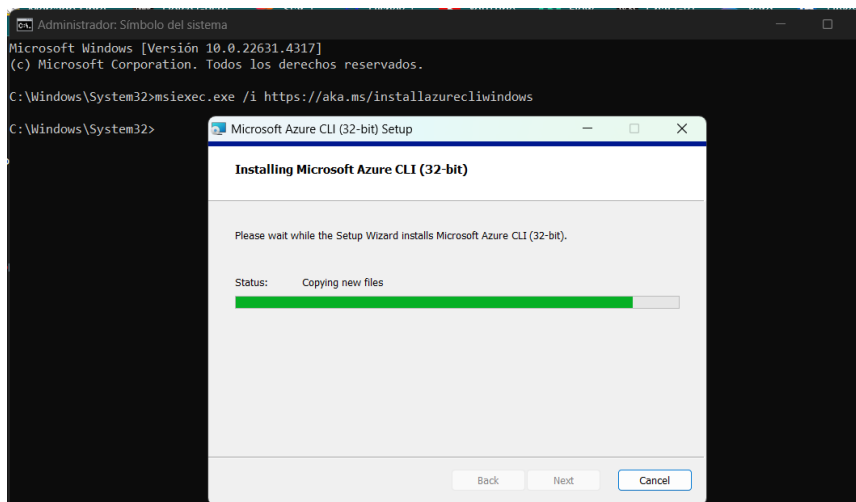
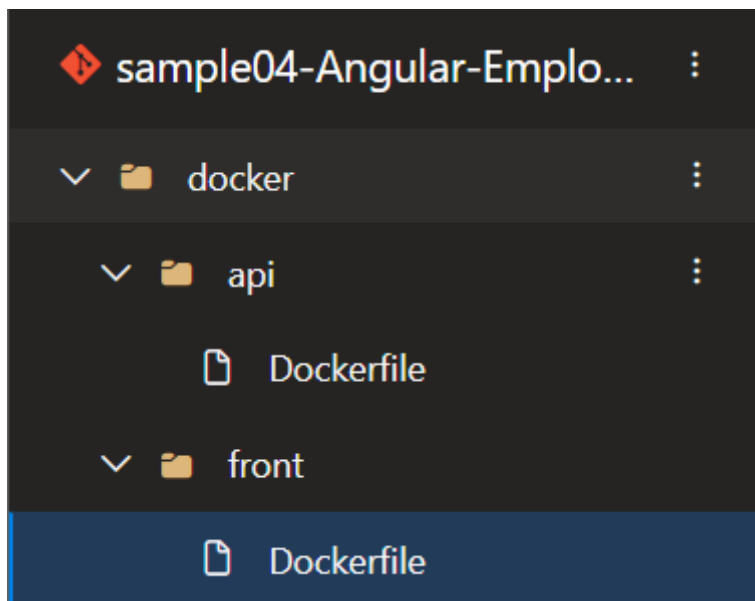


## Instalo Azure CLI



### 4.1 Modificar nuestro pipeline para construir imágenes Docker de back y front y subirlas a ACR

Creación de dockerfile en back y front



Creo el ACR

Home > Sample01TP5 > Marketplace >

Create container registry

...

Running final validation

Basics

Networking

Encryption

Tags

Review + create

Registry details

Basics

Registry name

Subscription

Resource Group

Location

Availability zones

Pricing plan

ACRignacioFranciosi

Azure subscription 1

Sample01TP5

East US

Disabled

Basic

Home >

Microsoft.ContainerRegistry | Overview

Deployment

Search

Delete

Cancel

Redeploy

Download

Refresh

Overview

Inputs

Outputs

Template

✓ Your deployment is complete

Deployment name : Microsoft.ContainerRegistry

Subscription : Azure subscription 1

Resource group : Sample01TP5

Start time : 10/11/2024, 12:22:11 PM

Correlation ID : 4d4ebded-7e33-43e4-9a17-16a750a9fed9

> Deployment details

> Next steps

Go to resource

Give feedback

Tell us about your experience with deployment

URL: acrignaciofranciosi.azurecr.io

Modifico el pipeline

< sample04 Angular Employee

main

sample04-Angular-Employee / azure-pipelines.yml \*

66

Settings

task: PublishBuildArtifacts@1

displayName: 'Publicar artefactos de compilación'

inputs:

PathToPublish: '\$(Build.ArtifactStagingDirectory)'

ArtifactName: 'api-drop'

publishLocation: 'Container'

72

73

Settings

task: PublishPipelineArtifact@1

displayName: 'Publicar Dockerfile de Back'

inputs:

targetPath: '\$(Build.SourcesDirectory)/docker/api/dockerfile'

artifact: 'dockerfile-back'

78

79

job: BuildAngular

displayName: 'Build and Test Angular'

pool:

vmImage: 'ubuntu-latest'

steps:

Settings

84

task: SonarCloudPrepare@2

displayName: 'Se prepara SonarCloud FRONTEND'

85

```

Settings
- task: PublishBuildArtifacts@1
- displayName: 'Publicar artefactos Angular'
- inputs:
- PathToPublish: '$(frontPath)/dist'
- ArtifactName: 'front-drop'

Settings
- task: PublishPipelineArtifact@1
- displayName: 'Publicar Dockerfile de Back'
- inputs:
- targetPath: '$(Build.SourcesDirectory)/docker/front/dockerfile'
- artifact: 'dockerfile-front'

```

## Agrego service connection

### Service connections

Filter by keywords

SonarCloud

### New Azure service connection

Azure Resource Manager using Workload Identity federation with OpenID Connect (automatic)

Subscription  
Azure subscription 1 (88ce7023-b976-4045-bb71-687aca6...)

Resource group  
Sample01TP5

Details

Service connection name  
ServiceConnectionARM

Service Management Reference (optional)

Description (optional)

Security
☒ Grant access permission to all pipelines

Learn more  
Troubleshoot

Back Save

## Agrego variables

```

variables:
- solution: '**/*.sln'
- buildPlatform: 'Any CPU'
- buildConfiguration: 'Release'
- frontPath: './EmployeeCrudAngular'
- ConnectedServiceName: 'ServiceConnectionARM' #Por ejemplo 'ServiceConnectionARM'
- acrLoginServer: 'acrignaciofranciosi.azurecr.io' #Por ejemplo 'ascontainerregistry.azurecr.io'
- backImageName: 'employee-crud-api' #Por ejemplo 'employee-crud-api'

```

Agrego stages

← sample04 Angular Employee

main sample04-Angular-Employee / azure-pipelines.yml \*

```
151 .....#-BUILD-DOCKER-BACK-IMAGE-Y-PUSH-A-AZURE-CONTAINER-REGISTRY
152 .....#
153 .....
154 .....- task: DownloadPipelineArtifact@2
155 .....  displayName: 'Descargar Artefactos de Back'
156 .....  inputs:
157 .....    buildType: 'current'
158 .....    artifactName: 'drop-back'
159 .....    targetPath: '$(Pipeline.Workspace)/drop-back'
160 .....
161 .....- task: DownloadPipelineArtifact@2
162 .....  displayName: 'Descargar Dockerfile de Back'
163 .....  inputs:
164 .....    buildType: 'current'
165 .....    artifactName: 'dockerfile-back'
166 .....    targetPath: '$(Pipeline.Workspace)/dockerfile-back'
167 .....
168 .....- task: AzureCLI@2
169 .....  displayName: 'Iniciar Sesión en Azure Container Registry (ACR)'
170 .....  inputs:
171 .....    azureSubscription: '$(connectedServiceName)'
172 .....    scriptType: bash
173 .....    scriptLocation: inlineScript
174 .....    inlineScript: |
```

Run

#20241012.12 - Update azure-pipelines.yml for Azure Pipelines

Run now

This run is being retained as one of 3 recent runs by main (Branch).

View retention issues

Summary Tests Associated pipelines Code Coverage

Triggered by Ignacio Franciosi

View 18 changes

Repository and version

sample04-Angular-Employee

main 8c9c38c3

Time started and elapsed

Today at 7:31 p. m.

7m 52s

Related

0 work items

5 published

Tests and coverage

100% passed

47.34% covered

Warnings

No data was written into the file /home/vsts/work/\_temp/task\_output/build.172877274050.txt

Construye y Sube Imágenes Docker a ACR + Construye y Sube Imágenes Docker a ACR + Construye Imagen Docker para Back

Stages Jobs

Build and Test API an... 2 jobs completed 100% tests passed 4 artifacts

Construye y Sube Imá... 1 job completed

Existe en ACR

Home > ACRIgnacioFranciosi

ACRIgnacioFranciosi | Repositories

Container registry

Search

Refresh Manage Deleted Repositories

Overview

Activity log

Access control (IAM)

Tags

Quick start

Events

Settings

Services

Repositories

Webhooks

Geo-replications

...

New to ACR, Artifact streaming helps pull images faster from AKS clusters. The 'Artifact streaming status' column shows which repository has artifact streaming enabled.

Search to filter repositories ...

Repositories ↑↓

employee-crud-api

Cache Rule

Aplico lo mismo que antes pero para front

```

# BUILD DOCKER BACK IMAGE Y PUSH A AZURE CONTAINER REGISTRY
# .....

Settings
- task: DownloadPipelineArtifact@2
  displayName: 'Descargar Artefactos de Front'
  inputs:
    buildType: 'current'
    artifactName: 'front-drop'
    targetPath: '$(Pipeline.Workspace)/front-drop'

Settings
- task: DownloadPipelineArtifact@2
  displayName: 'Descargar Dockerfile de Front'
  inputs:
    buildType: 'current'
    artifactName: 'dockerfile-front'
    targetPath: '$(Pipeline.Workspace)/dockerfile-front'

Settings
- task: AzureCLI@2
  displayName: 'Iniciar Sesión en Azure Container Registry (ACR)'
  inputs:
    azureSubscription: '$(ConnectedServiceName)'
    scriptType: bash
    scriptLocation: inlineScript
    inlineScript: |
      az acr login --name $(acrLoginServer)

Settings
- task: Docker@2
  displayName: 'Construir Imagen Docker para Front'
  inputs:
    command: build
    repository: $(acrLoginServer)/$(frontImageName)
    dockerfile: $(Pipeline.Workspace)/dockerfile-front/Dockerfile
    buildContext: $(Pipeline.Workspace)/front-drop
    tags: 'latest'

Settings
- task: Docker@2
  displayName: 'Subir Imagen Docker de Front a ACR'
  inputs:
    command: push
    repository: $(acrLoginServer)/$(frontImageName)
    tags: 'latest'
```

Aparece

Home > ACRignacioFranciosi

## ACRignacioFranciosi | Repositories

Container registry

< << Refresh Manage Deleted Repositories

Overview

Activity log

Access control (IAM)

Tags

Quick start

Events

Settings

Services

**Repositories**

Webhooks

New to ACR, Artifact streaming helps pull images faster

Repositories ↑↓

employee-crud-api

employee-crud-front

Agrego nuevas variables

```
- name: ResourceGroupName
  value: 'Sample01TP5' #Por ejemplo 'TPS_INGSOFT3_UCC'
- name: backContainerInstanceNameQA
  value: 'as-crud-api-qa' #Por ejemplo 'as-crud-api-qa'
- name: backImageTag
  value: 'latest'
- name: container-cpu-api-qa
  value: 1 #CPUS de nuestro container de QA
- name: container-memory-api-qa
  value: 1.5 #RAM de nuestro container de QA
```

Creacion de variable cnn string qa (contiene la cadena conexión de mi bd sql)

Server=localhost,15000;Database=Employees;User  
Id=SA;Password=Igna1234;TrustServerCertificate=True;

**NOTA: Tuve que crear un contenedor con BD SQL porque la BD de Azure se le venció la prueba gratis**

← New variable

Name

cnn\_string\_qa

Value

.....

☒ Keep this value secret

☐ Let users override this value when running this pipeline

To reference a variable in YAML, prefix it with a dollar sign and enclose it in parentheses. For example: `$(cnn_string_qa)`

To use a variable in a script, use environment variable syntax. Replace `.` and space with `_`, capitalize the letters, and then use your platform's syntax for referencing an environment variable. Examples:

Batch script: `%CNN_STRING_QA%`

PowerShell script: `${env:CNN_STRING_QA}`

Bash script: `$(CNN_STRING_QA)`

To use a secret variable in a script, you must explicitly map it as an environment variable.

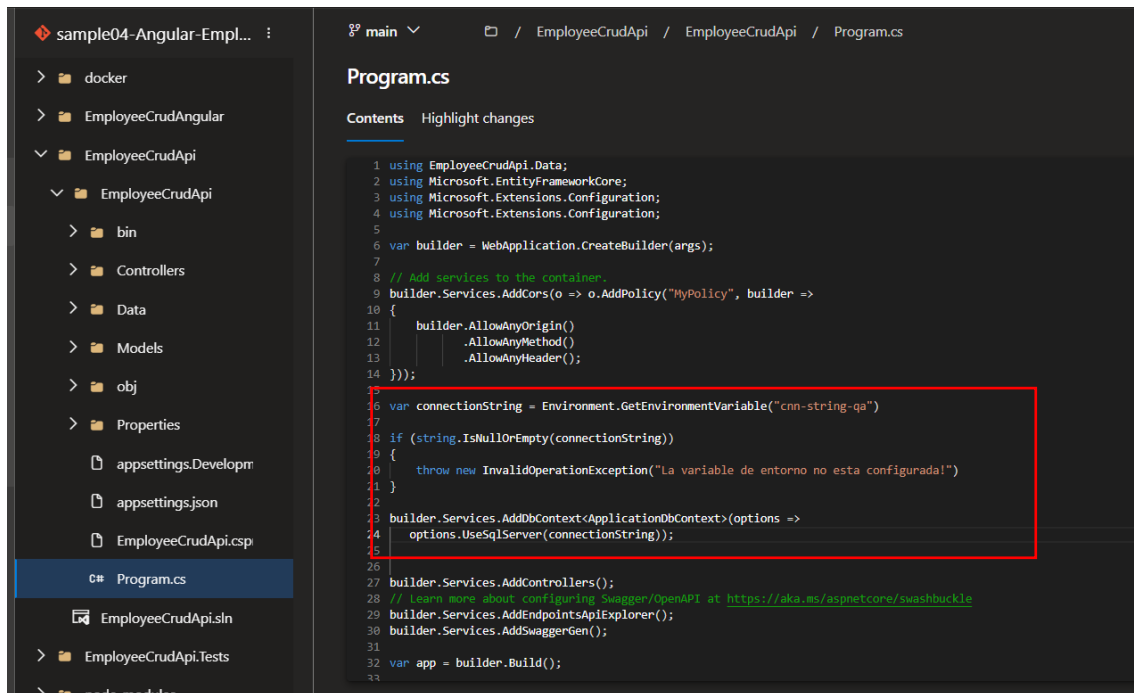
[Learn about variables](#)

Cancel OK

## Agrego el nuevo stage

```
218 #-----
219 .###-STAGE-DEPLOY-TO-ACI-QA
220 #-----
221 ..
222 - stage: DeployToACIQA
223   displayName: 'Desplegar en Azure Container Instances (ACI) QA'
224   dependsOn: DockerBuildAndPush
225   jobs:
226     - job: deploy_to_aci_qa
227       displayName: 'Desplegar en Azure Container Instances (ACI) QA'
228       pool:
229         vmImage: 'ubuntu-latest'
230       steps:
231         #-----
232         #-DEPLOY-DOCKER-BACK-IMAGE-A-AZURE-CONTAINER-INSTANCES-QA
233         #-----
234         #-----
235         Settings
236         task: AzureCLI@2
237         displayName: 'Desplegar Imagen Docker de Back en ACI QA'
238         inputs:
239           azureSubscription: '$(ConnectedServiceName)'
240           scriptType: bash
241           scriptLocation: inlineScript
242           inlineScript: |
243             echo "Resource Group: $(ResourceGroupName)"
244             echo "Container Instance Name: $(backContainerInstanceNameQA)"
245             echo "ACI Login Server: $(aciLoginServer)"
```

## Update Program.cs para que use la variable cnn-string-qa



The screenshot shows the Visual Studio IDE with the following details:

- Left Panel (Solution Explorer):** Shows a project named 'sample04-Angular-Emp...' with a folder structure including 'docker', 'EmployeeCrudAngular', 'EmployeeCrudApi', 'bin', 'Controllers', 'Data', 'Models', 'obj', 'Properties', 'appsettings.Developr', 'appsettings.json', 'EmployeeCrudApi.csp', 'C# Program.cs', 'EmployeeCrudApi.sln', 'EmployeeCrudApi.Tests', and 'node\_modules'.
- Top Panel (Breadcrumbs):** Shows the path 'main > EmployeeCrudApi > EmployeeCrudApi > Program.cs'.
- Editor Panel:** Displays the 'Program.cs' file. The code is as follows:

```
1 using EmployeeCrudApi.Data;
2 using Microsoft.EntityFrameworkCore;
3 using Microsoft.Extensions.Configuration;
4 using Microsoft.Extensions.Configuration;
5
6 var builder = WebApplication.CreateBuilder(args);
7
8 // Add services to the container.
9 builder.Services.AddCors(o => o.AddPolicy("MyPolicy", builder =>
10 {
11     builder.AllowAnyOrigin()
12         .AllowAnyMethod()
13         .AllowAnyHeader();
14 }));
15
16 var connectionString = Environment.GetEnvironmentVariable("cnn-string-qa");
17 if (string.IsNullOrEmpty(connectionString))
18 {
19     throw new InvalidOperationException("La variable de entorno no esta configurada!");
20 }
21
22 builder.Services.AddDbContext<ApplicationDbContext>(options =>
23     options.UseSqlServer(connectionString));
24
25
26 builder.Services.AddControllers();
27 // Learn more about configuring Swagger/OpenAPI at https://aka.ms/aspnetcore/swashbuckle
28 builder.Services.AddEndpointsApiExplorer();
29 builder.Services.AddSwaggerGen();
30
31
32 var app = builder.Build();
33
```

Azure CLI

```
Símbolo del sistema
C:\Users\admin>az acr update -n ACRignacioFranciosi --admin-enabled true
{
  "adminUserEnabled": true,
  "anonymousPullEnabled": false,
  "creationDate": "2024-10-11T15:22:13.960262+00:00",
  "dataEndpointEnabled": false,
  "dataEndpointHostNames": [],
  "encryption": {
    "keyVaultProperties": null,
    "status": "disabled"
  },
  "id": "/subscriptions/88ce7023-b976-4045-bb71-687aca616e4d/resourceGroups/Sample01TP5/providers/Microsoft.ContainerReg
istry/registries/ACRignacioFranciosi",
  "identity": null,
  "location": "eastus",
  "loginServer": "acrignaciofranciosi.azurecr.io",
  "metadataSearch": "Disabled",
  "name": "ACRignacioFranciosi",
  "networkRuleBypassOptions": "AzureServices",
  "networkRuleSet": null,
  "policies": {
    "azureAdAuthenticationAsArmPolicy": {
      "status": "enabled"
    },
    "exportPolicy": {
      "status": "enabled"
    },
    "quarantinePolicy": {
      "status": "disabled"
    }
  }
}

C:\Users\admin>az provider register --namespace Microsoft.ContainerInstance
Registering is still on-going. You can monitor using 'az provider show -n Microsoft.ContainerInstance'
```

Corre bien

#20241013.17 - Update azure-pipelines.yml for Azure Pipelines  
@sample01 Angular Employees

This run is being retained as one of 3 recent runs by main (Branch).

Summary Tests Code Coverage Associated pipelines

Triggered by Ignacio Franciosi

Repository and version  
sample01-Angular-Employees  
7 main 1 8615a0d2

Time started and elapsed  
Today at 6:30 p. m.  
9m 21s

Related  
0 work items  
5 published

Tests and coverage  
100% passed  
48.24% covered

Warnings

No data was written into the file /home/vsts/work/\_temp/task\_outputs/build\_1738055494171.txt  
Condition y Subir imágenes Docker a ACR > Construir y Subir imágenes Docker para Back

No data was written into the file /home/vsts/work/\_temp/task\_outputs/build\_173805516023.txt  
Condition y Subir imágenes Docker a ACR > Construir y Subir imágenes Docker para Front

Stages Jobs

Build and Test API etc... 9m 21s  
2 jobs completed  
100% tests passed  
4 warnings

Construir y Subir Imágenes... 1m 12s  
1 job completed

Desplegar en Azure... 1m 8s  
1 job completed

Container

Home > Sample01TP5 >

if-crud-api-qa  
Container instances

Search

Start Restart Stop Delete Refresh Give feedback

One or more of the containers in 'if-crud-api-qa' are in a 'Waiting' state and may not be running. Click here to view container statuses. →

Overview

Activity log

Access control (IAM)

Tags

Settings

Monitoring

Automation

Help

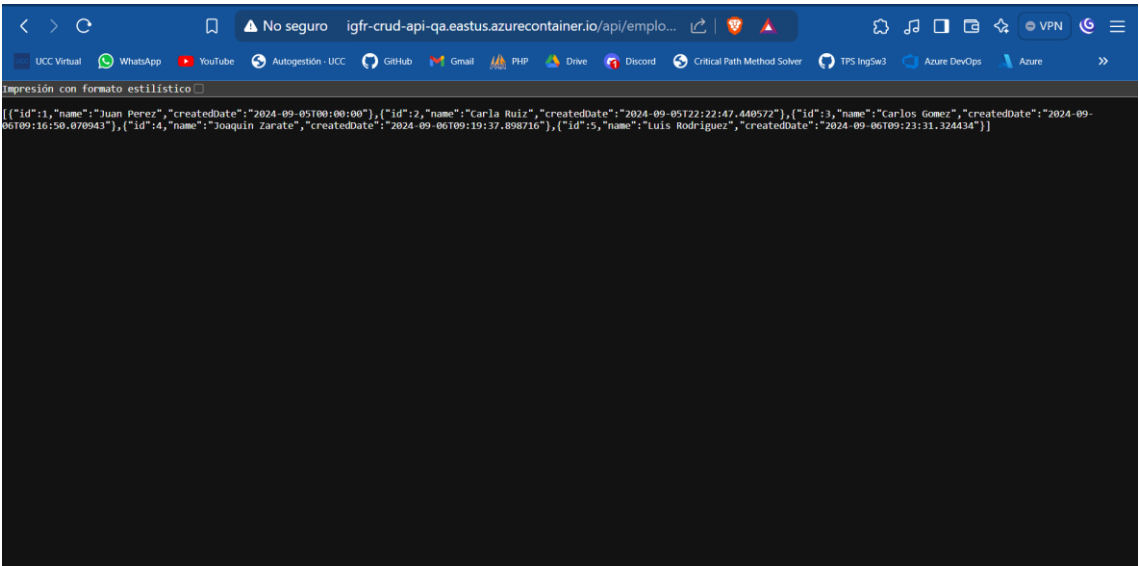
Network bytes received

Network bytes transmitted

Network Bytes Received Per Second (Avg), if-cr... 40.08B

Network Bytes Transmitted Per Second (Avg), if... 33.83B





## Container Front

← New variable

Name

api\_url

Value

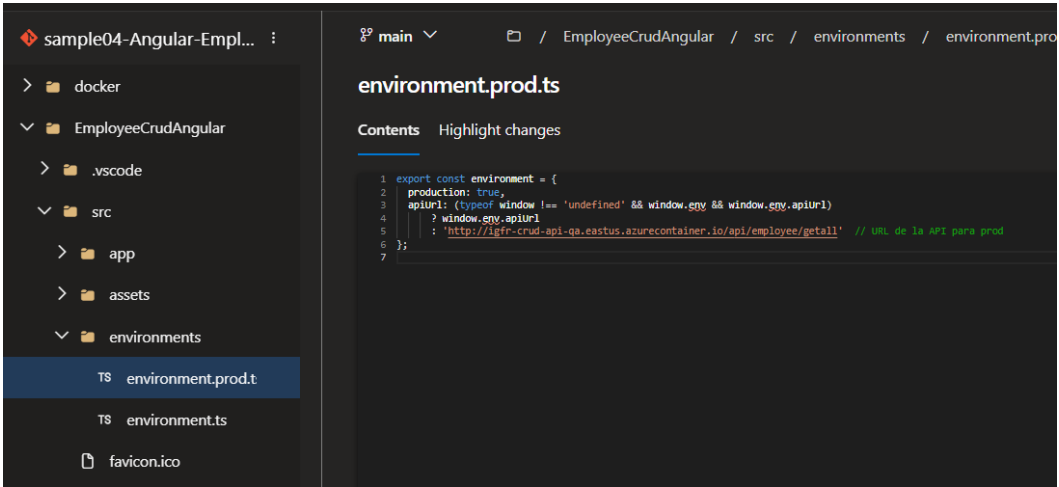
igfr-front-qa.eastus.azurecontainer.io/api/employee/getall

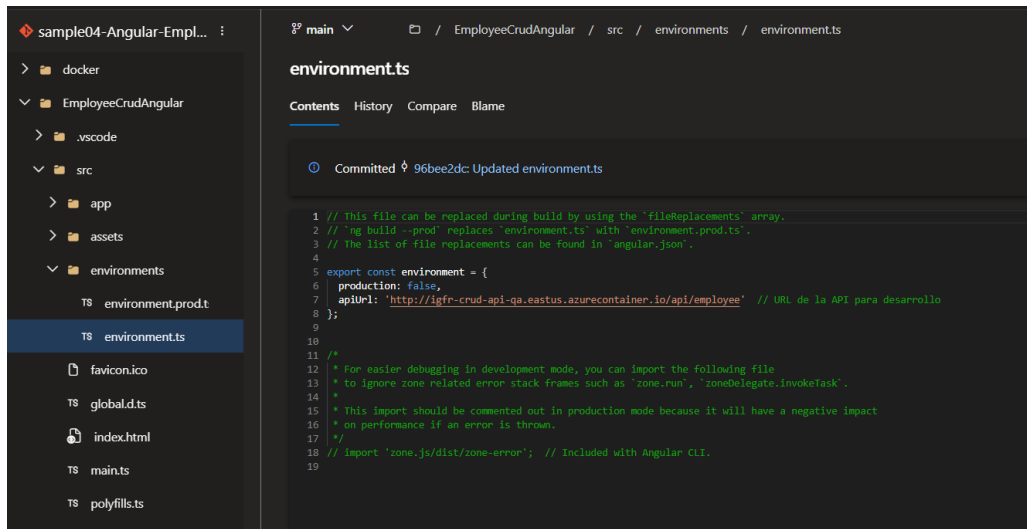
☐ Keep this value secret

☐ Let users override this value when running this pipeline

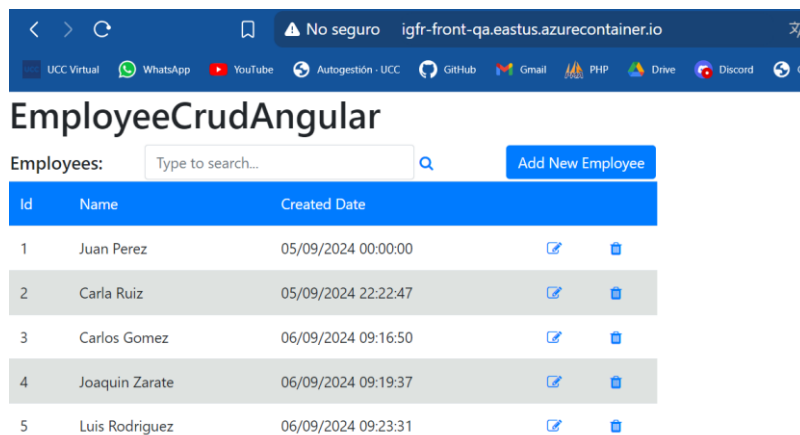
To reference a variable in YAML, prefix it with a dollar sign and enclose it in parentheses. For example: `$(api_url)`

To use a variable in a script, use environment variable syntax.

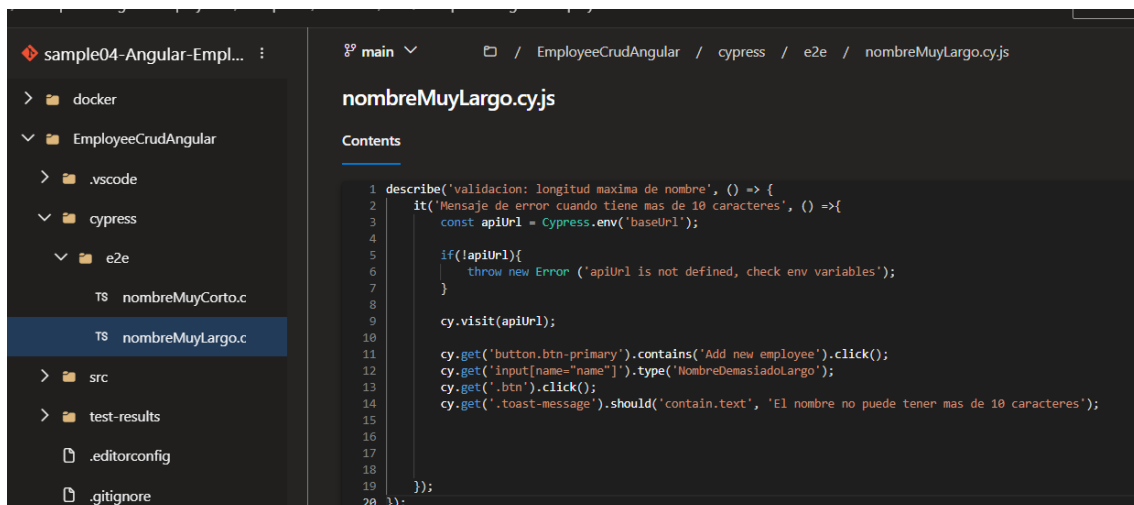




Trae todos los empleados :)



Tests



## nombreMuyCorto.cy.js

[Contents](#) [History](#) [Compare](#) [Blame](#)

Committed 0c77541c: Added nombreMuyLargo.cy.js

```
1 describe('validacion: longitud minima de nombre', () => {
2   it('Mensaje de error cuando tiene menos de 2 caracteres', () =>{
3     const apiUrl = Cypress.env('baseUrl');
4
5     if(!apiUrl){
6       throw new Error ('apiUrl is not defined, check env variables');
7     }
8
9     cy.visit(apiUrl);
10
11     cy.get('button.btn-primary').contains('Add new employee').click();
12     cy.get('input[name="name"]').type('P');
13     cy.get('.btn').click();
14     cy.get('.toast-message').should('contain.text', 'El nombre no puede tener menos de 2 caracteres');
15
16
17
18   });
19 });
20 });
```

## nombreConNumeros.cy.js

[Contents](#)

```
1 describe('validacion: nombre no contenga numeros', () => {
2   it('Mensaje de error cuando nombre tiene numeros', () =>{
3     const apiUrl = Cypress.env('baseUrl');
4
5     if(!apiUrl){
6       throw new Error ('apiUrl is not defined, check env variables');
7     }
8
9     cy.visit(apiUrl);
10
11     cy.get('button.btn-primary').contains('Add new employee').click();
12     cy.get('input[name="name"]').type('Igna12');
13     cy.get('.btn').click();
14     cy.get('.toast-message').should('contain.text', 'El nombre no puede tener numeros');
15
16
17
18   });
19 });
20 });
```

main

/ EmployeeCrudAngular / cypress / e2e / nombreConCaractRepetidos.cy.js

## nombreConCaractRepetidos.cy.js

### Contents

```
1 describe('validacion: que no tenga muchos caracteres repetidos', () => {
2   it('Mensaje de error cuando tiene muchos caracteres repetidos', () =>{
3     const apiUrl = Cypress.env('baseUrl');
4
5     if(!apiUrl){
6       throw new Error ('apiUrl is not defined, check env variables');
7     }
8
9     cy.visit(apiUrl);
10
11     cy.get('button.btn-primary').contains('Add new employee').click();
12     cy.get('input[name="name"]').type('Iggggnnnnnaaaaaa');
13     cy.get('.btn').click();
14     cy.get('.toast-message').should('contain.text', 'El nombre no puede tener caracteres repetidos');
15
16
17
18
19   });
20 });
```

## Job

```
315 .....
316 ----- job: TestIntegracion
317 ----- displayName: 'cypress'
318 ----- dependsOn: deploy_to_aci_qa
319 ----- variables:
320 ----- - baseUrl: '${(frontContainerInstanceNameQA).eastus.azurecontainer.io}'
321 ----- steps:
322 ----- - script: |
323 ----- - cd $(Build.SourcesDirectory)/EmployeeCrudAngular
324 ----- - npm install typescript ts-node
325 ----- - displayName: 'Install Typescript'
326 -----
327 ----- - script: |
328 ----- - mkdir $(Build.SourcesDirectory)\EmployeeCrudAngular\cypress\results
329 ----- - displayName: 'Create results directory'.....
330 -----
331 ----- - script: |
332 ----- - cd $(Build.SourcesDirectory)/EmployeeCrudAngular
333 ----- - npx cypress run --config-file cypress.config.ts --env baseUrl=$(baseUrl)
334 ----- - displayName: 'Run Cypress E2E Tests'
335 -----
336 ----- Settings
337 ----- - task: PublishTestResults@2
338 ----- - inputs:
339 ----- - testResultsFiles: '$(Build.SourcesDirectory)/EmployeeCrudAngular/cypress/results/*.xml'..
340 ----- - testRunTitle: 'Cypress E2E Tests (QA)'
341 ----- - displayName: 'Publish Cypress Test Results'.....
```

## Contenedores PROD

```
- name: backContainerInstanceNameProd
  value: 'igfr-container-back-prod'
- name: frontContainerInstanceNameProd
  value: 'igfr-container-front-prod'
```

```
347 - stage: DeployToACIProd
348   displayName: 'Desplegar PROD'
349   dependsOn:
350     - DeployToACIQA
351   jobs:
352     - deployment: DeployToProd
353       displayName: 'Desplegar PRODD'
354       environment:
355         name: 'Production'
356       strategy:
357         runOnce:
358           deploy:
359             steps:
360               - task: AzureCLI@2
361                 displayName: 'Desplegar Imagen Docker de Back en ACI (Prod)'
362                 inputs:
363                   azureSubscription: '${(ConnectedServiceName)}'
364                   scriptType: bash
365                   scriptLocation: inlineScript
366                   inlineScript: |
367                     echo "Resource Group: $(ResourceGroupName)"
368                     echo "Container Instance Name: $(backContainerInstanceNameProd)"
369                     echo "ACR Login Server: $(acrLoginServer)"
370                     echo "Image Name: $(backImageName)"
371                     echo "Image Tag: $(backImageTag)"
372                     echo "Connection String: $(cnn-string-qa)"
373
374                     az container delete --resource-group $(ResourceGroupName) --name $(backContainerInstanceNameProd) --yes
375
376                     az container create --resource-group $(ResourceGroupName) \
377                       --name $(backContainerInstanceNameProd) \
378                       --image $(acrLoginServer)/$(backImageName):$(backImageTag) \
379                       --registry-login-server $(acrLoginServer) \
380                       --registry-username $(acrName) \
381                       --registry-password $(az acr credential show --name $(acrName) --query "passwords[0].value" -o tsv) \
382                       --dns-name-label $(backContainerInstanceNameProd) \
383                       --ports 80 \
384                       --environment-variables ConnectionStrings_DefaultConnection="$(cnn-string-qa)" \
385                       --restart-policy Always \
386                       --cpu $(container-cpu-api-qa) \
387                       --memory $(container-memory-api-qa)
```

```
Settings
- task: AzureCLI@2
  displayName: 'Desplegar Imagen Docker de Front en ACI (PROD)'
  inputs:
    azureSubscription: '${(ConnectedServiceName)}'
    scriptType: bash
    scriptLocation: inlineScript
    inlineScript: |-
      echo "Resource Group: $(ResourceGroupName)"
      echo "Container Instance Name: $(frontContainerInstanceNameProd)"
      echo "ACR Login Server: $(acrLoginServer)"
      echo "Image Name: $(frontImageName)"
      echo "Image Tag: $(frontImageTag)"
      echo "API URL: $(PROD)"

      az container delete --resource-group $(ResourceGroupName) --name $(frontContainerInstanceNameProd) --yes

      az container create --resource-group $(ResourceGroupName) \
        --name $(frontContainerInstanceNameProd) \
        --image $(acrLoginServer)/$(frontImageName):$(frontImageTag) \
        --registry-login-server $(acrLoginServer) \
        --registry-username $(acrName) \
        --registry-password $(az acr credential show --name $(acrName) --query "passwords[0].value" -o tsv) \
        --dns-name-label $(frontContainerInstanceNameProd) \
        --ports 80 \
        --environment-variables API_URL="$(PROD)" \
        --restart-policy Always \
        --cpu $(container-cpu-front-qa) \
        --memory $(container-memory-front-qa)
```

# Waiting for review

Desplegar PROD

Permission

Environment Production

Permission needed

Permit

Summary

Environments

Associated pipelines

Code Coverage

Triggered by

Ignacio Franciosi

Repository and version

sample04-Angular-Employee

main b9aedf0e

Time started and elapsed

Today at 11:58 a. m.

12m 59s

Related

0 work items

4 published

Tests and code coverage

Get started

Warnings 2

No data was written into the file /home/vsts/work/\_temp/task\_outputs/build\_1729091051108.txt

Construir y Subir Imágenes Docker a ACR • Construir y Subir Imágenes Docker a ACR • Construir Imagen Docker para Back

No data was written into the file /home/vsts/work/\_temp/task\_outputs/build\_1729091112039.txt

Construir y Subir Imágenes Docker a ACR • Construir y subir imagenes docker de front a ACR • Construir Imagen Docker para Front

Stages

Jobs

Build and Test API an...

2 jobs completed

3m 58s

4 artifacts

Construir y Subir Imá...

2 jobs completed

2m 31s

Desplegar en Azure C...

1 job completed

1m 45s

Desplegar PROD

1 job completed

3m 21s

☐

igfr-container-back-prod

☐

igfr-container-front-prod

☐

igfr-crud-api-qa

☐

igfr-front-qa