Figure 2-2 The input screen for searching the Marketplace.

**4.** Select App Service Plan in the search results, as shown in Figure 2-3.



Figure 2-3 The search results for App Service plan.

**5.** Click Create on the App Service Plan blade displayed in Figure 2-4.



Figure 2-4 Click Create to create a new App Service plan.

**6.** After you see something similar to the App Service Plan blade displayed in Figure 2-5, you can define the parameters for your App Service plan.



Figure 2-5 The fields to be filled in for your new App Service plan.

**App Service Plan** This is what you would like to name your App Service plan. Make this something you can recognize when you want to use the plan later.

**Subscription** If you have multiple Azure subscriptions administered by this account, this will have a drop-down list of subscriptions, and you can select which one to use.

**Resource Group** Resource groups provide a logical container for a related set of resources. For example, you could put all of the resources you create for this book in the same resource group. When you’re finished, you can delete the resource group, and it will deallocate and remove all of those resources for you. Let’s create a new resource group for our App Service plan; later in this chapter, we will create a web app and assign it to our App Service plan. Leave the value as +New and specify the name of your new resource group. It’s recommended that you specify something that indicates what the resources are used for.

**Location** This is the Azure region where the resource group will be hosted. This includes metadata such as audit logs, where each resource in the group resides. This can be different from the resources themselves; this is important for those who care about where data is hosted—for example, those in countries with data sovereignty laws. Also, Resource Manager operations are sourced through this region, so you typically want it to be the same as most of the resources in the group. For our example, select the region closest to you.

**Pricing Tier** Click this field to see your choices. The new blade (displayed in Figure 2-6) shows the recommended pricing plans. This is a subset of all of the available pricing tiers. If you want to see all of the plans, click View All on this blade. The pricing plan lets you specify the amount of storage, scalability, backup choices, and so on.



Figure 2-6 The Pricing Tier blade.

Select the S1 Standard pricing plan and then click Select at the bottom of the blade. Now, your App Service Plan blade should display the pricing plan you selected.

**7.** Select the check box on the bottom of the App Service Plan blade that says Pin To Dashboard. This will pin a tile to the Dashboard showing your App Service plan, providing easy access to it. Now, click Create. It creates the plan and adds a tile to your Dashboard.

**8.** After the App Service plan is created, you can click the tile on the Dashboard and modify it. You can also see what apps are using that plan. After the web app is created and deployed, I’ll show you how to scale the apps by scaling the App Service plan.

At this point, you can create one or more app services, such as a web app, and assign them to that App Service plan. They will all run on the same VMs.