

Module 14 - Lab 2: Azure App Services (Optional) - Advanced Settings

Task 1: Create a static HTML web app in Azure CLI

❓ Azure Web Apps provides a highly scalable, self-patching web hosting service. This lab shows how to deploy a basic HTML+CSS site to Azure Web Apps. You'll complete this task in Cloud Shell but you can also run these commands locally with Azure CLI.

- ☐ 1. Navigate to portal.azure.com and login using username [sheikhnasir3LZ3U@gdcs4.com](#) and password [6pz0UftC8pgiKPR](#).
- ☐ 2. Open the **Cloud Shell** in **Bash** mode.
- ☐ 3. Click **Show advanced settings**.

You have no storage mounted

Azure Cloud Shell requires an Azure file share to persist files. [Learn more](#)
This will create a new storage account for you and this will incur a small monthly cost. [View pricing](#)

* Subscription
CloudShare7

Show advanced settings

Create storage Close

- ☐ 4. Select the **East US** region. Select **Use existing** Resource group and select the pre-provisioned resource group for the lab.

You have no storage mounted

* Subscription
CloudShare7

* Cloud Shell region
East US

Hide advanced settings

* Resource group
☐ Create new ☒ Use existing
onpremrgrg-5ff14358fe7

* Storage account
☒ Create new ☐ Use existing
Required field

* File share
☒ Create new ☐ Use existing
Required field

For guidance on Cloud Shell storage, please refer to the [Cloud Shell documentation](#).

Create storage Close

- ☐ 5. Enter a name for the storage account (this must be unique) and type [cloudshell](#) as the name of the File share then click **Create Storage**.

You have no storage mounted

* Subscription
CloudShare7

* Cloud Shell region
East US

Hide advanced settings

* Resource group
☐ Create new ☒ Use existing
onpremrgrg-5ff14358fe7

* Storage account
☒ Create new ☐ Use existing
thisisaunique name

* File share
☒ Create new ☐ Use existing
cloudshell

For guidance on Cloud Shell storage, please refer to the [Cloud Shell documentation](#).

Create storage Close

- ☐ 6. Your Cloud Shell will now launch.
- ☐ 7. To install the webapp extension, run the following command:

```
az extension add --name webapp
```

- ☐ 8. When the extension has been installed, the Cloud Shell shows the following message:

The installed extension 'webapp' is in preview.

- ☐ 9. Download the sample website. In the Cloud Shell, create a quickstart directory and then change to it using the following commands.

```
mkdir quickstart
```

```
cd quickstart
```

```
Bash
Initializing your account for Cloud Shell...\n
Requesting a Cloud Shell.Succeeded.\n
Connecting terminal...\n

Welcome to Azure Cloud Shell

Type "az" to use Azure CLI
Type "help" to learn about Cloud Shell

gareth_demolaegkc@Azure:~$ az extension add --name w
The installed extension 'webapp' is in preview.
gareth_demolaegkc@Azure:~$ mkdir quickstart
gareth_demolaegkc@Azure:~$ cd quickstart
gareth_demolaegkc@Azure:~/quickstart$
```

- ☐ 10. Next, run the following command to clone the sample app repository to your quickstart directory.

```
git clone https://github.com/Azure-Samples/html-docs-hello-world.git
```

```
Bash
gareth_demolaegkc@Azure:~/quickstart$ git clone https://github.com/Azure-Samples/html-docs-hello-world.git
Cloning into 'html-docs-hello-world'...
remote: Enumerating objects: 46, done.
remote: Total 46 (delta 0), reused 0 (delta 0), pack-reused 46
Unpacking objects: 100% (46/46), done.
Checking connectivity... done.
gareth_demolaegkc@Azure:~/quickstart$
```

- ☐ 11. Change to the directory that contains the sample code and run the az webapp up command.

```
cd html-docs-hello-world
```

- ☐ 12. Run the following command replacing <app_name> with a unique app name:

```
az webapp up --location eastus --resource-group myRG-UP9MFWS0AE --name <app_name> --html
```

- ☐ 13. The az webapp up command does the following actions:
- Create a default app service plan.
 - Create an app with the specified name.
 - [Zip deploy](#) files from the current working directory to the web app.

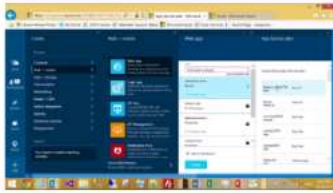
This command may take a few minutes to run. While running, it displays information similar to the following example:

```
{
  "app_url": "https://<app_name>.azurewebsites.net",
  "location": "eastus",
  "name": "<app_name>",
  "os": "Windows",
  "resourcegroup": "appsvc_rg_Windows_westeurope",
  "serverfarm": "appsvc_asp_Windows_westeurope",
  "sku": "FREE",
  "src_path": "/home/<username>/quickstart/html-docs-hello-world ",
  < JSON data removed for brevity. >
}
```

- ☐ 14. Browse to the app. In a browser, go to the Azure web app URL: http://<app_name>.azurewebsites.net.

The page is running as an Azure App Service web app.

Azure App Service - Sample Static HTML Site



Azure App Service Web Apps

App Service Web Apps is a fully managed compute platform that is optimized for hosting websites and web applications. This platform-as-a-service (PaaS) offering of Microsoft Azure lets you focus on your business logic while Azure takes care of the infrastructure to run and scale your apps.



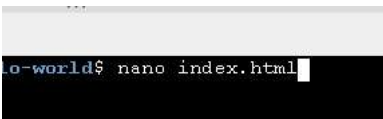
Azure Content Delivery Network (CDN)

The Azure Content Delivery Network (CDN) caches static web content at strategically placed locations to provide maximum throughput for delivering content to users. The CDN offers developers a global solution for delivering high-bandwidth content by caching the content at physical nodes across the world.

Task 2: Update and redeploy the app

- ☐ 1. In the Cloud Shell, type the following command and press enter to open the nano text editor.

```
nano index.html
```



- ☐ 2. In the <h1> heading tag, change "Azure App Service - Sample Static HTML Site" to "Azure App Service", as shown below.

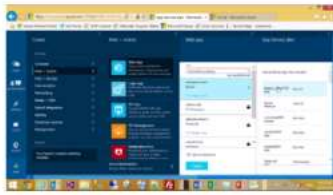
```
GNU nano 2.5.3 File
<div class="navbar-wrapper">
  <div class="container">
    <h1>Azure App Service</h1>
    <hr/>
  </div>
</div>
```

- ☐ 3. Save your changes Use the command `^O (Ctrl + O)` then **Enter** and `^X (Ctrl + X)` to exit nano.
- ☐ 4. You'll now redeploy the app with the same `az webapp up` command:

```
az webapp up --location eastus --resource-group myRG-UP9MFWS0AE --name <app_name> --html
```

- ☐ 5. Once deployment has completed, switch back to the browser window that opened in the **Browse to the app** step, and refresh the page.

Azure App Service



Azure App Service Web Apps

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- 6. Exit the Bash Shell in the Azure portal.

Task 3: Scale up a Web App.

In the previous task you automatically created an App Service Plan. However, this was a basic tier and required it to be scaled up in order to use some of the additional features in the following exercises. This task will demonstrate how to Scale up an App Service.

- 1. In the Azure Portal, navigate to **myRG-UP9MFWS0AE** and click on the App Service Plan that was created in the previous task.

myRG-8R1DX92B5Z Resource group

Search (Ctrl+F) Add Edit columns Delete resource group Refresh Move Export Delete re:

Overview Activity log Access control (IAM) Tags Events

Settings Quickstart Resource costs Deployments Policies Properties

Subscription (change) go deploy - Dev Test Subs Deployments 1 Succeeded

Subscription ID 93fe8ebb-c882-4947-b060-acde1858dc49

Tags (change) Click here to add tags

Filter by name... Type == all Location == all Add filter

Showing 1 to 2 of 2 records. Show hidden types No grouping

Name	Type	Location
1ZSVDZ_asp_Windows_eastus_0	App Service plan	East US
godeployazurelab	App Service	East US

- 2. Click on **Scale up (App Service plan)**.
- 3. Select the Production, then select **P1V2** tier and click **Apply**.

Dev / Test
For less demanding workloads

Production
For most production workloads

Advanced
For demanding workloads

Recommended pricing tiers

S1
100 total ACU
1.75 GB memory
A-Series compute equivalent
54.41 GBP/Month (Estimated)

P1V2
Premium V2 is not supported for this scale unit. Please consider redeploying or cloning your app.
[Click to learn more.](#)

P2V2
Premium V2 is not supported for this scale unit. Please consider redeploying or cloning your app.
[Click to learn more.](#)

P3V2
Premium V2 is not supported for this scale unit. Please consider redeploying or cloning your app.
[Click to learn more.](#)

[See additional pricing tiers](#)

- ☐ 4. Wait for the deployment to complete.

Task 4: Add a custom domain and certificate to a Web App.

? In this task you will add a Public Domain name (Custom Domain) and Public Certificate (SSL) to your web app.

- ☐ 1. Open **File Explorer** and navigate to the **E:** drive. Note the Certificate file.
- ☐ 2. In the Azure Portal select your **App Service**.

myRG-8R1DX92B5Z
Resource group

Search (Ctrl+/)

+ Add Edit columns Delete resource group Refresh Move Export to CSV

Overview Activity log Access control (IAM) Tags Events

Settings Quickstart Resource costs Deployments Policies Properties Locks

Subscription (change) Deployments
[go deploy - Dev Test Subs](#) 1 Succeeded

Subscription ID
93fe8ebb-c882-4947-b060-acde1858dc49

Tags (change)
[Click here to add tags](#)

Filter by name... Type == all Location == all Add filter

Showing 1 to 2 of 2 records. Show hidden types No grouping

Name	Type	Location
gareth_demo1ZSVDZ_asp_Windows_eastus_0	App Service plan	East US
godeployazurelab	App Service	East US

- ☐ 3. Click **Custom domains**.

Microsoft Azure Search resources, services, and docs (G+)

Home > Resource groups > myRG-8R1DX92B5Z >

godeployazurelab | TLS/SSL settings
App Service

Search (Ctrl+/)

Refresh Delete bindings

Identity Backups Custom domains TLS/SSL settings Networking

Bindings Private Key Certific.

Private Key Certific.

Private key certificates (.pfx) can be used to secure your app. To understand how to use them, see the documentation.

- ☐ 4. Click **Add custom domain**.

godeployazurelab | Custom domains
App Service

Search (Ctrl+/) Refresh Troubleshoot FAQs

- Identity
- Backups
- Custom domains**
- TLS/SSL settings
- Networking
- Scale up (App Service plan)
- Scale out (App Service plan)
- WebJobs
- Push
- MySQL In App

Custom Domains

Configure and manage custom domains assigned to this App Service.

IP address: 40.71.250.191

Custom Domain Verification ID: 9E192D4EC9E2011046041727E8BE2CB8840865

HTTPS Only: ☒ On

+ Add custom domain

Status Filter

5. In the lab environment, click the **DNS** tab and identify your **Lab Domain Name** that you have been allocated in the format **labxxxxxx.godeploylabs.com**.

Home Lab Guide **DNS**

Lab Domain Name lab356666.godeploylabs.com

+ A Records

Name	IPv4 Address
No A records	

+ AAAA Records

Name	IPv6 Address
------	--------------

6. In the Hostname field enter your domain name **unrecognised token (\$gd.com(labDomain).fqdn)** and click **Validate**.

Add custom domain

godeployazurelab

Custom domain *

lab356666.godeploylabs.com

Validate

7. In the Hostname record type select **A record (example.com)**.

Add custom domain

godeployazurelab

Validate

Hostname record type

A record (example.com) ✓

A record configuration

8. Scroll down to the bottom of the Add custom domain blade and note the two DNS records that are required to verify Domain ownership.

Domain ownership

To verify domain ownership create TXT and A records with your DNS provider using the configuration below. [Learn more](#)

Type	Host	Value
TXT	asuid	9E192D4EC9E2011046041727E8BE2CB8B40B657F7B1E
A	@	40.71.250.191

- ☐ 9. Add the TXT and A records to your DNS Tab of the lab environment. (Note you only need to add the name asuid for the TXT record and nothing for the A record)
- ☐ 10. Note the External IP Address (Public IP) and in the DNS tab of the lab environment on the A records click the + sign to add a new record. Do **NOT** enter anything in the name field just enter the **External IP Address** from the portal into the **IPv4 Address** field then click **Save**.
- ☐ 11. Once the records have been added, click **Validate** at the top of the blade.
- ☐ 12. Once validated, click **Add custom domain**

Add custom domain

×


godeployazurelab

Custom domain *

Validate

Hostname record type

CNAME (www.example.com or any subdomain)



CNAME configuration

A CNAME record is used to specify that a domain name is an alias for another domain. In your scenario, that would be mapping lab356666.godeploylabs.com to custom domain verification id below. [Learn More](#)

Custom Domain Verification ID: ⓘ

CNAME

Add custom domain

✓ Hostname availability

✓ Domain ownership

- ☐ 13. Navigate back to the Azure Portal and click **Add Binding**.

The screenshot shows the Azure portal interface for managing custom domains. A warning banner at the top states: "You have custom domains that are not secured and will cause browser errors. Click binding to secure your custom domains." Below this, the 'Custom Domains' section provides configuration options like IP address (13.69.68.5) and HTTPS status (Off). A table lists assigned domains, with the 'Add binding' link for 'lab848199.godeploylabs.com' highlighted in red.

- ☐ 14. Click **Upload PFX certificate**.
- ☐ 15. Select the PFX file from the **E:** of the your lab machine entering the password **Pa55w.rd** and then click **Upload**.
- ☐ 16. Select the **Private Certificate .godeploylabs.com** and then select **IP Based SSL type** and click **Add binding**.

TLS/SSL Binding

Use the dropdowns to select the Hostname to secure with SSL, and the certificate to use. You may also select whether to use Server Name Indication (SNI) or IP based SSL. [Learn more](#)

Custom domain *

lab356666.godeploylabs.com

Private Certificate Thumbprint *

*.godeploylabs.com (06CAF813E8E58E0845B692A700468...

i IP Based SSL bindings are limited to 10 unique certificate bindings per App Service plan. You may have any number of bindings with the same certificate, but if you add a different certificate it will contribute to the unique count limit of 10.

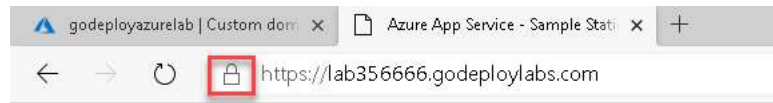
w If your custom domain is an A record then you may need to update it to point to a new IP address that you get after enabling IP Based SSL binding

TLS/SSL Type: *

IP Based SSL

Add Binding

- ☐ 17. Wait for the deployment to complete then open another tab on the browser and check to see if the SSL binding has been successful by new **HTTPS://** URL of your web app (ie [unrecognised token \(\\$gd.com\(labDomain\).fqdn\)](https://lab356666.godeploylabs.com))



Azure App Service



Azure App Service Web Apps

App Service Web Apps is a fully managed compute platform that is optimized for hosting websites and web applications. This platform-as-a-



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Task 5: So this is PaaS, where are my settings?

- ☐ When PaaS, such as Web Apps, are deployed you have no access to the underlying Virtual Machine. This is all done using settings in Azure. This task will show you how to configure the different settings for the Web App PaaS service.

- ☐ 1. To configure the settings for the PaaS service click **Configuration** and note all the available options to turn on/off features. Also note the similarities to the IIS Manager on IaaS.

godeployazurelab | Configuration

App Service

Search (Ctrl+/) Refresh Save Discard

Application settings General settings Default documents Path mappings

Application settings

Application settings are encrypted at rest and transmitted over an encrypted channel. You can choose to display them in plain text in your browser by using the controls below. Application Settings are exposed as environment variables for access by your application at runtime. [Learn more](#)

+ New application setting Show values Advanced edit Filter

Name	Value	Source
SCM_DO_BUILD_DURING_DEPLOYMENT	Hidden value. Click to show value	App Conf
WEBSITE_HTTPLOGGING_RETENTION_DAYS	Hidden value. Click to show value	App Conf
WEBSITE_NODE_DEFAULT_VERSION	Hidden value. Click to show value	App Conf

Connection strings

Connection strings are encrypted at rest and transmitted over an encrypted channel.

✓ **Results** : You have now completed this Lab.