Deploy de website na Oracle Cloud Infrastructure

Jean Rodrigues

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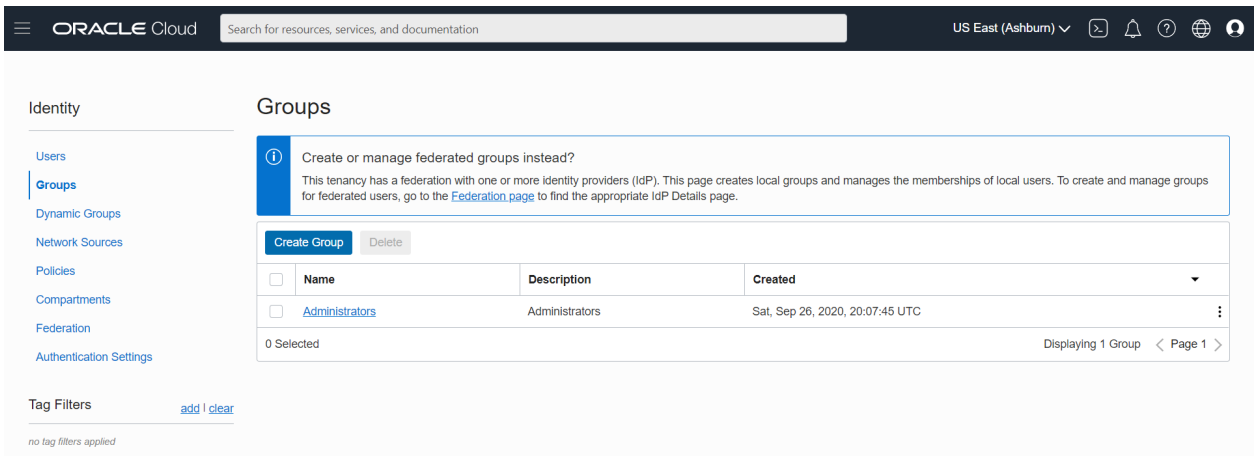
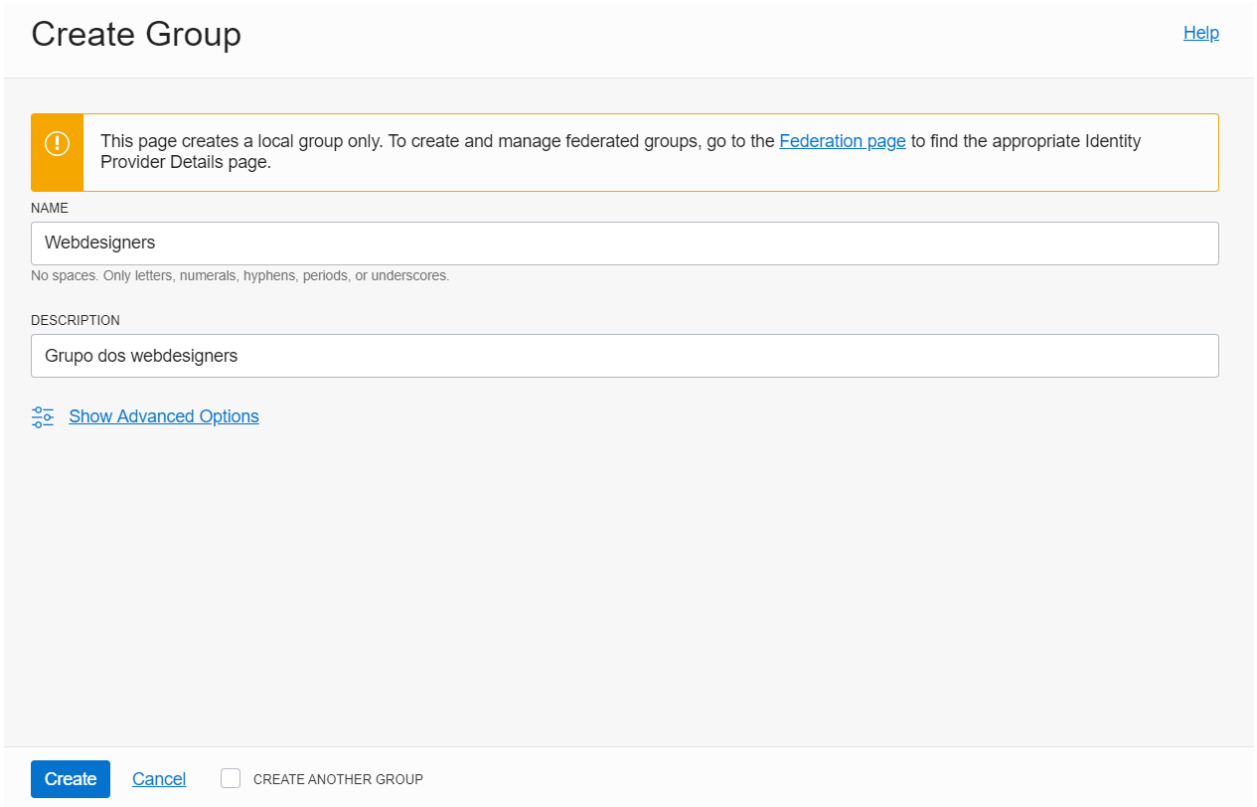
IAM | Criação do grupo, usuários, compartimentos e políticas

Criação do grupo Webdesigners

Ao acessar a console da OCI, clique em **Menu > Identity > Groups.**

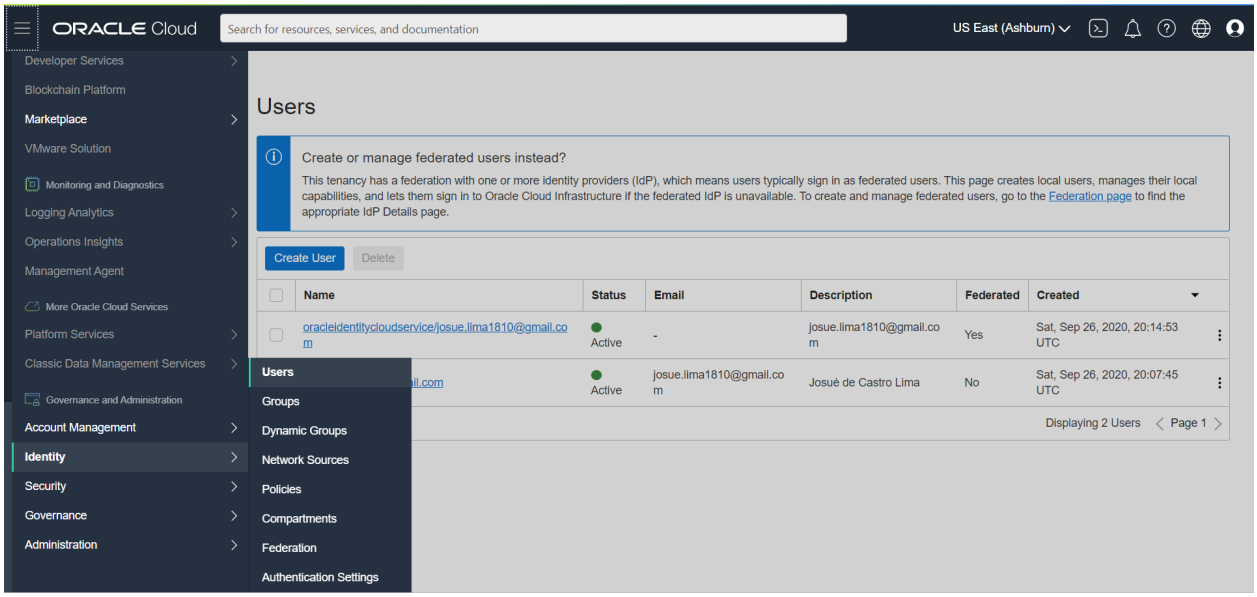


Clique em **Create Group.** Abaixo, insira o nome do grupo, sua descrição e clique em **Create**.

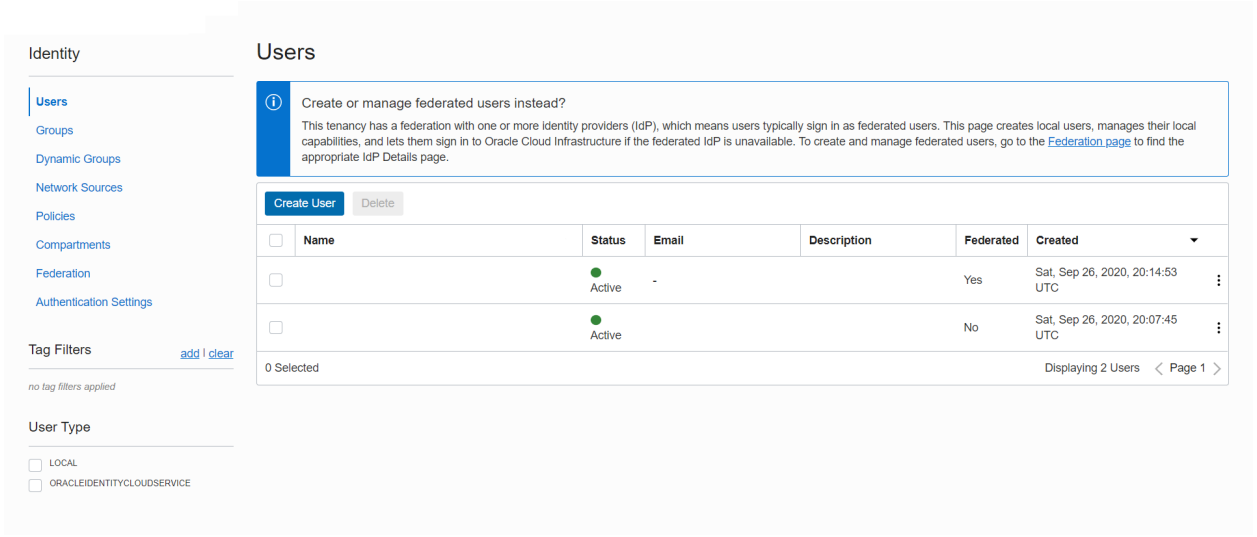


Criação da usuário Julia, Web Designer

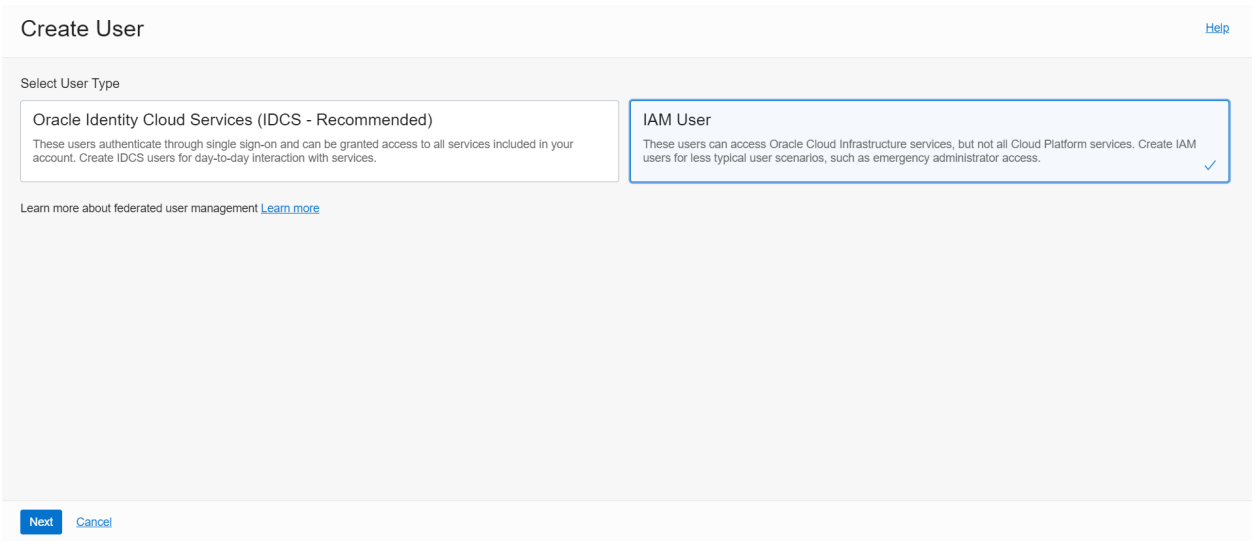
Ao acessar a console da OCI, clique em **Menu > Identity > Users**.



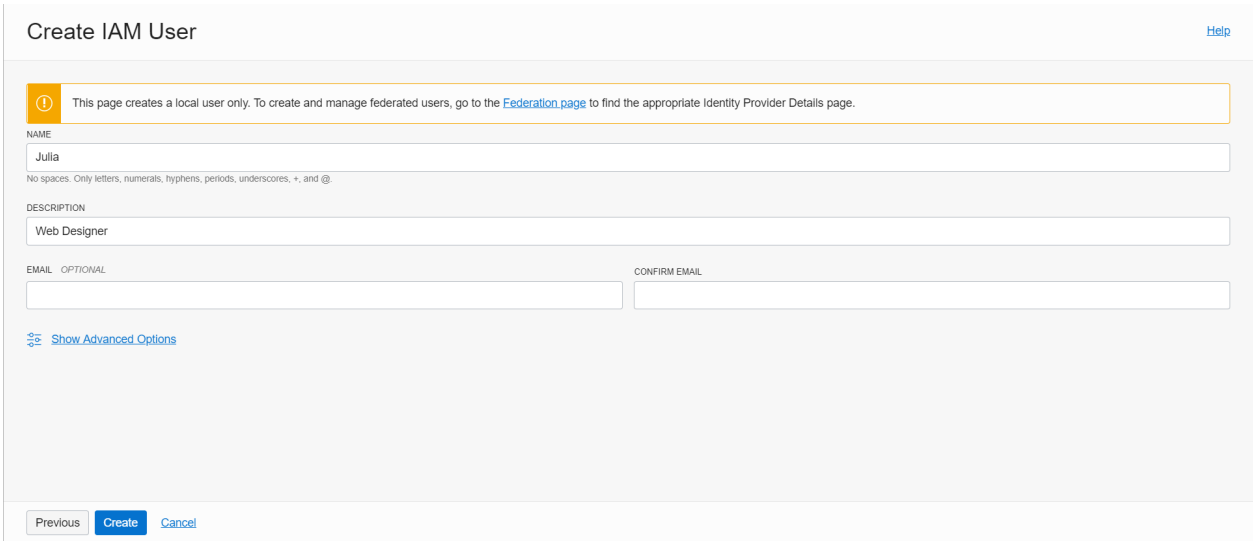
Clique no botão **Create User,** para iniciar a criação da usuária Julia.



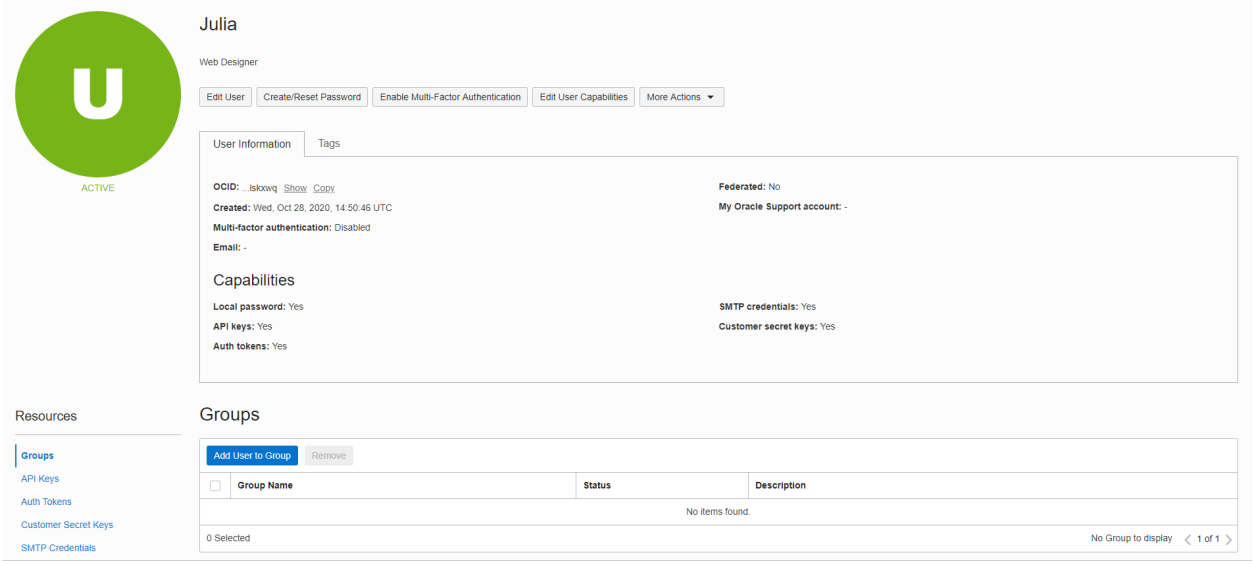
Selecione **IAM User** e clique em **Next.**



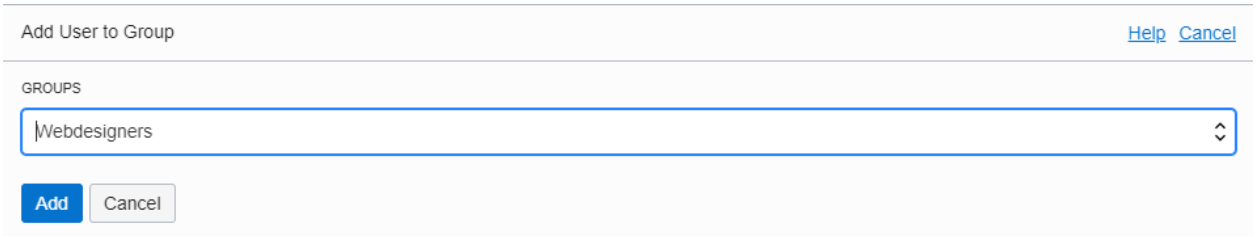
Insira o nome, a descrição e clique em **Create.**



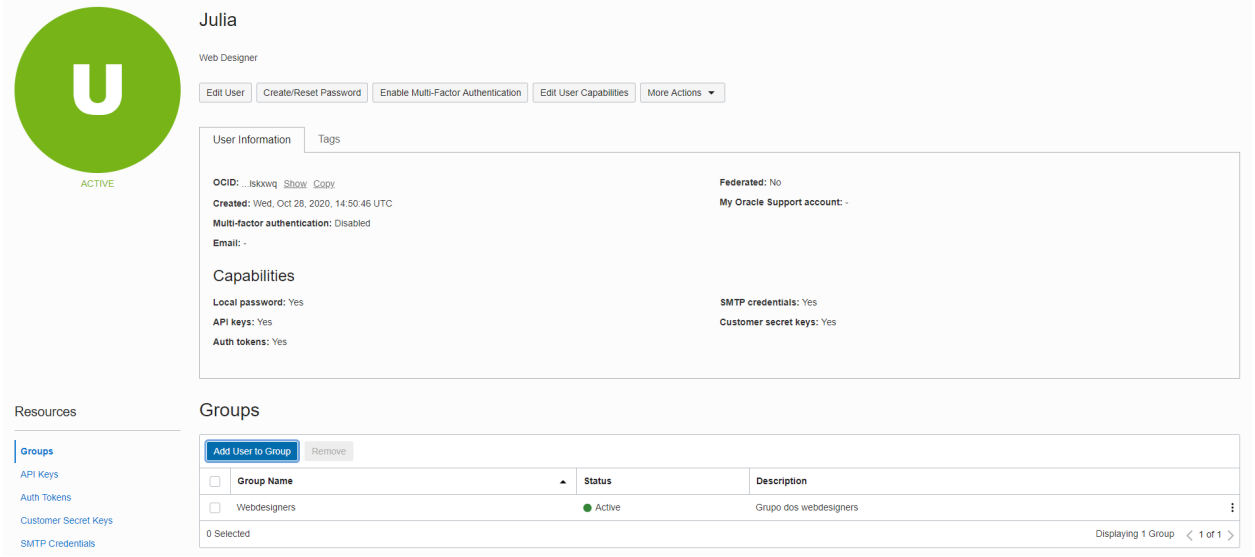
Após concluir a criação da usuária Julia, clique em **Add User to Group.**



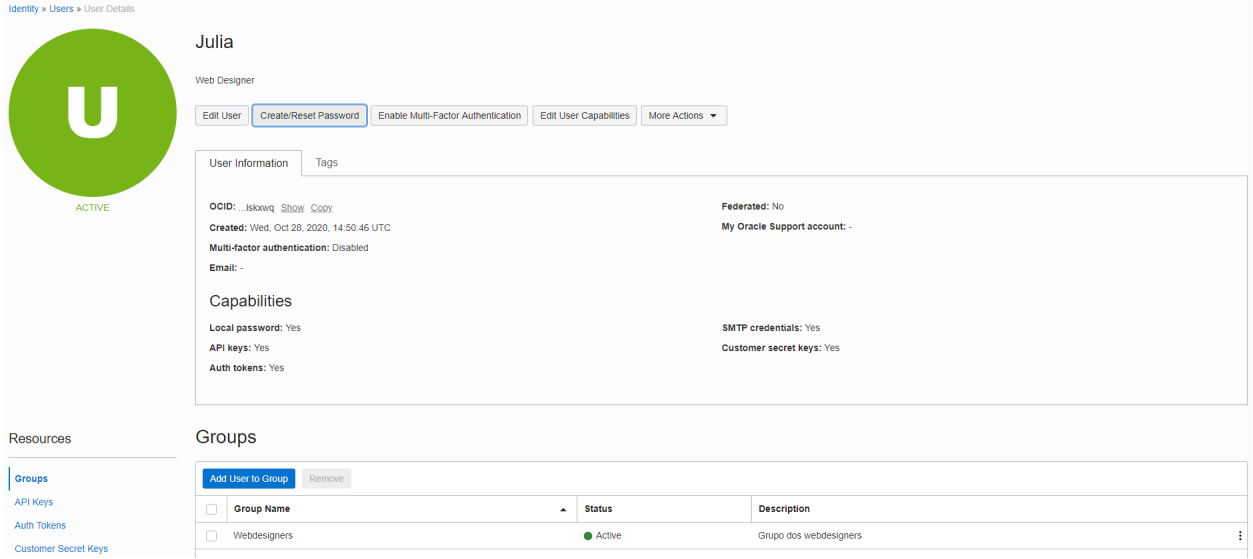
Selecione o grupo **Webdesigners** e clique em **Add**.



Usuária Julia adicionada no grupo Webdesigners.

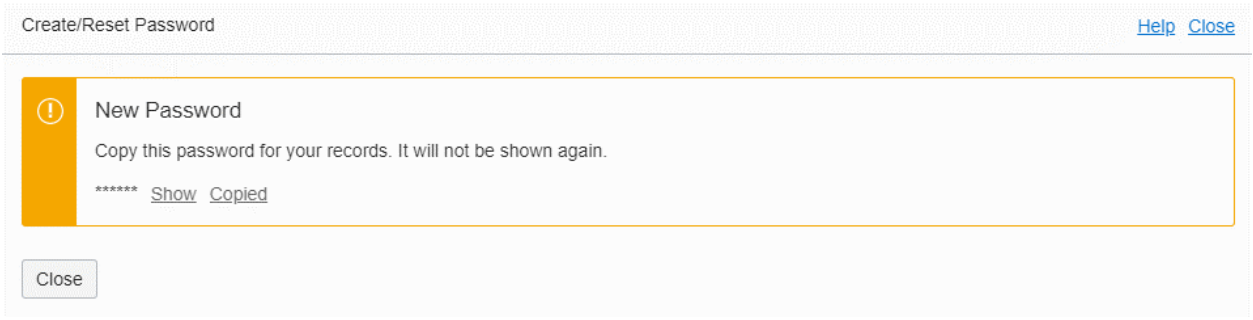


Clique em **Create/Reset Password**, para preparar uma senha de acesso à console da OCI para Julia.



Clique em **Create/Reset Pasword**.

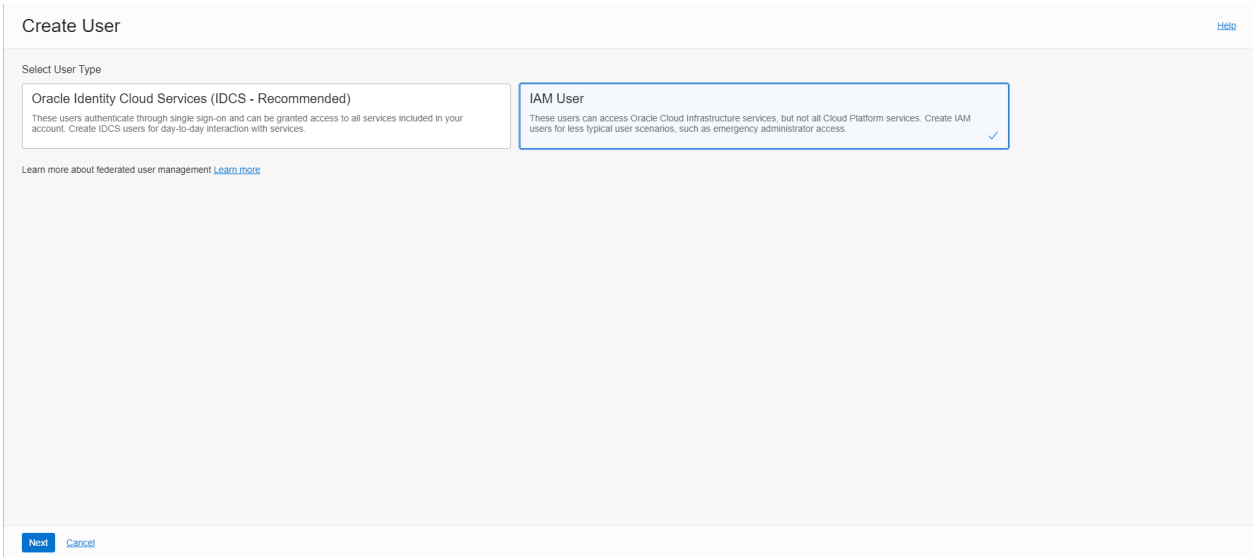
Senha disponível. Clique em **Copy** e cole em um local seguro.



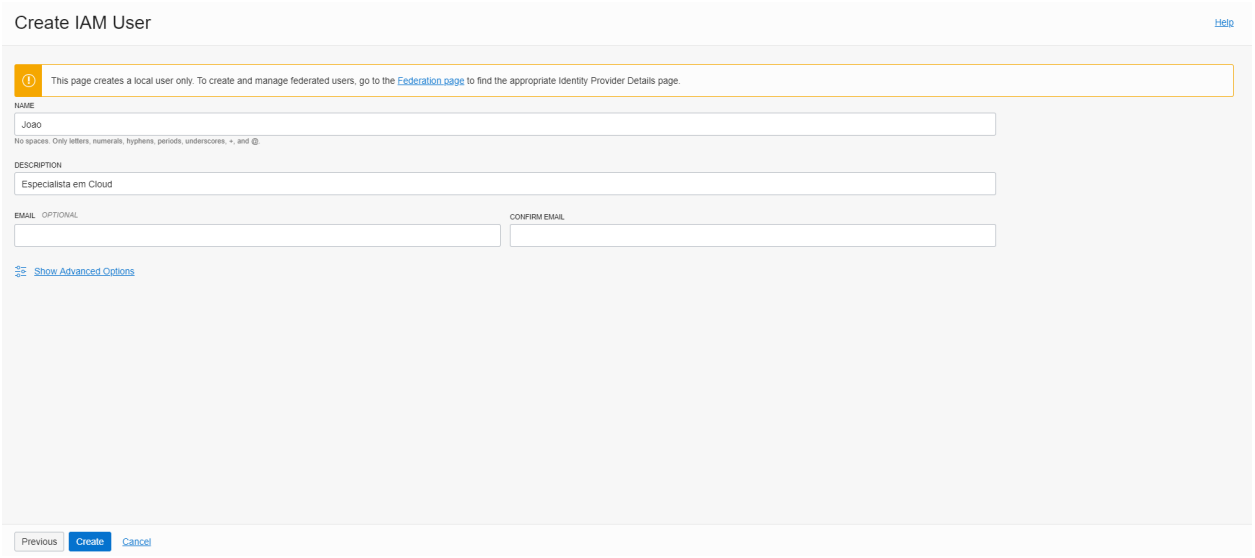
Criação do Usuário João, Especialista em Cloud

Ao acessar a console da OCI, clique em **Menu > Identity > Users**, em seguida, **Create User.**

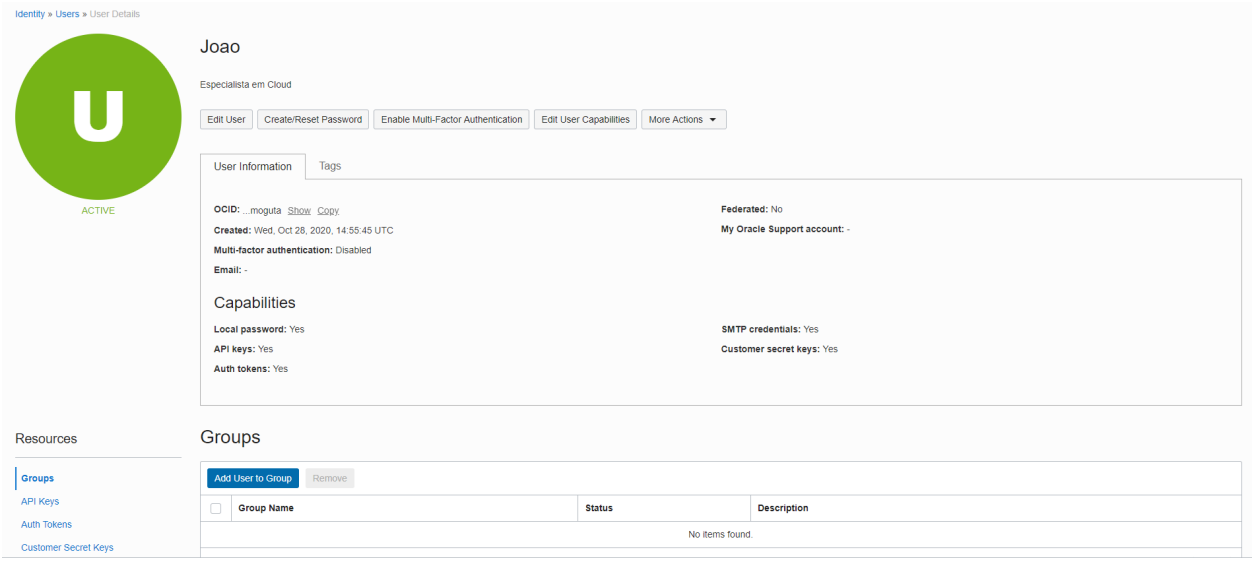
Selecione **IAM User** e clique em **Next.**



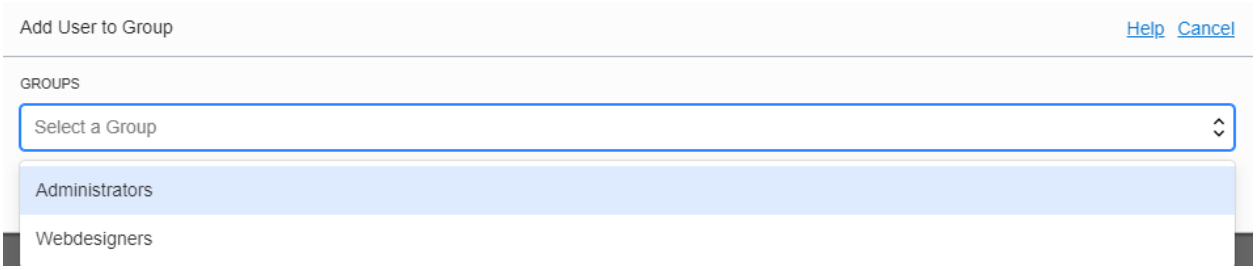
Insira o nome, a descrição e clique em **Create.**

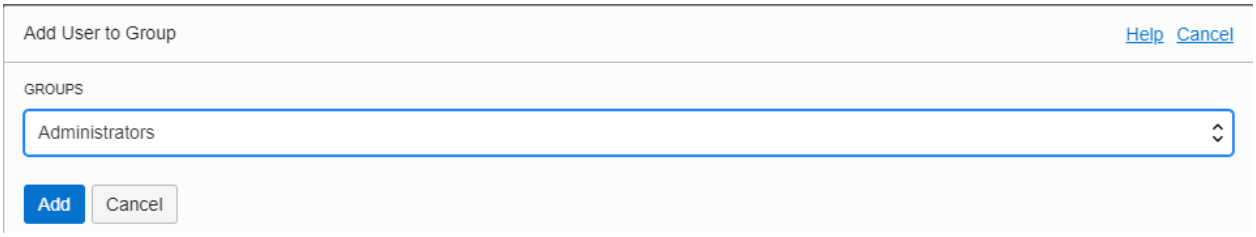


Após concluir a criação do usuário Joao, clique em **Add User to Group**.

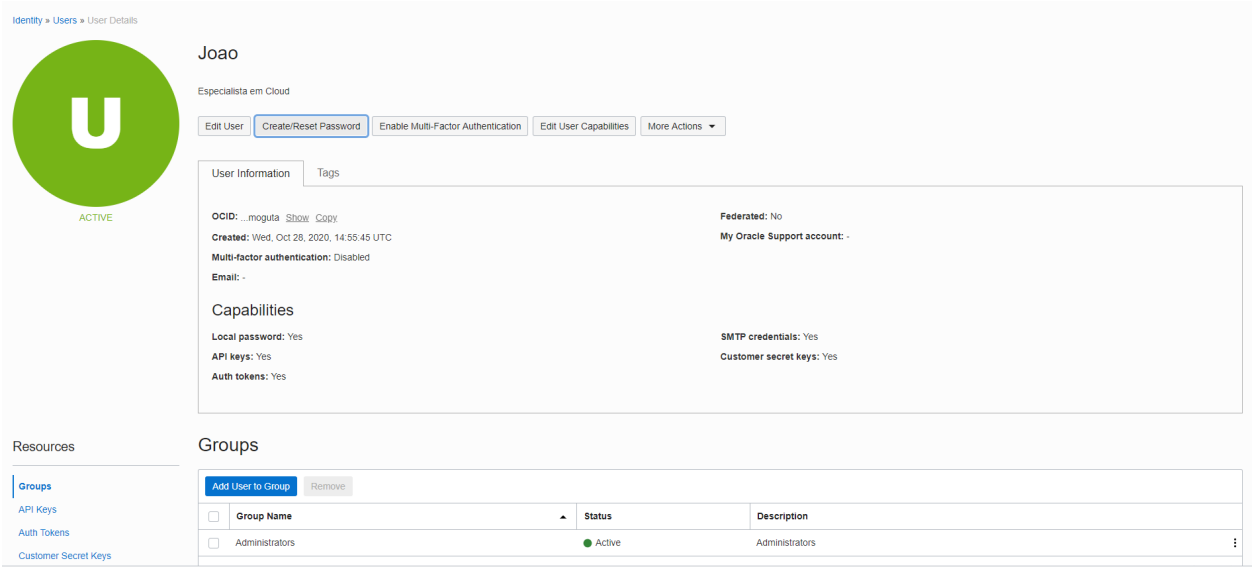


Selecione o grupo Administrators e clique em **Add**.



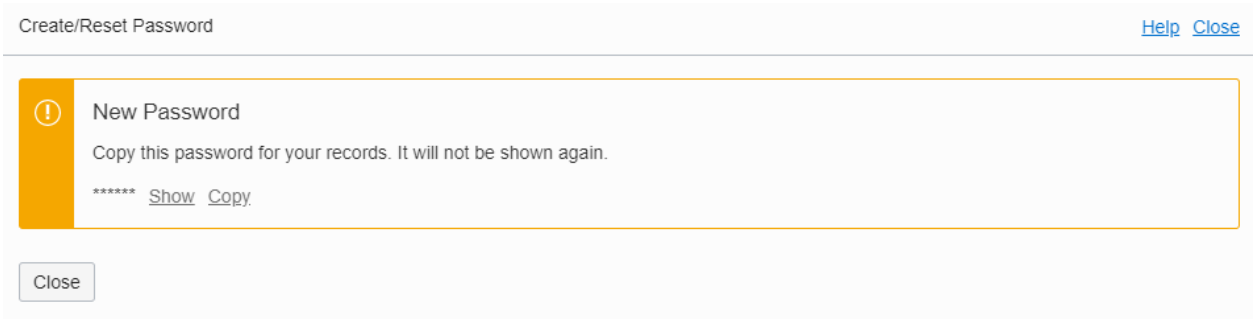


Usuário João adicionado ao grupo Administrators. Agora, clique em **Create/Reset Password**, para preparar uma senha de acesso à console da OCI para o João.



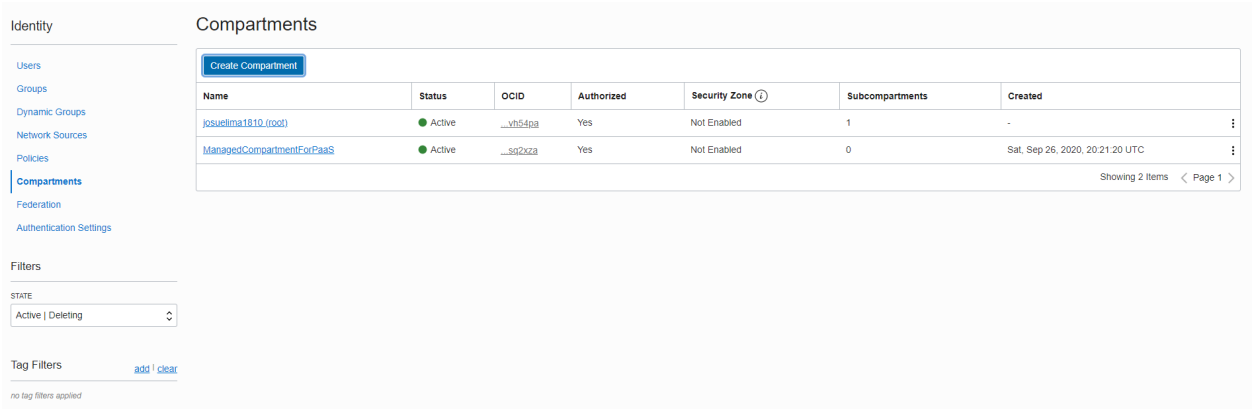
Clique em **Create/Reset Pasword**.

Senha disponível. Clique em **Copy** e cole em um local seguro.

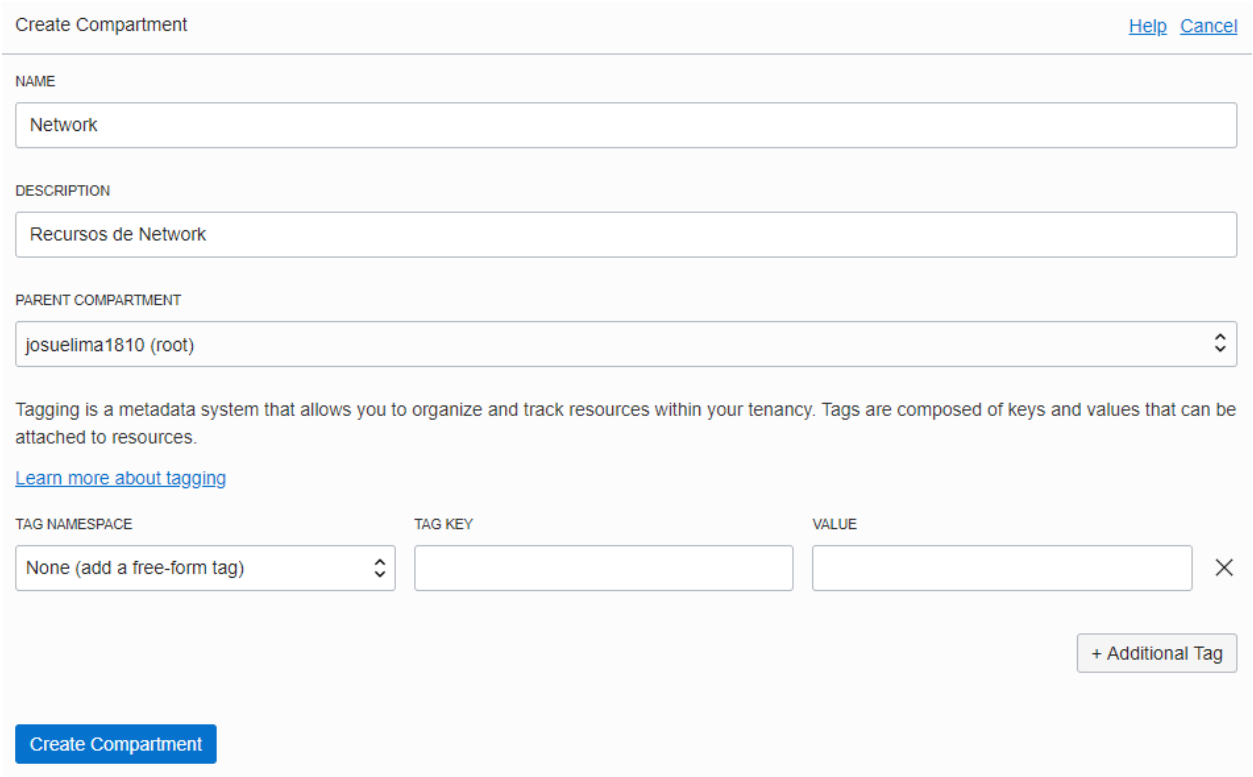


Criando Compartimentos

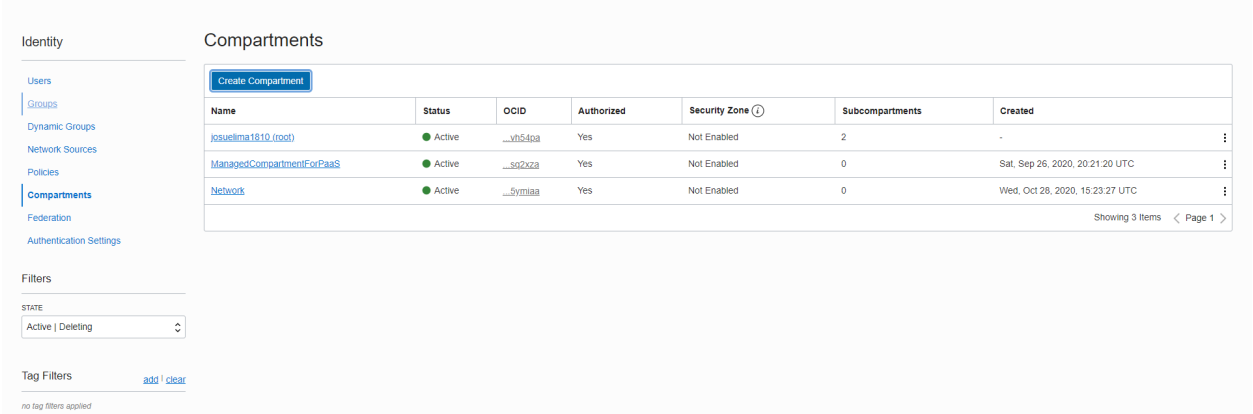
Ao navegar ao **Menu > Identity > Compartments**, clique em **Create Compartment.**



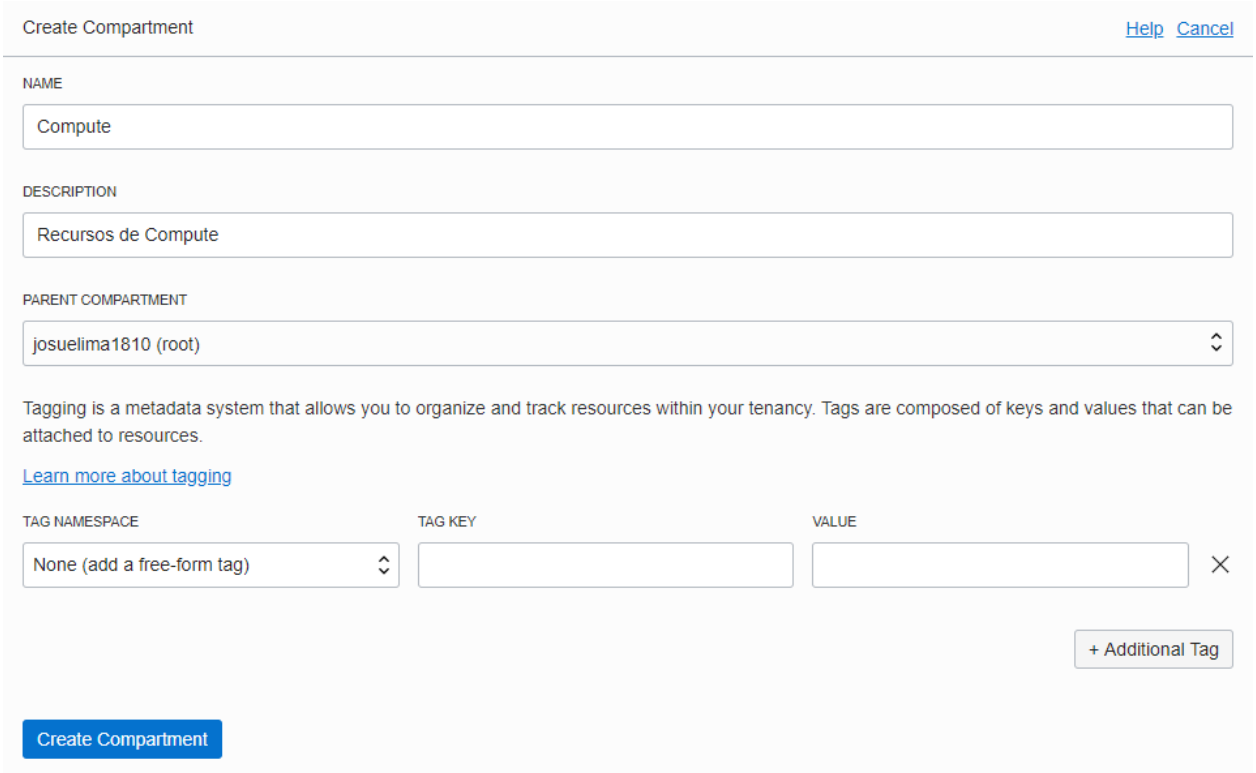
Insira o nome do compartimento, sua descrição e clique em **Create Compartment.**



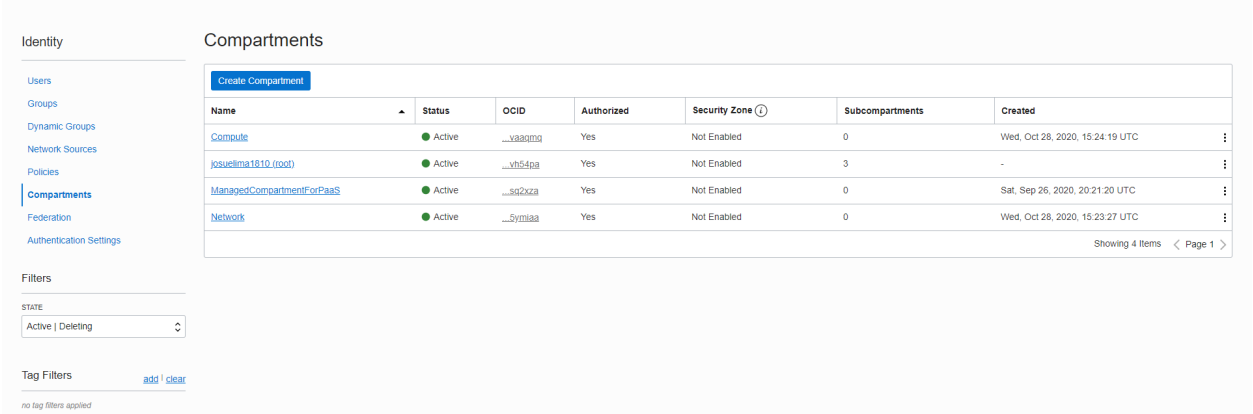
Compartimento **Network** criado. Clique em **Create Compartment** para criar o compartimento **Compute**.



Insira a informação de nome do compartimento, sua descrição e clique em **Create Compartment.**

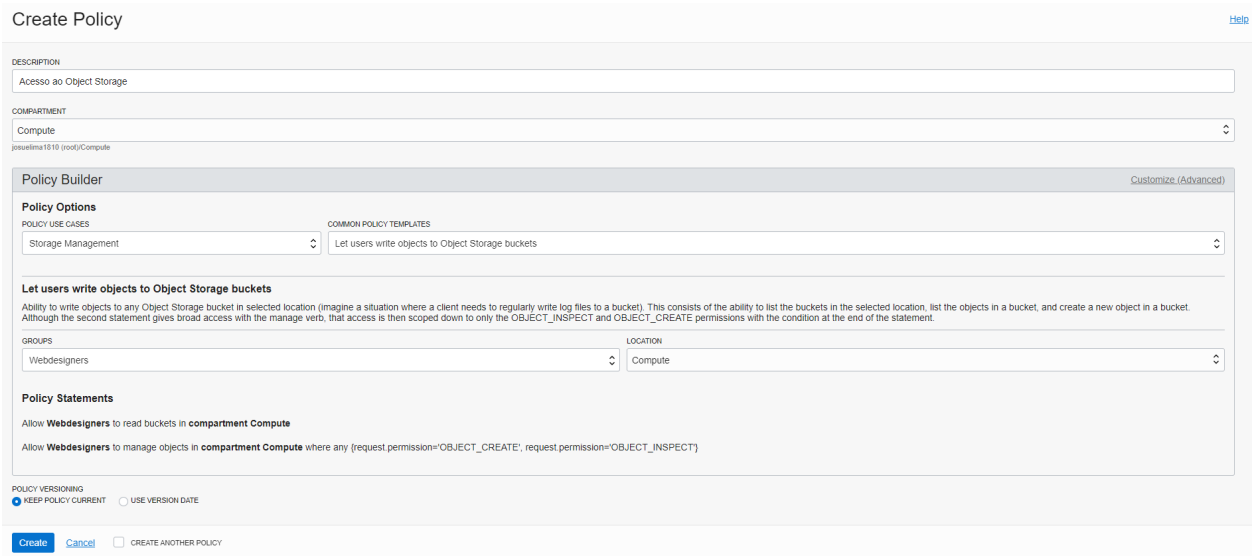


Compartimentos **Network** e **Compute** criado.



Criação da Policy para o grupo Webdesigners

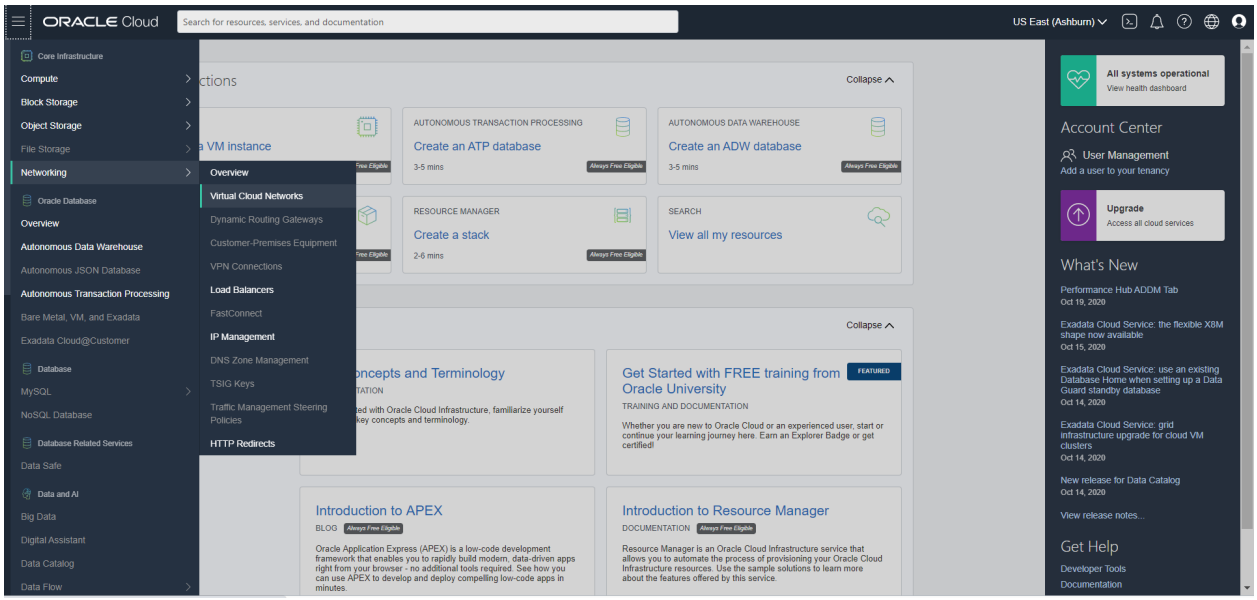
Acesse o **Menu > Identity > Policies**. Clique em **Create Policy**. Insira a descrição. Mantenha selecionado o compartimento **Compute**. Em Policy Builder > Policy Options, Policy Use Cases, selecione **Storage Management** e em Common Policy Templates, selecione **Let Users write objects to Object Storage buckets.** Em **Groups,** selecione Webdesigners. Em **Location**, selecione Compute e clique em **Create.**



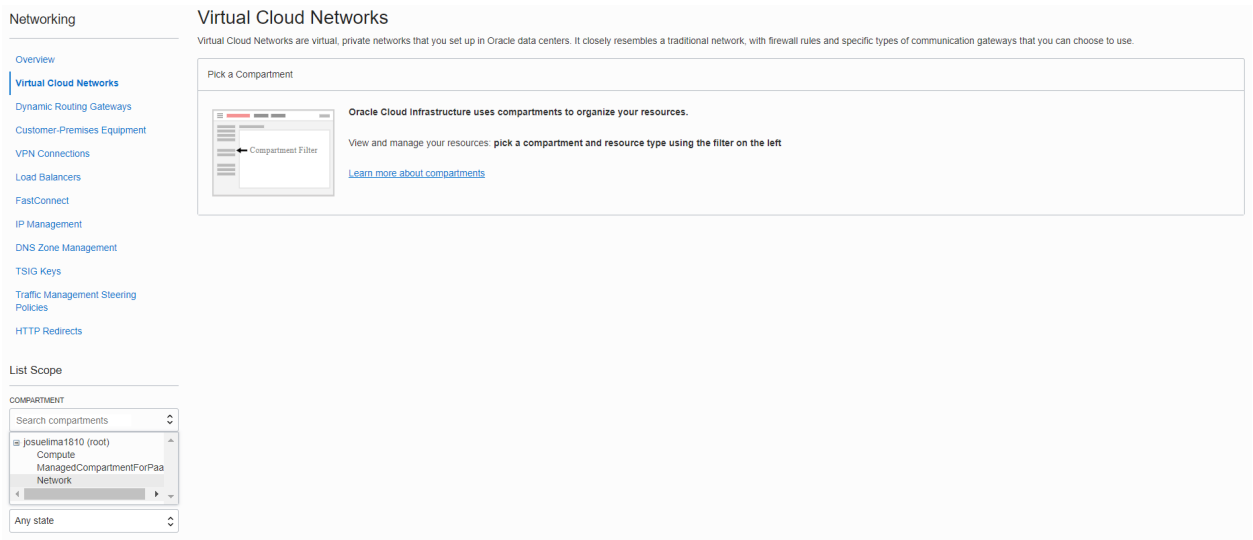
Policy-WebDesigner criada.

Faça o logout e faça o login na console da OCI com o usuário João, Especialista em Cloud, que será o responsável pela preparação do ambiente.

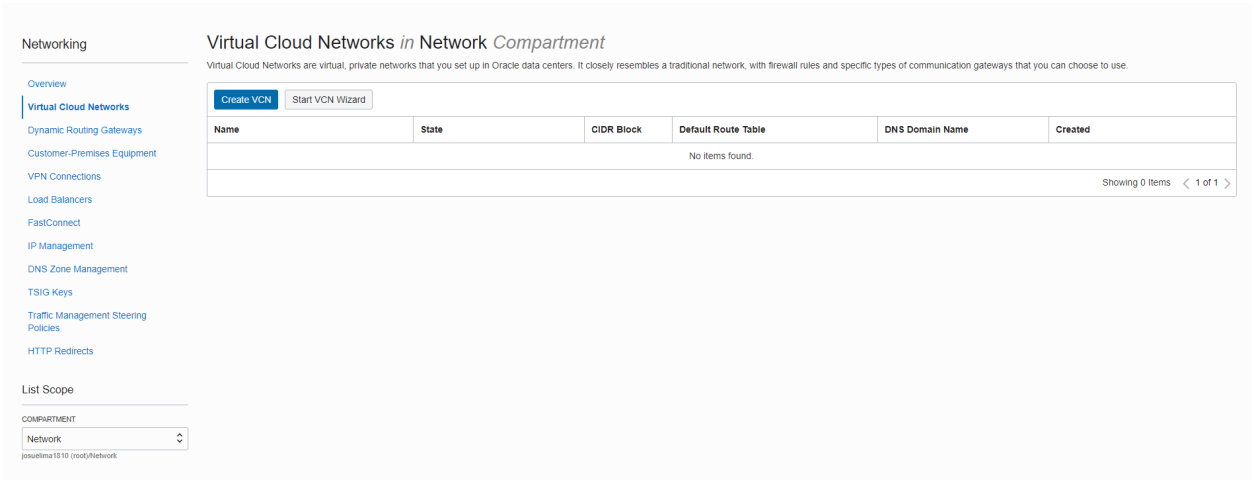
Após concluir o acesso com o usuário Joao, acesse **Menu > Networking > Virtual Cloud Networks.**



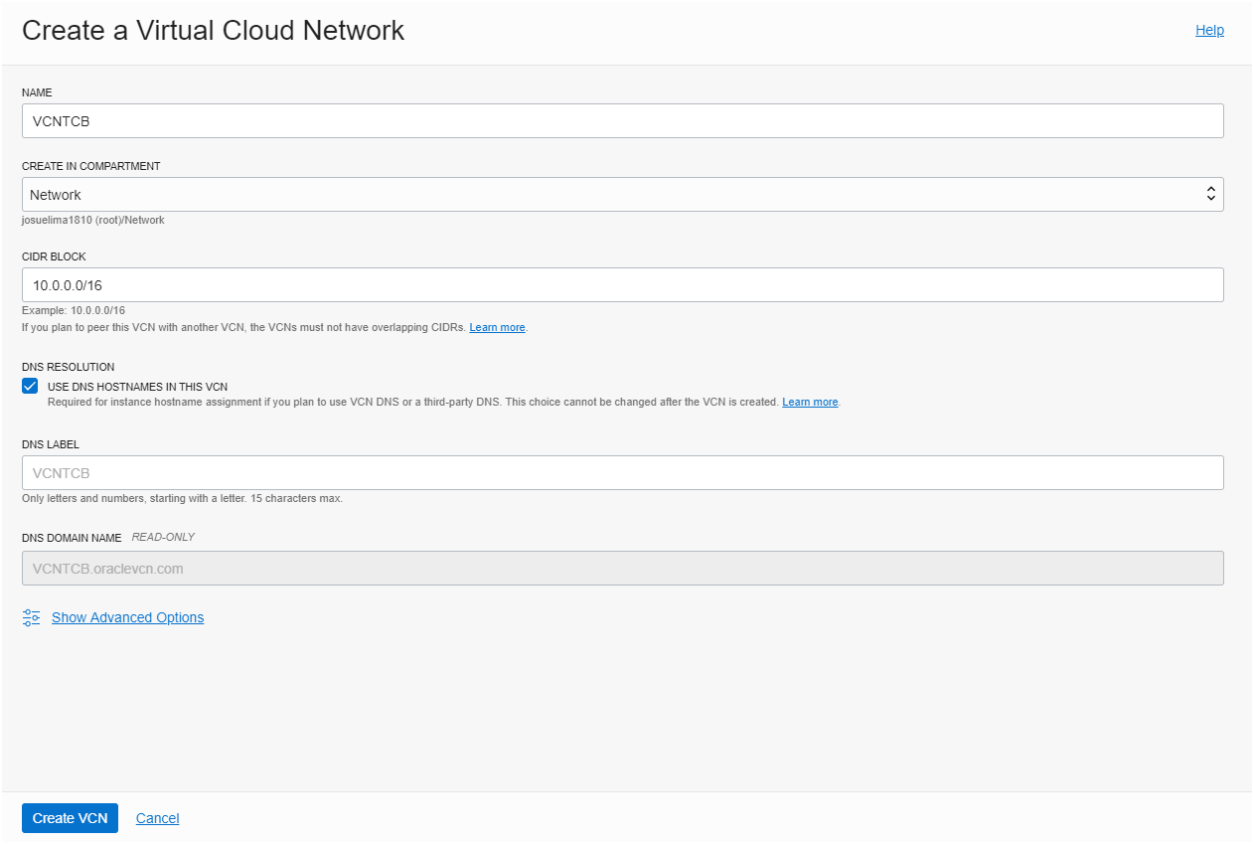
Em List Scope, Compartment, selecione o compartimento **Network.**



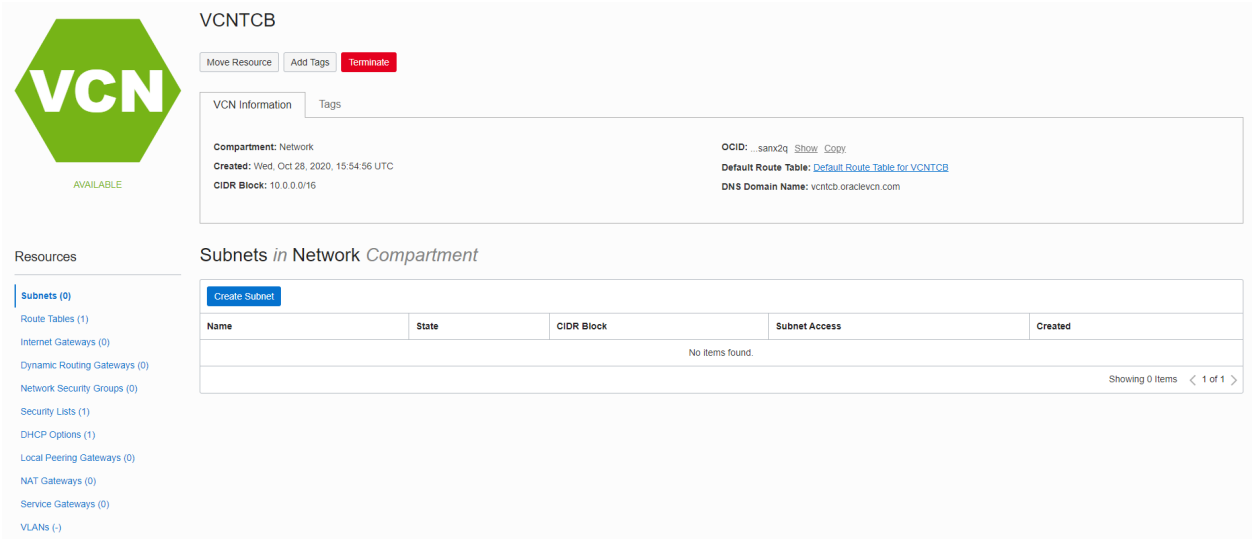
Clique em **Create VCN**.



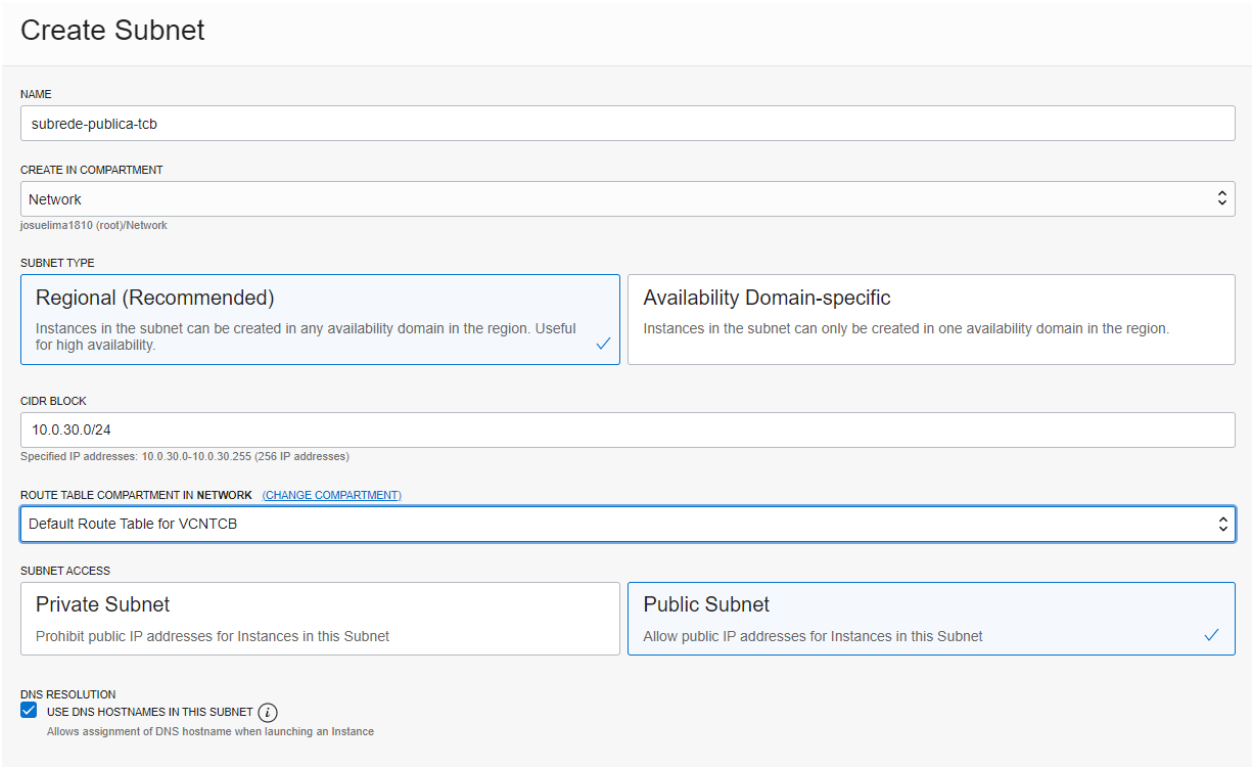
Insira o nome desejado, selecione o compartimento **Network.** Em CIDR Block, digite 10.0.0.0/16 e clique em **Create VCN.**



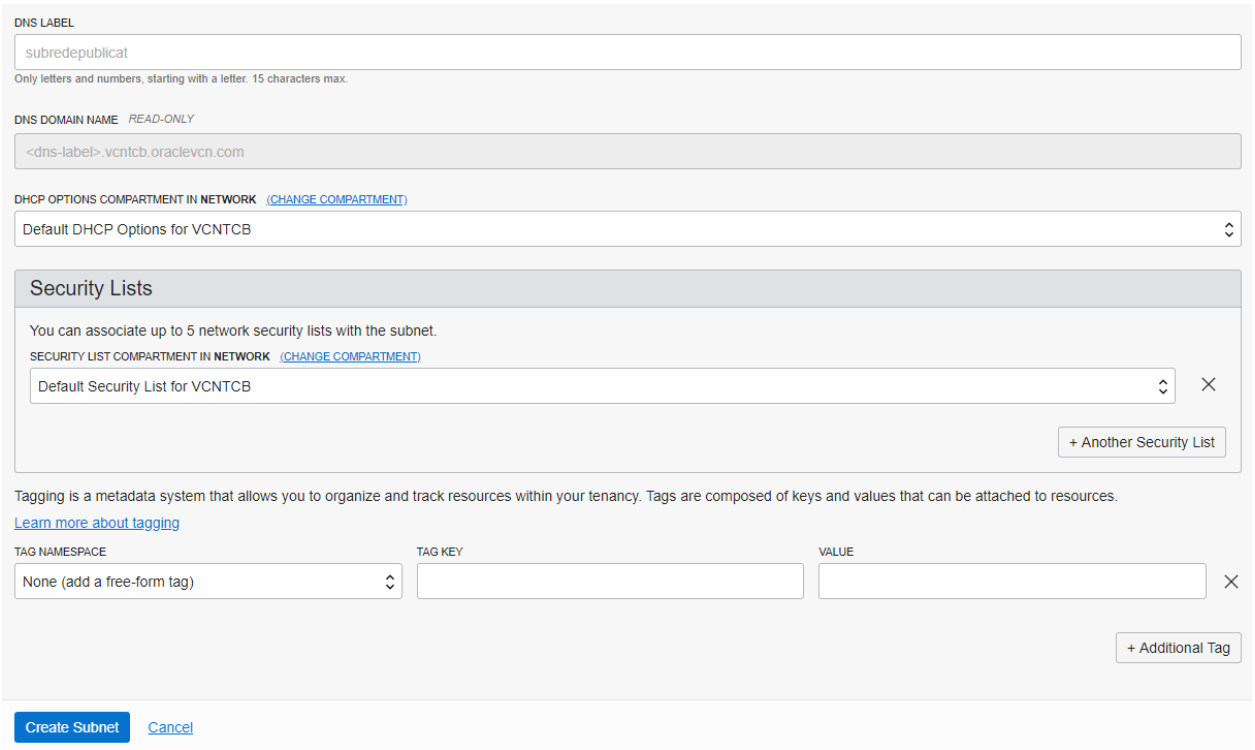
Em **Subnets**, clique em **Create Subnet.**



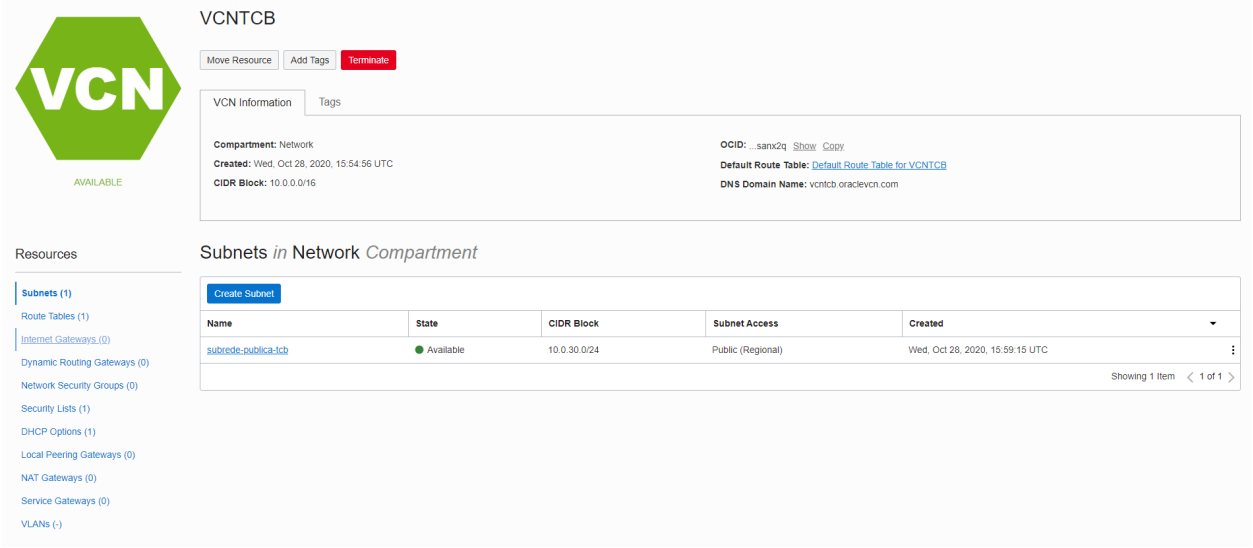
Durante a criação da subnet, insira o nome desejado, selecione o compartimento **Network.** Em CIDR Block, digite 10.0.30.0/24. Em **Route table**, selecione a **Default Route Table for VCNTCB**. Mantenha **Public Subnet** selecionado.



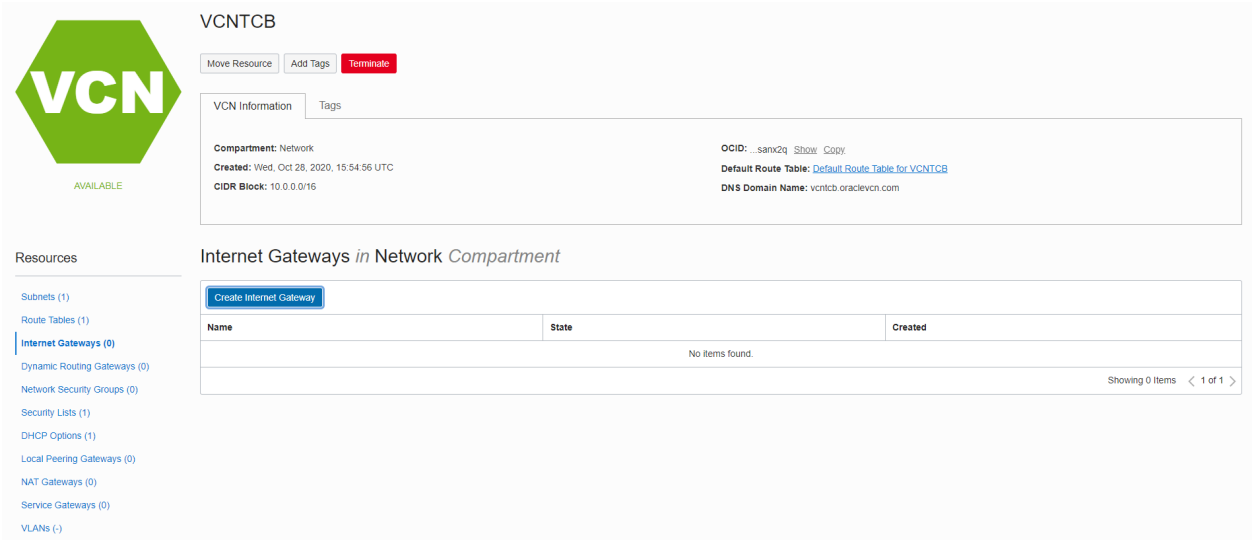
Em **DHCP options**, selecione **Default DHCP Options for VCNTCB.** Em **Security Lists**, selecione **Default Security List for VCNTCB.** Feito esses ajustes, clique em **Create Subnet.**



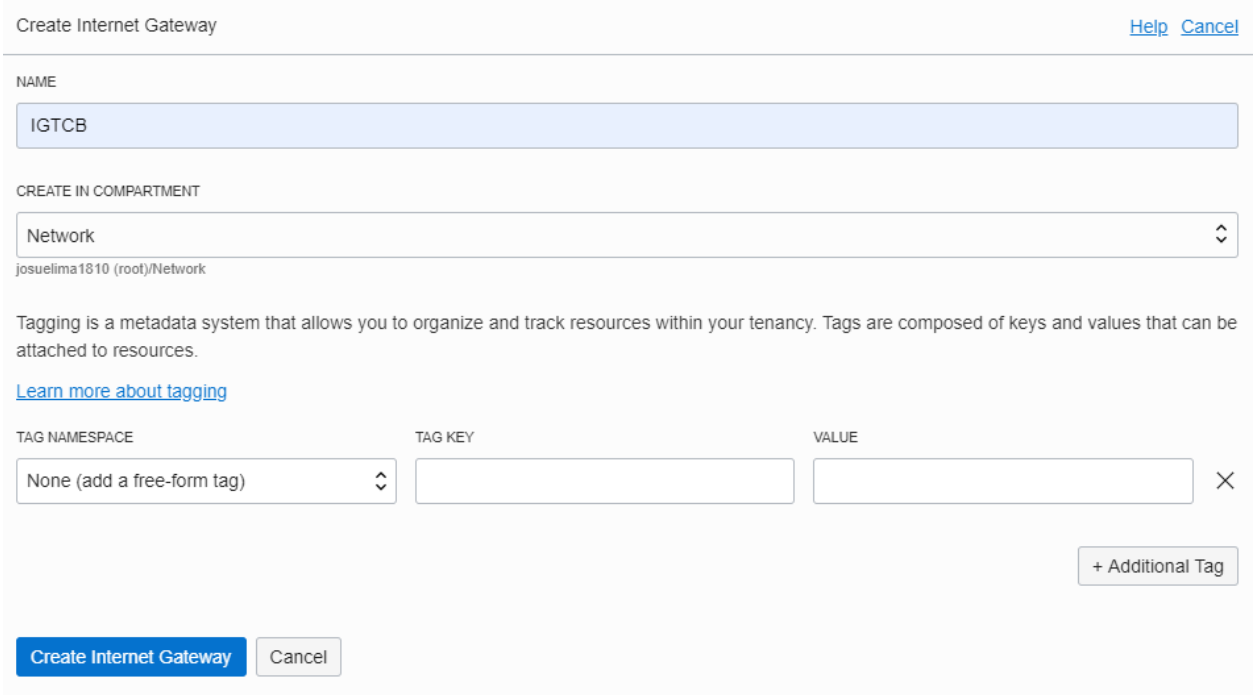
Com a Virtual Cloud Network criada, em **Resources**, clique em **Internet Gateways.**



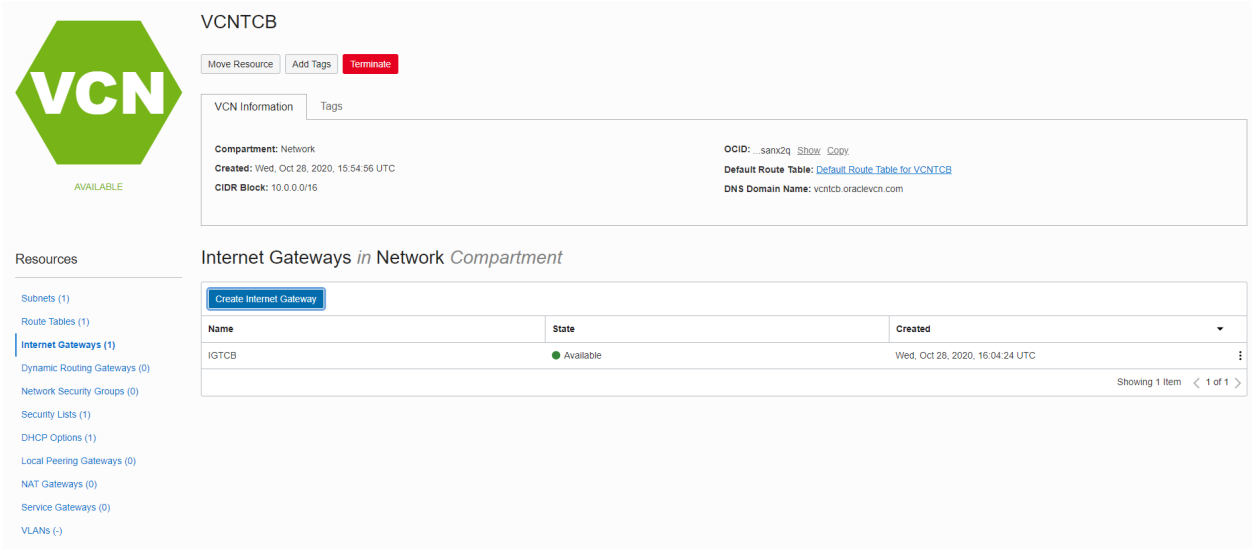
Clique em **Create Internet Gateway.**



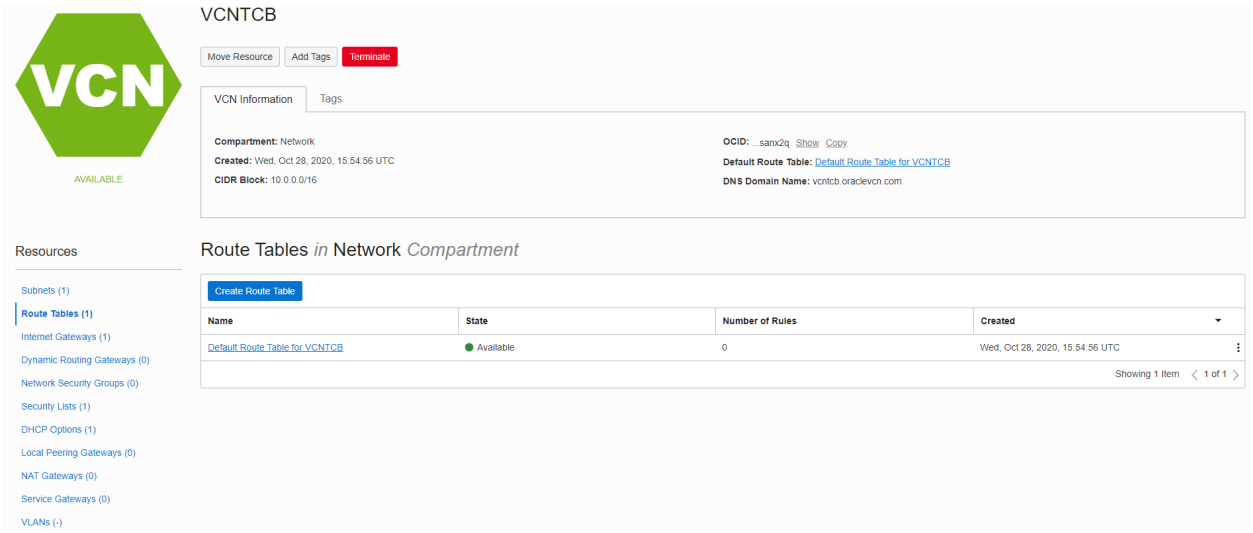
Insira a informação de nome, selecione o compartimento **Network e** clique em **Create Internet Gateway.**



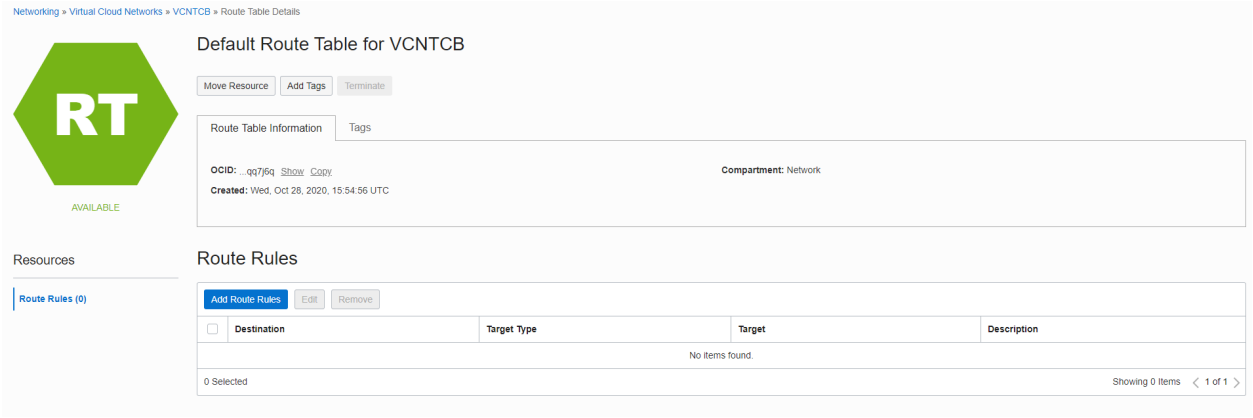
Com o Internet Gateway criado, em **Resources**, clique em **Route Tables.**



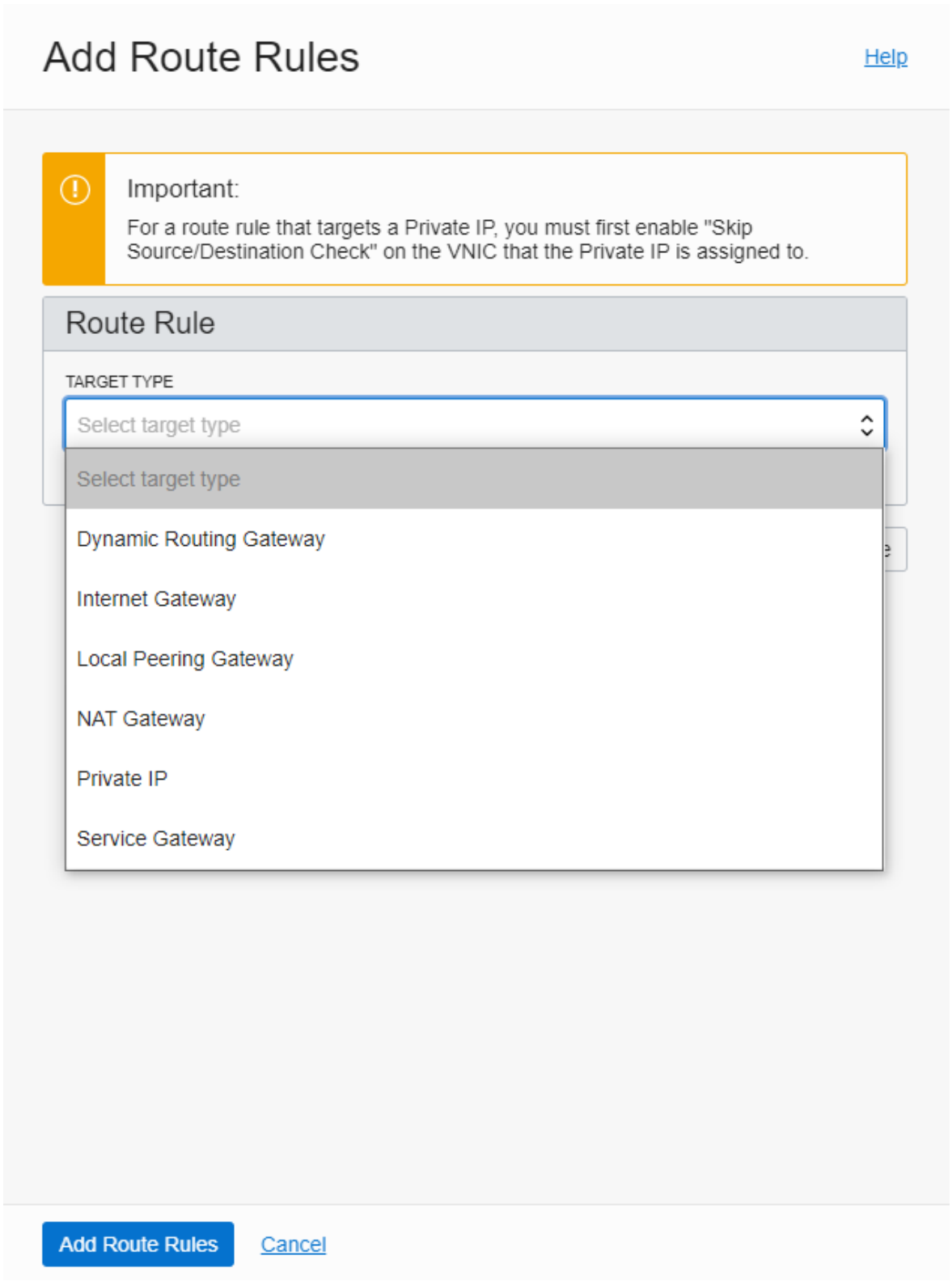
Clique em **Default Route Table for VCNTCB**.



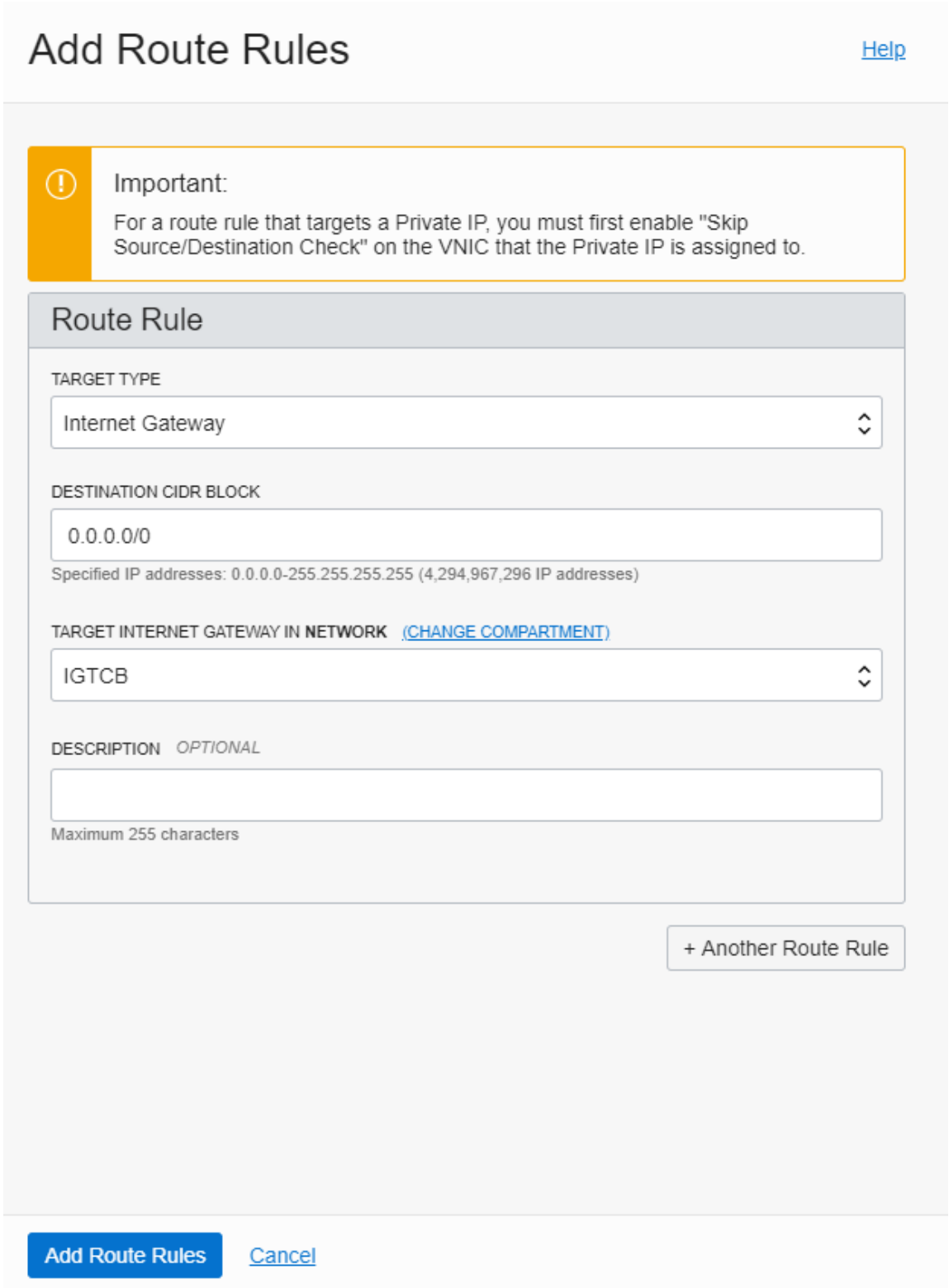
Em **Route Rules**, clique em **Add Route Rules**.

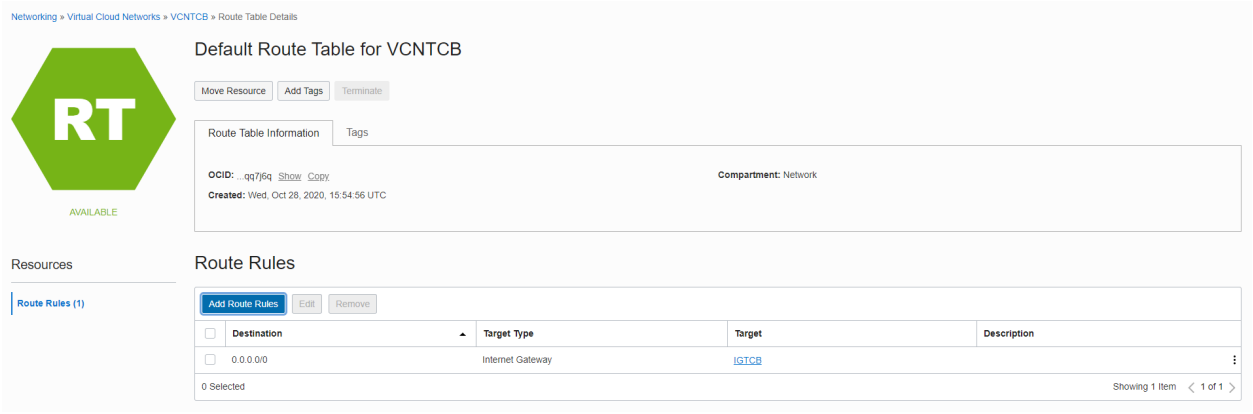


Em **Route Rules > Target Type**, selecione **Internet Gateway**.

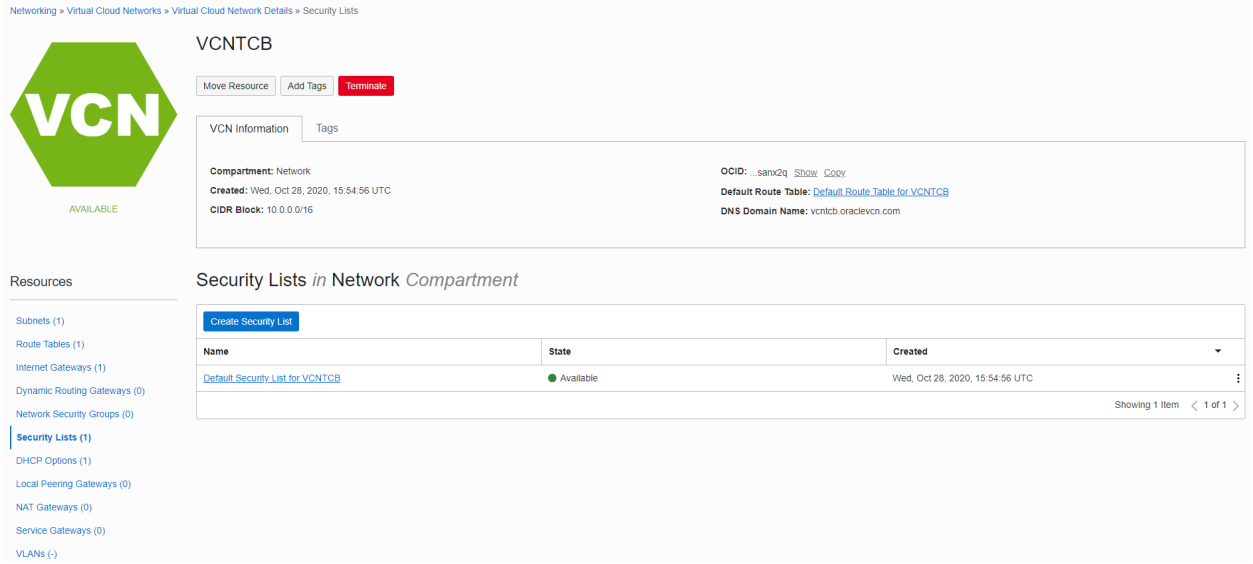


Em **Destination CIDR Block**, insira 0.0.0.0/0. Em Target Internet Gateway, selecione o Internet gateway criado anteriormente. Feito isso, clique em **Add Route Rules.**

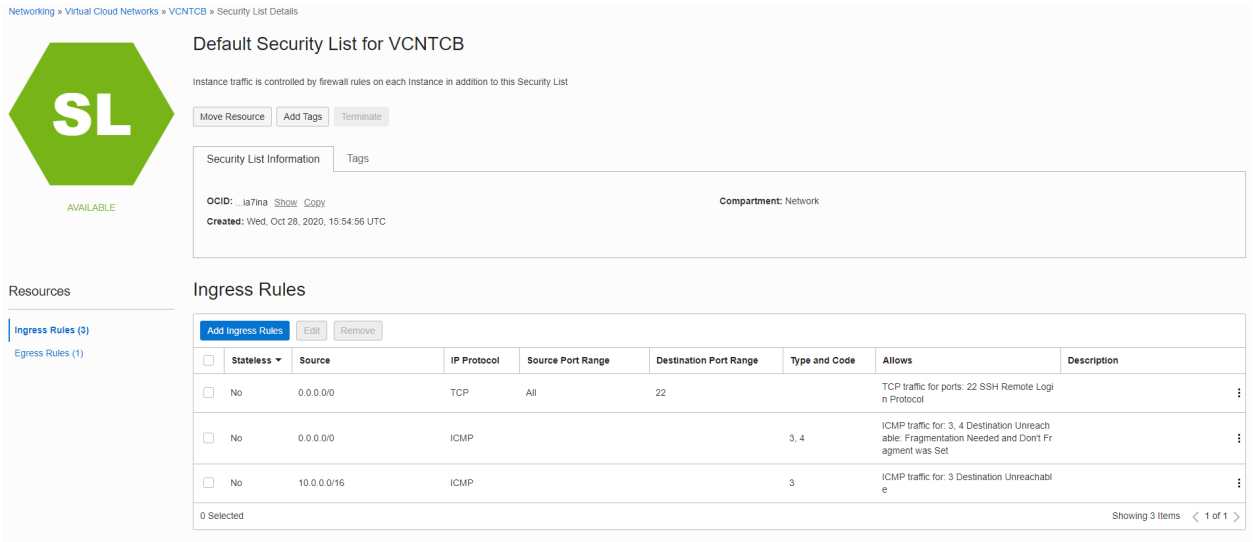




Nas informações da VCN, em Resources, clique em **Security List**. Em seguida, clique em **Default Security List for VCNTCB.**



Em **Ingress Rules**, clique em **Add Ingress Rules.**



Em **Source CIDR,** insira 0.0.0.0/0. Em **Destination Port Range**, insira 80. Mais abaixo, insira a descrição da regra e clique em **Add Ingress Rules.**

Add Ingress Rules

Cancel

Ingress Rule 1

Allows TCP traffic 80

STATELESS

SOURCE TYPE

CIDR

SOURCE CIDR

0.0.0.0/0

Specified IP addresses: 0.0.0.0-255.255.255.255 (4,294,967,296 IP addresses)

IP PROTOCOL

TCP

SOURCE PORT RANGE *OPTIONAL*

All

Examples: 80, 20-22

DESTINATION PORT RANGE *OPTIONAL*

80

Examples: 80, 20-22

DESCRIPTION *OPTIONAL*

Allow HTTP Traffic

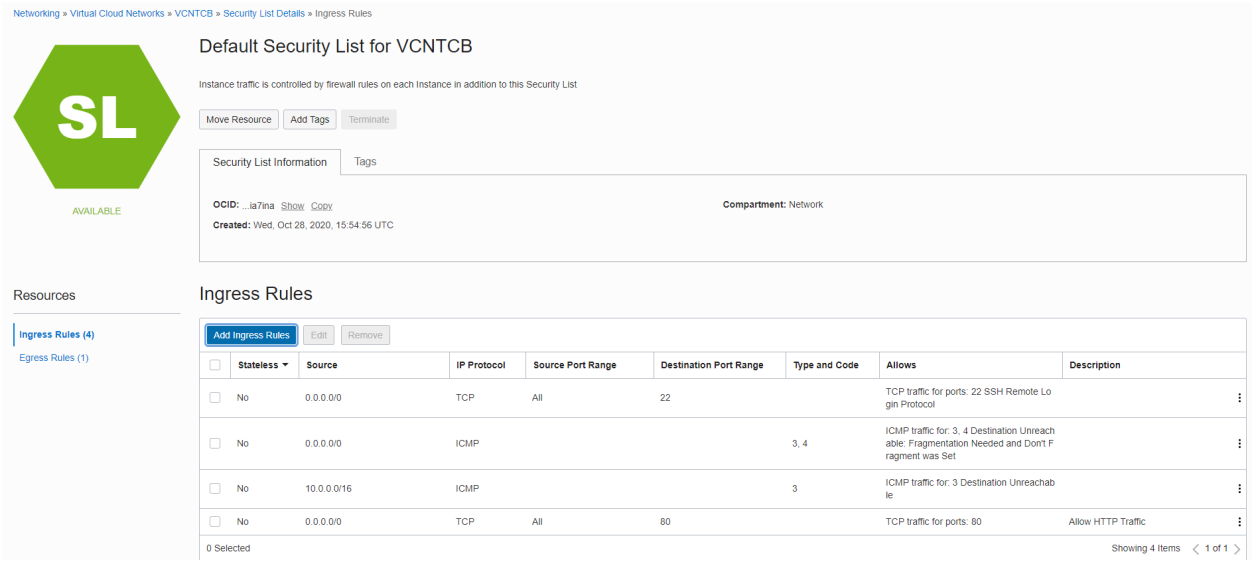
Maximum 255 characters

+ Another Ingress Rule

Add Ingress Rules

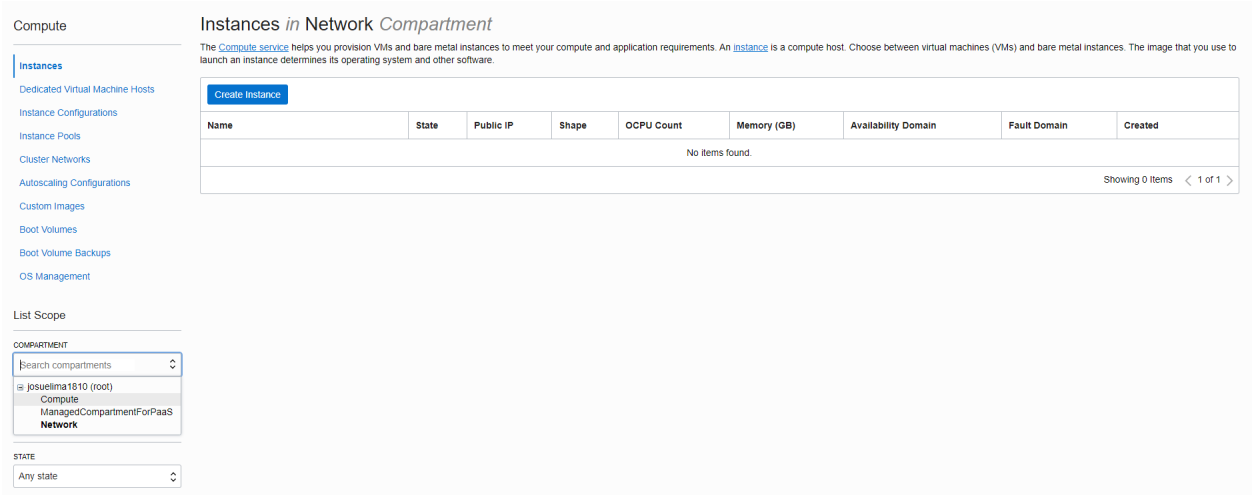
Cancel

Ingress Rule criada.

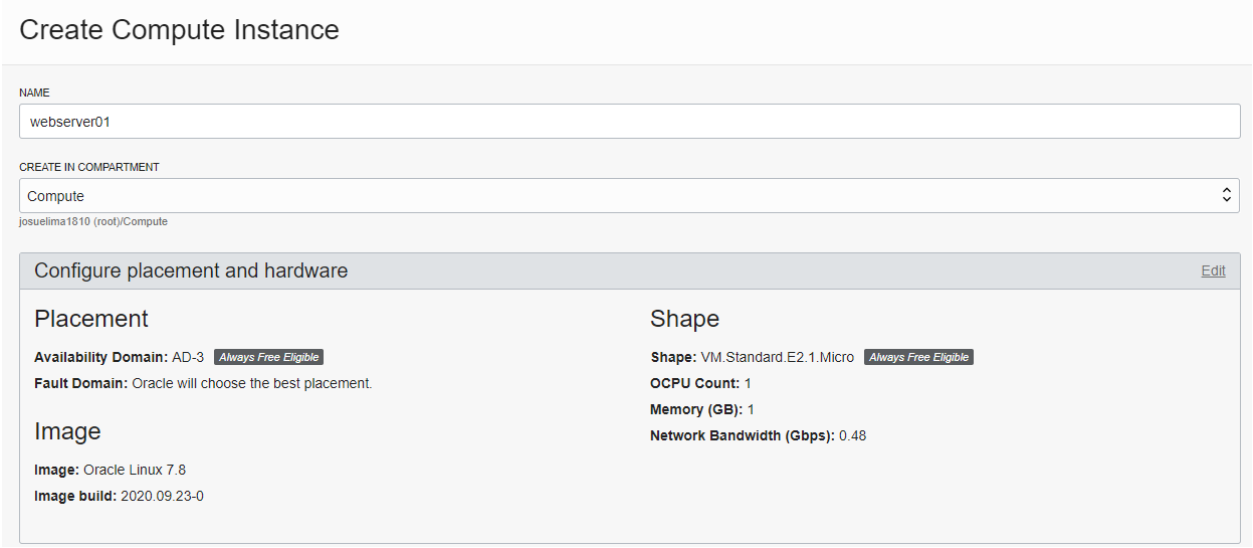


Criando a Instância

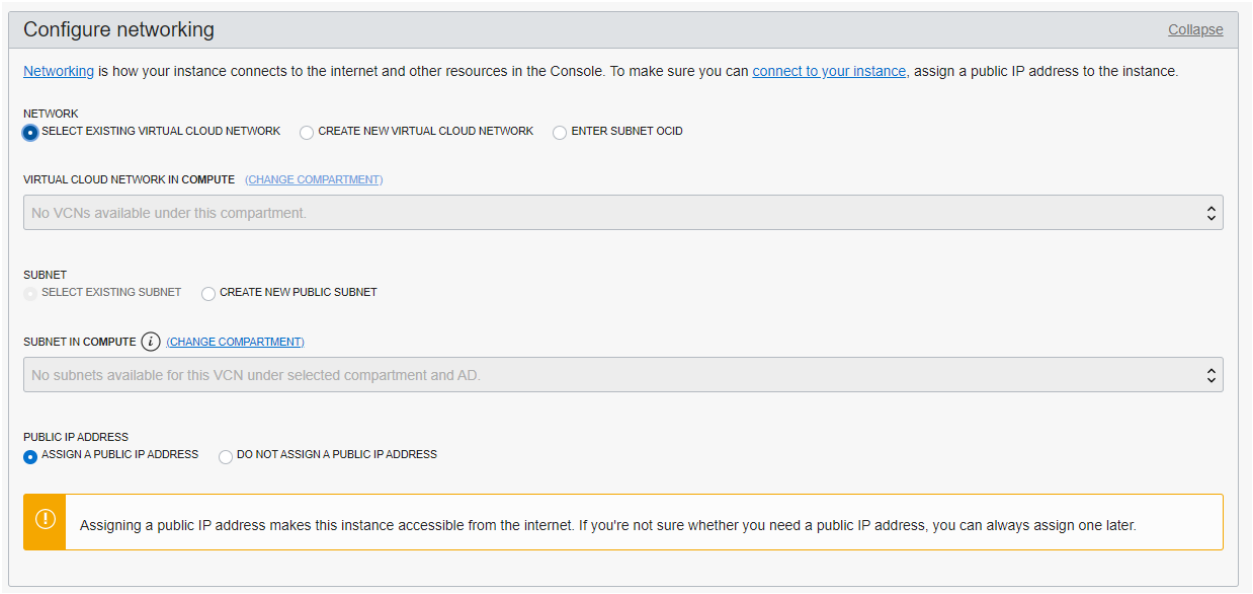
Acesse **Menu > Compute > Instances.** Em List Scope, Compartment, selecione **Compute.** Logo, clique em **Create Instance.**



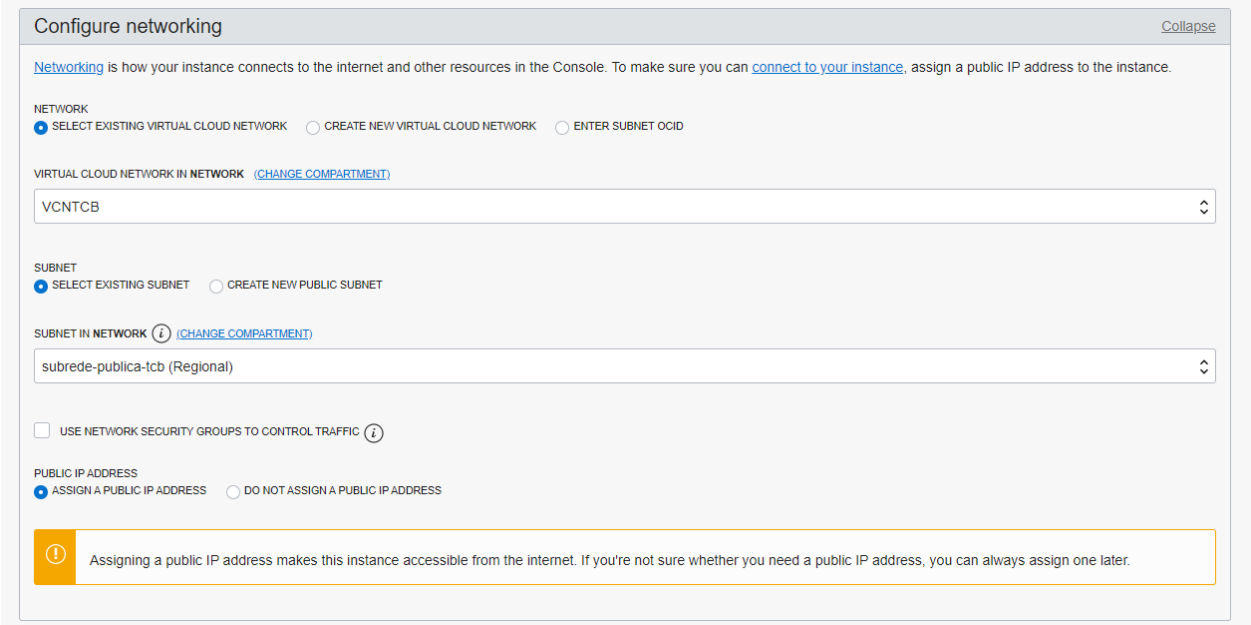
Abaixo, insira o nome desejado para a instância e mantenha o compartimento **Compute** selecionado.



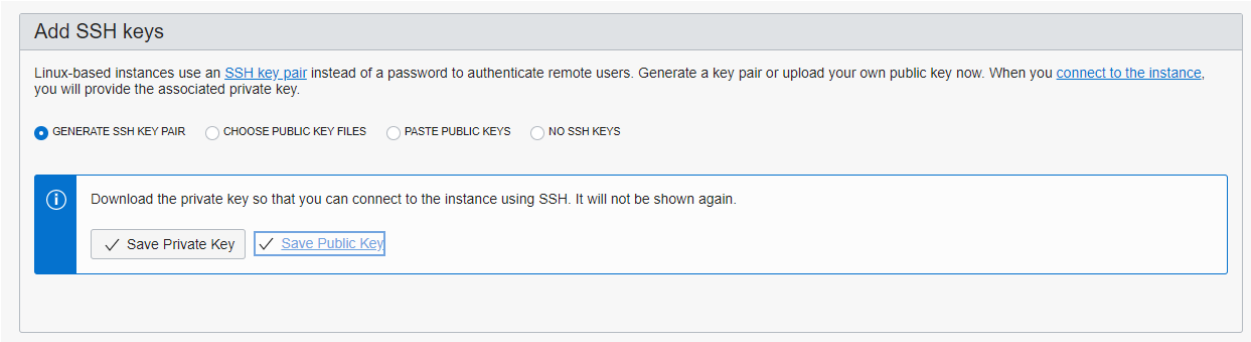
Em **Configure Networking**, clique em **Edit**. Após expandir, em **Network**, selecione a opção **Select Existing Virtual Cloud Network.** Em **Virtual Cloud Network**, clique em **Change Compartment** e selecione o compartimento **Network**. Em Subnet in compute, clique em **Change Compartment** e selecione o compartimento **Network**.

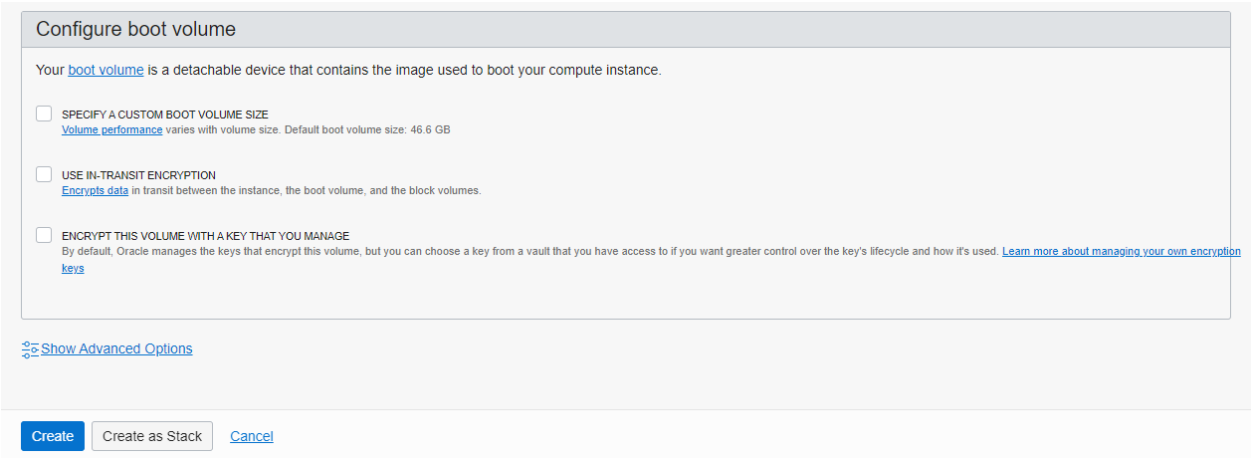


Após mudar o compartimento, em **Virtual Cloud Network**, selecione a VCN criada. Em **subnet**, mantenha a opção **Select Existing Subnet** selecionada. Em **Subnet in Network,** selecione a subnet criada.

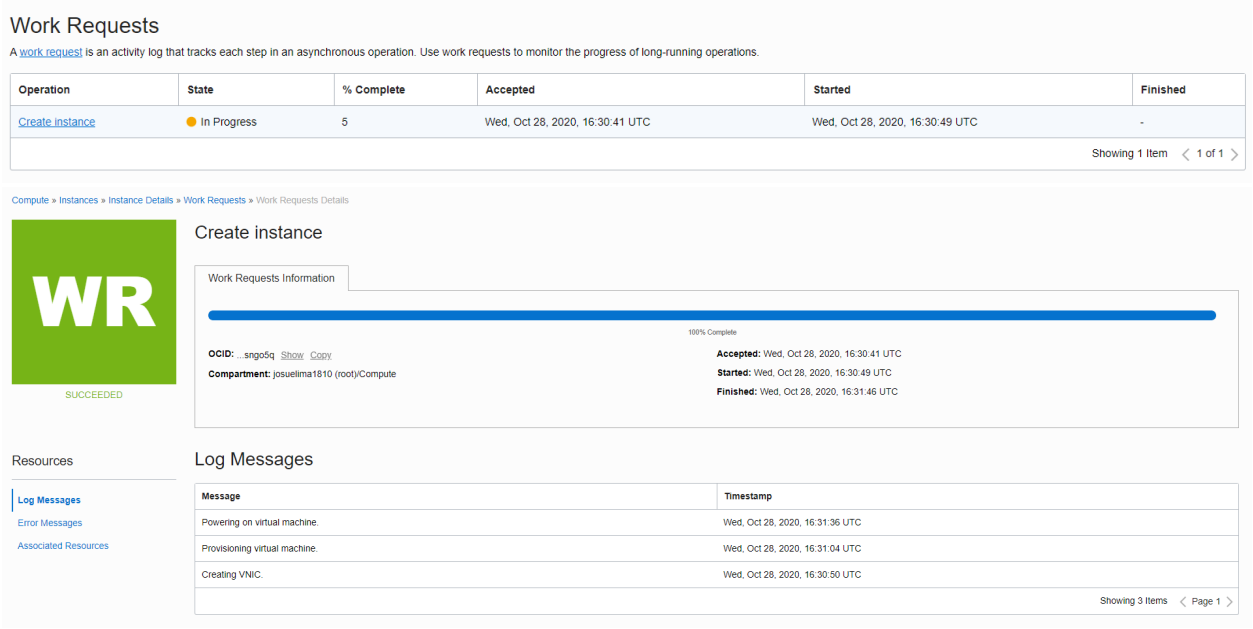


Em **Add SSH Keys**, mantenha a opção **Generate SSH Key Pair** selecionada, clique em **Save Private Key** e **Save Public Key.** Em seguida, clique em **Create.**



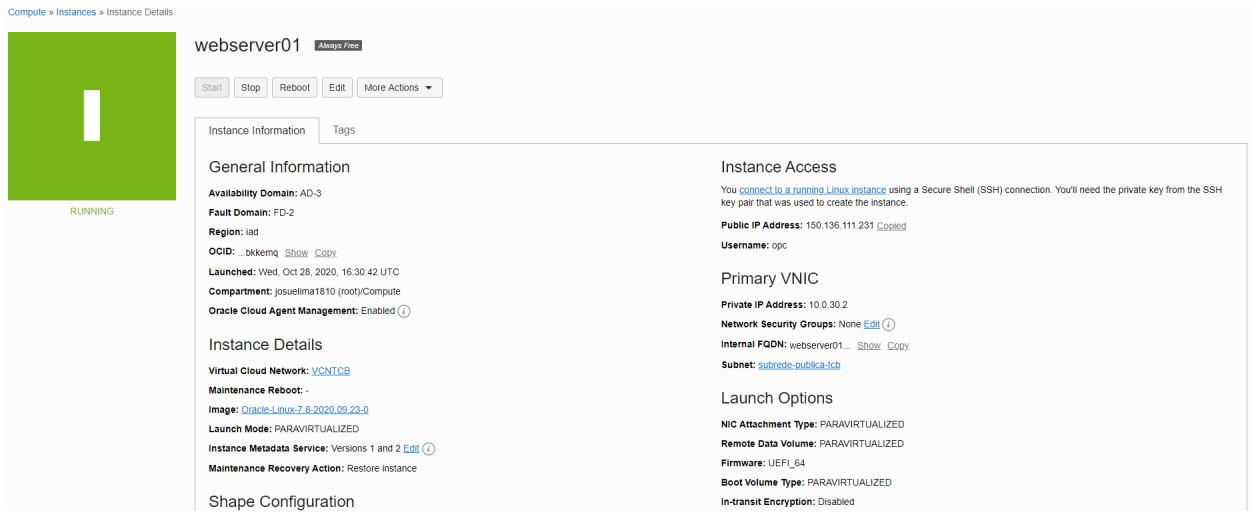


Aguarde o período de provisionamento da VM se concluir.

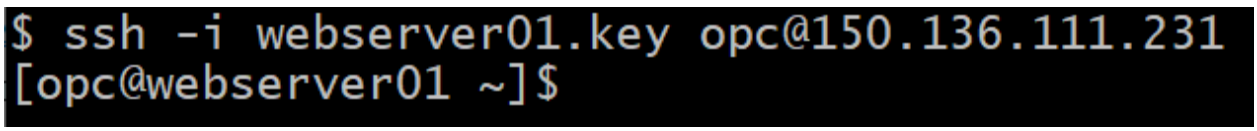


Acessando via SSH a VM criada

Ao acessar o Menu > Compute > Instances, clique na VM webserver01, para visualizer mais detalhes. Em Instance Information, Instance Access, Public IP Address, clique em Copy.



Para conectar à VM, foi utilizado o GitBash e inserido a seguinte linha de comando, obtendo sucesso na conexão via SSH.



Preparação da VM

Saída dos comandos de atualização.

```
[opc@webserver01 ~]$ sudo yum clean all
Loaded plugins: langpacks, ulninfo
Cleaning repos: ol7_UEKR5 ol7_addons ol7_developer ol7_developer_EPEL ol7_ksplice ol7_latest ol7_oci_included ol7_optional_latest
              : ol7_software_collections
Other repos take up 2.4 M of disk space (use --verbose for details)
```

```
[opc@webserver01 ~]$ sudo yum -y update
Loaded plugins: langpacks, ulninfo
ol7_UEKR5                                                                | 2.8 kB  00:00:00
ol7_addons                                                               | 2.8 kB  00:00:00
ol7_developer                                                            | 2.8 kB  00:00:00
ol7_developer_EPEL                                                       | 3.4 kB  00:00:00
ol7_ksplice                                                              | 2.8 kB  00:00:00
ol7_latest                                                               | 3.4 kB  00:00:00
ol7_oci_included                                                         | 2.9 kB  00:00:00
ol7_optional_latest                                                      | 2.8 kB  00:00:00
ol7_software_collections                                                 | 2.8 kB  00:00:00
(1/19): ol7_UEKR5/x86_64/updateinfo                                      |  40 kB  00:00:00
(2/19): ol7_developer/x86_64/primary_db                                  | 636 kB  00:00:00
(3/19): ol7_developer_EPEL/x86_64/group_gz                               |  87 kB  00:00:00
(4/19): ol7_addons/x86_64/primary_db                                     | 162 kB  00:00:00
(5/19): ol7_developer_EPEL/x86_64/updateinfo                             | 6.3 kB  00:00:00
(6/19): ol7_ksplice/updateinfo                                           | 5.8 kB  00:00:00
(7/19): ol7_ksplice/primary_db                                           | 1.1 MB  00:00:00
(8/19): ol7_addons/x86_64/updateinfo                                     |  93 kB  00:00:00
(9/19): ol7_latest/x86_64/group_gz                                       | 134 kB  00:00:00
(10/19): ol7_developer/x86_64/updateinfo                                 | 7.2 kB  00:00:00
(11/19): ol7_oci_included/x86_64/primary_db                              | 379 kB  00:00:00
(12/19): ol7_latest/x86_64/updateinfo                                    | 3.1 MB  00:00:00
(13/19): ol7_UEKR5/x86_64/primary_db                                     | 6.2 MB  00:00:01
(14/19): ol7_optional_latest/x86_64/updateinfo                           | 1.2 MB  00:00:00
(15/19): ol7_software_collections/x86_64/updateinfo                      | 8.7 kB  00:00:00
(16/19): ol7_optional_latest/x86_64/primary_db                           | 5.1 MB  00:00:00
(17/19): ol7_developer_EPEL/x86_64/primary_db                            |  12 MB  00:00:00
(18/19): ol7_software_collections/x86_64/primary_db                      | 5.1 MB  00:00:00
(19/19): ol7_latest/x86_64/primary_db                                    |  28 MB  00:00:00
```

```
  nss-sysinit.x86_64 0:3.53.1-3.el7_9                   nss-tools.x86_64 0:3.53.1-3.el7_9
  nss-util.x86_64 0:3.53.1-1.el7_9                      ntsysv.x86_64 0:1.7.6-1.el7
  numactl-libs.x86_64 0:2.0.12-5.0.3.el7                oci-utils.noarch 0:0.11.6-8.el7
  openldap.x86_64 0:2.4.44-22.el7                       oracle-cloud-agent.x86_64 0:1.5.1-3277.el7
  oracle-logos.noarch 0:70.7.0-1.0.7.el7                oraclelinux-release.x86_64 7:7.9-1.0.9.el7
  oraclelinux-release-el7.x86_64 0:1.0-13.1.el7         perl.x86_64 4:5.16.3-297.el7
  perl-Pod-Escapes.noarch 1:1.04-297.el7                perl-libs.x86_64 4:5.16.3-297.el7
  perl-macros.x86_64 4:5.16.3-297.el7                   procps-ng.x86_64 0:3.3.10-28.el7
  python.x86_64 0:2.7.5-89.0.1.el7                      python-firewall.noarch 0:0.6.3-11.0.1.el7
  python-libs.x86_64 0:2.7.5-89.0.1.el7                 python-perf.x86_64 0:3.10.0-1160.2.2.el7
  python-requests.noarch 0:2.6.0-10.el7                 python-setuptools.noarch 0:18.0.1-2.el7
  python3.x86_64 0:3.6.8-17.0.1.el7                     python3-libs.x86_64 0:3.6.8-17.0.1.el7
  python3-pip.noarch 0:9.0.3-8.el7                      redhat-release-server.x86_64 1:7.9-3.0.1.el7
  rhnlib.noarch 0:2.5.65-8.0.3.el7                      rpm.x86_64 0:4.11.3-45.el7
  rpm-build-libs.x86_64 0:4.11.3-45.el7                 rpm-libs.x86_64 0:4.11.3-45.el7
  rpm-python.x86_64 0:4.11.3-45.el7                     rsyslog.x86_64 0:8.24.0-57.el7_9
  sed.x86_64 0:4.2.2-7.el7                              selinux-policy.noarch 0:3.13.1-268.0.1.el7
  selinux-policy-targeted.noarch 0:3.13.1-268.0.1.el7   shim-x64.x86_64 0:15-2.0.9.el7
  sos.noarch 0:3.9-4.0.1.el7_9                          sssd-client.x86_64 0:1.16.5-10.0.1.el7_9.5
  strace.x86_64 0:4.24-6.el7                            sudo.x86_64 0:1.8.23-10.el7
  systemd.x86_64 0:219-78.0.1.el7                       systemd-libs.x86_64 0:219-78.0.1.el7
  systemd-python.x86_64 0:219-78.0.1.el7                systemd-sysv.x86_64 0:219-78.0.1.el7
  systemtap.x86_64 0:4.0-13.0.1.el7                     systemtap-client.x86_64 0:4.0-13.0.1.el7
  systemtap-devel.x86_64 0:4.0-13.0.1.el7               systemtap-runtime.x86_64 0:4.0-13.0.1.el7
  tcsh.x86_64 0:6.18.01-17.el7                          teamd.x86_64 0:1.29-3.el7
  tuned.noarch 0:2.11.0-9.0.3.el7                       tuned-profiles-oci.noarch 0:2.11.0-9.0.3.el7
  tuned-profiles-oci-recommend.noarch 0:2.11.0-9.0.3.el7 tzdata.noarch 0:2020d-2.el7
  uptrack.noarch 0:1.2.68-0.el7                         util-linux.x86_64 0:2.23.2-65.0.1.el7
  vdo.x86_64 0:6.1.3.23-5.el7                           vim-common.x86_64 2:7.4.629-7.0.1.el7
  vim-enhanced.x86_64 2:7.4.629-7.0.1.el7               vim-filesystem.x86_64 2:7.4.629-7.0.1.el7
  vim-minimal.x86_64 2:7.4.629-7.0.1.el7                yum.noarch 0:3.4.3-168.0.3.el7

Replaced:
  PyYAML.x86_64 0:3.10-11.el7          python-cffi.x86_64 0:1.6.0-5.el7          python-chardet.noarch 0:2.2.1-3.el7
  python-idna.noarch 0:2.4-1.el7       python-urllib3.noarch 0:1.10.2-7.el7

Complete!
```

Após a atualização ser concluída, utilize o commando **yum -y install httpd**, para instalar o Apache.

```
Installed:
  httpd.x86_64 0:2.4.6-95.0.1.el7

Dependency Installed:
  apr.x86_64 0:1.4.8-7.el7  apr-util.x86_64 0:1.5.2-6.0.1.el7  httpd-tools.x86_64 0:2.4.6-95.0.1.el7  mailcap.noarch 0:2.1.41-2.el7

Complete!
```

Com a instalação concluída, será necessário aplicar alguns comandos para conclusão da preparação da VM, como:

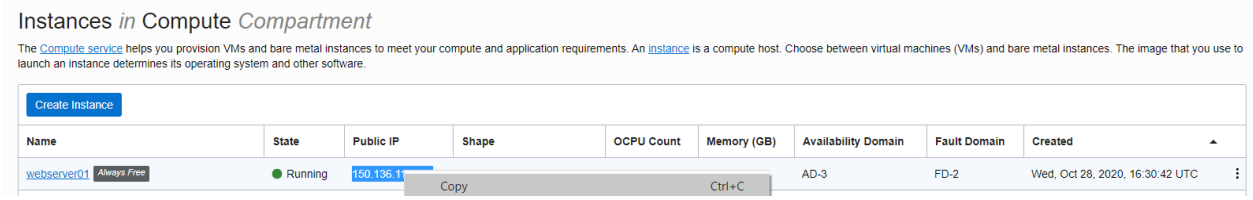
- sudo systemctl start httpd
- sudo systemctl enable httpd
- sudo firewall-cmd –permanent –zone=public –add-service=http
- sudo firewall-cmd –reload

```
Installed size: 4.3 M
Downloading packages:
(1/5): apr-1.4.8-7.el7.x86_64.rpm                                                                                                                  | 103 kB  00:00:00
(2/5): httpd-2.4.6-95.0.1.el7.x86_64.rpm                                                                                                           | 1.2 MB  00:00:00
(3/5): httpd-tools-2.4.6-95.0.1.el7.x86_64.rpm                                                                                                     |  92 kB  00:00:00
(4/5): apr-util-1.5.2-6.0.1.el7.x86_64.rpm                                                                                                         |  91 kB  00:00:00
(5/5): mailcap-2.1.41-2.el7.noarch.rpm                                                                                                             |  30 kB  00:00:00
------------------------------------------------------------------------------------------------------------------------------------------------------------------
Total                                                                                                                      3.0 MB/s | 1.5 MB  00:00:00
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
  Installing : apr-1.4.8-7.el7.x86_64                                                                                                                      1/5
  Installing : apr-util-1.5.2-6.0.1.el7.x86_64                                                                                                             2/5
  Installing : httpd-tools-2.4.6-95.0.1.el7.x86_64                                                                                                         3/5
  Installing : mailcap-2.1.41-2.el7.noarch                                                                                                                 4/5
  Installing : httpd-2.4.6-95.0.1.el7.x86_64                                                                                                               5/5
  Verifying  : httpd-tools-2.4.6-95.0.1.el7.x86_64                                                                                                         1/5
  Verifying  : apr-util-1.5.2-6.0.1.el7.x86_64                                                                                                             2/5
  Verifying  : mailcap-2.1.41-2.el7.noarch                                                                                                                 3/5
  Verifying  : apr-1.4.8-7.el7.x86_64                                                                                                                      4/5
  Verifying  : httpd-2.4.6-95.0.1.el7.x86_64                                                                                                               5/5

Installed:
  httpd.x86_64 0:2.4.6-95.0.1.el7

Dependency Installed:
  apr.x86_64 0:1.4.8-7.el7  apr-util.x86_64 0:1.5.2-6.0.1.el7  httpd-tools.x86_64 0:2.4.6-95.0.1.el7  mailcap.noarch 0:2.1.41-2.el7

Complete!
[opc@webserver01 ~]$ sudo systemctl start httpd
[opc@webserver01 ~]$ sudo systemctl enable httpd
Created symlink from /etc/systemd/system/multi-user.target.wants/httpd.service to /usr/lib/systemd/system/httpd.service.
[opc@webserver01 ~]$ sudo firewall-cmd --permanent --zone=public --add-service=http
success
[opc@webserver01 ~]$ sudo firewall-cmd --reload
success
```

Utilizando o comando **sudo systemctl status httpd,** para validar o funcionamento do Apache.

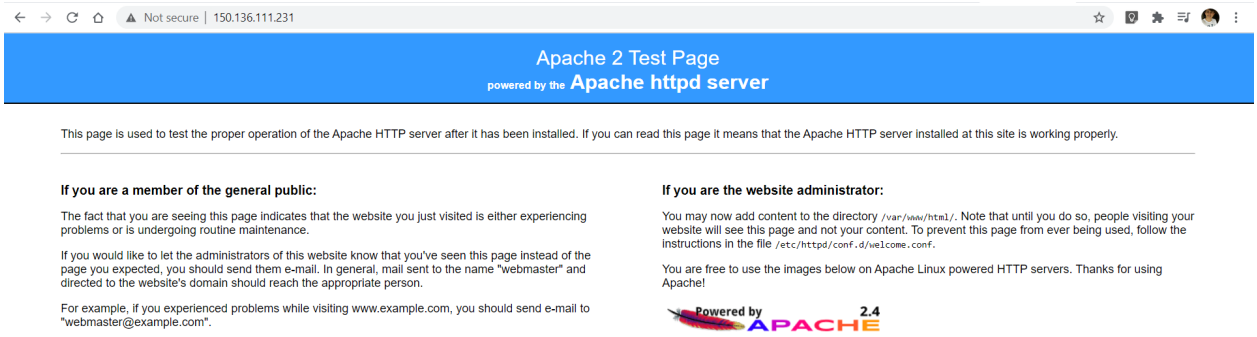
```
[opc@webserver01 ~]$ sudo systemctl status httpd
● httpd.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; enabled; vendor preset: disabled)
   Active: active (running) since Wed 2020-10-28 17:14:13 GMT; 7min ago
     Docs: man:httpd(8)
           man:apachectl(8)
 Main PID: 5179 (httpd)
   Status: "Total requests: 4; Current requests/sec: 0; Current traffic:   0 B/sec"
   CGroup: /system.slice/httpd.service
           ├─5179 /usr/sbin/httpd -DFOREGROUND
           ├─5180 /usr/sbin/httpd -DFOREGROUND
           ├─5181 /usr/sbin/httpd -DFOREGROUND
           ├─5182 /usr/sbin/httpd -DFOREGROUND
           ├─5183 /usr/sbin/httpd -DFOREGROUND
           ├─5184 /usr/sbin/httpd -DFOREGROUND
           └─5902 /usr/sbin/httpd -DFOREGROUND

Oct 28 17:14:13 webserver01 systemd[1]: Starting The Apache HTTP Server...
Oct 28 17:14:13 webserver01 systemd[1]: Started The Apache HTTP Server.
```

Após a verificação, navegue de volta à console da OCI e copie o IP Público da VM.



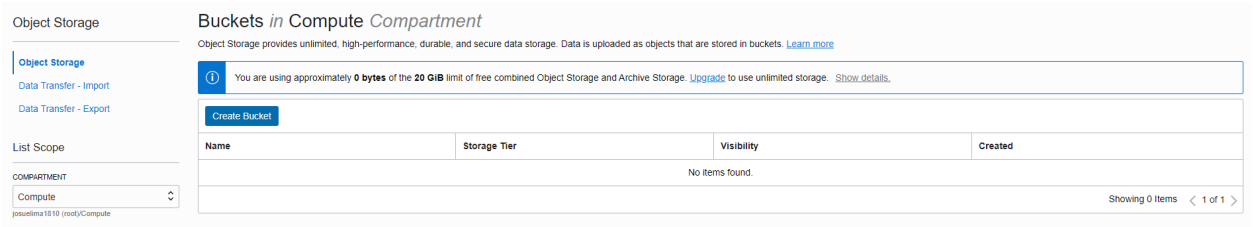
Feito isso, abra o seu navegador, cole o IP público para acessar o site em execução na VM.

Se tudo estiver funcionando corretamente, você verá a tela de Welcome do Apache, conforme figura abaixo.

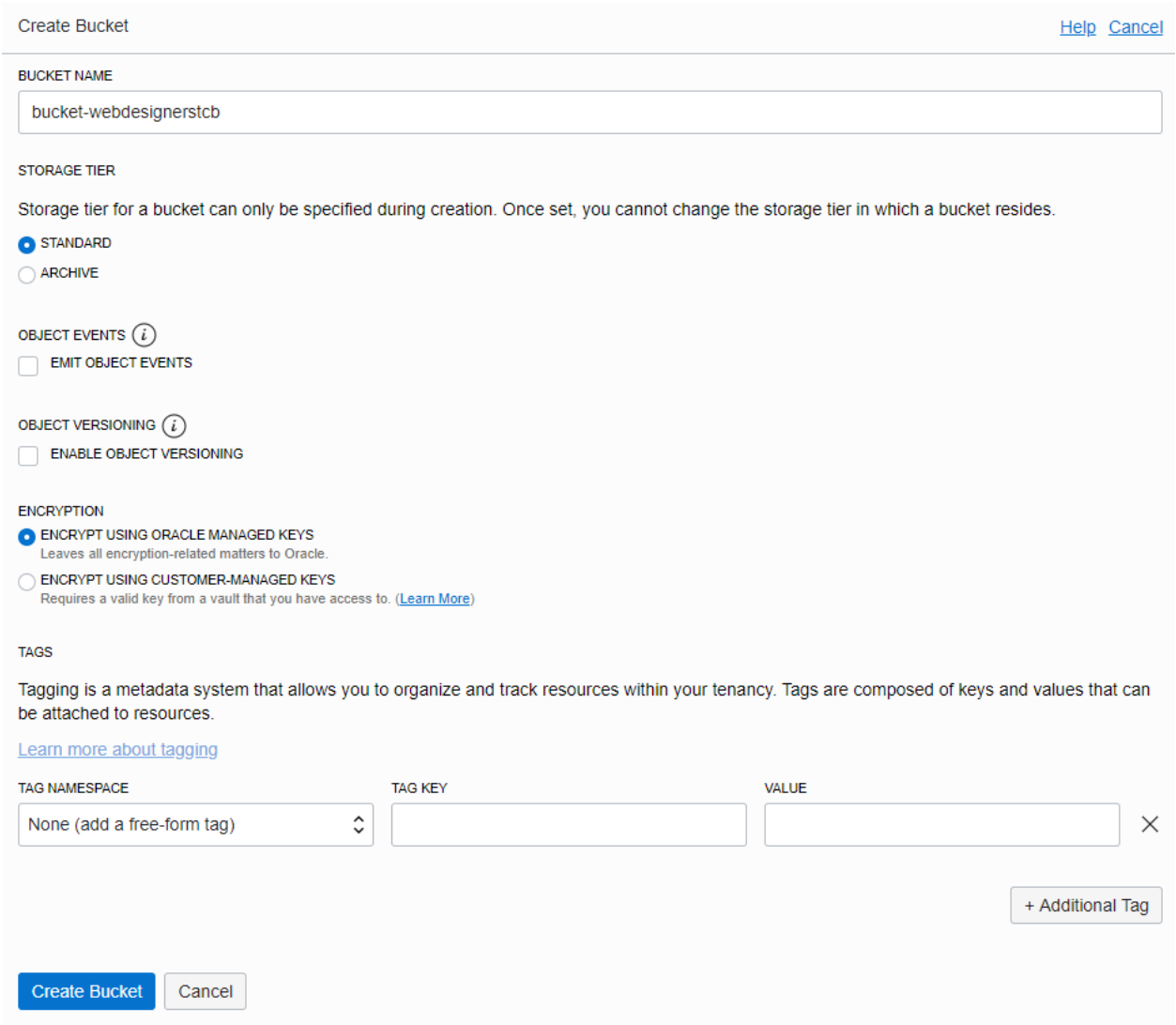


Criação do Bucket

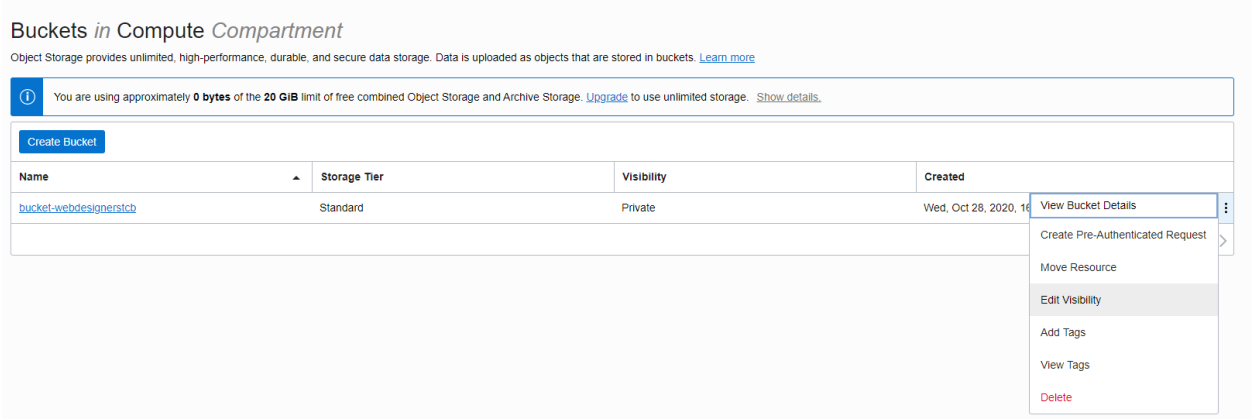
Acesse **Menu > Object Storage > Object Storage,** clique em **Create Bucket**.



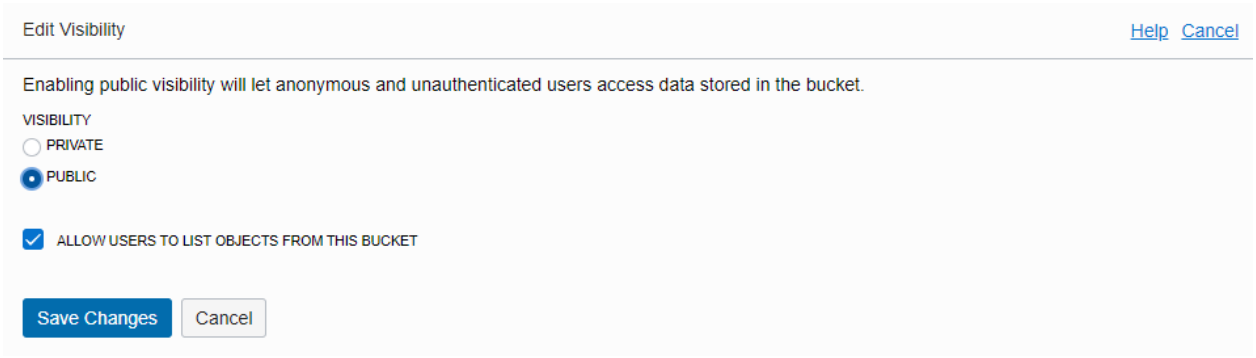
Insira o **nome do bucket** e clique em **Create Bucket.**



Após a criação do bucket, em detalhes do bucket criado (3 pontos), clique em **Edit Visibility.**

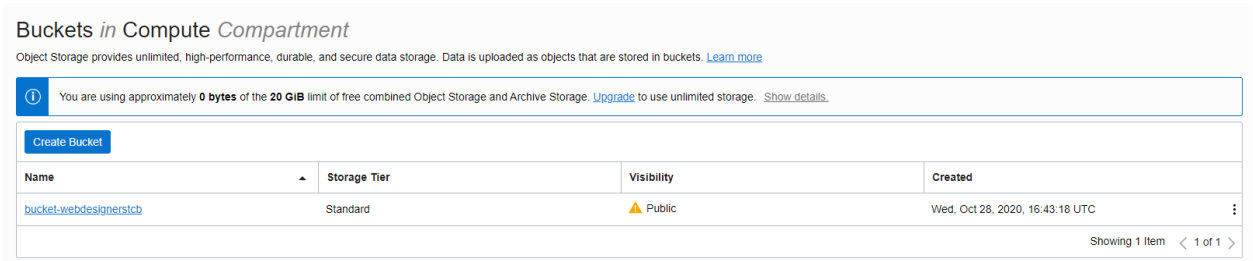


Em **Visibility**, selecione **Public** e clique em **Save Changes**.

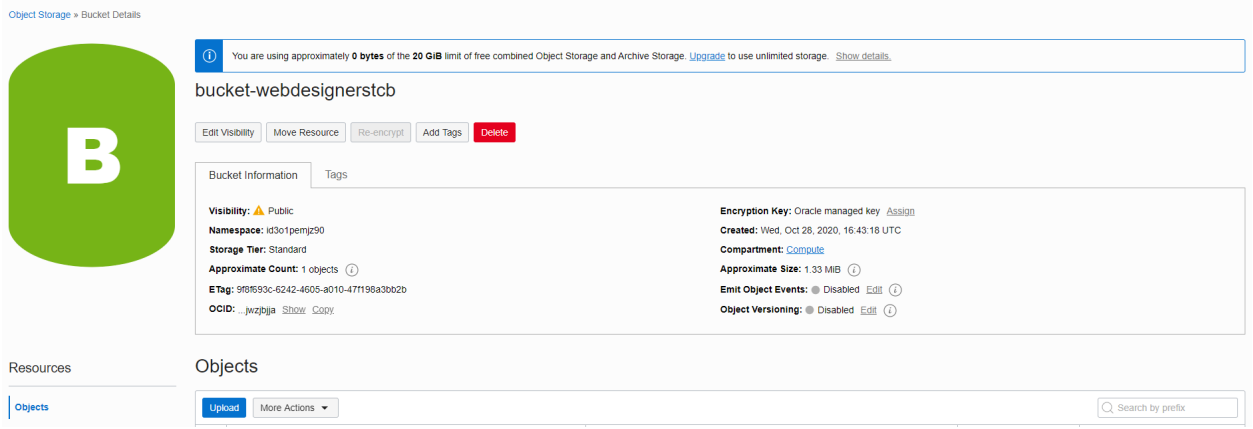


Fazendo upload do arquivo com o site para o bucket

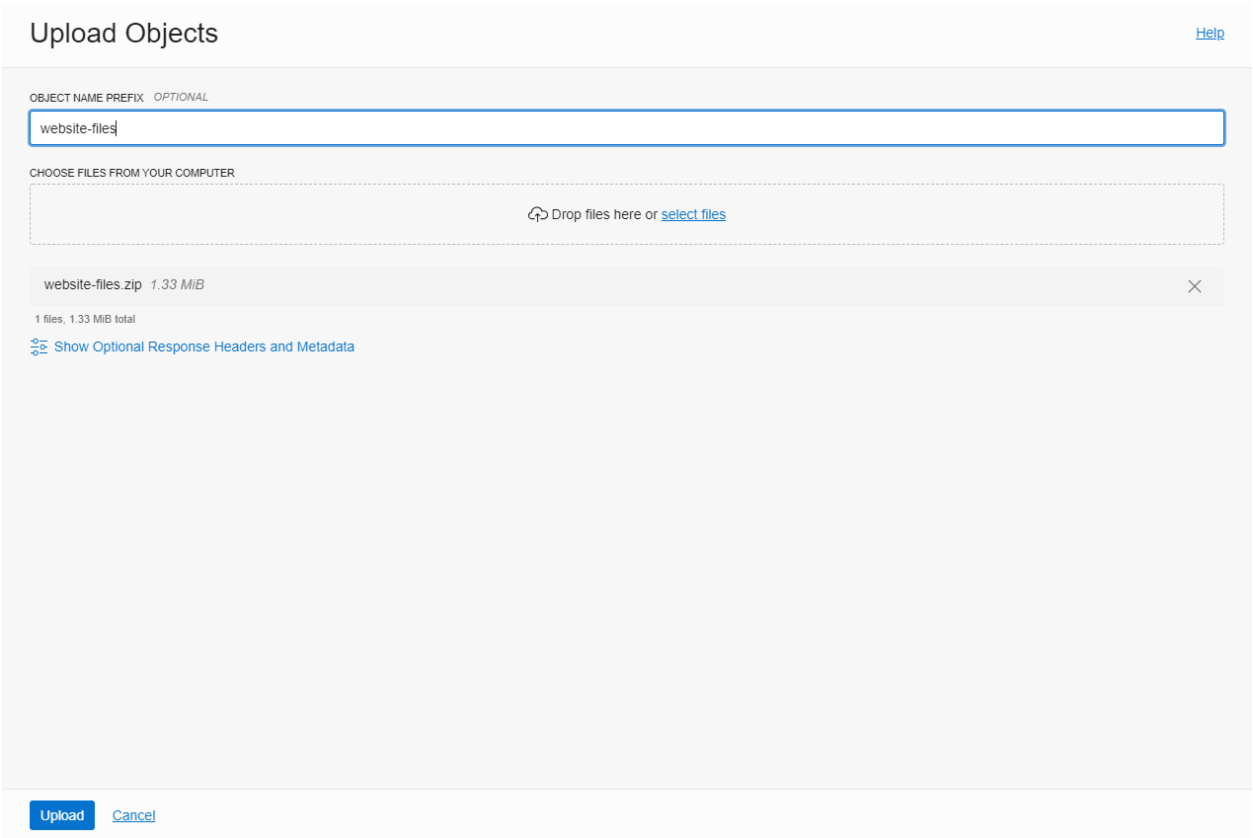
Clique no bucket (bucket-webdesignerstcb) para acessar mais recursos.



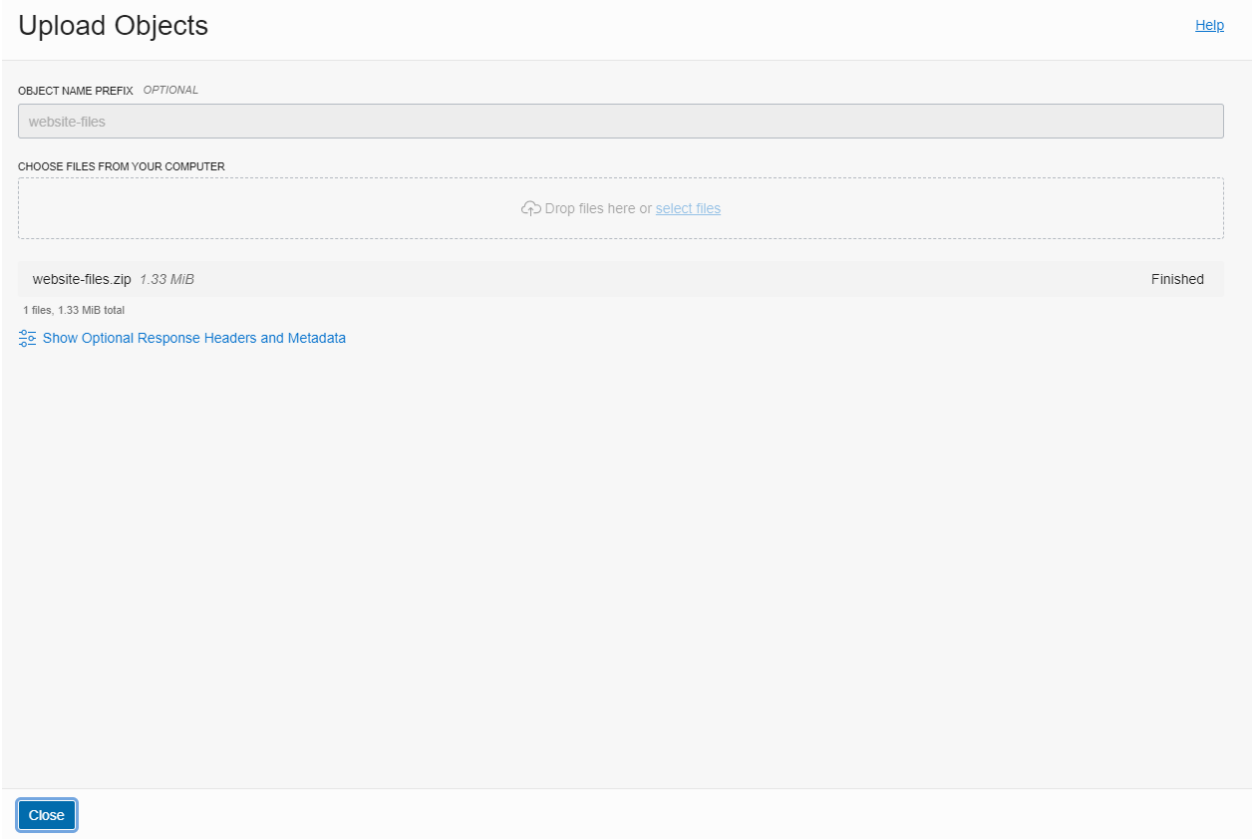
Em **Objects**, clique em **Upload**.



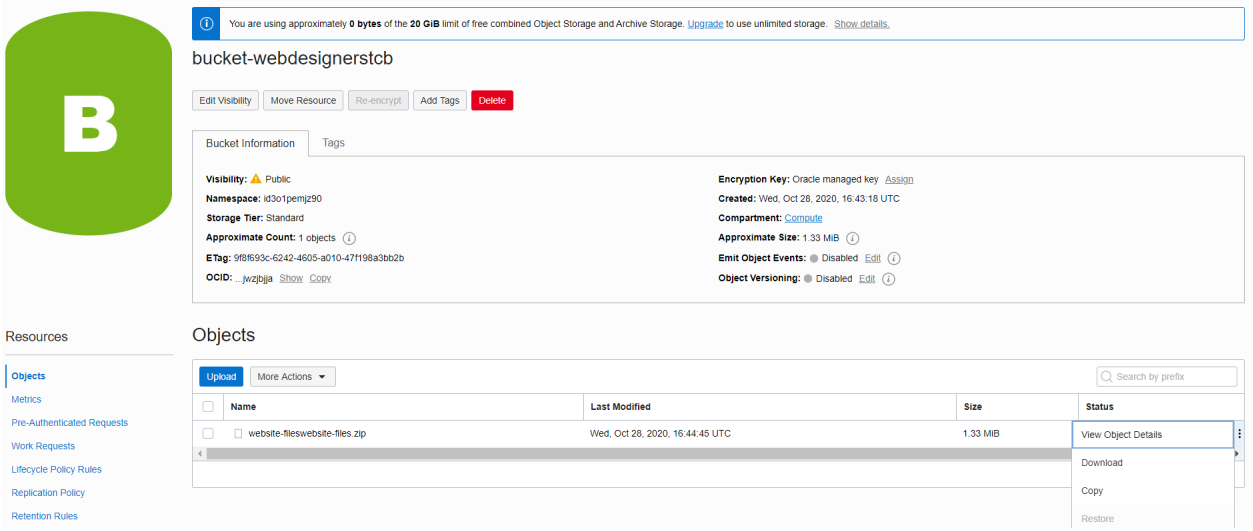
Em **Upload Objects**, defina um Object Name Prefix. Logo, em **Choose Files from Your Computer,** clique em select files, para direcionar o arquivo do site localizado em seu computador. Após selecionar, clique em **Upload.**



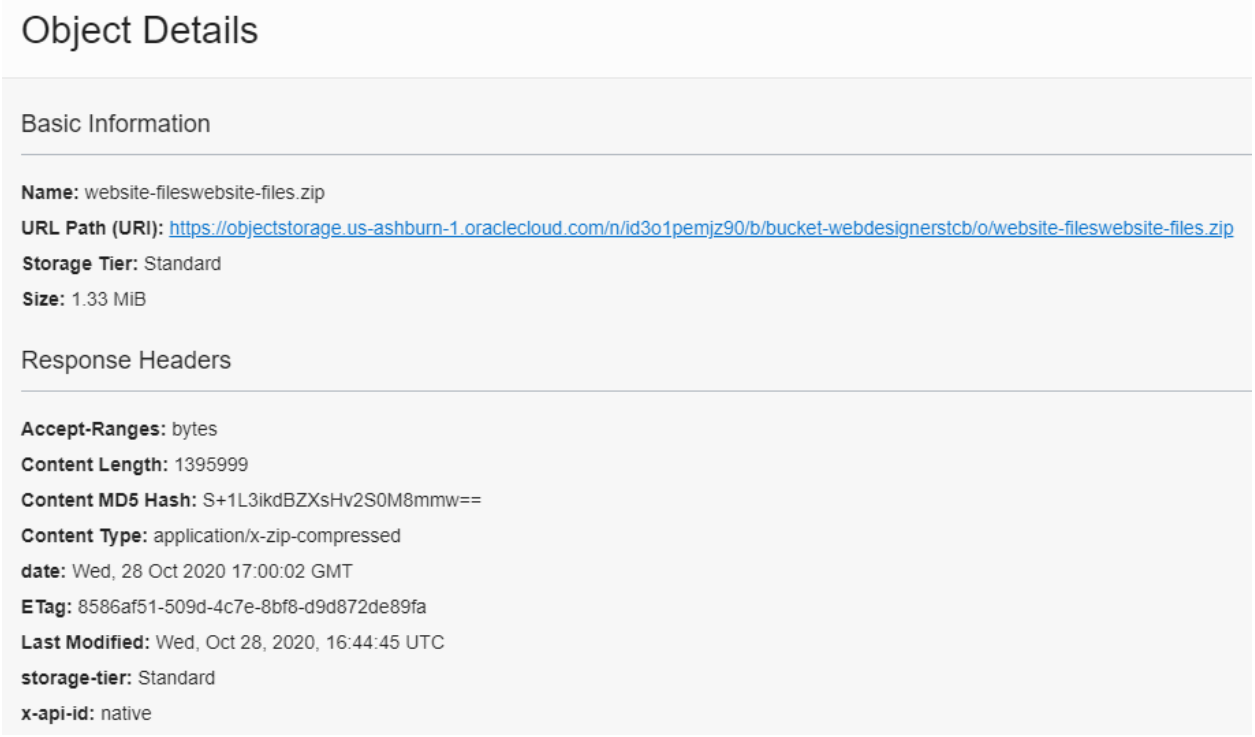
Com o Upload concluído, clique em **Close.**



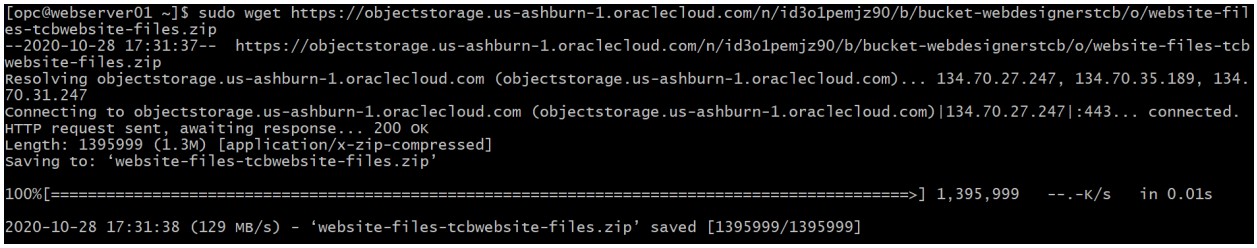
Em Objects, no arquivo feito o upload, clique nos 3 pontos e, em seguida, **View Object Details.**



Em **Object Details**, **Basic Information**, copie o link localizado em **URL Path (URI).**



Acesse a instância via SSH e execute o comando **sudo wget** *<URL-path-copiada>.*



Descompacte o arquivo com o comando **sudo unzip** *<nome-do-arquivo-do-site>*.

```
[opc@webserver01 ~]$ sudo unzip website-files-tcbwebsite-files.zip
Archive:  website-files-tcbwebsite-files.zip
   creating: website-files/
  inflating: website-files/index.html
   creating: __MACOSX/
   creating: __MACOSX/website-files/
  inflating: __MACOSX/website-files/._index.html
  inflating: website-files/.DS_Store
  inflating: __MACOSX/website-files/._.DS_Store
   creating: website-files/images/
  inflating: website-files/images/.DS_Store
  inflating: website-files/images/pic01.jpg
  inflating: website-files/images/background.jpeg
  inflating: website-files/LICENSE.txt
   creating: website-files/assets/
  inflating: website-files/assets/.DS_Store
   creating: website-files/assets/css/
  inflating: website-files/assets/css/main.css
  inflating: website-files/assets/css/font-awesome.min.css
   creating: website-files/assets/js/
  inflating: website-files/assets/js/util.js
  inflating: website-files/assets/js/jquery.scrolly.min.js
  inflating: website-files/assets/js/jquery.min.js
  inflating: website-files/assets/js/main.js
  inflating: website-files/assets/js/skel.min.js
  inflating: website-files/assets/js/jquery.scrollex.min.js
   creating: website-files/assets/fonts/
  inflating: website-files/assets/fonts/fontawesome-webfont.svg
  inflating: website-files/assets/fonts/FontAwesome.otf
  inflating: website-files/assets/fonts/fontawesome-webfont.woff2
  inflating: website-files/assets/fonts/fontawesome-webfont.ttf
  inflating: website-files/assets/fonts/fontawesome-webfont.woff
  inflating: website-files/assets/fonts/fontawesome-webfont.eot
```

Agora, copie os arquivos da pasta **website-files** para o diretório **/var/www/html,** utilizando o comando:

- sudo sync -avP ~/website-files/ /var/www/html/

```
[opc@webserver01 ~]$ sudo rsync -avP ~/website-files/ /var/www/html/
sending incremental file list
./
.DS_Store
          6,148 100%    0.00kB/s    0:00:00 (xfr#1, to-chk=25/27)
LICENSE.txt
         17,130 100%   16.34MB/s    0:00:00 (xfr#2, to-chk=24/27)
index.html
          2,940 100%    2.80MB/s    0:00:00 (xfr#3, to-chk=23/27)
assets/
assets/.DS_Store
          6,148 100%    5.86MB/s    0:00:00 (xfr#4, to-chk=20/27)
assets/css/
assets/css/font-awesome.min.css
         29,063 100%   27.72MB/s    0:00:00 (xfr#5, to-chk=16/27)
assets/css/main.css
         66,822 100%   63.73MB/s    0:00:00 (xfr#6, to-chk=15/27)
assets/fonts/
assets/fonts/FontAwesome.otf
        124,988 100%   39.73MB/s    0:00:00 (xfr#7, to-chk=14/27)
assets/fonts/fontawesome-webfont.eot
         76,518 100%   24.32MB/s    0:00:00 (xfr#8, to-chk=13/27)
assets/fonts/fontawesome-webfont.svg
```

```
website-files/assets/js/main.js
          3,575 100%  290.93kB/s    0:00:00 (xfr#16, to-chk=5/27)
website-files/assets/js/skel.min.js
          9,085 100%  739.34kB/s    0:00:00 (xfr#17, to-chk=4/27)
website-files/assets/js/util.js
         12,433 100% 1011.80kB/s    0:00:00 (xfr#18, to-chk=3/27)
website-files/images/
website-files/images/.DS_Store
          6,148 100%  500.33kB/s    0:00:00 (xfr#19, to-chk=2/27)
website-files/images/background.jpeg
        310,041 100%   18.48MB/s    0:00:00 (xfr#20, to-chk=1/27)
website-files/images/pic01.jpg
        507,126 100%   26.87MB/s    0:00:00 (xfr#21, to-chk=0/27)

sent 1,985,894 bytes  received 459 bytes  3,972,706.00 bytes/sec
total size is 1,983,936  speedup is 1.00
```

Com a pasta copiada, ajuste as permissões da pasta com os comandos:

- sudo chown -R apache:apache /var/www/html/
- sudo chmod -R 775 /var/www/html/

Em seguida, execute os comandos para verificação e reinicie o apache:

- cd /var/www/html
- ls -l
- sudo systemctl restart httpd

```
[opc@webserver01 ~]$ sudo chown -R apache:apache /var/www/html/
[opc@webserver01 ~]$ sudo chmod -R 775 /var/www/html/
[opc@webserver01 ~]$ cd /var/www/html
[opc@webserver01 html]$ ls -l
total 24
drwxrwxr-x. 5 apache apache    57 Apr  4  2020 assets
drwxrwxr-x. 2 apache apache    63 Oct 28 14:41 images
-rwxrwxr-x. 1 apache apache  2940 Oct 28 14:53 index.html
-rwxrwxr-x. 1 apache apache 17130 Jan  4  2017 LICENSE.txt
[opc@webserver01 html]$ sudo systemctl restart httpd
```

Após a execução do commando de reinicialização, retorne à console da OCI, acesse o menu > Compute > Instances. Copie o IP público da VM **webserver01**, cole no seu navegador e aperte enter para acessar o site. Com tudo de acordo, a sua página de Parabéns será exibida da forma como a figura abaixo. Excelente trabalho!