

1: Branching Strategy and Execution Rules.

Prashanth7993 / java-microservice-app

Search Type to search

+

🕒

🔍

📧

👤

<> Code

🔗 Pull requests

🕒 Actions

📁 Projects

📖 Wiki

🔒 Security

📊 Insights

⚙️ Settings

java-microservice-app

Public

📌 Pin

👁 Watch 0

🍴 Fork 0

☆ Star 0

forked from vilasvarghese/hello1springboot

main

4 Branches

0 Tags

Go to file

Add file

Code

Switch branches/tags

Find or create a branch...

Branches

Tags

main default

develop

feature/sample-feature

hotfix/fix-issue

View all branches

mvnw

Contribute

Sync fork

Go to file

Updated deployment.yaml 10 minutes ago

Updated Hello1Controller.java 3 hours ago

Updated Dockerfile 2 hours ago

init 5 days ago

Updated Jenkins file 33 minutes ago

init 5 days ago

About

No description, website, or topics provided.

Activity

0 stars

0 watching

0 forks

Releases

No releases published

Create a new release

Packages

No packages published

Publish your first package

https://github.com/Prashanth7993/java-microservice-app

Prashanth7993 / java-microservice-app

Search Type to search

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⚙️ Settings

Branches

New branch

Overview

Yours

Active

Stale

All

Search branches...

Default

Branch

Updated

Check status

Behind Ahead

Pull request

main 14 minutes ago Default

Your branches

Branch

Updated

Check status

Behind Ahead

Pull request

feature/sample-feature 19 minutes ago 28 0

develop 37 minutes ago 21 0

hotfix/fix-issue 4 hours ago 32 0

2: Github Webhook

Prashanth7993 / java-microservice-app

Type **/** to search

+ ▾

<> Code

Pull requests

Actions

Projects

Wiki

Security

Insights

Settings

General

Access

Collaborators

Moderation options ▾

Code and automation

Branches

Tags

Rules ▾

Actions ▾

Webhooks

Environments

Codespaces

Pages

Security

Webhooks

Webhooks allow external services to be notified when certain events happen. When the specified events happen, we'll send a POST request to each of the URLs you provide. Learn more in our [Webhooks Guide](#).

✓ <http://34.238.138.216:8080/github-...> (all events)

Last delivery was successful.

EditDelete

Add webhook

Prashanth7993 / java-microservice-app

Type **/** to search

+ ▾

<> Code

Pull requests

Actions

Projects

Wiki

Security

Insights

Settings

General

Access

Collaborators

Moderation options ▾

Code and automation

Branches

Tags

Rules ▾

Actions ▾

Webhooks

Environments

Codespaces

Pages

Security

Webhooks / Manage webhook

Settings

Recent Deliveries

✓		18438968-1605-11f0-8dac-2676aac792ee	push	2025-04-10 17:42:39	...
✓		80739C5e-1604-11f0-8a8a-9095a494965a	push	2025-04-10 17:38:24	...
✓		6086f4ae-1604-11f0-8e1e-f417134a6e48	push	2025-04-10 17:37:30	...
✓		cec88196-1602-11f0-8f0b-362f110090e3	push	2025-04-10 17:26:16	...
✓		b483aa9a-1602-11f0-86a7-d51cf2d39d10	push	2025-04-10 17:25:33	...
✓		f0bf3fb0-1601-11f0-8cd1-a32537ec3201	push	2025-04-10 17:20:14	...
✓		dfbafb06-1601-11f0-9f89-ce87a585ae85	push	2025-04-10 17:19:35	...
✓		64038172-1601-11f0-9de6-fd49ce882c08	push	2025-04-10 17:16:08	...
✓		43ab65de-1601-11f0-83a5-23f7068112e7	push	2025-04-10 17:15:14	...

3: Building Java Code with Maven

Dashboard > java-microservice-ci-cd > Configuration

Configuration

General

Branch Sources

Build Configuration

Scan Multibranch Pipeline Triggers

Orphaned Item Strategy

Appearance

Health metrics

Properties

Branch Sources

Git

Project Repository ?

https://github.com/Prashanth7993/java-microservice-app

Credentials ?

prashanth7993/***** (github-credentials)

+ Add

Behaviors

Discover branches ?

Add ▾

Save

Apply

Activate Windows
Go to Settings to activate Windows.

Dashboard > java-microservice-ci-cd > Configuration

Configuration

General

Branch Sources

Build Configuration

Scan Multibranch Pipeline Triggers

Orphaned Item Strategy

Appearance

Health metrics

Properties

Add property ▾

Add source ▾

Build Configuration

Mode

by Jenkinsfile ▾

Script Path ?

Jenkinsfile

Scan Multibranch Pipeline Triggers

☐ Periodically if not otherwise run ?

Save

Apply

Activate Windows
Go to Settings to activate Windows.

```
Dashboard > java-microservice-ci-cd > main > #19

[Pipeline] stage
[Pipeline] { (Build with Maven)
[Pipeline] sh
+ mvn clean package -DskipTests
[01:34mINFO][m] Scanning for projects...
[01:34mINFO][m] [01m-----< [0;36mcom.example:demo[0;1m -----[0m
[01:34mINFO][m] [01mbuilding hello1 0.0.1-SNAPSHOT[0m
[01:34mINFO][m] [01m-----[ jar ]-----[0m
[01:34mINFO][m]
[01:34mINFO][m] [01m--- [0;32mmaven-clean-plugin:3.4.1:clean[0m [01m(default-clean)[0m @ [0;36mdemo[0;1m ---[0m
[01:34mINFO][m] Deleting /var/lib/jenkins/workspace/java-microservice-ci-cd_main/target
[01:34mINFO][m]
[01:34mINFO][m] [01m--- [0;32mmaven-resources-plugin:3.3.1:resources[0m [01m(default-resources)[0m @ [0;36mdemo[0;1m ---[0m
[01:34mINFO][m] Copying 1 resource from src/main/resources to target/classes
[01:34mINFO][m] Copying 0 resource from src/main/resources to target/classes
[01:34mINFO][m]
[01:34mINFO][m] [01m--- [0;32mmaven-compiler-plugin:3.13.0:compile[0m [01m(default-compile)[0m @ [0;36mdemo[0;1m ---[0m
[01:34mINFO][m] Recompiling the module because of [01mchanged source code[0m.
[01:34mINFO][m] Compiling 2 source files with javac [debug parameters release 17] to target/classes
[01:34mINFO][m]
[01:34mINFO][m] [01m--- [0;32mmaven-resources-plugin:3.3.1:testResources[0m [01m(default-testResources)[0m @ [0;36mdemo[0;1m ---[0m
[01:34mINFO][m] skip non existing resourceDirectory /var/lib/jenkins/workspace/java-microservice-ci-cd_main/src/test/resources
[01:34mINFO][m]
[Pipeline] }
```

```
Dashboard > java-microservice-ci-cd > main > #19

[01:34mINFO][m] 12:19:08.574 CPD Executor 2 files had no CPD blocks
[01:34mINFO][m] 12:19:08.575 CPD Executor Calculating CPD for 0 files
[01:34mINFO][m] 12:19:08.575 CPD Executor CPD calculation finished (done) | time=0ms
[01:34mINFO][m] 12:19:08.657 Analysis report generated in 71ms, dir size=152.2 kB
[01:34mINFO][m] 12:19:08.680 Analysis report compressed in 22ms, zip size=23.0 kB
[01:34mINFO][m] 12:19:08.702 Analysis report uploaded in 22ms
[01:34mINFO][m] 12:19:08.703 ANALYSIS SUCCESSFUL, you can find the results at: http://34.238.136.216:9000/dashboard?id=com.example%3Ademo
[01:34mINFO][m] 12:19:08.703 Note that you will be able to access the updated dashboard once the server has processed the submitted analysis report
[01:34mINFO][m] 12:19:08.703 More about the report processing at http://34.238.136.216:9000/api/ce/task?id=AZYfo8Uu7vtx-arjs8Id
[01:34mINFO][m] 12:19:08.719 Analysis total time: 6.412 s
[01:34mINFO][m] [01m-----[0m
[01:34mINFO][m] [01;32mBUILD SUCCESS[0m
[01:34mINFO][m] [01m-----[0m
[01:34mINFO][m] Total time: 8.863 s
[01:34mINFO][m] Finished at: 2025-04-10T12:19:08Z
[01:34mINFO][m] [01m-----[0m
[Pipeline] }
```

4: SonarQube code Analysis and Quality Gate

My Favorites

All

Filters

Quality Gate

Passed

1

Failed

0

Reliability

A

1

B

0

C

0

D

0

E

0

Search for projects...

Perspective

Overall Status

Sort by

Name

1 project(s)

hello1 PUBLIC

Passed

Last analysis: 10 minutes ago • 71 Lines of Code • XML, Java

A 0

A 0

E 0.0%

A 2

0.0%

0.0%

Bugs

Vulnerabilities

Hotspots Reviewed

Code Smells

Coverage

Duplications

1 of 1 shown

SonarQube™ technology is powered by SonarSource SA

Community Edition - Version 10.3 (build 82913) - [LGPL v3](#) - [Community](#) - [Documentation](#) - [Plugins](#) - [Web API](#)

sonarqube

ProjectsIssuesRulesQuality ProfilesQuality GatesAdministrationMore

hello1 / main

Version 0.0.1-SNAPSHOT

OverviewIssuesSecurity HotspotsMeasuresCodeActivityProject SettingsProject Information

Quality Gate Status

Quality Gate

Passed

Enjoy your sparkling clean code!

Measures

New CodeOverall Code

New Code: Since April 10, 2025 Started 2 hours ago

Reliability

0 New Bugs

A

Maintainability

0 New Code Smells

A

Security

0 New Vulnerabilities

A

Security Review

0 New Security Hotspots

A

Activate Windows

Go to Settings to activate Windows.

sonarqube

ProjectsIssuesRulesQuality ProfilesQuality GatesAdministrationMore

hello1 / main

Version 0.0.1-SNAPSHOT

OverviewIssuesSecurity HotspotsMeasuresCodeActivityProject SettingsProject Information

Filter events

Start Date

to

End Date

Reset dates

0.0.1-SNAPSHOT

April 10, 2025

5:49 PM

Version: 0.0.1-SNAPSHOT

5:43 PM

5:38 PM

5:32 PM

5:26 PM

5:20 PM

5:07 PM

5:03 PM

5:02 PM

4:55 PM

Issues

Bugs

Code Smells

Vulnerabilities

New Code

2

0

04 PM

04:15

04:30

04:45

05 PM

05:15

05:30

Activate Windows

Go to Settings to activate Windows.

Jenkins

Prashanth

log out

Dashboard > java-microservice-ci-cd > main

Status

Changes

Build Now

View Configuration

SonarQube

Stages

Pipeline Syntax

Builds

Filter

Today

#19

12:18 PM

#18

12:12 PM

#17

12:08 PM

main

Full project name: java-microservice-ci-cd/main

Last Successful Artifacts

demo-0.0.1-SNAPSHOT.jar

19.78 MiB

view

SonarQube Quality Gate

hello1 Passed

server-side processing: Success

Permalinks

Last build (#19), 15 min ago

Last stable build (#19), 15 min ago

Last successful build (#19), 15 min ago

Last failed build (#12), 1 hr 0 min ago

Last unsuccessful build (#12), 1 hr 0 min ago

Last completed build (#19), 15 min ago

Activate Windows

Go to Settings to activate Windows.

5: Docker Containerization and Image Push to docker registry.

```
GNU nano 7.2
FROM openjdk:11-jre-slim
WORKDIR /app
COPY target/*.jar ./app.jar
EXPOSE 8080
ENTRYPOINT ["java", "-jar", "./app.jar"]
```

```
root@kmaster:~/java-microservice-app/kubernetes# docker images
REPOSITORY          TAG         IMAGE ID      CREATED        SIZE
prashanth7993/java-microservice-cicd  latest     10187a0ab415  25 minutes ago  244MB
root@kmaster:~/java-microservice-app/kubernetes#
```

The screenshot shows the Docker Hub web interface for a user named 'prashanth7993'. The main content area displays the repository 'prashanth7993/java-microservice-cicd', which was last pushed 19 minutes ago and has a size of 253.7 MB. The 'Tags' section shows a single tag named 'latest' with an OS of 'linux' and a type of 'Image', pushed less than 1 day ago. The interface also includes a sidebar with navigation options like 'Repositories', 'Settings', 'Billing', and 'Usage'. A 'Docker commands' section provides the command 'docker push prashanth7993/java-microservice-cicd:tagname'. A 'buildcloud' advertisement is visible on the right side.

6: Kubernetes Deployment

```
apiVersion: apps/v1
kind: Deployment
metadata:
  name: java-microservices-cicd
spec:
  replicas: 2
  selector:
    matchLabels:
      app: java-microservices-cicd
  template:
    metadata:
      labels:
        app: java-microservices-cicd
    spec:
      containers:
        - name: java-microservices-cicd
          image: prashanth7993/java-microservices-cicd:latest
          ports:
            - containerPort: 8080
```

^G Help	^O Write Out	^W Where Is	^K Cut	^T Execute
^X Exit	^R Read File	^\\ Replace	^U Paste	^J Justify

```
GNU nano 7.2
apiVersion: v1
kind: Service
metadata:
  name: java-microservices-cicd-service
spec:
  type: ClusterIP
  selector:
    app: java-microservices-cicd
  ports:
    - protocol: TCP
      port: 8080
      targetPort: 8080
```

^G Help	^O Write Out	^W Where Is	^K Cut	^T Execute
^X Exit	^R Read File	^_ Replace	^U Paste	^J Justify


```

root@kmaster:~/java-microservice-app# cat Jenkinsfile
pipeline {
    agent any

    environment {
        SONARQUBE_ENV = 'MySonarQube'
    }

    stages {
        stage('Checkout') {
            steps {
                checkout scm
            }
        }

        stage('Build with Maven') {
            steps {
                sh 'mvn clean package -DskipTests'
            }
        }

        stage('SonarQube Analysis') {
            steps {
                withSonarQubeEnv("${SONARQUBE_ENV}") {
                    sh 'mvn sonar:sonar'
                }
            }
        }

        stage('Wait for Quality Gate') {
            steps {
                timeout(time: 5, unit: 'MINUTES') {
                    waitForQualityGate abortPipeline: true
                }
            }
        }
    }
}

```

```

        echo "Pushing Docker image..."
        docker push $DOCKER_USER/java-microservice-cicd:latest
    """
    }
}

stage('Kubernetes Deploy') {
    steps {
        script {
            sh '''
                echo "Deleting existing deployment (if exists)..."
                kubectl delete -f kubernetes/deployment.yaml --ignore-not-found
                echo "Applying deployments and service yaml"
                kubectl apply -f kubernetes/deployment.yaml
                kubectl apply -f kubernetes/service.yaml
            '''
        }
    }
}

post {
    success {
        echo "JAR built, analyzed by SonarQube, and archived successfully."
    }
    failure {
        echo "Build failed due to errors or Quality Gate failure."
    }
}
}


```

NAME	TYPE	CLUSTER-IP	EXTERNAL-IP	PORT(S)	AGE
service/java-microservices-cicd-service	ClusterIP	10.99.228.120	<none>	8080/TCP	64m
service/kubernetes	ClusterIP	10.96.0.1	<none>	443/TCP	4h39m

```

root@kmaster:~/java-microservice-app/kubernetes# █

```

 Jenkins

Dashboard > java-microservice-ci-cd > main > Stages

Build main

Build

id	pipeline
#19	<div>Start Checkout SCM Checkout Build with Maven SonarQube Ana... Wait for Quality... Archive JAR Docker Build & ... Kubernetes De... Past Actions End</div>
#18	<div>Start Checkout SCM Checkout Build with Maven SonarQube Ana... Wait for Quality... Archive JAR Docker Build & ... Kubernetes De... Past Actions End</div>
#17	<div>Start Checkout SCM Checkout Build with Maven SonarQube Ana... Wait for Quality... Archive JAR Docker Build & ... Kubernetes De... Past Actions End</div>

Activate Windows
Go to Settings to activate Windows.

Reference:

<https://github.com/Prashanth7993/java-microservice-app>