

# Azure Web Apps and Container Instances

## Project Overview

This document presents hands-on experience managing application hosting services in Microsoft Azure, with a focus on Azure Web Apps and Azure Container Instances. The work emphasizes deployment configuration, scaling, and operational management of cloud-hosted applications.

Key areas addressed include:

- Web application configuration and deployment workflows
  - Deployment slot management for staged releases
  - Application auto-scaling based on demand
  - Containerized application deployment using Azure Container Instances
  - Verification and operational validation of hosted applications
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## Web Application Configuration and Deployment Workflows

This section documents the configuration and deployment of Azure Web Apps, including application settings and deployment options used to support reliable application delivery.

The screenshot shows the Microsoft Azure portal interface for a Web App named "WebApp58903817". The main view is the "Overview" tab, which provides a summary of the app's configuration. Key details shown include:

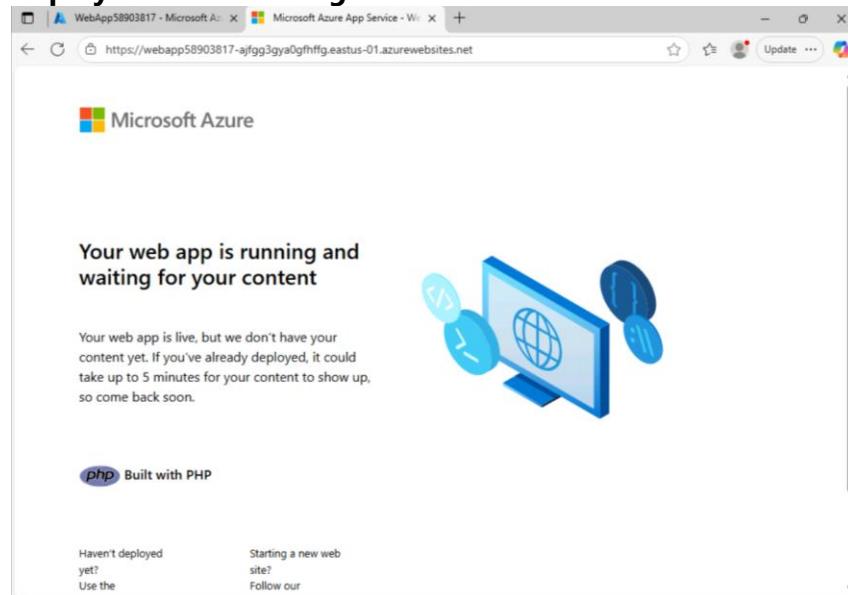
- Resource group: az104-rg9-lod58903817
- Status: Running
- Location: East US
- App Service Plan: ASP-az104rg9lod58903817-9fa9 (P1v3: 1)
- Default domain: webapp58903817-afgg3gya0gfhffg.eastus-01.azurewebsites.net
- Operating System: Linux
- Subscription: AZ-104T00A\_CSR\_2
- Subscription ID: 3b719365-011d-4d73-9835-1ac5f0fed5c4
- Health Check: Not Configured

The left sidebar lists other tabs such as Activity log, Access control (IAM), Tags, Diagnose and solve problems, Microsoft Defender for Cloud, Events (preview), Resource visualizer, Deployment, Settings, Performance, App Service plan, Development Tools, and API. The bottom navigation bar includes Properties, Monitoring, Logs, Capabilities, Notifications (0), and Recommendations.

# Deployment Slot Management for Staged Releases

This section describes the use of deployment slots to manage staged application releases, enabling controlled updates and reduced deployment risk.

## Deployment Slot Management for Production Releases.



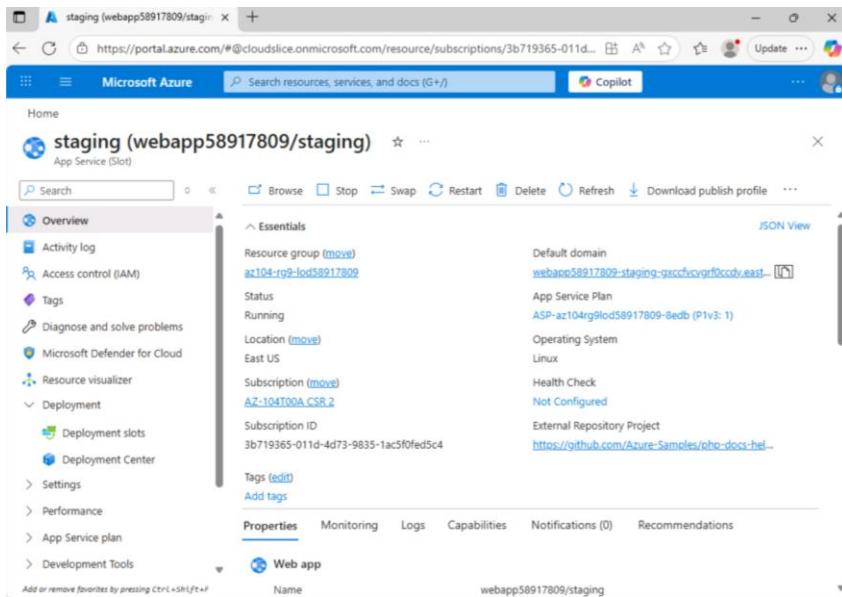
The screenshot shows the Microsoft Azure portal interface for a web application named "WebApp58903817". The title bar reads "WebApp58903817 - Microsoft Edge" and "Microsoft Azure App Service - Web". The URL is "https://portal.azure.com/#@cloudslice.onmicrosoft.com/resource/subscriptions/3b719365-011d-4...". The page content includes:

- A navigation bar with "Search resources, services, and docs (G+)" and "Copilot".
- A breadcrumb trail: "Home > Microsoft.Web-WebApp-Portal-305a0022-8dd0 | Overview > WebApp58903817".
- A main header: "WebApp58903817 | Deployment slots" with a "Web App" icon.
- A sidebar with links: Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Microsoft Defender for Cloud, Events (preview), Resource visualizer, Deployment, and Deployment slots (which is selected).
- A central panel titled "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." It shows a table with two rows:

Name	Status	App service plan	Traffic %
webapp58903817 <span style="background-color: green; color: white;">PRODUCTION</span>	Running	ASP-az104rg9lod5890381...	100
webapp58903817-staging	Running	ASP-az104rg9lod5890381...	0

# Deployment Slot Management for Staged Releases

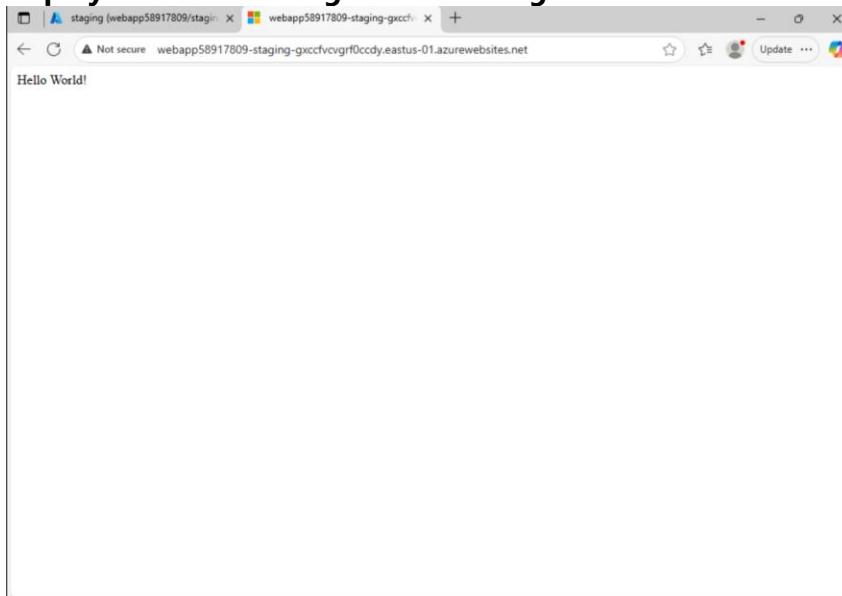
This section describes the use of deployment slots to manage staged application releases, enabling controlled updates and reduced deployment risk.



The screenshot shows the Microsoft Azure portal interface for managing an App Service named 'staging'. The left sidebar lists various management options like Activity log, Access control (IAM), Tags, and Deployment slots. The main content area displays the 'Overview' tab for the 'staging' slot. Key details shown include:

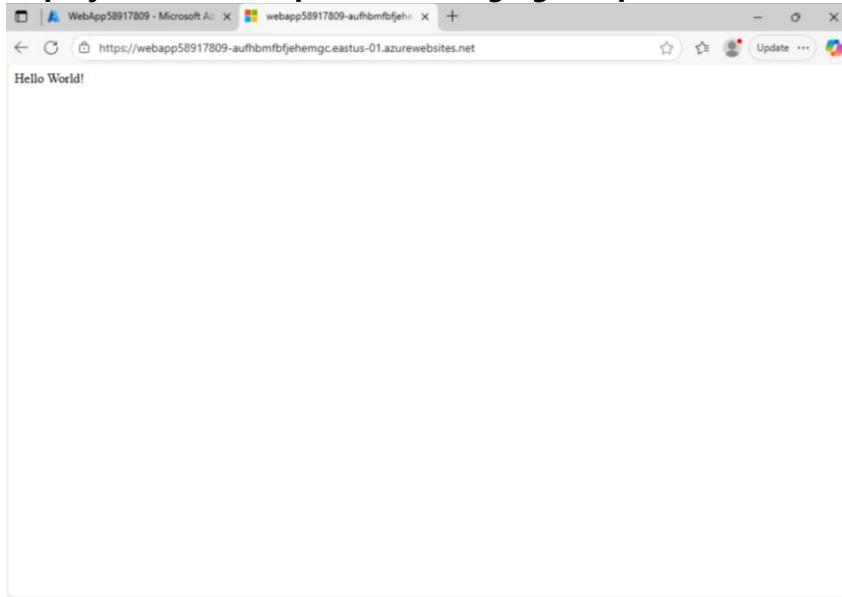
- Resource group: az104-rg2-loc58917809
- Status: Running
- Location: East US
- Subscription: AZ-104T00A\_CSR\_2
- Subscription ID: 3b719365-011d-4d73-9835-1ac5f0fed5c4
- Default domain: webapp58917809-staging-gxccfvgrf0ccdy.eastus.azurewebsites.net
- App Service Plan: ASP-az104rg2-loc58917809-8edb (P1v3: 1)
- Operating System: Linux
- Health Check: Not Configured
- External Repository Project: <https://github.com/Azure-Samples/php-docs-hello-world>

## Deployment Slot Management for Staged Releases.



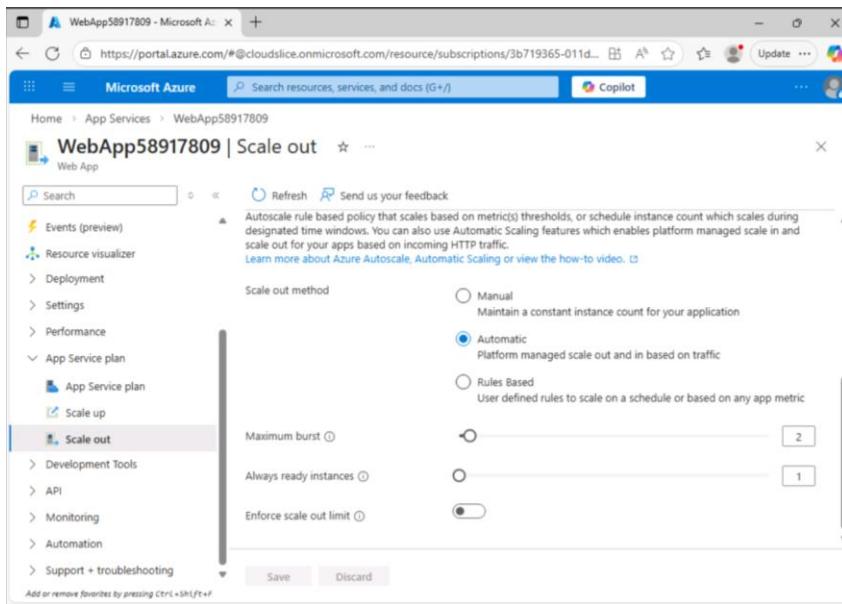
The screenshot shows a browser window displaying the 'Hello World!' application running on the 'staging' deployment slot. The URL is [webapp58917809-staging-gxccfvgrf0ccdy.eastus-01.azurewebsites.net](https://webapp58917809-staging-gxccfvgrf0ccdy.eastus-01.azurewebsites.net). The page content is "Hello World!".

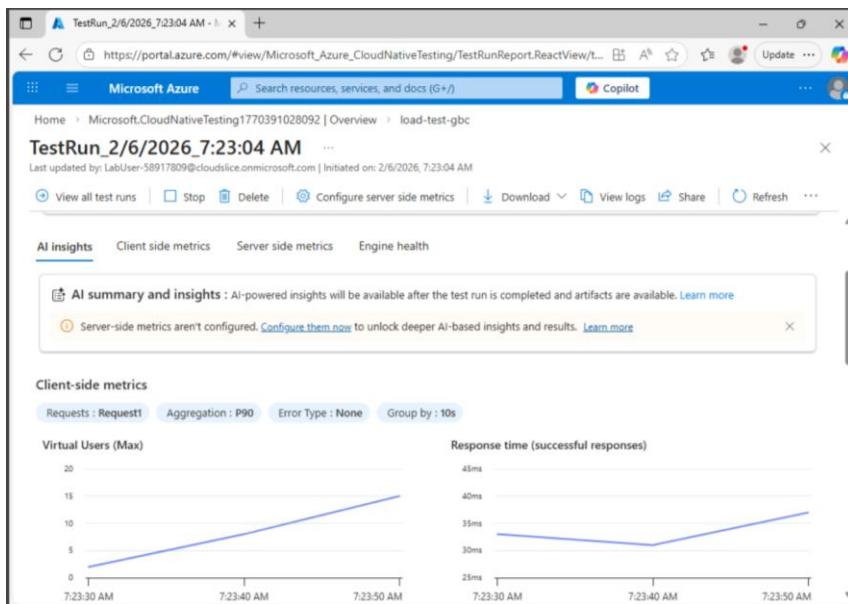
## Deployment slot swap between staging and production environments.



## Application Auto-Scaling Based on Demand

This section outlines the configuration and testing of auto-scaling rules to dynamically adjust application capacity in response to workload demand.





## Containerized Application Deployment Using Azure Container Instances

This section demonstrates the deployment of containerized applications using Azure Container Instances, highlighting container configuration and execution in a managed environment.

### Azure Container Instance deployment using a Docker image.

**az104-c1** - Microsoft Azure

Home > NoMarketplace-20260205180603 | Overview

**az104-c1** Container instances

**Overview**

Please be aware that Docker Hub has recently introduced a pull rate limit on Docker images. When specifying an image from the Docker Hub registry, this may impact your container instance. [Learn more](#)

**Essentials**

Resource group (move)	SKU
az104-rg1-locd5890310	Standard
Status	OS type
Running	Linux
Location	IP address (Public)
East US	20.253.0.155
Subscription (move)	FQDN
AZ-104T00A CSB_3	gb-container.e6gxd5gbwa3grgx.eastus.azurecont...
Subscription ID	Container count
846fbfb63-2909-4efc-8bd7-d0d2d465a22a	1

Tags (edit)   Add tags

CPU (millicores)

## Verification and Operational Validation of Hosted Applications

