



Ep3: GitHub Actions 실무에 사용하기

1편 : 코드, 빌드, 테스트

여러분들이
오늘 알게 될 것들 :



GitHub Actions 워크플로우를
내 입맛에 맞게 작성할 수 있다.

여러분들이 오늘 알게 될 것들 :



GitHub Actions 워크플로우를
내 입맛에 맞게 작성할 수 있다.

<요구 사항 3가지 >



OS 종류와 **Node** 버전이 다양해요.



빌드할 때마다 **테스트**를 실행해서
불편해요.



다른 job에서 **빌드 아티팩트** 접근이
안돼요.

여러분들이 오늘 알게 될 것들 :



GitHub Actions 워크플로우를
내 입맛에 맞게 작성할 수 있다.

<해결 방법 3가지 >



빌드 매트릭스 이용하기



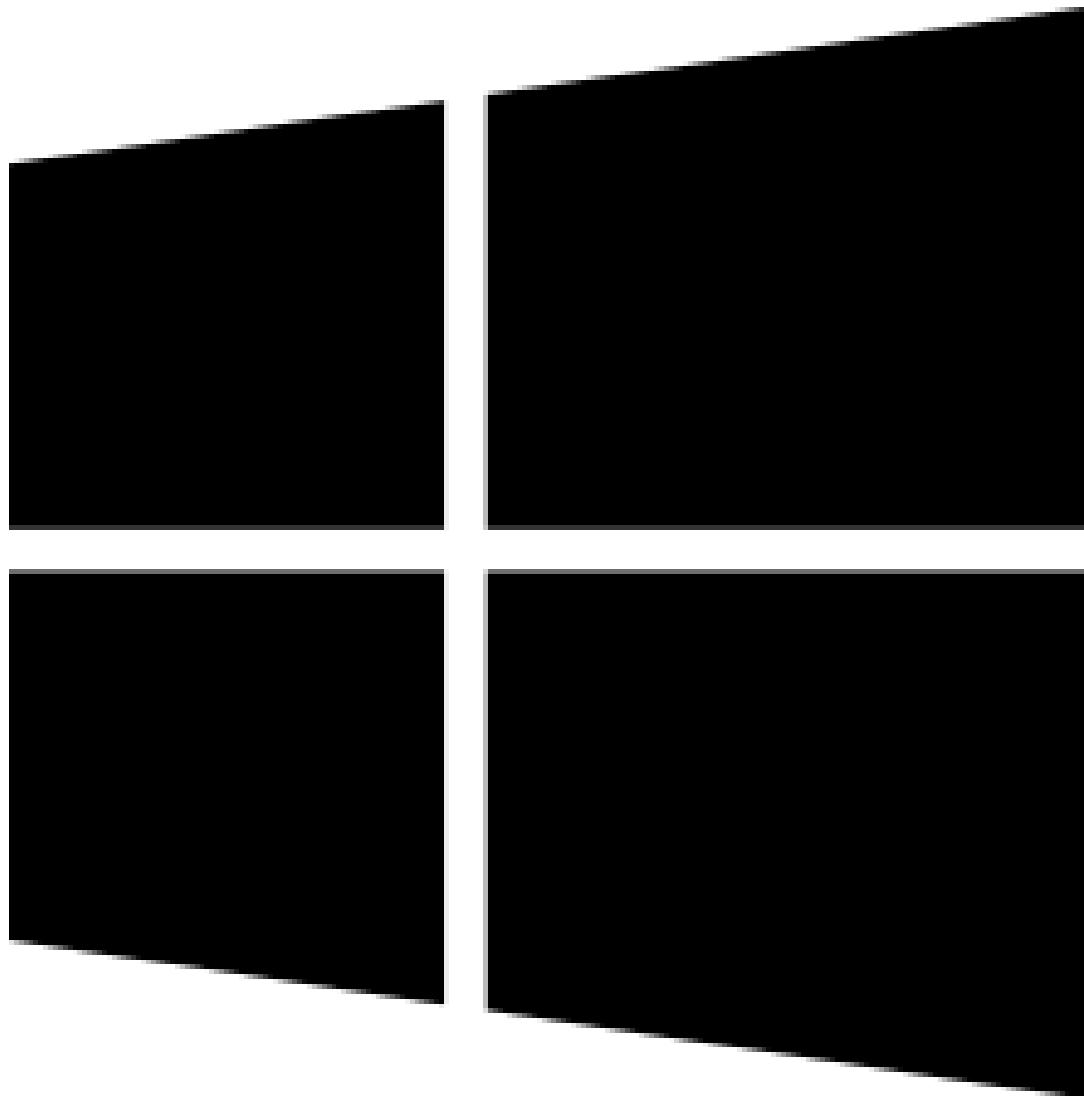
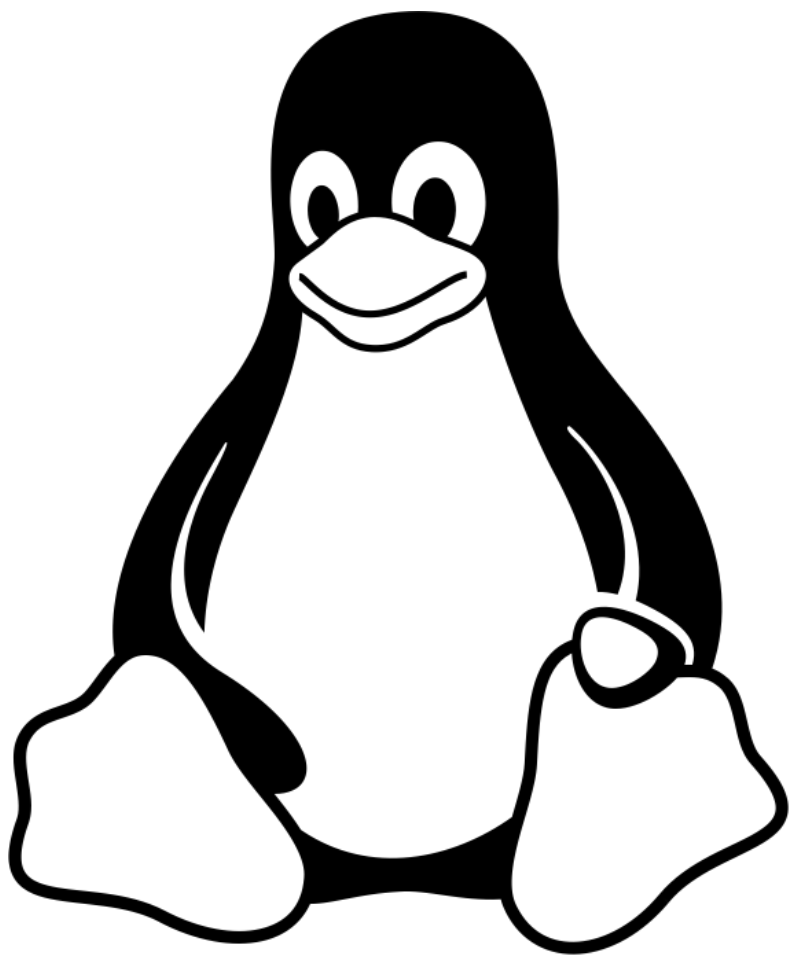
템플릿 변경해서 빌드 테스트 **분리**하기

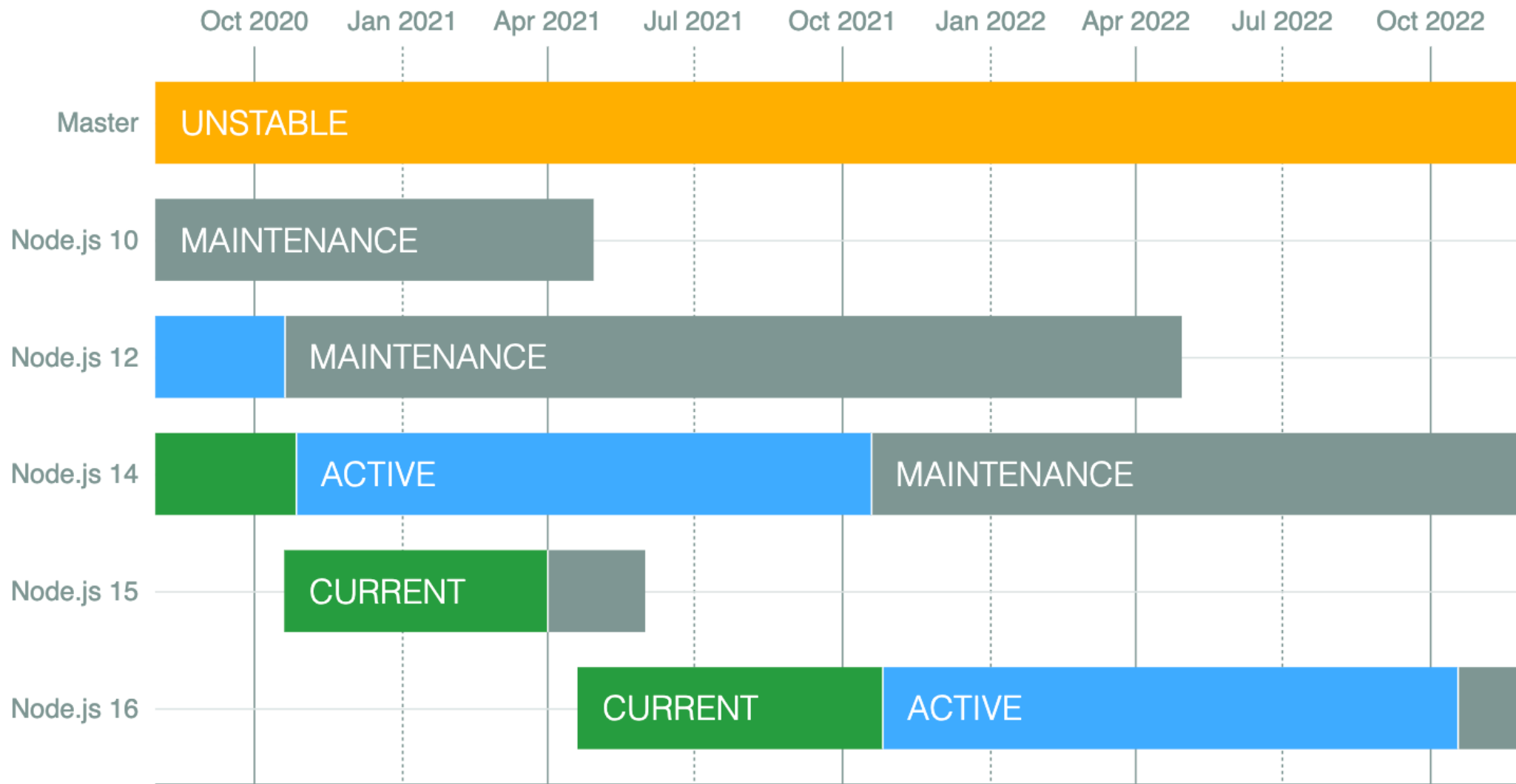


Built-in 스토리지 이용하기

OS 종류/ Node 버전이 너무 많아요!







<https://nodejs.org/en/about/releases/>

테스트할 때마다 빌드하나요?
시간이 너무 오래 걸려요...




```
8     branches: [ main ]
9     pull_request:
10     branches: [ main ]
11
12     jobs:
13         build:
14
15         runs-on: ubuntu-latest
16
17         strategy:
18             matrix:
19                 node-version: [10.x, 12.x, 14.x]
20
21         steps:
22             - uses: actions/checkout@v2
23             - name: Use Node.js ${ matrix.node-version }
24               uses: actions/setup-node@v1
25               with:
26                 node-version: ${ matrix.node-version }
27             - run: npm ci
28             - run: npm run build --if-present
29             - run: npm test
```



Update src/game.js

add-yaml



616c3ac

🔄 Re-run jobs

✓ Node.js CI

on: pull_request

✓ build (10.x)

✓ build (12.x)

✓ build (14.x)

build (14.x)

succeeded 27 seconds ago in 34s

🔍 Search logs

- > ✓ Set up job
- > ✓ Run actions/checkout@v2
- > ✓ Use Node.js 14.x
- > ✓ Run npm ci
- > ✓ Run npm run build --if-present
- > ✓ Run npm test
- > ✓ Post Run actions/checkout@v2
- > ✓ Complete job



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빌드 테스트 분리하긴 했는데...
테스트에서 빌드 아티팩트가 접근이 안돼요





Update node.js.yml

wisdeom-patch-1



2f2d48c

Re-run jobs

Node.js CI
on: pull_request

5

- ✓ build
- ✗ test (ubuntu-latest, 12.x)
- ✗ test (ubuntu-latest, 14.x)
- ✗ test (windows-2016, 12.x)
- ⚠ test (windows-2016, 14.x)

test (ubuntu-latest, 12.x)

failed 16 days ago in 40s

Search logs

- > ✓ Set up job 3s
- > ✓ Run actions/checkout@v2 1s
- > ✓ Use Node.js 12.x 0s
- ✗ npm install, and test 36s

```
1 ▶ Run npm install
7 npm WARN actions-template@1.0.0 No repository field.
8 npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@1.2.9
  (node_modules/fsevents):
9 npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for
  fsevents@1.2.9: wanted {"os":"darwin","arch":"any"} (current:
  {"os":"linux","arch":"x64"})
10
11 added 951 packages from 480 contributors and audited 1019 packages in 13.862s
12 found 27 vulnerabilities (22 low, 1 moderate, 4 high)
13   run `npm audit fix` to fix them, or `npm audit` for details
14
```



Update node.js.yml

wisdeom-patch-1



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Re-run jobs ▾

✓ Node.js CI
on: pull_request

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✓ build

✗ test (ubuntu-latest, 12.x)

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OS 종류/ Node 버전이 너무 많아요!



여러 타겟으로 동시 빌드할 수 있어요!



매트릭스 빌드


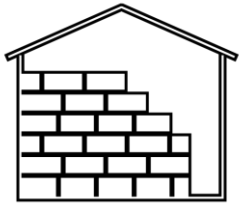
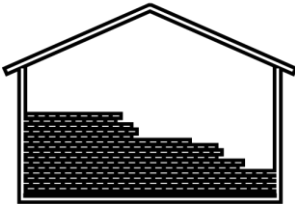
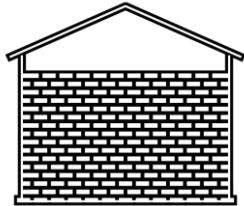
매트릭스?

매트릭스 matrix (noun).

(숫자·기호 등을 가로, 세로로 나열해 놓은) 행렬

	Windows	Linux

	Windows	Linux
Node 12.x		
Node 14.x		

	Windows	Linux
Node 12.x		
Node 14.x		

테스트할 때마다 빌드하나요?
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빌드와 테스트를 분리할 수 있어요!

템플릿 구조 복습해볼까요?

9 lines (7 sloc) | 65 Bytes

```
1  name: Node.js CI
2
3  on: [push]
4
5  jobs:
6    job1:
7      ...
8    job2:
9      ...
```

빌드랑 테스트가 같이 진행되고 있어요.

9 lines (7 sloc) | 121 Bytes

```
1  name: Node.js CI
2
3  on: [push]
4
5  jobs:
6    build:
7      - run: npm ci
8      - run: npm run build --if-present
9      - run: npm test
```

2개의 job으로 분리하면 됩니다.

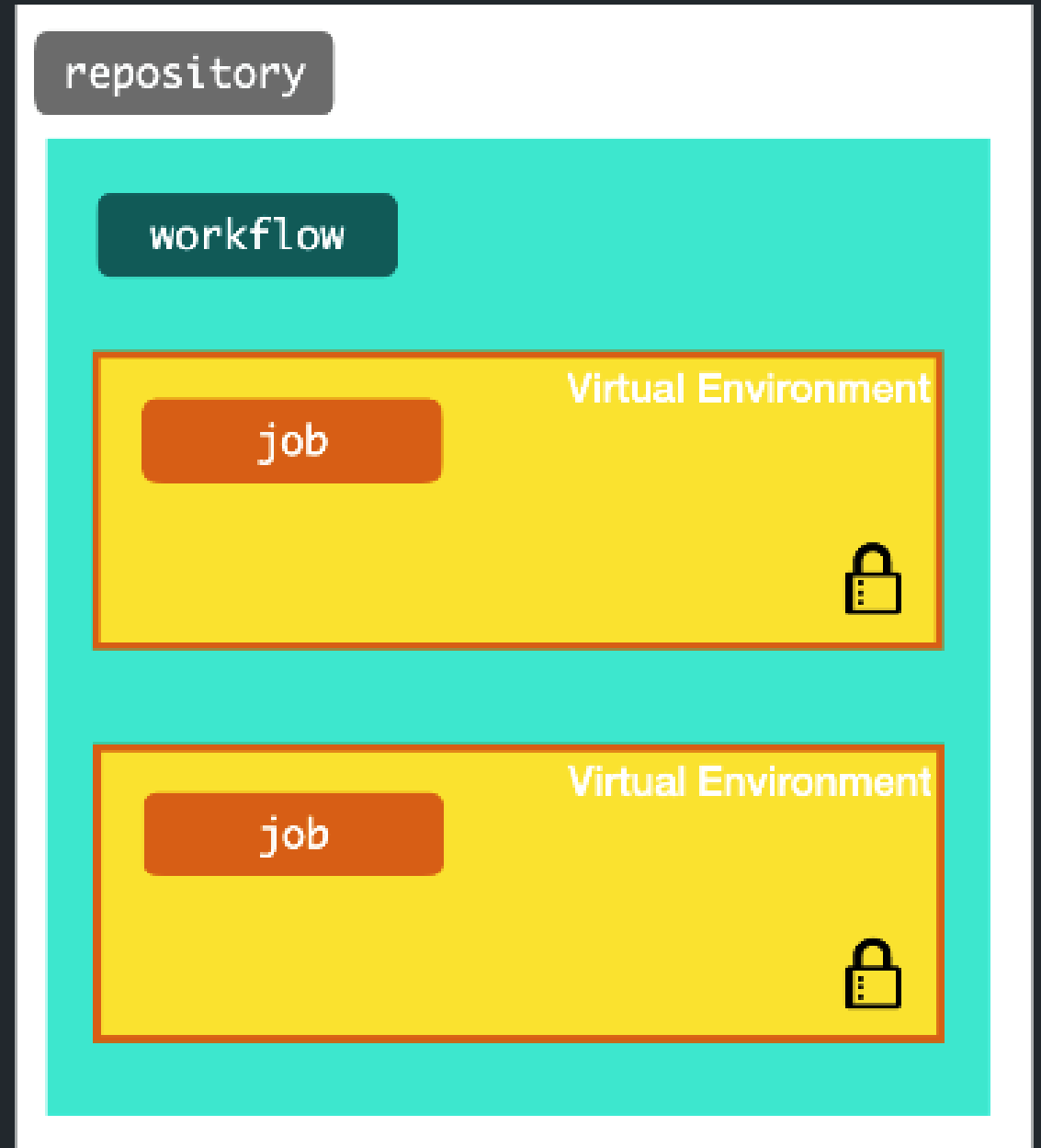
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2
3  on: [push]
4
5  jobs:
6    build:
7      ...
8    test:
9      ...
```


빌드 테스트 분리하긴 했는데...
테스트에서 빌드 아티팩트가 접근이 안돼요



Job이 무엇인가요?





Virtual Environment



Virtual Environment



Virtual Environment

job



Virtual Environment

job



서로 다른 job에서
빌드 아티팩트를 공유할 수 있을까요?



Built-in 아티팩트 스토리지로 접근할 수
있어요!

Built-in 아티팩트 스토리지



여러분들이 오늘 알게 된 것들 :



GitHub Actions 워크플로우를
내 입맛에 맞게 작성할 수 있다.

<해결 방법 3가지 >



빌드 매트릭스 이용하기



템플릿 변경해서 빌드 테스트 **분리**하기



Built-in 스토리지 이용하기

다음 시간에는 :



GitHub Actions 워크플로우를
내 입맛에 맞게 작성할 수 있다.

<요구 사항 3가지 >



main 브랜치가 망가질까 걱정돼요.



Pull Request는 언제 merge하면
좋을까요?



늘어나는 **Issue**와 **PR** 관리가 어려워요.