



FORMAÇÃO 4.0 AWS | TERRAFORM & AWS



Implantação de Recursos:

1. Configuração do Terraform e Provedores

- Define a versão do Terraform (``>= 1.2.0``).
- Especifica os provedores necessários.
- Define a origem (``hashicorp/aws``) e a versão (``~> 4.16``) do provedor AWS.
- Configura a região (``us-east-1``) e o perfil IAM (``user-formacao-aws``).

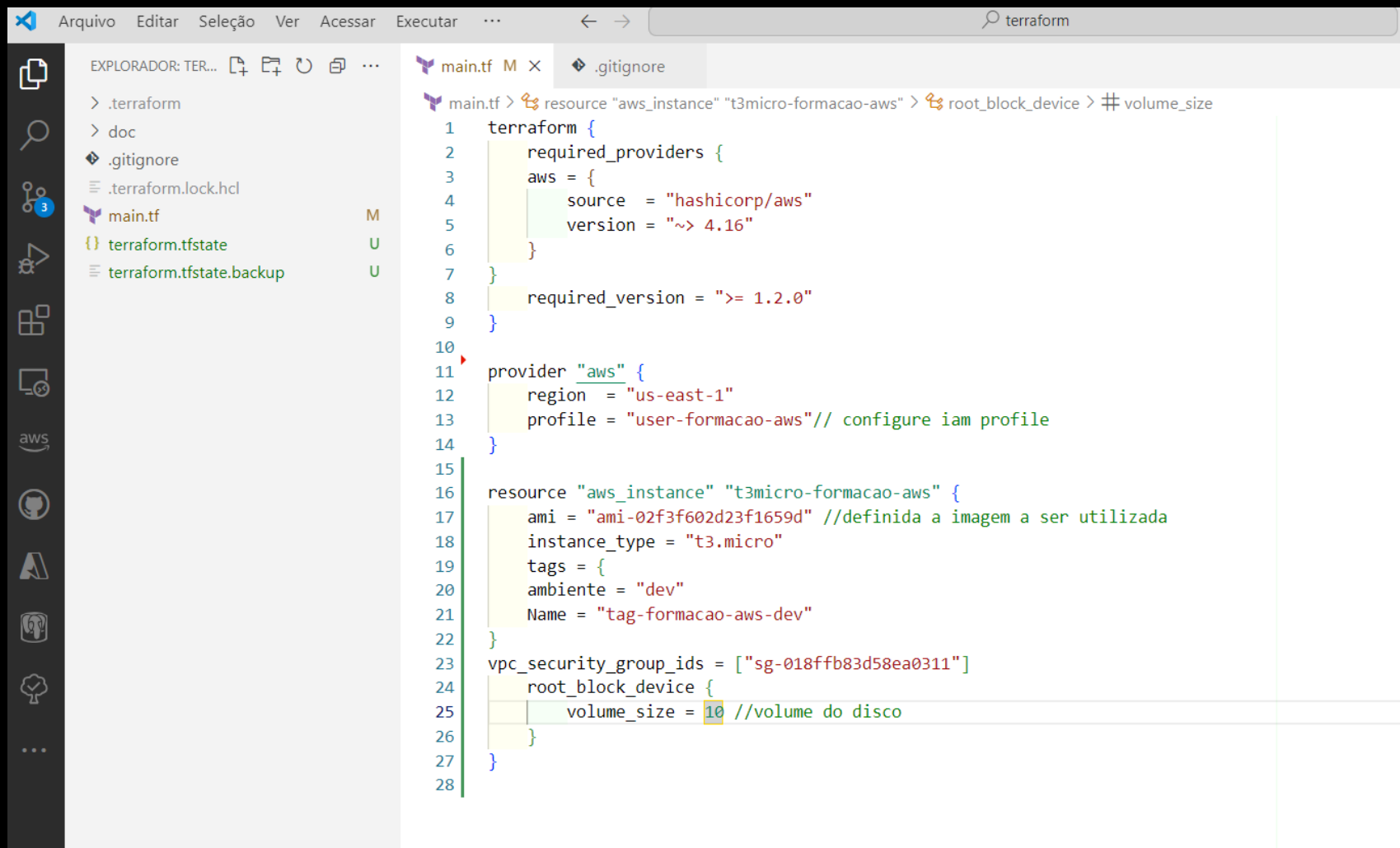
2. Configuração do Security Group e IAM

- Configura o Security Group (ID ``sg-018ffb83d58ea0311``).
- Configura o IAM.

3. Lançando Instância

- Define uma instância EC2 da AWS:
 - AMI: ``ami-02f3f602d23f1659d``.
 - Tipo de instância: ``t3.micro``.
 - Tags: ``ambiente`` e ``Name``.
 - Dispositivo de bloco raiz: Volume de 10 GB.

CONFIGURAÇÃO DO TERRAFORM E PROVEDORES



The screenshot shows a code editor with a file explorer on the left and a code editor on the right. The file explorer shows a directory structure for a Terraform project, including files like .terraform, doc, .gitignore, .terraform.lock.hcl, main.tf, terraform.tfstate, and terraform.tfstate.backup. The code editor displays the main.tf file, which contains Terraform configuration for an AWS instance. The configuration includes the terraform block with required_providers and required_version, the provider block for AWS, and the resource block for the AWS instance. The instance configuration includes ami, instance_type, tags, and vpc_security_group_ids. The root_block_device block is also defined with a volume_size of 10.

```
1 terraform {
2   required_providers {
3     aws = {
4       source = "hashicorp/aws"
5       version = "~> 4.16"
6     }
7   }
8   required_version = ">= 1.2.0"
9 }
10
11 provider "aws" {
12   region = "us-east-1"
13   profile = "user-formacao-aws" // configure iam profile
14 }
15
16 resource "aws_instance" "t3micro-formacao-aws" {
17   ami = "ami-02f3f602d23f1659d" //definida a imagem a ser utilizada
18   instance_type = "t3.micro"
19   tags = {
20     ambiente = "dev"
21     Name = "tag-formacao-aws-dev"
22   }
23   vpc_security_group_ids = ["sg-018ffb83d58ea0311"]
24   root_block_device {
25     volume_size = 10 //volume do disco
26   }
27 }
28
```



CONFIGURAÇÃO DO SECURITY GROUP



[EC2](#) > [Security Groups](#) > sg-018ffb83d58ea0311 - security-group-formacao-aws

sg-018ffb83d58ea0311 - security-group-formacao-aws

Actions ▼

Details

Security group name security-group-formacao-aws	Security group ID sg-018ffb83d58ea0311	Description Security Group padrao formacao aws	VPC ID vpc-0e18cce88879d621c
Owner 654654441431	Inbound rules count 0 Permission entries	Outbound rules count 1 Permission entry	

Inbound rules | **Outbound rules** | Tags

Outbound rules (1)

[Refresh](#) [Manage tags](#) [Edit outbound rules](#)

Search

< 1 > ⚙

<input type="checkbox"/>	Name ▼	Security group rule... ▼	IP version ▼	Type ▼	Protocol ▼	Port range ▼	Destination ▼	Description
<input type="checkbox"/>	-	sgr-0a0e42cb259615fe1	IPv4	All traffic	All	All	0.0.0.0/0	-



CONFIGURAÇÃO DO IAM



IAM > Users > user-formacao-aws

user-formacao-aws

Info

Delete

Summary

ARN

arn:aws:iam::654654441431:user/user-formacao-aws

Console access

Disabled

Access key 1

AKIAZQ3DSA7LXZHNHHWC - Active

Never used. Created today.

Created

June 29, 2024, 17:00 (UTC-03:00)

Last console sign-in

-

Access key 2

Create access key

Permissions

Groups (1)

Tags (1)

Security credentials

Access Advisor

Permissions policies (2)

Permissions are defined by policies attached to the user directly or through groups.

Filter by Type

All types

Search

< 1 >

<input type="checkbox"/>	Policy name	Type	Attached via
<input type="checkbox"/>	<input type="checkbox"/> AmazonEC2FullAccess	AWS managed	Group group-formacao-aws
<input type="checkbox"/>	<input type="checkbox"/> AmazonRDSFullAccess	AWS managed	Group group-formacao-aws



EXECUÇÃO DO TERRAFORM



The screenshot shows the Visual Studio Code interface with a Terraform configuration file named `main.tf` open. The file contains the following code:

```
provider "aws"

terraform {
  required_providers {
    aws = {
      source = "hashicorp/aws"
      version = "~> 4.16"
    }
  }
}
```

The Explorer sidebar on the left shows the project structure with files like `.terraform`, `doc`, `.gitignore`, `.terraform.lock.hcl`, `main.tf`, `terraform.tfstate`, and `terraform.tfstate.backup`.

The Terminal panel at the bottom shows the output of the `terraform apply` command. It indicates that there is no state file and lists the actions Terraform will perform, including creating an `aws_instance.t3micro-formacao-aws` resource. The resource configuration is detailed as follows:

```
# aws_instance.t3micro-formacao-aws will be created
+ resource "aws_instance" "t3micro-formacao-aws" {
  + ami                  = "ami-02f3f602d23f1659d"
  + arn                  = (known after apply)
  + associate_public_ip_address = (known after apply)
  + availability_zone     = (known after apply)
  + cpu_core_count        = (known after apply)
  + cpu_threads_per_core   = (known after apply)
  + disable_api_stop      = (known after apply)
  + disable_api_termination = (known after apply)
  + ebs_optimized          = (known after apply)
  + get_password_data      = false
  + host_id               = (known after apply)
  + host_resource_group_arn = (known after apply)
  + iam_instance_profile   = (known after apply)
  + id                    = (known after apply)
  + instance_initiated_shutdown_behavior = (known after apply)
  + instance_state         = (known after apply)
  + instance_type          = "t3.micro"
  + ipv6_address_count      = (known after apply)
  + ipv6_addresses         = (known after apply)
  + key_name               = (known after apply)
```

The status bar at the bottom indicates the current file is `main.tf`, the encoding is UTF-8, and the line/character count is 14/2.

LANÇANDO INSTÂNCIA

aws

Services

Search

[Alt+S]

EC2

RDS

Billing and Cost Management

IAM

S3

Lambda

CloudFormation

Elastic Beanstalk

EC2 Dashboard

EC2 Global View

Events

Console-to-Code

Instances

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Launch Templates

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Savings Plans

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Dedicated Hosts

Capacity Reservations

Images

AMIs

AMI Catalog

Elastic Block Store

Volumes

Snapshots

Lifecycle Manager

Network & Security

Security Groups

Instances (1/1)

Info

Find Instance by attribute or tag (case-sensitive)

All states

Instance state = running

Clear filters

Connect

Instance state

Actions

Launch instances

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4
tag-formacao-aws-dev	i-04483cde6dec879d0	Running	t3.micro	2/2 checks passed	View alarms	us-east-1a	ec2-100-26

i-04483cde6dec879d0 (tag-formacao-aws-dev)

Details

Status and alarms

Monitoring

Security

Networking

Storage

Tags

Root device details

Root device name

/dev/xvda

Root device type

EBS

EBS optimization

disabled

Block devices

Filter block devices

Volume ID	Device name	Volume size (GiB)	Attachment status	Attachment time	Encrypted	KMS key ID	Delete on termination
vol-03c70866c7e263a15	/dev/xvda	10	Attached	2024/06/29 19:09 GMT-3	No	-	Yes

Volume monitoring (1)

CloudShell

Feedback

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FORMAÇÃO 4.0 AWS



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