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Install Jenkins with Docker

- Install **Docker** on your personal laptop or Cloud instance or Virtual Machine.
- Download and [Run Jenkins in Docker](#)
- Get Admin Password for Jenkins Setup
 - `docker exec -it blueocean[name of your container] /bin/bash`
 - `cat /var/jenkins_home/secrets/initialAdminPassword` or
 - `docker logs <<CONTAINER_ID>>`

Jenkinsfile – Pipeline as Code for Test Execution and Code Coverage Calculation

Dockerfile.build

FROM node:16.13.1-alpine

Create a CI stage and add NPM and Test stages inside CI stage.

Jenkinsfile

```
1. pipeline {
2.   agent any
3.
4.   stages {
5.     stage('CI') {
6.       agent {
7.         dockerfile {
8.           filename 'Dockerfile.build'
9.           args '-v /root/.npm:/root/.npm'
10.        }
11.      }
12.    stages {
13.      stage('NPM') {
14.        steps {
15.          sh 'ls -a; node --version'
16.          sh 'npm ci --cache .npm'
17.        }
18.      }
19.      stage('Test') {
20.        steps {
21.          sh 'npm test'
22.          archiveArtifacts artifacts: 'coverage/*.*', followSymlinks:
false
23.          cobertura autoUpdateHealth: false, autoUpdateStability: false,
coberturaReportFile: 'coverage/cobertura-coverage.xml', conditionalCoverageTargets: '70, 0, 0', failUnhealthy: false, failUnstable: false, lineCoverageTargets: '80, 0, 0',
maxNumberOfBuilds: 0, methodCoverageTargets: '80, 0, 0', onlyStable: false,
sourceEncoding: 'ASCII', zoomCoverageChart: false
24.        }
25.      }
26.    }
27.  }
28. }
29. }
30. }
```

Verify Pipeline Status.

Back to Project

Status

Changes

Console Output

Edit Build Information

Delete build '#55'

Timings

Git Build Data

Coverage Report

Aquasec Trivy Warnings

Performance Report

Parameters

Open Blue Ocean

Restart from Stage

Build #55 (May 14, 2022, 7:46:50 PM)

Keep this build forever

Add description

Started 2 days 22 hr ago

Took 14 min

Build Artifacts

build.zip655.57 KBview

cobertura-coverage.xml9.03 KBview

Started by user admin

Replayed #54 (diff)

This run spent:

- 4 ms waiting;
- 14 min build duration;
- 14 min total from scheduled to completion.

git

Revision: ea2b2fcf6265c91f09c38cc1472ed26ab899a74

Repository: https://github.com/devops-pocs9/bmi-calculator.git

minikube

Cobertura Coverage Report

Packages: 100%Files: 100%Classes: 100%Methods: 47%Lines: 56%Conditionals: 40%

Aquasec Trivy: 387 warnings

Reference build: minikube #53

Verify Coverage Report.

Back to Project

Status

Changes

Console Output

Edit Build Information

Delete build '#55'

Timings

Git Build Data

Coverage Report

Aquasec Trivy Warnings

Performance Report

Parameters

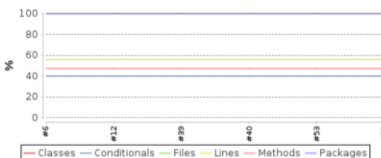
Open Blue Ocean

Restart from Stage

Code Coverage

Cobertura Coverage Report

Trend



Project Coverage summary

Name	Packages	Files	Classes	Methods	Lines	Conditionals
Cobertura Coverage Report	100%5/5	100%5/5	100%5/5	47%9/19	56%37/66	40%4/10

Coverage Breakdown by Package

Name	Files	Classes	Methods	Lines	Conditionals
components.App	100%1/1	100%1/1	20%2/10	33%9/27	50%2/4
components.Bar	100%1/1	100%1/1	50%1/2	50%5/10	N/A
components.BmiForm	100%1/1	100%1/1	100%3/3	93%13/14	50%1/2

Done.