

Arquitetura Serverless na AWS & Terraform

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Digital Product - BootCamp
Impacta - MBA Cloud Computing & DevOps

Versões utilizadas no servidor Jenkins

Jenkins - Python - Terraform

```
[ec2-user@ip-172-31-17-170 yum-plugins]$ jenkins --help
Jun 18, 2022 9:32:02 PM Main verifyJavaVersion
WARNING: You are running Jenkins on Java 1.8, support f
nounced date. The Long Term Support (LTS) line of Jenki
or details on upgrading to Java 11: https://www.jenkins
Running from: /usr/share/java/jenkins.war
webroot: $user.home/.jenkins
Jenkins Automation Server Engine 2.350
```

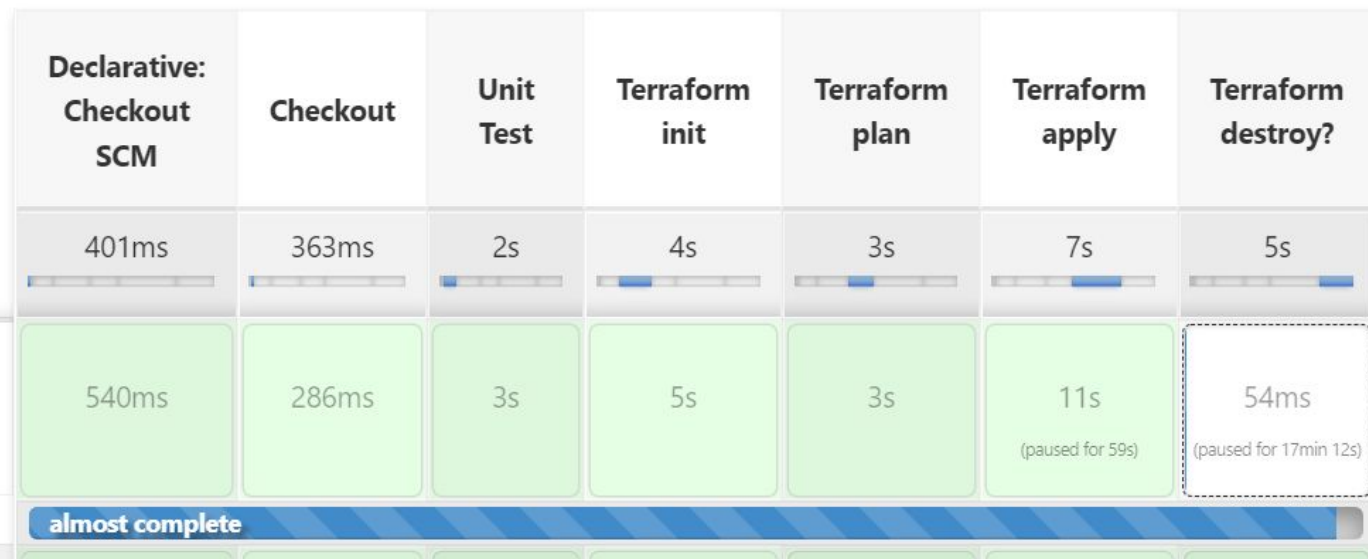
```
[ec2-user@ip-172-31-17-170 yum-plugins]$ python3
Python 3.7.10 (default, Jun  3 2021, 00:02:01)
[GCC 7.3.1 20180712 (Red Hat 7.3.1-13)] on linux
```

```
[ec2-user@ip-172-31-17-170 yum-plugins]$ terraform -v
Terraform v1.2.2
on linux_amd64
```

Pipeline

Average stage times:

(Average full run time: ~5min 58s)



#81

Jun 18

17:52

1

commit

Pipeline - logs do step Unit Test

Shell Script -- python3 -m unittest src/test/python/test_handler.py -v (self time 763ms)

```
+ python3 -m unittest src/test/python/test_handler.py -v
/var/lib/jenkins/.local/lib/python3.7/site-packages/moto/__init__.py:27: UserWarning: Module mock_dynamodb2 has been
use mock_dynamodb instead. See https://github.com/spulec/moto/issues/4526 for more information.
  f"Module {used} has been deprecated, and will be removed in a later release. Please use {recommended} instead. "
test_write_into_table (src.test.python.test_handler.MyTest)
Test the write_into_table with a valid input data ... ok

-----

Ran 1 test in 0.096s

OK
Loading function
Received event: {'body': '{"operation": "create", "payload": {"Item": {"id": "1", "organization": "Test"}}}'}
```

Pipeline - logs do step apply

Stage Logs (Terraform apply)

⏏ Wait for interactive input -- Deseja executar o apply? (self time 59s)

⏏ Shell Script -- terraform apply --auto-approve (self time 11s)

```
aws_dynamodb_table.anything: Creation complete after 6s [id=anything]
[33m][0m[0m
[33m][0m [0m[1m[33mWarning: [0m[0m[1mQuoted references are deprecated[0m
[33m][0m [0m
[33m][0m [0m[0m on main.tf line 29, in resource "aws_api_gateway_deployment" "deployment
[33m][0m [0m [0m 29:   depends_on = ["aws_api_gateway_integration.integration"[0m][0m
[33m][0m [0m
[33m][0m [0mIn this context, references are expected literally rather than in quotes.
[33m][0m [0mTerraform 0.11 and earlier required quotes, but quoted references are now
[33m][0m [0mdeprecated and will be removed in a future version of Terraform. Remove the
[33m][0m [0mquotes surrounding this reference to silence this warning.
[33m'[0m[0m
[0m[1m[32m
Apply complete! Resources: 9 added, 0 changed, 0 destroyed.
[0m[0m[1m[32m
Outputs:

mur1 = "https://sff6r95itc.execute-api.us-east-1.amazonaws.com/dev/dynamodbmanager"
```

Run - request create

POST <https://sff6r95itc.execute-api.us-east-1.amazonaws.com/dev/dynamodbmanager>

Params Authorization Headers (9) **Body** Pre-request Script Tests Settings

☐ none ☐ form-data ☐ x-www-form-urlencoded ☒ raw ☐ binary ☐ GraphQL **JSON**

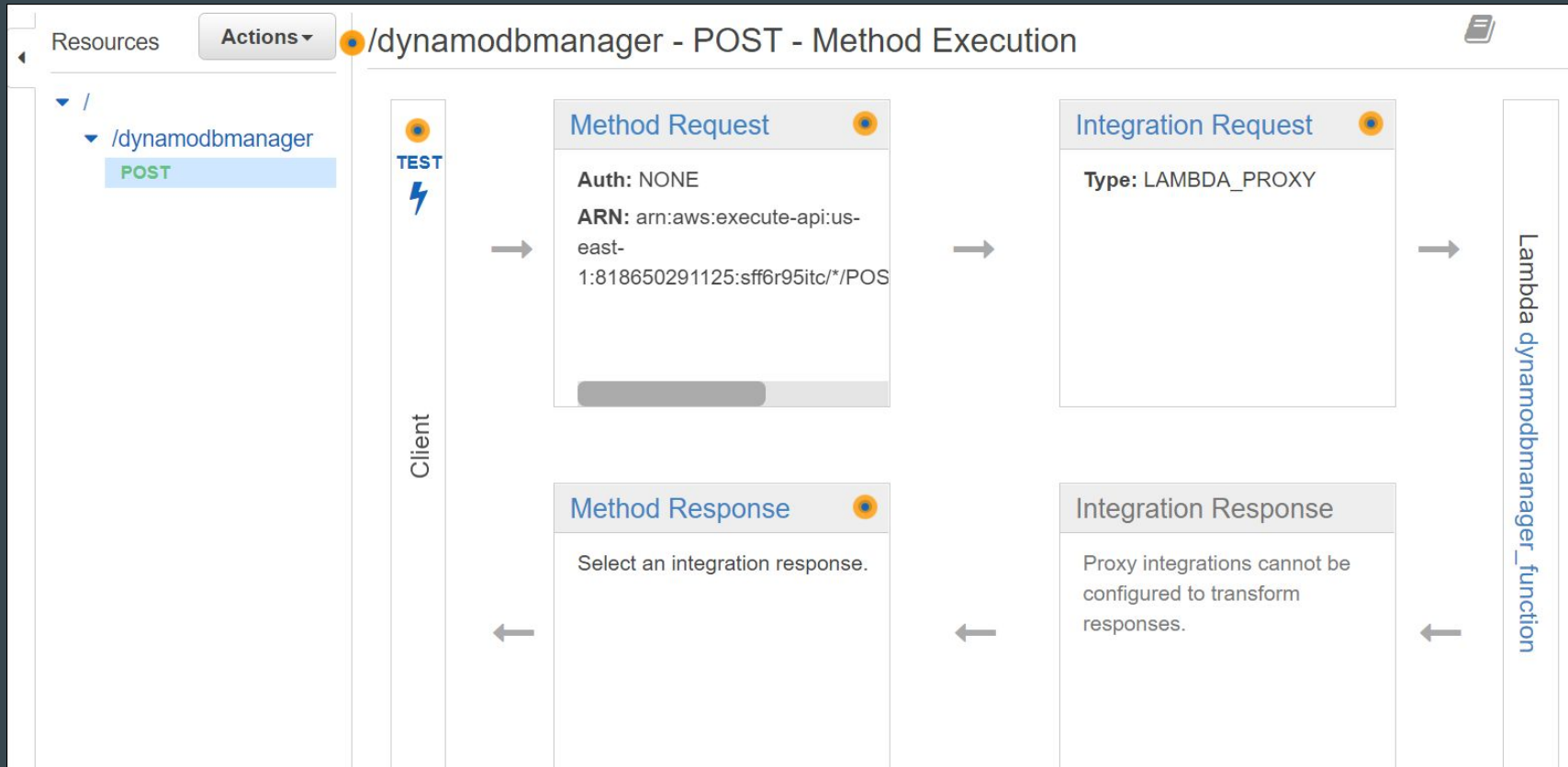
```
1 {
2   "operation": "create",
3   "payload": {
4     "Item": {
5       "id": "3",
6       "organization": "Impacta RJ/"
7     }
8   }
9 }
```

Body Cookies Headers (11) Test Results

Pretty Raw Preview Visualize **JSON**

```
1 {
2   "ResponseMetadata": {
3     "RequestId": "TPFIA9CVNIGE1PDVTAMT7N4C7FVV4KQNS05AEMVJF66Q9ASUAAJG",
4     "HTTPStatusCode": 200,
5     "HTTPHeaders": {
6       "server": "Server",
7       "date": "Sat, 18 Jun 2022 20:57:26 GMT",
8       "content-type": "application/x-amz-json-1.0",
9       "content-length": "2",
10      "connection": "keep-alive",
11      "x-amzn-requestid": "TPFIA9CVNIGE1PDVTAMT7N4C7FVV4KQNS05AEMVJF66Q9ASUAAJG",
12      "x-amz-crc32": "2745614147"
13    },
14     "RetryAttempts": 0
15   }
16 }
```

Api Gateway



Lambda

Lambda > Functions > dynamodbmanager_function

dynamodbmanager_function

Throttle

 Copy ARN

Actions ▼

▼ Function overview [Info](#)



dynamodbmanage
r_function



Layers (0)



API Gateway

+ Add trigger

+ Add destination


Description

-

Last modified

14 minutes ago

Function ARN

 arn:aws:lambda:us-east-1:818650291125:func
tion:dynamodbmanager_function

Function URL [Info](#)

-

DynamoDB

DynamoDB > Items > anything

Tables (1)



Any table tag



Find tables by table name

< 1 >



anything

anything

▼ Scan/Query items

Scan/query a table or index

Scan

Query

anything

► Filters

Run

Reset

✓ Completed Read capacity units consumed: 0.5

Items returned (3)

<input type="checkbox"/>	id	organization
<input type="checkbox"/>	2	Impacta SP
<input type="checkbox"/>	1	Impacta
<input type="checkbox"/>	3	Impacta RJ/

CloudWatch Logs

CloudWatch > Log groups > /aws/lambda/dynamodbmanager_function >

2022/06/18/[\$LATEST]33c000d0e2764a2d84a37053e31b98db

Log events

You can use the filter bar below to search for and match terms, phrases, or values in your log events. [Learn more about filter patterns](#)



☐ View as text



Actions ▼

Create Metric Filter



Filter events

Clear

1m

30m

1h

12h

Custom



Timestamp

Message

No older events at this moment. [Retry](#)



2022-06-18T17:56:49.354-03:00

START RequestId: 6a9d1042-b843-4aa2-a5e1-fdd660a38373 Version: \$LATEST



2022-06-18T17:56:49.354-03:00

Loading function



2022-06-18T17:56:49.357-03:00

Received event: {'resource': '/dynamodbmanager', 'path': '/dynamodbmanager', 'htt...



2022-06-18T17:56:50.795-03:00

END RequestId: 6a9d1042-b843-4aa2-a5e1-fdd660a38373



2022-06-18T17:56:50.795-03:00

REPORT RequestId: 6a9d1042-b843-4aa2-a5e1-fdd660a38373 Duration: 1438.96 ms Bille...



2022-06-18T17:57:16.494-03:00

START RequestId: 20fe4af4-fac9-4850-9b15-a99fad187f6a Version: \$LATEST



2022-06-18T17:57:16.496-03:00

Received event: {'resource': '/dynamodbmanager', 'path': '/dynamodbmanager', 'htt...

Run - request list

POST ▼ https://sff6r95itc.execute-api.us-east-1.amazonaws.com/dev/dynamodbmanager

Params Authorization Headers (9) **Body** Pre-request Script Tests Settings

☐ none ☐ form-data ☐ x-www-form-urlencoded ☒ raw ☐ binary ☐ GraphQL **JSON** ▼

```
1 {  
2   "operation": "list",  
3   "payload": {}  
4 }
```

Body Cookies Headers (11) Test Results

Pretty Raw Preview Visualize **JSON** ≡

```
1 {  
2   "Items": [  
3     {  
4       "id": "2",  
5       "organization": "Impacta SP"  
6     },  
7     {  
8       "id": "1",  
9       "organization": "Impacta"  
10    },  
11    {  
12      "id": "3",  
13      "organization": "Impacta RJ/"  
14    }  
15  ],  
16 }
```

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