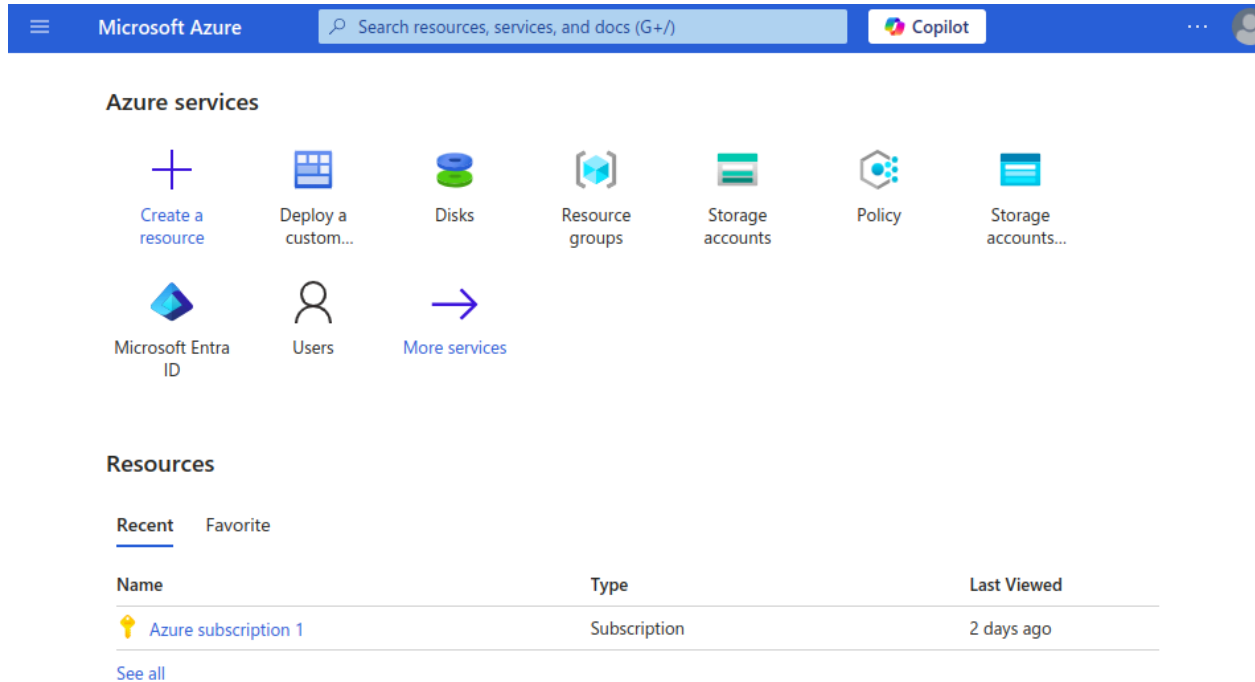


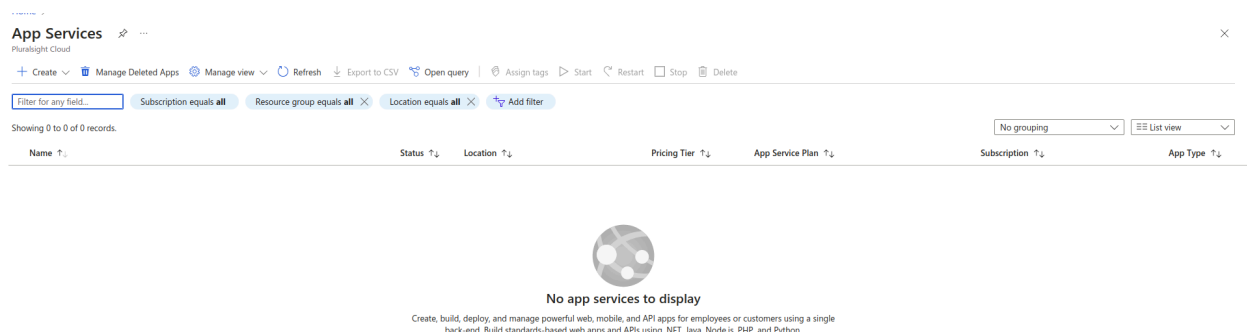
Lab 09a - Implement Web Apps

Task 1: Create and configure an Azure web app

1. Sign in to the Azure portal - <https://portal.azure.com>.



2. Search for and select App services.



3. Select + Create, from drop-down menu, Web App. Notice the other choices.

4. On the Basics tab of the Create Web App blade, specify the following settings (leave others with their default values):

[Home](#) > [App Services](#) >

Create Web App ...

Subscription * ⓘ

Resource Group * ⓘ

Azure subscription 1

(New) az104-rg9

[Create new](#)

Instance Details

Name

az104-rg9webapp

-cqhhdqdra6h6f5b4.eastus-01.azurewebsites.net

☒

 Unique default hostname (preview) on. [More about this update](#)

Publish *

☒ Code ☐ Container ☐ Static Web App

Runtime stack *

PHP 8.2

Operating System *

☒ Linux ☐ Windows

Region *

East US

Not finding your App Service Plan? Try a different region or select your App Service Environment.

Pricing plans

App Service plan pricing tier determines the location, features, cost and compute resources associated with your app. [Learn more](#)

Linux Plan (East US) * ⓘ

(New) ASP-az104rg9-9ace

[Create new](#)

Pricing plan

Premium V3 P1V3 (195 minimum ACU/vCPU, 8 GB memory, 2 vCPU)

[Explore pricing plans](#)

Zone redundancy

An App Service plan can be deployed as a zone redundant service in the regions that support it. This is a deployment time only decision. You can't make an App Service plan zone redundant after it has been deployed [Learn more](#)

Zone redundancy

☐ **Enabled:** Your App Service plan and the apps in it will be zone redundant. The minimum App Service plan instance count will be three.

☒ **Disabled:** Your App Service Plan and the apps in it will not be zone redundant. The minimum App Service plan instance count will be one.

5. Click Review + create, and then Create.

Create Web App ...


- Basics
- Deployment
- Networking
- Monitor + secure
- Tags
- Review + create

Summary



Web App
by Microsoft

Premium V3 (P1V3) sku
Estimated price - loading ...

 Basic authentication for this app is currently disabled and may impact deployments. Click to learn more.

Details

Subscription	f80303f7-6763-4988-a828-9a2836f89e14
Resource Group	az104-rg9
Name	az104-rg9webapp
Unique default hostname (preview)	Enabled
Publish	Code
Runtime stack	PHP 8.2

App Service Plan (New)

Name	ASP-az104rg9-9ace
Operating System	Linux
Region	East US
SKU	Premium V3
Size	Small
ACU	195 minimum ACU/vCPU
Memory	8 GB memory

Monitor + secure



Application Insights	Not enabled
----------------------	-------------

Deployment



Basic authentication	Disabled
Continuous deployment	Not enabled / Set up after app creation






6. After the deployment, select Go to resource.

Home >


 **Microsoft.Web-WebApp-Portal-4ec0f150-b1b7** | Overview  ...


Deployment


Search  


 Delete  Cancel  Redeploy  Download  Refresh


Overview

 Inputs

 Outputs

 Template

 **Your deployment is complete**

 Deployment name: Microsoft.W... Start time: 10/24/2024, 5:42:09...
Subscription: [Azure subscription 1](#) Correlation ID: 9ab955e9-01da-4
Resource group: [az104-rg9](#)

Deployment details

Next steps


[Manage deployments for your app.](#) Recommended

[Protect your app with authentication.](#) Recommended




[Add a deployment slot.](#) Recommended

[Go to resource](#)



Give feedback








 Tell us about your experience with deployment

Home > Microsoft.Web-WebApp-Portal-4ec0f150-b1b7 | Overview >


 **az104-rg9webapp**   ...


Web App


Search  


 Browse  Start  Swap  Restart  Delete  Refresh  Download publish profile ...


Overview


 Activity log


 Access control (IAM)


 Tags

 Diagnose and solve problems

 Microsoft Defender for Cloud

 Events (preview)

 Better Together (preview)

 Log stream

> Deployment

> Settings

> Performance

> App Service plan

> Development Tools

> API

> Monitoring

> Automation

> Support + troubleshooting

Essentials JSON View

Resource group ([move](#))

[az104-rg9](#)

Status

Location ([move](#))

East US 2

Subscription ([move](#))

[Azure subscription 1](#)


Subscription ID

f80303f7-6763-4988-a828-9a2836f89e14

Tags ([edit](#))


[Add tags](#)

Properties Monitoring Logs Capabilities Notifications Recommendations

 **Web app**

Name

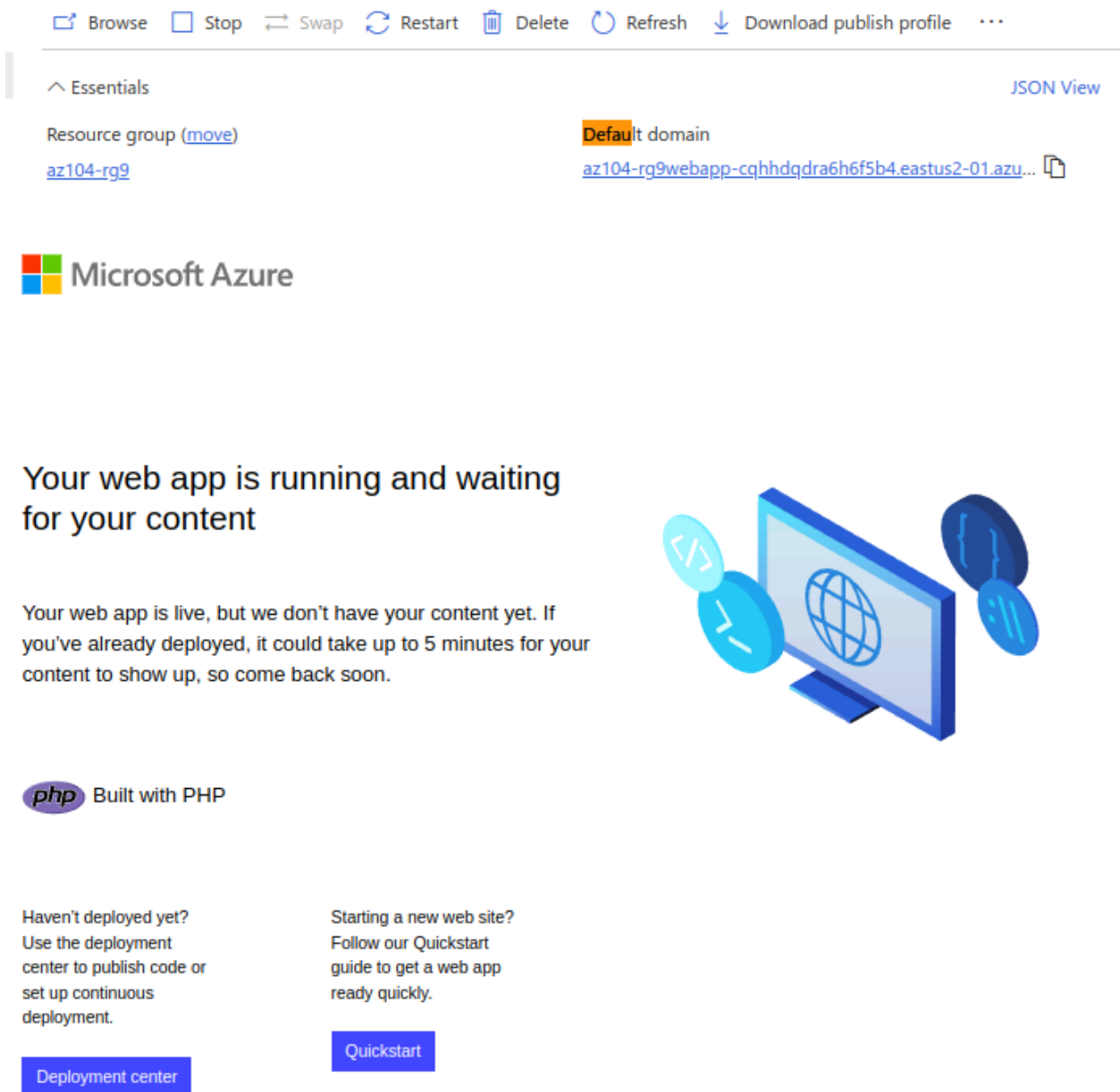
Publishing model

 **Domains**

Default domain

Task 2: Create and configure a deployment slot

1. On the blade of the newly deployed Web App, click the Default domain link to display the default web page in a new browser tab.




The screenshot shows the Azure portal interface for a newly deployed Web App. At the top, there is a toolbar with icons for Browse, Stop, Swap, Restart, Delete, Refresh, and Download publish profile. Below the toolbar, the 'Essentials' section displays the Resource group (az104-rg9) and the Default domain (az104-rq9webapp-cqhhdqdra6h6f5b4.eastus2-01.azurewebsites.net). The main content area features the Microsoft Azure logo and a message: 'Your web app is running and waiting for your content'. It states that the web app is live but content is not yet deployed, and it could take up to 5 minutes for content to show up. Below this message, there is a 'php' logo and the text 'Built with PHP'. At the bottom, there are two sections: 'Haven't deployed yet?' with a 'Deployment center' button, and 'Starting a new web site?' with a 'Quickstart' button.

Browser Stop Swap Restart Delete Refresh Download publish profile ...

^ Essentials JSON View


Resource group (move) az104-rg9


Default domain az104-rq9webapp-cqhhdqdra6h6f5b4.eastus2-01.azurewebsites.net

 Microsoft Azure

Your web app is running and waiting for your content

Your web app is live, but we don't have your content yet. If you've already deployed, it could take up to 5 minutes for your content to show up, so come back soon.



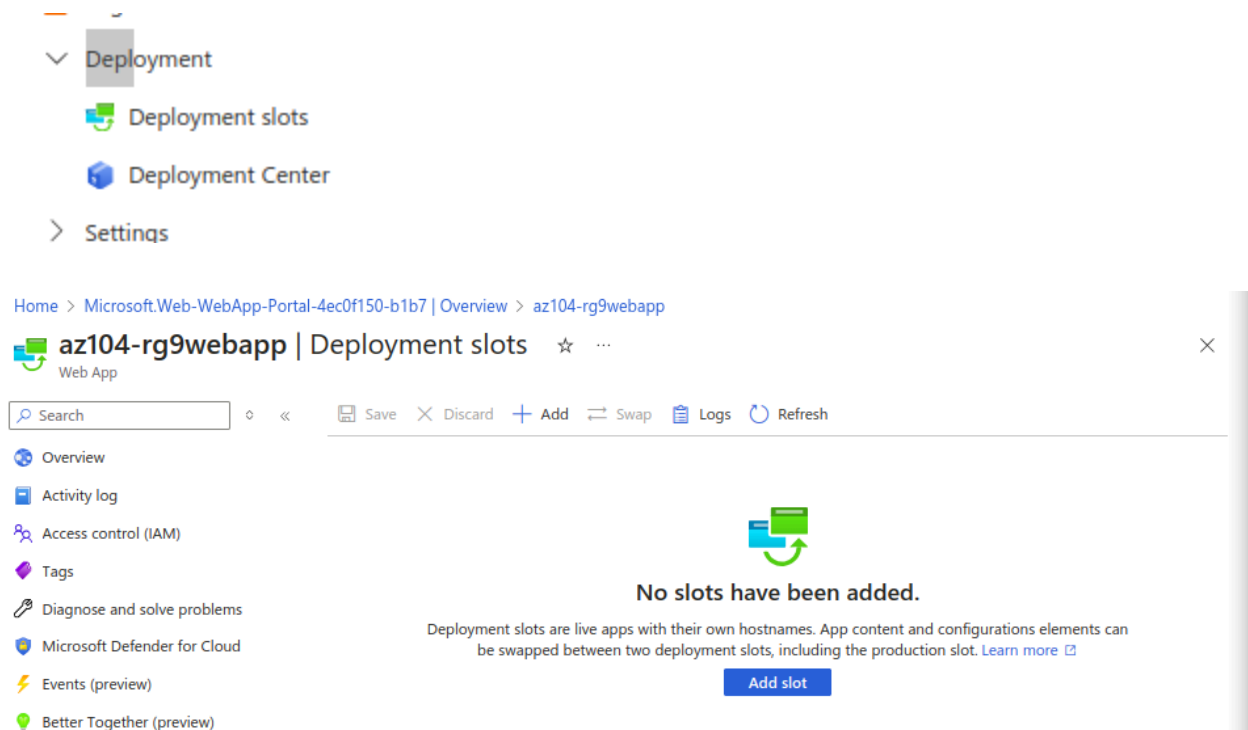
 Built with PHP

Haven't deployed yet?
Use the deployment center to publish code or set up continuous deployment.

Starting a new web site?
Follow our Quickstart guide to get a web app ready quickly.

Deployment center Quickstart

2. Close the new browser tab and, back in the Azure portal, in the Deployment section of the Web App blade, click Deployment slots.



3. Click Add slot, and add a new slot with the following settings:

The 'Add Slot' dialog box is shown. It has a title bar with a close button. The 'Name' field contains the text 'staging'. Below this field, the full slot name is displayed: 'az104-rg9webapp-staging-d3h9c2g3f5b4fsh3.eastus2-01.azurewebsites.net'. Under the heading 'Clone settings from:', there is a dropdown menu currently showing 'Do not clone settings'.

4. Select Add.

5. Back on the Deployment slots blade of the Web App, click the entry representing the newly created staging slot.

az104-rg9webapp | Deployment slots
☆ ...

Web App

Save Discard Add Swap Logs Refresh

Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Microsoft Defender for Cloud

Deployment slots are live apps with their own hostnames. App content and configurations elements can be swapped between two deployment slots, including the production slot.

Name	Status	App service plan	Traffic %
az104-rg9webapp PRODUCTION	Running	ASP-az104rg9-89d9	100
az104-rg9webapp-staging	Running	ASP-az104rg9-89d9	0

staging (az104-rg9webapp/staging)
☆ ...

App Service (Slot)

Browse Start Swap Restart Delete Refresh Download publish profile ...

Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Microsoft Defender for Cloud
Better Together (preview)
Log stream
Deployment
Settings
Performance
App Service plan

Essentials
JSON View

Resource group [\(move\)](#)
[az104-rg9](#)
Status
Location [\(move\)](#)
East US 2
Subscription [\(move\)](#)
[Azure subscription 1](#)
Subscription ID
f80303f7-6763-4988-a828-9a2836f89e14
Tags [\(edit\)](#)
[Add tags](#)

6.Review the staging slot blade and note that its URL differs from the one assigned to the production slot.

[Publish profile](#)
[Reset publish profile](#)
[Share to mobile](#)
[Send us your feedback](#)

JSON View

Default domain	: az104-rg9webapp-staging-d3h9c2g3f5b4fsh3.eastus2-01.azurewebsi...
App Service Plan	: ASP-az104rg9-89d9 (P0v3: 1)
Operating System	: Linux
Health Check	: Cannot fetch health check data. Please try again later.

Browse Stop Swap Restart Delete Refresh Download publish profile ...

Essentials JSON View

Resource group (move) **Default** domain

az104-rg9 az104-rg9webapp-cqhhdqdra6h6f5b4.eastus2-01.azu...

Task 3: Configure Web App deployment settings

1. In the staging slot, select Deployment Center and then select Settings.

staging (az104-rg9w) App Service (Slot)

Deplo

Deployment

Deployment slots

Deployment Center

staging (az104-rg9webapp/staging) | Deployment Center App Service (Slot)

Deplo Save Discard Browse Manage publish profile Sync Leave Feedback

Deployment

Deployment slots

Deployment Center

Settings Logs FTPS credentials







Deploy and build code from your preferred source and build provider. [Learn more](#)

Source*

Select code source

2. In the Source drop-down list, select External Git. Notice the other choices.

webapp/staging) | Deployment Center ☆ ...

 Save  Discard  Browse  Manage publish profile  Sync  Leave Feedback

Settings * Logs FTPS credentials

Deploy and build code from your preferred source and build provider. [Learn more](#)

Source *

External Git

Building with App Service Build Service [Change provider](#)

3. In the repository field, enter `https://github.com/Azure-Samples/php-docs-hello-world`

4. In the branch field, enter `master`.

External Git

If your code is not on GitHub or BitBucket, you can use this option to manually sync your code from the repository. When you sync your repository, App Service will pull your code, build your application, and deploy it to your web app.

Repository *

`https://github.com/Azure-Samples/ph...`

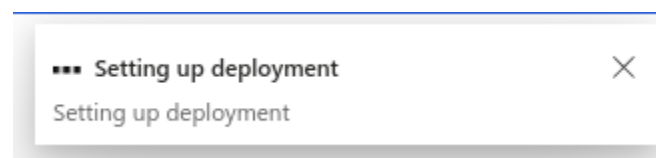
Branch *

`master`

Repository Type

☒ Public ☐ Private

5. Select Save.



6. From the staging slot, select Overview.

Home > az104-rg9webapp | Deployment slots >

staging (az104-rg9webapp/staging) ☆ ☆ ...

App Service (Slot)

Search ◊ << Browse Stop Swap Restart Delete Refresh Download publish profile Reset publish profile ...

Overview

- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems
- Microsoft Defender for Cloud
- Better Together (preview)
- Log stream
- Deployment
 - Deployment slots

Essentials

Resource group (move)
az104-rg9

Status
Running

Location (move)
East US 2

Subscription (move)
Azure subscription 1

Subscription ID
f80303f7-6763-4988-a828-9a2836f89e14

Default domain
az104-rg9webapp-staging-d3h9c2g3f5b4fsh3.eastus2-01.azurew...

App Service Plan
ASP-az104rg9-89d9

Operating System
Linux

Health Check
Cannot fetch health check data. Please try again later.

JSON

7. Select the Default domain link, and open the URL in a new tab.

staging) ☆ ☆ ...

Browse Stop Swap Restart Delete Refresh Download publish profile Reset publish profile ...

Essentials

Resource group (move)
az104-rg9

Status
Running

Location (move)

Default domain
az104-rg9webapp-staging-d3h9c2g3f5b4fsh3.eastus2-01.azurewebsites.net /view

App Service Plan
ASP-az104rg9-89d9 (P0v3: 1)

Operating System

8. Verify that the staging slot displays Hello World.

az104-rg9webapp-staging-d3h9c2g3f5b4fsh3.eastus2-01.azureweb... |

Hello World!

Task 4: Swap deployment slots

1.Navigate back to the Deployment slots blade, and then select Swap.

Home > az104-rg9webapp | Deployment slots > staging (az104-rg9webapp/staging)

staging (az104-rg9webapp/staging) | Deployment slots ☆ ...

App Service (Slot)

Deplo x x < + Add ⇄ Swap 📄 Logs ↻ Refresh

Deployment

Deployment slots

Deployment Center

Deployment slots are live apps with their own hostnames. App content and configurations elements can be swapped between two deployment slots, including the production slot.

Name	Status	App service plan	Traffic %
az104-rg9webapp PRODUCTION	Running	ASP-az104rg9-89d9	100
az104-rg9webapp-staging	Running	ASP-az104rg9-89d9	0

2.Review the default settings and click Start Swap.

Swap

✕

● Source

az104-rg9webapp-staging

● Target **PRODUCTION**

az104-rg9webapp

ⓘ Swap with preview can only be used with sites that have deployment slot settings enabled.

☐ Perform swap with preview

Config Changes

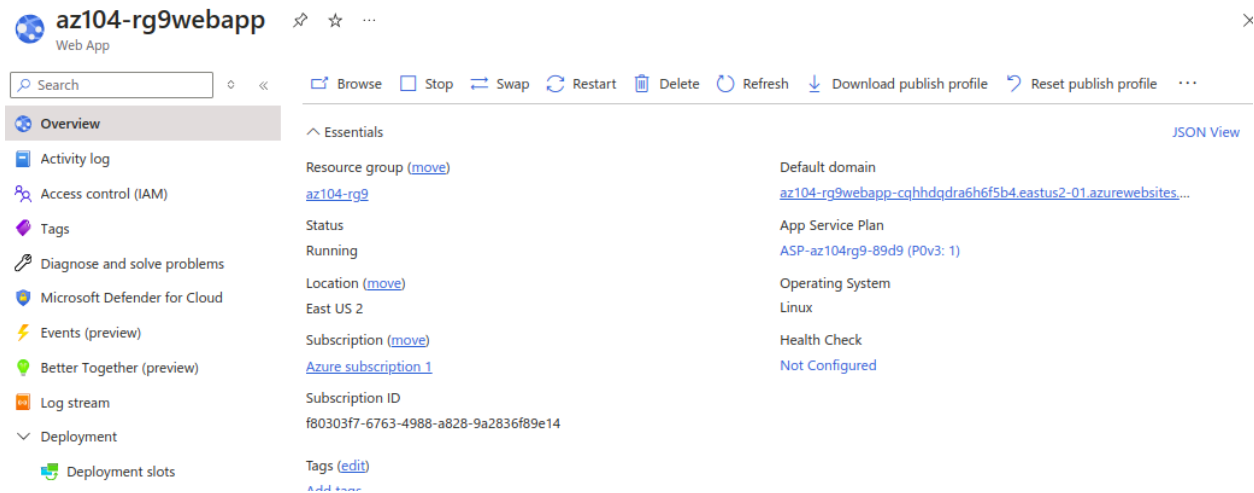
This is a summary of the final set of configuration changes on the source and target deployment slots after the swap has completed.

● Source slot changes

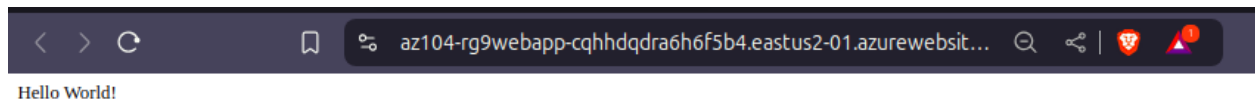
● Target slot changes

Setting	Type	Old Value	New Value
No Changes			

3. On the Overview blade of the Web App select the Default domain link to display the website home page.

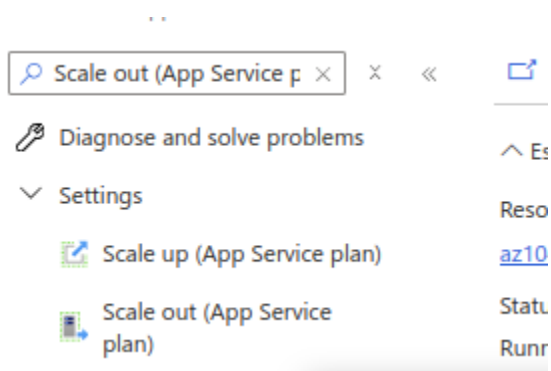


4. Verify the production web page displays the Hello World! page.



Task 5: Configure and test autoscaling of the Azure Web App

1. In the Settings section, select Scale out (App Service plan).



2. From the Scaling section, select Automatic. Notice the Rules Based option. Rules based scaling can be configured for different app metrics.

Home > az104-rg9webapp

az104-rg9webapp | Scale out (App Service plan) ☆ ...

Scale out (App Servic... x x « Refresh Send us your feedback

Diagnose and solve problems

Settings

Scale up (App Service plan)

Scale out (App Service plan)

App Service plan

App Service plan

Pricing plan

Current plan	Premium v3 P0V3 (Change)
Price (instance)	0.078 USD/hour (56.575 USD/month)
Memory (GB)	4
Maximum scale (instance)	30
Current instance	Metrics Learn more about automatic scaling events.

Scaling

App service provides multiple features that help applications perform their best when scaling demand changes. You can choose to scale your resource manually to a specific instance count, or via a custom Autoscale rule based policy that scales based on metric(s) thresholds, or schedule instance count which scales during designated time windows. You can also use Automatic Scaling features which enables platform managed scale in and scale out for your apps based on incoming HTTP traffic. [Learn more about Azure Autoscale, Automatic Scaling or view the how-to video.](#)

Scale out method

- ☐ Manual
Maintain a constant instance count for your application
- ☒ Automatic
Platform managed scale out and in based on traffic
- ☐ Rules Based
User defined rules to scale on a schedule or based on any app metric

Maximum burst ⓘ 1

Always ready instances ⓘ 1

Enforce scale out limit ⓘ ☒

3. In the Maximum burst field, select 2.

Maximum burst ⓘ 2

Always ready instances ⓘ 1

Enforce scale out limit ⓘ ☒

4. Select Save.

Save

Discard

5. Select Diagnose and solve problems (left pane).

The screenshot shows the 'Diagnose and solve problems' page for a Web App named 'az104-rg9webapp'. The left sidebar contains a navigation menu with 'Diagnose and solve problems' selected, and sub-items for 'Monitoring', 'Diagnostic settings', 'App Service logs', 'Support + troubleshooting', and 'Support + Troubleshooting'. The main content area is titled 'App Service Diagnostics' and includes a search bar, a 'Have questions? Ask Genie' link, and two troubleshooting categories: 'Availability and Performance' (with links for Application Logs, App Down Workflow, and Web App Down) and 'Configuration and Management' (with links for Investigate EasyAuth errors, IP Address Configuration, and All Scaling Operations). A notification banner at the top right states 'Scale out app' with a green checkmark, indicating a successful scale out operation.

6. In the Load Test your App box, select Create Load Test.

The screenshot shows the 'Azure Load Testing' page. The header includes the title 'Azure Load Testing' and a default directory path. Below the header is a toolbar with buttons for '+ Create', 'Manage view', 'Refresh', 'Export to CSV', 'Open query', and 'Assign tags'. A filter bar shows 'Subscription equals all', 'Resource group equals all', and 'Location equals all', with an 'Add filter' button. The main content area displays 'Showing 0 to 0 of 0 records.' and a table with columns for 'Name', 'Type', 'Resource group', 'Location', and 'Subscription'. A large, faint watermark of a beaker and a clock is visible in the background.

Select + Create and give your load test a name. The name must be unique.

Create a load testing resource ...

Basics Encryption Tags Review + create

Azure Load Testing is a fully managed load-testing service that makes it easy to generate high-scale load and identify performance bottlenecks. [Learn more](#)

Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription * Azure subscription 1

Resource group * az104-rg9

Create new

Instance details

Name * az104testapp

Region * East US

Select Review + create and then Create.

Create a load testing resource ...

Validating...

Basics Encryption Tags Review + create

Basics

Subscription

Azure subscription 1

Resource group

az104-rg9

Name

az104testapp

Region

East US

Encryption

Encryption type

MMK

7.Wait for the load test to create, and then select Go to resource.

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

Home >

Microsoft.CloudNativeTesting1729782756297 | Overview

Deployment

Search x << Delete Cancel Redeploy Download Refresh

Overview

Inputs

Outputs

Template

✓ Your deployment is complete

Deployment name : Microsoft.CloudNativeT... Start time : 10/24/2024, 6:13:00 PM

Subscription : Azure subscription 1 Correlation ID : 6c1e6737-8450-4a69-9e...

Resource group : az104-rg9

> Deployment details

✓ Next steps

Go to resource

Give feedback

Tell us about your experience with deployment

8.From the Overview Add HTTP requests, select Create.

Home > Microsoft.CloudNativeTesting1729782756297 | Overview

az104testapp Azure Load Testing

Search Refresh Delete resource Manage budget Give feedback

Overview

Activity log

Access control (IAM)

Tags

Tests

Settings

Monitoring

Automation

Help

You can now use your Locust scripts in Azure Load Testing to generate high scale load and get action [more](#).

Essentials

Resource group (move) [az104-rg9](#)

Subscription (move) [Azure subscription 1](#)

Status ---

Subscription ID f80303f7-6763-4981

Location East US

Get started Test runs Tutorials

Load test your application and infras

Add HTTP requests

Create a test by adding your HTTP endpoints and request details.

Create

Upload a scrip

Create a new per uploading a JMet

Create

9. On the Test plan tab, click Add request. In the URL field, paste in your Default domain URL. Ensure this is properly formatted and begins with https://.

Create a URL-based test

Basics **Test plan** Parameters Load Monitoring

Requests

Enter the request details that you want to test. You can add up to 20 headers. Extract data into response variables to use in any subsequent requests as \${VariableName}. [Learn more](#)

+ Add request

Name

Add requests to the test.

Input data files

Upload the input data files in CSV format with ';' as the separator.

Add request

Enter the request details like URL, method, headers and body or add a cURL command. You can add up to 20 headers. Extract data into response variables to use in any subsequent requests as \${VariableName}. [Learn more](#)

Request format * ☒ Add input in UI ☐ Add cURL command

Request name * Request1

URL * <https://az104-rg9webapp-cqhdqdra6h6f5b4.eastus2-01.azurewebsites.net>

E.g. <https://azure.microsoft.com>

HTTP method * GET

Query parameters Headers Response variables

10. Select Review + create and Create.

Home > Microsoft.CloudNativeTesting1729782756297 | Overview > az104testapp >

Create a URL-based test

✓ Validation passed.

Basics **Test plan** Parameters Load Monitoring Test criteria **Review + create**

Basics

Test tool JMeter

Test name Test_10/24/2024_6:14:16 PM

Test description Test_10/24/2024_6:14:16 PM

Debug mode Disabled

Test plan

Test method URL

Requests Request1

Input data files Request1

Load

Engine instances 1

Load pattern Linear

Concurrent users per engine 50

Test duration (minutes) 20

Ramp-up time (minutes) 1

Load distribution

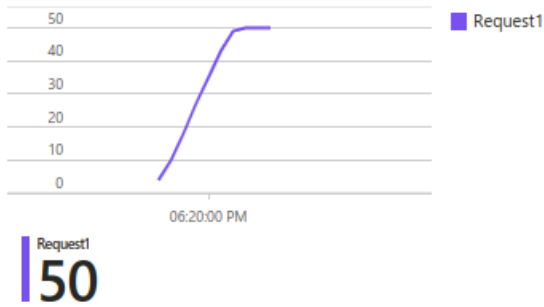
Previous Next **Create**

11. Review the test results including Virtual users, Response time, and Requests/sec.

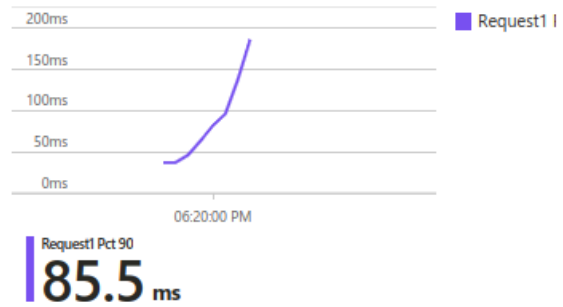
Client-side metrics

Requests : **All** Region : **0** Aggregation : **P90** Error type : **0**
Time range : **10/24/2024, 6:18:18 PM - 10/24/2024, 6:19:25 PM** Group by : **5s**

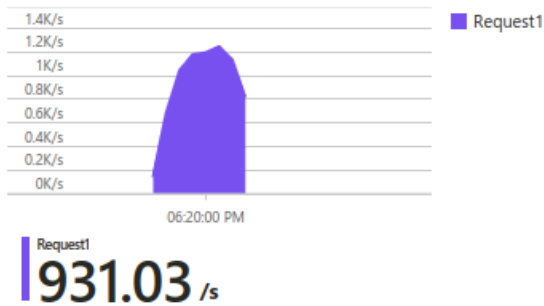
Virtual Users (Max)



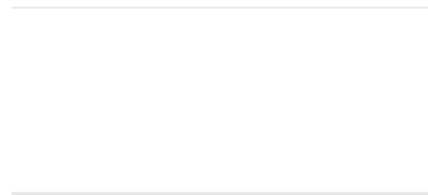
Response time (successful responses)



Requests/sec (Avg)



Errors (total)



12. Select Stop to complete the test run.

Last Updated by : deadd1scoredeon@outloc

[View all test runs](#) ☐ Stop [Refresh](#)