

URLs:

- 1) <https://github.com/bishoymaurice/cdond-c3-projectstarter>
- 2) <http://udapeople-fd441b3.s3-website-us-east-1.amazonaws.com>
- 3) <https://d2vbt4fegfmvw.cloudfront.net>
- 4) ec2-18-215-158-61.compute-1.amazonaws.com:3030
- 5) <http://ec2-18-215-158-61.compute-1.amazonaws.com:9100/metrics>

Screenshots:

1

The screenshot displays a GitHub Actions workflow run for the user 'bishoymaurice'. The workflow is titled '1 / 4 parallel runs'. The steps shown are: 'Spin up environment' (2s), 'Preparing environment variables' (0s), 'Checkout code' (1s), 'Restoring cache' (0s), and 'Back-end build' (49s). The 'Back-end build' step is highlighted in red, indicating a failure. The terminal output for the 'Back-end build' step shows a series of npm errors, including 'npm ERR! code ELIFECYCLE', 'npm ERR! errno 2', and 'npm ERR! glee281.0.0 build: 'tsc''. The errors indicate a failure in the build process. The terminal output also shows a message from npm: 'A complete log of this run can be found in: /home/circleci/.npm/_logs/2021-09-12T22_01_52_004Z-debug.log'. The workflow status is 'OPERATIONAL'.

3

The screenshot shows the CircleCI web interface. On the left is a sidebar with navigation links: Dashboard, Projects, Insights, Organization Settings, and Plan. The main content area displays a build log for a job named 'Scan back-end'. The log indicates that the output is too large to display in the browser and provides a link to download the full output as a file. Below this, the log shows a table of dependencies for the 'jest' package, including paths and more info. The log ends with a message: 'Exited with code exit status 1' and 'CircleCI received exit code 1'.

Checkout code 0s

Restoring cache 0s

Scan back-end 1m 52s

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

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

Package	Kind-of
Dependency of	jest [dev]
Path	jest > jest-cli > @jest/core > jest-runner > jest-jasmine2 > jest-runtime > jest-config > jest-environment-jdom > @jest/environment > @jest/transform > jest-haste-map > sane > anymatch > micromatch > braces > snapdragon-node > define-property > is-descriptor > kind-of
More info	https://npmjs.com/advisories/1490

Low	Validation Bypass
Package	Kind-of
Dependency of	jest [dev]
Path	jest > jest-cli > @jest/core > jest-runner > jest-runtime > jest-config > jest-environment-jdom > @jest/environment > @jest/transform > jest-haste-map >

 This step produced more than the 100 MB limit of output, additional output will not be recorded.
 If you need this amount of output, we suggest writing it to a file and using store_artifacts to save it.

Exited with code exit status 1
 CircleCI received exit code 1

4

The screenshot shows a Slack channel named '#notifications'. The channel has a topic 'Add a topic' and a search bar. The channel contains several messages from the bot 'CircleCI'. The first message is a text notification: 'This is a text notification'. The second message is a 'Job Failed' notification for a build-backend job, showing project details (cdond-c3-projectstarter), author (bishoymaurice), and mentions (@EngineeringTeam). The third message is a 'Deployment Successful' notification for the same project, showing the deployment time (05/13/2021 11:59:23). The fourth message is another 'Deployment Successful' notification for the same project, showing the deployment time (05/13/2021 11:59:27). The channel has a sidebar with navigation links: Browse Slack, Channels, Direct messages, and Apps.

#notifications

Add a topic

CircleCI added an integration to this channel: circleci

CircleCI This is a text notification

CircleCI Job Failed.

Job: build-backend

Project: cdond-c3-projectstarter Branch: test/pipeline

Author: bishoymaurice

Mentions: @EngineeringTeam

[View Job](#)

Deployment Successful!

Project: cdond-c3-projectstarter When: 05/13/2021 11:59:23

Tag:

[View Job](#)


Deployment Successful!

Project: cdond-c3-projectstarter When: 05/13/2021 11:59:27

Tag:

[View Job](#)

Send a message to #notifications



bishoymaurice

bishoy


Dashboard

Projects


Insights

Organization Settings


Plan **Basic**




Status **OPERATIONAL**




Help




1




bishoymaurice
Bishoy




Dashboard




Projects



Insights



Organization Settings



Plan **Free**

STEPS TESTS ARTIFACTS

1 / 4 parallel runs

✓ Spin up environment3s

✓ Preparing environment variables0s

✓ Checkout code0s

❌ Ensure back-end infrastructure exists1m 8s

```
1 $! /bin/bash -eo pipefail
2 aws cloudformation deploy \
3   --template-file ./circleci/files/backend.yml \
4   --tags UdaPeople=UdaPeopleBackend \
5   --stack-name UDA-PEOPLE-BACKEND-$(CIRCLE_WORKFLOW_ID:0?) \
6   --parameter-overrides ID=$(CIRCLE_WORKFLOW_ID:0?)
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 UDA-PEOPLE-BACKEND-20ad10e
15
16 Exited with code exit status 255
17 CircleCI received exit code 255
```

Slack - Detecting Job Status (FAIL)0s

6

bishoymaurice

bishoy

Dashboard

Projects

Insights

Organization Settings

Plan

Status

Help

Preparing environment variables

0s

Checkout code

0s

Install dependencies

54s

Attaching workspace

0s

Get backend url

0s

Backend smoke test.

0s

Slack - Detecting Job Status (FAIL)

0s

Slack - Sending Notification

3s

Revert migrations

0s

Destroy environments

4s

```

1 #!/bin/bash -eo pipefail
2 export BACKEND_IP=$(cat .circleci/ansible/backendip.txt)
3 export API_URL="http://$BACKEND_IP:3030"
4 echo $API_URL
5 export BackendTestHttpCode=$(curl -s -o /dev/null -w "%{http_code}" $API_URL)
6 echo "BackendTestHttpCode is $BackendTestHttpCode"
7 if [ $BackendTestHttpCode != 200 ]
8 then
9   echo "Backend smoke test failed";
10   exit 1;
11 fi
12
13 http://52.34.176.133:3030
14 BackendTestHttpCode is 000
15 Backend smoke test failed
16
17 Exited with code exit status 1
18 CircleCI received exit code 1

```

7

bishoymaurice

bishoy

Dashboard

Projects

Insights

Organization Settings

Plan

Status

Help

Backend smoke test.

0s

```

1 #!/bin/bash -eo pipefail
2 export BACKEND_IP=$(cat .circleci/ansible/backendip.txt)
3 export API_URL="http://$BACKEND_IP:3030"
4 echo $API_URL
5 export BackendTestHttpCode=$(curl -s -o /dev/null -w "%{http_code}" $API_URL)
6 echo "BackendTestHttpCode is $BackendTestHttpCode"
7 if [ $BackendTestHttpCode != 200 ]
8 then
9   echo "Backend smoke test failed";
10   exit 1;
11 fi
12
13 http://52.34.176.133:3030
14 BackendTestHttpCode is 000
15 Backend smoke test failed
16
17 Exited with code exit status 1
18 CircleCI received exit code 1

```

Slack - Detecting Job Status (FAIL)

0s

Slack - Sending Notification

3s

Revert migrations

0s

Destroy environments

4s

8

bishoymaurice
Bishoy

10m 9s / 58m ago 0s Docker Medium master 6184e85 89

STEPS TESTS ARTIFACTS

1 / 4 parallel runs

- Spin up environment 3s
- Preparing environment variables 0s
- Checkout code 0s
- Install dependencies 47s
- Update cloudfront distribution 9m 14s
- Slack - Detecting Job Status (PASS) 0s
- Slack - Sending Notification 0s

```

1 #!/bin/bash -eo pipefail
2 aws cloudformation deploy \
3   --template-file .circleci/files/cloudfront.yml \
4   --tags UdaPeople=UdaPeopleFrontend \
5   --stack-name UDA-PEOPLE-FRONTEND-${CIRCLE_WORKFLOW_ID:0:7} \
6   --parameter-overrides WorkflowID=${CIRCLE_WORKFLOW_ID:0:7}
7
8
9 Waiting for changeset to be created..
10 Waiting for stack create/update to complete
11 Successfully created/updated stack - UDA-PEOPLE-FRONTEND-d7386e4
12 CircleCI received exit code 0

```

9

bishoymaurice
Bishoy

Checkout code 0s

Install dependencies 55s

Get old stack workflow id 2s

```

1 #!/bin/bash -eo pipefail
2 export OldWorkflowID=$(aws cloudformation \
3   list-exports --query "Exports[?Name=='WorkflowID'].Value" \
4   --no-paginate --output text --region=us-west-2)
5 export STACKS=$(aws cloudformation list-stacks --query "StackSummaries[*].StackName" \
6   --stack-status-filter CREATE_COMPLETE --no-paginate --output text --region=us-west-2)
7 echo "OldWorkflowID $OldWorkflowID"
8 echo "STACKS $STACKS"
9
10
11 OldWorkflowID 0e97113
12 STACKS UDA-PEOPLE-BACKEND-b7928e4
13 CircleCI received exit code 0

```

Remove old stacks and files 1s

```

1 #!/bin/bash -eo pipefail
2 if [[ "${STACKS[@]}" == "${OldWorkflowID}" ]]
3 then
4   aws cloudformation delete-stack --stack-name "UDA-PEOPLE-BACKEND-${OldWorkflowID}" --region=us-west-2
5 fi
6
7 CircleCI received exit code 0

```

Slack - Detecting Job Status (PASS) 0s

```

1 #!/bin/bash -eo pipefail
2 echo "export CCI_STATUS='pass'" > /tmp/SLACK_JOB_STATUS
3
4 CircleCI received exit code 0

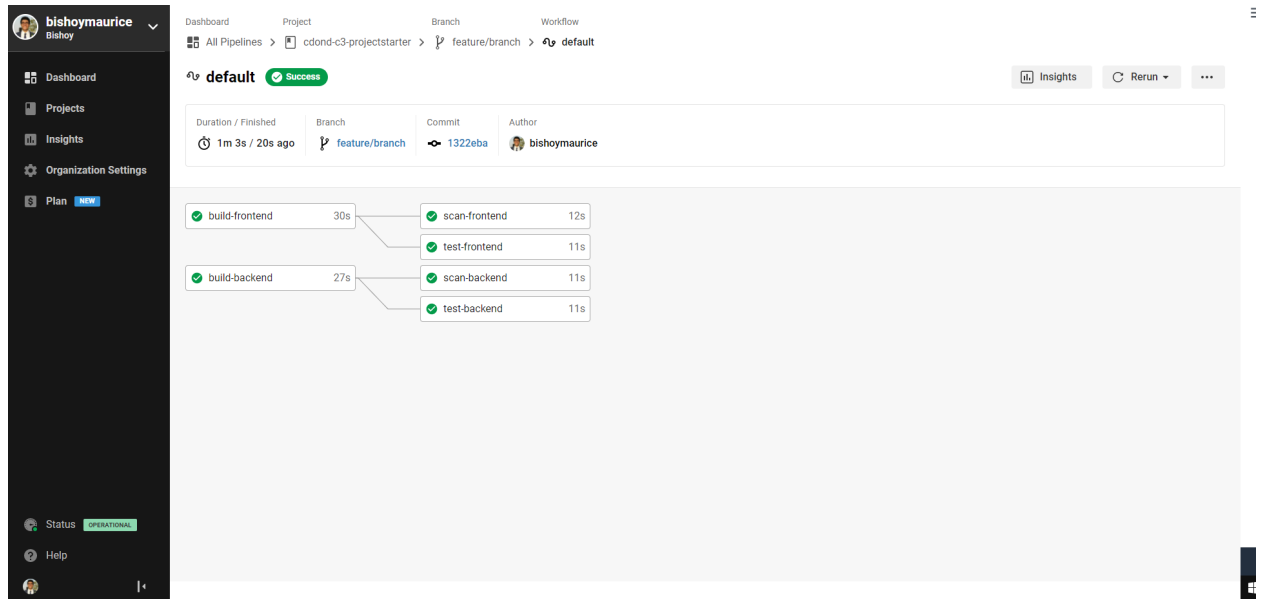
```

Slack - Sending Notification 0s

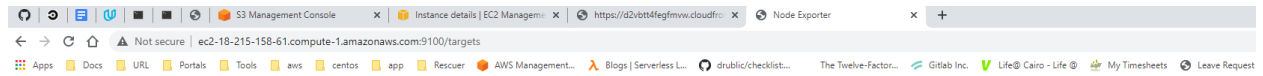
Slack - Detecting Job Status (PASS) 0s

Slack - Sending Notification 4s

10



11



Node Exporter

[Metrics](#)

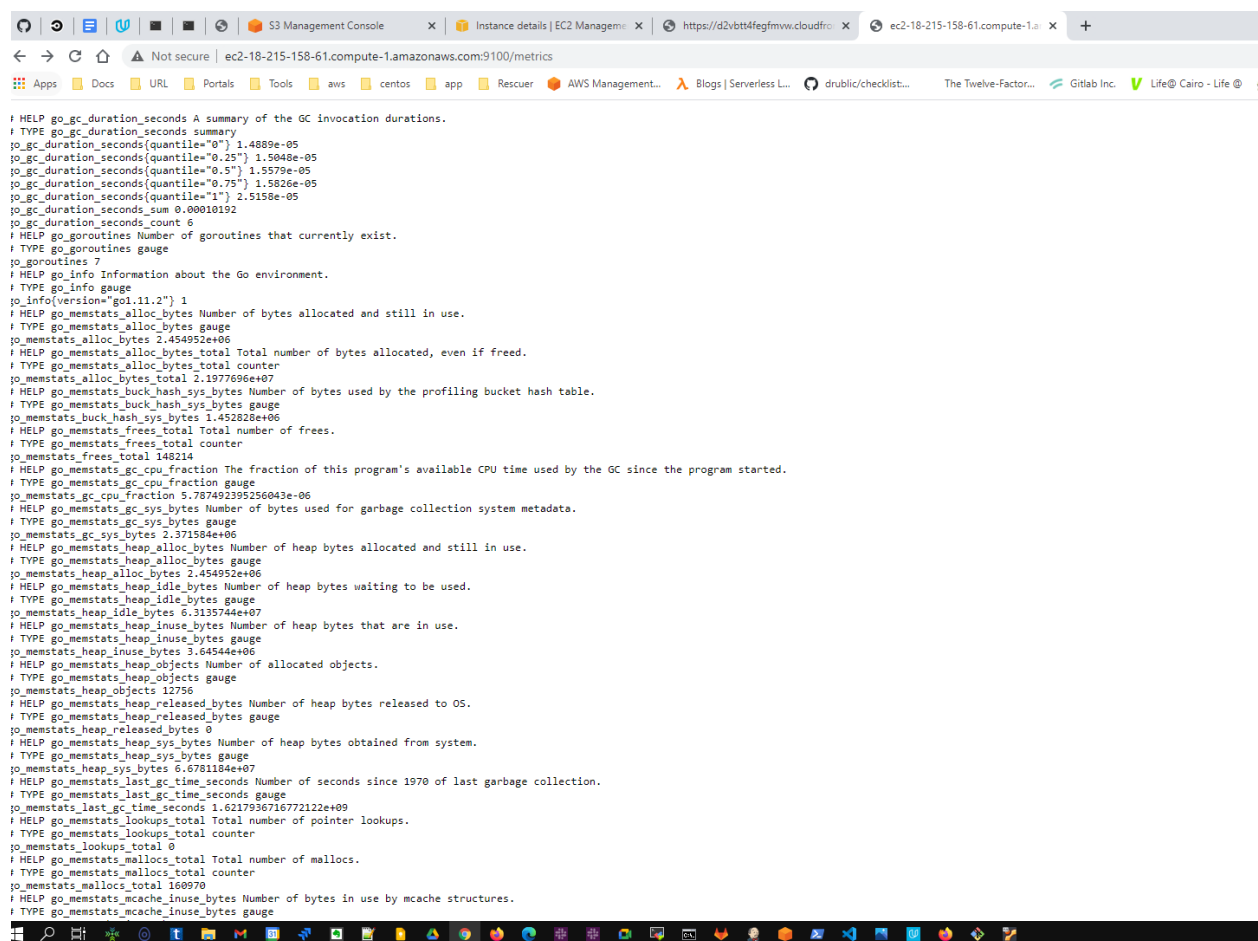


S3 Management Console x Instance details | EC2 Management x https://d2vbt4fegfmmw.cloudfr... x ec2-18-215-158-61.compute-1.0 x +

Not secure | ec2-18-215-158-61.compute-1.amazonaws.com:9100/metrics

Apps Docs URL Portals Tools aws centos app Rescuer AWS Management... Blogs | Serverless L... drublic/checklist... The Twelve-Factor... Gitlab Inc. Life@ Cairo - Life My Timesheets Leave Re

```
# HELP go_gc_duration_seconds A summary of the GC invocation durations.
# TYPE go_gc_duration_seconds summary
go_gc_duration_seconds{quantile="0"} 0
go_gc_duration_seconds{quantile="0.25"} 0
go_gc_duration_seconds{quantile="0.5"} 0
go_gc_duration_seconds{quantile="0.75"} 0
go_gc_duration_seconds{quantile="1"} 0
go_gc_duration_seconds_sum 0
go_gc_duration_seconds_count 0
# HELP go_goroutines Number of goroutines that currently exist.
# TYPE go_goroutines gauge
go_goroutines 6
# HELP go_info Information about the Go environment.
# TYPE go_info gauge
go_info{version="go1.11.2"} 1
# HELP go_memstats_alloc_bytes Number of bytes allocated and still in use.
# TYPE go_memstats_alloc_bytes gauge
go_memstats_alloc_bytes 3.325808e+06
# HELP go_memstats_alloc_bytes_total Total number of bytes allocated, even if freed.
# TYPE go_memstats_alloc_bytes_total counter
go_memstats_alloc_bytes_total 3.325808e+06
# HELP go_memstats_buck_hash_sys_bytes Number of bytes used by the profiling bucket hash table.
# TYPE go_memstats_buck_hash_sys_bytes gauge
go_memstats_buck_hash_sys_bytes 1.44374e+06
# HELP go_memstats_frees_total Total number of frees.
# TYPE go_memstats_frees_total counter
go_memstats_frees_total 1637
# HELP go_memstats_gc_cpu_fraction The fraction of this program's available CPU time used by the GC since the program started.
# TYPE go_memstats_gc_cpu_fraction gauge
go_memstats_gc_cpu_fraction 0
# HELP go_memstats_gc_sys_bytes Number of bytes used for garbage collection system metadata.
# TYPE go_memstats_gc_sys_bytes gauge
go_memstats_gc_sys_bytes 2.234368e+06
# HELP go_memstats_heap_alloc_bytes Number of heap bytes allocated and still in use.
# TYPE go_memstats_heap_alloc_bytes gauge
go_memstats_heap_alloc_bytes 3.325808e+06
# HELP go_memstats_heap_idle_bytes Number of heap bytes waiting to be used.
# TYPE go_memstats_heap_idle_bytes gauge
go_memstats_heap_idle_bytes 6.279168e+07
# HELP go_memstats_heap_inuse_bytes Number of heap bytes that are in use.
# TYPE go_memstats_heap_inuse_bytes gauge
go_memstats_heap_inuse_bytes 4.022272e+06
# HELP go_memstats_heap_objects Number of allocated objects.
# TYPE go_memstats_heap_objects gauge
go_memstats_heap_objects 19707
# HELP go_memstats_heap_released_bytes Number of heap bytes released to OS.
# TYPE go_memstats_heap_released_bytes gauge
go_memstats_heap_released_bytes 0
# HELP go_memstats_heap_sys_bytes Number of heap bytes obtained from system.
# TYPE go_memstats_heap_sys_bytes gauge
go_memstats_heap_sys_bytes 6.681392e+07
# HELP go_memstats_last_gc_time_seconds Number of seconds since 1970 of last garbage collection.
# TYPE go_memstats_last_gc_time_seconds gauge
go_memstats_last_gc_time_seconds 0
# HELP go_memstats_lookups_total Total number of pointer lookups.
# TYPE go_memstats_lookups_total counter
go_memstats_lookups_total 0
# HELP go_memstats_mallocs_total Total number of mallocs.
# TYPE go_memstats_mallocs_total counter
go_memstats_mallocs_total 21344
# HELP go_memstats_mcache_inuse_bytes Number of bytes in use by mcache structures.
# TYPE go_memstats_mcache_inuse_bytes gauge
```

Prometheus server

Prometheus

Alerts

Graph

Status

Help

Targets

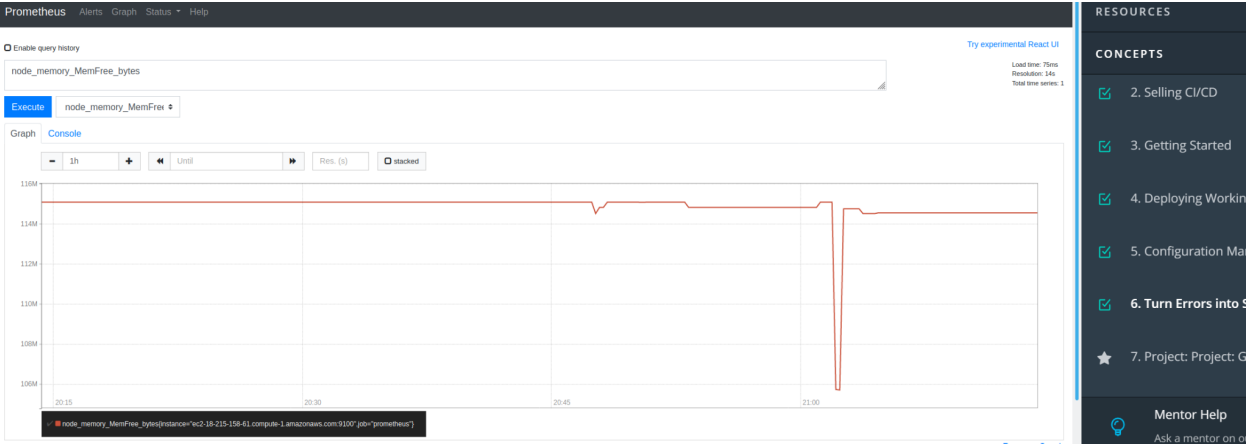
All

Unhealthy

prometheus (1/1 up)

show less

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://ec2-18-215-158-61.compute-1.amazonaws.com:9100/metrics	UP	instance="ec2-18-215-158-61.compute-1.amazonaws.com:9100" job="prometheus"	1.883s ago	176.5ms	



Alerts

Inactive (1)Pending (1)Firing (0)

Show annotations

/etc/prometheus/rules.yml > example

InstanceDown (1 active)

alert: InstanceDown
expr: up == 0
for: 5m
labels:
severity: page
annotations:
description: '{{ \$labels.instance }} of job {{ \$labels.job }} has been down for more than 5 minutes.'
summary: Instance {{ \$labels.instance }} down

Labels	State	Active Since	Value
alertname="InstanceDown"instance="172.31.16.163:9100"job="node"severity="page"	PENDING	2021-05-23 22:47:46.431338009 +0000 UTC	0

APIHighRequestLatency (0 active)

alert: APIHighRequestLatency
expr: api_http_request_latencies_second(quantile="0.5") > 1
for: 10m
annotations:
description: '{{ \$labels.instance }} has a median request latency above 1s (current value: {{ \$value }}s)'
summary: High request latency on {{ \$labels.instance }}

Events
Tags
Limits
▼ Instance
Instance
Launch T
Spot Req
Savings f
Reserved
Dedicate
Schedule
Capacity
▼ Images
AMIs
▼ Elastic B
Volumes
Feedback
uc

PrometheusAlertsGraphStatusHelp

Targets

AllUnhealthy

node (0/1 up) show logs

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://172.31.16.163:9100/metrics	DOWN	instance="172.31.16.163:9100"job="node"	10.21s ago	10s	Get "http://172.31.16.163:9100/metrics": context deadline exceeded

EC
Ev
Ta
Li
▼ In
In
In:
La
Sp
Sa
Re

12

I used mailhog to simulate alerts

