

Terraformando um Ecossistema

ThoughtWorks®



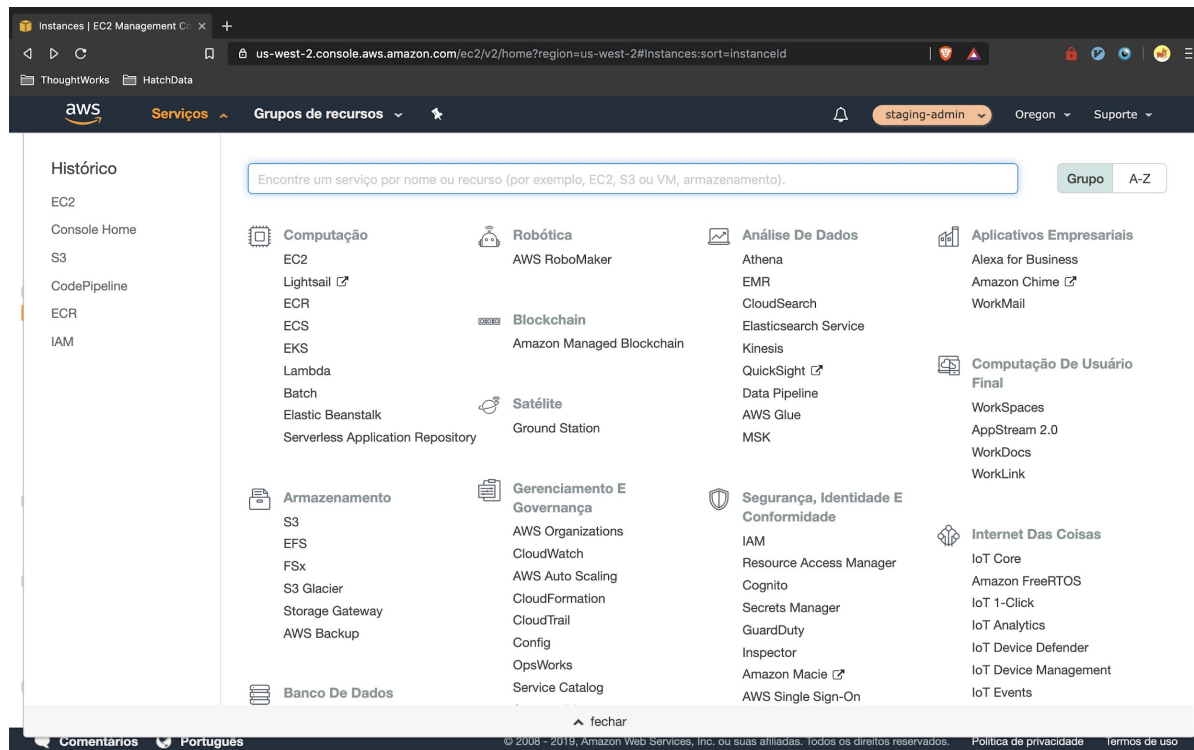
Roney Gomes

@umbravirtual
ThoughtWorks®

PROVISIONAMENTO DE INFRAESTRUTURA

NO BRAÇO

FORMAS TRADICIONAIS DE PROVISIONAMENTO DE INFRAESTRUTURA



FORMAS TRADICIONAIS DE PROVISIONAMENTO DE INFRAESTRUTURA

The screenshot displays the AWS Management Console interface for the EC2 service in the US West (Oregon) region. The left-hand navigation pane lists various EC2-related sections: EC2 Dashboard, Events, Tags, Reports, Limits, INSTANCES (with sub-items like Instances, Launch Templates, Spot Requests, etc.), IMAGES (with sub-items like AMIs, Bundle Tasks), ELASTIC BLOCK STORE (with sub-items like Volumes, Snapshots, Lifecycle Manager), and NETWORK & SECURITY (with sub-items like Security Groups, Elastic IPs). The main content area is divided into several panels. The 'Resources' panel shows a summary of EC2 resources: 2 Running Instances, 0 Dedicated Hosts, 2 Volumes, 1 Key Pairs, 0 Placement Groups, 1 Elastic IPs, 0 Snapshots, 2 Load Balancers, and 9 Security Groups. Below this is a 'Create Instance' section with a 'Launch Instance' button. The 'Service Health' panel indicates that the US West (Oregon) service status is 'OK' and the availability zone 'us-west-2a' is operating normally. The 'Scheduled Events' panel shows no events. The right-hand sidebar contains 'Account Attributes' (Supported Platforms, Default VPC, etc.) and 'Additional Information' (Getting Started Guide, Documentation, etc.). At the bottom, there is a footer with 'Comentários', 'Português', and copyright information for Amazon Web Services, Inc. (2008-2019).

EC2 Management Console

us-west-2.console.aws.amazon.com/ec2/v2/home?region=us-west-2#Home:

ThoughtWorks HatchData

aws Serviços Grupos de recursos

staging-admin Oregon Suporte

EC2 Dashboard

- Events
- Tags
- Reports
- Limits
- INSTANCES
 - Instances
 - Launch Templates
 - Spot Requests
 - Reserved Instances
 - Dedicated Hosts
 - Scheduled Instances
 - Capacity Reservations
- IMAGES
 - AMIs
 - Bundle Tasks
- ELASTIC BLOCK STORE
 - Volumes
 - Snapshots
 - Lifecycle Manager
- NETWORK & SECURITY
 - Security Groups
 - Elastic IPs

Resources

You are using the following Amazon EC2 resources in the US West (Oregon) region:

- 2 Running Instances
- 0 Dedicated Hosts
- 2 Volumes
- 1 Key Pairs
- 0 Placement Groups
- 1 Elastic IPs
- 0 Snapshots
- 2 Load Balancers
- 9 Security Groups

Learn more about the latest in AWS Compute from AWS re:Invent by viewing the EC2 Videos.

Create Instance

To start using Amazon EC2 you will want to launch a virtual server, known as an Amazon EC2 instance.

[Launch Instance](#)

Note: Your instances will launch in the US West (Oregon) region

Service Health

Service Status:

- US West (Oregon): OK

Availability Zone Status:

- us-west-2a: OK
Availability zone is operating normally

Scheduled Events

US West (Oregon):

- No events

Account Attributes

Supported Platforms

- VPC

Default VPC

- none

Resource ID length management

- Console experiments
- Settings

Additional Information

- [Getting Started Guide](#)
- [Documentation](#)
- [All EC2 Resources](#)
- [Forums](#)
- [Pricing](#)
- [Contact Us](#)

AWS Marketplace

Find free software trial products in the AWS Marketplace from the [EC2 Launch Wizard](#). Or try these popular AMIs:

- [Barracuda CloudGen Firewall for AWS - PAYG](#)

By Barracuda Networks, Inc.

Comentários Português

© 2008 - 2019, Amazon Web Services, Inc. ou suas afiliadas. Todos os direitos reservados. Política de privacidade Termos de uso

FORMAS TRADICIONAIS DE PROVISIONAMENTO DE INFRAESTRUTURA

Launch instance wizard | EC2 M x +

us-west-2.console.aws.amazon.com/ec2/v2/home?region=us-west-2#LaunchInstanceWizard:

ThoughtWorks HatchData

aws

Serviços

Grupos de recursos

staging-admin

Oregon

Suporte

1. Choose AMI

2. Choose Instance Type

3. Configure Instance

4. Add Storage

5. Add Tags

6. Configure Security Group

7. Review

Step 1: Choose an Amazon Machine Image (AMI) [Cancel and Exit](#)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. You can select an AMI provided by AWS, our user community, or the AWS Marketplace; or you can select one of your own AMIs.

Search for an AMI by entering a search term e.g. "Windows"


Quick Start

My AMIs

AWS Marketplace

Community AMIs


☐ Free tier only ⓘ

**Amazon Linux**
Free tier eligible

Amazon Linux 2 AMI (HVM), SSD Volume Type - ami-0cb72367e98845d43 (64-bit x86) / ami-05348ee4dc634ca1c
(64-bit Arm)
Amazon Linux 2 comes with five years support. It provides Linux kernel 4.14 tuned for optimal performance on Amazon EC2, systemd 219, GCC 7.3, Glibc 2.26, Binutils 2.29.1, and the latest software packages through extras.
Root device type: ebs Virtualization type: hvm ENA Enabled: Yes


☒ 64-bit (x86)

☐ 64-bit (Arm)

**Amazon Linux**
Free tier eligible

Amazon Linux AMI 2018.03.0 (HVM), SSD Volume Type - ami-07a0c6e669965bb7c
The Amazon Linux AMI is an EBS-backed, AWS-supported image. The default image includes AWS command line tools, Python, Ruby, Perl, and Java. The repositories include Docker, PHP, MySQL, PostgreSQL, and other packages.
Root device type: ebs Virtualization type: hvm ENA Enabled: Yes

☐ 64-bit (x86)

**Red Hat**
Free tier eligible

Red Hat Enterprise Linux 8 (HVM), SSD Volume Type - ami-079596bf7a949ddf8 (64-bit x86) / ami-0f7a968a2c17fb48b (64-bit Arm)
Red Hat Enterprise Linux version 8 (HVM), EBS General Purpose (SSD) Volume Type

☒ 64-bit (x86)

☐ 64-bit (Arm)

Select

Select

Select

Comentários

Português

© 2008 - 2019, Amazon Web Services, Inc. ou suas afiliadas. Todos os direitos reservados. [Política de privacidade](#) [Termos de uso](#)

FORMAS TRADICIONAIS DE PROVISIONAMENTO DE INFRAESTRUTURA

Launch instance wizard | EC2 M x +

us-west-2.console.aws.amazon.com/ec2/v2/home?region=us-west-2#LaunchInstanceWizard:

ThoughtWorks HatchData

aws

Serviços

Grupos de recursos

staging-admin

Oregon

Suporte

1. Choose AMI

2. Choose Instance Type

3. Configure Instance

4. Add Storage

5. Add Tags

6. Configure Security Group

7. Review

Step 2: Choose an Instance Type

Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instances are virtual servers that can run applications. They have varying combinations of CPU, memory, storage, and networking capacity, and give you the flexibility to choose the appropriate mix of resources for your applications. [Learn more](#) about instance types and how they can meet your computing needs.

Filter by: All instance types Current generation [Show/Hide Columns](#)

Currently selected: t2.micro (Variable ECUs, 1 vCPUs, 2.5 GHz, Intel Xeon Family, 1 GiB memory, EBS only)

	Family	Type	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance	IPv6 Support
<input type="checkbox"/>	General purpose	t2.nano	1	0.5	EBS only	-	Low to Moderate	Yes
<input checked="" type="checkbox"/>	General purpose	t2.micro Free tier eligible	1	1	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.small	1	2	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.medium	2	4	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.large	2	8	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.xlarge	4	16	EBS only	-	Moderate	Yes

CancelPreviousReview and LaunchNext: Configure Instance Details

Comentários

Português

© 2008 - 2019, Amazon Web Services, Inc. ou suas afiliadas. Todos os direitos reservados. [Política de privacidade](#) [Termos de uso](#)

**FORMAS TRADICIONAIS DE
PROVISIONAMENTO DE INFRAESTRUTURA**

AO INFINITO...

FORMAS TRADICIONAIS DE PROVISIONAMENTO DE INFRAESTRUTURA

SHELL SCRIPT?



UMA SAÍDA

INFRAESTRUTURA COMO CÓDIGO

INFRAESTRUTURA COMO CÓDIGO

TRATANDO INFRAESTRUTURA COMO SOFTWARE

- Versionamento
- Integração Contínua
- Revisão de Código
- Testes Automáticos

FERRAMENTAS EXISTENTES

**ANSIBLE, PUPPET,
CHEF...**

FERRAMENTAS EXISTENTES

GERENCIAMENTO DE CONFIGURAÇÃO

FERRAMENTAS EXISTENTES

ACÚMULO DE ESTADO

PREENCHENDO UM ESPAÇO DESOCUPADO

TERRAFORM

HASHICORP

PROVISION, SECURE, AND RUN

ANY INFRASTRUCTURE FOR ANY APPLICATION

PROVISION



Vagrant



Packer



Terraform

SECURE



Vault

RUN



Nomad



Consul

BUILD

TEST

PACKAGE

PROVISION

SECURE

DEPLOY

MAINTAIN

Seven elements of the modern Application Lifecycle

PREENCHENDO UM ESPAÇO DESOCUPADO

DECLARATIVO

UM EXEMPLO

```
resource "aws_instance" "amazon_linux" {  
    ami = "ami-0b59bfac6be064b78"  
    instance_type = "t2.nano"  
    tags = {  
        Name = "some-sample-instance"  
    }  
}
```

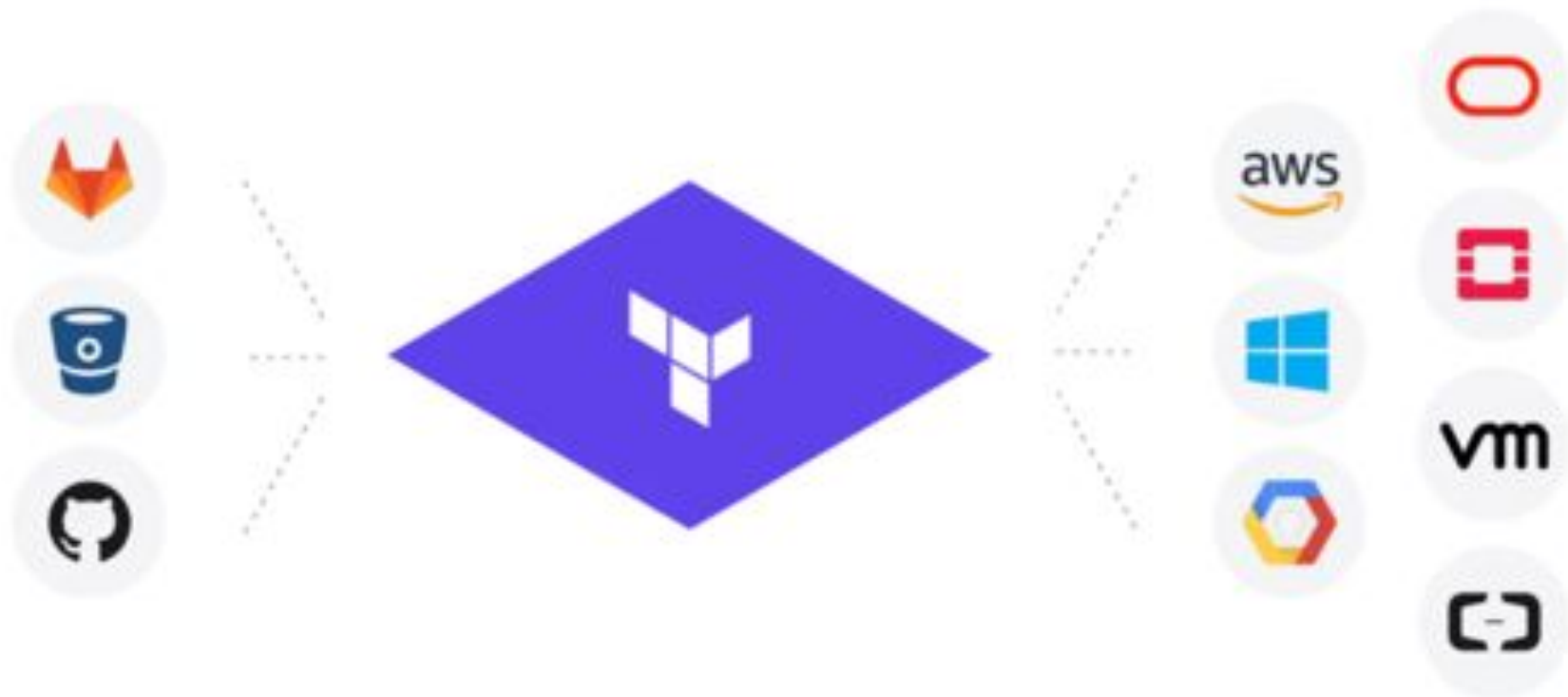
PREENCHENDO UM ESPAÇO DESOCUPADO

IMUTÁVEL

PREENCHENDO UM ESPAÇO DESOCUPADO

MULTICLOUD

TERRAFORM

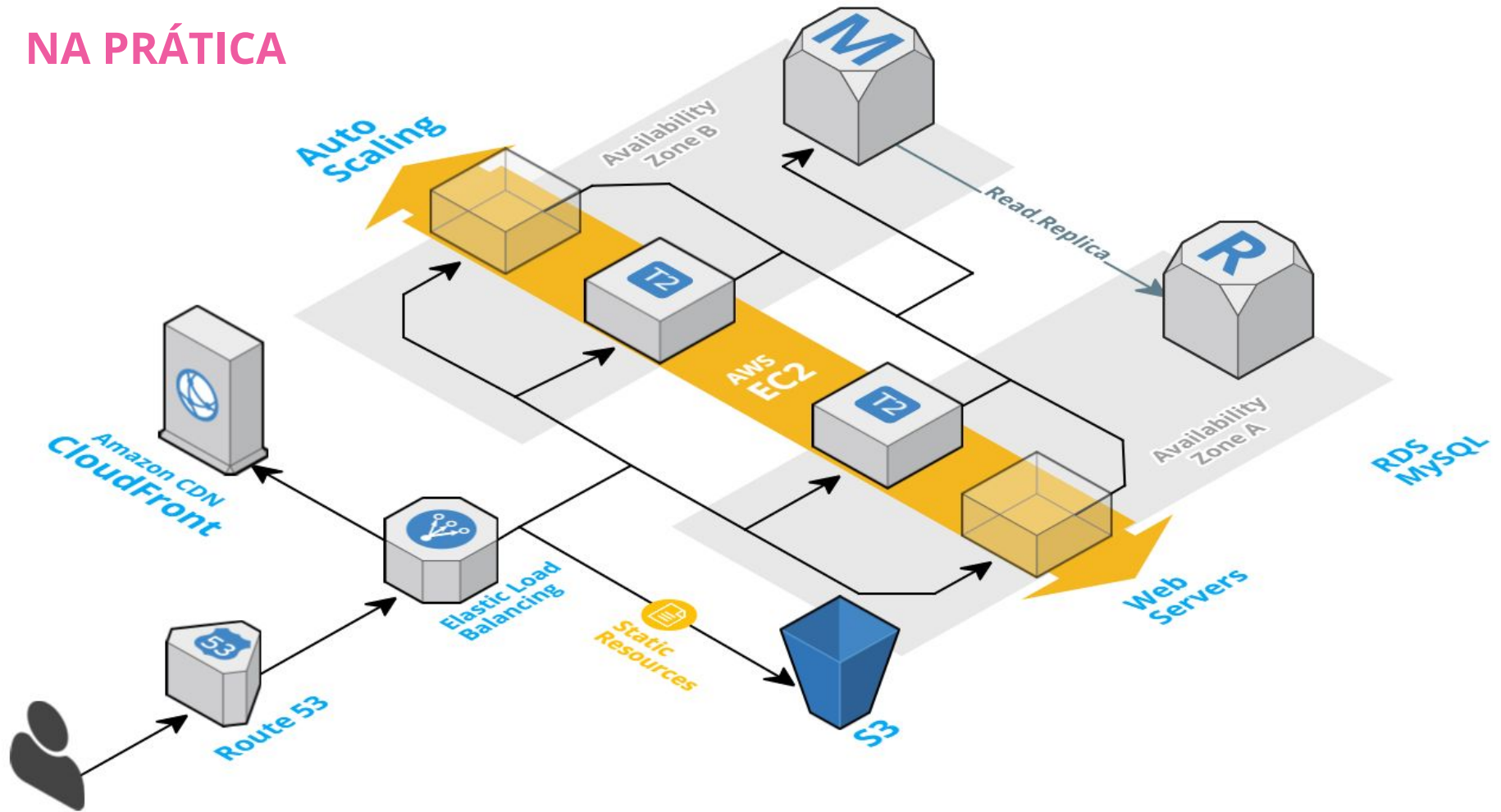


ECOSSISTEMAS

"Conjunto das relações de interdependência, reguladas pelas condições físicas, químicas e biológicas, que os seres vivos estabelecem entre si e também com o meio ambiente em que habitam."

— *Dicionário Online da Língua Portuguesa: priberam.org*

NA PRÁTICA



Development environment

<https://dev-my-app.com/>

Frontend

Service A, B, C

Backend

Database

Staging (test) environment

<https://staging-my-app.com/>

Frontend

Service A, B, C

Backend

Database

Production environment

<https://my-app.com/>

Frontend

Service A, B, C

Backend

Database

TERRAFORM

O QUE FALTA?

TERRAFORM

PARÂMETROS

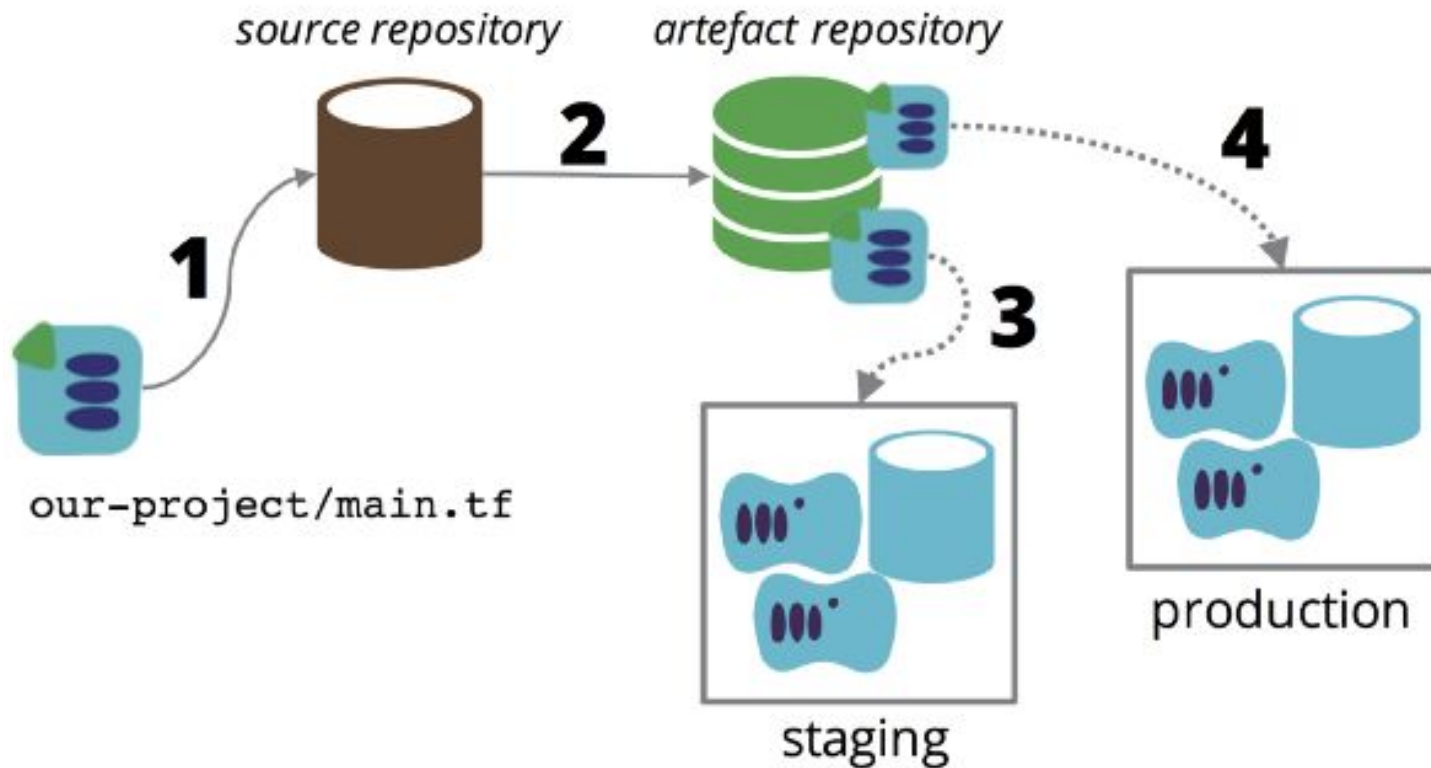
TERRAFORM

ISOLAMENTO

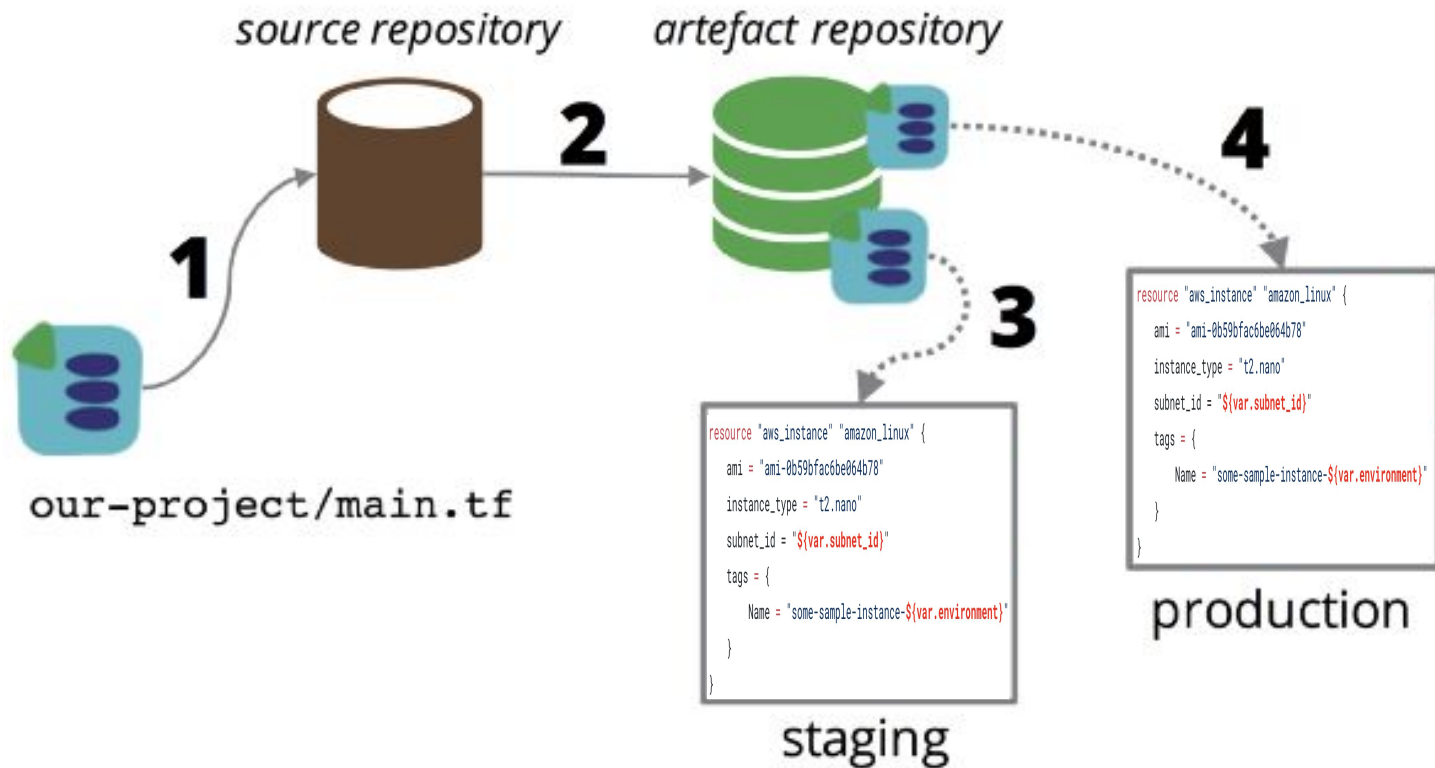
TERRAFORM COM PARÂMETROS

```
resource "aws_instance" "amazon_linux" {  
    ami = "ami-0b59bfac6be064b78"  
    instance_type = "t2.nano"  
    subnet_id = "${var.subnet_id}"  
    tags = {  
        Name = "some-sample-instance-${var.environment}"  
    }  
}
```

TERRAFORM & INTEGRAÇÃO CONTÍNUA



TERRAFORM & INTEGRAÇÃO CONTÍNUA





Roney Gomes

@umbravirtual
ThoughtWorks®