

USECASE 2: Setup CI/CD pipeline for JAVA Microservices applications on Azure AKS. Use Azure DevOps, GitHub, K8s, Terraform, Docker, Docker Hub, Azure Storage account, Resource group and required tools.

1. Create a project in new azure DevOps.
2. Create a new repository in GitHub.
3. create a new folder and push the files of java microservice to GitHub repository.
4. In project, create a pipeline, select GitHub, authorize and select the repository created, approve and install. Select starter pipeline, and can rename the yaml file if needed then save and run.
5. You can edit the yaml file and again push and see the changes in the pipeline.
6. Edit the pipeline yaml files with jobs. Create more than one job, understand various stages then save and run.
7. Add some variables in the yaml file of pipeline then save and run
8. Go to Service connection in project settings – establish the docker connection
9. Create a new pipeline - GitHub- docker- yaml file- settings- docker hub details- save and build
10. Create a release. Create n artifact and add three stages for Dev, QA and Production
inside dev--- add agent job --> bash script...settings—displayname (listfiles) ..inline
....script(ls -R \$(SystemArtifactsDirectory)).....save.....
go to agent job settings---agent job specifications---ubuntu 16.04..save and create release..
11. Add one more stage . QA... can add pre deployment approvers..... save and create release
12. Create a Service connection in project Settings....establish Azure Connection.
13. Create new pipeline...starter pipeline...show assistant... terraform cli...add variables...add storage account...upload file in library... save and run.

keerthi-ns/azure-devops-kubern... build and push docker images - x App Services - Microsoft Azure x +

github.com/keerthi-ns/azure-devops-kubernetes-terraform/tree/master

Search or jump to... Pull requests Issues Marketplace Explore

keerthi-ns / azure-devops-kubernetes-terraform Private

Code Issues Pull requests Actions Projects Security Insights Settings

master 1 branch 0 tags

Go to file Add file Code

keerthi-ns Update azure-pipelines-3.yml for Azure Pipelines ✓ d15ce06 3 hours ago 20 commits

- configuration first commit k8s yesterday
- pipeline-backups first commit k8s yesterday
- src first commit k8s yesterday
- .gitignore first commit k8s yesterday
- Dockerfile edited the welcome msg yesterday
- azure-pipelines-1.yml env yesterday
- azure-pipelines-2.yml docker build yesterday
- azure-pipelines-3.yml Update azure-pipelines-3.yml for Azure Pipelines 3 hours ago
- azure-pipelines.yml Update azure-pipelines.yml for Azure Pipelines 23 hours ago
- first-azure-pipelines.yml Update first-azure-pipelines.yml for Azure Pipelines yesterday
- pom.xml first commit k8s yesterday
- readme.md first commit k8s yesterday

readme.md

Currency Exchange Micro Service - H2

About

No description, website, or topics provided.

Readme

Releases

No releases published
Create a new release

Packages

No packages published
Publish your first package

Languages

Java 52.8% HCL 44.9% Dockerfile 2.3%

keerthi-ns/azure-devops-kubern... Pipelines - Run 20210428.6 logs x App Services - Microsoft Azure x +

portal.azure.com/?resourceMenuPerf=true#blade/HubsExtension/BrowseResource/resourceType/Microsoft.Web%2Fsites

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

Home >

App Services

Default Directory

+ Add Manage view Refresh Export to CSV Open query Feedback Assign tags Start Restart Stop Delete

Filter for any field... Subscription == all Resource group == all Location == all Add filter

Showing 1 to 12 of 12 records.

No grouping List view

Name	Status	Location	Pricing Tier	App Service Plan	Subscription	App Type
166703-dev	Running	Central US	Standard	Azure-166703	Pay-As-You-Go	Web App
166703-prod	Running	Central US	Standard	Azure-166703	Pay-As-You-Go	Web App
166703-qa	Running	Central US	Standard	Azure-166703	Pay-As-You-Go	Web App
deployment	Running	Central US	Standard	Azure-166703	Pay-As-You-Go	Web App
product12345	Running	Central US	Standard	Azure-166703	Pay-As-You-Go	Web App
production-166743	Running	Central US	Standard	Azure-166703	Pay-As-You-Go	Web App
qa-166743	Running	Central US	Standard	Azure-166703	Pay-As-You-Go	Web App
qna-12345	Running	Central US	Standard	Azure-166703	Pay-As-You-Go	Web App
second	Running	Central US	Standard	Azure-166703	Pay-As-You-Go	Web App
reheari-deploy	Running	Central US	Standard	Azure-166703	Pay-As-You-Go	Web App
test-shipa	Running	Central US	Standard	Azure-166703	Pay-As-You-Go	Web App
third	Running	Central US	Standard	Azure-166703	Pay-As-You-Go	Web App

< Previous Page 1 of 1 Next >

Resume Format (1....doc)

Show all

first-azure-pipeline - Pipelines x Sign in to Microsoft Azure x keerthi-ns/azure-devops-kubern... x +

dev.azure.com/AzureDotnetProject/A_D_K_T_166703/_apps/hub/ms.vss-build-web.ci-designer-hub?pipelineId=88&nonce=vkDcE91dVzG9HWnh70vShQ%3D%3D&branch=master

Azure DevOps AzureDotnetProject / A_D_K_T_166703 / Pipelines / Builds / first-azure-pipeline / YAML

first-azure-pipeline

master keerthi-ns/azure-devops-kubernetes-terraform / first-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   - master
8
9 pool:
10  - vmImage: ubuntu-latest
11
12 #pipelines--stages--jobs--tasks
13
14 jobs:
15   - job: Job1
16     steps:
17       - script: echo Hello, world! How are you
18         displayName: 'Run a one-line script'
19       - script: |
20         echo Add other tasks to build, test, and deploy your project.
21         echo See https://aka.ms/yaml
22         echo more information
23       displayName: 'Run a multi-line script'
24   - job: Job2
25     steps:
26       - script: echo I am Job2!
27       displayName: 'Run a one-line script'
28   - job: Job3
29     steps:
30       - script: echo I am Job3!
31       displayName: 'Run a one-line script'
```

03:35 PM 27-04-2021

Pipelines - Run 20210427.8 x Sign in to Microsoft Azure x keerthi-ns/azure-devops-kubern... x +

dev.azure.com/AzureDotnetProject/A_D_K_T_166703/_build/results?buildId=568&view=results

Azure DevOps AzureDotnetProject / A_D_K_T_166703 / Pipelines / first-azure-pipeline / 20210427.8

#20210427.8 Update azure-pipelines.yml for Azure Pipelines

on first-azure-pipeline Retained Run now

Summary

Triggered by keerthi-ns View change

Repository and version
keerthi-ns/azure-devops-kubernetes-terraform
master # 94561a

Time started and elapsed
Today at 3:30 PM
17s

Related
0 work items
0 artifacts

Tests and coverage
Get started

Name	Status	Duration
Job1	Success	7s
Job2	Success	7s
Job3	Success	6s

03:37 PM 27-04-2021

keerthi-ns.azure-devops-kuberni x Sign in to Microsoft Azure x keerthi-ns.azure-devops-kuberni x +

dev.azure.com/AzureDotnetProject/A_D_K_T_166703/_apps/hub/ms.vss-build-web.ci-designer-hub?pipelineId=9&branch=master&nonce=3ujzvDB640vinZPISo1J6Q%3D%3D

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Azure DevOps AzureDotnetProject / A_D_K_T_166703 / Pipelines / Builds / keerthi-ns.azure-devops-kuberni / YAML

← keerthi-ns.azure-devops-kubernetes-terraform

master kee.../azure-devops-kubernetes-terraform / azure-pipelines.yml

```
5 pool:
6   vmImage: ubuntu-latest
7
8 stages:
9   - stage: Build
10    jobs:
11      - job: FirstJob
12        steps:
13          - bash: echo Build FirstJob
14      - job: SecondJob
15        steps:
16          - bash: echo Build secondJob
17   - stage: DevDeploy
18     dependsOn: Build
19     jobs:
20       - job: FirstJob
21         steps:
22           - bash: echo DevDeploy job
23   - stage: QADeploy
24     dependsOn: Build
25     jobs:
26       - job: FirstJob
27         steps:
28           - bash: echo QADeploy job
29   - stage: ProDeploy
30     dependsOn:
31       - DevDeploy
32       - QADeploy
33     jobs:
34       - job: FirstJob
35         steps:
36           - bash: echo ProDeploy job
37
38
```

Tasks

Search tasks

- .NET Core
- Android signing
- Ant
- App Center distribute
- App Center test
- Archive files
- ARM template deployment
- Azure App Service deploy
- Azure App Service manage
- Azure App Service Settings
- Azure CLI
- Azure Cloud Service deployment

Type here to search

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keerthi-ns.azure-devops-kuberni x Pipelines - Run 20210427.1 x App Services - Microsoft Azure x +

dev.azure.com/AzureDotnetProject/A_D_K_T_166703/_build/results?buildId=51&view=results

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Azure DevOps AzureDotnetProject / A_D_K_T_166703 / Pipelines / understanding stages / 20210427.1

✓ #20210427.1 Adding multiple stages on understanding stages

Summary Releases

Triggered by keerthi-ns

Repository and version: kee.../azure-devops-kubernetes-terraform master 788890b

Time started and elapsed: Yesterday at 3:23 PM 1m 39s

Related: 0 work items 0 artifacts

Tests and coverage: Get started

Stages jobs

Build 2 jobs completed 11s

DevDeploy 1 job completed 11s

QADeploy 1 job completed 10s

ProDeploy 1 job completed 10s

Type here to search

04:01 PM 28-04-2021

keerthi-ns/azure-devops-kubern... build and push docker images - App Services - Microsoft Azure

dev.azure.com/AzureDotnetProject/A_D_K_T_166703/_apps/hub/ms.vss-build-web.ci-designer-hub?pipelineId=11&nonce=v56%2Bw%2F4KfL9eBKsQOeg%3D%3D&branch=master

Azure DevOps

AzureDotnetProject / A_D_K_T_166703 / Pipelines / Builds / build and push docker imag... / YAML

build and push docker images Disabled

master keerthi-ns/azure-devops-kubernetes-terraform / azure-pipelines-2.yml

```
1 Docker
2 # Build a Docker image
3 # https://docs.microsoft.com/azure/devops/pipelines/languages/docker
4
5 trigger:
6   - master
7
8 resources:
9   - repo: self
10
11 variables:
12   - tag: '$(Build.BuildId)'
13
14 stages:
15   - stage: Build
16     displayName: Build image
17     jobs:
18       - job: Build
19         displayName: Build
20         pool:
21           vmImage: ubuntu-latest
22         steps:
23           - task: Docker@2
24             displayName: Build an image
25             inputs:
26               containerRegistry: 'keerthi-docker-hub'
27               repository: 'keerthins123 / myrepo'
28               command: 'buildAndPush'
29               Dockerfile: '**/Dockerfile'
30               tags: '$(tag)'
31
```

Tasks

- Search tasks
- NET Core: Build, test, package, or publish a dotnet applicatio...
- Android signing: Sign and align Android APK files
- Ant: Build with Apache Ant
- App Center distribute: Distribute app builds to testers and users via Visu...
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- Azure App Service manage: Start, stop, restart, slot swap, slot delete, install st...
- Azure App Service Settings: Update/Add App settings in Azure Web App for ...
- Azure CLI: Run Azure CLI commands against an Azure subscr...

Show all

Type here to search

03:52 PM 28-04-2021

keerthi-ns/azure-devops-kubern... Pipelines - Run 20210427.1 App Services - Microsoft Azure

dev.azure.com/AzureDotnetProject/A_D_K_T_166703/_build/results?buildId=688&view=results

Azure DevOps

AzureDotnetProject / A_D_K_T_166703 / Pipelines / build and push docker imag... / 20210427.1

#20210427.1 docker build on build and push docker images Retained

Summary

Triggered by keertthi-ns

Repository and version: keertthi-ns/azure-devops-kubemetes-terraform master 161139e

Time started and elapsed: Yesterday at 4:16 PM 9m 15s

Related: 0 work items 0 artifacts

Tests and coverage: Get started

View change

Jobs

Name	Status	Duration
Build	Success	9m 6s

Resume Format (1...doc)

Show all

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keerthi-ns/azure-devops-kubern... understanding stages - Pipelines x App Services - Microsoft Azure x +

dev.azure.com/AzureDotnetProject/A_D_K_T_166703/_apps/hub/ms.vss-build-web.ci-designer-hub?pipelineId=98&branch=master&nonce=K4jbcu3rS%2BDLsMS05Wx6Q%3D%3D

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Azure DevOps AzureDotnetProject / A_D_K_T_166703 / Pipelines / Builds / understanding stages / YAML

A.D.K.T.166703 +

Overview Boards Repos Pipelines Pipelines Environments Releases Library Task groups Deployment groups Test Plans Artifacts

Project settings <<

← understanding stages Disabled

master keerthi-ns/azure-devops-kubernets-terraform / azure-pipelines.yml *

```
1 triggers:
2   - master
3
4
5 pool:
6   vmImage: ubuntu-latest
7
8 stages:
9   - Build
10  jobs:
11    - job: FirstJob
12      steps:
13        - bash: echo Build FirstJob
14        - bash: echo $(PipelineLevelVar)
15        - bash: echo Build FirstJob
16        - bash: echo $(PipelineLevelVariable)
17        - bash: echo $(Build.BuildNumber)
18        - bash: echo $(Build.BuildId)
19        - bash: echo $(Build.SourceBranchName)
20        - bash: echo $(Build.SourceDirectory)
21        - bash: echo $(System.DefaultWorkingDirectory)
22        - bash: ls -R $(System.DefaultWorkingDirectory)
23        - bash: echo $(Build.ArtifactStagingDirectory)
24
25      - task: CopyFiles@2
26        inputs:
27          SourceFolder: '$(System.DefaultWorkingDirectory)'
28          Contents: |
29            **/*.yaml
30            **/*.tf
31          TargetFolder: '$(Build.ArtifactStagingDirectory)'
32          - bash: ls -R $(Build.ArtifactStagingDirectory)
33
34      - task: PublishBuildArtifacts@1
35        inputs:
36          PathToPublish: '$(Build.ArtifactStagingDirectory)'
37          ArtifactName: 'drop'
38          publishLocation: 'Container'
39
```

Tasks

Search tasks

- .NET Core Build, test, package, or publish a dotnet application...
- Android signing Sign and align Android APK files
- Ant Build with Apache Ant
- App Center distribute Distribute app builds to testers and users via Visu...
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- ARM template deployment Deploy an Azure Resource Manager (ARM) templ...
- Azure App Service deployment Deploy to Azure App Service a web, mobile, or AP...
- Azure App Service manage Start, stop, restart, slot swap, slot delete, instal...
- Azure App Service Settings Update/Reset App settings on Azure Web App for ...
- Azure CLI Run Azure CLI commands against an Azure subsc...
- Azure Cloud Service deployment Deploy an Azure Cloud Service

Type here to search

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keerthi-ns/azure-devops-kubern... Pipelines - Run 20210427.7 x App Services - Microsoft Azure x +

dev.azure.com/AzureDotnetProject/A_D_K_T_166703/_build/results?buildId=598&view=results

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Azure DevOps AzureDotnetProject / A_D_K_T_166703 / Pipelines / understanding stages / 20210427.7

A.D.K.T.166703 +

Overview Boards Repos Pipelines Pipelines Environments Releases Library Task groups Deployment groups Test Plans Artifacts

Project settings <<

#20210427.7 ADDED variables on understanding stages

Summary Releases

Triggered by keerthi-ns

Repository and version keerthi-ns/azure-devops-kubernets-terraform master 6972b78

Time started and elapsed Yesterday at 3:38 PM 1m 21s

Related 0 work items 0 artifacts

Tests and coverage Get started

View change

Stages Jobs

Build 2 jobs completed 14s

DevDeploy 1 job completed 13s

QA Deploy 1 job completed 10s

ProDeploy 1 job completed 9s

Type here to search

03:59 PM 28-04-2021

keerthi-ns.azure-devops-kubern... x kee... App Services - Microsoft Azure x +

dev.azure.com/AzureDotnetProject/A_D_K_T_166703/_apps/hub/ms.vss-build-web-designer-hub?pipelineId=22&branch=master&nonce=0EbvIQ9Dcgb6DD4Zmo95nA%3D%3D

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Azure DevOps AzureDotnetProject / A_D_K_T_166703 / Pipelines / Builds / kee... / YAML

← kee... Variables Run

master kee... / azure-pipeline-3.yml

```
1
2
3 trigger:
4   - master
5
6 pool:
7   vmImage: ubuntu-latest
8
9 steps:
10  - script: echo Hello, world!
11    displayName: 'Run a one-line script'
12
13 settings:
14   task: DownloadSecureFile@1
15   name: publickey
16   inputs:
17     secureFile: 'azure_rsa.pub'
18
19 task: TerraformCLI@0
20 inputs:
21   command: 'init'
22   workingDirectory: '$(System.DefaultWorkingDirectory)/configuration/laac/azure/kubernetes'
23   commandOptions: '-var client_id=$(client_id) -var client_secret=$(client_secret) -var ssh_public_key=$(publickey.securefilePath)'
24   backendType: 'azurerm'
25   backendServiceName: 'add a azure pipeline'
26   ensureBackend: true
27   backendAzureResourceGroupName: 'terraform-backend-rg'
28   backendAzureResourceGroupLocation: 'westeurope'
29   backendAzureStorageAccountName: 'storageacctst'
30   backendAzureContainerName: 'storageacctstcontainer'
31   backendAzureKey: 'kubernetes-dev.tfstate'
32   allowTelemetryCollection: true
```

Tasks

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- .NET Core Build, test, package, or publish a dotnet application...
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- Azure App Service deploy Deploy to Azure App Service a web, mobile, or AP...
- Azure App Service manage Start, stop, restart, slot swap, slot delete, install s...
- Azure App Service Settings Update/Reset App settings in Azure Web App for ...
- Azure CLI Run Azure CLI commands against an Azure subsc...
- Azure Cloud Service deployment Deploy an Azure Cloud Service

Project settings

Type here to search

04:05 PM 28-04-2021

keerthi-ns.azure-devops-kubern... x Pipelines - Run 20210428.8 logs x App Services - Microsoft Azure x (no subject) - kee... x +

dev.azure.com/AzureDotnetProject/A_D_K_T_166703/_build/results?buildId=130&view=logs&_id=12f1170f-5412-53f3-20dd-22fc7dff55f9

Apps Vehicle to Grid - an... elsevier - Google S... IEEE PESGRE 2020 Advance Search wrf.org wrf.org... leeforum Confere... sciencelobe.org |... https://www.getpra... Mail - Keerthi Nalla... Kubera

Azure DevOps AzureDotnetProject / A_D_K_T_166703 / Pipelines / kee... / 20210428.8

← Jobs in run #20210428.8 kee... View raw log

Jobs

Job	35s
Initialize job	2s
Pre-job: publickey	2s
Checkout kee.../azure-devop...	3s
Run a one-line script	<1s
TerraformCLI	26s
Post-job: Checkout kee.../az...	<1s
Finalize Job	<1s

Job

```
1 Pool: Azure Pipelines
2 Image: ubuntu-latest
3 Agent: Hosted Agent
4 Started: Today at 4:07 PM
5 Duration: 35s
6
7 Job preparation parameters
```

Type here to search

04:13 PM 28-04-2021