



# Automatización en OCI

Herramientas para agilizar despliegues en OCI

**LAD-CO Tech Knowledge Team**

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# Agenda

Prerequisitos

Acceso a Cuenta

- Creación del perfil
- Generación del keypair

Acceso a la Nube

- API
- Ansible
- SDK/CLI
- Resource Manager

Terraform

- Archivos
- Variables
- Componentes
- Avanzados OCI: Backend, Atributos, comandos

Características de Resource Manager

Demo: Ansible/CLI

Demo: Terraform Local

Demo: Resource Manager

OCI Kit Designer - OKIT



## Beneficios de Automatización

- Productividad/Menos tiempo gastado del talento
- Colaboración / Empoderamiento
- Ahorro de Costos (Recurso innecesario)
- Reusabilidad
- Reducir complejidad
- Errores / Confiabilidad
- Simultaneidad, Volumen (Migraciones)
- Continuidad



“Una buena herramienta mejora la forma en que **trabajas**.  
Una gran herramienta mejora la forma en que **piensas**.”  
-Jeff Duntemann

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# Pre-requisitos

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# Prerequisitos

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## Necesarios:

Cuenta en OCI, por ejemplo, <https://www.oracle.com/cloud/free/>  
OCI CLI: <https://docs.oracle.com/en-us/iaas/Content/API/SDKDocs/clinstall.htm>

## Opcionales:

JQ, JSON Parser: <https://stedolan.github.io/jq/download/>  
Terraform: <https://www.terraform.io/downloads>  
Python 3 (para SDK): <https://www.python.org/downloads/>



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# Acceso a Cuenta

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# Perfiles

Navegadores: Chrome, Firefox o Safari (Mac)

OCI Always Free Account:

<https://www.oracle.com/cloud/free/>

Oracle Account:

<https://cloud.oracle.com>

<https://cloud.oracle.com/?tenant=<Nombre>>

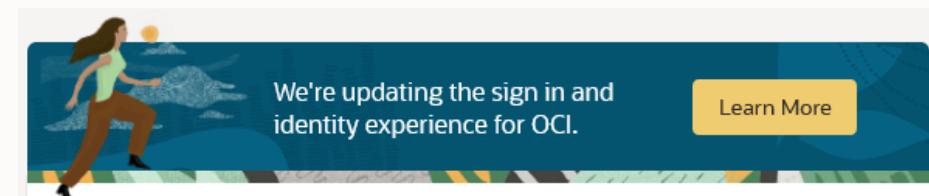
---

Tipos Login: SSO or Direct Sign-In.

Sign In

Tenancy  
franciscommoreno

Continue



franciscommoreno

Change tenancy

## Single Sign-On (SSO)

We have detected that your tenancy has been federated to another Identity Provider.

Select your Identity Provider below.

oracleidentitycloudservice

Continue

## Oracle Cloud Infrastructure Direct Sign-In i

This login is uncommon for federated accounts. If you have questions, please review the [FAQ](#) or contact your tenancy administrator.

User Name

Password

Sign In

Forgot Password?

# Keypair

ACTIVE

OCID: ...ranjwq [Show](#) [Copy](#)

Created: Fri, Jul 23, 2021, 20:27:03 UTC

Multi-factor authentication: Disabled

Email: -

## Profile

oracleidentitycloudservice/francisco.m.moreno@oracle.com

Tenancy: franciscommoreno

[User Settings](#) 1[Console Settings](#)[Sign Out](#)

## Capabilities

Local password: No

API keys: Yes

Customer secret keys: Yes

Auth tokens: Yes

OAuth 2.0 Client Credentials: Yes

Database Passwords: Yes

## Resources

Groups

[API Keys](#) 2

Auth Tokens

Customer Secret Keys

Database Passwords

OAuth 2.0 Client Credentials

## API Keys

[Add API Key](#) 3

Fingerprint

Created

No items found.

No API Key to display



# Keypair

## Add API Key

[Help](#)

**Note:** An API key is an RSA key pair in PEM format used for signing API requests. You can generate the key pair here and download the private key. If you already have a key pair, you can choose to load or paste your public key file instead. [Learn more](#)

Generate API Key Pair    Choose Public Key File    Paste Public Key

Public Key

(i) Download the private key. It will not be shown again. After you download it, [change the file permissions](#) so only you can view it.

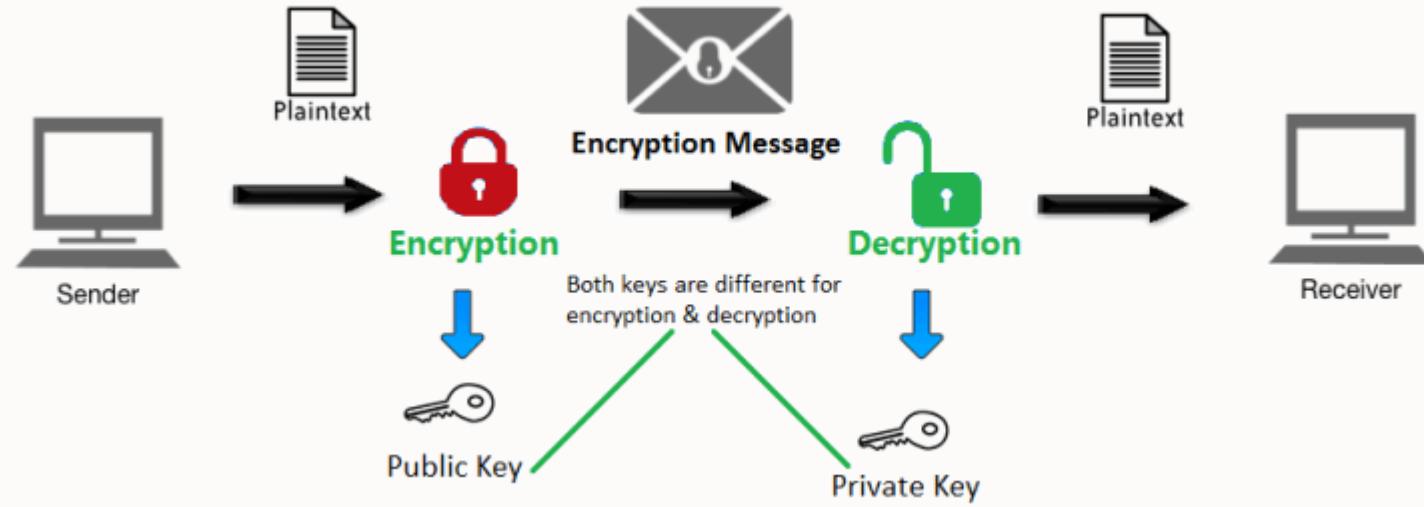
[Download Private Key](#)   [Download Public Key](#)

**Descargar en carpeta <usuario>/oci/**

[Add](#)   [Cancel](#)

**Opciones:**  
\*Automático  
Subir el archivo  
Pegar contenido del archivo  
>Las ultimas 2 implican actividades locales

# Modo Funcionamiento – Llaves Publicas/Privadas



Mas información:

<https://docs.oracle.com/en-us/iaas/Content/GSG/Tasks/creatingkeys.htm>

## Configuration File Preview

[Help](#)

**Note:** This configuration file snippet includes the basic authentication information you'll need to use the SDK, CLI, or other OCI developer tool. Paste the contents of the text box into your `~/.oci/config` file and update the `key_file` parameter with the file path to your private key. If you already have a **Default** profile in your config profile, you'll need to perform some additional steps. [Learn more](#)

Select API Key Fingerprint

1d:6d:f7:0e:d4:dd:ce:a7:67:00:83:fa:e6:df:ac:76



Configuration File Preview *Read-Only*

1

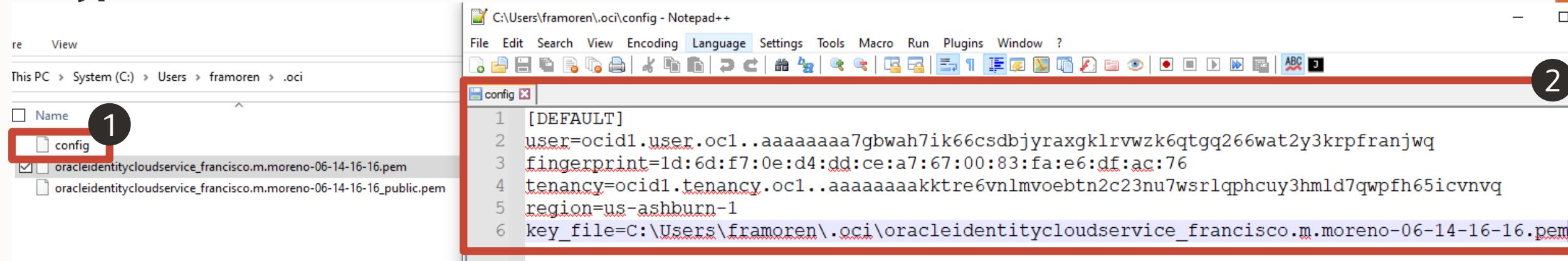
```
[DEFAULT]
user=ocid1.user.oc1..aaaaaaaa7gbwah7ik66csdbjyrapgk1rvwzk6qtqq266wat2y3krp
franjwq
fingerprint=1d:6d:f7:0e:d4:dd:ce:a7:67:00:83:fa:e6:df:ac:76
tenancy=ocid1.tenancy.oc1..aaaaaaaaakktre6vnilmvoebtn2c23nu7wsrlqphcuy3hmld
7qwpfh65icvnnq
region=us-ashburn-1
key_file=<path to your private keyfile> # TODO
```

Paste the contents of the text box into your `~/.oci/config` file.

[Copy](#)

[Close](#)

# Keypair



En <usuario>/.oci/, crear un archivo config (sin extensión) y pegar de la ventana anterior.  
Es necesario enrutar key\_file con el archivo descargado de Private Key

```
Command Prompt
C:\Users\framoren>oci os ns get
{
  "data": "idpebqr1ceyl"
}
```

En un CLI, escribir  
oci os ns get  
Para comprobar acceso

Mas información para [CLI](#)

Opciones:  
[Autocompletar \(en PS\).](#)  
[Pasos Detallados en Ingles \(Blog\)](#)



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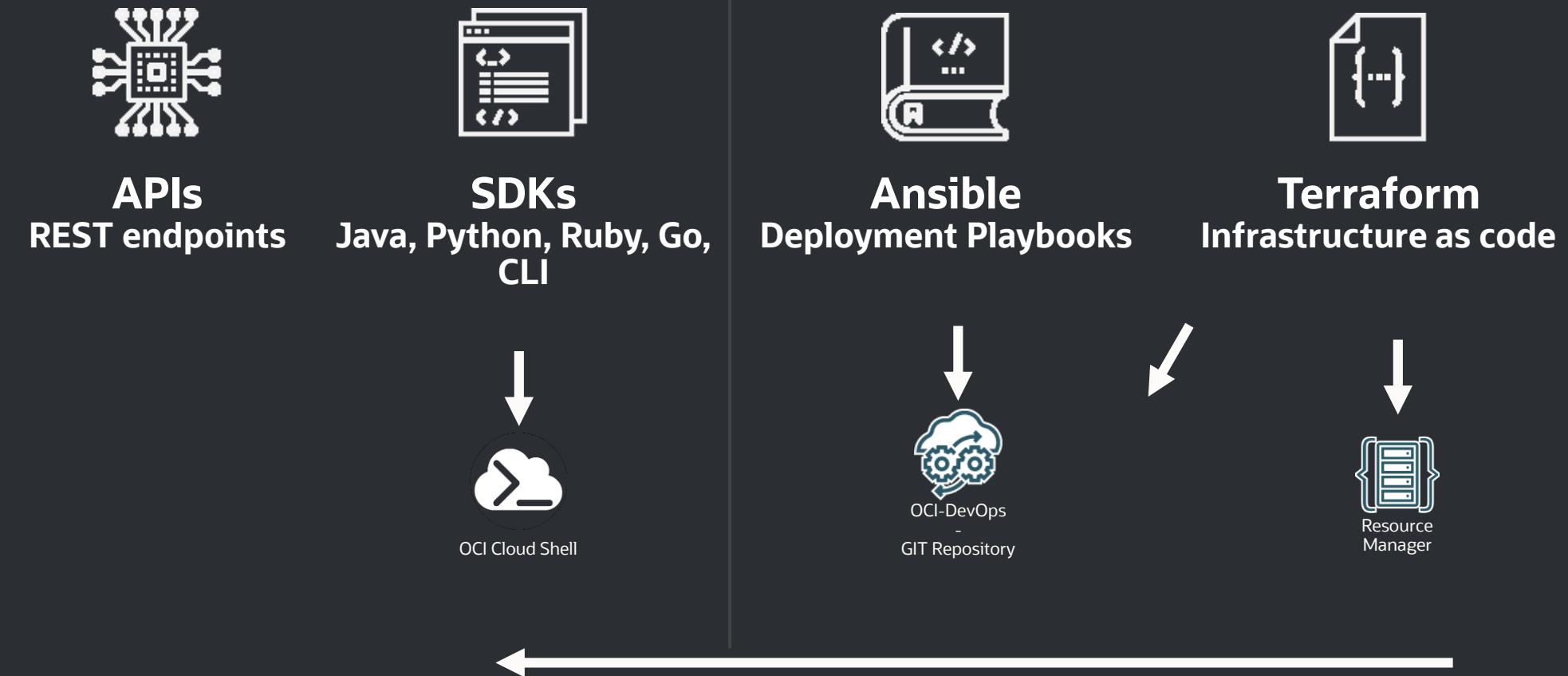


# Acceso a Nube

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# Acceso

## Developer Tools and Resources



# API

Consumo REST a endpoints regionales  
Atributos JSON para solicitud y respuesta

Mas información en:

<https://docs.oracle.com/en-us/iaas/api/>

<https://docs.oracle.com/en-us/iaas/api/#/en/iaas/20160918/Vcn/CreateVcn>

Ejemplos llamados desde [Postman](#) o desde [cURL](#)

The screenshot shows the Postman application interface. On the left, there's a sidebar with a dark blue header labeled 'Ora' and a yellow bar below it. The main area has a light gray background. At the top, there are navigation tabs: Home, Workspaces, API Network, Explore, and a search bar on the right. Below these, a title 'OCI-REST-EXAMPLE' is followed by 'New' and 'Import' buttons. A 'Collections' tab is selected, showing a list of collections: 'OCI\_REST\_COLLECTION2' (selected), 'OCI\_REST\_INITIALIZATION', and 'OCI\_REST\_COLLECTION1'. Under 'OCI\_REST\_COLLECTION2', there are two items: 'POST GET\_METRICS\_SUMMARY\_IN...' and 'GET GET\_OCI\_ANNOUNCEMENTS'. The 'GET GET\_OCI\_ANNOUNCEMENTS' item is expanded, showing its details. The 'Params' tab is selected, showing a single parameter 'compartmentId' with value 'ocid1.compartment.oc1..aaaaaaaaaaaa4ewy3s376yq5xuvtpwe5n'. Below this, there are tabs for Body, Cookies, Headers (7), and Test Results. The Body tab is selected, showing the JSON response in Pretty, Raw, Preview, Visualize, and JSON (selected) formats. The JSON response is as follows:

```
34     "timeOneType": "START_TIME",
35     "timeOneValue": "2022-05-03T23:00:00.000Z",
36     "timeTwoTitle": "End Time",
37     "timeTwoType": "END_TIME",
38     "timeTwoValue": "2022-05-06T18:30:00.000Z",
39     "services": [
40       "Oracle Cloud Infrastructure Console"
41     ],
42     "affectedRegions": [
43       "US East (Ashburn)"
44     ],
45     "announcementType": "PRODUCTION_EVENT_NOTIFICATION",
46     "lifecycleState": "INACTIVE",
47     "isBanner": false,
48     "timeCreated": "2022-05-06T21:54:18Z",
49     "timeUpdated": "2022-05-06T22:03:30Z",
50     "environmentName": null,
51     "platformType": "IAAS"
52   },
53 }
```

# SDK

Llamadas al API desde diferentes lenguajes, con librerías OCI

Por ejemplo,

<https://docs.oracle.com/en-us/iaas/api/#/en/iaas/20160918/Vcn/CreateVcn>

The screenshot shows a web browser displaying the Oracle Cloud documentation for the NetworkSecurityGroup API. The URL is [docs.oracle.com/en-us/iaas/api/#/en/iaas/20160918/NetworkSecurityGroup/CreateNetworkSecurityGroup](https://docs.oracle.com/en-us/iaas/api/#/en/iaas/20160918/NetworkSecurityGroup/CreateNetworkSecurityGroup). The page lists various API endpoints under the NetworkSecurityGroup category. A specific endpoint, `CreateNetworkSecurityGroup`, is highlighted in blue. To the right of the list, there is a code sample in Python. The code starts by importing the `oci` module. It then creates a configuration object from a file using the `oci.config.from_file()` method. Next, it initializes a service client for the VirtualNetworkClient using the created configuration. Finally, it sends a request to create a new network security group using the `create_network_security_group` method, passing in details like compartment ID, VCN ID, display name, and freeform tags. The response is then printed.

```
# This is an automatically generated code sample.
# To make this code sample work in your Oracle Cloud tenancy,
# please replace the values for any parameters whose current values do not fit
# your use case (such as resource IDs, strings containing 'EXAMPLE' or 'unique_id', and
# boolean, number, and enum parameters with values not fitting your use case).

import oci

# Create a default config using DEFAULT profile in default location
# Refer to
# https://docs.cloud.oracle.com/en-us/iaas/Content/API/Concepts/sdkconfig.htm#SDK_and_CLI_Configuration_File
# for more info
config = oci.config.from_file()

# Initialize service client with default config file
core_client = oci.core.VirtualNetworkClient(config)

# Send the request to service, some parameters are not required, see API
# doc for more info
create_network_security_group_response = core_client.create_network_security_group(
    create_network_security_group_details=oci.core.models.CreateNetworkSecurityGroupDetails(
        compartment_id="ocid1.test.oc1..EXAMPLE-compartmentId-Value",
        vcn_id="ocid1.test.oc1..EXAMPLE-vcnId-Value",
        defined_tags={
            'EXAMPLE_KEY_1fLJ0': {
                'EXAMPLE_KEY_1xbje': 'EXAMPLE--Value'},
            display_name="EXAMPLE-displayName-Value",
            freeform_tags={
                'EXAMPLE_KEY_XduNu': 'EXAMPLE_VALUE_gaE4cvp0ZIQuYbl6uxqm'},
            opc_retry_token="EXAMPLE-opcRetryToken-Value"
        }
    )
    # Get the data from response
    print(create_network_security_group_response.data)
```

## Responses

# SDK – Ejemplo Python

## Requisitos:

Tener un SDK, ejemplo, Java, Python, Go, etc.  
Tener configurado el Perfil OCI

## Tips:

Existen un cantidad de scripts para ejecutar

Oficiales:

<https://github.com/oracle/learning-library>

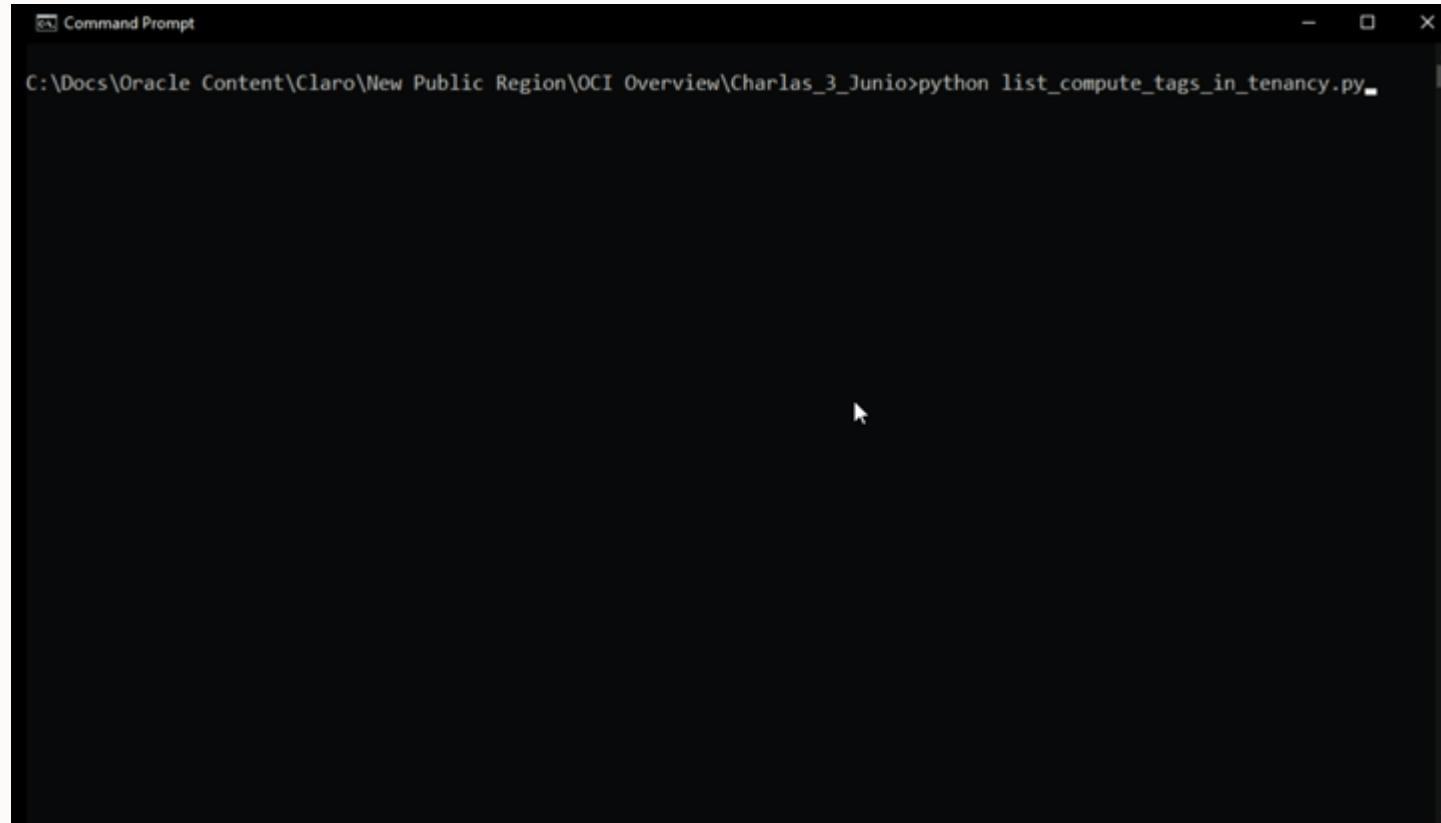
<https://github.com/oracle/oci-python-sdk>

Blogs:

<https://www.oc-blog.com/oci-scripts-and-example-code/>

Este ejemplo es de

[https://github.com/oracle/oci-python-sdk/tree/master/examples/list\\_resources\\_in\\_tenancy](https://github.com/oracle/oci-python-sdk/tree/master/examples/list_resources_in_tenancy)



The screenshot shows a Windows Command Prompt window titled "Command Prompt". The path in the title bar is "C:\Docs\Oracle Content\Claro>New Public Region\OCI Overview\Charlas\_3\_Junio>". The command entered is "python list\_compute\_tags\_in\_tenancy.py". The window is mostly black, indicating no output has been displayed yet.

# Conceptos

Herramienta	Hashicorp Terraform	Redhat Ansible	Diferencias
	Infrastructure-as-a-Code IaC	Configuration Management	
Enfoque	Orquestación de despliegue	Enfocado en configuración y parchado	
Objetivo Principal	Despliega y retira provisión de recursos completos de nube	Instala software y despliegue de aplicaciones sin agentes	
Programación	Declarativo	Imperativo	Declarativo: Se especifica el resultado. Imperativo: Secuencia de operaciones.
Infraestructura	Inmutable	Mutable	Mutable: Actualiza o modifica Inmutable: No permite actualización, se tiene que volver a desplegar.
Idempotencia	Si	Si	No duplica recursos la misma acción.
Ciclo de vida	Si	No	



# ANSIBLE

## Que es?

- Herramienta Configuration Management para DevOps
- Ejecuta Módulos, que son Unidad discretas de código.
- Se provee una gran comunidad, así como sus librerías de módulos para su ejecución.

## Que problemas solucionar?

- Provee infraestructura, recursos y administración.
- Permite orquestación compleja y general de workflows.
- Permite despliegue, liberación de versiones y auditoria.

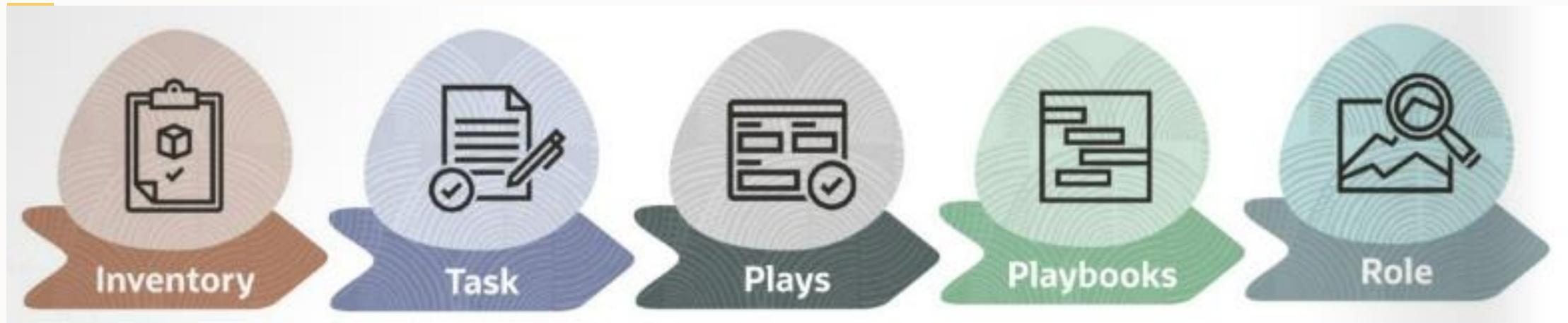
## Beneficios

- Fácil de aprender, usa YAML como formato. No es necesario habilidades de programación.
- Instrucciones ejecutadas en orden.
- Sin agentes.
- Extensible, construido con módulos provisto por Oracle.
- Confiable, sencillo de implementar.

Módulos en: <https://github.com/oracle/oci-ansible-collection>



# ANSIBLE



Define donde ejecutar acciones

Puedes ser dinámico o estático

Llama al modulo de Ansible

Serie de tareas o roles mapeados a un grupo de hosts del Inventory

Ejecución en Orden

Conjunto de plays  
Especifica que va a ejecutar

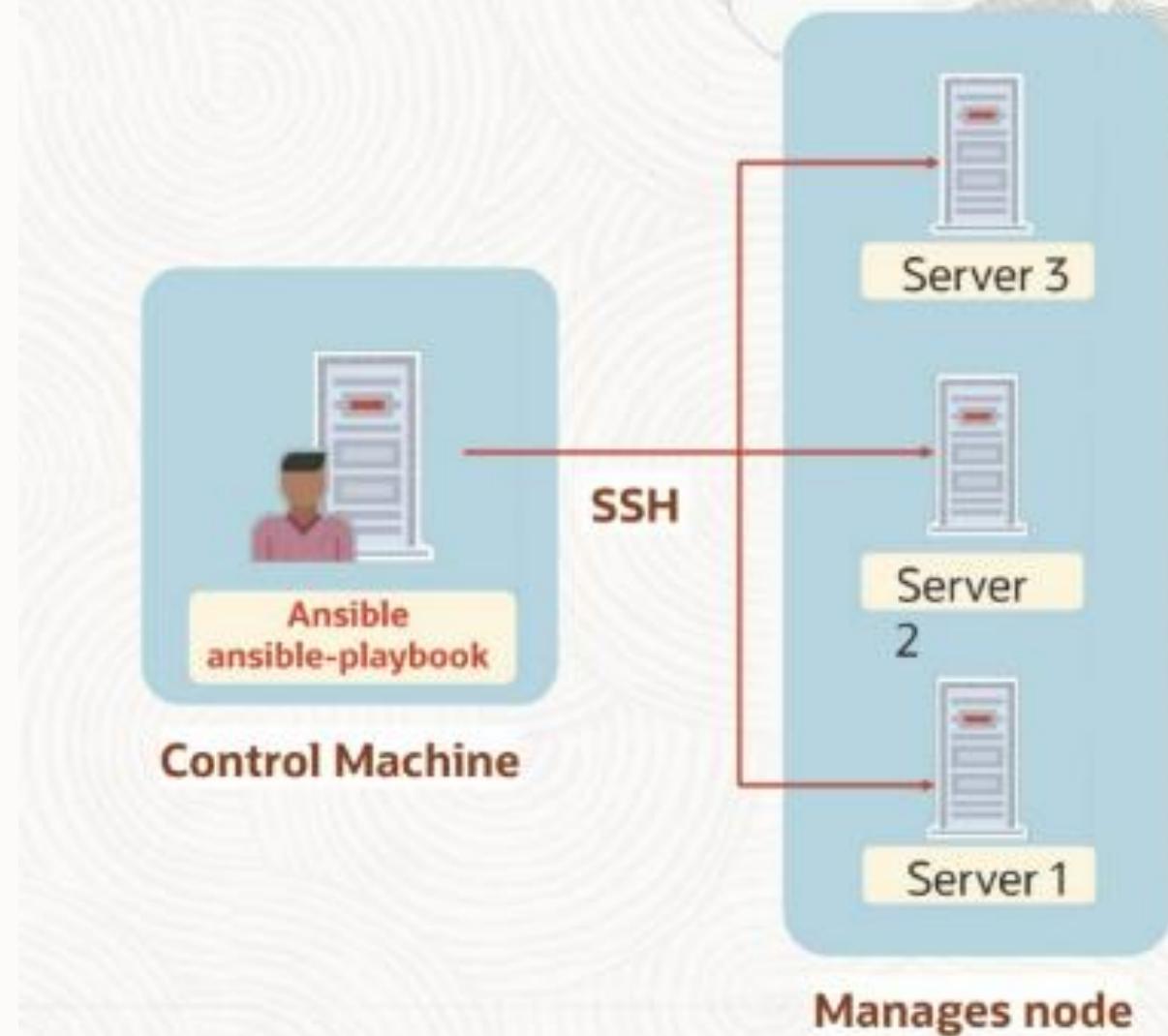
Uso de YAML

Estructura estándar para especificar tareas y variables

Permite modularizar y reusar

# ANSIBLE

- Ejecuta comandos iniciados desde un punto de control
- Usa módulos pequeños llamados “playbooks” para ejecutar comandos via SSH
- Usa SSH *keypairs* para la autenticación (Kerberos es soportados)
- Maneja *inventory* en un archivo de texto, se incluyen plugins para leer desde fuentes adicionales



# ANSIBLE

```
francisco_@cloudshell:~ (us-ashburn-1)$ ansible-playbook sample.yaml
[WARNING]: No inventory was parsed, only implicit localhost is available
[WARNING]: provided hosts list is empty, only localhost is available. Note that the implicit localhost does not match 'all'

PLAY [Get namespace name] *****

TASK [Gathering Facts] *****
ok: [localhost]

TASK [Get namespace name] *****
ok: [localhost]

TASK [Print namespace name] *****
ok: [localhost] => {
    "msg": {
        "changed": false,
        "failed": false,
        "namespace": "idpebqriceyl"
    }
}

PLAY RECAP *****
localhost                  : ok=3    changed=0    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0

francisco_@cloudshell:~ (us-ashburn-1)$
```

Se pueden ejecutar inventario dinámico o estatico: Inventory

<https://docs.oracle.com/en-us/iaas/Content/API/SDKDocs/ansiblegetstarted.htm>

Dependiendo de la actividad a realizar si se desea enviar comandos a servidores o proveer infraestructura.

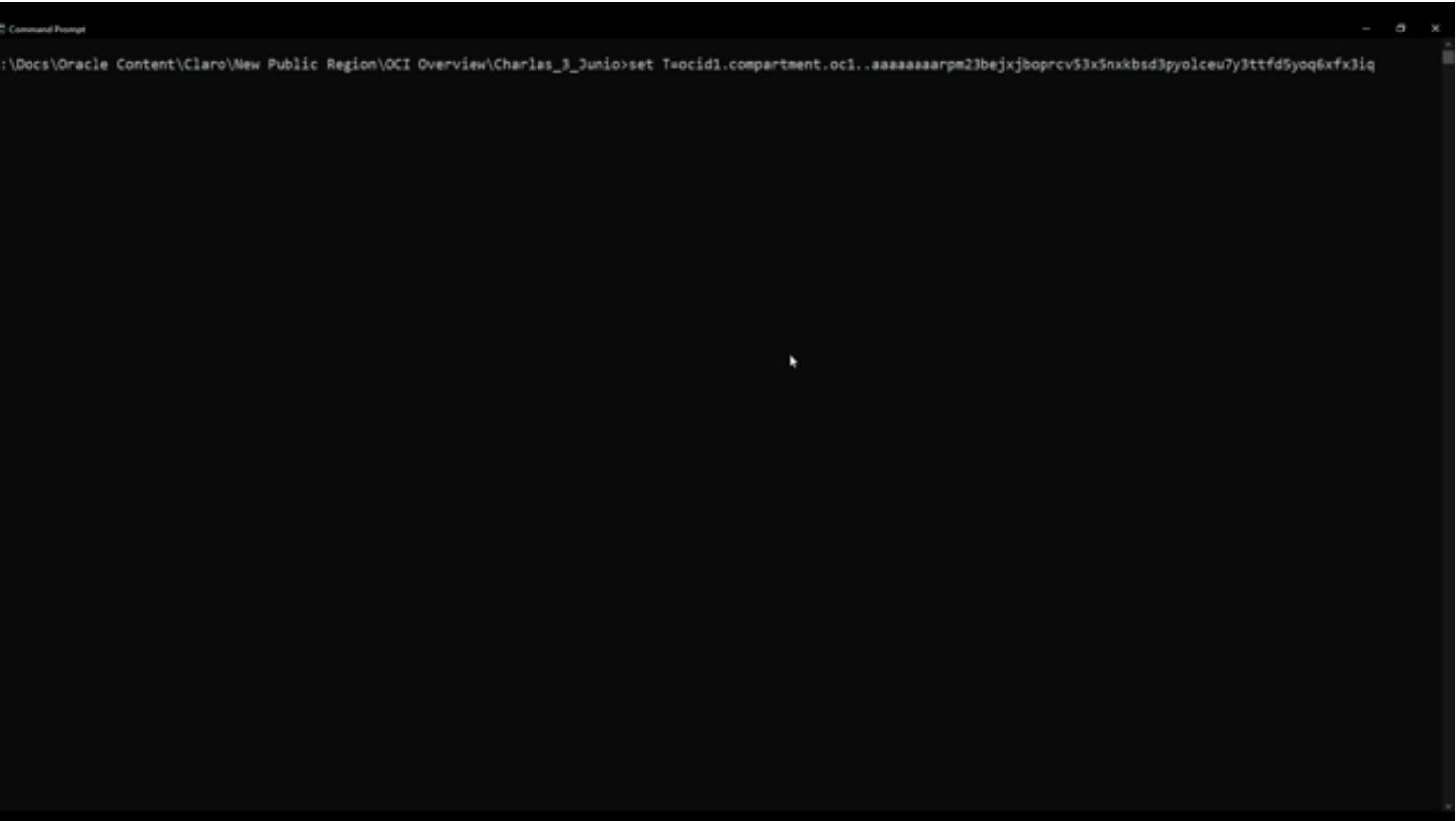
Para Cloud Shell, se sugiere instalar el OCI Collections (sin usar root)

*ansible-galaxy collection install oracle.oci*

Se puede ejecutar los ejemplos de Ansible para despliegue usando Cloud Shell.



# CLI

A screenshot of a Windows Command Prompt window titled "Command Prompt". The window shows a single line of command-line text: "C:\Docs\Oracle Content\Claro>New Public Region\OCI Overview\Charles\_3\_Junior>set T=ocid1.compartment.oc1..aaaaaaaaarpm23bejxjboprcv53x5nxkbsd3pyolceu7y3ttfd5yoq6xfx3iq". The background of the slide features a decorative orange and yellow patterned border at the top.

## Requisitos:

Tener instalado el OCI CLI

Tener configurado el perfil OCI

## Tips:

Usar variables de entorno

Usar cadenas de ejecución –si aplica–

>> Variables de Entorno

>> Variables parseadas de JSON

## Ejemplo, en Windows (CLI):

```
oci iam compartment list|jq ".data[] | select(.name | contains(\"TestTerraform\"))" | jq .\"id\" > TempFile  
set /p T= < TempFile  
oci compute instance list -c %T%
```

# CLI

1. Categoría
2. Componente
3. Comandos
4. Opciones del Comando

Mas información en  
[https://docs.oracle.com/en-us/iaas/tools/oci-cli/2.12.11/oci\\_cli\\_docs/index.html](https://docs.oracle.com/en-us/iaas/tools/oci-cli/2.12.11/oci_cli_docs/index.html)

The screenshot shows a browser window displaying the Oracle Cloud Infrastructure (OCI) CLI documentation. The URL in the address bar is `docs.oracle.com/en-us/iaas/tools/oci-cli/2.12.11/oci_cli_docs/cmdref/compute/instance.html`. The page title is "instance".

The content is organized into several sections:

- Available Commands:** A list of commands under the "Compute Service (compute)" category. Number 1 points to this section.
- instance:** A detailed view of the "instance" command. Number 2 points to this section.
- Description:** A brief description of what a compute host is and how it's used. Number 3 points to this section.
- get:** The specific command definition, including its purpose ("Gets information about the specified instance") and usage examples. Number 4 points to this section.

On the left side of the main content, there is a sidebar with a navigation tree:

- BLOCK Volume Service (bv)
- Blockchain Platform Control Plane (blockchain)
- Budgets (budgets)
- Cloud Guard (cloud-guard)
- Compute Management Service (compute-management)
- Compute Service (compute)** (highlighted with a red box)
  - Description
  - Available Commands** (highlighted with a red box)
    - boot-volume-attachment
    - console-history
    - dedicated-vm-host
    - dedicated-vm-host-instance
    - device
    - global-image-capability-schema
    - global-image-capability-schema-version
    - image
    - image-capability-schema
    - image-shape-compatibility-entry
  - instance** (highlighted with a red box)
    - Description
    - Available Commands
    - instance-console-connection
    - pic
    - shape
    - vnic-attachment
    - volume-attachment
- Container Engine for Kubernetes (ce)
- Data Catalog (data-catalog)

# Cloud Shell

## Requisitos:

Iniciar la Consola Web

## Características:

Oracle Linux – Ultima Versión

Muchas Dev Tools – Python, Kubectl, etc

IP Publica

5 GB en sesión – Borrado 6 meses

## Tips:

Usar variables de entorno

Usar cadenas de ejecución –si aplica-

>> Variables de Entorno

>> Variables parseadas de JSON

The screenshot shows the Oracle Cloud Identity Compartments page. On the left, there is a sidebar with links: Identity, Users, Groups, Dynamic Groups, Network Sources, Policies, Compartments (which is highlighted in blue), Federation, and Authentication Settings. Below the sidebar are filters for State (Active | Deleting) and Tag filters (add / clear). The main area is titled "Compartments" and contains a table with the following data:

Name	Status	OCID	Authorized	Security Zone	Subcompartments	Created
BasicCompartments	Active	ocid1.compartment.oc1.. ...c1000	Yes	Not Enabled	2	Fri, Jul 23, 2021, 20:37:02 UTC
ManagedCompartmentForRead	Active	ocid1.compartment.oc1.. ...e0000	Yes	Not Enabled	0	Fri, Jun 10, 2022, 15:48:27 UTC
TestCompartments	Active	ocid1.compartment.oc1.. ...e0000	Yes	Not Enabled	0	Fri, Jun 10, 2022, 15:48:27 UTC

At the bottom of the page, there are links for "Terms of Use and Privacy" and "Oracle Preferences".

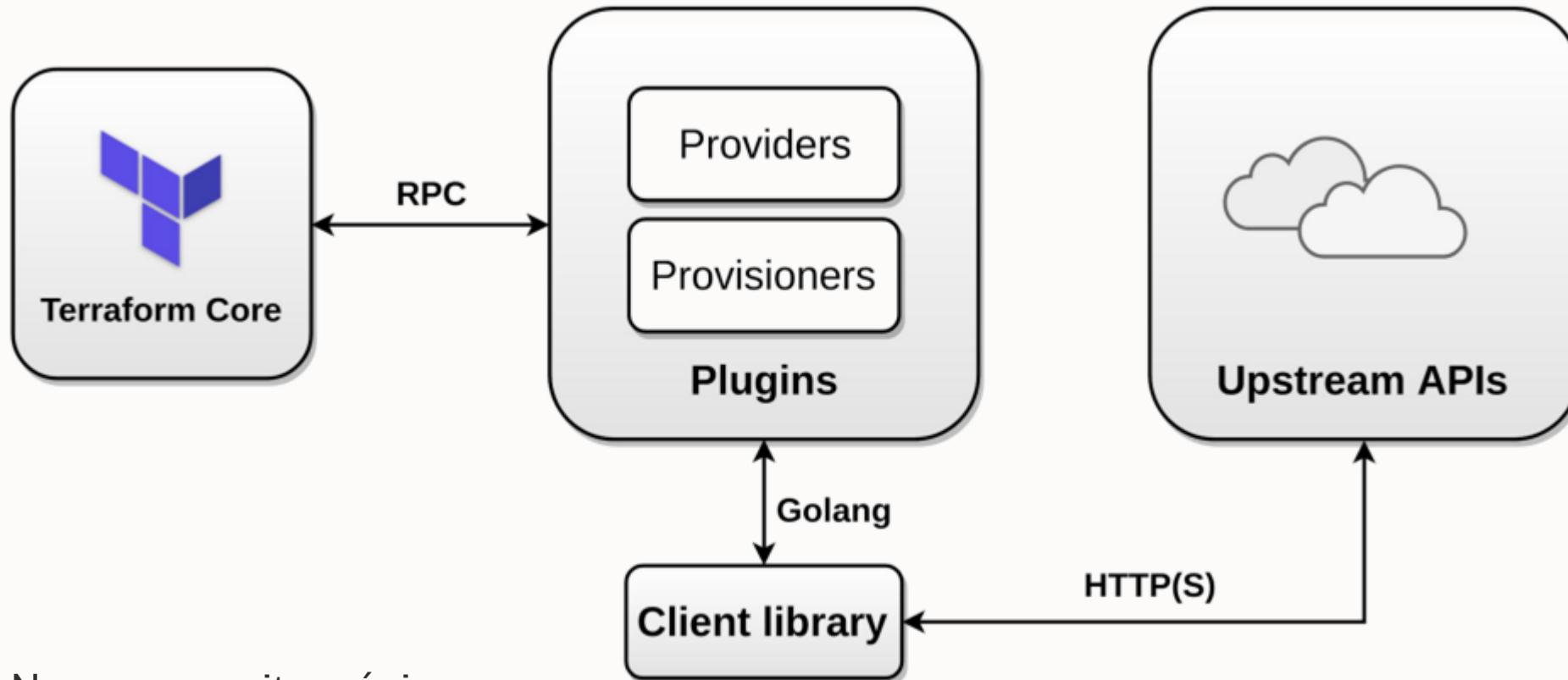
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# Terraform

Francisco Moreno

# Terraform – Herramienta Agnóstica de Nube \*

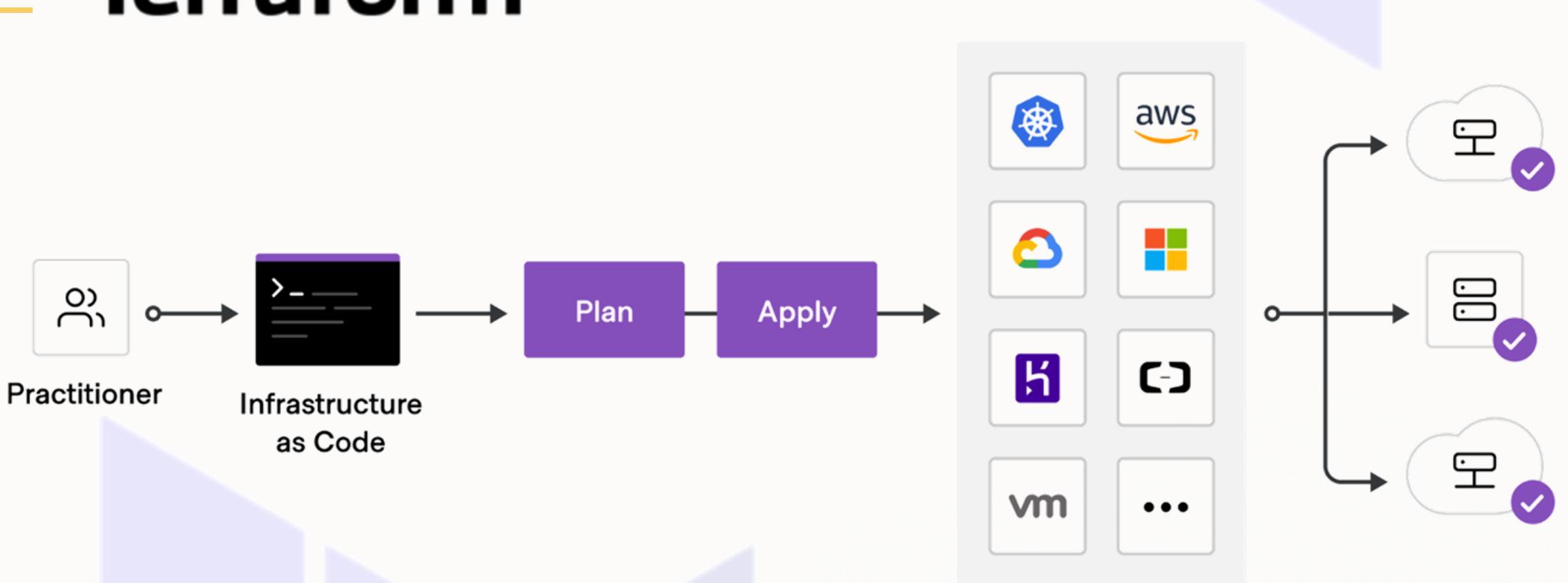


\* No es una varita mágica.

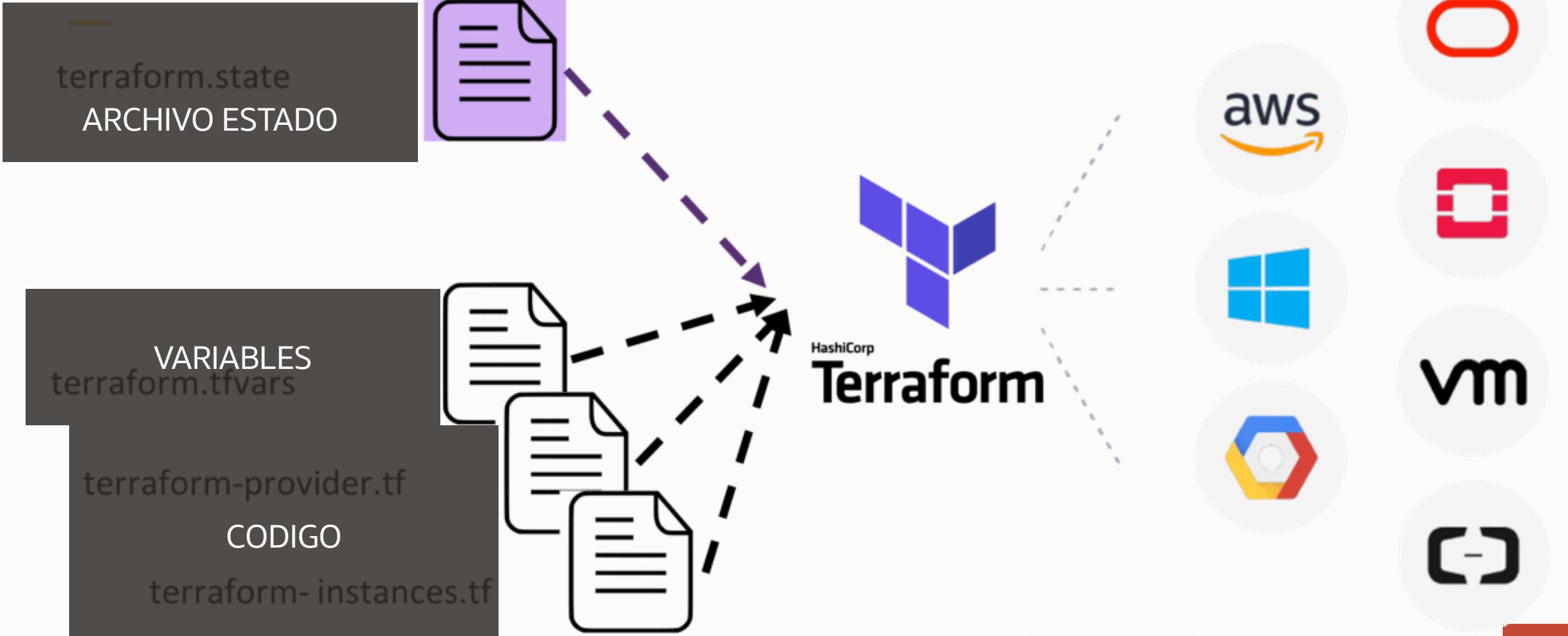
Provee un lenguaje común para orquestar recursos nube y/o otros proveedores.

HashiCorp

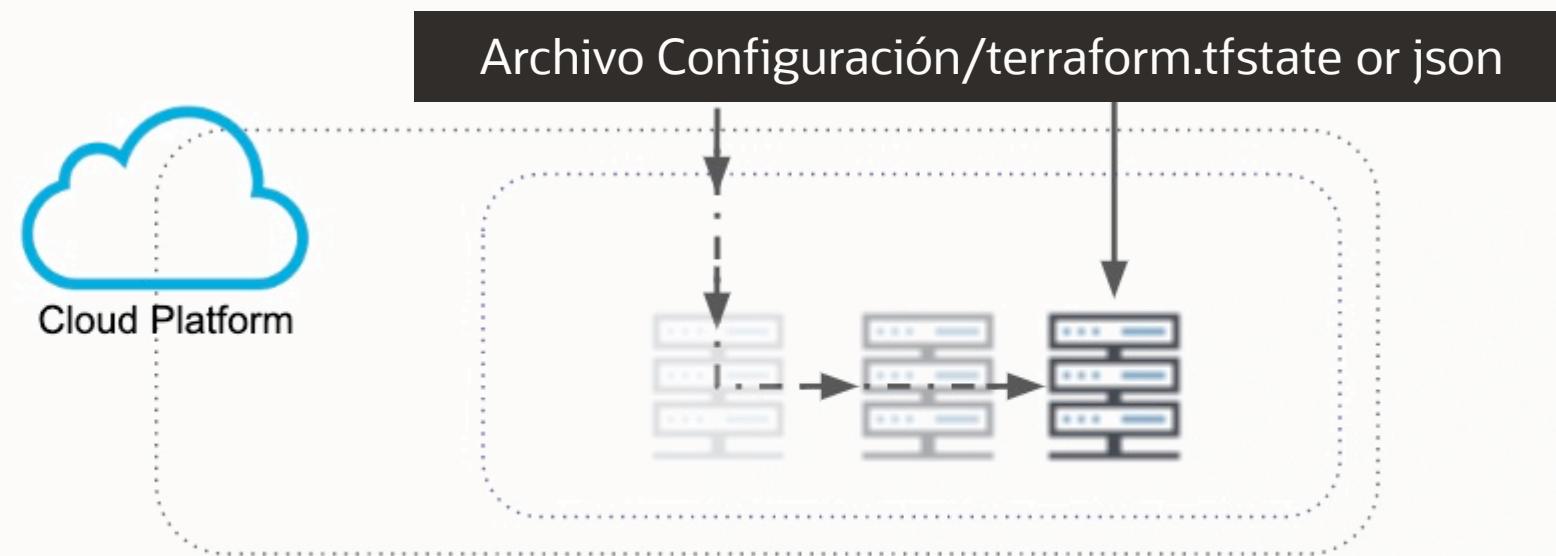
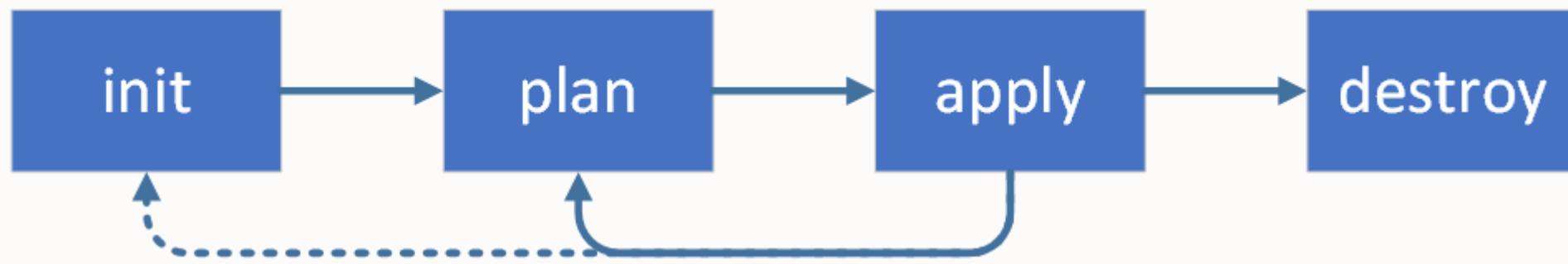
# Terraform



# Archivos



## Terraform – Simple Flujo de trabajo



# Variables

## ENTRADA

Definición variables: desde el CLI, archivo, variables de entorno.

Tipos de variables:

Simples: string, number, bool

Construidas: list, set, map, object, tuple.

Validación de ingreso: regexp, nulos,

## SALIDA

Atributos: sensible

The screenshot shows a terminal window with three tabs open:

- main.tf**: Contains a variable definition for "region".
- variables.env**: A shell environment file with several variable assignments.
- terraform.tfvars**: A Terraform configuration file with variable assignments.

```
main.tf
variable "region" {
  default = "us-ashburn-1"
}

variables.env
set TF_VAR_tenancy_ocid=ocid1.tenancy
set TF_VAR_user_ocid=ocid1.user
set TF_VAR_fingerprint=1d:6d:f7:0e:4f:4c:4d:4b:4b:4b:4b:4b:4b:4b:4b:4b
set TF_VAR_compartment_ocid=ocid1.compartment

terraform.tfvars
private_key_path="C:\\\\Users\\\\framoren\\\\.ssh\\\\id_rsa"
ssh_public_key="C:\\\\Users\\\\framoren\\\\.ssh\\\\id_rsa.pub"
region="us-ashburn-1"
```

# Componentes

```
provider "oci" {
    region      = var.region
    tenancy_ocid = var.tenancy_ocid
    user_ocid   = var.user_ocid
    fingerprint = var.fingerprint
    private_key_path = var.private_key_path
}

# See https://docs.oracle.com/iaas/images/
data "oci_core_images" "test_images" {
    compartment_id      = var.compartment_ocid
    operating_system    = "Oracle Linux"
    operating_system_version = "8"
    shape               = var.instance_shape
    sort_by             = "TIMECREATED"
    sort_order          = "DESC"
}

/* Network */
resource "oci_core_virtual_network" "test_vcn" {
    cidr_block      = "10.1.0.0/16"
    compartment_id = var.compartment_ocid
    display_name   = "testVCN"
    dns_label      = "testvcn"
}

output "Public_IP_LoadBalanceador" {
    value = "http://${oci_load_balancer_load_balancer.free_l
}
```

variable  
provider  
data  
resource  
output

## Module

Carpeta con código y tiene entrada y salida similar

Terraform solo acceder a los archivos TF de la carpeta actual, no ingresa a los valores internas



# Conceptos Avanzados

Remote Backend

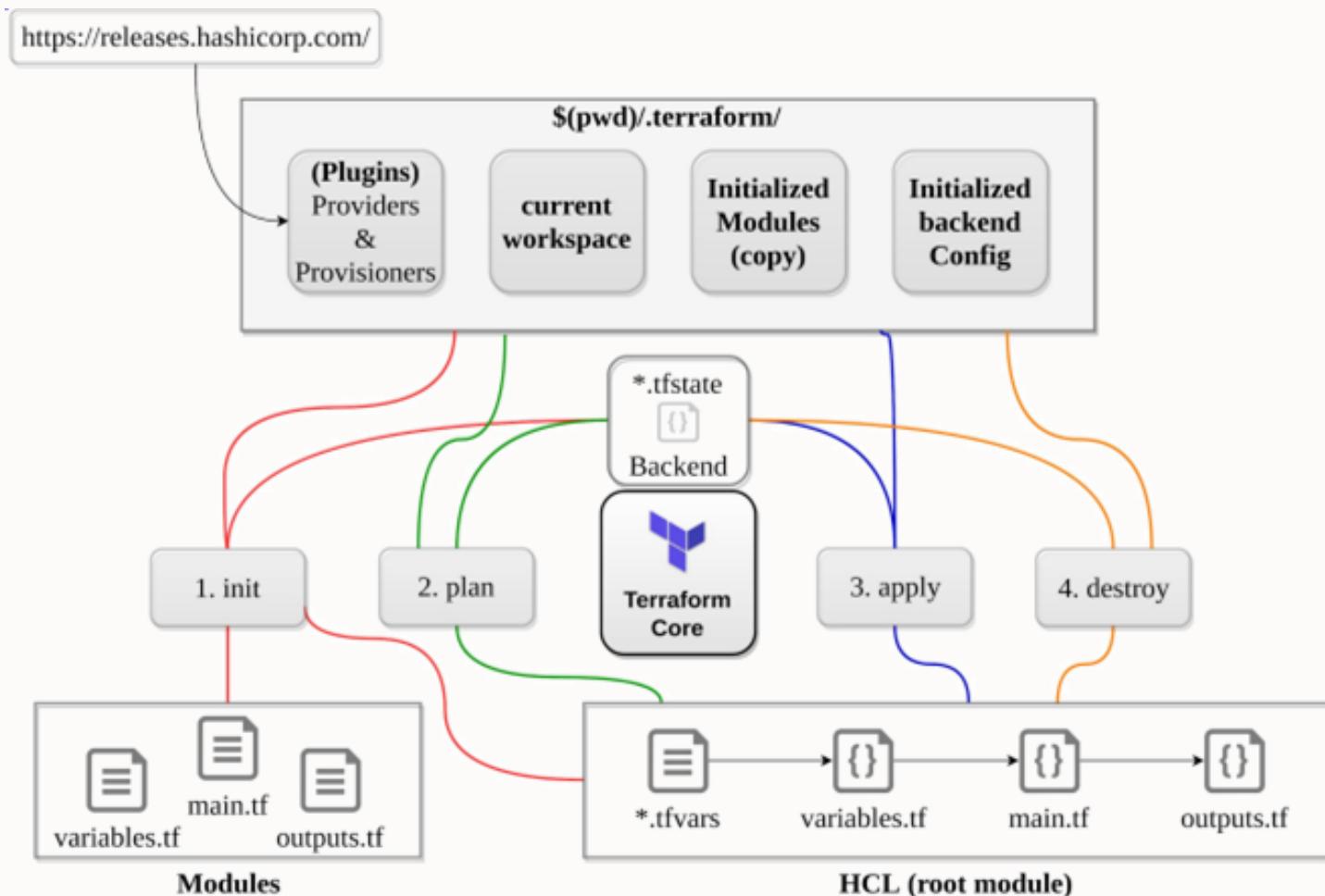
Providers: Local y Remote

Comandos: fmt, validate, taint, import, lock

Opciones: parallelism

Workspaces

Anidación: Export/Import state files

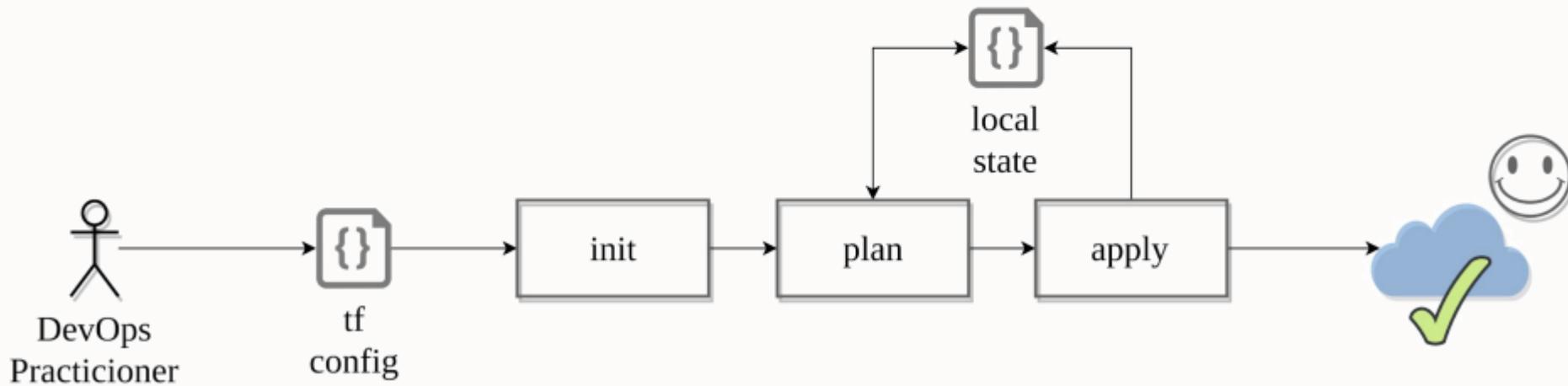


# Adopción

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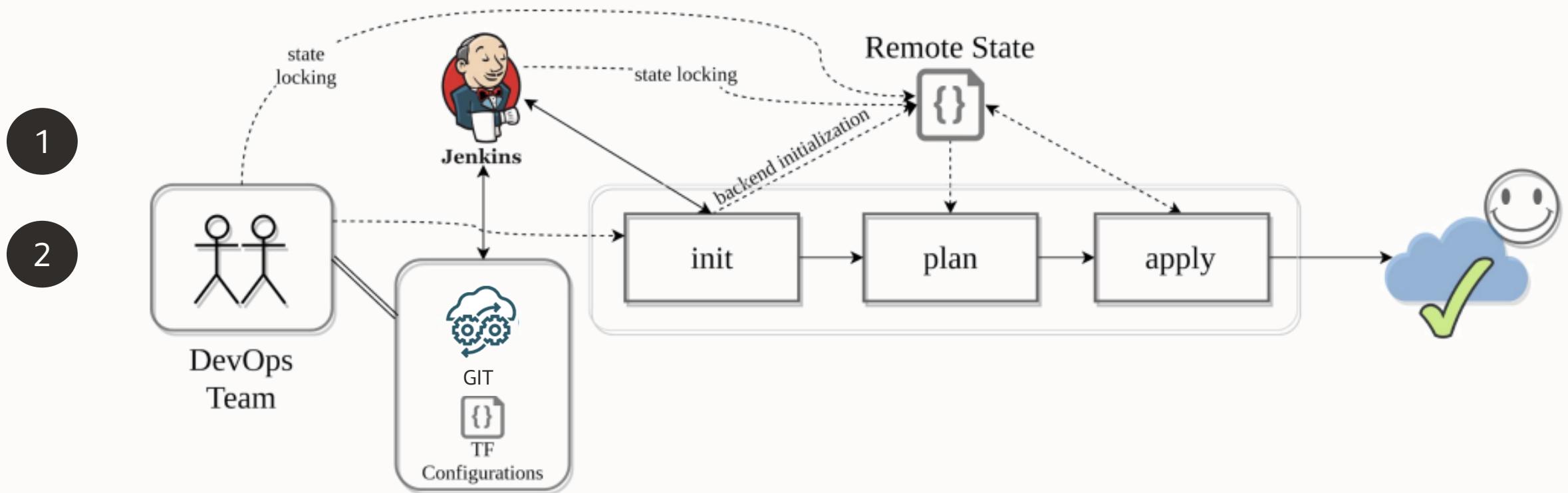
1

## Single contributor



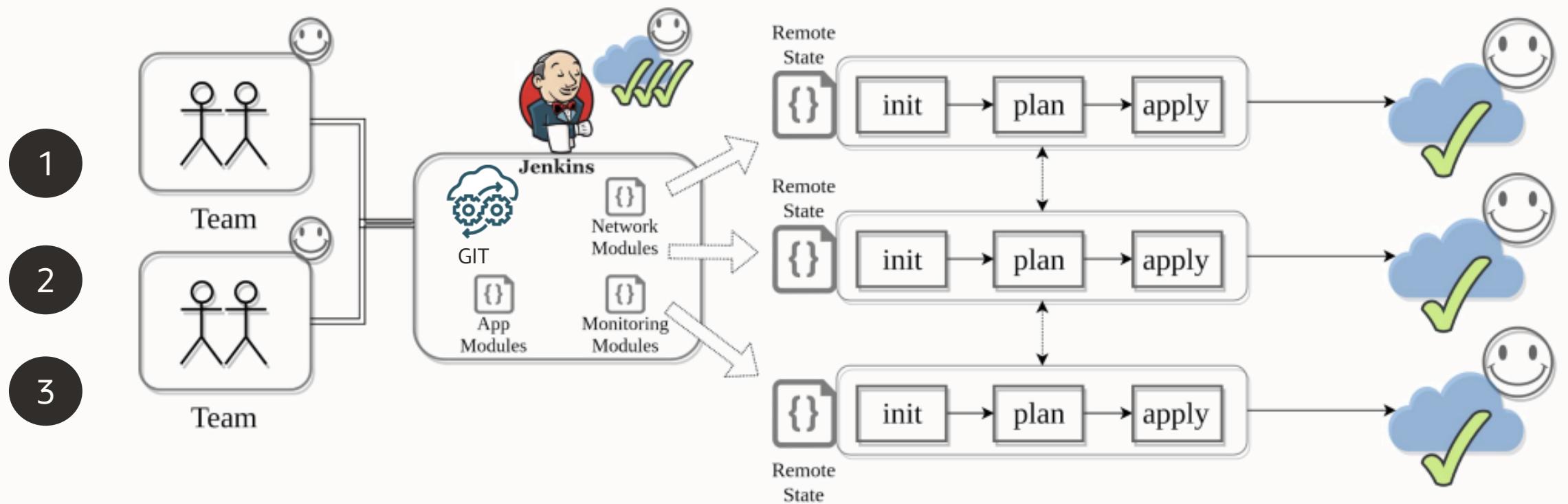
# Adopción

## Team Collaboration



# Adopción

## Multiple Teams



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# Resource Manager

**Francisco Moreno**

# Vista General

## Que es?

- Terraform como Servicio
- Usa IaC para automatizar aprovisionamiento de todos los recursos OCI
- Soporte completo CLI, SDK y Consola

## Que problemas solucionar?

- Administración del estado de la infraestructura
- La ejecución paralela puede conducir a resultados de infraestructura indeseables
- Controles de acceso limitados en torno a la ejecución de comandos Terraform

## Beneficios

- Automatice y estandarice su infraestructura y replique fácilmente los entornos
- Integración profunda con OCI (es decir, identidad, etiquetado, etc.)
- Administre sin problemas los archivos de estado y mejore la colaboración en equipo

## Diferenciador Oracle

- Sin bloqueo, migraciones simples desde y hacia nubes privadas y de terceros
- Construido sobre software de código abierto sin modificar de Terraform para IaC en Oracle Cloud y On Premises
- Soporte local 100% - 1 día para los nuevos servicios y características de OCI



# Términos Resource Manager

- Un **stack** representa un conjunto de recursos de OCI que se crean en el tenant.
- Cada stack se asigna a un **configuration** de Terraform y un **state file**.
- Un **job** realiza las acciones definidas en la configuración.
- Las posibles acciones son **Plan, Apply, Destroy e Import State**

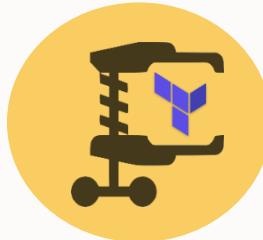
The screenshot shows the Oracle Cloud Infrastructure (OCI) Resource Manager Stacks interface. The URL is https://cloud.oracle.com/resourcemanager/stacks?region=us-ashburn-1. The page title is "Stacks | Oracle Cloud Infrastructure". The main content area is titled "Stacks in TestTerraform Compartiment". It displays a "Create Stack" form with fields for Name, Description, State, and Created. Below the form, a message states "No items". At the bottom, there are links for "Showing 0 Stacks" and "Page 1". On the left, there is a sidebar with "Resource Manager" navigation options: Overview, Stacks (which is selected), Jobs, Private Templates, Configuration Source Providers, and Private Endpoints. Under "List Scope", it shows "Compartiment: TestTerraform" and "franciscomoreno (root/TestTerraform)". There are also "Tag filters" and "add | clear" buttons. The footer includes links for "Terms of Use and Privacy" and "Cookie Preferences", and a copyright notice: "Copyright © 2022, Oracle and/or its affiliates. All rights reserved."



# Como funciona?

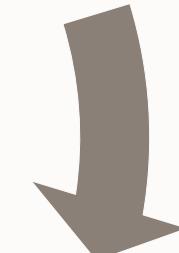
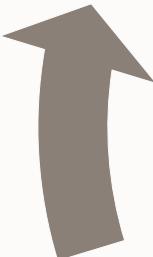
## Codifica/Actualiza

- Archivos Terraform (Zip)
- Sample templates
- Private templates
- Importar infraestructura
- Repositorio Código Fuente
- Asistente (Wizard)



## Crea/Actualiza Stack usando

- Console Web
- SDK
- CLI



## Ejecuta Job

- Plan/
  - Apply/
  - Destroy/
  - Import State
- Para aprovisiona y manejar recursos

- Visualiza estado manejado y recursos aprovisionados
- Detect Drift



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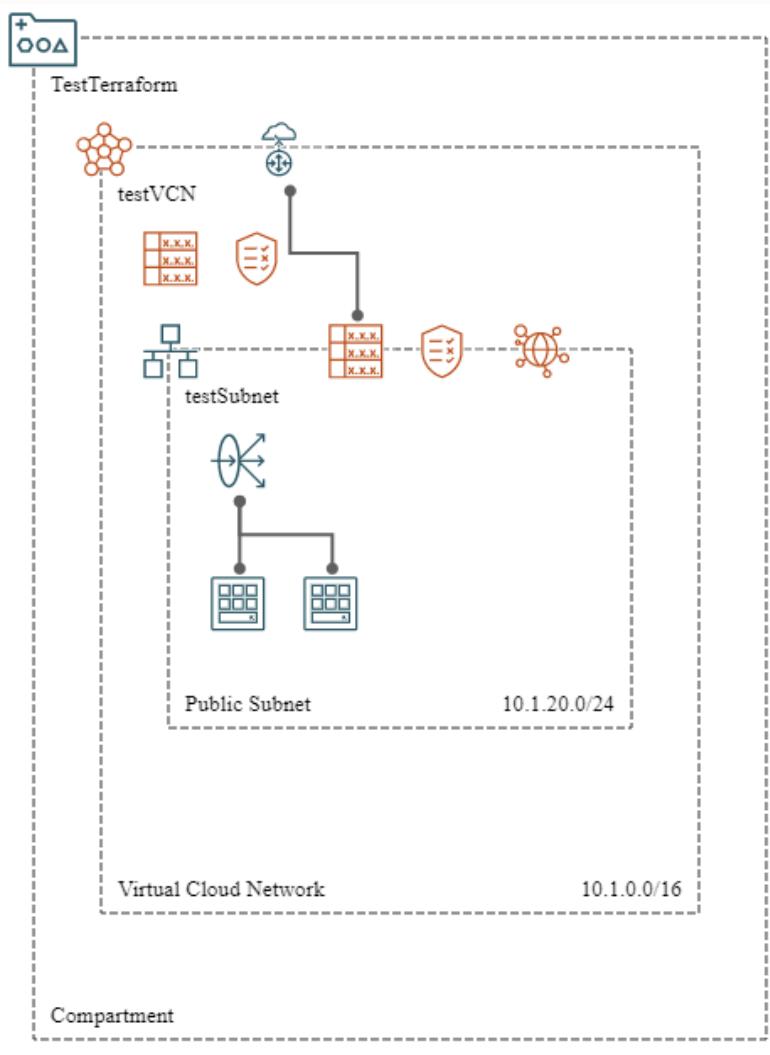


# Demos

**Francisco Moreno**

[https://github.com/fmorenod81/OCI\\_TF](https://github.com/fmorenod81/OCI_TF)

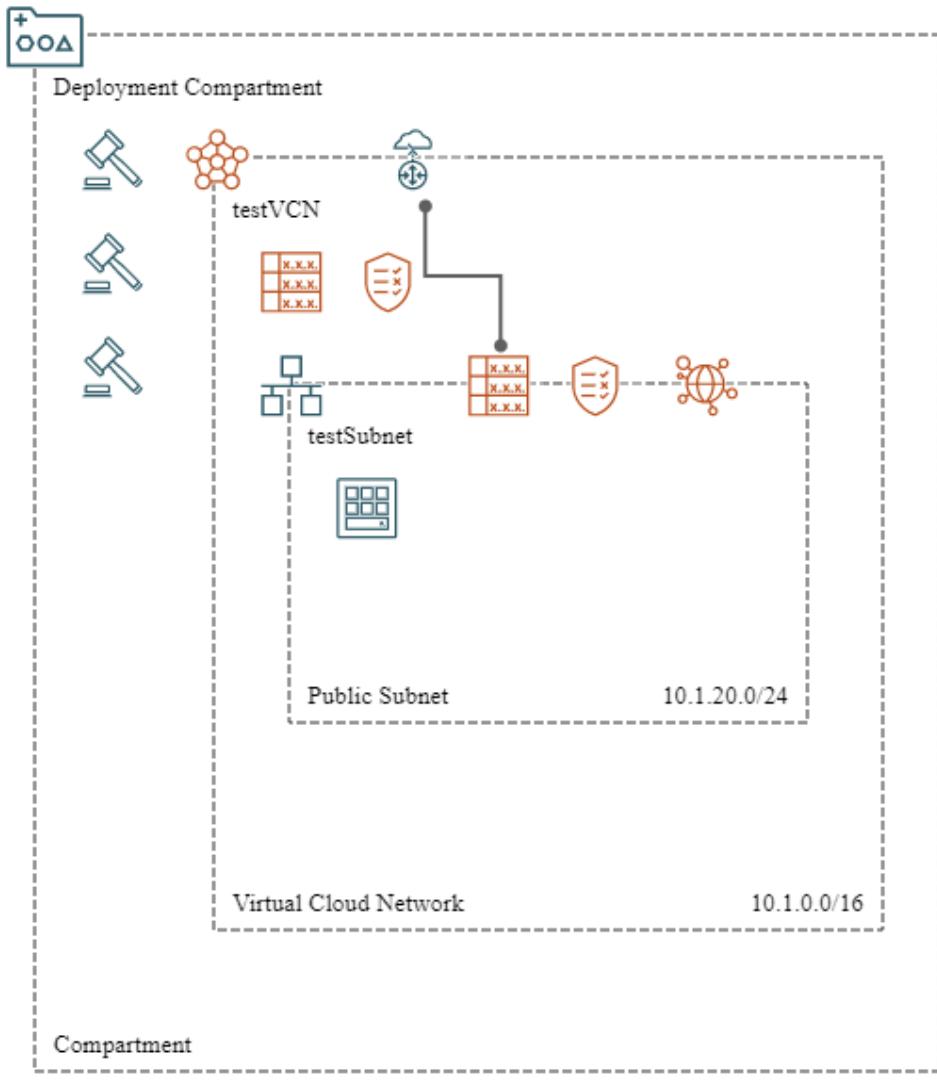
# Usando Terraform CLI



## Pasos

1. Configurar OCI CLI
2. Configurar Terraform
3. Descargar código
4. Cambiar a Desde\_CLI
5. Desplegar desde Terraform

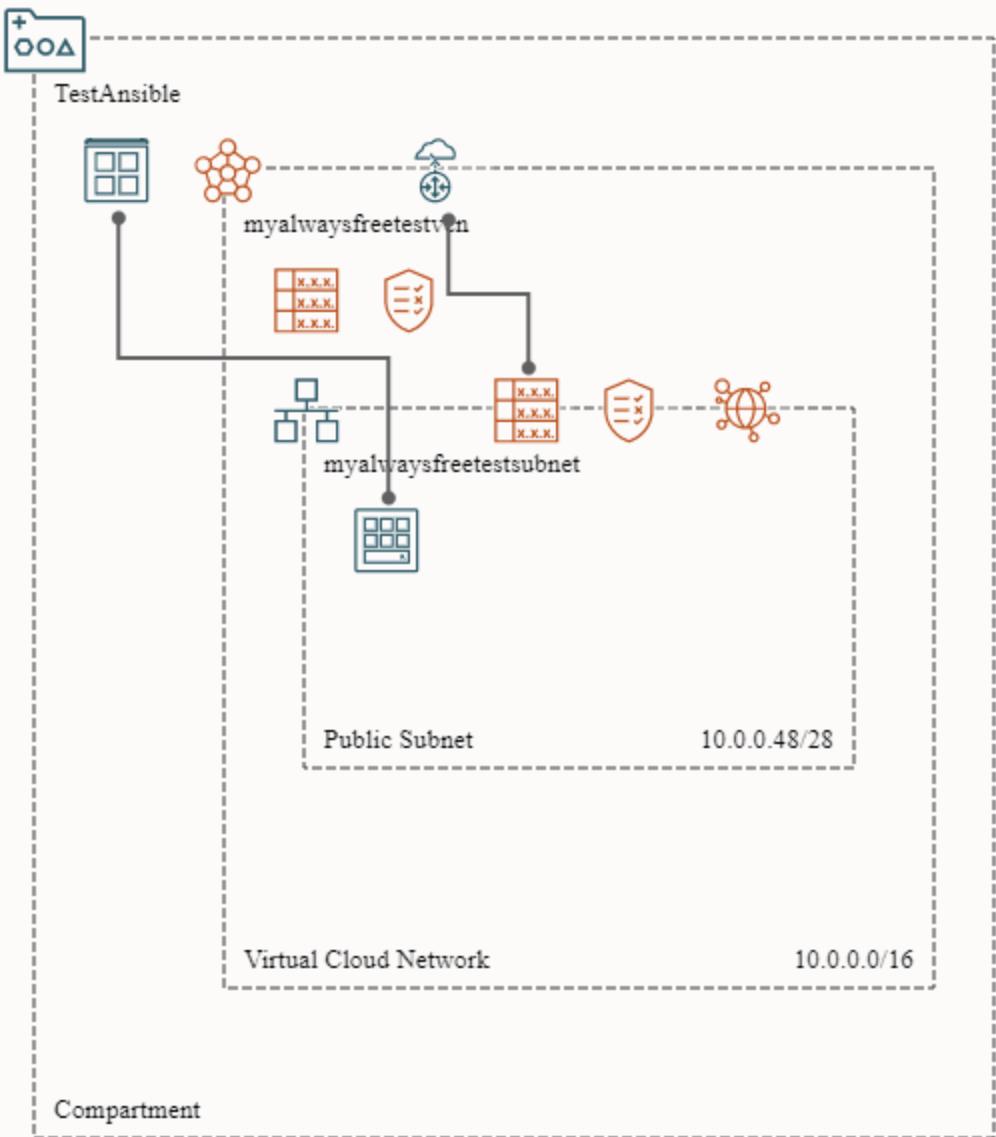
# Usando Resource Manager



## Pasos

1. Descargar ZIP
2. Ejecutar el Resource Manager
3. Ingresar los datos incluidos el script inicial y una llave privada para el SSH a la instancia publica

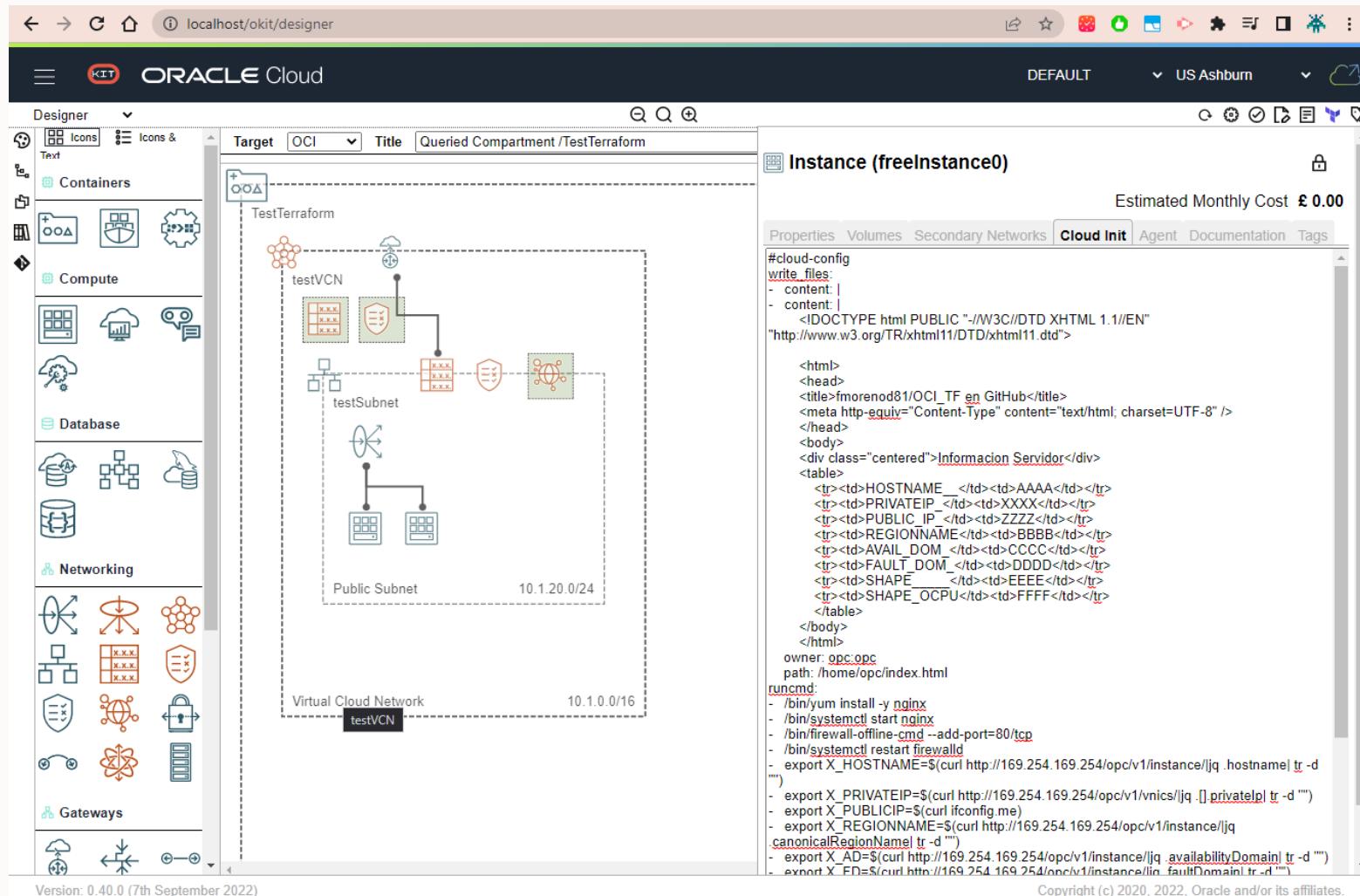
# Usando Ansible



## Pasos

1. Desde Cloud Shell, instalar *ansible-galaxy collection install oracle.oci*
2. Clonar el Repositorio y leer el *README* de la carpeta para establecer las variables de entorno
3. Ejecutar *ansible-playbooks sample.yaml*

# Usar el OCI Designer Toolkit



1. Configurar OCI CLI
2. Instalar Docker
3. Construir en Docker el OKIT
4. Ejecutarlo

Ejemplo,  
<http://localhost/okit/designer>

## Lanzamiento,

```
docker run -d --rm -p 80:80 --volume /mnt/c/Users/framoren/.oci2:/root/.oci
--volume /mnt/c/Users/framoren/.ssh:/root/.ssh --name okit okit
```

# Referencias Oficiales

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<https://www.ateam-oracle.com/>

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## Especificas:

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<https://docs.oracle.com/en-us/iaas/Content/GSG/Tasks/creatingkeys.htm>

<https://learn.hashicorp.com/tutorials/terraform/oci-build?in=terraform/oci-get-started>

<https://blogs.oracle.com/cloud-infrastructure/getting-started-with-the-resource-manager-on-oracle-cloud-infrastructure>

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<https://docs.cloud.oracle.com/en-us/iaas/Content/ResourceManager/Reference/solutions.htm>

<https://oracle.github.io/learning-library/oci-library/>



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## Generales:

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<https://technology.amis.nl>  
<https://k21academy.com>

## Especificas:

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