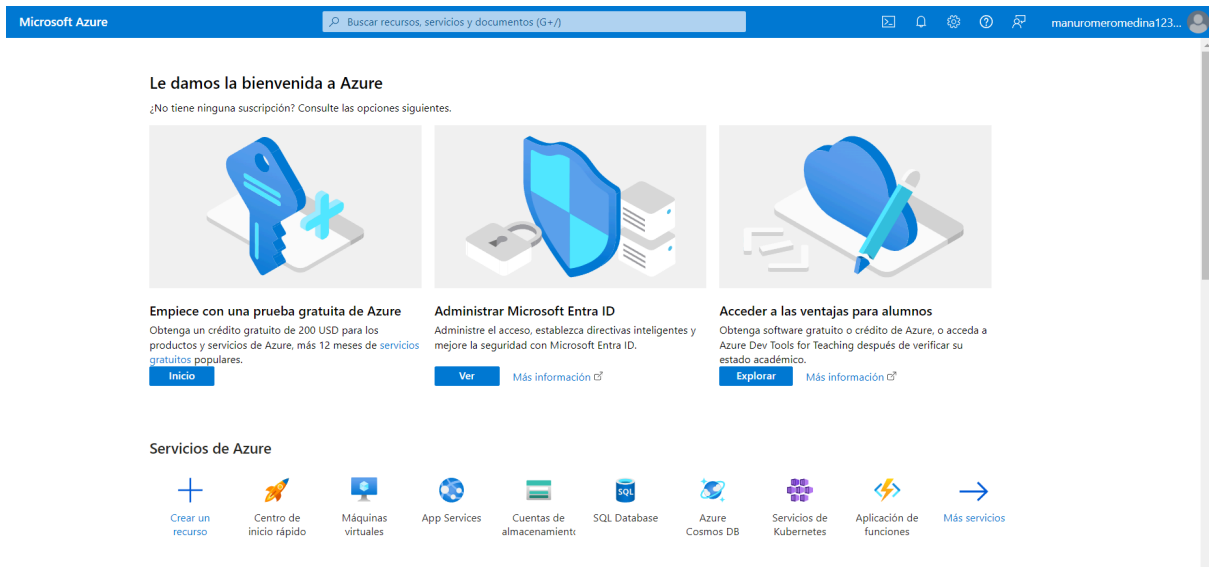


# TP5 - Despliegue de aplicaciones con Azure Devops Release Pipelines

## Manuel Romero Medina

### 5.1 Crear una cuenta Azure.



### 5.2 Crear un recurso Web App en Azure Portal y navegar a la url provista.

Inicio >

TP5IngSoft3UCC2024

Grupo de recursos

Buscar

+ Crear

Administrar vista

Eliminar grupo de recursos

Actualizar

Exportar a CSV

Abrir consulta

Asignar etiquetas

Mover

Eliminar

Vista JSON

Información general

Registro de actividad

Control de acceso (IAM)

Etiquetas

Visualizador de recursos

Eventos

Configuración

Administración de costos

Información esencial

Recursos

Recomendaciones

Filtrar por cualquier ca...

Tipo es igual a todo

Ubicación es igual a todo

Agregar filtro

Mostrando de 0 a 0 de 0 registros.

Mostrar tipos ocultos

Sin agrupar

Vista de lista

Nombre

Tipo

Ubicación

Resumen

Aplicación web de Microsoft

SKU Gratis

Precio estimado - Gratis

Detalles

Suscripción

5a496d64-56ee-4be3-9f0d-75685209f7ab

Grupo de recursos

TP5IngSoft3UCC2024

Nombre

MiEjemplo1

Publicar

Código

Pila del entorno en tiempo de ejecución

.NET 8 (LTS)

Plan de App Service (nuevo)

Nombre

MiPlanTP05

Sistema operativo

Windows

Región

Brazil South

SKU

Gratis

ACU

Infraestructura compartida

Inicio >

Microsoft.Web-WebApp-Portal-1e726c37-b8c1 | Información general ✨ ...

Implementación

Buscar 🔍 < << Eliminar Cancelar Volver a implementar Descargar Actualizar

Información general

- Entradas
- Salidas
- Plantilla

✓ Se completó la implementación

Nombre de implementación: Microsoft.Web-WebApp-Portal-1e726... Hora de inicio: 19/9/2024, 14:54:23  
Suscripción: Azure subscription 1 Id. de correlación: af84057d-c44f-41ce-88d4-be1c1f6605d1

Grupo de recursos: TP5ingSoft3UCC2024

▼ Detalles de implementación

^ Pasos siguientes

Administre las implementaciones de la aplicación. Recomendado

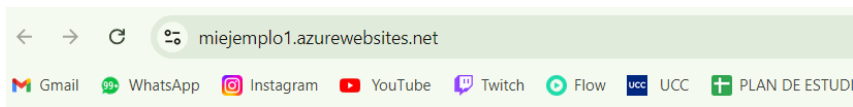
Proteja la aplicación mediante la autenticación. Recomendado

[Ir al recurso](#)

Enviar comentarios


[Cuéntenos su experiencia con la implementación](#)

## Dominio predeterminado: miejemplo1.azurewebsites.net



## 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.

 Supporting Node.js, Java, .NET and more

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

[Deployment center](#)

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

[Quickstart](#)

### 5.3. Actualizar Pipeline de Build para que use tareas de DotNetCoreCLI@2 como en el pipeline clásico, luego crear un Pipeline de Release en Azure DevOps con CD habilitada

The screenshot displays the Azure DevOps interface for creating a new release pipeline. The top navigation bar shows the user 'manuromeromedina12345' and the path 'Sample02 / Pipelines / Releases'. The main area is titled 'New release pipeline' and includes tabs for 'Pipeline', 'Tasks', 'Variables', 'Retention', 'Options', and 'History'.

The left pane shows the pipeline structure with 'Artifacts' and 'Stages' sections. The 'Artifacts' section has a button 'Add an artifact'. The 'Stages' section has a button 'Add' and a stage named 'Stage 1' with the subtext 'Select a template'. A 'Loading...' indicator is visible.

The right pane displays a list of templates under 'Select a template'. The templates include:

- Azure App Service deployment**: Deploy your application to Azure App Service. Choose from Web App on Windows, Linux, containers, Function Apps, or WebJobs.
- 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.

The bottom pane shows the 'Stage' configuration for 'Deploy a QA'. The stage name is 'Deploy a QA' and the stage owner is 'Manuel Romero Medina'. The stage is configured with '1 job, 1 task'.

×

Add an artifact

Source type

✓ Build

Azure Repos ...

GitHub

TFVC

[5 more artifact types](#) ▾

Project \* ⓘ

Sample02 ▾

Source (build pipeline) \* ⓘ

Sample02 ▾

Default version \* ⓘ

Latest ▾

Source alias \* ⓘ

\_Sample02

ⓘ No version is available for **Sample02** or the latest version has no artifacts to publish. Please check the source pipeline.

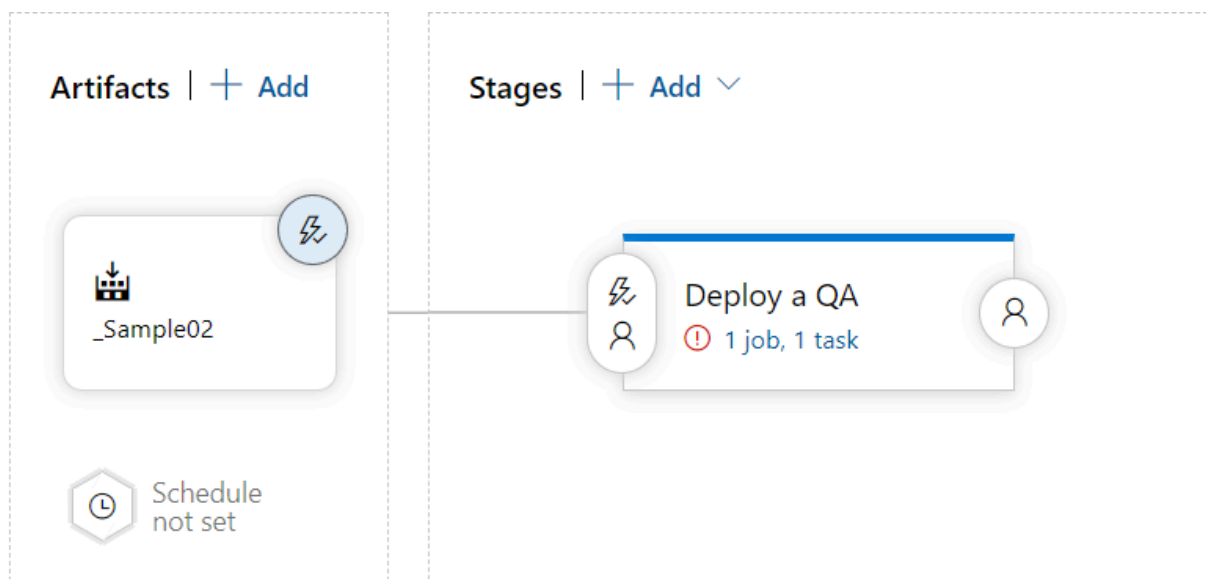
Add

## Continuous deployment trigger

Build: \_Sample02

☒ Enabled

Creates a release every time a new build is available.



Stage name

## Deploy a QA


## Parameters ⓘ | 🔗 Unlink all

Azure subscription \*  | [Manage](#) 

Azure subscription 1 (5a496d64-56ee-4be3-9f0d-75685209f7ab)

① Scoped to subscription 'Azure subscription 1'

This field is linked to 1 setting in 'Deploy Azure App Service'

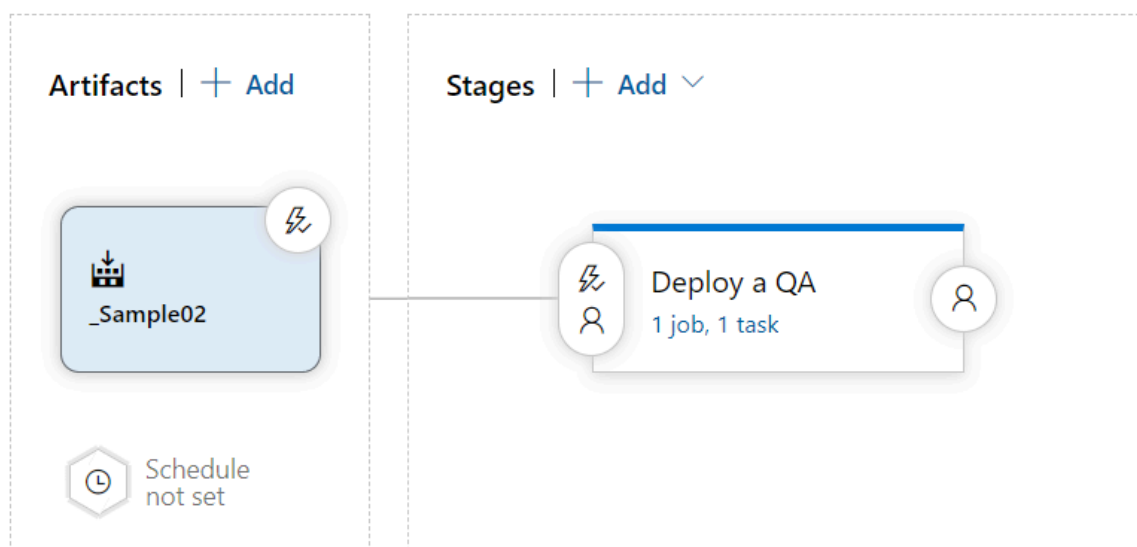
App type 

## Web App on Windows

App service name \*

MiEjemplo1

This field is linked to 1 setting in 'Deploy Azure App Service'



manuromeromedina12345 / Sample02 / Pipelines / Releases

🔍 Search all pipelines






**ReleasePipeline01**  
No deployments found

ReleasePipeline01

Releases Deployments Analytics

 Edit

Create release

All releases ▾



### 5.4. Optimizar Pipeline de Build

manuromeromedia12345 / Sample02 / Pipelines

← Sample02

main

Sample02 / azure-pipelines.yml \*

```
1 # Starter pipeline
2 # Start with a minimal pipeline that you can customize to build and deploy your code.
3 # Add steps that build, run tests, deploy, and more:
4 # https://aka.ms/yaml
5
6 trigger:
7   - main
8
9 pool:
10  - vmImage: 'windows-latest'
11
12 variables:
13   - solution: '**/*.sln'
14   - buildPlatform: 'Any CPU'
15   - buildConfiguration: 'Release'
16
17 steps:
18   - Settings
```

Validate and save

×

Validate and commit azure-pipelines.yml to the repository.

Validation

✓ Pipeline is valid.

Commit message

Update azure-pipelines.yml for Azure Pipelines

Optional extended description

Add an optional description...

☒ Commit directly to the main branch

☐ Create a new branch for this commit

Search all pipelines

☰

🗑

+

New

▼

ReleasePipeline01

✓ Deploy a QA

☆

Releases

Deployments

Analytics

Releases

Created

Stages

MM

Release-2

📄 20240922....

🌐 main

22/9/2024, 19:31:43

✓ Deploy a ...

### 5.5 Verificar el deploy de la URL de la WebAPP /weatherforecast

← → ↺ ⚙ miejemplo1.azurewebsites.net/weatherforecast

📧 Gmail

📞 WhatsApp

📷 Instagram

📺 YouTube

🗣 Twitch

🎮 Flow

🏢 ucc

🌐 U

Dar formato al texto ☒


[  
 {  
 "date": "2024-09-23",  
 "temperatureC": -15,  
 "temperatureF": 6,  
 "summary": "Sweltering"  
 },  
 {  
 "date": "2024-09-24",  
 "temperatureC": 24,  
 "temperatureF": 75,  
 "summary": "Helado"  
 },  
 {  
 "date": "2024-09-25",  
 "temperatureC": 25,  
 "temperatureF": 76,  
 "summary": "Calido"  
 },  
]

5.6 Realizar un cambio al código del controlador para que devuelva 7 pronósticos, realizar commit, evaluar ejecución de pipelines de build y release, navegar a la url de la webapp/weatherforecast y corroborar cambio



Primero realizamos el cambio para que devuelva 7 pronósticos, y realizamos el commit :


```
21  
22 [HttpGet(Name = "GetWeatherForecast")]  
23 public IEnumerable<WeatherForecast> Get()  
24 {  
25     return Enumerable.Range(1, 7).Select(index => new WeatherForecast  
26     {  
27         Date = DateOnly.FromDateTime(DateTime.Now.AddDays(index)),  
28         TemperatureC = Random.Shared.Next(-20, 55),  
29         Summary = Summaries[Random.Shared.Next(Summaries.Length)]  
30     })  
31     .ToArray();
```


Vemos que se ejecuta el pipeline de build y release:


 Sample02


#20240922.3 • Updated WeatherForecastController.cs

 Individual CI for  main

 6m ago









 2m 21s





## ReleasePipeline01

Releases Deployments Analytics


Releases	Created	Stages
 <b>Release-3</b>  20240922....  main	22/9/2024, 19:47:08	 Deploy a ...
 <b>Release-2</b>  20240922....  main	22/9/2024, 19:31:43	 Deploy a ...

Corroboramos los cambios:

```
Dar formato al texto ☒
```

```
[
  {
    "date": "2024-09-23",
    "temperatureC": 16,
    "temperatureF": 60,
    "summary": "Calido"
  },
  {
    "date": "2024-09-24",
    "temperatureC": 22,
    "temperatureF": 71,
    "summary": "Mild"
  },
  {
    "date": "2024-09-25",
    "temperatureC": 25,
    "temperatureF": 76,
    "summary": "Fresco"
  },
  {
    "date": "2024-09-26",
    "temperatureC": 36,
    "temperatureF": 96,
    "summary": "Sweltering"
  },
  {
    "date": "2024-09-27",
    "temperatureC": 27,
    "temperatureF": 80,
    "summary": "Calido"
  },
  {
    "date": "2024-09-28",
    "temperatureC": 5,
    "temperatureF": 40,
    "summary": "Mild"
  },
  {
    "date": "2024-09-29",
    "temperatureC": 15,
    "temperatureF": 58,
    "summary": "Fresquito"
  }
]
```

5.7. Clonar la Web App de QA para que contar con una WebApp de PROD a partir de un Template Deployment en Azure Portal y navegar a la url provista para la WebApp de PROD.4.7. Clonar la Web App de QA para que contar con una WebApp de PROD a partir de un Template Deployment en Azure Portal y navegar a la url provista para la WebApp de PROD.

Template Deployment (implementar mediante plantillas personalizadas)  ...

Microsoft



## Template Deployment (implementar mediante plantillas personalizadas) [Agregar a Favoritos](#)

Microsoft | Azure Service

★ 4.0 (3 clasificaciones)

Plan

Template deployment (deploy using c...

Crear

## Cargo archivo template.json

Editar plantilla ...

Edite la plantilla Azure Resource Manager

[+ Agregar recurso](#) [↑ Plantilla de inicio rápido](#) [📄 Cargar archivo](#) [↓ Descargar](#)

Parámetros (17)

Variables (0)

Recursos (2)

[parameters('name')]

(Microsoft.Web/sites)

[parameters('hostingPlanName')]

(Microsoft.Web/serverfarms)

```
1 {
2   "$schema": "http://schema.management.azure.com/schemas/2015-01-01/deploymentTemplate.json",
3   "contentVersion": "1.0.0.0",
4   "parameters": {
5     "subscriptionId": {
6       "type": "string"
7     },
8     "resourceGroupName": {
9       "type": "string"
10    },
11    "name": {
12      "type": "string"
13    },
14    "location": {
15      "type": "string"
16    },
17    "hostingPlanName": {
18      "type": "string"
19    },
20    "serverFarmResourceGroup": {
21      "type": "string"
22    },
23    "alwaysOn": {
```

Guardar

Descartar



# Editar parámetros

Inicio > TP5IngSoft3UCC2024 > Marketplace > Template Deployment (implementar mediante plantillas personalizadas) >

## Editar parámetros

Cargar archivo

Descargar

```
1 {
2   "$schema": "https://schema.management.azure.com/schemas/2019-04-01/deploymentParameters.json#",
3   "contentVersion": "1.0.0.0",
4   "parameters": {
5     "subscriptionId": {
6       "value": "5a496d64-56ee-4be3-9f0d-75685209f7ab"
7     },
8     "resourceGroupName": {
9       "value": "TP5IngSoft3UCC2024"
10    },
11    "name": {
12      "value": "MiEjemplo1-PROD"
13    },
14    "location": {
15      "value": "Brazil South"
16    },
17    "hostingPlanName": {
18      "value": "MiPlanTP05"
19    },
20    "serverFarmResourceGroup": {
21      "value": "TP5IngSoft3UCC2024"
22    },
23    "alwaysOn": {
24      "value": true
25    }
26  }
27 }
```

Básico	
Suscripción	Azure subscription 1
Grupo de recursos	TP5IngSoft3UCC2024
Región	East US
Subscription Id	5a496d64-56ee-4be3-9f0d-75685209f7ab
Resource Group Name	TP5IngSoft3UCC2024
Name	MiEjemplo1-PROD
Location	Brazil South
Hosting Plan Name	MiPlanTP05
Server Farm Resource Group	TP5IngSoft3UCC2024
Always On	false
Ftps State	FtpsOnly
Auto Generated Domain Name Label Sc...	TenantReuse
Sku	Free
Sku Code	F1
Worker Size	0
Worker Size Id	0
Number Of Workers	1

# Se implementó exitosamente

Inicio >

Microsoft.Template-20240922202346 | Información general

Implementación

Buscar

Eliminar

Cancelar

Volver a implementar

Descargar

Actualizar

Información general

Entradas

Salidas

Plantilla

Se completó la implementación

Nombre de implementación : Microsoft.Template-20240922202346

Suscripción : Azure subscription 1

Grupo de recursos : TP5IngSoft3UCC2024

Hora de inicio : 22/9/2024, 20:23:59

Id. de correlación : 2033a676-921d-4c28-9ac2-2ec2235447a6

> Detalles de implementación

> Pasos siguientes

Ir al grupo de recursos

Enviar comentarios

Cuéntenos su experiencia con la implementación

- ☐

Nombre ↑↓
- ☐

Application Insights Smart Detection
- ☐

MiEjemplo1
- ☐

MiEjemplo1
- ☐

MiEjemplo1-PROD
- ☐

MiPlanTP05

## 5.8 Agregar una etapa de Deploy a Prod en Azure Release Pipelines

ReleasePipeline01

Save Create release View releases

Pipeline Tasks Variables Retention Options History

Deploy a PROD

Run on agent

Deploy Azure App Service

Stage name

Deploy a PROD

Parameters

Unlink all

Azure subscription

Azure subscription 1 (5a496d64-56ee-4be3-9f0d-75685209f7ab)

App type

Web App on Windows

App service name

MI Ejemplo1-PROD

This field is linked to 1 setting in 'Deploy Azure App Service'

Artifacts

Add

Sample02

Schedule not set

Stages

Add

Deploy a QA

1 job, 1 task

Deploy a PROD

1 job, 1 task

Pre-deployment approvals

Enabled

Select the users who can approve or reject deployments to this stage

Approvers

ingsoft3ucc@gmail.com

Search users and groups for approvers

Timeout

30 Days

4.9 Realizar un cambio al código del controlador para que devuelva 10 pronósticos, realizar commit, evaluar ejecución de pipelines de build y release, navegar a la url de la webapp/weatherforecast y corroborar cambio, verificar que en la url de la webapp\_prod/weatherforecast se muestra lo mismo.

Realizamos cambio para que devuelva 10 pronosticos:

```
[HttpGet(Name = "GetWeatherForecast")]
public IEnumerable<WeatherForecast> Get()
{
    return Enumerable.Range(1, 10).Select(index => new WeatherForecast
    {
        Date = DateOnly.FromDateTime(DateTime.Now.AddDays(index)),
        TemperatureC = Random.Shared.Next(-20, 55),
        Summary = Summaries[Random.Shared.Next(Summaries.Length)]
    })
    .ToArray();
}
```

Evaluamos ejecución de pipeline de build y de reléase:

Sample02

#20240922.4 • Updated WeatherForecastController.cs

Individual CI for main

2m ago  
1m 42s

ReleasePipeline01

ReleasesDeploymentsAnalytics

Releases	Created	Stages
<div><div></div><div>Release-4</div><div> 20240922....  main</div></div> <div>22/9/2024, 20:50:34</div> <div><div>Deploy a ...</div><div>Deploy a ...</div></div>		

Corroboramos cambios:

Ver formateo al texto

```
[{"date": "2024-09-23", "temperatureC": -15, "temperatureF": 6, "summary": "Fresco"}, {"date": "2024-09-24", "temperatureC": 41, "temperatureF": 105, "summary": "Helado"}, {"date": "2024-09-25", "temperatureC": 10, "temperatureF": 49, "summary": "Sweltering"}, {"date": "2024-09-26", "temperatureC": 51, "temperatureF": 123, "summary": "Sweltering"}, {"date": "2024-09-27", "temperatureC": -19, "temperatureF": -2, "summary": "Sweltering"}, {"date": "2024-09-28", "temperatureC": -19, "temperatureF": -2, "summary": "Sweltering"}, {"date": "2024-09-29", "temperatureC": 15, "temperatureF": 59, "summary": "Helado"}, {"date": "2024-09-30", "temperatureC": 7, "temperatureF": 44, "summary": "Calido"}, {"date": "2024-10-01", "temperatureC": 1, "temperatureF": 33, "summary": "Bracing"}, {"date": "2024-10-02", "temperatureC": 1, "temperatureF": 33, "summary": "Fresco"}]
```

4.10. Modificar el pipeline de release para colocar una aprobación manual para el paso a Producción.

Pre-deployment conditions

Deploy a PROD

Triggers 

Define the trigger that will start deployment to this stage

Pre-deployment approvals 

Enabled

Select the users who can approve or reject deployments to this stage

Approvers

Manuel Romero Medina

Search users and groups for approvers

Timeout

30

Days

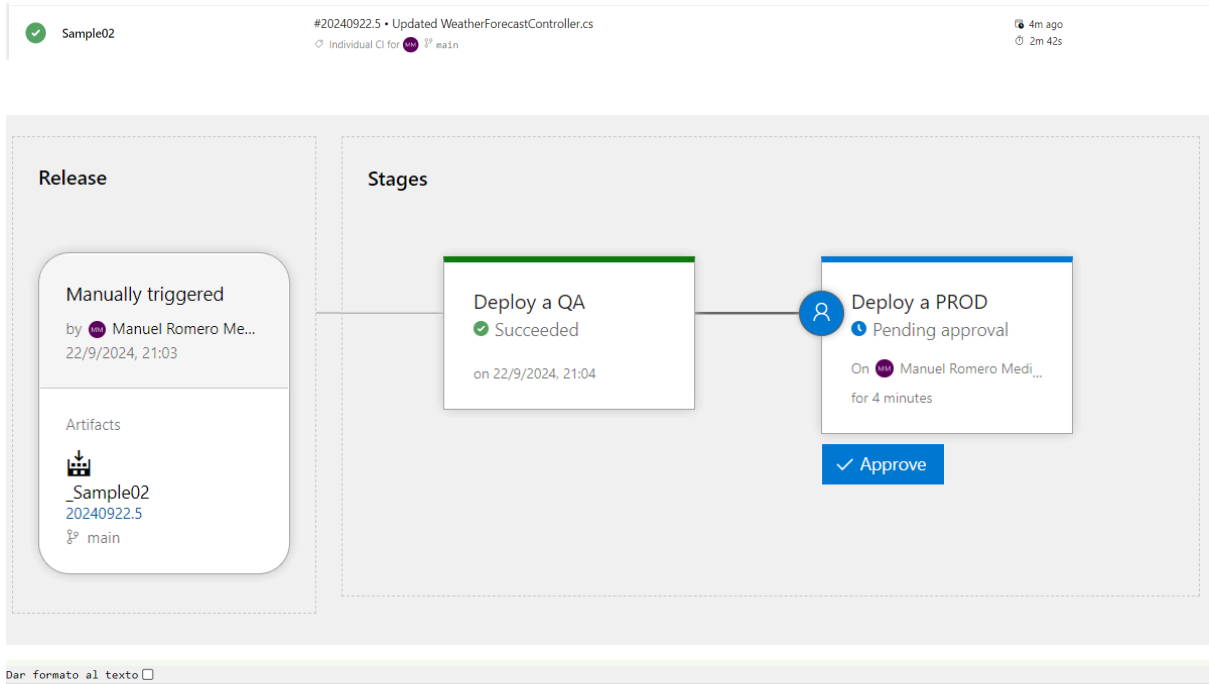
Approval policies

☐ The user performing a release or deployment should not approve it

4.11. Realizar un cambio al código del controlador para que devuelva 5 pronósticos, realizar commit, evaluar ejecución de pipelines de build y release, navegar a la url de la webapp/weatherforecast y corroborar cambio, verificar que en la url de la webapp\_prod/weatherforecast aun se muestra la versión anterior.

```
[HttpGet(Name = "GetWeatherForecast")]
public IEnumerable<WeatherForecast> Get()
{
    return Enumerable.Range(1, 5).Select(index => new WeatherForecast
    {
        Date = DateOnly.FromDateTime(DateTime.Now.AddDays(index)),
        TemperatureC = Random.Shared.Next(-20, 55),
        Summary = Summaries[Random.Shared.Next(Summaries.Length)]
    })
    .ToArray();
}
```

Evaluamos ejecución de pipelines de build y release:



4.14. Realizar un pipeline (no release) que incluya el deploy a QA y a PROD con una aprobación manual. El pipeline debe estar construido en YAML sin utilizar el editor clásico de pipelines ni el editor clásico de pipelines de release.