

Project Solution Screenshots

[URL01](#) - public GitHub repository for udapeople project

[URL02](#) - functioning front-end application in S3

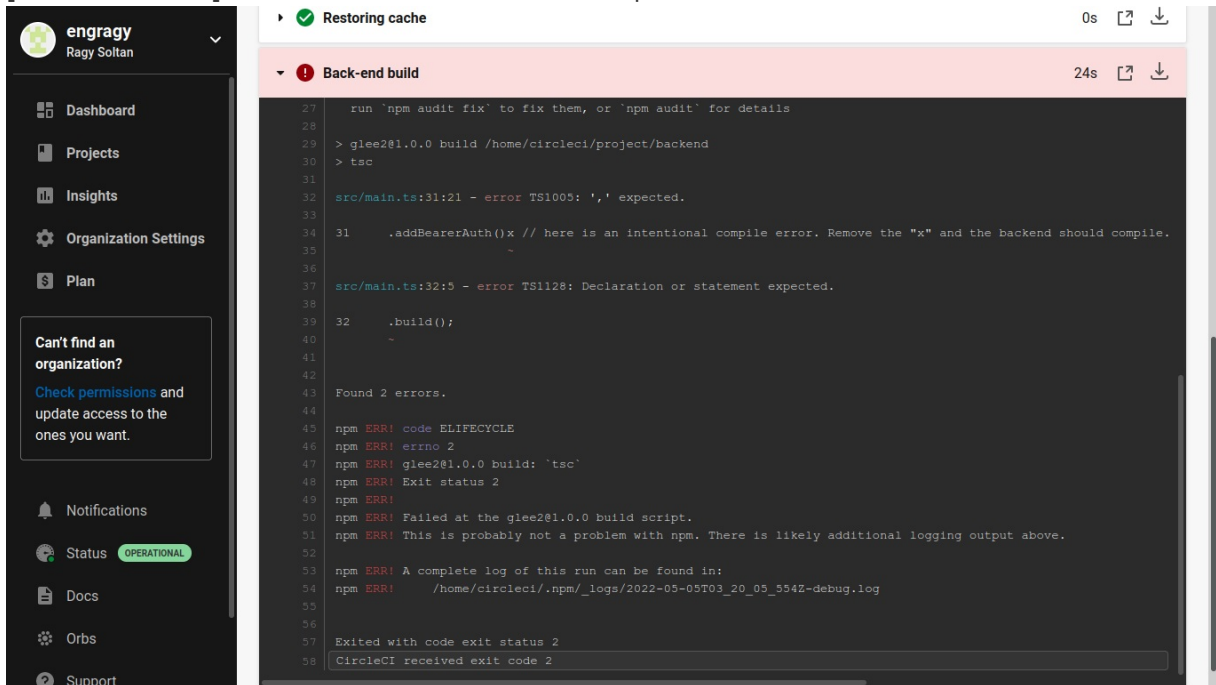
[URL03](#) - functioning front-end application in cloudfront

[URL04](#) - healthy back-end application

[URL05](#) - Evidence of Prometheus Server

1. Utilize Deployment Strategies to design and build CI/CD pipelines that support Continuous Delivery processes.

- A public git repository with your project code. [URL01](#)
- Console output of various pre-deploy job failure scenarios:
 - **[SCREENSHOT01]** Build Jobs that failed because of compile errors.



- **[SCREENSHOT02]** Failed unit tests.

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- Dashboard
- Projects
- Insights
- Organization Settings
- Plan

Can't find an organization?

[Check permissions](#) and update access to the ones you want.

- Notifications
- Status OPERATIONAL
- Docs
- Orbs
- Support

Restoring cache 4s

test Back-end 44s

```

273
276     33 |
277     34 |         // Assert
278     > 35 |         expect(employeeRepository.findById).toBeCalledWith(100);
279         |
280     36 |         expect(employeeRepository.save).toBeCalled();
281     37 |     });
282     38 | });
283
284     at src/modules/domain/employees/commands/handlers/employee-activator.handler.spec.ts:35:43
285     at fulfilled (src/modules/domain/employees/commands/handlers/employee-activator.handler.spec.ts:5:58)
286
287
288 Test Suites: 1 failed, 50 passed, 51 total
289 Tests:      1 failed, 78 passed, 79 total
290 Snapshots:  0 total
291 Time:       35.128s
292 Ran all test suites.
293 npm ERR! code ELIFECYCLE
294 npm ERR! errno 1
295 npm ERR! glee2@1.0.0 test: `jest --runInBand`
296 npm ERR! Exit status 1
297 npm ERR!
298 npm ERR! Failed at the glee2@1.0.0 test script.
299 npm ERR! This is probably not a problem with npm. There is likely additional logging output above.
300
301 npm ERR! A complete log of this run can be found in:
302 npm ERR!     /home/circleci/.npm/_logs/2022-05-05T03_44_51_008Z-debug.log
303
304
305 Exited with code exit status 1
306 CircleCI received exit code 1

```

- [SCREENSHOT03] Failure because of vulnerable packages.

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scan Back-end dependencies 12s

Your output is too large to display in the browser.
Only the last 400000 characters are displayed.

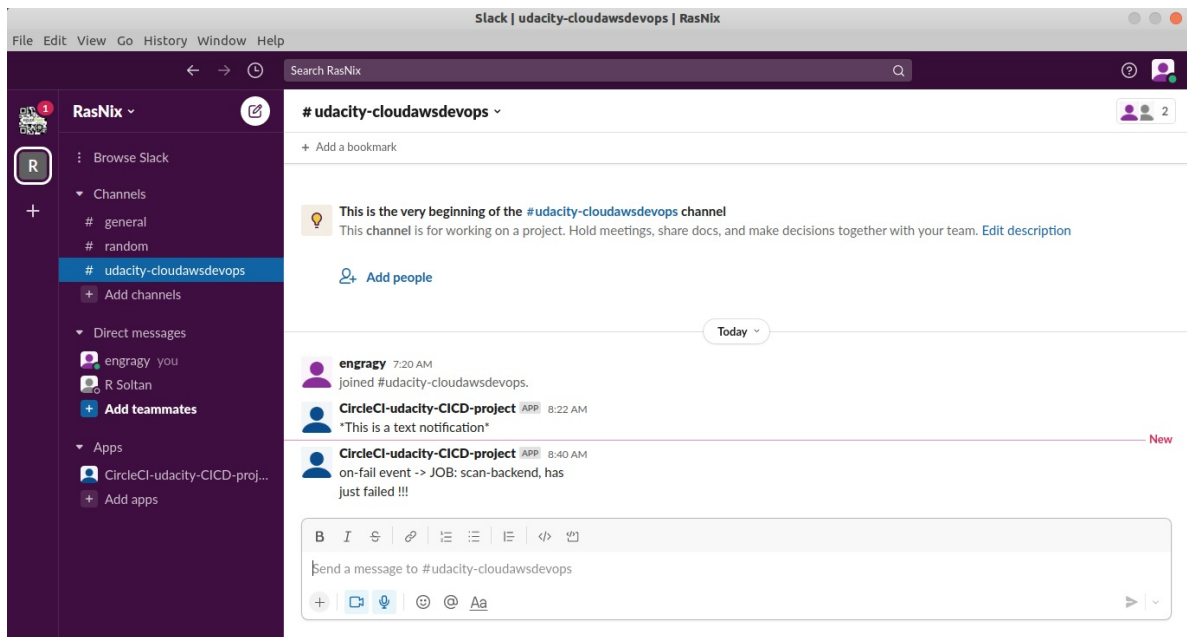
[Download the full output as a file](#)

| | | |
|------|---------------|---|
| 5570 | Moderate | Prototype Pollution in Ajv |
| 5571 | Package | ajv |
| 5572 | Patched in | >=6.12.3 |
| 5573 | Dependency of | glee-jwks-rsa |
| 5574 | Path | glee-jwks-rsa > request > har-validator > ajv |
| 5575 | More info | https://github.com/advisories/GHSA-v88g-cgmw-v5xw |
| 5576 | Moderate | Prototype Pollution in Ajv |
| 5577 | Package | ajv |
| 5578 | Patched in | >=6.12.3 |
| 5579 | Dependency of | winston-loggly-bulk |
| 5580 | Path | winston-loggly-bulk > node-loggly-bulk > request > har-validator > ajv |
| 5581 | More info | https://github.com/advisories/GHSA-v88g-cgmw-v5xw |

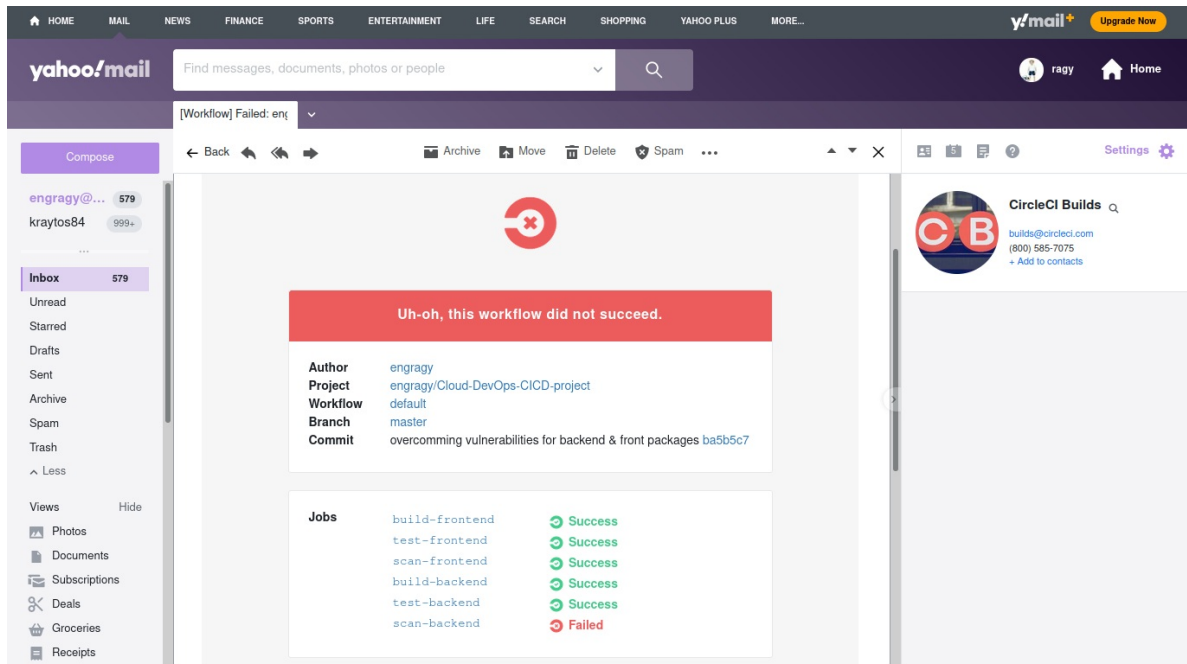
found 629 vulnerabilities (2 low, 141 moderate, 369 high, 117 critical) in 1389 scanned packages
run 'npm audit fix' to fix 495 of them.

- [SCREENSHOT04] An alert from one of your failed builds.

- Slack notification



■ Email notification



2. Utilize a Configuration Management Tool to Accomplish Deployment to Cloud-Based Servers

- [SCREENSHOT05] Console output of appropriate failure for infrastructure creation job (using CloudFormation).

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Spin up environment

1s

Preparing environment variables

0s

Checkout code

0s

yum install -y tar gzip

6s

Ensure back-end infrastructure exists

1m 6s

Destroy environments

1s

```

1 #!/bin/bash -eo pipefail
2 aws cloudformation deploy \
3   --template-file .circleci/files/backend.yml \
4   --tags project=udapeople \
5   --stack-name "udapeople-backend-${CIRCLE_WORKFLOW_ID:0:7}" \
6   --parameter-overrides ID="${CIRCLE_WORKFLOW_ID:0:7}"
7
8
9 Waiting for changeset to be created..
10 Waiting for stack create/update to complete
11
12 Failed to create/update the stack. Run the following command
13 to fetch the list of events leading up to the failure
14 aws cloudformation describe-stack-events --stack-name udapeople-backend-91212ff
15
16 Exited with code exit status 255
17 CircleCI received exit code 255

```

- [SCREENSHOT06] Console output of a smoke test job that is failing appropriately.

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Spin up environment

1s

Preparing environment variables

0s

Checkout code

0s

Install dependencies

37s

Backend smoke test

0s

Frontend smoke test.

0s

```

1 #!/bin/bash -eo pipefail
2 URL="http://udapeople-${CIRCLE_WORKFLOW_ID:0:7}.s3-website-us-east-1.amazonaws.com/#/employees"
3 echo ${URL}
4 if curl -s ${URL} | grep "Welcome"
5 then
6   # Change this to 0 after the job fails
7   exit 1
8 else
9   exit 1
10 fi
11
12 http://udapeople-be94b17.s3-website-*****.amazonaws.com/#/employees
13 Welcome
14
15 Exited with code exit status 1
16 CircleCI received exit code 1

```

- [SCREENSHOT07] Console output of a successful rollback after a failed smoke test.

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Frontend smoke test.

0s

```

1 #!/bin/bash -eo pipefail
2 URL="http://udapeople-${CIRCLE_WORKFLOW_ID:0:7}.s3-website-us-east-1.amazonaws.com/#/employees"
3 echo $URL
4 if curl -s $URL | grep "Welcome"
5 then
6     # Change this to 0 after the job fails
7     exit 1
8 else
9     exit 1
10 fi
11
12 http://udapeople-7584139.s3-website-*****.amazonaws.com/#/employees
13 Welcome
14
15 Exited with code exit status 1
16 CircleCI received exit code 1

```

Destroy environments

2s

```

1 #!/bin/bash -eo pipefail
2 aws cloudformation delete-stack --stack-name udapeople-backend-${CIRCLE_WORKFLOW_ID:0:7}
3 # empty and remove frontend S3 bucket
4 aws s3 rm s3://udapeople-${CIRCLE_WORKFLOW_ID:0:7} --recursive
5 aws cloudformation delete-stack --stack-name udapeople-frontend-${CIRCLE_WORKFLOW_ID:0:7}
6
7 delete: s3://udapeople-7584139/53ad4ccb01ee8a5a302d.js
8 delete: s3://udapeople-7584139/2fa692cd5bfc83c228c0ab271e4388c.woff
9 delete: s3://udapeople-7584139/1ceff9123b66b50a7d3cb5b221160855.eot
10 delete: s3://udapeople-7584139/bundle.js
11 delete: s3://udapeople-7584139/index.html
12 delete: s3://udapeople-7584139/224b6d9d16679dab02826a2a7ea705eb.ttf
13 delete: s3://udapeople-7584139/images/6ab15f4239b7d187935cf6f64ec3313bf-kiwi.svg
14 delete: s3://udapeople-7584139/7d234c755f55c47d2c5a.js
15 CircleCI received exit code 0

```

Revert migrations

31s

```

1 #!/bin/bash -eo pipefail
2 # check kvdb(used key), to get the migration state for the workflow id
3 echo "some url is https://kvdb-1-udapeople-com.amazonaws.com/udapeople-${CIRCLE_WORKFLOW_ID:0:7}"

```

- [SCREENSHOT08] Console output of successful promotion of new version to production in CloudFront.

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Parallel runs

1 / 16 parallel runs

0

04:00

Use parallelism to run faster tests

Parallelism speeds up tests by splitting them across multiple executors.

Go to Docs

X

Spin up environment

1s

Preparing environment variables

0s

Checkout code

0s

Install dependencies

16s

Update cloudfront distribution

3m 42s

```

1 #!/bin/bash -eo pipefail
2 # Change the initial stack name, as applicable to you
3 aws cloudformation deploy \
4     --template-file .circleci/files/cloudfront.yml \
5     --stack-name InitialStack \
6     --parameter-overrides WorkflowID="udapeople-${CIRCLE_WORKFLOW_ID:0:7}" \
7     --tags project=udapeople
8
9
10 Waiting for changeset to be created..
11 Waiting for stack create/update to complete
12 Successfully created/updated stack - InitialStack
13 CircleCI received exit code 0

```

- [SCREENSHOT09] Console output of successful cleanup job that removes old S3 bucket and EC2 instance.

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Can't find an organization?
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Notifications
Status OPERATIONAL
Docs
Orbs
Support

Parallelism speeds up tests by splitting them across multiple executors.

Spin up environment
5s

Preparing environment variables
0s

Checkout code
0s

Remove old stacks and files
2s

```

1 #!/bin/bash -eo pipefail
2 # retrieve old workflow
3 export OldWorkflowID=$(curl -k https://kvdb.io/6QF3Cy5gQ9q7Q7DtVXVxm/oldid_${CIRCLE_WORKFLOW_ID:0:7})
4 echo "${OldWorkflowID}"
5 aws s3 rm "s3://udapeople-${OldWorkflowID}" --recursive
6 aws cloudformation delete-stack --stack-name "udapeople-backend-${OldWorkflowID}"
7 aws cloudformation delete-stack --stack-name "udapeople-frontend-${OldWorkflowID}"
8
9
10 % Total      % Received % Xferd  Average Speed   Time    Time     Time  Current
11             Dload  Upload  Total   Spent    Left   Speed
12 f85df7e
13 delete: s3://udapeople-f85df7e/2fa692cd55bfc83c228c0ab271e4388c.woff
14 delete: s3://udapeople-f85df7e/c96808dc3b8f501blcde.js
15 delete: s3://udapeople-f85df7e/224b6d9d16679dab02826a2a7ea705eb.ttf
16 delete: s3://udapeople-f85df7e/bundle.js
17 delete: s3://udapeople-f85df7e/index.html
18 delete: s3://udapeople-f85df7e/images/6ab15f4239b7d187935cf6f4ec3313bf-kiwi.svg
19 delete: s3://udapeople-f85df7e/7d234c755f55c47d2c5a.js
20 delete: s3://udapeople-f85df7e/1ceff9123b66b50a7d3cb5b221160855.eot
21 CircleCI received exit code 0

```

- [SCREENSHOT010] Evidence that deploy jobs only happen on master branch.

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Dashboard
Project
Branch
Workflow

All Pipelines > Cloud-DevOps-CICD-project > dev-branch > default

default
Success

Insights
Rerun

Duration / Finished
1m 44s / 1s ago

Branch
dev-branch

Commit
4329acb

Author & Message
1st commit in development branch

build-frontend
27s

build-backend
26s

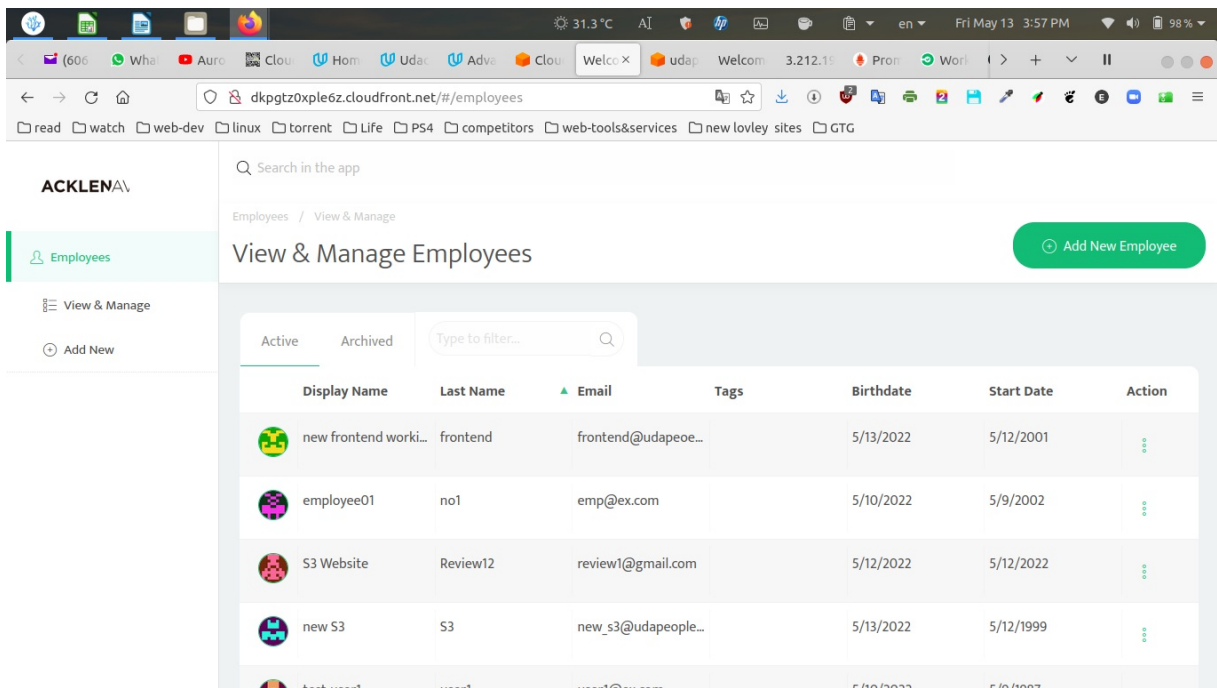
scan-frontend
47s

test-frontend
1m 6s

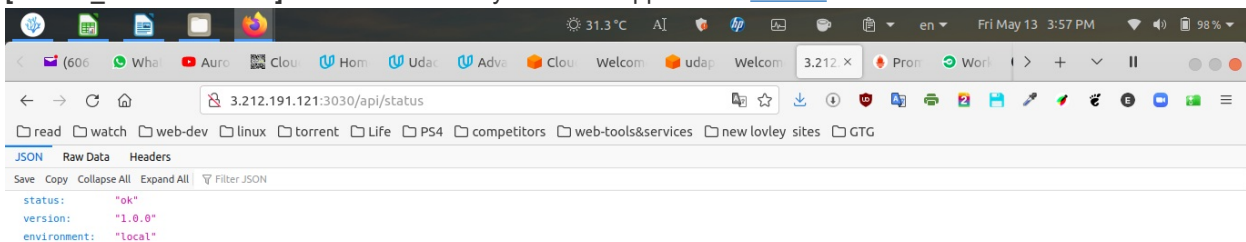
scan-backend
1m 1s

test-backend
57s

- Evidence of deployed and functioning front-end application
 - in an S3 bucket [URL02](#)
 - in CloudFront. [URL03](#)

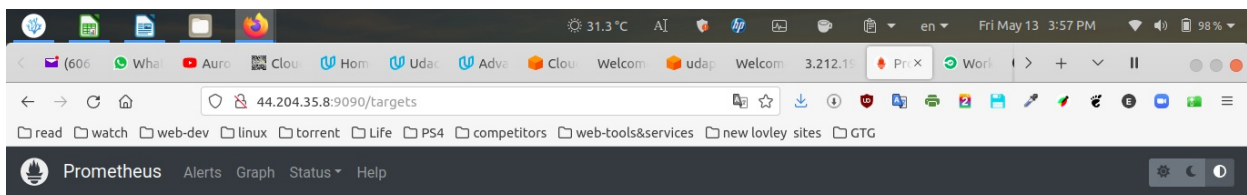


- [URL04_SCREENSHOT] Evidence of healthy back-end application. [URL04](#)



Surface critical server errors for diagnosis using centralized logging.

- [URL05_SCREENSHOT] Evidence of Prometheus Server. [URL05](#)



Targets

All Unhealthy Collapse All

Filter by endpoint or labels

Prometheus-EC2-node (2/2 up) [show less](#)

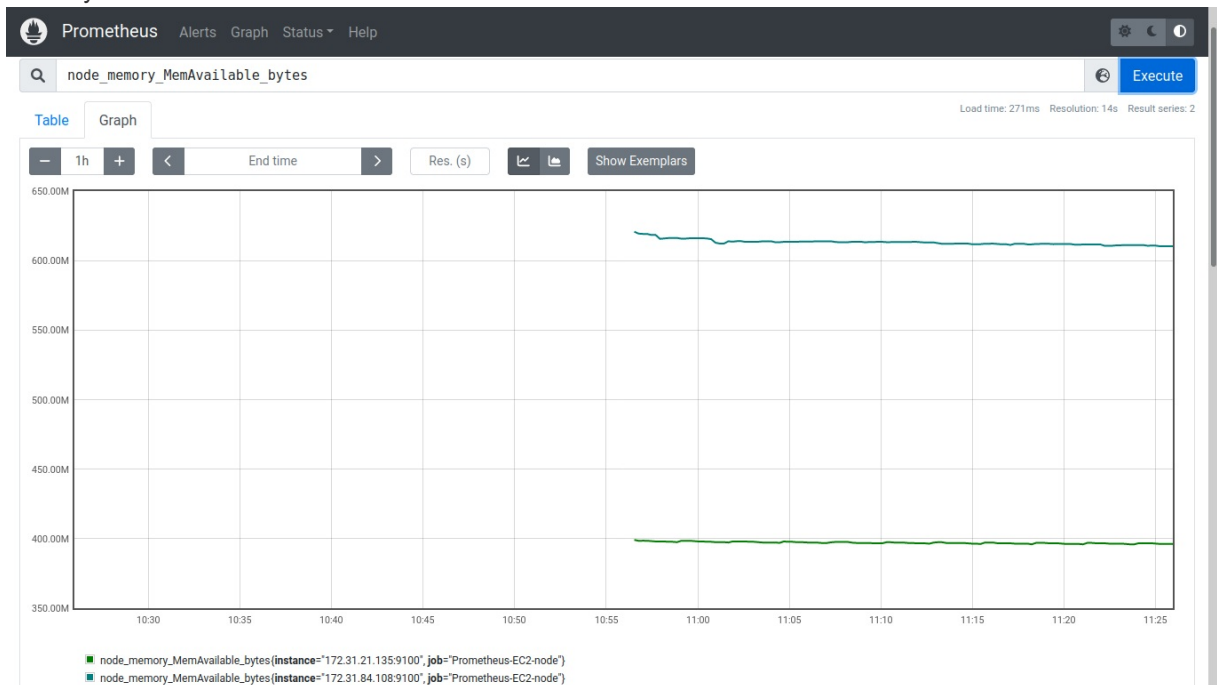
| Endpoint | State | Labels | Last Scrape | Scrape Duration | Error |
|---|-------|--|-------------|-----------------|-------|
| http://172.31.84.108:9100/metrics | UP | instance="172.31.84.108:9100" job="Prometheus-EC2-node" | 2.740s ago | 14.028ms | |
| http://172.31.28.29:9100/metrics | UP | instance="172.31.28.29:9100" job="Prometheus-EC2-node" | 2.920s ago | 11.422ms | |

prometheus (1/1 up) [show less](#)

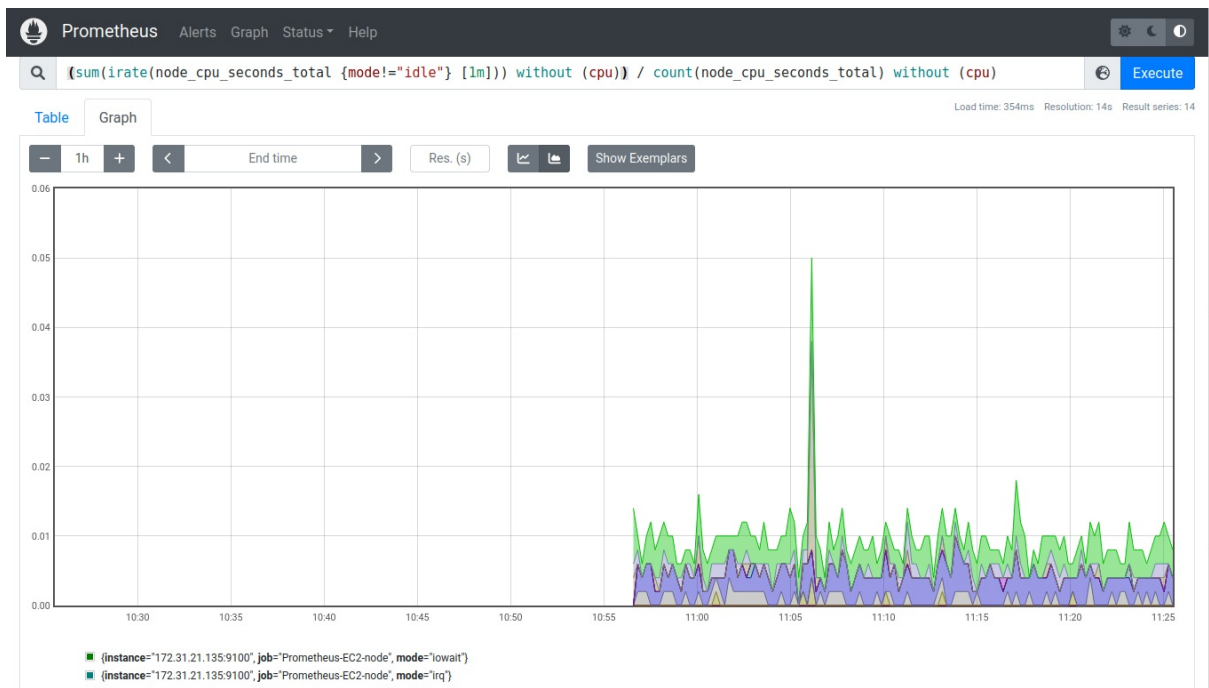
| Endpoint | State | Labels | Last Scrape | Scrape Duration | Error |
|---|-------|--|-------------|-----------------|-------|
| http://localhost:9090/metrics | UP | instance="localhost:9090" job="prometheus" | 2.604s ago | 6.942ms | |

- [SCREENSHOT11] Evidence that Prometheus is monitoring EC2 instances

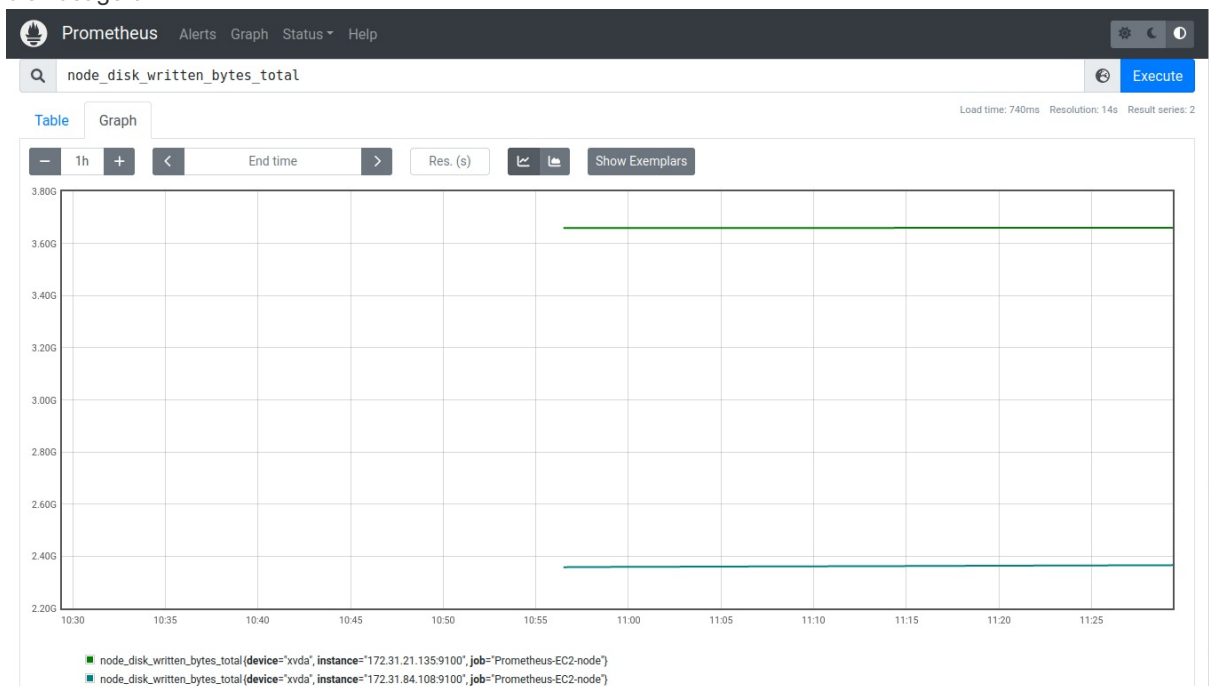
- memory



- cpu usage



◦ disk usage of



- [SCREENSHOT12] Evidence that Prometheus and AlertManager send alerts when certain conditions exist in the EC2 instance.

HOMEMAILNEWSFINANCESPORTSENTERTAINMENTLIFESearchSHOPPINGYAHOO PLUSMORE...

y!mail⁺Upgrade Now

Find messages, documents, photos or people

ragyHome

[FIRING:1] (Instance[

ComposeBackArchiveMoveDeleteSpam...Settings

engragy@ya...606
kraytos84999+

Inbox606
Unread
Starred
Drafts
Sent
Archive
Spam
Trash
Less
ViewsHide
Photos
Documents
Subscriptions
Deals
Groceries
Receipts

[FIRING:1] (InstanceDown 172.31.28.29:9100 Prometheus-EC2-node prometheus critical)Yahoo/Inbox

E

kraytos84@gmail.com<kraytos84@gmail.com>
To: engragy@yahoo.co.uk

Fri, May 13 at 4:00 PM

1 alert for

View In Alertmanager

[1] Firing

Labels
alertname = InstanceDown
instance = 172.31.28.29:9100
job = Prometheus-EC2-node
monitor = prometheus
severity = critical

Annotations
description = of job has been down for more than 1 minutes.
summary = Instance is down
[Source](#)