GitLab CI/CD

A Complete DevOps Platform Delivered as a Single Application

Single Conversation
Single Data Store
Single Permission Model
Single Interface
Governance & Security
Team Collaboration
Lifecycle Analytics

Release Stage
CI/CD

Lab Assignment
Part 3

Scenario: Create a *.gitlab-ci.yml* file to visualize an automated CI process.

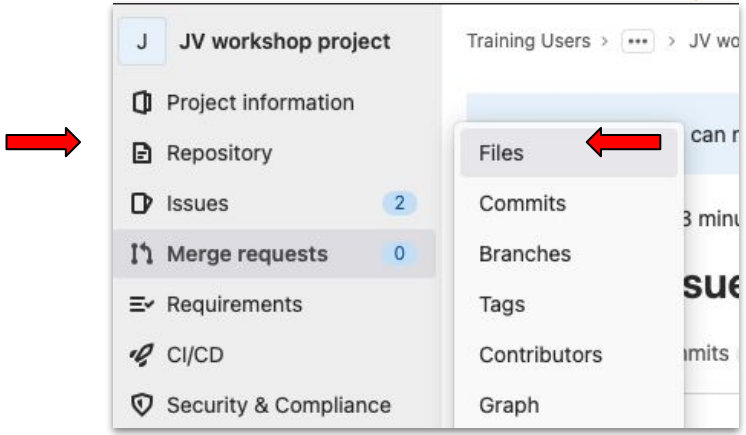
Key Tasks to Complete

1. Create a *.gitlab-ci.yml* File
2. View the CI pipeline
3. Update the CI pipeline

Access repository files

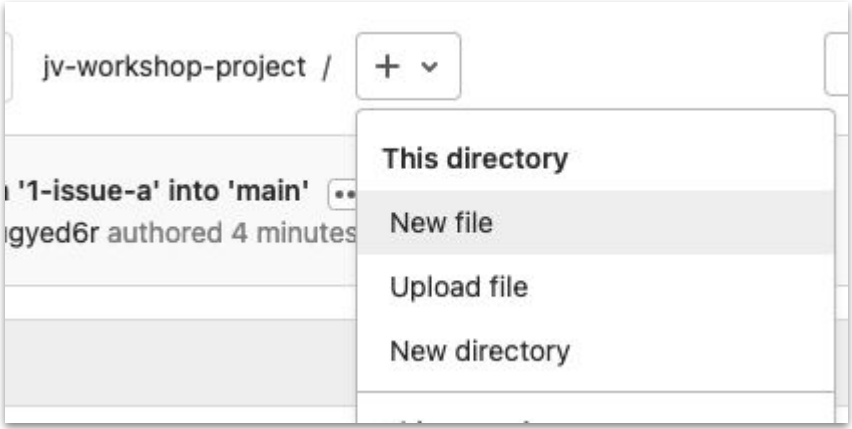
In the MR view:

1. Select **Repository→Files**.



In the repository file view:

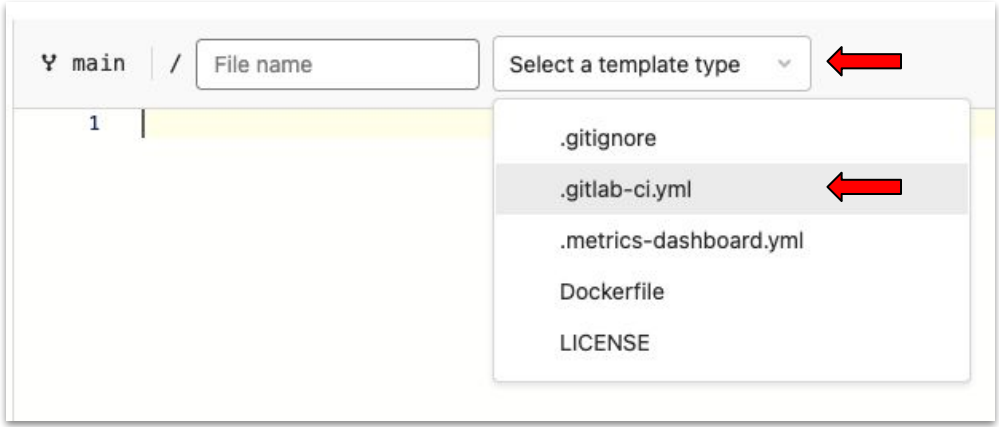
2. Select the '**+**' → '**New file**'



Select file template type

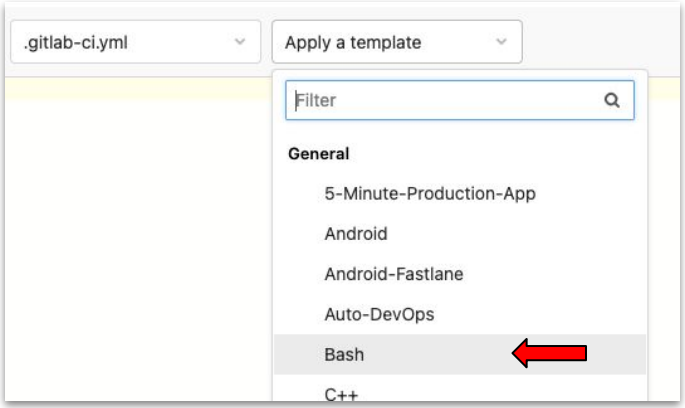
In the New file view:

1. Select the '**Select a template type**' drop-down→ '**.gitlab-ci.yml**' option.



In the New file view:

2. Select the '**Apply a template**' drop-down→ '**Bash**' option.



File title and contents populated with template

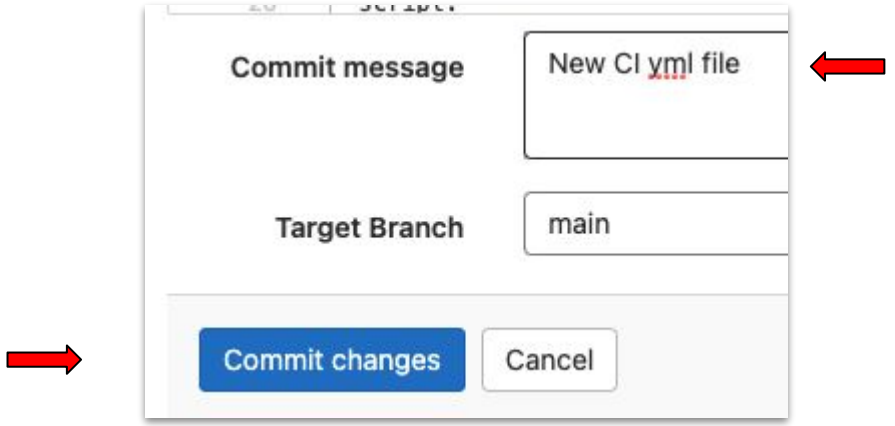
main / .gitlab-ci.yml .gitlab-ci.yml Apply a template

```
# This file is a template, and might need editing before it works on your project.
# To contribute improvements to CI/CD templates, please follow the Development guide at:
# https://docs.gitlab.com/ee/development/cicd/templates.html
# This specific template is located at:
# https://gitlab.com/gitlab-org/gitlab/-/blob/master/lib/gitlab/ci/templates/Bash.gitlab-ci.yml

# See https://docs.gitlab.com/ee/ci/yaml/README.html for all available options

# you can delete this line if you're not using Docker
image: busybox:latest

before_script:
  - echo "Before script section"
  - echo "For example you might run an update here or install a build dependency"
  - echo "Or perhaps you might print out some debugging details"

after_script:
  - echo "After script section"
  - echo "For example you might do some cleanup here"

build1:
  stage: build
  script:
    - echo "Do your build here"

test1:
  stage: test
  script:
```

Add commit message

In the New file view:

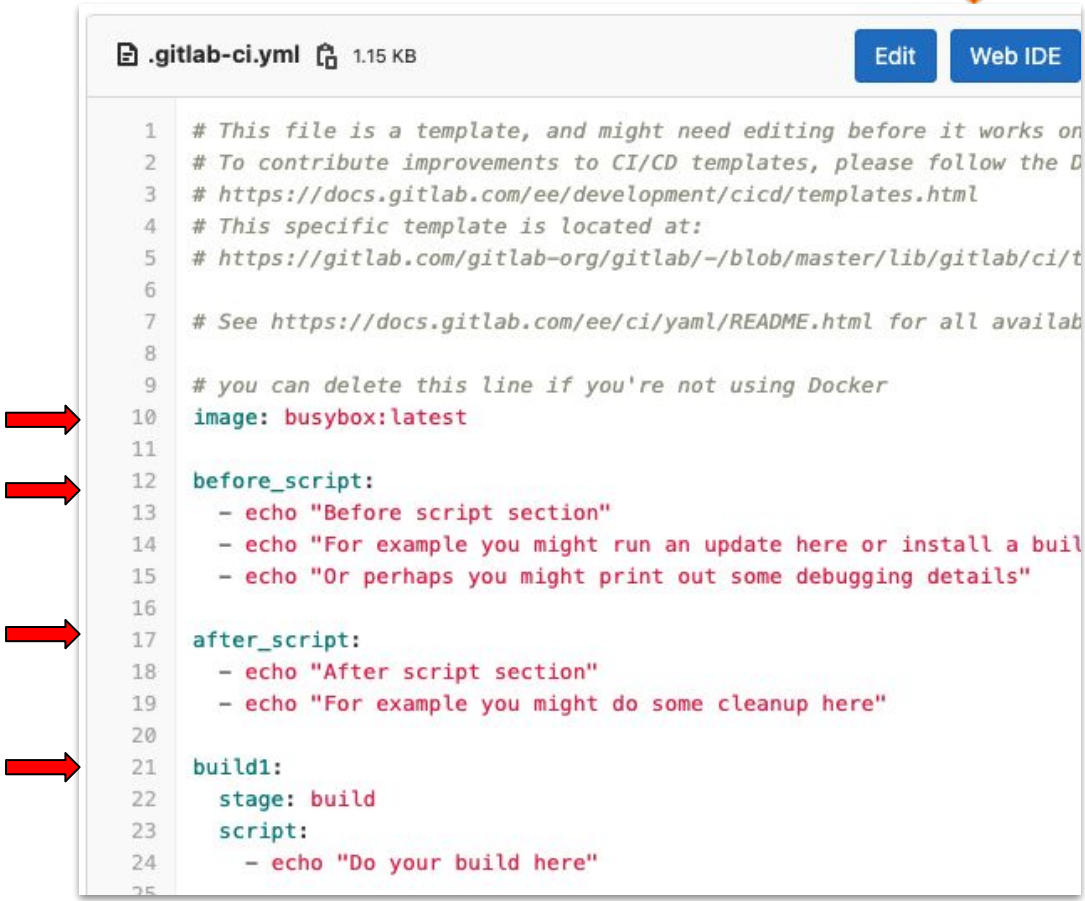
1. Enter <**commit message text**> into the '**Commit message**' pane.
2. Select the '**Commit changes**' button.



Components of this .gitlab-ci.yml

In the file view, confirm the following components.

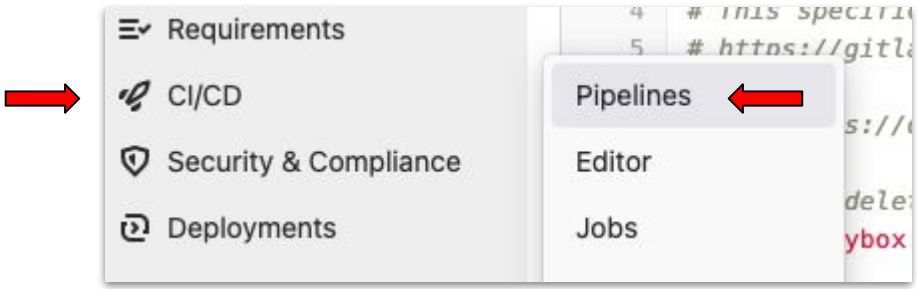
1. Leverages Docker **image**.
2. '**before_script**' block.
3. '**after_script**' block.
4. Pipeline elements of '**stage**' and '**script**'.



Access repository pipelines

In the file view:

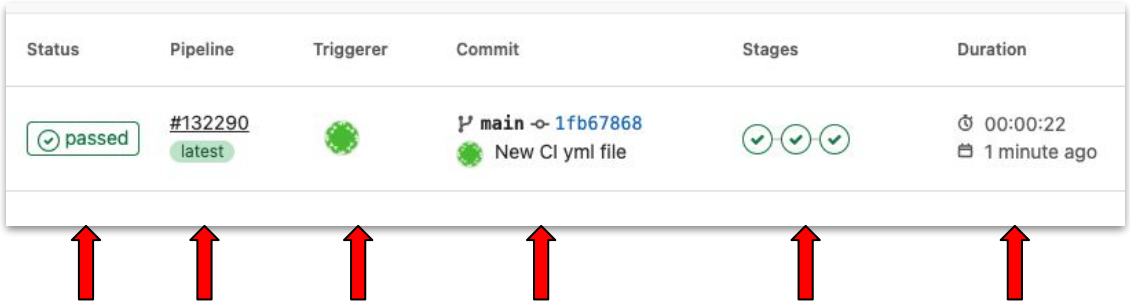
1. Select **CI/CD→Pipelines**.



In the Pipelines view:

2. Confirm the pipeline elements below.

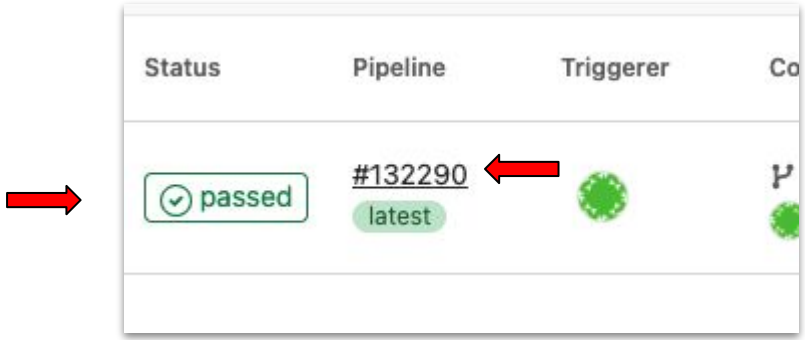
- Pipeline status.
- Pipeline ID.
- Pipeline triggerer.
- Pipeline target.
- Pipeline stages and status.
- Pipeline time.



Access pipeline details

In the Pipelines view:

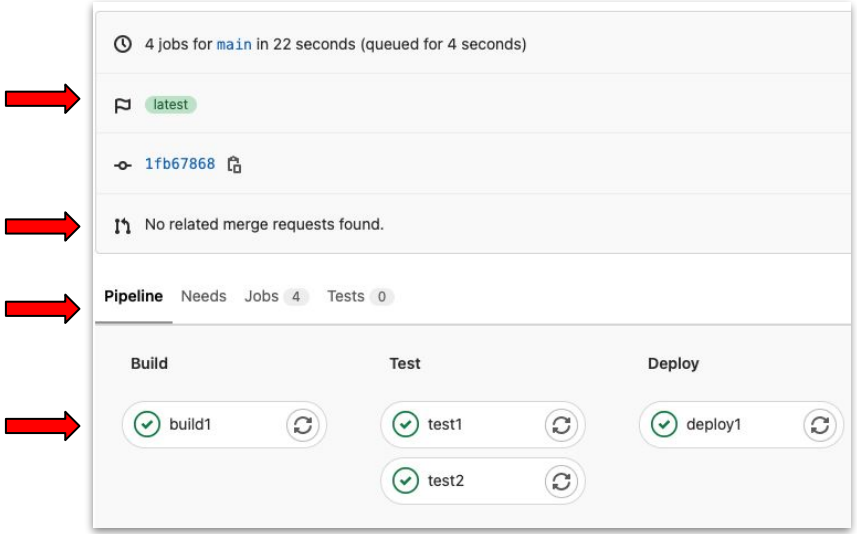
1. Select the '<**pipeline status**>' button, or
2. Select the '<**pipeline ID**>' hyperlink.



In the pipeline view:

3. Confirm the additional pipeline elements.

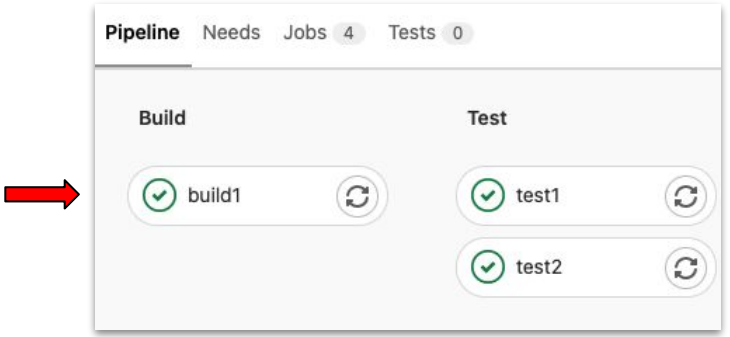
- '**latest**' flag,
- Related merge requests.
- Additional tabs for context.
- Expanded pipeline view.



Access job details

In the pipeline view:

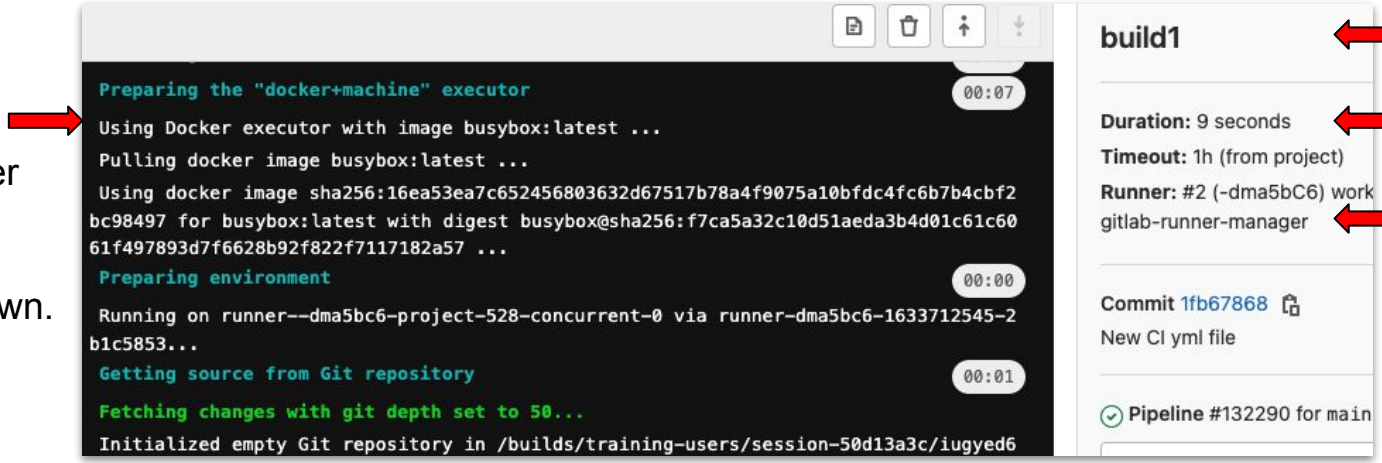
1. Select '**<individual job>**' button.



In the job view:

2. Confirm the following elements.

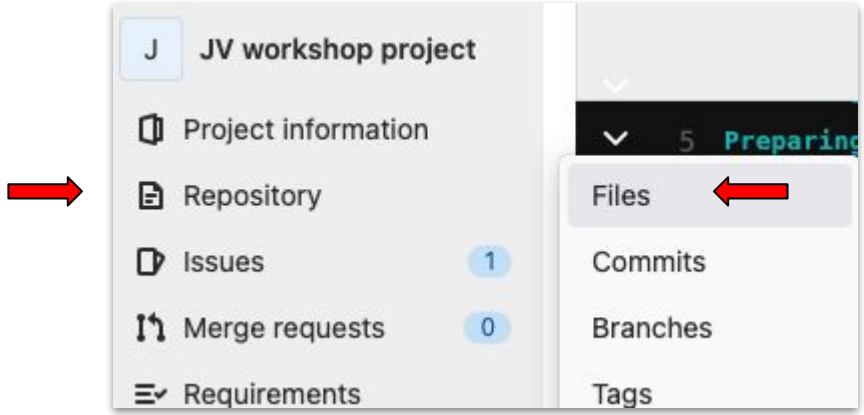
- Job name.
- Job duration and runner name.
- Job artifacts (if avail.).
- Pipeline stage drop-down.
- List of pipeline jobs.
- Terminal output.



Access repository files

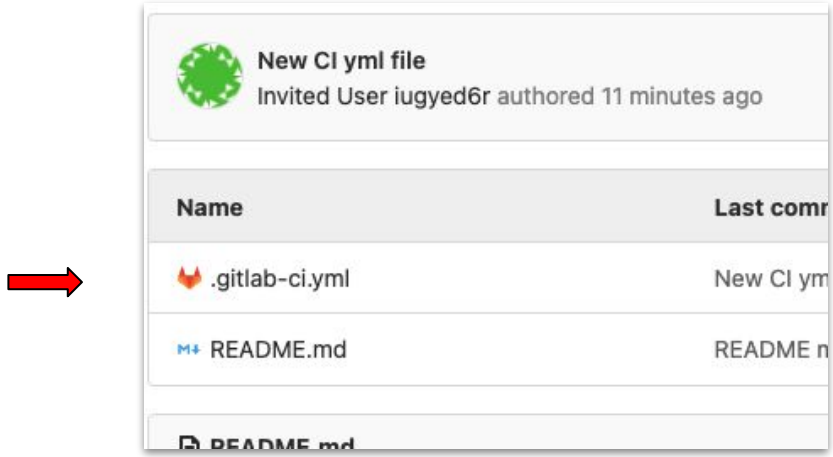
In the job view:

1. Select **Repository→Files**.



In the Repository files list view:

2. Select '**.gitlab-ci.yml**' file name.



Open .gitlab-ci.yml file to edits

In the file content view:

1. Select the '**Edit'** button.

In the file edit view:

2. Copy the contents of the '**test1:**' element.

Modify the .gitlab-ci.yml file - part 1

In the file edit view:

1. Scroll to the bottom of the file.
2. Insert a space after the last row in the file.
3. **Paste** the copied contents to the end of the *.gitlab-ci.yml* file.

```
37
38  deploy1:
39    stage: deploy
40    script:
41      - echo "Do your deploy here"
42
43  test1:
44    stage: test
45    script:
46      - echo "Do a test here"
47      - echo "For example run a test suite"
```

In the file edit view:

4. Modify the pasted contents to reflect:

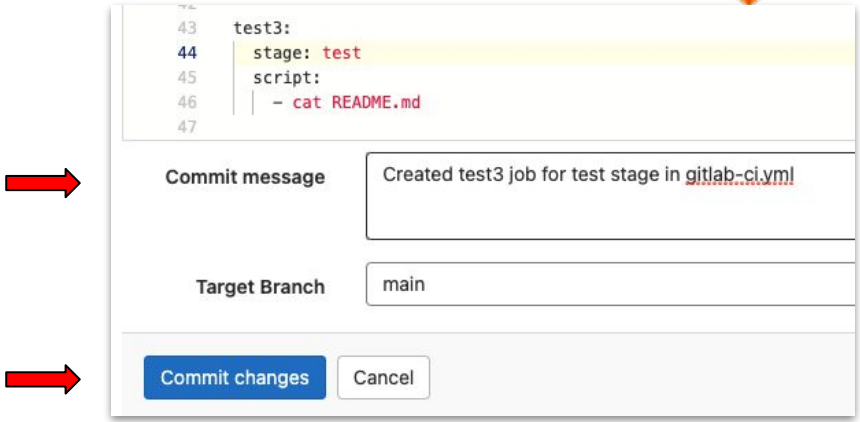
```
test3:
  stage: test
  script:
    - cat README.md
```

```
37
38  deploy1:
39    stage: deploy
40    script:
41      - echo "Do your deploy here"
42
43  test3:
44    stage: test
45    script:
46      - cat README.md
47
```

Add commit message for .gitlab-ci.yml file

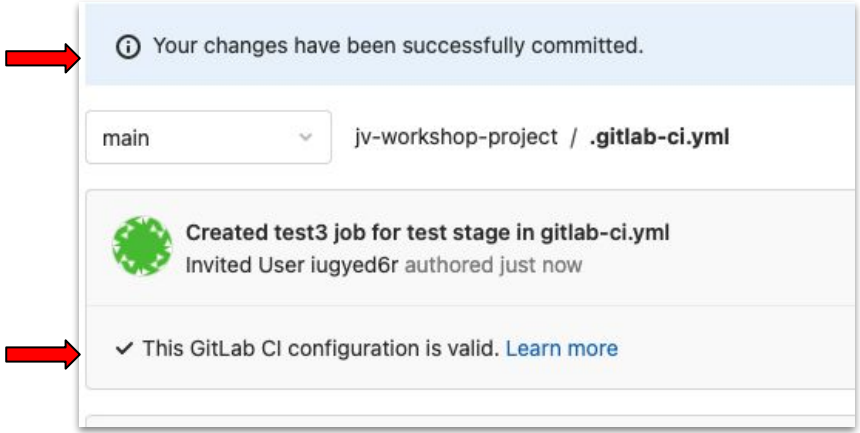
In the file edit view:

1. Enter <**commit message text**> into the '**Commit message**' pane.
2. Select the '**Commit changes**' button.



In the file view:

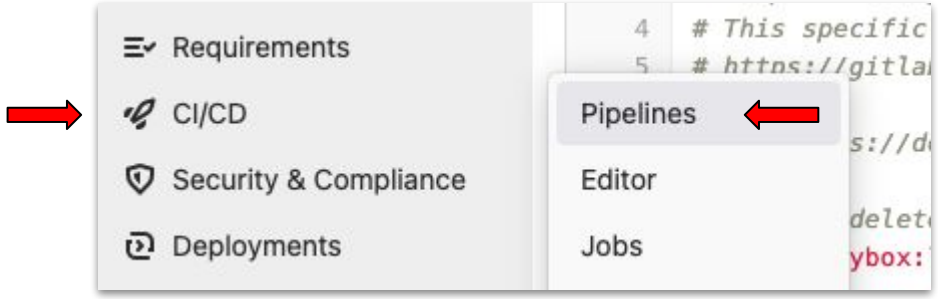
3. Verify the following components.
   - Commit status message.
   - Configuration lint.



Access repository pipelines

In the file view:

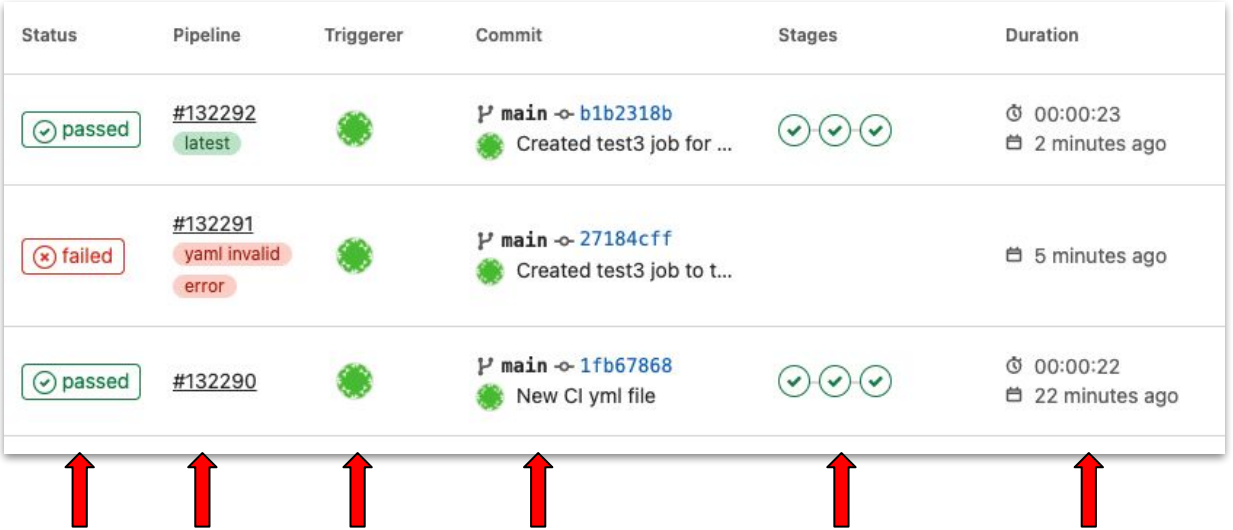
1. Select **CI/CD→Pipelines**.



In the Pipelines view:

2. Confirm updates to the following pipeline elements.

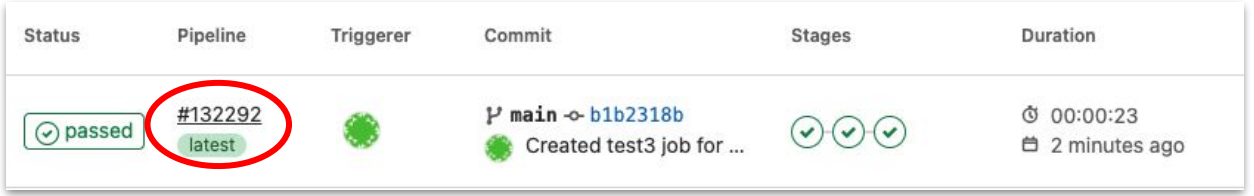
- Pipeline status.
- Pipeline ID.
- Pipeline triggerer.
- Pipeline target.
- Pipeline stages and status.
- Pipeline time.



Access pipeline details

In the Pipelines view:

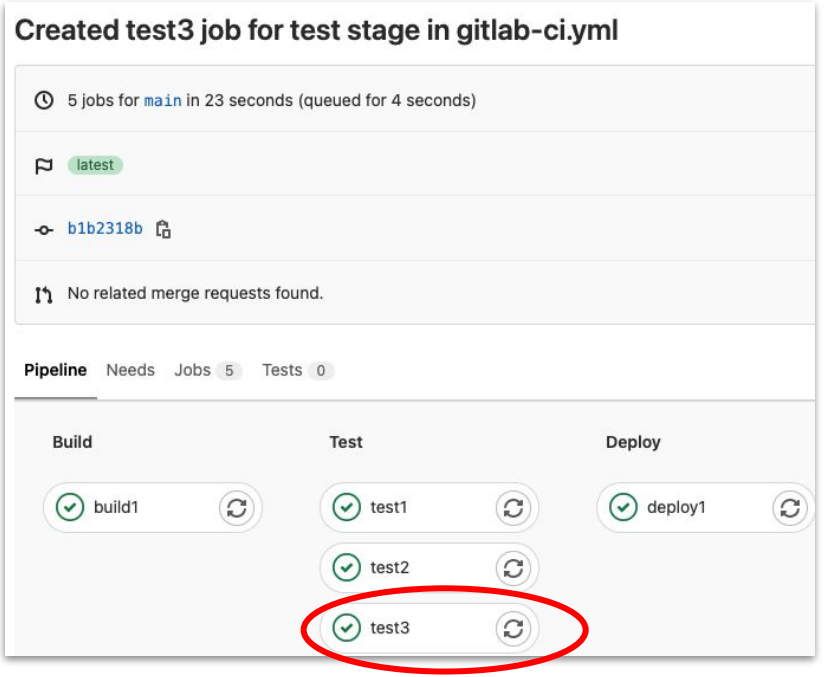
1. Select the '<**pipeline status**>' button, or
2. Select the '<**pipeline ID**>' hyperlink.



In the pipeline view:

3. Confirm the following pipeline elements.

- Commit message listed.
- Additional job added to "Test" stage.



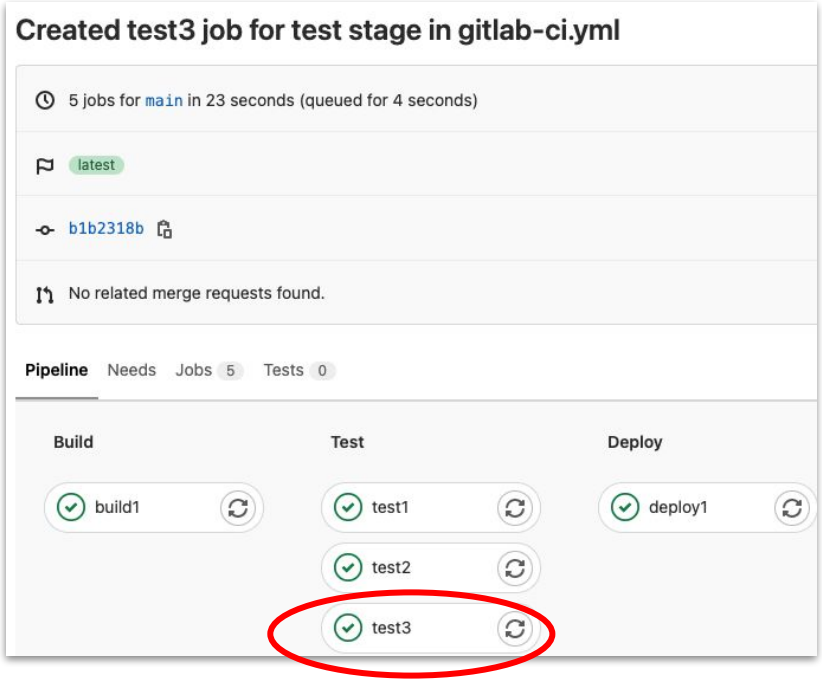
Access job details

In the pipeline view:

1. Select '<individual job>' button.

Example:

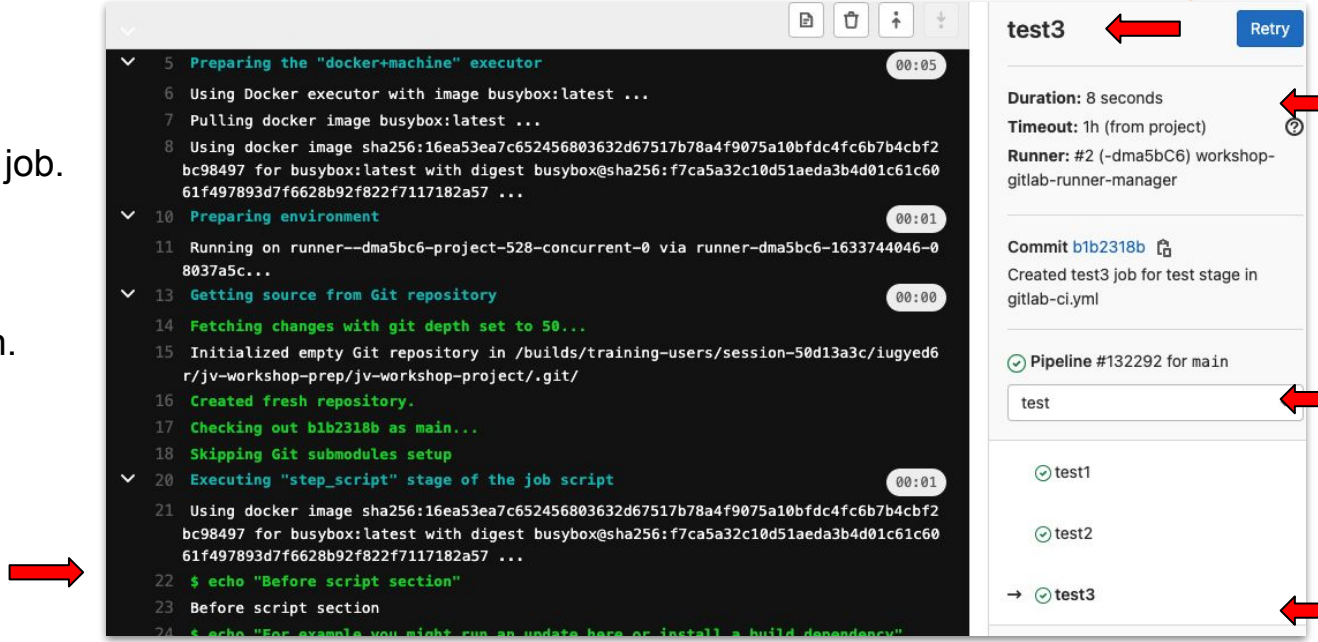
1. Select the '**test3**' button.



Job details

In the job view:

1. Confirm the following elements.
   - Job name reflects added job.
   - Job duration and runner name.
   - Job artifacts (if avail.).
   - Pipeline stage drop-down. includes added job.
   - Terminal output reflects “script” for ‘**test3**’ job.



Have fun!

- CI/CD example projects: https://docs.gitlab.com/ee/ci/examples/#cicd-examples
- CI/CD templates: https://docs.gitlab.com/ee/ci/examples/#cicd-templates

Everyone can contribute