CA - Experiment 12 - Final Practical Exercise and Wrap-Up

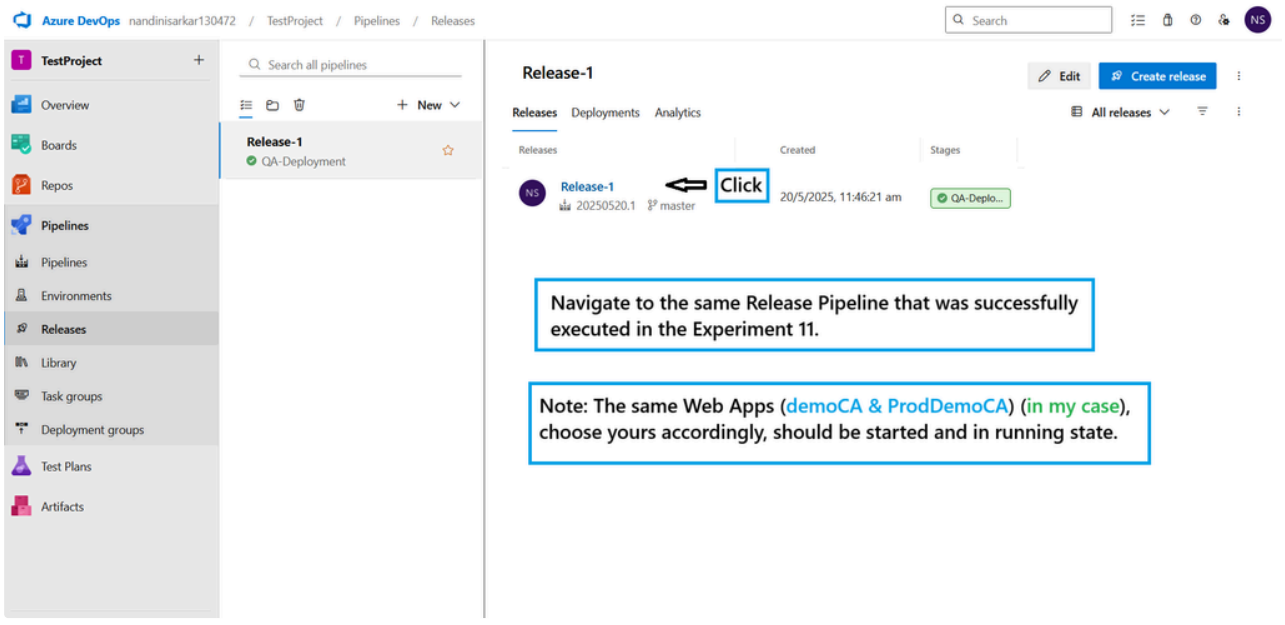
✅Build and Deploy a Complete DevOps Pipeline, Discussion on Best Practices and Q&A

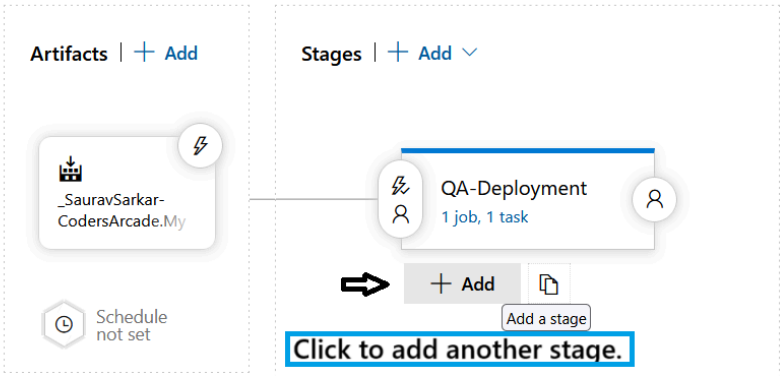
Objectives of Experiment 12 🚀💡

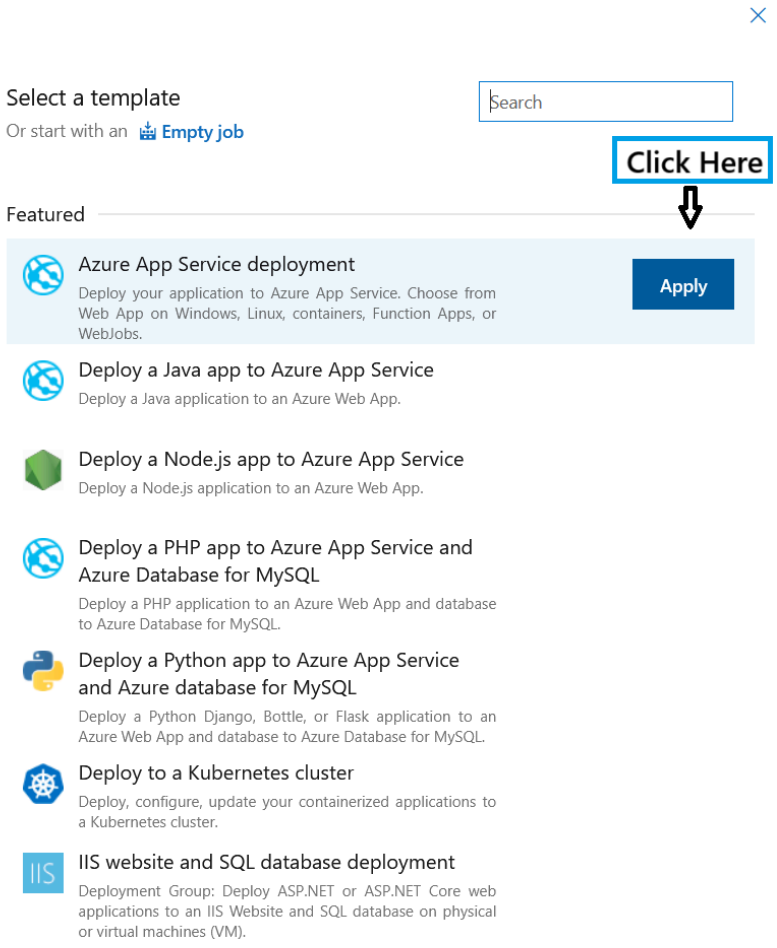
1. Complete the **final stage of the CI/CD pipeline** by deploying the `.war` file to the **Production Server (prodDemoCA)** using Azure DevOps Release Pipeline 🏁☁️
2. Set up and configure a **production-ready release pipeline** connected to the build artifacts 📦🔁
3. Deploy the web application to the **Azure App Service (prodDemoCA)** as the production environment 🌍🚀
4. Perform **post-deployment validation** using Java-Selenium automation with **JUnit test cases** ✅🧪
5. Update the automation script with your **production app URL** for live testing 🌐🧭
6. Enable the **Continuous Deployment Trigger (CD trigger)** to automate deployment on every GitHub push ⚡🔄
7. Observe automatic **Release creation (e.g., Release-4)** right after build completion and artifact publishing 🎯📈
8. Learn how to handle **multi-stage pipelines** for QA and Production environments effectively 🎬💼
9. Ensure App Services (`demoCA` and `prodDemoCA`) are running during release execution 🟢🖥️
10. Experience the **full DevOps workflow**: Code → Build → Release → Deploy → Test, all done automatically 💻🔧🎉

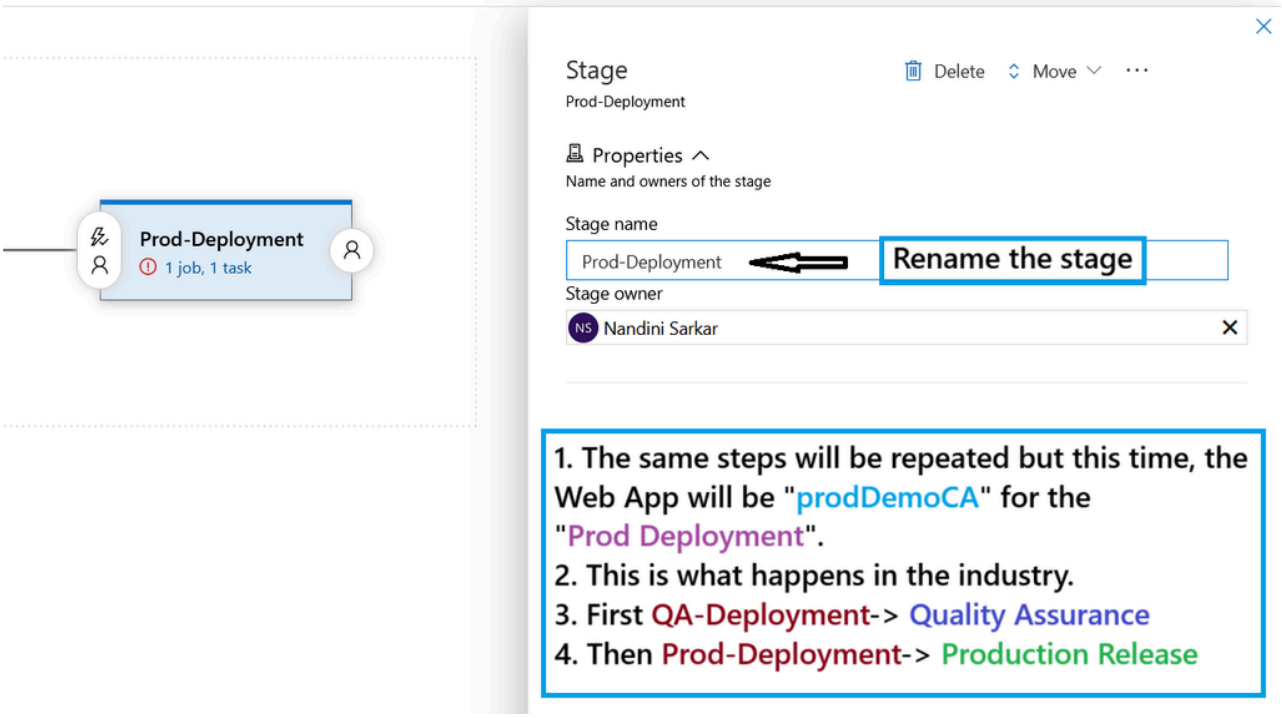
✅Here are the steps to follow for the Final Practical Exercise in DevOps VTU Experiment 12

1. **You need to navigate to your Project & the Release Pipeline that you created in Experiment 11 as shown below:**
2. **Now you can follow these steps for Experiment 12 as shown below:**

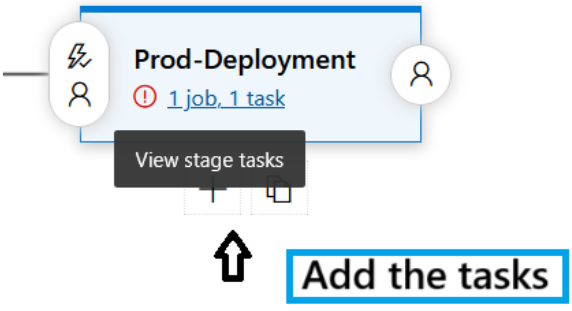


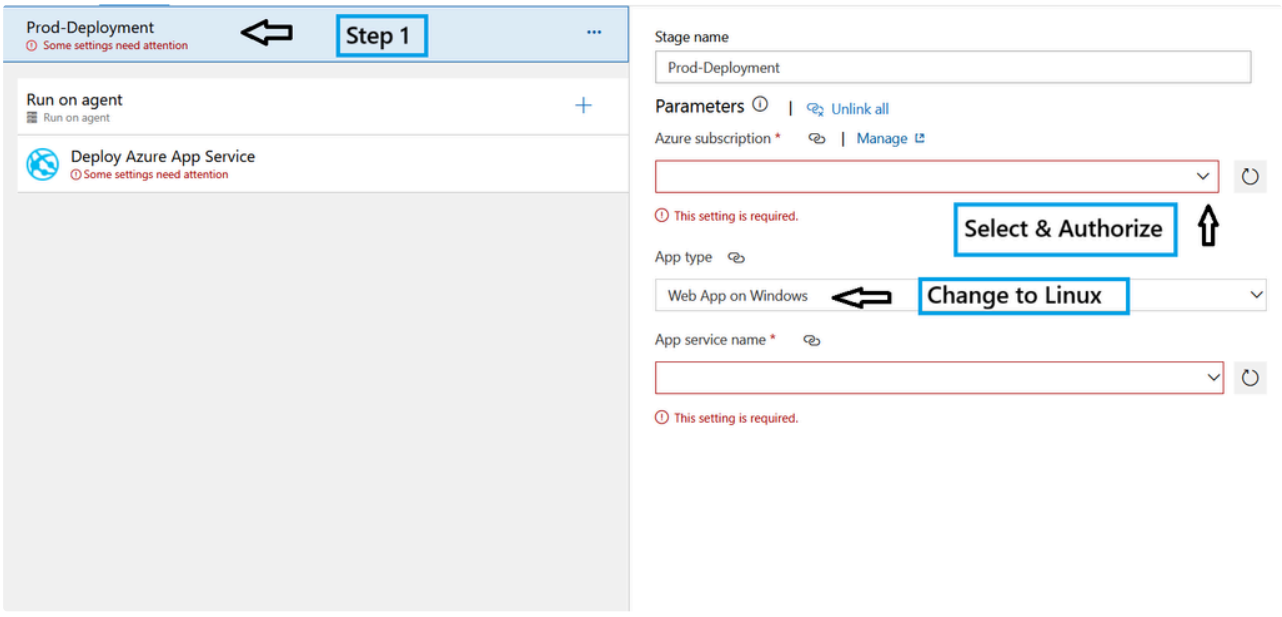

Artifacts | Add
Stages | Add
_SauravSarkar-CodersArcade.My
Schedule not set
QA-Deployment
1 job, 1 task
Add
Add a stage
Click to add another stage.

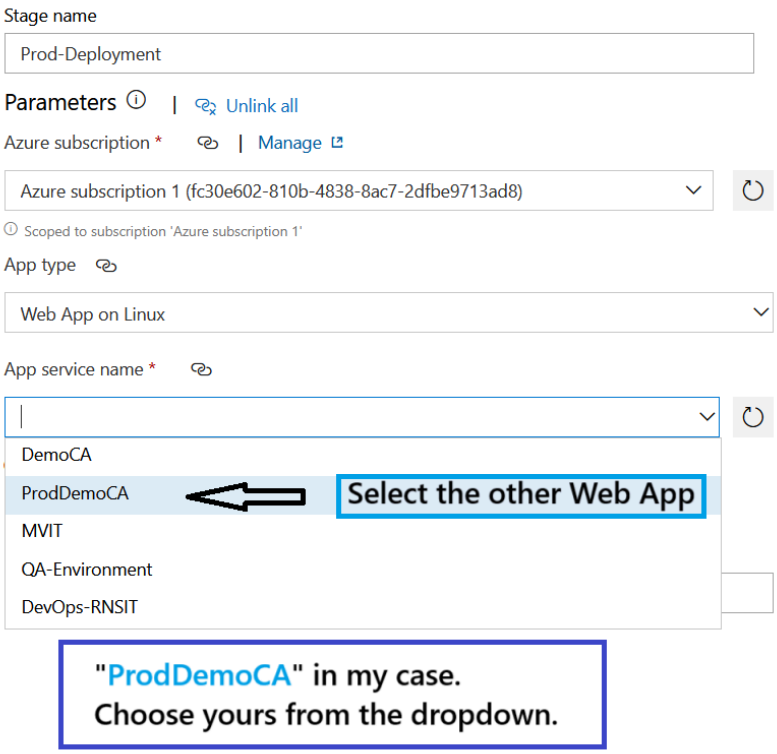

Select a template
Or start with an Empty job
Search
Click Here
Featured
Azure App Service deployment
Deploy your application to Azure App Service. Choose from Web App on Windows, Linux, containers, Function Apps, or WebJobs.
Apply
Deploy a Java app to Azure App Service
Deploy a Java application to an Azure Web App.
Deploy a Node.js app to Azure App Service
Deploy a Node.js application to an Azure Web App.
Deploy a PHP app to Azure App Service and Azure Database for MySQL
Deploy a PHP application to an Azure Web App and database to Azure Database for MySQL.
Deploy a Python app to Azure App Service and Azure database for MySQL
Deploy a Python Django, Bottle, or Flask application to an Azure Web App and database to Azure Database for MySQL.
Deploy to a Kubernetes cluster
Deploy, configure, update your containerized applications to a Kubernetes cluster.
IIS website and SQL database deployment
Deployment Group: Deploy ASP.NET or ASP.NET Core web applications to an IIS Website and SQL database on physical or virtual machines (VM).

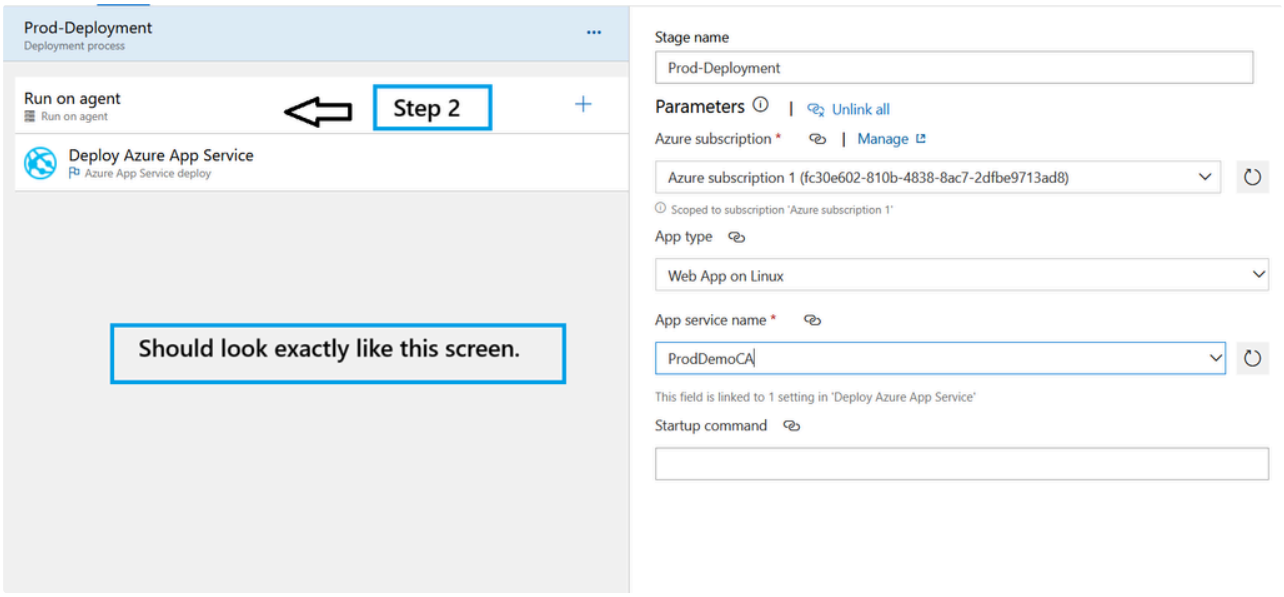


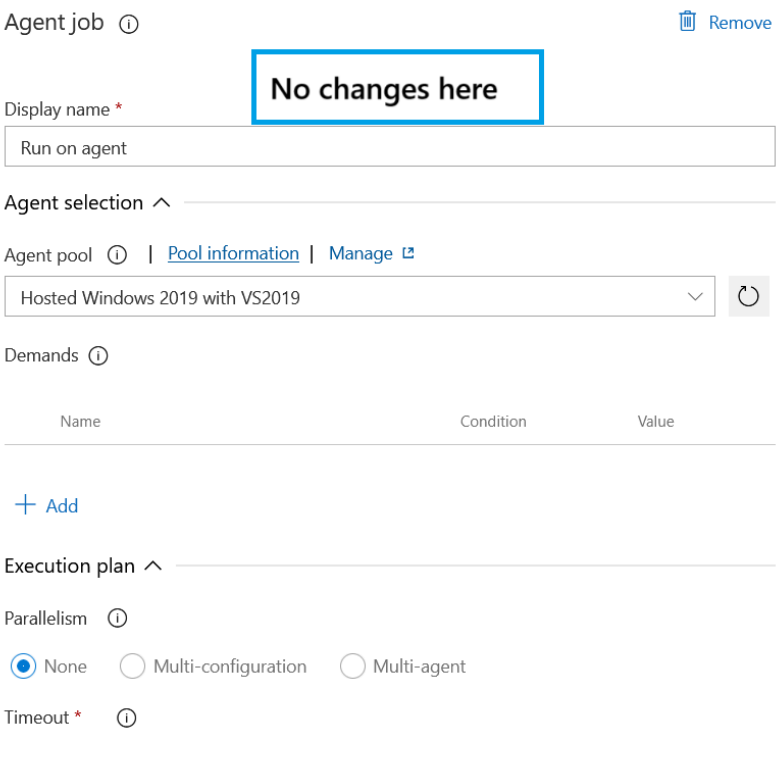
1. The same steps will be repeated but this time, the Web App will be "prodDemoCA" for the "Prod Deployment".
2. This is what happens in the industry.
3. First QA-Deployment-> Quality Assurance
4. Then Prod-Deployment-> Production Release

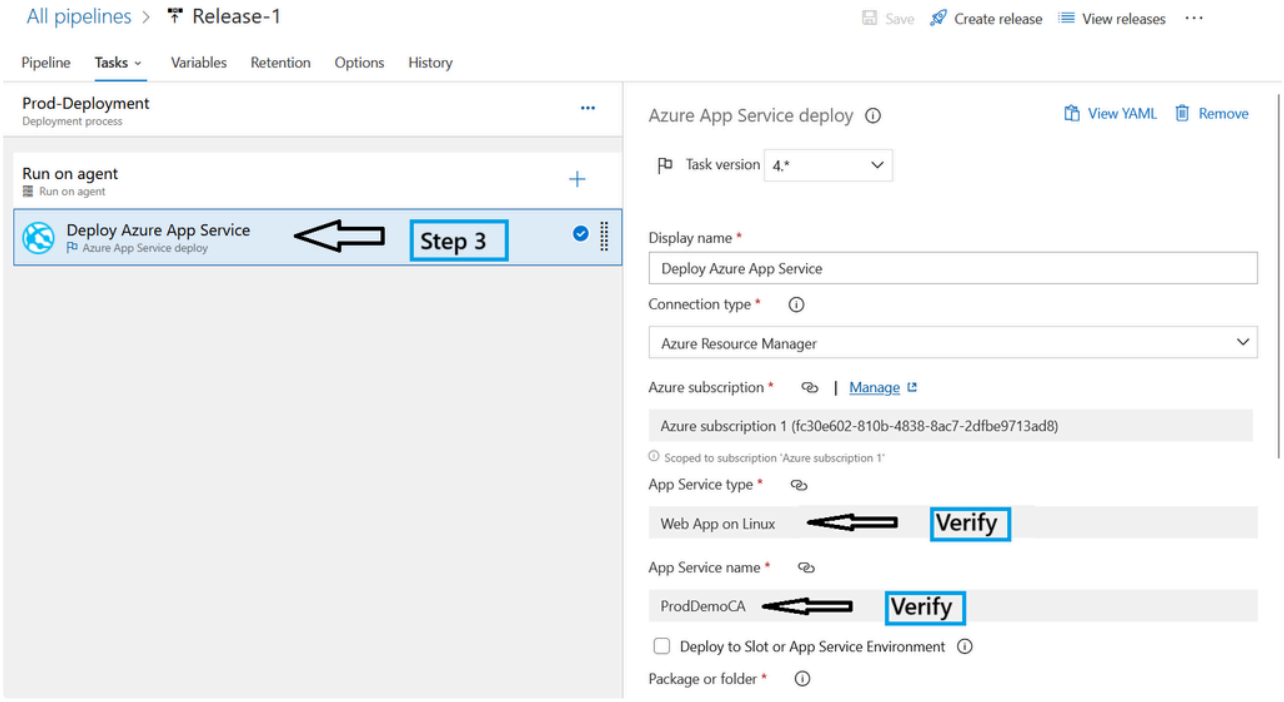


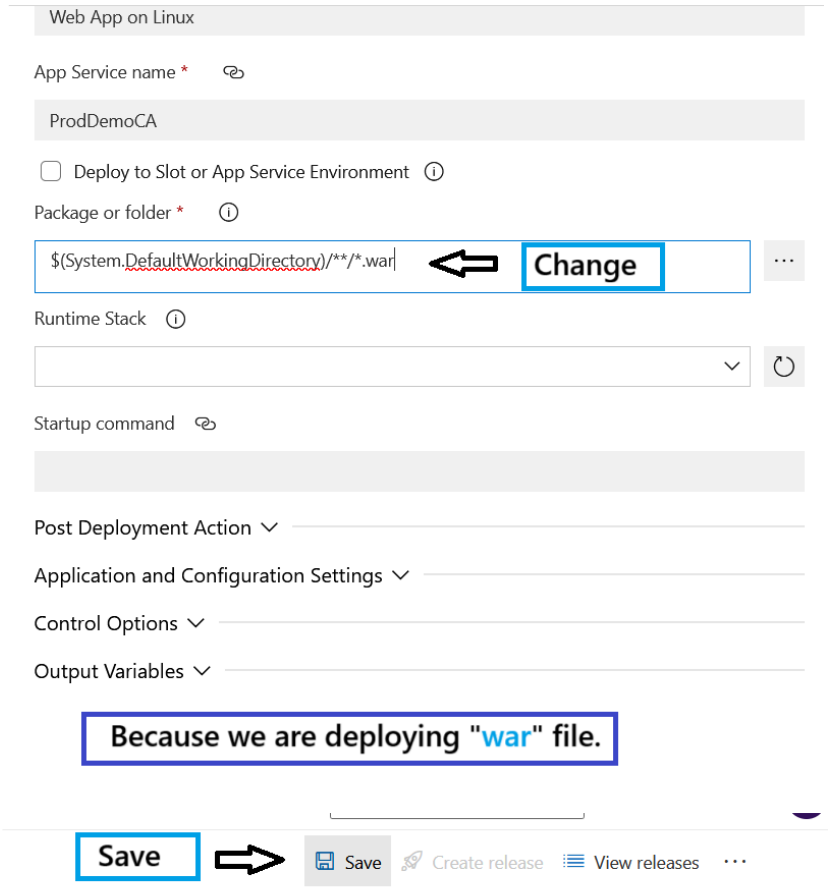



Stage name
Prod-Deployment
Parameters
Unlink all
Azure subscription *
Manage
Azure subscription 1 (fc30e602-810b-4838-8ac7-2dfbe9713ad8)
Scoped to subscription 'Azure subscription 1'
App type
Web App on Linux
App service name *
DemoCA
ProdDemoCA
MVIT
QA-Environment
DevOps-RNSIT
Select the other Web App
"ProdDemoCA" in my case.
Choose yours from the dropdown.

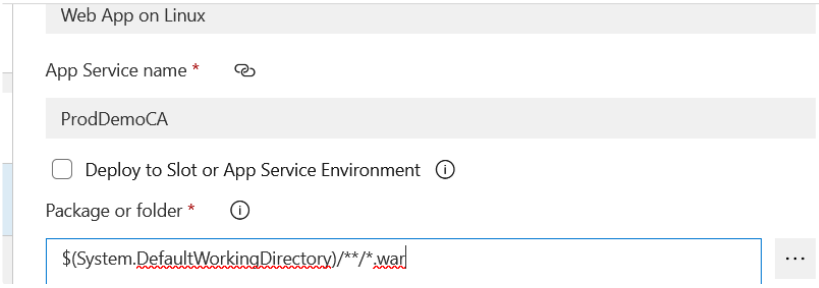

Prod-Deployment
Deployment process
Run on agent
Run on agent
Step 2
Deploy Azure App Service
Azure App Service deploy
Should look exactly like this screen.
Stage name
Prod-Deployment
Parameters
Unlink all
Azure subscription *
Manage
Azure subscription 1 (fc30e602-810b-4838-8ac7-2dfbe9713ad8)
Scoped to subscription 'Azure subscription 1'
App type
Web App on Linux
App service name *
ProdDemoCA
This field is linked to 1 setting in 'Deploy Azure App Service'
Startup command

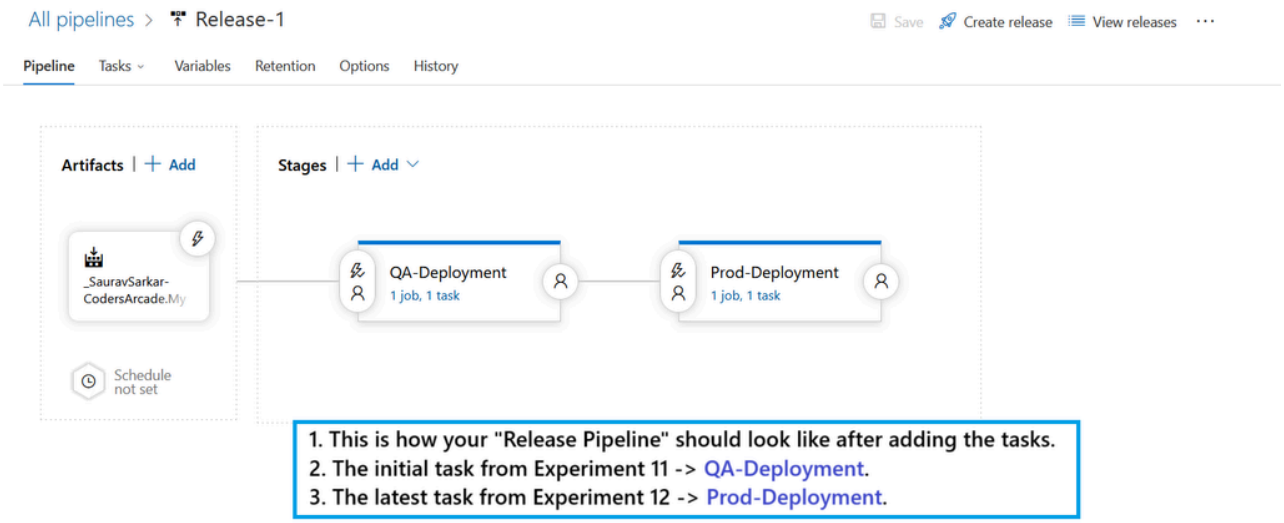

Agent job
Remove
No changes here
Display name *
Run on agent
Agent selection
Agent pool
Pool information
Manage
Hosted Windows 2019 with VS2019
Demands
Name
Condition
Value
Add
Execution plan
Parallelism
None
Multi-configuration
Multi-agent
Timeout *

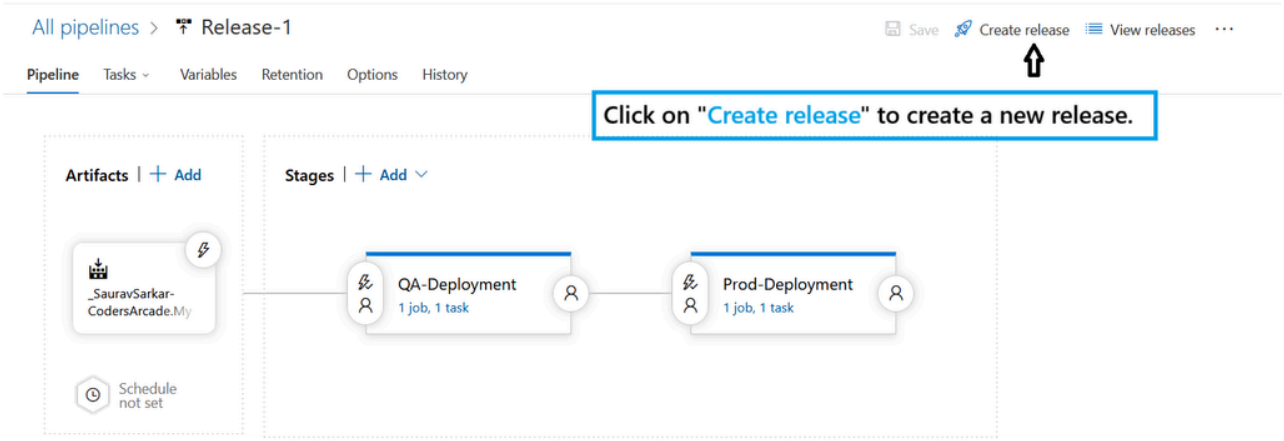

All pipelines
Release-1
Save
Create release
View releases
Pipeline
Tasks
Variables
Retention
Options
History
Prod-Deployment
Deployment process
Run on agent
Run on agent
Deploy Azure App Service
Azure App Service deploy
Step 3
Azure App Service deploy
View YAML
Remove
Task version
4.*
Display name *
Deploy Azure App Service
Connection type *
Azure Resource Manager
Azure subscription *
Manage
Azure subscription 1 (fc30e602-810b-4838-8ac7-2dfbe9713ad8)
Scoped to subscription 'Azure subscription 1'
App Service type *
Web App on Linux
Verify
App Service name *
ProdDemoCA
Verify
Deploy to Slot or App Service Environment
Package or folder *

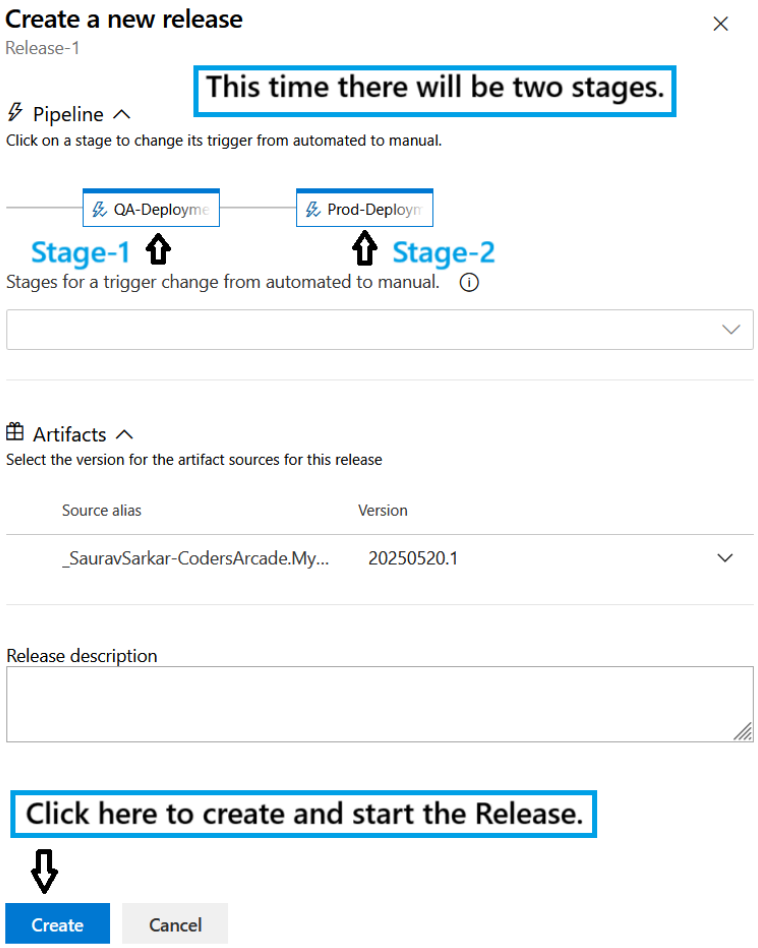

Web App on Linux
App Service name *
ProdDemoCA
Deploy to Slot or App Service Environment
Package or folder *
$(System.DefaultWorkingDirectory)/**/*.war
Change
Runtime Stack
Startup command
Post Deployment Action
Application and Configuration Settings
Control Options
Output Variables
Because we are deploying "war" file.

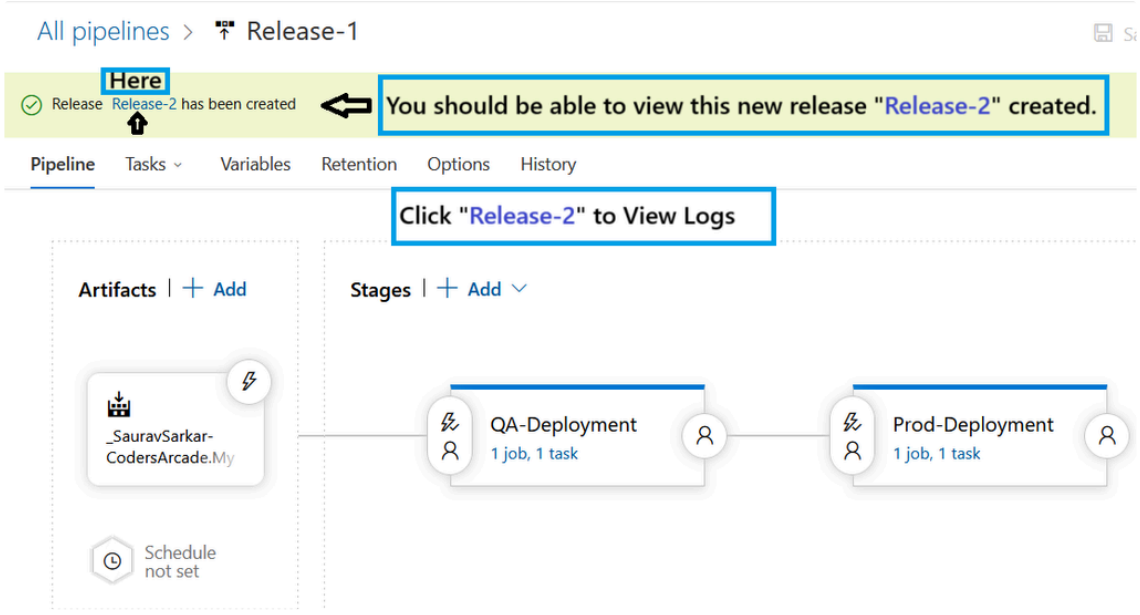
Save
Save
Create release
View releases

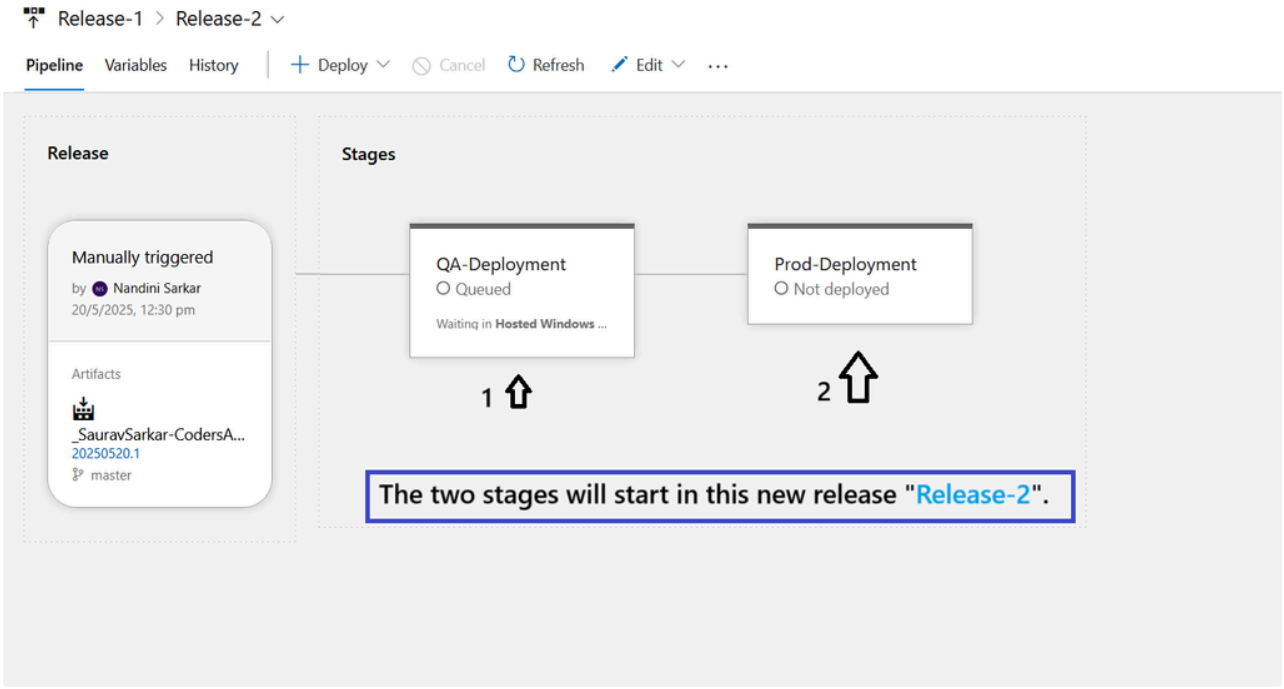

Web App on Linux
App Service name *
ProdDemoCA
Deploy to Slot or App Service Environment
Package or folder *
$(System.DefaultWorkingDirectory)/**/*.war

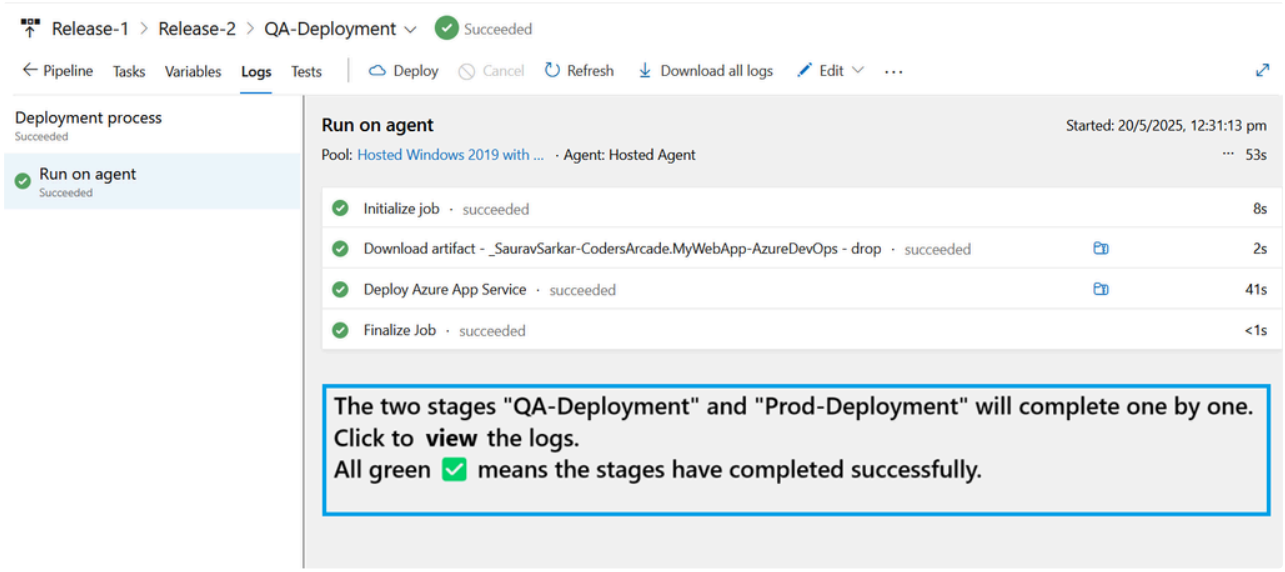

All pipelines
Release-1
Save
Create release
View releases
Pipeline
Tasks
Variables
Retention
Options
History
Artifacts | Add
_SauravSarkar-CodersArcade.My
Schedule not set
Stages | Add
QA-Deployment
1 job, 1 task
Prod-Deployment
1 job, 1 task
1. This is how your "Release Pipeline" should look like after adding the tasks.
2. The initial task from Experiment 11 -> QA-Deployment.
3. The latest task from Experiment 12 -> Prod-Deployment.

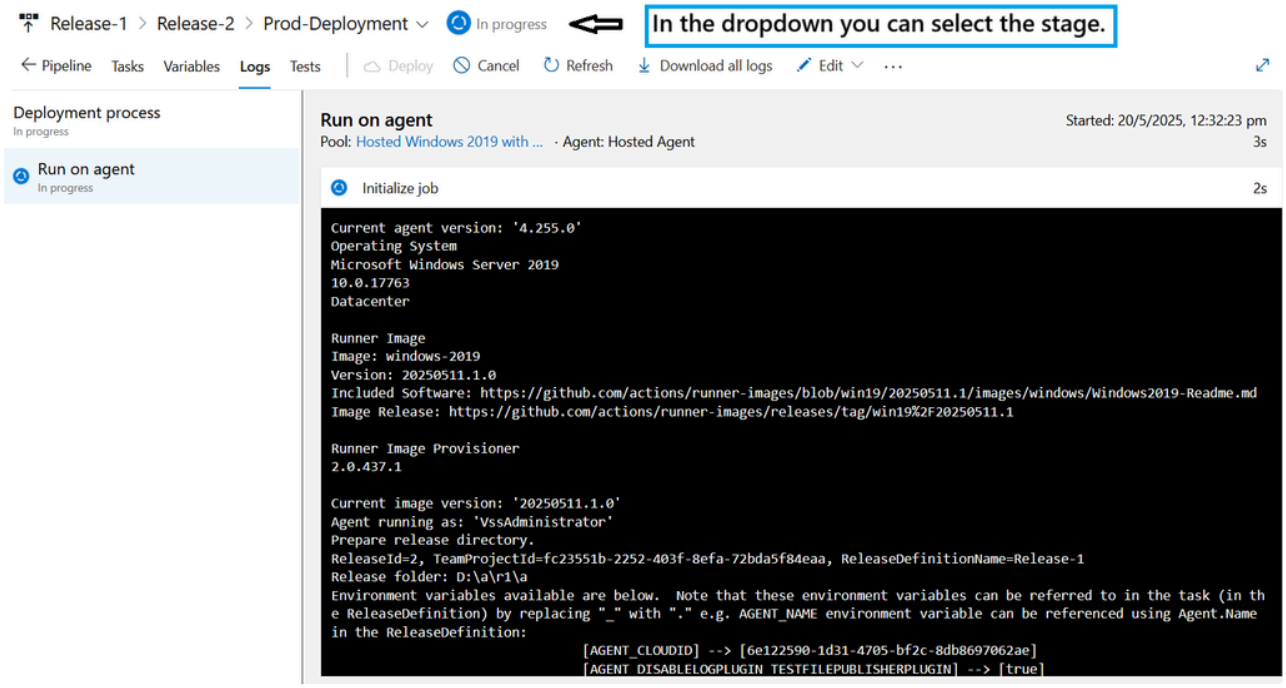

All pipelines > Release-1
Save
Create release
View releases
Pipeline
Tasks
Variables
Retention
Options
History
Click on "Create release" to create a new release.
Artifacts | + Add
Stages | + Add
_SauravSarkar-CodersArcade.My
QA-Deployment
1 job, 1 task
Prod-Deployment
1 job, 1 task
Schedule not set

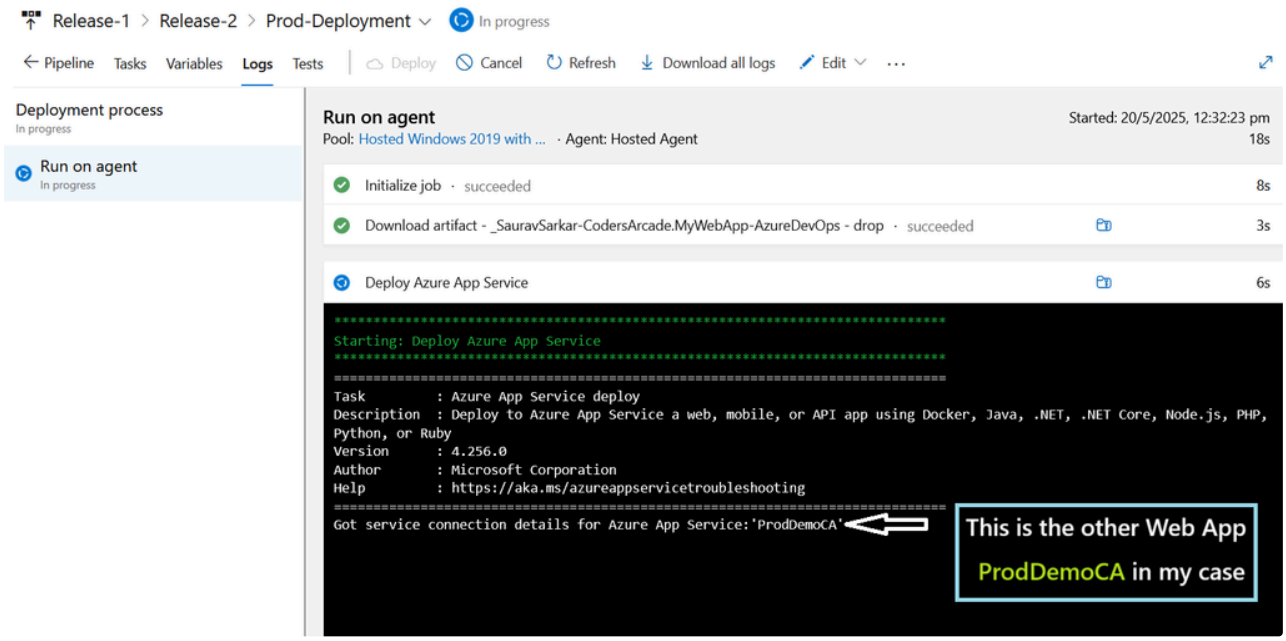

Create a new release
Release-1
This time there will be two stages.
Pipeline
Click on a stage to change its trigger from automated to manual.
QA-Deployme
Prod-Deployn
Stage-1
Stage-2
Stages for a trigger change from automated to manual.
Artifacts
Select the version for the artifact sources for this release
Source alias
Version
_SauravSarkar-CodersArcade.My...
20250520.1
Release description
Click here to create and start the Release.
Create
Cancel

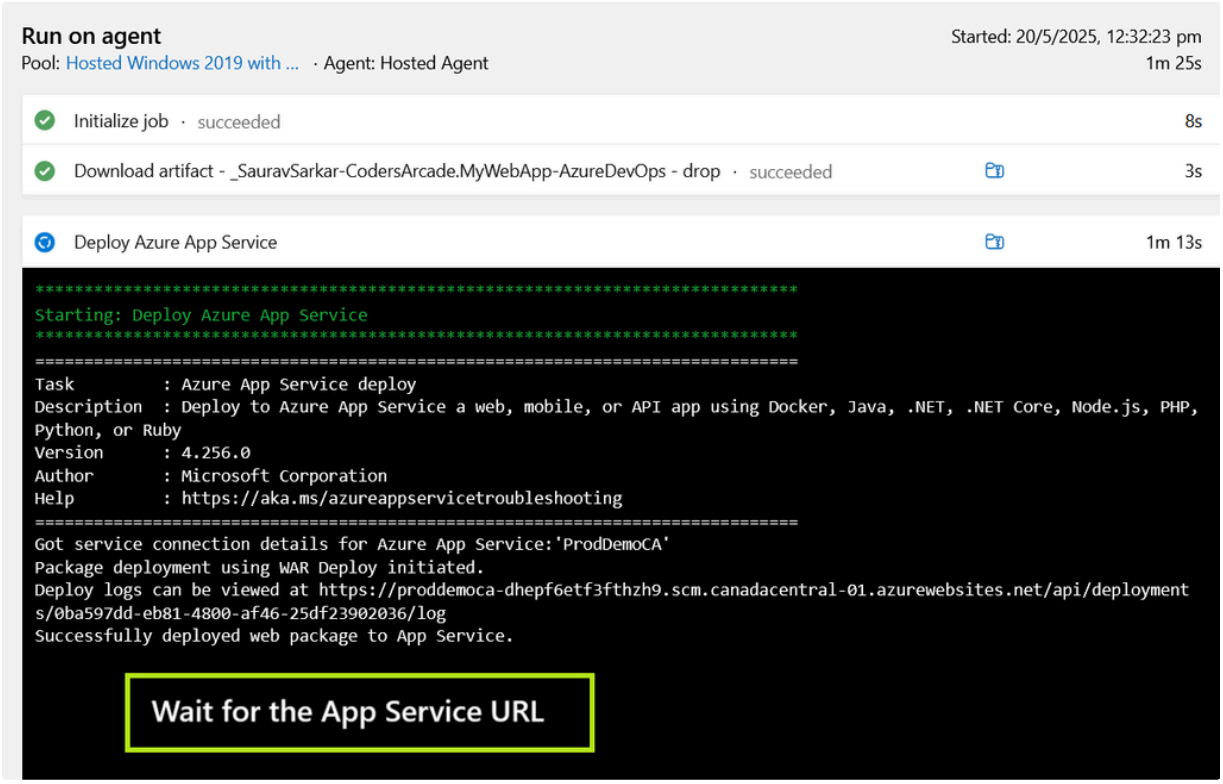

All pipelines > Release-1
Here
Release Release-2 has been created
You should be able to view this new release "Release-2" created.
Pipeline
Tasks
Variables
Retention
Options
History
Click "Release-2" to View Logs
Artifacts | Add
Stages | Add
_SauravSarkar-CodersArcade.My
QA-Deployment
1 job, 1 task
Prod-Deployment
1 job, 1 task
Schedule not set

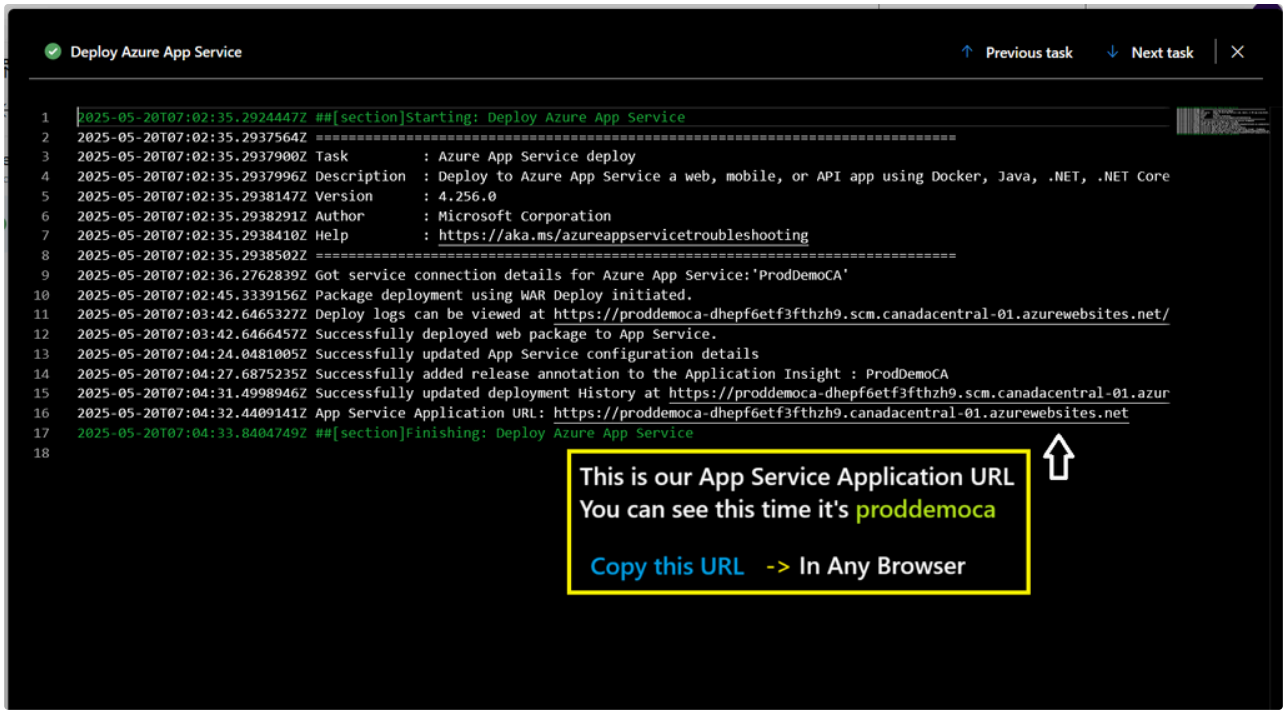

Release-1 > Release-2
Pipeline
Variables
History
Deploy
Cancel
Refresh
Edit
Release
Stages
Manually triggered
by Nandini Sarkar
20/5/2025, 12:30 pm
Artifacts
_SauravSarkar-CodersA...
20250520.1
master
QA-Deployment
Queued
Waiting in Hosted Windows ...
Prod-Deployment
Not deployed
1
2
The two stages will start in this new release "Release-2".

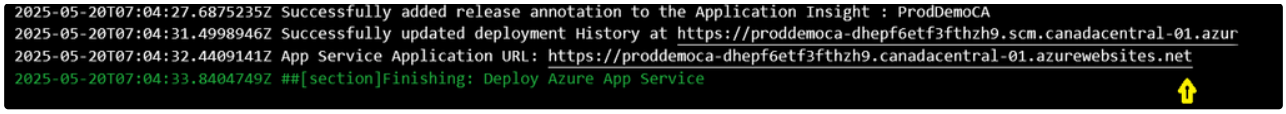

Release-1 > Release-2 > QA-Deployment
Succeeded
Pipeline
Tasks
Variables
Logs
Tests
Deploy
Cancel
Refresh
Download all logs
Edit
Deployment process
Succeeded
Run on agent
Succeeded
Run on agent
Started: 20/5/2025, 12:31:13 pm
Pool: Hosted Windows 2019 with ... · Agent: Hosted Agent
53s
Initialize job · succeeded 8s
Download artifact - _SauravSarkar-CodersArcade.MyWebApp-AzureDevOps - drop · succeeded 2s
Deploy Azure App Service · succeeded 41s
Finalize Job · succeeded <1s
The two stages "QA-Deployment" and "Prod-Deployment" will complete one by one.
Click to view the logs.
All green ✅ means the stages have completed successfully.

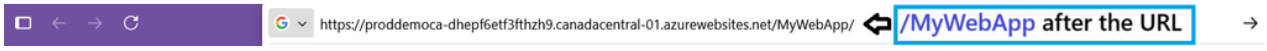

Release-1 > Release-2 > Prod-Deployment
In progress
In the dropdown you can select the stage.
Pipeline
Tasks
Variables
Logs
Tests
Deploy
Cancel
Refresh
Download all logs
Edit
Deployment process
In progress
Run on agent
In progress
Run on agent
Started: 20/5/2025, 12:32:23 pm
Pool: Hosted Windows 2019 with ... · Agent: Hosted Agent
3s
Initialize job 2s
Current agent version: '4.255.0'
Operating System
Microsoft Windows Server 2019
10.0.17763
Datacenter
Runner Image
Image: windows-2019
Version: 20250511.1.0
Included Software: https://github.com/actions/runner-images/blob/win19/20250511.1/images/windows/Windows2019-Readme.md
Image Release: https://github.com/actions/runner-images/releases/tag/win19%2F20250511.1
Runner Image Provisioner
2.0.437.1
Current image version: '20250511.1.0'
Agent running as: 'VssAdministrator'
Prepare release directory.
ReleaseId=2, TeamProjectId=fc23551b-2252-403f-8efa-72bda5f84eaa, ReleaseDefinitionName=Release-1
Release folder: D:\a\r1\a
Environment variables available are below. Note that these environment variables can be referred to in the task (in th
e ReleaseDefinition) by replacing "_" with "." e.g. AGENT_NAME environment variable can be referenced using Agent.Name
in the ReleaseDefinition:
[AGENT_CLOUDID] --> [6e122590-1d31-4705-bf2c-8db8697062ae]
[AGENT_DISABLELOGPLUGIN_TESTFILEPUBLISHERPLUGIN] --> [true]

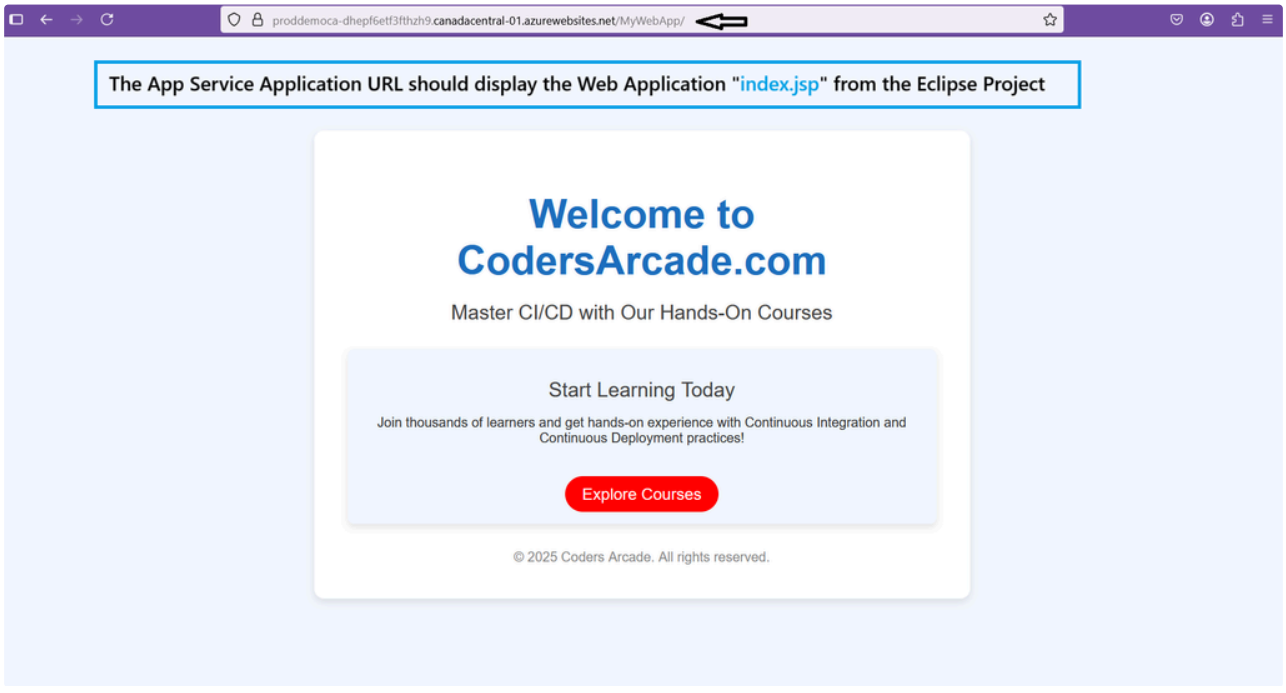

Release-1 > Release-2 > Prod-Deployment
In progress
Pipeline
Tasks
Variables
Logs
Tests
Deploy
Cancel
Refresh
Download all logs
Edit
Deployment process
In progress
Run on agent
In progress
Run on agent
Pool: Hosted Windows 2019 with ... · Agent: Hosted Agent
Started: 20/5/2025, 12:32:23 pm
18s
Initialize job · succeeded
8s
Download artifact - _SauravSarkar-CodersArcade.MyWebApp-AzureDevOps - drop · succeeded
3s
Deploy Azure App Service
6s
Starting: Deploy Azure App Service
Task : Azure App Service deploy
Description : Deploy to Azure App Service a web, mobile, or API app using Docker, Java, .NET, .NET Core, Node.js, PHP, Python, or Ruby
Version : 4.256.0
Author : Microsoft Corporation
Help : https://aka.ms/azureappservicetroubleshooting
Got service connection details for Azure App Service:'ProdDemoCA'
This is the other Web App
ProdDemoCA in my case


Run on agent
Pool: Hosted Windows 2019 with ... · Agent: Hosted Agent
Started: 20/5/2025, 12:32:23 pm
1m 25s
Initialize job · succeeded
8s
Download artifact - _SauravSarkar-CodersArcade.MyWebApp-AzureDevOps - drop · succeeded
3s
Deploy Azure App Service
1m 13s
Starting: Deploy Azure App Service
Task : Azure App Service deploy
Description : Deploy to Azure App Service a web, mobile, or API app using Docker, Java, .NET, .NET Core, Node.js, PHP, Python, or Ruby
Version : 4.256.0
Author : Microsoft Corporation
Help : https://aka.ms/azureappservicetroubleshooting
Got service connection details for Azure App Service:'ProdDemoCA'
Package deployment using WAR Deploy initiated.
Deploy logs can be viewed at https://proddemoca-dhepf6etf3fthzh9.scm.canadacentral-01.azurewebsites.net/api/deployments/0ba597dd-eb81-4800-af46-25df23902036/log
Successfully deployed web package to App Service.
Wait for the App Service URL


Deploy Azure App Service
Previous task
Next task
2025-05-20T07:02:35.2924447Z ##[section]Starting: Deploy Azure App Service
2025-05-20T07:02:35.2937564Z ==========
2025-05-20T07:02:35.2937900Z Task : Azure App Service deploy
2025-05-20T07:02:35.2937996Z Description : Deploy to Azure App Service a web, mobile, or API app using Docker, Java, .NET, .NET Core
2025-05-20T07:02:35.2938147Z Version : 4.256.0
2025-05-20T07:02:35.2938291Z Author : Microsoft Corporation
2025-05-20T07:02:35.2938410Z Help : https://aka.ms/azureappservicetroubleshooting
2025-05-20T07:02:35.2938502Z ==========
2025-05-20T07:02:36.2762839Z Got service connection details for Azure App Service:'ProdDemoCA'
2025-05-20T07:02:45.3339156Z Package deployment using WAR Deploy initiated.
2025-05-20T07:03:42.6465327Z Deploy logs can be viewed at https://proddemoca-dhepf6etf3fthzh9.scm.canadacentral-01.azurewebsites.net/
2025-05-20T07:03:42.6466457Z Successfully deployed web package to App Service.
2025-05-20T07:04:24.0481005Z Successfully updated App Service configuration details
2025-05-20T07:04:27.6875235Z Successfully added release annotation to the Application Insight : ProdDemoCA
2025-05-20T07:04:31.4998946Z Successfully updated deployment History at https://proddemoca-dhepf6etf3fthzh9.scm.canadacentral-01.azur
2025-05-20T07:04:32.4409141Z App Service Application URL: https://proddemoca-dhepf6etf3fthzh9.canadacentral-01.azurewebsites.net
2025-05-20T07:04:33.8404749Z ##[section]Finishing: Deploy Azure App Service
This is our App Service Application URL
You can see this time it's proddemoca
Copy this URL -> In Any Browser


2025-05-20T07:04:27.6875235Z Successfully added release annotation to the Application Insight : ProdDemoCA
2025-05-20T07:04:31.4998946Z Successfully updated deployment History at https://proddemoca-dhepf6etf3fthzh9.scm.canadacentral-01.azur
2025-05-20T07:04:32.4409141Z App Service Application URL: https://proddemoca-dhepf6etf3fthzh9.canadacentral-01.azurewebsites.net
2025-05-20T07:04:33.8404749Z ##[section]Finishing: Deploy Azure App Service


https://proddemoca-dhepf6etf3fthzh9.canadacentral-01.azurewebsites.net/MyWebApp/
/MyWebApp after the URL


proddemoca-dhepf6etf3fthzh9.canadacentral-01.azurewebsites.net/MyWebApp/
The App Service Application URL should display the Web Application "index.jsp" from the Eclipse Project
Welcome to CodersArcade.com
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Start Learning Today
Join thousands of learners and get hands-on experience with Continuous Integration and Continuous Deployment practices!
Explore Courses
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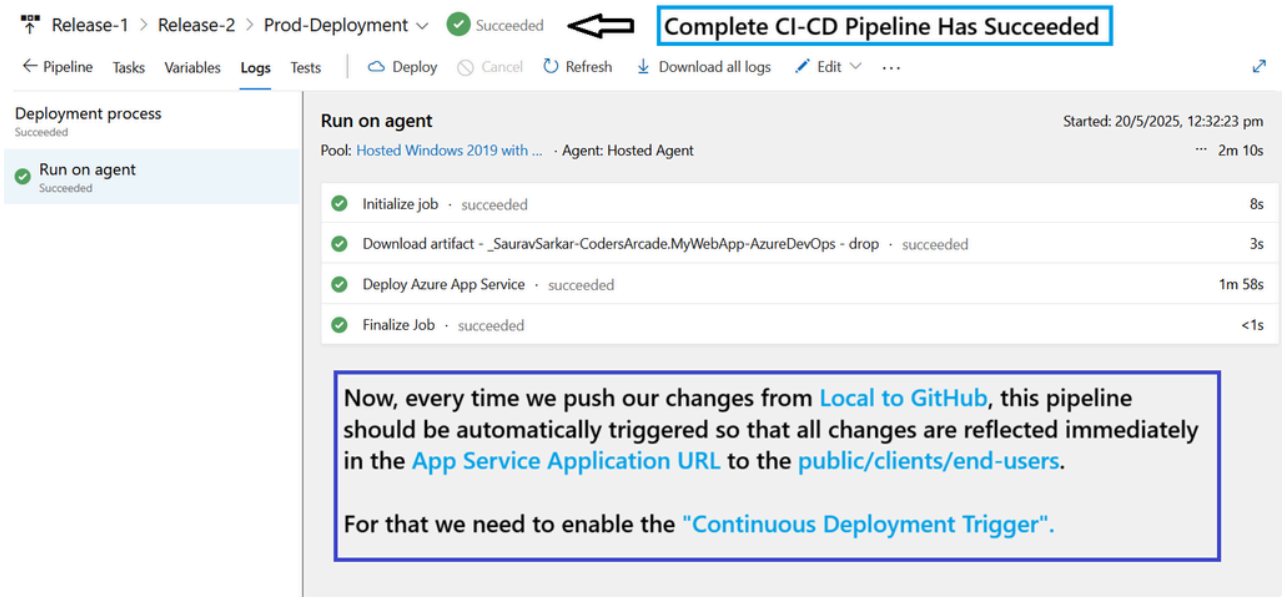
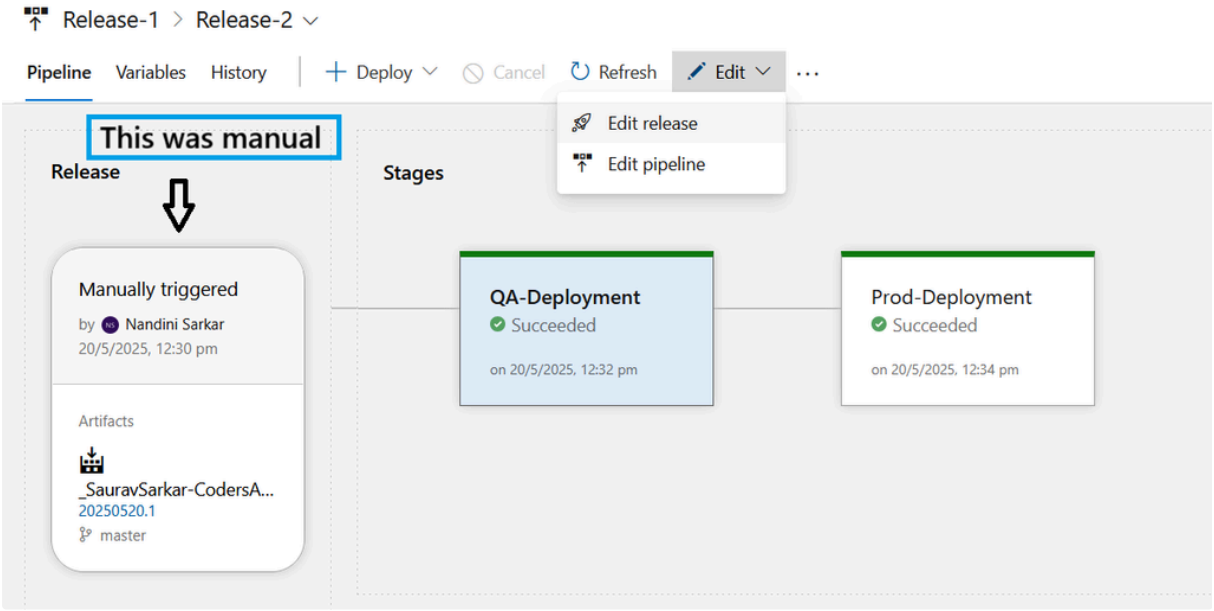
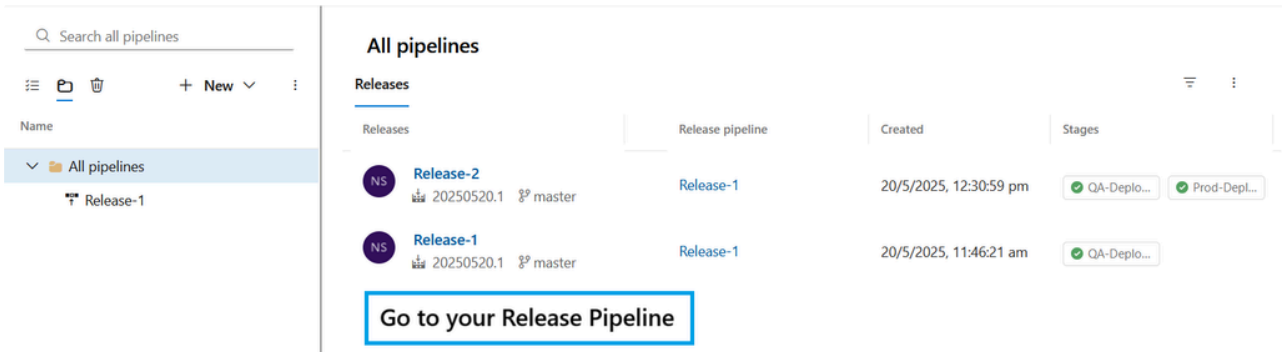
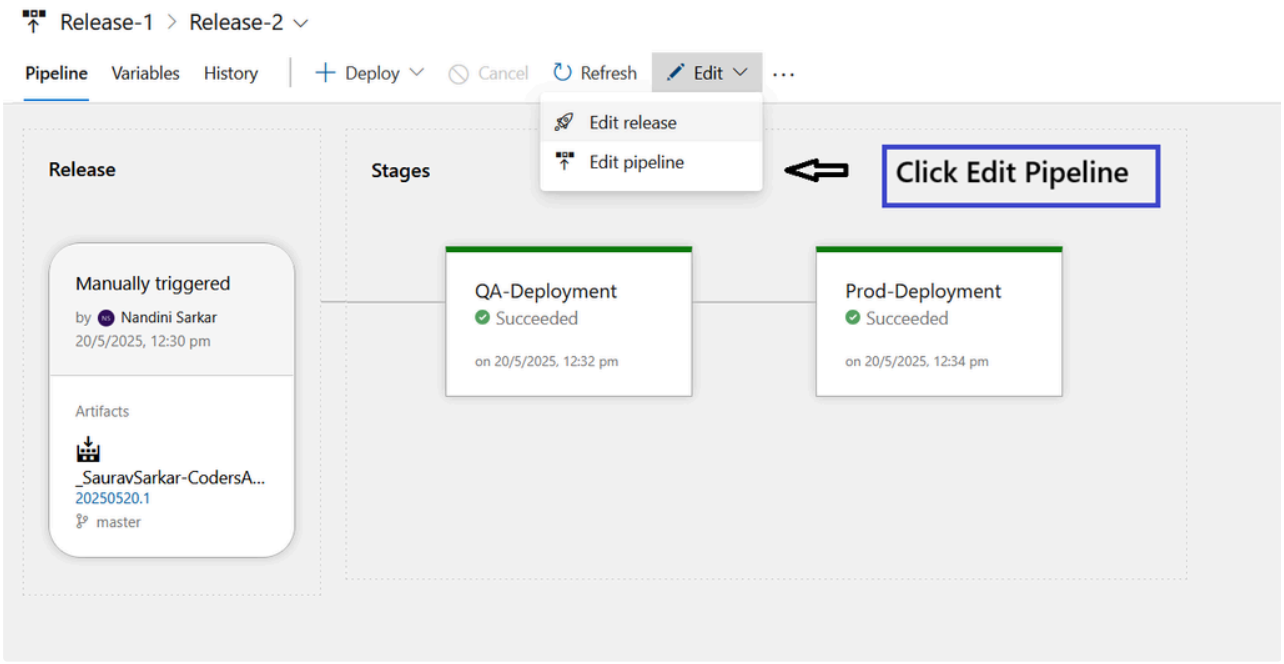
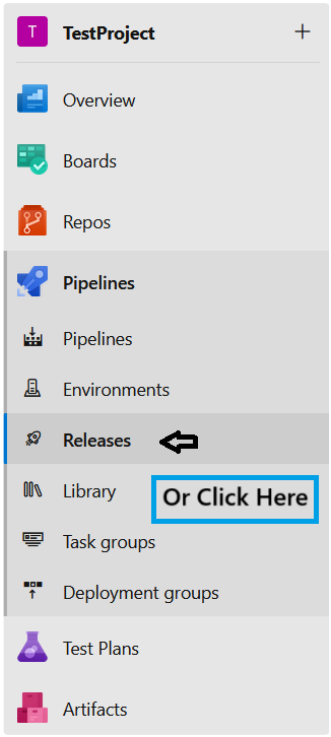
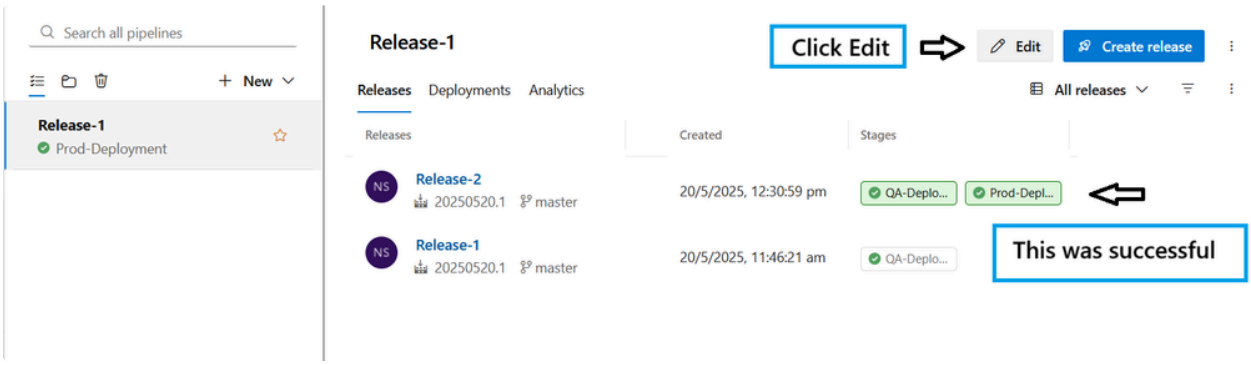

Release-1 > Release-2 > Prod-Deployment
Succeeded
Complete CI-CD Pipeline Has Succeeded
Pipeline
Tasks
Variables
Logs
Tests
Deploy
Cancel
Refresh
Download all logs
Edit
Deployment process
Succeeded
Run on agent
Succeeded
Run on agent
Started: 20/5/2025, 12:32:23 pm
Pool: Hosted Windows 2019 with ... · Agent: Hosted Agent
2m 10s
Initialize job · succeeded 8s
Download artifact - _SauravSarkar-CodersArcade.MyWebApp-AzureDevOps - drop · succeeded 3s
Deploy Azure App Service · succeeded 1m 58s
Finalize Job · succeeded <1s
Now, every time we push our changes from Local to GitHub, this pipeline should be automatically triggered so that all changes are reflected immediately in the App Service Application URL to the public/clients/end-users.
For that we need to enable the "Continuous Deployment Trigger".

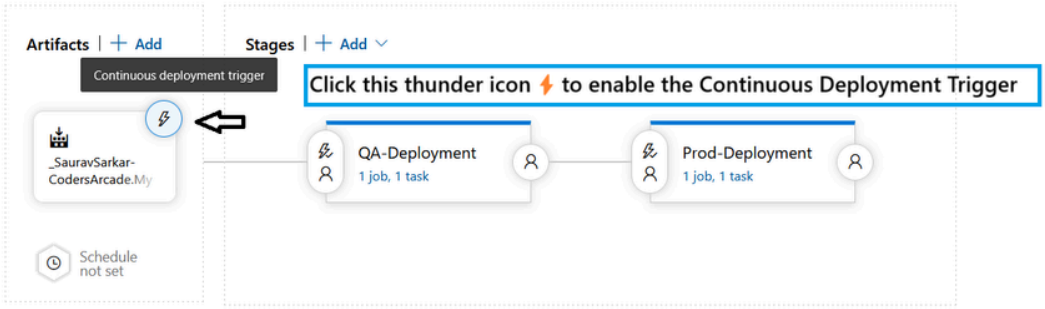

Release-1 > Release-2
Pipeline
Variables
History
Deploy
Cancel
Refresh
Edit
Edit release
Edit pipeline
This was manual
Release
Stages
Manually triggered
by Nandini Sarkar
20/5/2025, 12:30 pm
Artifacts
_SauravSarkar-CodersA...
20250520.1
master
QA-Deployment
Succeeded
on 20/5/2025, 12:32 pm
Prod-Deployment
Succeeded
on 20/5/2025, 12:34 pm

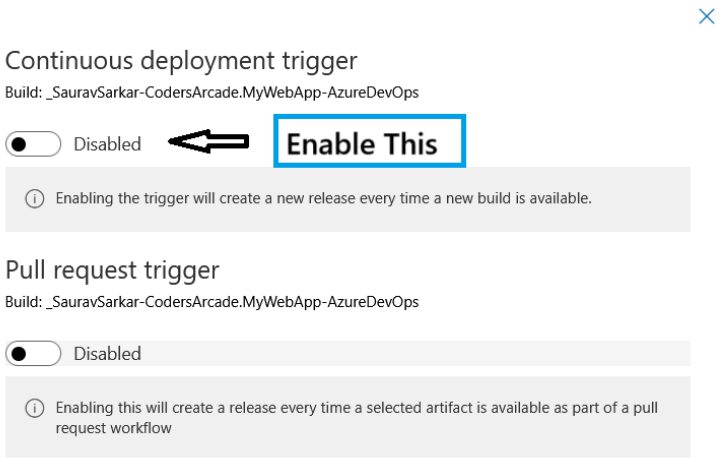

Search all pipelines
New
Name
All pipelines
Release-1
All pipelines
Releases
Releases
Release pipeline
Created
Stages
Release-2
20250520.1
master
Release-1
20/5/2025, 12:30:59 pm
QA-Deplo...
Prod-Depl...
Release-1
20250520.1
master
Release-1
20/5/2025, 11:46:21 am
QA-Deplo...
Go to your Release Pipeline

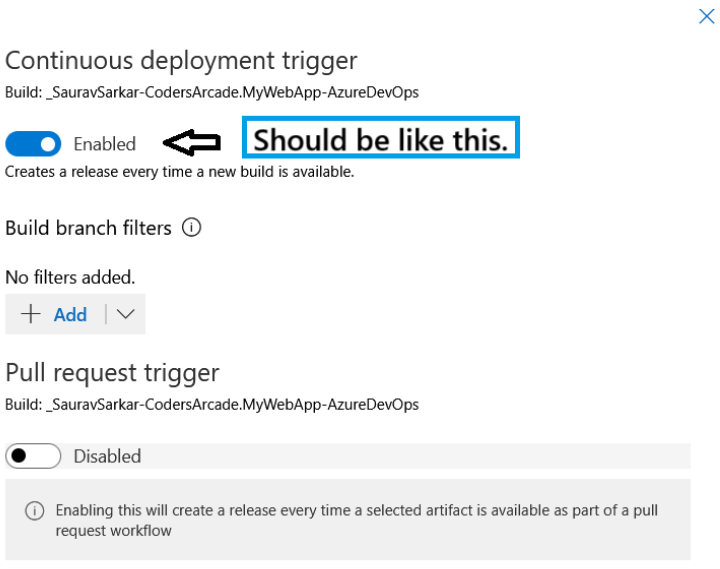

Release-1 > Release-2
Pipeline
Variables
History
Deploy
Cancel
Refresh
Edit
Edit release
Edit pipeline
Click Edit Pipeline
Release
Stages
Manually triggered
by Nandini Sarkar
20/5/2025, 12:30 pm
Artifacts
_SauravSarkar-CodersA...
20250520.1
master
QA-Deployment
Succeeded
on 20/5/2025, 12:32 pm
Prod-Deployment
Succeeded
on 20/5/2025, 12:34 pm

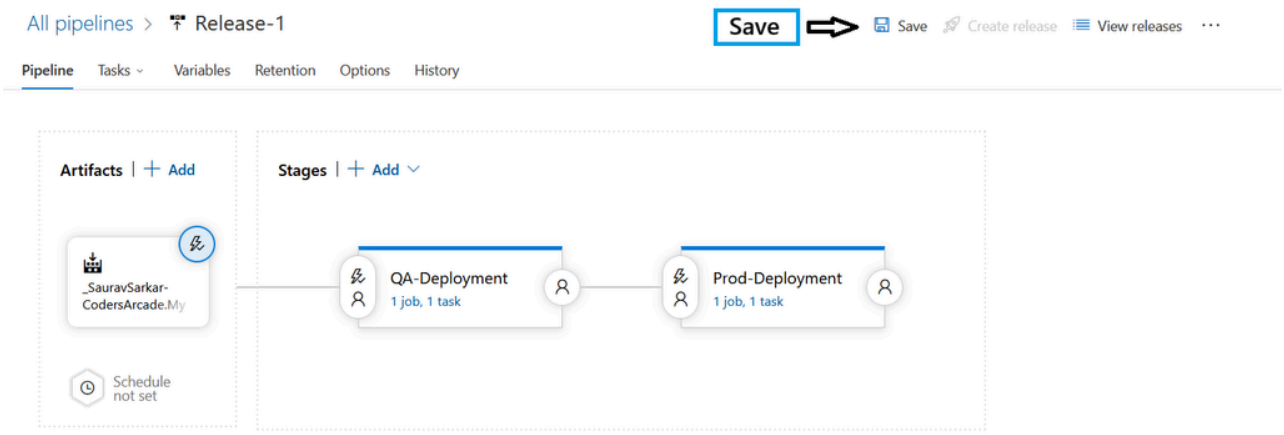

TestProject
Overview
Boards
Repos
Pipelines
Pipelines
Environments
Releases
Library
Or Click Here
Task groups
Deployment groups
Test Plans
Artifacts

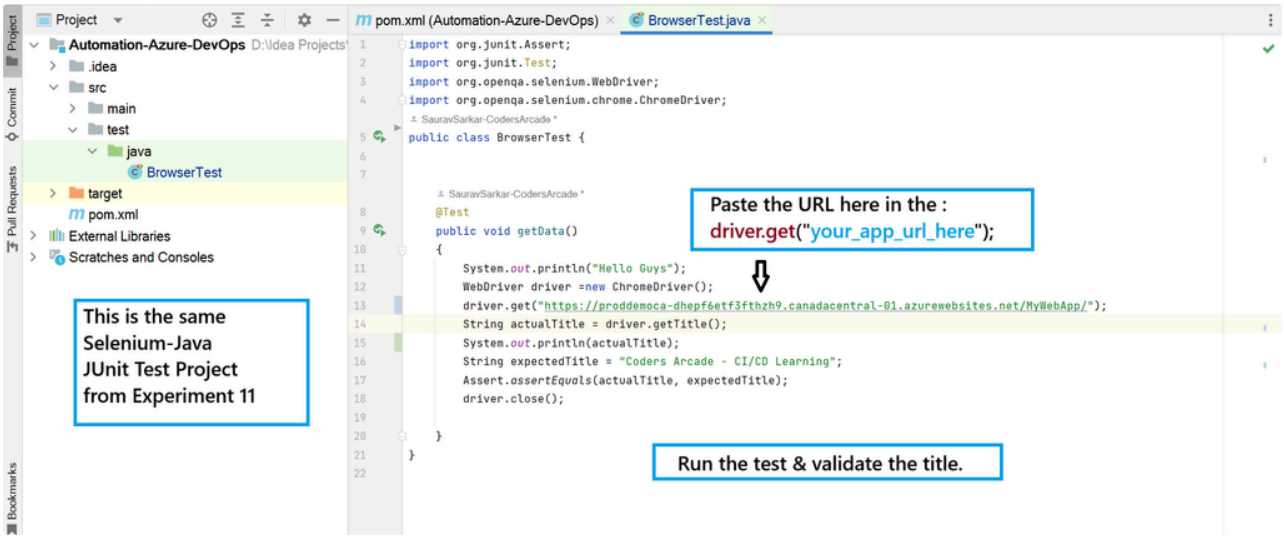

Search all pipelines
New
Release-1
Prod-Deployment
Release-1
Click Edit
Edit
Create release
Releases
Deployments
Analytics
All releases
Releases
Created
Stages
Release-2
20250520.1
master
20/5/2025, 12:30:59 pm
QA-Deplo...
Prod-Depl...
Release-1
20250520.1
master
20/5/2025, 11:46:21 am
QA-Deplo...
This was successful


Artifacts | Add
Stages | Add
Continuous deployment trigger
Click this thunder icon to enable the Continuous Deployment Trigger
_SauravSarkar-CodersArcade.My
QA-Deployment
1 job, 1 task
Prod-Deployment
1 job, 1 task
Schedule not set


Continuous deployment trigger
Build: _SauravSarkar-CodersArcade.MyWebApp-AzureDevOps
Disabled
Enable This
Enabling the trigger will create a new release every time a new build is available.
Pull request trigger
Build: _SauravSarkar-CodersArcade.MyWebApp-AzureDevOps
Disabled
Enabling this will create a release every time a selected artifact is available as part of a pull request workflow


Continuous deployment trigger
Build: _SauravSarkar-CodersArcade.MyWebApp-AzureDevOps
Enabled
Should be like this.
Creates a release every time a new build is available.
Build branch filters
No filters added.
Add
Pull request trigger
Build: _SauravSarkar-CodersArcade.MyWebApp-AzureDevOps
Disabled
Enabling this will create a release every time a selected artifact is available as part of a pull request workflow



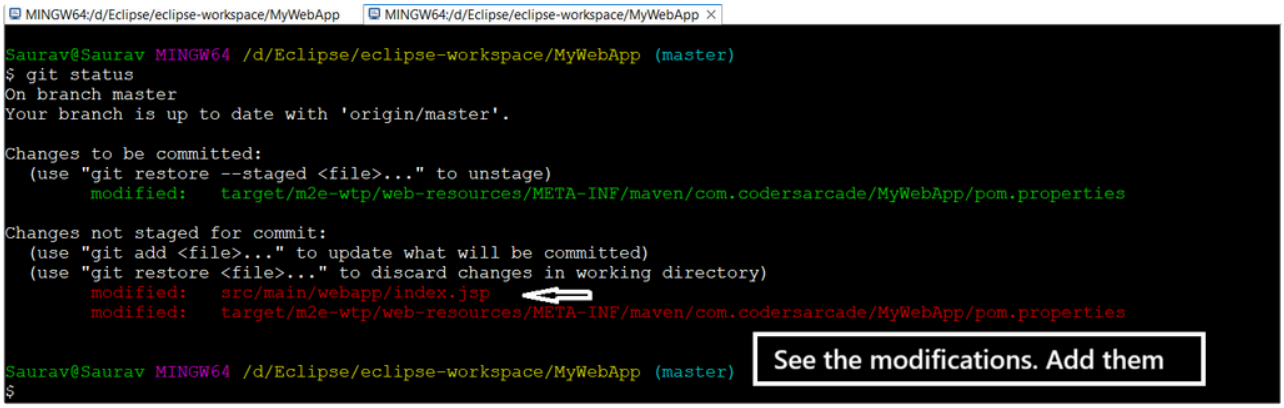


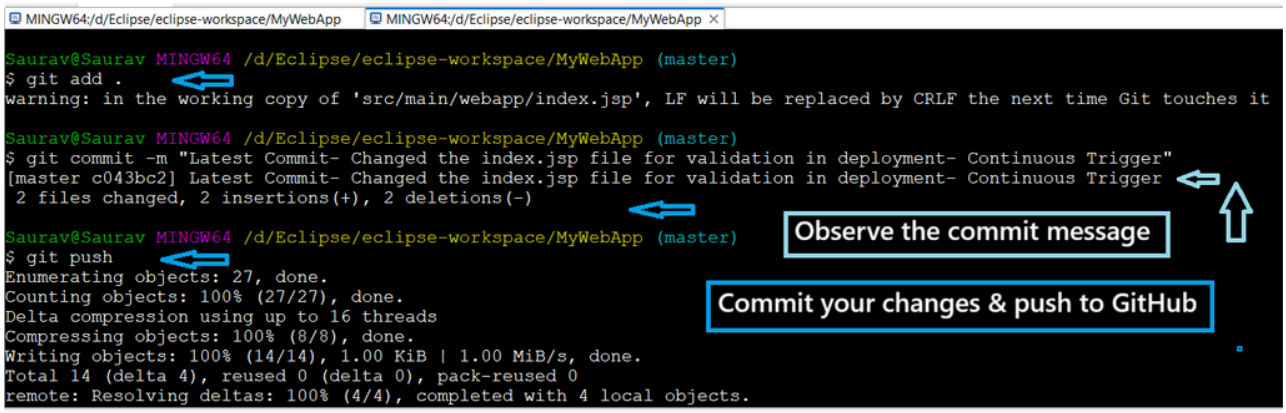

```
<div class="container">
    <h1>Welcome to CodersArcade.com</h1>
    <h2>Master CI/CD with Our Hands-On Courses</h2>
    <div class="cta">
        <h2>Start Learning Today!!!!</h2>
        <p>Join thousands of learners and get hands-on experience with
        <a href="https://www.youtube.com/c/codersarcade" class="button
    </div>
    <footer>
        <p>&copy; 2025 Coders Arcade. All rights reserved.</p>
    </footer>
</div>
```

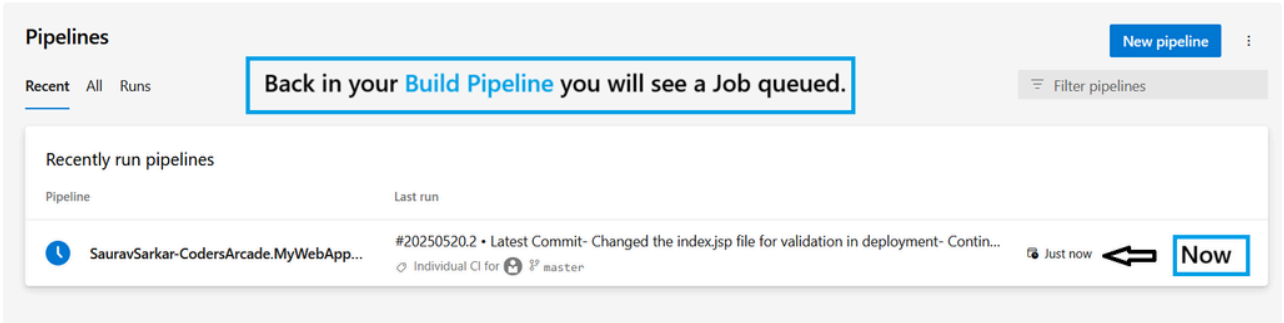
Change something

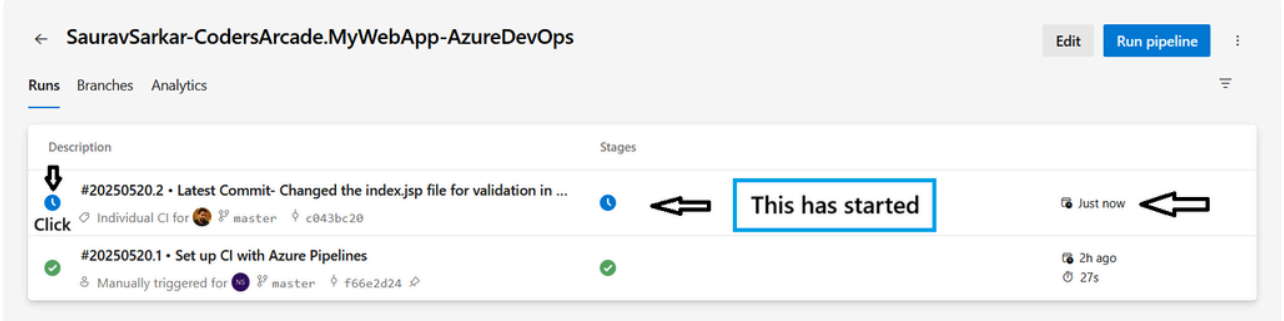
```
<body>

    <div class="container">
        <h1>Welcome to CodersArcade.com</h1>
        <h2>Master CI/CD with Our Hands-On Courses</h2>
        <div class="cta">
            <h2>Start Learning Today!!!!!!!!!</h2>
            <p>Join thousands of learners and get hands-on experience with
            <a href="https://www.youtube.com/c/codersarcade" class="button
        </div>
        <footer>
            <p>&copy; 2025 Coders Arcade. All rights reserved.</p>
        </footer>
    </div>
```

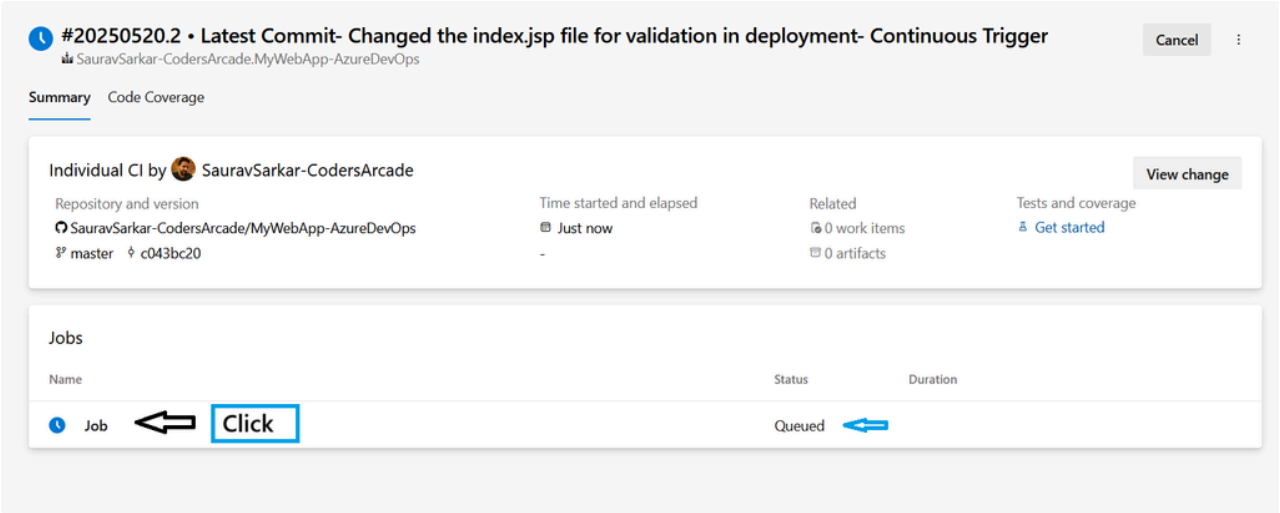
Like this

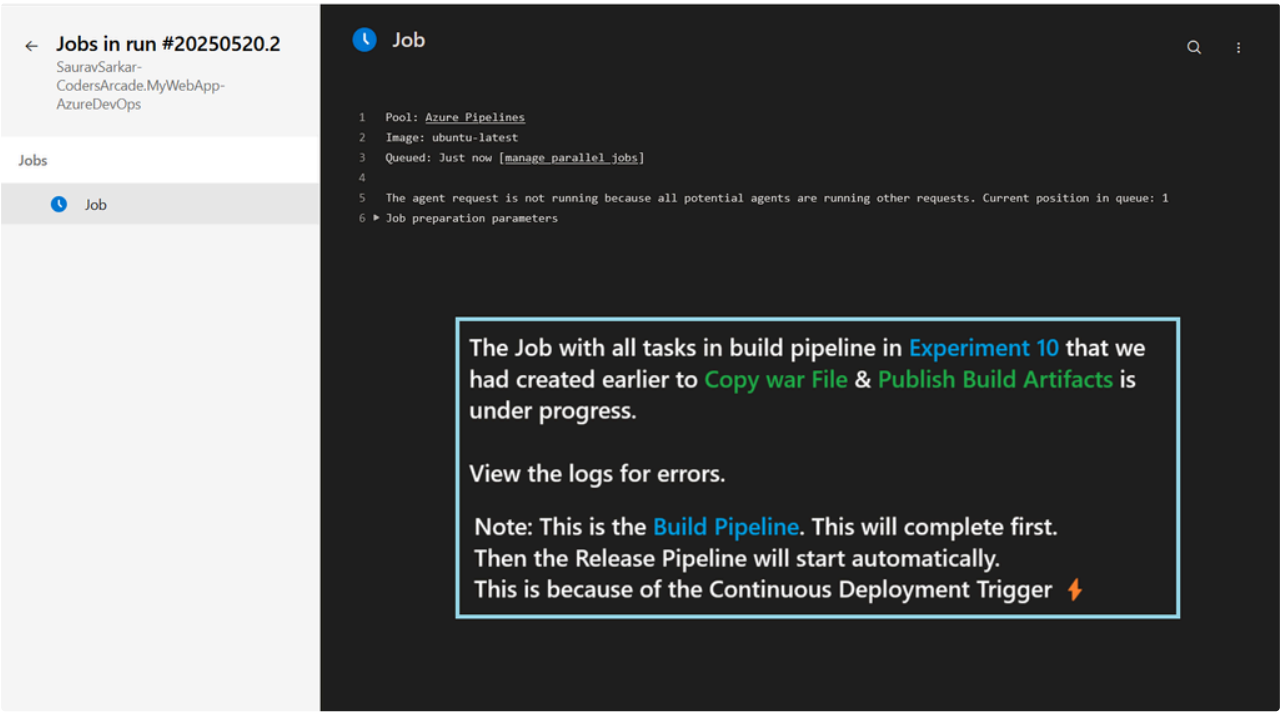


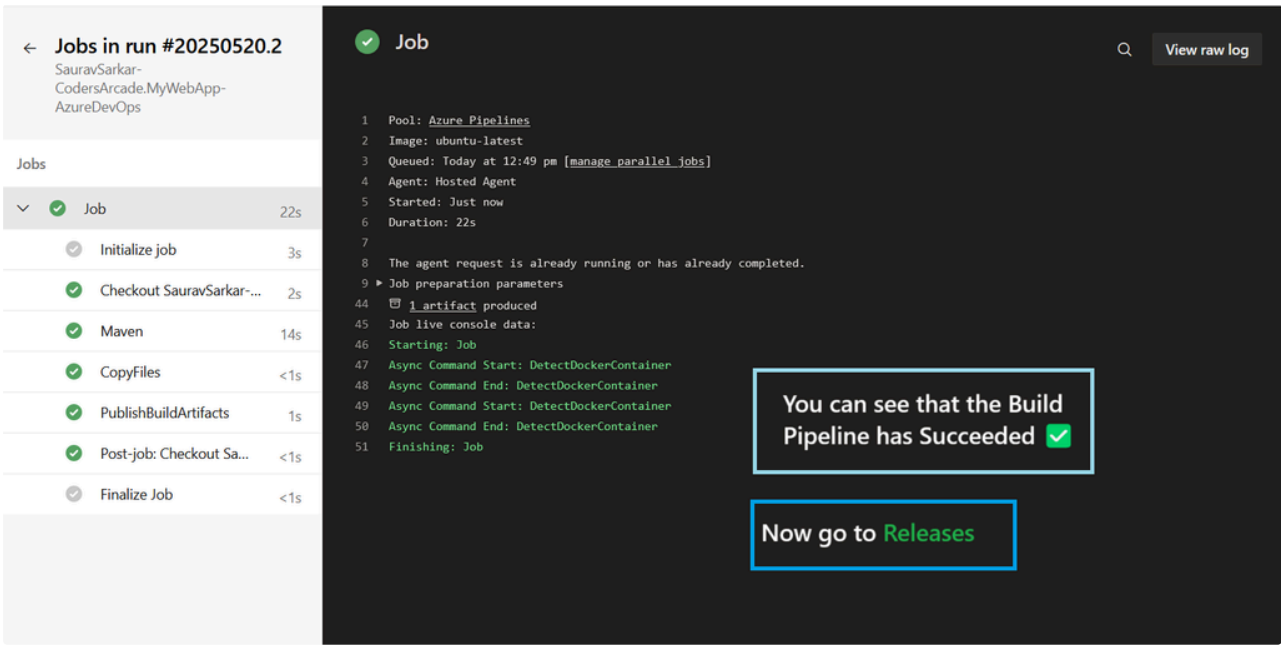


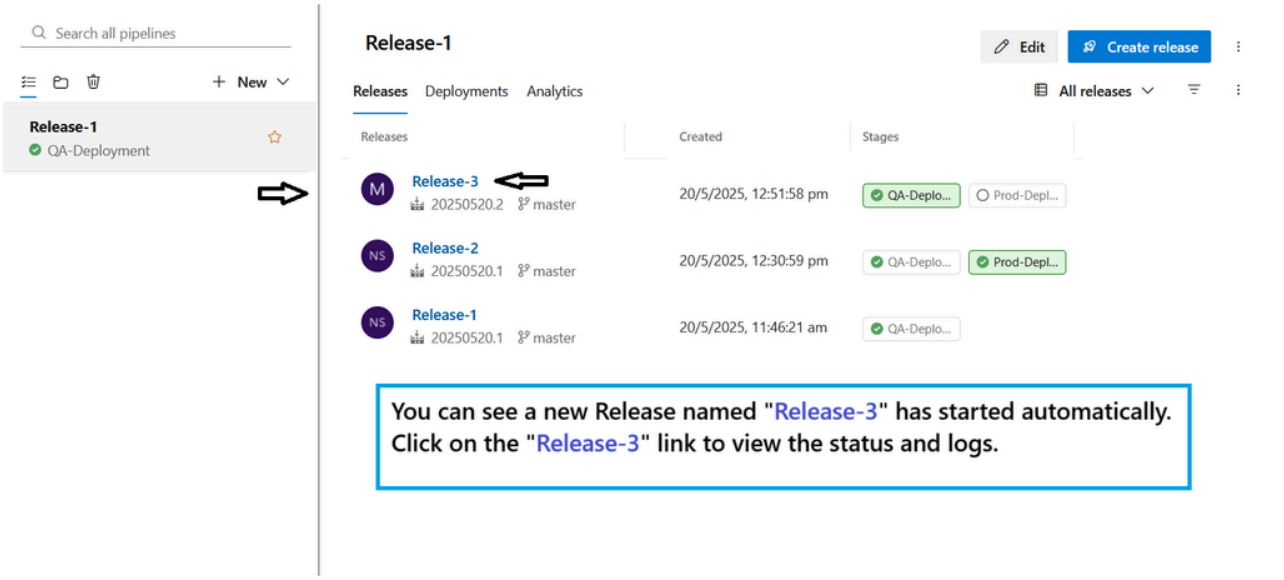


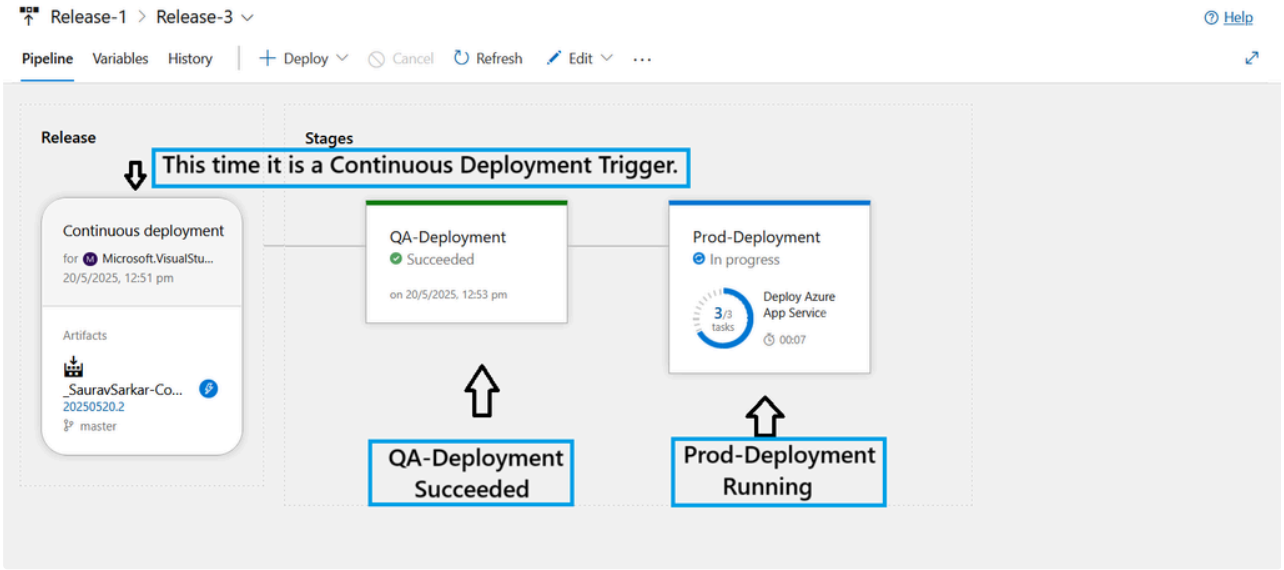


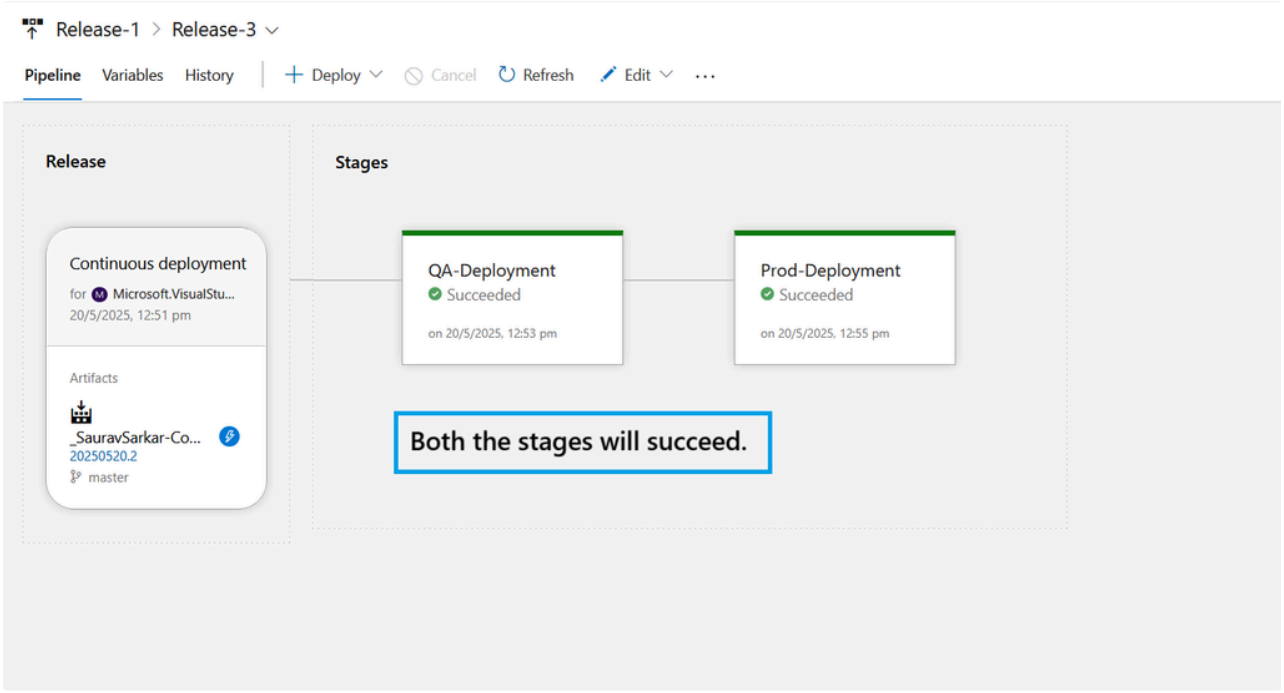

#20250520.2 • Latest Commit- Changed the index.jsp file for validation in deployment- Continuous Trigger
SauravSarkar-CodersArcade.MyWebApp-AzureDevOps
Cancel
Summary
Code Coverage
Individual CI by SauravSarkar-CodersArcade
View change
Repository and version
SauravSarkar-CodersArcade/MyWebApp-AzureDevOps
master c043bc20
Time started and elapsed
Just now
-
Related
0 work items
0 artifacts
Tests and coverage
Get started
Jobs
Name
Status
Duration
Job
Click
Queued

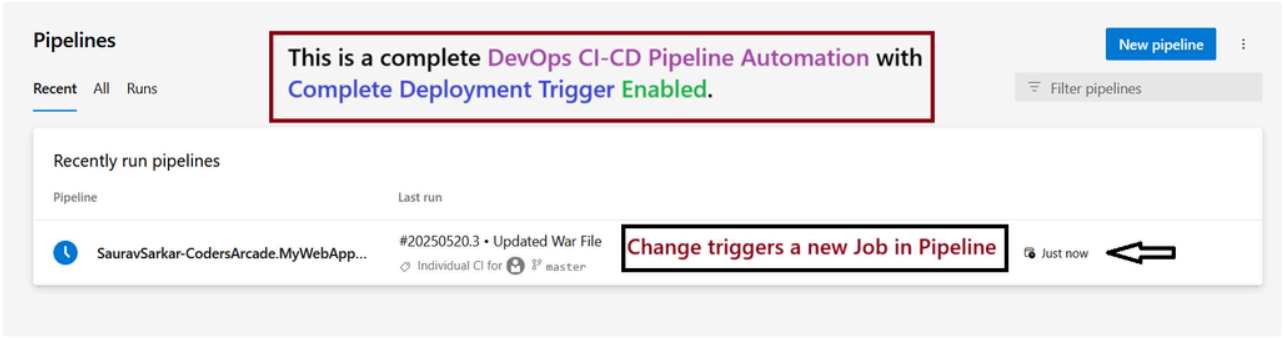

Jobs in run #20250520.2
SauravSarkar-CodersArcade.MyWebApp-AzureDevOps
Jobs
Job
Job
1 Pool: Azure Pipelines
2 Image: ubuntu-latest
3 Queued: Just now [manage parallel jobs]
4
5 The agent request is not running because all potential agents are running other requests. Current position in queue: 1
6 ▶ Job preparation parameters
The Job with all tasks in build pipeline in Experiment 10 that we had created earlier to Copy war File & Publish Build Artifacts is under progress.
View the logs for errors.
Note: This is the Build Pipeline. This will complete first.
Then the Release Pipeline will start automatically.
This is because of the Continuous Deployment Trigger

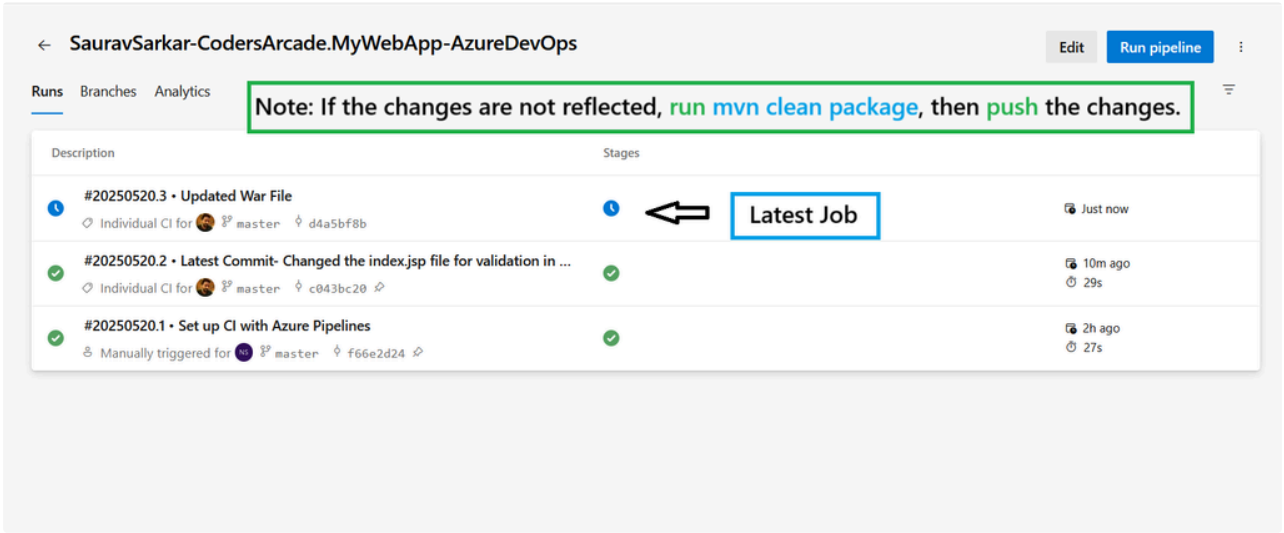

Jobs in run #20250520.2
SauravSarkar-CodersArcade.MyWebApp-AzureDevOps
Jobs
Job 22s
Initialize job 3s
Checkout SauravSarkar-... 2s
Maven 14s
CopyFiles <1s
PublishBuildArtifacts 1s
Post-job: Checkout Sa... <1s
Finalize Job <1s
Job
View raw log
1 Pool: Azure Pipelines
2 Image: ubuntu-latest
3 Queued: Today at 12:49 pm [manage parallel jobs]
4 Agent: Hosted Agent
5 Started: Just now
6 Duration: 22s
8 The agent request is already running or has already completed.
9 Job preparation parameters
44 1 artifact produced
45 Job live console data:
46 Starting: Job
47 Async Command Start: DetectDockerContainer
48 Async Command End: DetectDockerContainer
49 Async Command Start: DetectDockerContainer
50 Async Command End: DetectDockerContainer
51 Finishing: Job
You can see that the Build Pipeline has Succeeded
Now go to Releases

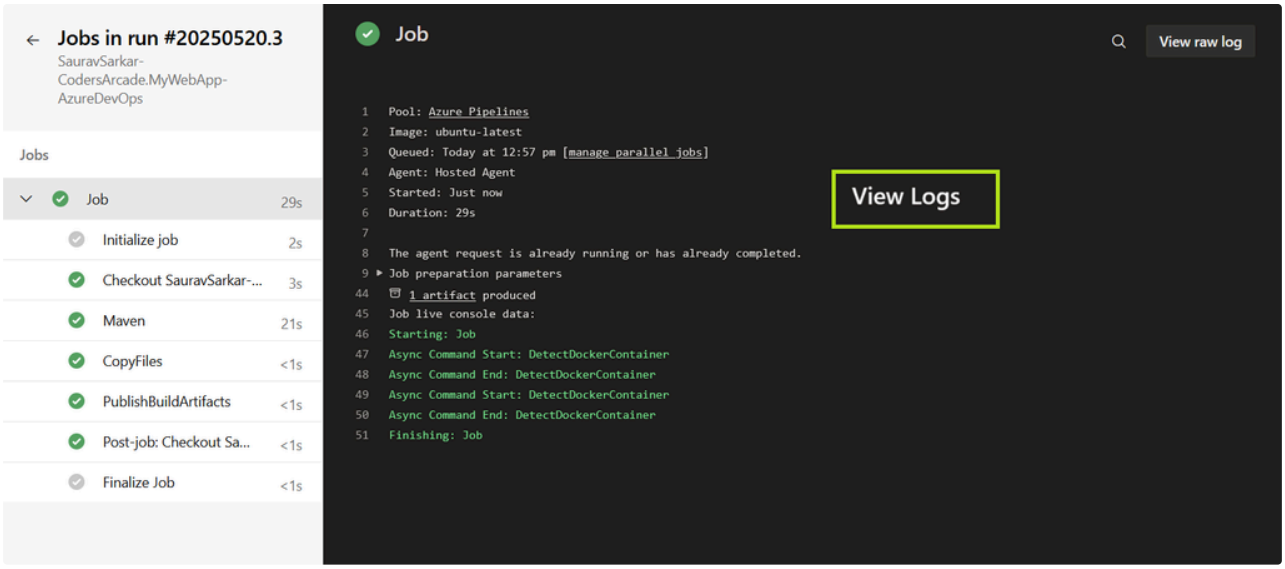

Search all pipelines
New
Release-1
QA-Deployment
Release-1
Edit
Create release
Releases
Deployments
Analytics
All releases
Releases
Created
Stages
Release-3
20250520.2 master
20/5/2025, 12:51:58 pm
QA-Deplo...
Prod-Depl...
Release-2
20250520.1 master
20/5/2025, 12:30:59 pm
QA-Deplo...
Prod-Depl...
Release-1
20250520.1 master
20/5/2025, 11:46:21 am
QA-Deplo...
You can see a new Release named "Release-3" has started automatically. Click on the "Release-3" link to view the status and logs.

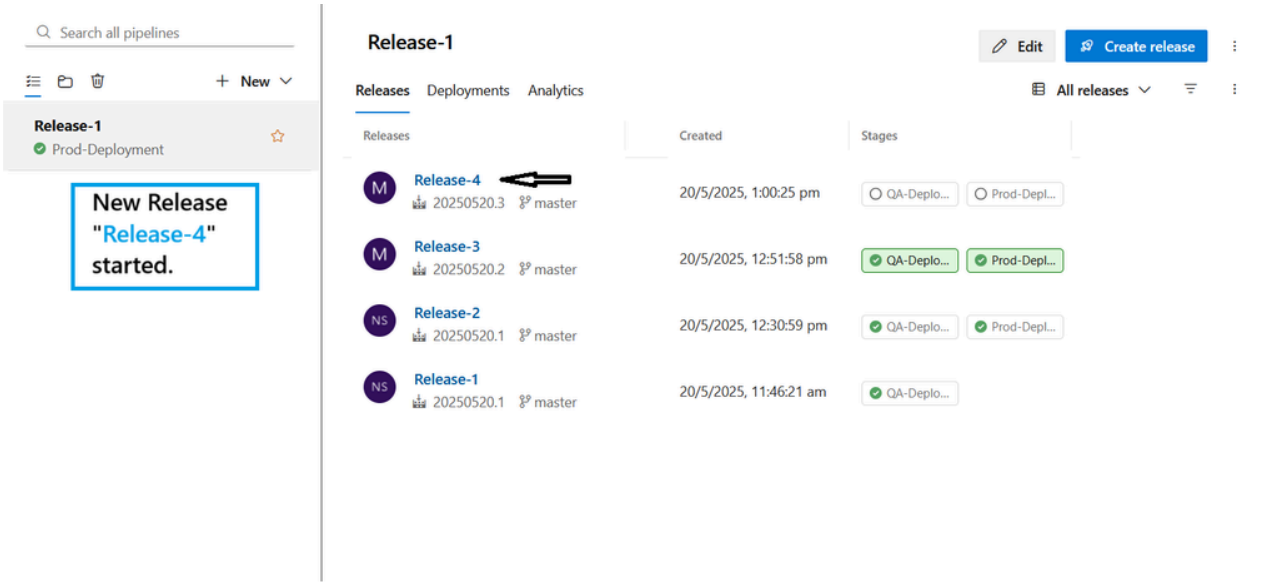

Release-1 > Release-3
Help
Pipeline
Variables
History
Deploy
Cancel
Refresh
Edit
Release
Stages
This time it is a Continuous Deployment Trigger.
Continuous deployment
for Microsoft.VisualStu...
20/5/2025, 12:51 pm
Artifacts
_SauravSarkar-Co...
20250520.2
master
QA-Deployment
Succeeded
on 20/5/2025, 12:53 pm
Prod-Deployment
In progress
3/3 tasks
Deploy Azure App Service
00:07
QA-Deployment Succeeded
Prod-Deployment Running

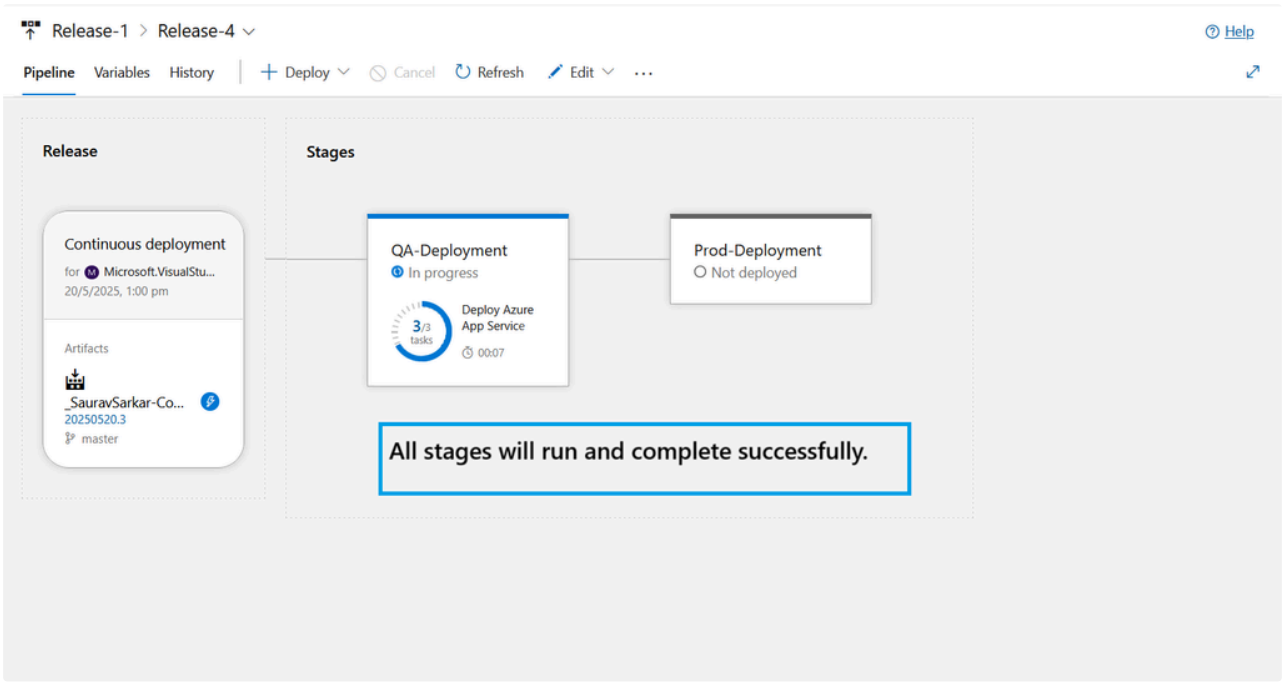

Release-1 > Release-3
Pipeline
Variables
History
Deploy
Cancel
Refresh
Edit
Release
Continuous deployment
for Microsoft.VisualStu...
20/5/2025, 12:51 pm
Artifacts
_SauravSarkar-Co...
20250520.2
master
Stages
QA-Deployment
Succeeded
on 20/5/2025, 12:53 pm
Prod-Deployment
Succeeded
on 20/5/2025, 12:55 pm
Both the stages will succeed.

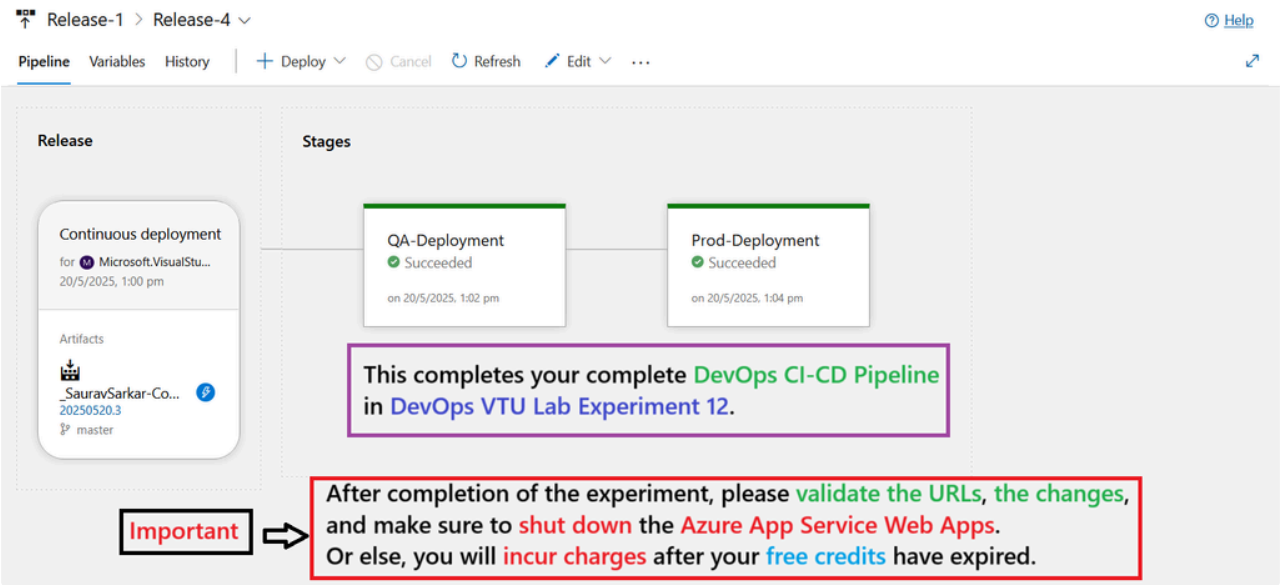

Pipelines
This is a complete DevOps CI-CD Pipeline Automation with Complete Deployment Trigger Enabled.
New pipeline
Recent
All
Runs
Filter pipelines
Recently run pipelines
Pipeline
Last run
SauravSarkar-CodersArcade.MyWebApp...
#20250520.3 • Updated War File
Individual CI for master
Change triggers a new Job in Pipeline
Just now


SauravSarkar-CodersArcade.MyWebApp-AzureDevOps
Edit
Run pipeline
Runs
Branches
Analytics
Note: If the changes are not reflected, run mvn clean package, then push the changes.
Description
Stages
#20250520.3 • Updated War File
Individual CI for master d4a5bf8b
Latest Job
Just now
#20250520.2 • Latest Commit- Changed the index.jsp file for validation in ...
Individual CI for master c043bc20
10m ago
29s
#20250520.1 • Set up CI with Azure Pipelines
Manually triggered for master f66e2d24
2h ago
27s

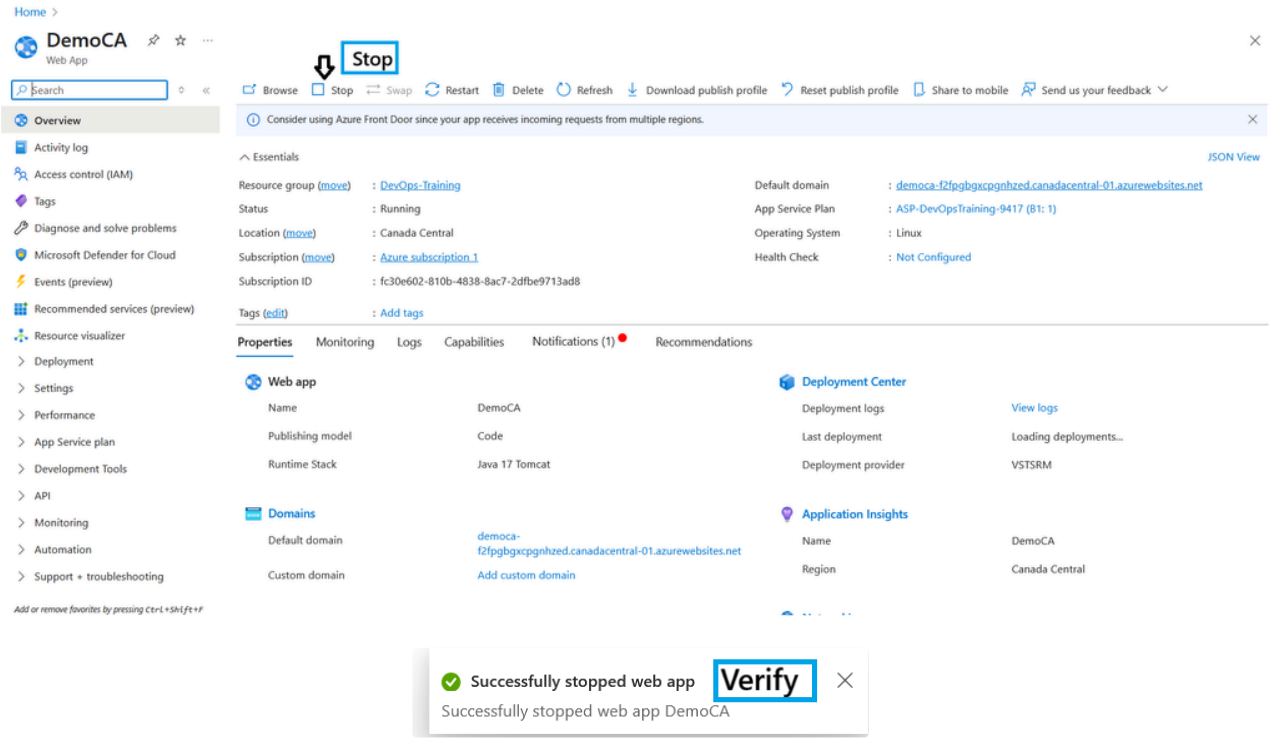

Jobs in run #20250520.3
SauravSarkar-CodersArcade.MyWebApp-AzureDevOps
Jobs
Job 29s
Initialize job 2s
Checkout SauravSarkar-... 3s
Maven 21s
CopyFiles <1s
PublishBuildArtifacts <1s
Post-job: Checkout Sa... <1s
Finalize Job <1s
Job
View raw log
1 Pool: Azure Pipelines
2 Image: ubuntu-latest
3 Queued: Today at 12:57 pm [manage parallel jobs]
4 Agent: Hosted Agent
5 Started: Just now
6 Duration: 29s
8 The agent request is already running or has already completed.
9 Job preparation parameters
44 1 artifact produced
45 Job live console data:
46 Starting: Job
47 Async Command Start: DetectDockerContainer
48 Async Command End: DetectDockerContainer
49 Async Command Start: DetectDockerContainer
50 Async Command End: DetectDockerContainer
51 Finishing: Job
View Logs

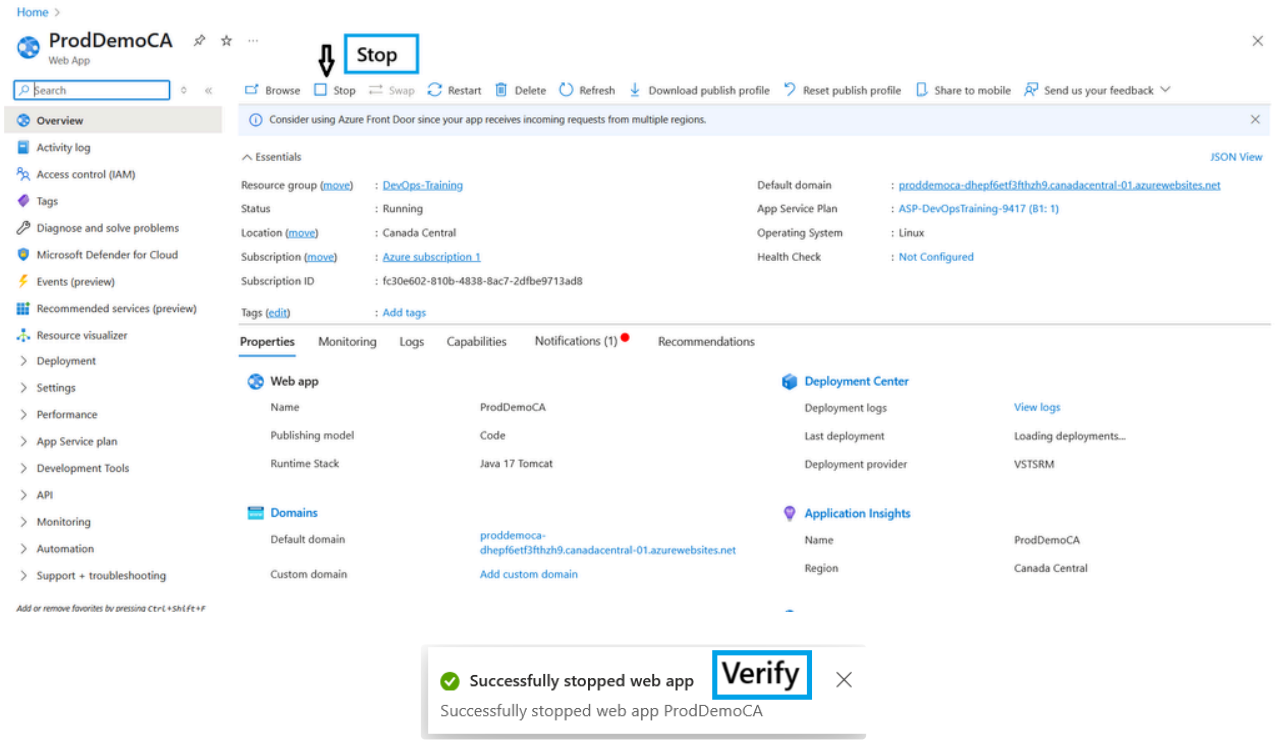

Search all pipelines
New
Release-1
Prod-Deployment
New Release "Release-4" started.
Release-1
Edit
Create release
Releases
Deployments
Analytics
All releases
Releases
Created
Stages
Release-4
20250520.3
master
20/5/2025, 1:00:25 pm
QA-Deplo...
Prod-Depl...
Release-3
20250520.2
master
20/5/2025, 12:51:58 pm
QA-Deplo...
Prod-Depl...
Release-2
20250520.1
master
20/5/2025, 12:30:59 pm
QA-Deplo...
Prod-Depl...
Release-1
20250520.1
master
20/5/2025, 11:46:21 am
QA-Deplo...

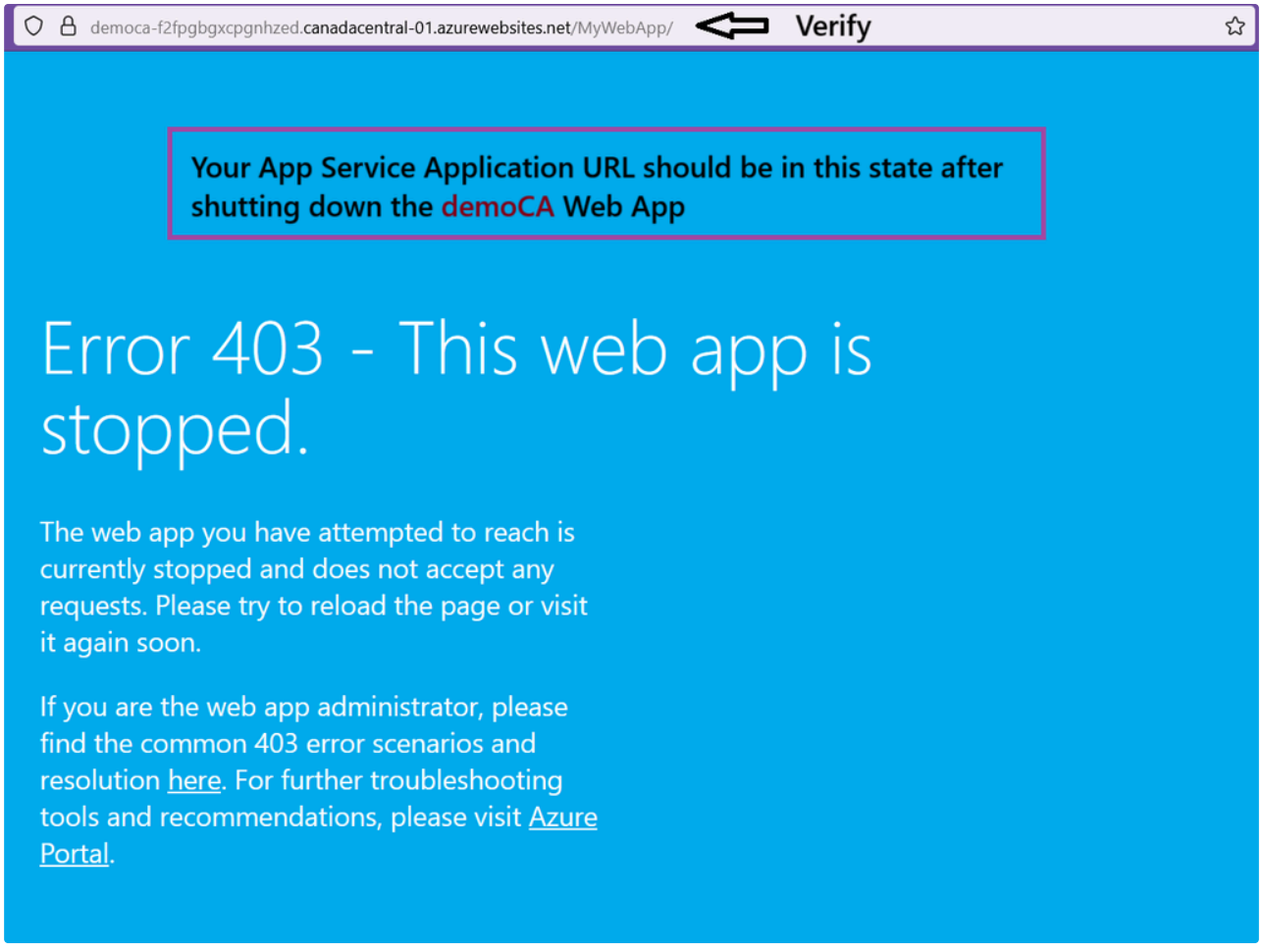

Release-1 > Release-4
Help
Pipeline
Variables
History
Deploy
Cancel
Refresh
Edit
Release
Continuous deployment
for Microsoft.VisualStu...
20/5/2025, 1:00 pm
Artifacts
_SauravSarkar-Co...
20250520.3
master
Stages
QA-Deployment
In progress
3/3 tasks
Deploy Azure App Service
00:07
Prod-Deployment
Not deployed
All stages will run and complete successfully.

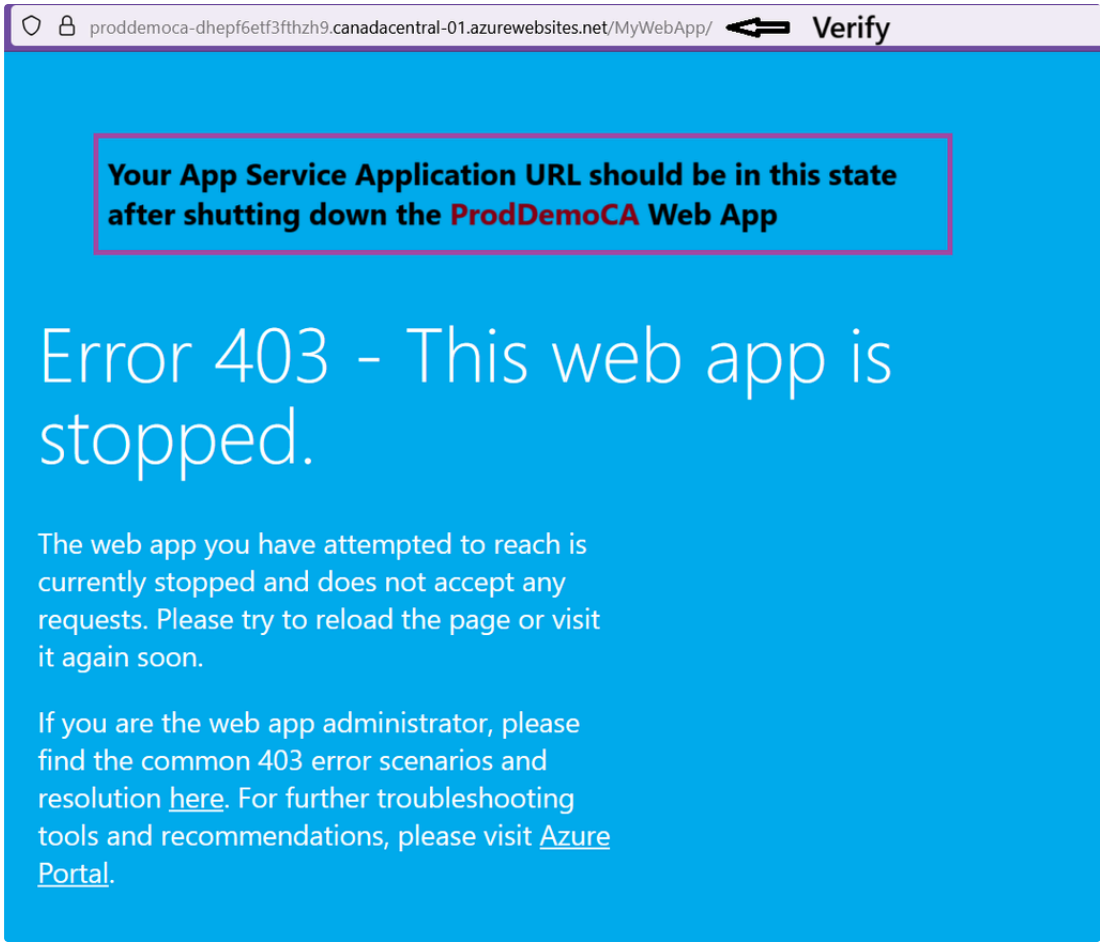


3. Now go to **portal.azure.com/#home and stop the two Web Apps as shown below.**
4. **This is mandatory because otherwise you will incur charges after the free credits have expired [Important]**




Home
ProdDemoCA
Web App
Stop
Search
Browse
Stop
Swap
Restart
Delete
Refresh
Download publish profile
Reset publish profile
Share to mobile
Send us your feedback
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Microsoft Defender for Cloud
Events (preview)
Recommended services (preview)
Resource visualizer
Deployment
Settings
Performance
App Service plan
Development Tools
API
Monitoring
Automation
Support + troubleshooting
Add or remove favorites by pressing Ctrl+Shift+F
Consider using Azure Front Door since your app receives incoming requests from multiple regions.
Essentials
JSON View
Resource group (move) : DevOps-Training
Status : Running
Location (move) : Canada Central
Subscription (move) : Azure subscription 1
Subscription ID : fc30e602-810b-4838-8ac7-2dfbe9713ad8
Tags (edit) : Add tags
Default domain : proddemoca-dhepf6etf3fthzh9.canadacentral-01.azurewebsites.net
App Service Plan : ASP-DevOpsTraining-9417 (B1: 1)
Operating System : Linux
Health Check : Not Configured
Properties
Monitoring
Logs
Capabilities
Notifications (1)
Recommendations
Web app
Name ProdDemoCA
Publishing model Code
Runtime Stack Java 17 Tomcat
Deployment Center
Deployment logs View logs
Last deployment Loading deployments...
Deployment provider VSTSRM
Domains
Default domain proddemoca-dhepf6etf3fthzh9.canadacentral-01.azurewebsites.net
Custom domain Add custom domain
Application Insights
Name ProdDemoCA
Region Canada Central
Successfully stopped web app
Verify
Successfully stopped web app ProdDemoCA


democa-f2fpgbgxcpgnhzed.canadacentral-01.azurewebsites.net/MyWebApp/
Verify
Your App Service Application URL should be in this state after shutting down the demoCA Web App
Error 403 - This web app is stopped.
The web app you have attempted to reach is currently stopped and does not accept any requests. Please try to reload the page or visit it again soon.
If you are the web app administrator, please find the common 403 error scenarios and resolution here. For further troubleshooting tools and recommendations, please visit Azure Portal.



✅ Final Summary – Experiment 12: Full CI/CD Pipeline with Azure DevOps (Production Deployment)

- 🏗️ Completed the **CI/CD pipeline** by configuring a **Release Pipeline** for deploying the final `.war` file to the **Production Server** (`prodDemoCA` Web App on Azure).
- 🧱 Used the same `.war` artifact generated in the Build Pipeline (Experiment 10), now pushed to **Production** via a separate **release stage**.
- 🚀 Deployed to the **prodDemoCA Azure App Service**, simulating a real-world Production environment.
- 🌍 Copied the generated **App Service URL** and updated it inside the `driver.get("your_app_service_url");` method in the automation script.
- 🧪 Reused the existing `BrowserTest.java` file and ran it with **JUnit** to perform a **simple title validation** — confirming successful deployment.
- ⚙️ Enabled the **Continuous Deployment Trigger (⚡icon)** so that every time you push code to GitHub, it:
  - 🔁 Triggers the Build Pipeline
  - 📦 Publishes artifacts
  - 🚚 Automatically starts a new **Release** (e.g., Release-4 after Release-3)
  - 🛠️ Deploys to the Production Server
  - ✅ Completes the automation test
- 🔁 Validated how any code change (once pushed) triggers the **full CI/CD cycle** from build → release → deployment → test without manual intervention.
- 🧩 Final reminder: Ensure the **Azure Web Apps (demoCA and prodDemoCA)** are started before releases get triggered, otherwise deployment will fail.

This wraps up the **complete DevOps CI/CD journey** across Experiments 10, 11, and 12 — from code build to production deployment with automation testing, all powered by Azure DevOps. 🚀💻🔁
