

1. Job failed because of compile errors. [SCREENSHOT01]

The screenshot shows the CircleCI web interface for a project named "Tinega-Devops". On the left, there's a sidebar with navigation links like Dashboard, Projects, Insights, Organization Settings, Plan, and a note about building behind a firewall. The main area shows a build step titled "Restoring cache" followed by "Back-end build". The build log output is displayed in a monospaced font:

```
26 found 641 vulnerabilities (2 low, 143 moderate, 371 high, 125 critical)
27 run `npm audit fix` to fix them, or `npm audit` for details
28
29 > glee2@1.0.0 build /home/circleci/project/backend
30 > tsc
31
32 src/main.ts:31:21 - error TS1005: ',' expected.
33
34 .addBearerAuth()x // here is an intentional compile error. Remove the "x" and the backend should compile.
35 ~
36
37 src/main.ts:32:5 - error TS1128: Declaration or statement expected.
38
39
40 .build();
41 ~
42
43
44 Found 2 errors.
45
46 npm ERR! code ELIFECYCLE
47 npm ERR! errno 2
48 npm ERR! glee2@1.0.0 build: `tsc`
49 npm ERR! Exit status 2
50 npm ERR!
51 npm ERR! Failed at the glee2@1.0.0 build script.
52 npm ERR! This is probably not a problem with npm. There is likely additional logging output above.
53
54 npm ERR! A complete log of this run can be found in:
55 npm ERR!     /home/circleci/.npm/_logs/2022-07-25T00_33_44_227Z-debug.log
56
57
58 Exited with code exit status 2
```

2. Job failed because of unit tests. [SCREENSHOT02]

The screenshot shows the CircleCI web interface for the same project "Tinega-Devops". The sidebar and navigation are identical to Screenshot 01. The main area shows a build step titled "Restoring cache" followed by "Run backend test". The build log output is displayed in a monospaced font:

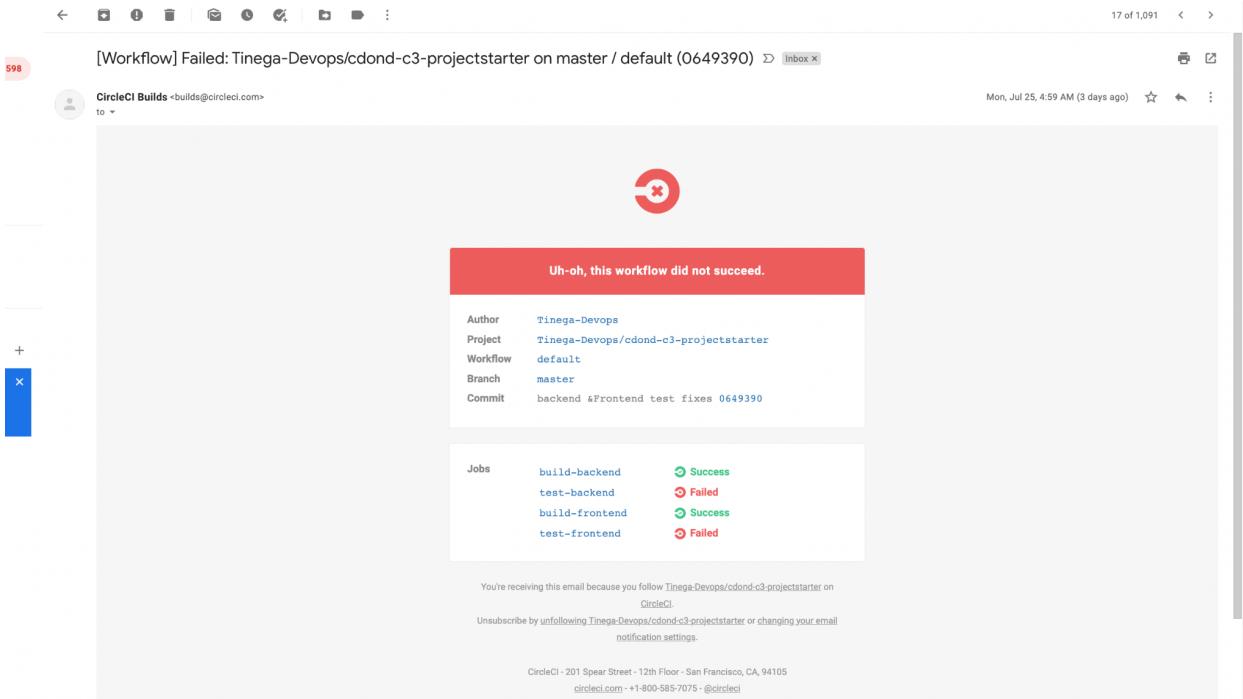
```
255 prisma/repo/prisma.yml
256 errors
257 error.filter.ts
258 status
259 status.controller.ts
260 status.module.ts
261 -----
262
263 Summary of all failing tests
264 FAIL src/modules/domain/employees/commands/handlers/employee-activator.handler.spec.ts
265   • Employee Remover > when a user activates an employee > should activate the employee from the repository
266
267     expect(jest.fn()).toBeCalledWith(...expected)
268
269     Expected: 100
270     Received: 101
271
272     Number of calls: 1
273
274       33 | 
275       34 |     // Assert
276       35 |     expect(employeeRepository.findById).toBeCalledWith(100);
277       |
278       36 |     expect(employeeRepository.save).toBeCalled();
279       37 |   });
280       38 | });
281
282     at src/modules/domain/employees/commands/handlers/employee-activator.handler.spec.ts:35:43
283     at fulfilled (src/modules/domain/employees/commands/handlers/employee-activator.handler.spec.ts:5:58)
284
285 Test Suites: 1 failed, 50 passed, 51 total
```

3. Job that failed because of vulnerable packages. [SCREENSHOT03]

The screenshot shows a CI/CD pipeline interface for a project named "Tinega-Devops". On the left, there's a sidebar with navigation links like Dashboard, Projects, Insights, Organization Settings, Plan, Notifications, Status (OPERATIONAL), Docs, Orbs, and Support. A prominent callout box in the sidebar says "Build behind a firewall" and "Install a self-hosted runner in 5 minutes or less." The main area displays two pipeline stages: "Restoring cache" (green checkmark) and "Run backend Scan" (red exclamation mark). The "Run backend Scan" stage failed with the message "Your output is too large to display in the browser. Only the last 400000 characters are displayed." A blue button allows downloading the full output as a file. Below this, a table lists vulnerability details:

Line	Severity	Category	Description
5564	Moderate	Prototype Pollution in Ajv	
5565		Package	ajv
5566		Patched in	>=6.12.3
5567		Dependency of	winston-loggly-bulk
5568		Path	winston-loggly-bulk > node-loggly-bulk > request >
5569			har-validator > ajv
5570		More info	https://github.com/advisories/GHSA-v88g-cgmw-v5xw
5571	High	Crash in HeaderParser in dicer	
5572		Package	dicer
5573		Patched in	No patch available
5574		Dependency of	@nestjs/platform-express
5575		Path	@nestjs/platform-express > multer > busboy > dicer
5576		More info	https://github.com/advisories/GHSA-wm7h-9275-46v2
5577			
5578			
5579			
5580			
5581			
5582			
5583			
5584			
5585			
5586			
5587			
5588			

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



5. Appropriate job failure for infrastructure creation. [SCREENSHOT05]

A screenshot of a CircleCI build log. The sidebar shows the organization "Tinega-Devops" and various project and settings options. The main area displays a list of steps: "Spin up environment" (1s), "Preparing environment variables" (0s), "Checkout code" (0s), "Install Dependencies" (5s), and "Ensure back-end infrastructure exists" (1m 12s). The last step is expanded, showing a terminal session with the following output:

```
#!/bin/bash -eo pipefail
aws cloudformation deploy \
--template-file .circleci/files/backend.yml \
--stack-name "udapeople-backend-${CIRCLE_WORKFLOW_ID:0:7}" \
--parameter-overrides ID="${CIRCLE_WORKFLOW_ID:0:7}" \
--tags project=udapeople

Waiting for changeset to be created..
Waiting for stack create/update to complete

Failed to create/update the stack. Run the following command
to fetch the list of events leading up to the failure
aws cloudformation describe-stack-events --stack-name udapeople-backend-3d48373

Exited with code exit status 255
CircleCI received exit code 255
```

6. Appropriate job failure for the smoke test job. [SCREENSHOT06]

The screenshot shows a CircleCI pipeline for the 'Tinega-Devops' organization. The pipeline consists of several steps:

- Checkout code (green checkmark)
- Install Node.js 13 (green checkmark)
- Install AWS cli (green checkmark)
- Backend smoke test (green checkmark)
- Frontend smoke test (red exclamation mark):
 - Contains a shell script with code to check if a curl request to a specific S3 website returns 'Welcome'. If it does, it exits 1; if not, it exits 0.
 - Logs show the script exiting with code 1.
 - Message: "Exited with code exit status 1"
 - Message: "CircleCI received exit code 1"
- Destroy environments (green checkmark)
- Revert migrations (green checkmark)

7. Successful rollback after a failed smoke test. [SCREENSHOT07]

The screenshot shows a CircleCI pipeline for the 'Tinega-Devops' organization. The pipeline includes the following steps:

- Frontend smoke test (red exclamation mark):
 - Contains a shell script with code to check if a curl request to a specific S3 website returns 'Welcome'. If it does, it exits 1; if not, it exits 0.
 - Logs show the script exiting with code 1.
 - Message: "Exited with code exit status 1"
 - Message: "CircleCI received exit code 1"
- Destroy environments (green checkmark):
 - Contains a shell script with commands to delete files from an S3 bucket and CloudFormation stacks.
 - Logs show the deletion of various files and CloudFormation stacks.
 - Message: "# Your code here"
 - Message: "aws s3 rm s3://udapeople-\$[CIRCLE_WORKFLOW_ID:0:7] --recursive"
 - Message: "aws cloudformation delete-stack --stack-name \"udapeople-backend-\$[CIRCLE_WORKFLOW_ID:0:7]\""
 - Message: "aws cloudformation delete-stack --stack-name \"udapeople-frontend-\$[CIRCLE_WORKFLOW_ID:0:7]\""
 - Message: "delete: s3://udapeople-131a4a1/1ceff9123b66b50a7d3cb5b22160855.eot"
 - Message: "delete: s3://udapeople-131a4a1/2fa692cd55bfc83c228c0ab271e4388c.woff"
 - Message: "delete: s3://udapeople-131a4a1/224b6d9d16679dab02826a2a7ea705eb.ttf"
 - Message: "delete: s3://udapeople-131a4a1/f148bb042eee8da41dd8.js"
 - Message: "delete: s3://udapeople-131a4a1/7d234c755f55c47d2c5a.js"
 - Message: "delete: s3://udapeople-131a4a1/bundle.js"
 - Message: "delete: s3://udapeople-131a4a1/images/6ab15f4239b7d187935cf6f4ec3313bf-kiwi.svg"
 - Message: "delete: s3://udapeople-131a4a1/index.html"

8. Successful promotion job. [SCREENSHOT08]

The screenshot shows a CircleCI workflow interface. At the top, there's a header with "Author & Message" and a user icon followed by the message "debugged frontend smoke test". Below the header is a navigation bar with tabs: STEPS (which is selected), TESTS, TIMING, ARTIFACTS, and RESOURCES. A "NEW" badge is visible next to the RESOURCES tab.

The main area displays a list of workflow steps:

- Spin up environment (1s)
- Preparing environment variables (0s)
- Checkout code (0s)
- Install dep / Save Old Workflow ID to kvdb.io (0s)
- Update cloudfont distribution (3m 42s)

The "Update cloudfont distribution" step is expanded, showing the command history:

```
1 #!/bin/bash -eo pipefail
2 aws cloudformation deploy \
3   --template-file .circleci/files/cloudfont.yml \
4   --parameter-overrides WorkflowID="${CIRCLE_WORKFLOW_ID:0:7}" \
5   --stack-name InitialStack
6
7
8 Waiting for changeset to be created..
9 Waiting for stack create/update to complete
10 Successfully created/updated stack - InitialStack
11 CircleCI received exit code 0
```

9. Successful cleanup job. [SCREENSHOT09]

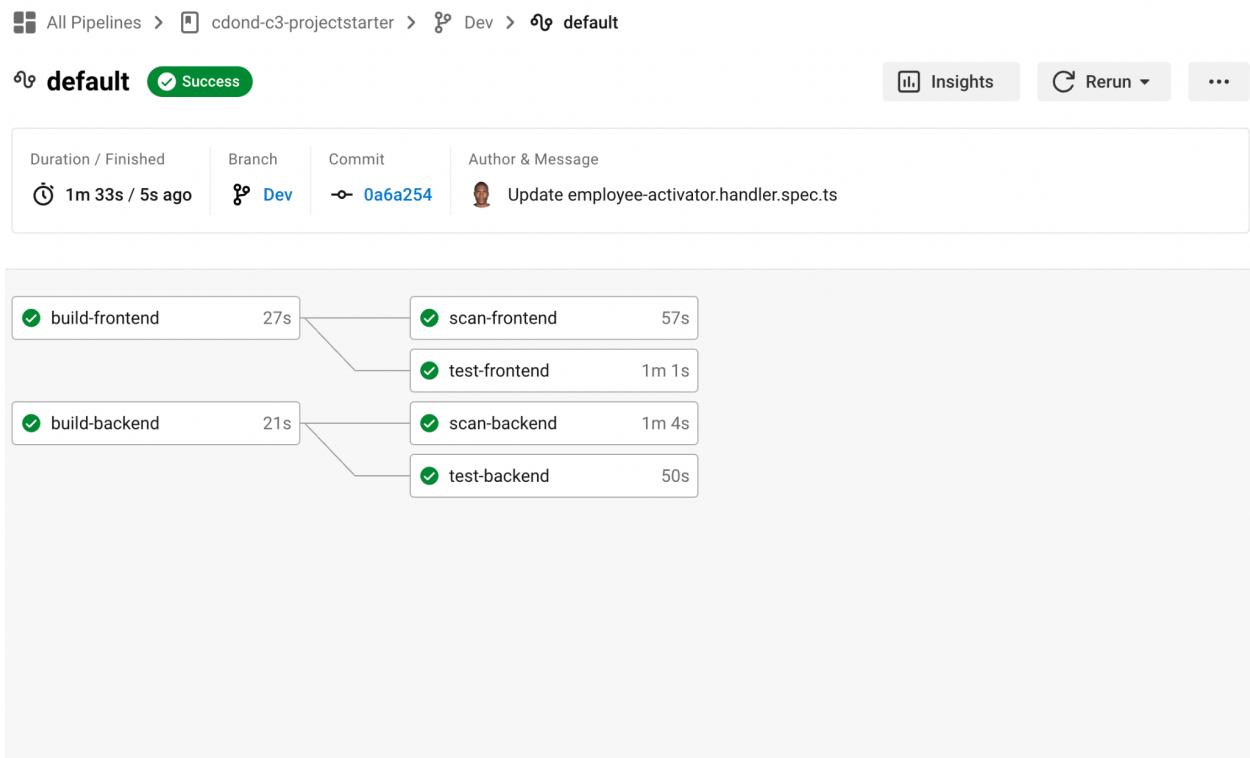
```

#!/bin/bash -eo pipefail
export OldWorkflowID=$(aws cloudformation \
    list-exports --query "Exports[?Name=='WorkflowID'].Value" \
    --no-paginate --output text)
export STACKS=$(aws cloudformation list-stacks --query "StackSummaries[*].StackName" \
    --stack-status-filter CREATE_COMPLETE --no-paginate --output text)
echo Old Workflow ID: $OldWorkflowID
if [[ "${STACKS[@]}" == *"${OldWorkflowID}"* ]]
then
    aws s3 rm "s3://udapeople-$OldWorkflowID" --recursive
    aws cloudformation delete-stack --stack-name "udapeople-backend-$OldWorkflowID"
    aws cloudformation delete-stack --stack-name "udapeople-frontend-$OldWorkflowID"
else
    # your code goes here
    exit 1
fi

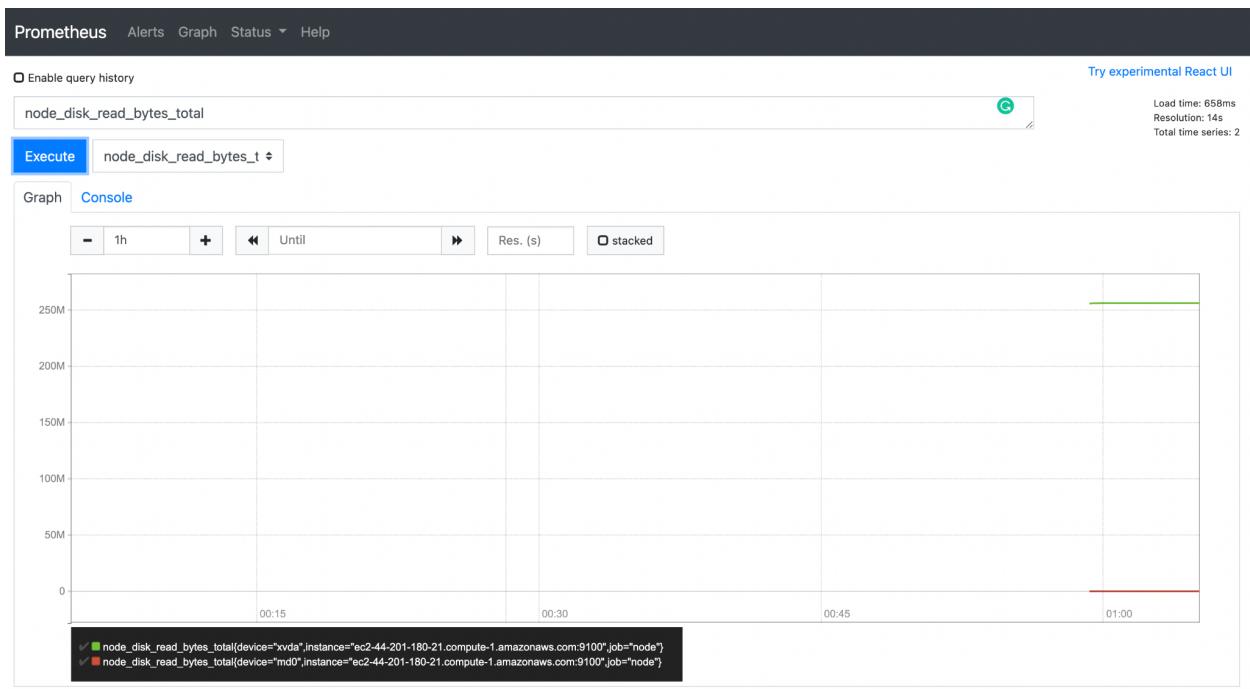
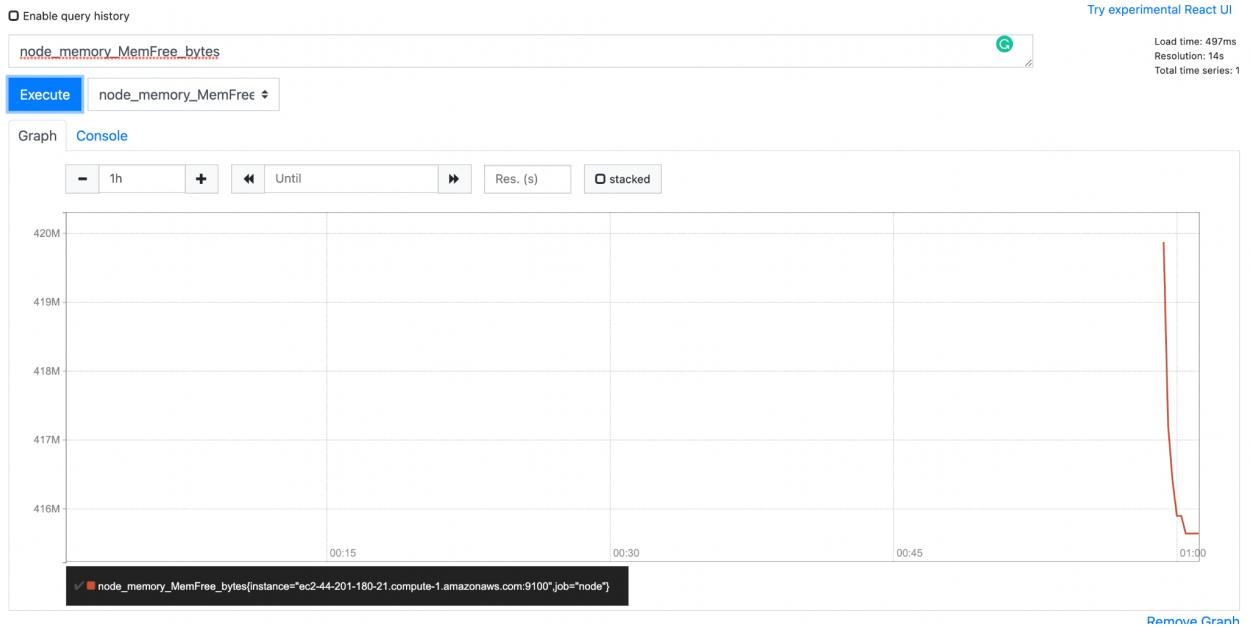
Old Workflow ID: 8620ff6
delete: s3://udapeople-8620ff6/1ceff9123b6b50a7d3cb5b22160855.eot
delete: s3://udapeople-8620ff6/2fa692cd5bf83c28c0ab271e4388c.woff
delete: s3://udapeople-8620ff6/224b6d9d16679dbb2826a2a7ea705eb.ttf
delete: s3://udapeople-8620ff6/7d234c755f55c47dc5c5a.js
delete: s3://udapeople-8620ff6/4e3ee00c10d44ec04b5.js
delete: s3://udapeople-8620ff6/images/6ab15f4239b7d187935cf6f4ec3313bf-kiwi.svg
delete: s3://udapeople-8620ff6/index.html
delete: s3://udapeople-8620ff6/bundle.js
CircleCI received exit code 0

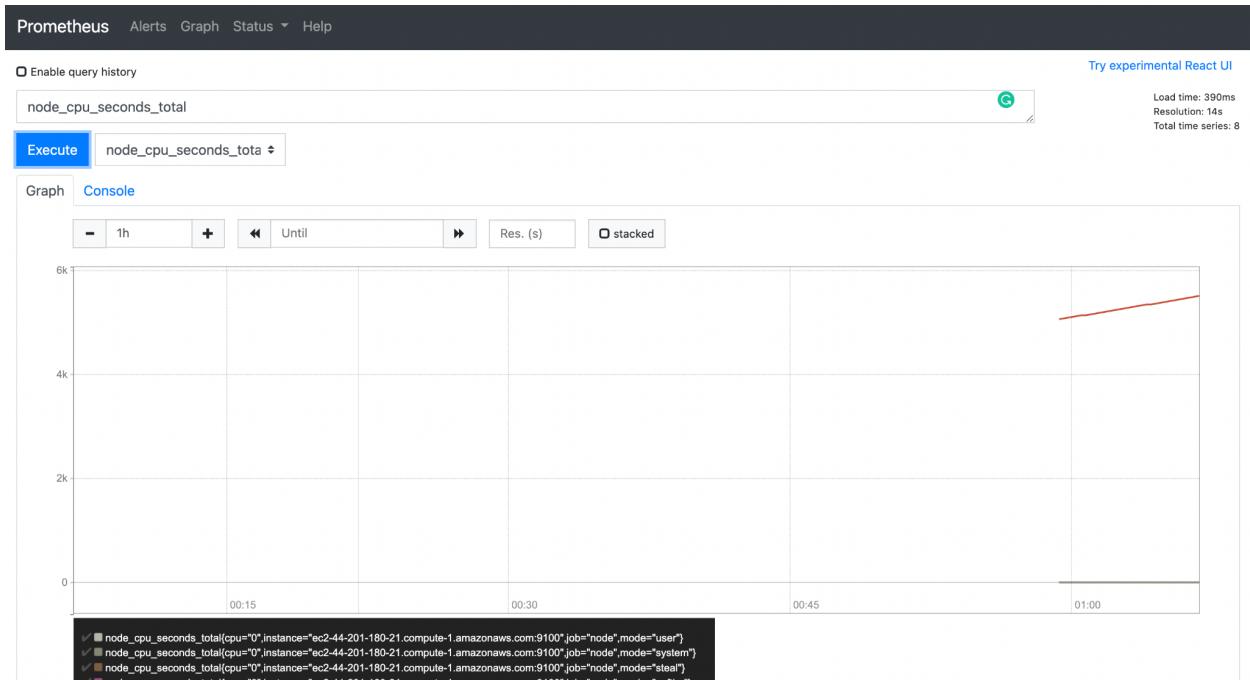
```

10. Only deploy on pushed to master branch. [SCREENSHOT10]



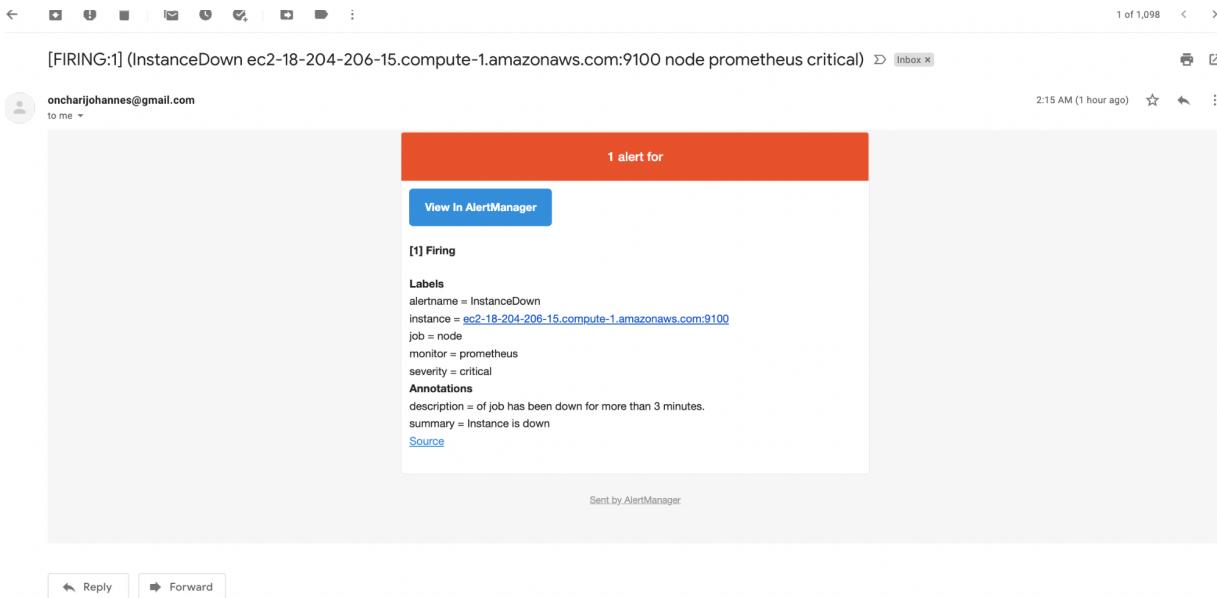
11. Provide a screenshot of a graph of your EC2 instance including available memory, available disk space, and CPU usage. [SCREENSHOT11]



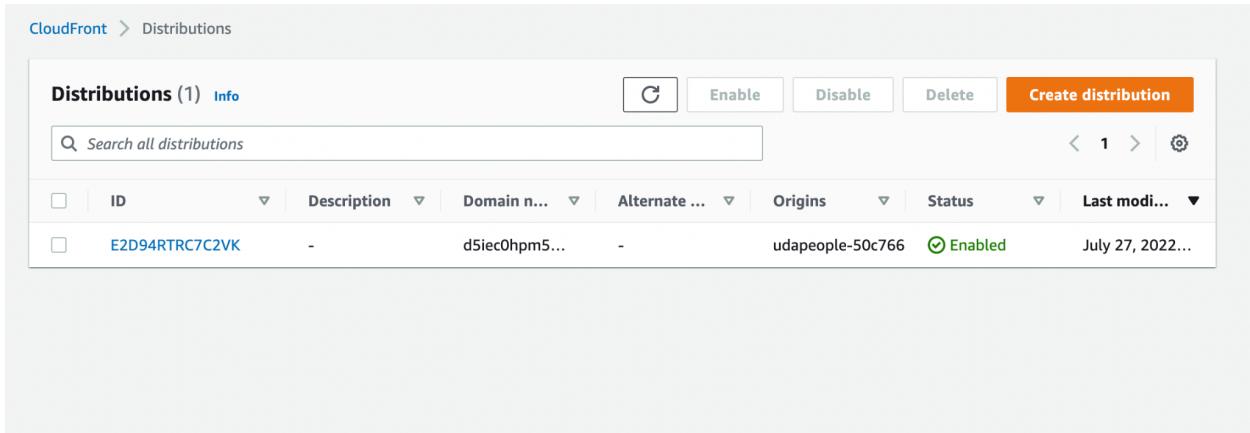


12. Provide a screenshot of an alert that was sent by Prometheus.

[SCREENSHOT12]



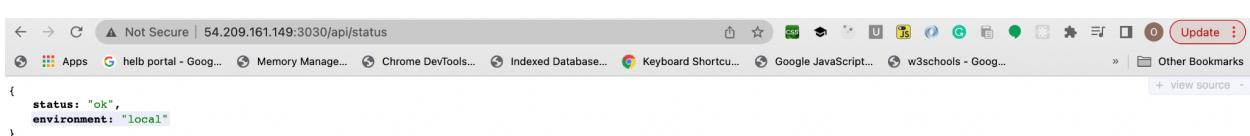
13. Provide a screenshot showing the evidence of deployed and functioning front-end application in CloudFront (aka, your production front-end).
[URL03_SCREENSHOT]



The screenshot shows the AWS CloudFront Distributions page. At the top, there is a breadcrumb navigation: CloudFront > Distributions. Below the breadcrumb, there is a search bar labeled "Search all distributions". To the right of the search bar are buttons for "Create distribution", "Enable", "Disable", and "Delete". A table below the search bar lists the distribution details:

ID	Description	Domain name	Alternate domain names	Origins	Status	Last modified
E2D94RTRC7C2VK	-	d5iec0hpm5...	-	udapeople-50c766	Enabled	July 27, 2022...

14. Provide a screenshot showing the evidence of a healthy backend application.
The backend endpoint status should show a healthy response.
[URL04_SCREENSHOT]



The screenshot shows a browser window with the URL "Not Secure | 54.209.161.149:3030/api/status". The page content is a JSON object:

```
{  
  "status": "ok",  
  "environment": "local"  
}
```

The screenshot shows a web application interface for managing employees. The title bar indicates the URL is `udapeople-d4e69fa.s3-website-us-east-1.amazonaws.com/#/employees`. The main header is "View & Manage Employees". On the left, there's a sidebar with "Employees" selected, showing options like "View & Manage" and "Add New". The main content area displays a table with one row of data:

Display Name	Last Name	Email	Tags	Birthdate	Start Date	Action
Tinega	Onchari	oncharijohannes@g...		7/26/2022	7/26/2022	⋮

15. Provide a screenshot of your Prometheus server showing UP state

[URL05_SCREENSHOT]

The screenshot shows the Prometheus Targets page at `ec2-52-70-219-217.compute-1.amazonaws.com:9090/targets`. The top navigation bar includes links for Prometheus, Alerts, Graph, Status, and Help. The main section is titled "Targets" and shows two entries:

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://ec2-18-204-206-15.compute-1.amazonaws.com:9100/metrics	UP	instance="ec2-18-204-206-15.compute-1.amazonaws.com:9100" job="node"	3.726s ago	13.19ms	

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://localhost:9090/metrics	UP	instance="localhost:9090" job="prometheus"	1.741s ago	6.394ms	

