

[Risk&DC FE] CI 输出单元测试报告

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日期	说明	责任人
2022/01/11	新建方案	Yadong Ma
2022/01/13	增加增量测试报告方案	Yadong Ma

现状与目的

目前虽然单元测试接入 GitLab CI，但是并没有实际的效果，多数情况 CI 执行结果均会执行失败，并且无人关注。主要原因：

- 单测并未真正落实，多数代码并无单测用例
- 测试报告查看依赖 sonar，但是目前 sonar 已经无人维护，存在很大风险，这也是导致 CI 经常执行时失败的原因
- 单次报告查看不直观，不能直接在 MR 页面查看，需要登录 sonar 才能查看

基于以上问题，本次方案决定弃用 sonar 的模式，采用 GitLab CI 本身对 test 的支持实现测试用例报告直接在 GitLab Job 结果中查看。

Jest 配置

jest.config.js

```
module.exports = {
  verbose: true,
  //
  testMatch: ["**/__tests__/**/*.ts"],
  // junit GitLab CI
  reporters: [
    "default",
    [
      "jest-junit",
      {
        ancestorSeparator: " > ",
        suiteNameTemplate: "{filename}",
        classNameTemplate: "{classname}",
        titleTemplate: "{title}",
        outputDirectory: "coverage/",
      },
    ],
  ],
  //
  // GitLab CI  cobertura  MR changes
  // text  log GitLab  log
  coverageReporters: ["cobertura", "text"],
  //
  collectCoverage: true,
  //
  collectCoverageFrom: [". /src/**", "!**/__tests__/**"],
  // jest  jest  pipeline
  coverageThreshold: {
    global: {
      statements: 80,
    },
  },
};
```

CI 配置

.gitlab-ci.yml

```
# git nodejs git
# image
image: harbor.shopeemobile.com/shopee/credit/risk_fe_ci_runner:0.1

cache:
  key: "node_modules"
  paths:
    - .node_modules/

stages:
  - unit-test

# MR
#
unit-test-all:
  stage: unit-test
  script:
    - npm install
    - npm test
  #
  artifacts:
    reports:
      # cobertura changes
      cobertura: coverage/cobertura-coverage.xml
      # junit
      junit:
        - coverage/junit.xml
  //
  coverage: '/All files[^\]*\|[[^\]]*\s+([\d\.]+)/'
  only:
    - merge_requests

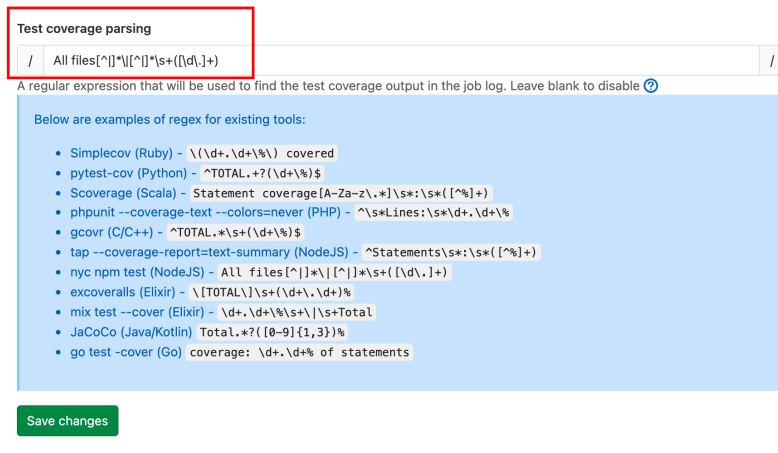
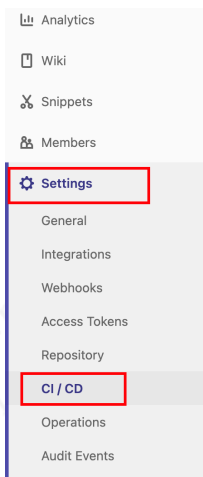
#
unit-test-new:
  stage: unit-test
  script:
    #
    - git fetch --no-tags --depth=1 origin ${CI_MERGE_REQUEST_TARGET_BRANCH_NAME}
    - npm test -- --ci --changedSince=origin/${CI_MERGE_REQUEST_TARGET_BRANCH_NAME}
  artifacts:
    reports:
      cobertura: coverage/cobertura-coverage.xml
      junit:
        - coverage/junit.xml
  //
  coverage: '/All files[^\]*\|[[^\]]*\s+([\d\.]+)/'
  only:
    - merge_requests
```

测试覆盖率解析

可直接参考上文在 CI Job 中配置 coverage 的正则表达式进行解析，则无需进行下面的设置，两种方案任选一种即可

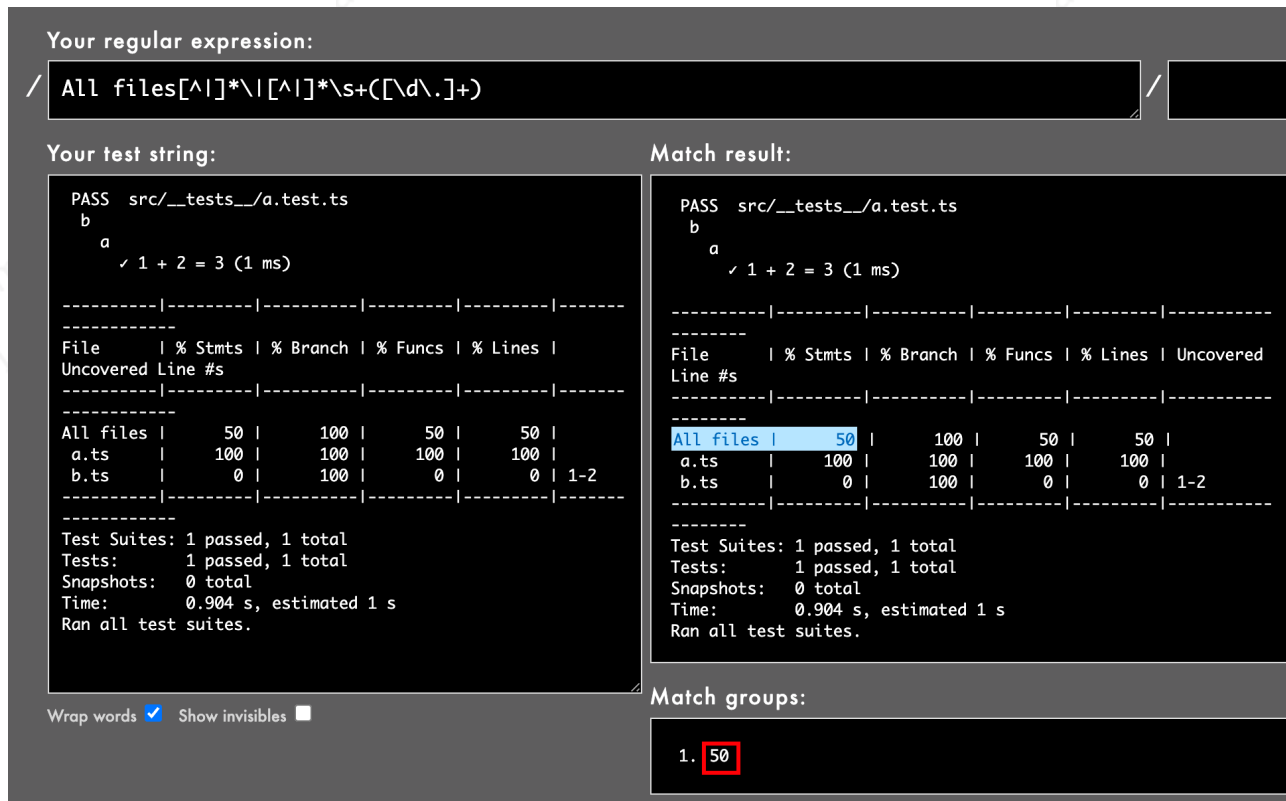
GitLab → Project → Settings → CI/CD → General pipelines → Test coverage parsing

GitLab 通过正则解析脚本输出的 log，从 log 文本中读取中的覆盖率，因此 jest 配置需要输出 `text` 或 `text-summary` 报告到 log 才能计算。



匹配原理：可以通过 <https://rubular.com/> 测试正则表达式

匹配结果为 50



具体案例

MR 内查看单元测试结果：

单元测试覆盖率包括 **全量测试覆盖率** 和 **增量测试覆盖率**，分别由两个 Job 输出：

Uunit-test-ci

Project overview

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OpenOpened 23 hours ago by Yadong MaMaintainer

EditMark as draft

Unit test 2

Overview0Commits12Pipelines11Changes4

Request to merge

Coverage value for this pipeline was calculated by averaging the resulting coverage values of 2 jobs.
unit-test-new (50%)
unit-test-all (75%)

Open in Web IDECheck out branch

Detached merge request

Coverage 62.50% from 2 jobs

38 passed for 0929a1a0

Approval is optional

View eligible approvers

Test summary contained no changed test results out of 3 total tests

unit-test-all found no changed test results out of 3 total tests

Test summary

View full reportCollapse

Merge

Delete source branch

Squash commits

12 commits and 1 merge commit will be added to unit-test. Modify merge commit

You can merge this merge request manually using the command line

测试报告详情:

点击 Jobs 查看增量覆盖率和全量覆盖率对应的测试结果:

Pipeline	Needs	Jobs 2	Tests 3
Status	Job ID	Name	Coverage
Test			
passed	#11429331	unit-test-all	75.0%
passed	#11429332 my-unit-test	unit-test-new	50.0%

点击 Tests 查看各个 Job 测试用例执行结果:

注意: 该处的成功率为测试用例执行的成功率, 而非测试覆盖率。此处仅会列出所执行的测试用例及其执行情况:

Pipeline

Needs

Jobs 2

Tests 4

Summary

4 tests

0 failures

0 errors

100% success rate

11.00ms

Jobs

Job	Duration	Failed	Errors	Skipped	Passed	Total
unit-test-new	4.00ms	0	0	0	1	1
unit-test-all	7.00ms	0	0	0	3	3

点击 Job 名称查看测试用例

具体的测试用例：

unit-test

1 tests 0 failures 0 errors 100% success rate 2.00ms

Tests

Suite	Name	Filename	Status	Duration	Details
b > a	1 + 2 = 3			2.00ms	View details

MR Changes 查看行覆盖情况：

No test coverage

+3 -0

1 + export const add = (a, b) => {

2 + return a + b;

3 + };

相关文档

[\[Risk&DC FE\] Vue 组件单元测试实践](#)