

1 Übung 01 - Gradle und Continuous Integration

Aufgabe 1: Gradle

Link zu Git Repo

<https://github.com/greenBene/fst-ueb01>

Aufgabe 2: TeamCity

Link zu Git Repo

<https://github.com/greenBene/fst-ueb01>

TeamCity Config

Build Steps

In this section you can configure the sequence of build steps to be executed. Each build step is represented by a build runner and provides integration with a specific build or test tool. [?](#)

+ Add build step		Reorder build steps	Auto-detect build steps
Build Step	Parameters	Description	
1. Gradle buildUI	Gradle Gradle tasks: clean buildUI Use wrapper script: no Execute: If all previous steps finished successfully		Edit
2. Gradle Test	Gradle Gradle tasks: clean test Use wrapper script: no Execute: If all previous steps finished successfully		Edit

TeamCity Success

FST_WS22/23 / Beckermann / Build

#14 at 7 Nov 18:14

Tests passed: 1

main Actions Details

Overview Changes Tests **Build Log** Artifacts Parameters PerfMon

Expand All Collapse All All Messages Search in log...

Step 1/2: Gradle buildUI (Gradle) 10sStep 2/2: Gradle Test (Gradle)

18:14:18 The build is removed from the queue to be prepared for the start
18:14:18 > Collecting changes in 1 VCS root < 1s
18:14:18 Starting the build on the agent "host"
18:14:19 > Updating tools for build
18:14:21 Clearing temporary directory: C:\BuildAgent\temp\buildTmp
18:14:21 > Publishing internal artifacts < 1s
18:14:21 Using vcs information from agent file: dfef9ced9e015bda.xml
18:14:21 Checkout directory: C:\BuildAgent\work\dfef9ced9e015bda
18:14:21 > Updating sources: auto checkout (on agent) 3s
18:14:24 > Step 1/2: Gradle buildUI (Gradle) 10s
18:14:34 > Step 2/2: Gradle Test (Gradle) 15s
18:14:59 > Publishing artifacts < 1s
18:14:59 > Publishing internal artifacts < 1s
18:14:59 > Publishing artifacts < 1s
18:14:59 Build finished

TeamCity Success Build

```
18:14:24 ~Step 1/2: Gradle buildUI (Gradle) 18s
18:14:24 Starting: C:\Gradle\gradle-7.5.1\bin\gradle.bat --init-script C:\BuildAgent\plugins\gradle-runner\scripts\init.gradle -Dorg.gradle.daemon=false clean buildUI
18:14:24 in directory: C:\BuildAgent\work\dfef9ced9e015bda
18:14:25 To honour the JVM settings for this build a single-use Daemon process will be forked. See https://docs.gradle.org/7.5.1/userguide/gradle_daemon.html#sec:disabling_the_daemon
18:14:27 Daemon will be stopped at the end of the build
18:14:31
18:14:31 > Configure project :
18:14:31 Starting Gradle in TeamCity build 14
18:14:32 Project : => no module-info.java found
18:14:33
18:14:33 > Task :clean
18:14:33 :clean
18:14:34 > Task :compileJava
18:14:34 Note: C:\BuildAgent\work\dfef9ced9e015bda\src\main\java\de\unitrier\st\ui\Plot.java uses unchecked or unsafe operations.
18:14:34 Note: Recompile with -Xlint:unchecked for details.
18:14:34 :compileJava
18:14:34 > Task :processResources
18:14:34 :processResources
18:14:34 > Task :classes
18:14:34 :classes
18:14:34 > Task :buildUI NO-SOURCE
18:14:34 :buildUI NO-SOURCE
18:14:34 Deprecated Gradle features were used in this build, making it incompatible with Gradle 8.0.
18:14:34 You can use '--warning-mode all' to show the individual deprecation warnings and determine if they come from your own scripts or plugins.
18:14:34 See https://docs.gradle.org/7.5.1/userguide/command_line_interface.html#sec:command_line_warnings
18:14:34
18:14:34 BUILD SUCCESSFUL in 9s
18:14:34 3 actionable tasks: 3 executed
18:14:34 Process exited with code 0
```

TeamCity Success Test

```
18:14:34 ~Step 2/2: Gradle Test (Gradle) 15s
18:14:34 Starting: C:\Gradle\gradle-7.5.1\bin\gradle.bat --init-script C:\BuildAgent\plugins\gradle-runner\scripts\init.gradle -Dorg.gradle.daemon=false
18:14:34 in directory: C:\BuildAgent\work\dfef9ced9e015bda
18:14:35 To honour the JVM settings for this build a single-use Daemon process will be forked. See https://docs.gradle.org/7.5.1/userguide/gradle_daemon.html#sec:disabling_the_daemon
18:14:38 Daemon will be stopped at the end of the build
18:14:46
18:14:46 > Configure project :
18:14:46 Starting Gradle in TeamCity build 14
18:14:46 Project : => no module-info.java found
18:14:47
18:14:47 > Task :clean
18:14:47 :clean
18:14:48 Note: C:\BuildAgent\work\dfef9ced9e015bda\src\main\java\de\unitrier\st\ui\Plot.java uses unchecked or unsafe operations.
18:14:48 Note: Recompile with -Xlint:unchecked for details.
18:14:48 > Task :compileJava
18:14:48 :compileJava
18:14:48 > Task :processResources
18:14:48 :processResources
18:14:48 > Task :classes
18:14:48 :classes
18:14:48 > Task :compileTestJava
18:14:48 :compileTestJava
18:14:48 > Task :processTestResources NO-SOURCE
18:14:48 :processTestResources NO-SOURCE
18:14:48 > Task :testClasses
18:14:48 :testClasses
18:14:50
18:14:50 > Task :test
18:14:50 :test
18:14:50 DataTest
18:14:50 Deprecated Gradle features were used in this build, making it incompatible with Gradle 8.0.
18:14:50 You can use '--warning-mode all' to show the individual deprecation warnings and determine if they come from your own scripts or plugins.
18:14:50 See https://docs.gradle.org/7.5.1/userguide/command_line_interface.html#sec:command_line_warnings
18:14:50
18:14:50 BUILD SUCCESSFUL in 14s
18:14:50 5 actionable tasks: 5 executed
18:14:50 Process exited with code 0
```

TeamCity Fail

The screenshot shows the TeamCity interface for build #13. The build is marked as successful with a green star. The build log shows the following steps:

- Step 1/2: Gradle buildUI (Gradle) 8s
- 18:39:48 The build is removed from the queue to be prepared for the start
- 18:39:48 > Collecting changes in 1 VCS root < 1s
- 18:39:48 Starting the build on the agent "host"
- 18:39:48 > Updating tools for build
- 18:39:49 Clearing temporary directory: C:\BuildAgent\temp\buildTmp
- 18:39:49 > Publishing internal artifacts < 1s
- 18:39:49 Using vcs information from agent file: dfef9ced9e015bda.xml
- 18:39:49 Checkout directory: C:\BuildAgent\work\dfef9ced9e015bda
- 18:39:49 > Updating sources: auto checkout (on agent) 2s
- 18:39:52 > Step 1/2: Gradle buildUI (Gradle) 8s
- 18:40:00 > Step 2/2: Gradle Test (Gradle) 10s
- 18:40:18 > Publishing artifacts < 1s
- 18:40:18 > Publishing internal artifacts < 1s
- 18:40:18 > Publishing artifacts < 1s
- 18:40:18 Build finished

TeamCity Fail Build

```
18:39:52 > Step 1/2: Gradle buildUI (Gradle) 8s
18:39:52 Starting C:\Gradle\gradle-7.5.1\bin\gradle.bat --init-script C:\BuildAgent\plugins\gradle-runnerscripts\init.gradle -Dorg.gradle.daemon=false clean buildUI
18:39:52 in directory: C:\BuildAgent\work\dfef9ced9e015bda
18:39:53 To honour the JVM settings for this build a single-use Daemon process will be forked. See https://docs.gradle.org/7.5.1/userguide/gradle_daemon.html#sec:disabling_the_daemon
18:39:53 Daemon will be stopped at the end of the build
18:39:58 > Configure project :
18:39:58 Starting Gradle in TeamCity build 13
18:39:58 Project : => no module-info.java found
18:39:59 > Task :clean
18:39:59 :clean
18:40:00 > Task :compileJava
18:40:00 Notes: C:\BuildAgent\work\dfef9ced9e015bda\src\main\java\de\unitriple\st\ui\Plot.java uses unchecked or unsafe operations.
18:40:00 Note: Recompile with -Xlint:unchecked for details.
18:40:00 :compileJava
18:40:00 > Task :processResources
18:40:00 :processResources
18:40:00 > Task :classes
18:40:00 :classes
18:40:00 > Task :buildUI NO-SOURCE
18:40:00 :buildUI NO-SOURCE
18:40:00 Deprecated Gradle features were used in this build, making it incompatible with Gradle 8.0.
18:40:00 You can use '--warning-mode all' to show the individual deprecation warnings and determine if they come from your own scripts or plugins.
18:40:00 See https://docs.gradle.org/7.5.1/userguide/command_line_interface.html#sec:command_line_warnings
18:40:00 BUILD SUCCESSFUL in 8s
```

TeamCity Fail Test

```
18:48:00 Process exited with code 0
18:48:00 ~ Step 2/2: Gradle test (Gradle) 18s
18:48:00 Starting: C:\Gradle\gradle-7.5.1\bin\gradle.bat --init-script C:\BuildAgent\plugins\gradle-runner\scripts\init.gradle --org.gradle.daemon=false clean test
18:48:00 in directory: C:\BuildAgent\work\dfe9ced9e815bda
18:48:01 To honour the JVM settings for this build a single-use Daemon process will be forked. See https://docs.gradle.org/7.5.1/userguide/gradle_daemon.html#sec:disabling_the_daemon
18:48:01 Daemon will be stopped at the end of the build
18:48:06
18:48:06 > Configure project :
18:48:06 Starting Gradle in TeamCity build 13
18:48:06 Project : => no module-info.java found
18:48:07
18:48:07 > Task :clean
18:48:07 :clean
18:48:08
18:48:08 Note: C:\BuildAgent\work\dfe9ced9e815bda\src\main\java\de\unintrier\stui\Plot.java uses unchecked or unsafe operations.
18:48:08 Note: Recompile with -Xlint:unchecked for details.
18:48:08
18:48:08 > Task :compileJava
18:48:08 :compileJava
18:48:08 > Task :processResources
18:48:08 :processResources
18:48:08 > Task :classes
18:48:08 :classes
18:48:08 > Task :compileTestJava
18:48:08 :compileTestJava
18:48:08 > Task :processTestResources NO-SOURCE
18:48:08 :processTestResources NO-SOURCE
18:48:08 > Task :testClasses
18:48:08 :testClasses
18:48:10
18:48:10 > Task :test FAILED
18:48:10 > :test
18:48:10 > :test
18:48:10 > Publishing artifacts
18:48:10 Deprecated Gradle features were used in this build, making it incompatible with Gradle 8.0.
18:48:10
18:48:10 You can use "--warning-mode all" to show the individual deprecation warnings and determine if they come from your own scripts or plugins.
18:48:10
18:48:10 See https://docs.gradle.org/7.5.1/userguide/command_line_interface.html#sec:command_line_warnings
18:48:10 5 actionable tasks: 5 executed
18:48:10 Process exited with code 1
18:48:10 > Gradle failure report!
18:48:10 Process exited with code 1 (Step: Gradle Test (Gradle))
18:48:10 Step Gradle Test (Gradle) failed
```

Aufgabe 3: GitHub-Actions mit SonarCloud

Link zu Git Repo

<https://github.com/greenBene/fst-ueb01>

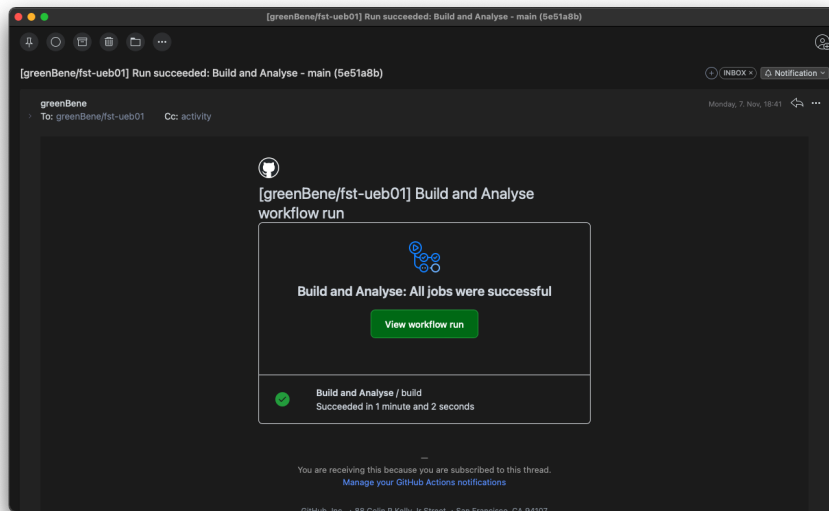
Action Konfigurationsdatei

```
# action.yml
# Benedikt Maria Beckermann, 1599203
name: 'Build and Analyse'
on: [push]
```

```
permissions:
  contents: read
```

```
jobs:
  build:
    runs-on: ubuntu-latest
    steps:
      - uses: actions/checkout@v3
      - name: Set up JDK 11
        uses: actions/setup-java@v3
        with:
          java-version: '11'
          distribution: 'temurin'
      - name: Execute Gradle buildUI
        run: ./gradlew buildUI
      - name: Execute Gradle test
        run: ./gradlew test
      - name: Execute Gradle sonar
        run: ./gradlew sonar
```

Screenshot der E-Mail von Github bei erfolgreichem Build



Screenshot von Sonarcloud mit analysiertem Projekt

