

Create Linux Compute Instance

Introduction

Oracle Cloud Infrastructure Compute lets you provision and manage compute hosts, known as instances . You can create instances as needed to meet your compute and application requirements. After you create an instance, you can access it securely from your computer or cloud shell.

Create Linux Compute Instance

In this lab, you use Oracle Cloud Infrastructure to create an Oracle Linux instance.

Estimated Time: 20 minutes

Objectives

In this lab, you will be guided through the following tasks:

- Create SSH Key on OCI Cloud
- Create Compute Instance

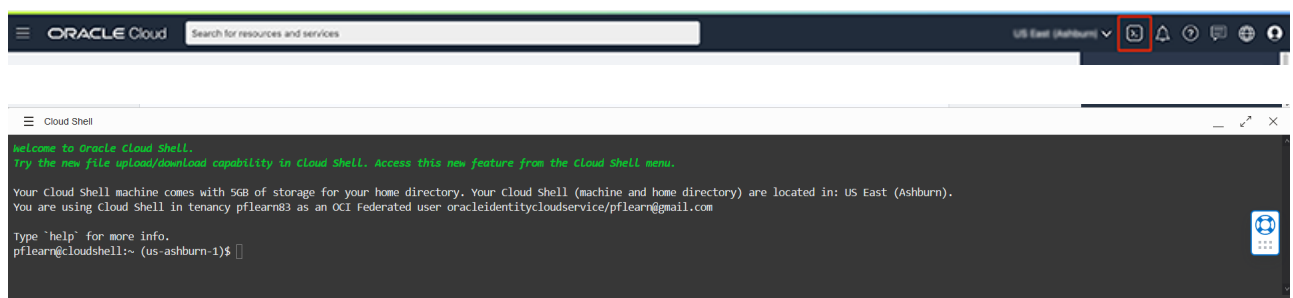
Prerequisites

- An Oracle Free Tier or Paid Cloud Account
- A web browser
- Should have completed Lab 1

Task 1: Create SSH Key on OCI Cloud Shell

The Cloud Shell machine is a small virtual machine running a Bash shell which you access through the Oracle Cloud Console (Homepage). You will start the Cloud Shell and generate a SSH Key to use for the Bastion session.

1. To start the Oracle Cloud shell, go to your Cloud console and click the cloud shell icon at the top right of the page. This will open the Cloud Shell in the browser, the first time it takes some time to generate it.



Note: You can use the icons in the upper right corner of the Cloud Shell window to minimize, maximize, restart, and close your Cloud Shell session.

2. Once the cloud shell has started, create the SSH Key using the following command:

```
<copy>ssh-keygen -t rsa</copy>
```

Press enter for each question.

Here is what it should look like.

```
Cloud Shell

fdescamp@cloudshell:~ (us-ashburn-1)$ ssh-keygen -t rsa
Generating public/private rsa key pair.
Enter file in which to save the key (/home/fdescamp/.ssh/id_rsa):
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/fdescamp/.ssh/id_rsa.
Your public key has been saved in /home/fdescamp/.ssh/id_rsa.pub.
The key fingerprint is:
SHA256:E7UaGFjjmA5TcT+0o5z6QoF fdescamp@98(
The key's randomart image is:
+---[RSA 2048]---+
|+0+0++= . . |
|+0.+.= * o . |
|o.=.o o B . |
|0+.+. . o * |
|+ E.. + S |
|. = 0.. . |
|+ .o |
|. + ... |
|o.o... |
+-----[SHA256]-----+
```

3. The public and private SSH keys are stored in ~/.ssh/id_rsa.pub.
4. Examine the two files that you just created.

```
<copy>cd .ssh</copy>
```

```
<copy>ls</copy>
```

```
pflern@cloudshell:~ (us-ashburn-1)$ cd .ssh
pflern@cloudshell:~ (us-ashburn-1)$ ls
id_rsa  id_rsa.pub
pflern@cloudshell:~ (us-ashburn-1)$
```

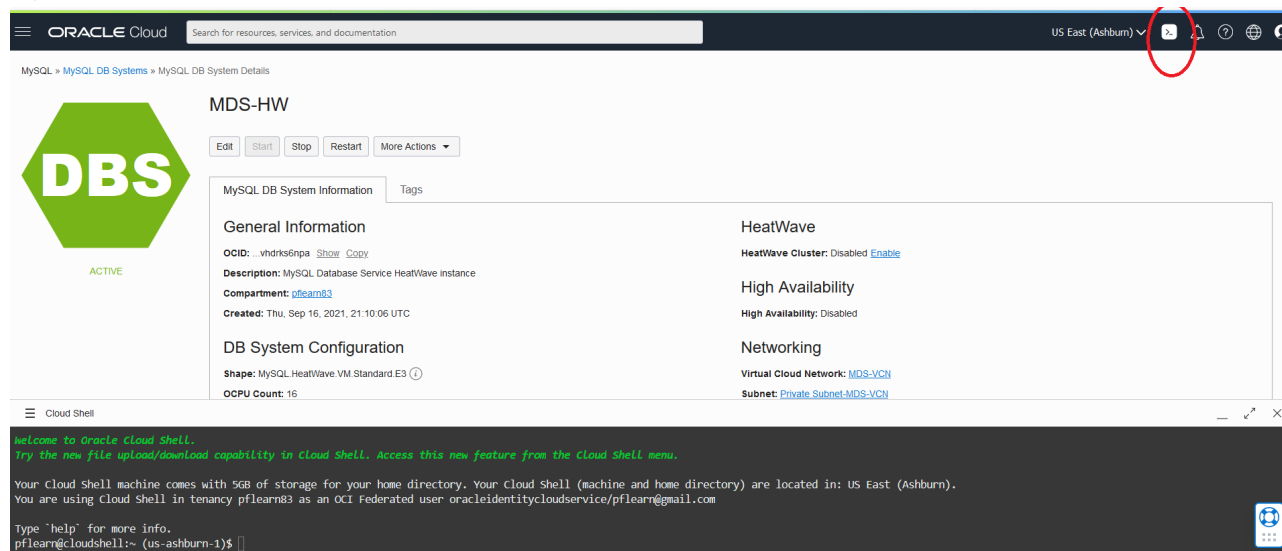
Note: in the output there are two files, a *private key*: `id_rsa` and a *public key*: `id_rsa.pub`. Keep the private key safe and don't share its content with anyone. The public key will be needed for various activities and can be uploaded to certain systems as well as copied and pasted to facilitate secure communications in the cloud.

Task 2: Create Compute instance

You will need a compute Instance to connect to your brand new MySQL database.

1. Before creating the Compute instance open a notepad
2. Do the followings steps to copy the public SSH key to the notepad

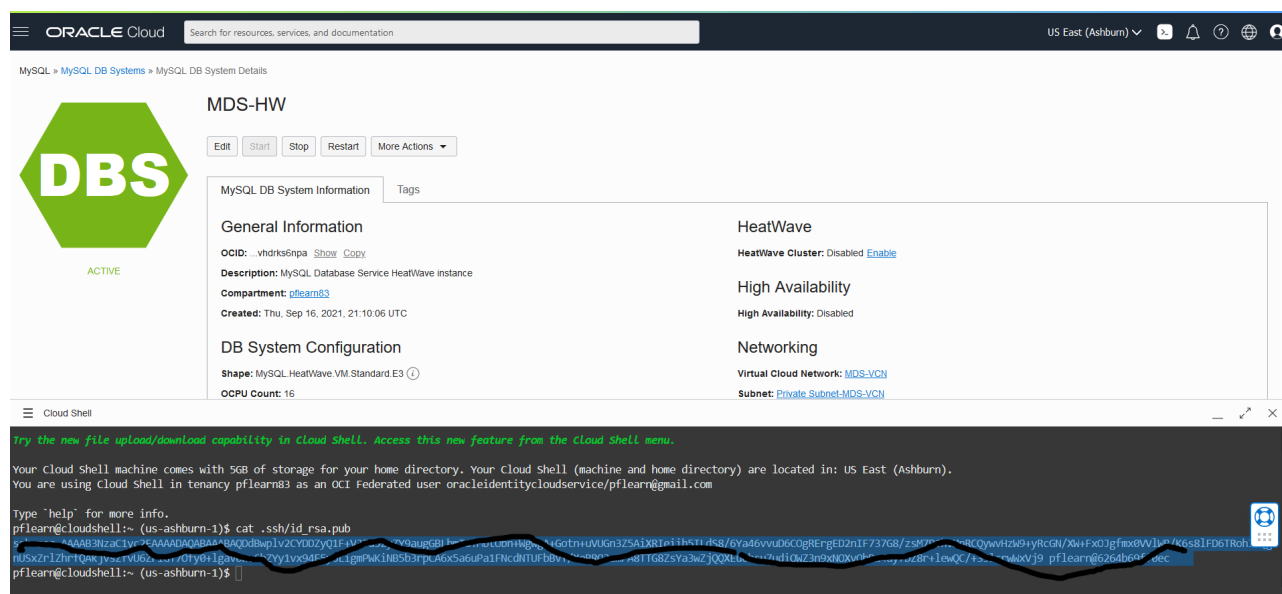
Open the Cloud shell



The screenshot shows the Oracle Cloud console with the MySQL DB System Details page. The 'Cloud Shell' button in the top right corner is circled in red. Below the console, the Cloud Shell interface is visible, showing a terminal prompt and a welcome message.

Enter the following command

```
<copy>cat ~/.ssh/id_rsa.pub</copy>
```



The screenshot shows the Oracle Cloud console with the MySQL DB System Details page. The 'Cloud Shell' button in the top right corner is circled in red. Below the console, the Cloud Shell interface is visible, showing a terminal prompt and a welcome message. The terminal output shows the command `cat ~/.ssh/id_rsa.pub` being executed, and the public key content is displayed.

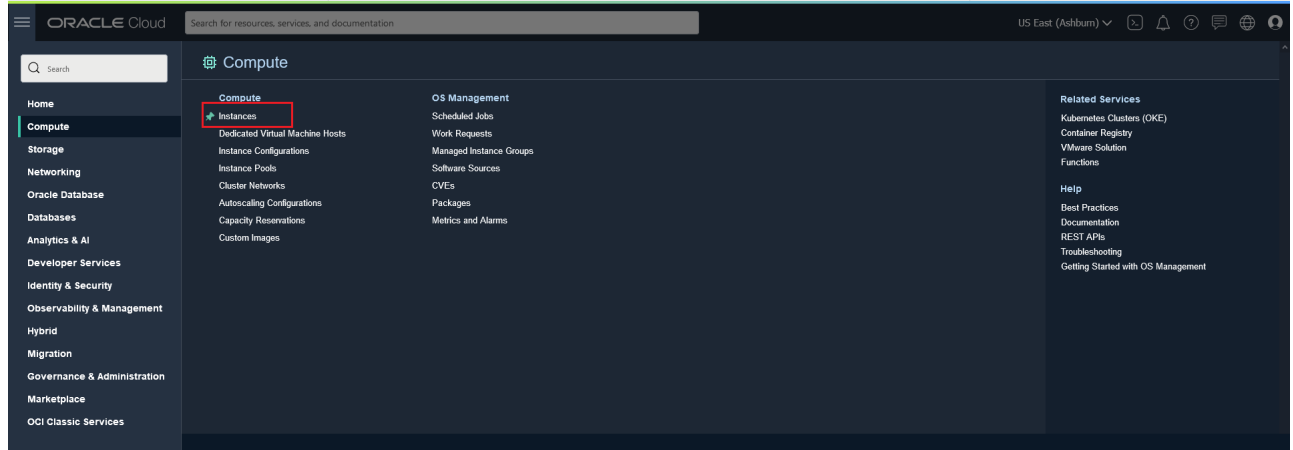
3. Copy the id_rsa.pub content the notepad

Your notepad should look like this

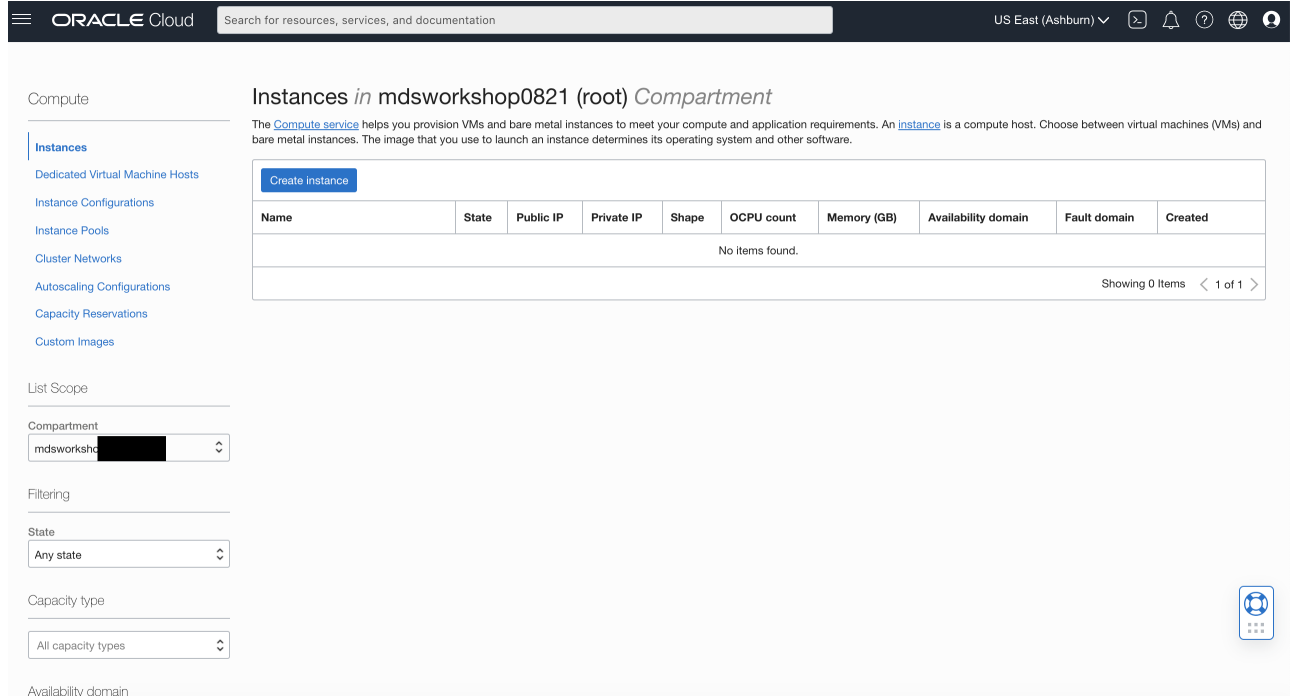
id-rsa.pub

```
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQDDbWp1v2CYDDZyQ1F+V3Fu5zyZY9augGBLbmT6+Mbt0bn+WgwgA+Gotn
+uVUGn3Z5AiXRIeiIh5ILdS8/6Ya46vvuD6C0gREngED2nIF737G8/zsM7P6hVMnRCQywwHzW9+yRcGN/XW
+FxOJgfmX0VV1WB/K6s81FD6TRohIhQgnUSxZr1ZhrfQAkjvsZfvU6ZrIGT70fy0+lgav0wu6bZYy1vx94E5y6LigmPWK1NB5b3rpCA6x
5a6uPa1FNcdNTUFbBvY/XoBRQ3amPA8TTG8ZsYa3wZjQXEu6bsu7udiQWZ3n9xNOXvObDa4ay7DZ8r+1ewQC/+351crwWxVj9
pf1earn@6264b69ff0ec
```

4. To launch a Linux Compute instance, go to Navigation Menu Compute Instances



5. On Instances in (root) Compartment, click **Create Instance**



6. On Create Compute Instance

Enter Name `<copy>myclient</copy>`

7. Make sure **(root)** compartment is selected

8. On Placement, keep the selected Availability Domain

9. On Image and Shape click the **Edit** link

- On Image: Keep the selected Image, Oracle Linux 8

Create an instance to deploy and run applications, or save as a reusable Terraform stack for creating an instance with Resource Manager.

Name

MDS-Client

Create in compartment

Test_1

priscilagalvao40 (root)/Test_1

Placement

Availability domain: AD-3 **Always Free-eligible**

Capacity type: On-demand capacity

Fault domain: Let Oracle choose the best fault domain

Edit

Image and shape

Image: Oracle Linux 8

Image build: 2022.01.24-0

Shape: VM.Standard.E2.1.Micro **Always Free-eligible**

OCPU count: 1

Memory (GB): 1

Network bandwidth (Gbps): 0.48

Edit

Networking

Virtual cloud network: MDS-VCN

Subnet: Public Subnet-MDS-VCN

Launch options: -

Use network security groups to control traffic: No

Assign a public IPv4 address: Yes

DNS record: Yes

Edit

- On Shape - Click the **change shape** button
- Select Instance Shape: VM.Standard.E2.2

Create compute instance

Create an instance to deploy and run applications, or save as a reusable Terraform stack for c

Name

MDS-Client

Create in compartment

Test_1

priscilagalvao40 (root)/Test_1

Placement

Availability domain: AD-3 **Always Free-eligible**

Fault domain: Let Oracle choose the best fault domain

Image and shape

A **shape** is a template that determines the number of CPUs, amount of memory, and other of the shape.

Image

ORACLE Linux

Oracle Linux 8

Image build: 2022.01.24-0

Shape

AMD

VM.Standard.E2.1.Micro **Always Free-eligible**

Virtual machine, 1 core OCPU, 1 GB memory, 0.48 Gbps network b

Show advanced options

Networking

Virtual cloud network: MDS-VCN

Subnet: Public Subnet-MDS-VCN

Launch options: -

Create Save as stack Cancel

Browse all shapes

A **shape** is a template that determines the number of CPUs, amount of memory, and other resources allocated to a newly created instance.

Don't see the shape you want?

To access all shapes, [upgrade](#). You'll pay only for what you use, no minimum terms and no prepayments.

Upgrade

Instance type

Virtual machine **Always Free-eligible**

A virtual machine is an independent computing environment that runs on top of physical bare metal hardware.

Bare metal machine

A bare metal compute instance gives you dedicated physical server access for highest performance and strong isolation.

Shape series

AMD

Flexible OCPU count. AMD processors.

Intel

Flexible OCPU count. Intel processors.

Ampere

Arm-based processor.

Specialty and previous generation

Earlier generation AMD and Intel standard shapes, Always Free, Dense I/O, GPU, and HPC shapes.

Image: Oracle Linux 8

| Shape name | OCPU | Memory (GB) | Network bandwidth (Gbps) | Max. total VNICs |
|--|------|-------------|--------------------------|------------------|
| <input type="checkbox"/> VM.Standard.E2.1.Micro Always Free-eligible | 1 | 1 | 0.48 | 1 |
| Local disk: Block storage only Processor: 2.0 GHz AMD EPYC™ 7551 (Naples) | | | | |
| <input type="checkbox"/> VM.Standard.E2.1 | 1 | 8 | 0.7 | 2 |
| <input checked="" type="checkbox"/> VM.Standard.E2.2 | 2 | 16 | 1.4 | 2 |
| Local disk: Block storage only Processor: 2.0 GHz AMD EPYC™ 7551 (Naples) | | | | |
| <input type="checkbox"/> VM.Standard.E2.4 | 4 | 32 | 2.8 | 4 |
| <input type="checkbox"/> VM.Standard.E2.8 | 8 | 64 | 5.6 | 8 |
| <input type="checkbox"/> VM.Standard1.1 | 1 | 7 | 0.6 | 2 |
| <input type="checkbox"/> VM.Standard1.2 | 2 | 14 | 1.2 | 2 |
| <input type="checkbox"/> VM.Standard1.4 | 4 | 28 | 1.2 | 4 |

Select shape Cancel

10. On Networking, make sure 'myvcn' is selected

5 / 9

'Assign a public IP address' should be set to Yes

Networking

Virtual cloud network: MDS-VCN

Subnet: Public Subnet-MDS-VCN

Launch Options: -

Use network security groups to control traffic: No

Assign a public IPv4 address: Yes

DNS record: Yes

Edit

11. On Add SSH keys, paste the public key from the notepad.

Create compute instance

Public IP address

☒ Assign a public IPv4 address ☐ Do not assign a public IPv4 address

ⓘ

Assigning a public IP address makes this instance accessible from the internet. If you're not sure whether you need a public IP address, you can always assign one later.

Show advanced options

Add SSH keys

Generate an [SSH key pair](#) to connect to the instance using a Secure Shell (SSH) connection, or upload a public key that you already have.

☐ Generate a key pair for me ☐ Upload public key files (.pub) ☒ Paste public keys ☐ No SSH keys

SSH keys

pwO13b4OVNasnrueUrk/gMnjGT1fczWMXvU4W1hzfo8bziqJUtDuepE+3Ky1GTLi9024MBY3+9BR3OBh/HlsyUD+uhfzmeVn3nP2tpHPGIHUIJIT8p7qJF57 perside_fo@1073eeaa1d41

Example: ssh-rsa AAAAB3Nza...NWap6Ptb ssh-key-2021-01-27 [See all supported key types](#)

+ Another key

Boot volume

A [boot volume](#) is a detachable device that contains the image used to boot the compute instance.

Create

Save as stack

Cancel

Cloud Shell

12. Click 'Create' to finish creating your Compute Instance.

13. The New Virtual Machine will be ready to use after a few minutes. The state will be shown as 'Provisioning' during the creation

ORACLE Cloud

Search for resources, services, and documentation

US East (Ashburn)

Compute > Instances > Instance Details > Work Requests

PROVISIONING

MDS-Client

Always Free

Start

Stop

Reboot

Edit

More Actions

Instance Information

Oracle Cloud Agent

Tags

General Information

Availability Domain: AD-2

Fault Domain: FD-2

Region: iad

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

Launched: Mon, Jul 26, 2021, 18:50:25 UTC

Compartment: persidefoster91 (root)

Capacity Type: On-demand

Instance Details

Virtual Cloud Network: [mds_vcn](#)

Maintenance Reboot: -

Image: [Oracle-Linux](#) 2021.06.20-0

Launch Mode: PARAVIRTUALIZED

Instance Metadata Service: Versions 1 and 2 [Edit](#)

Live Migration: Use recommended default

Maintenance Recovery Action: Restore instance

Shape Configuration

Instance Access

The instance must be running before you can connect to it.

Public IP Address: 150.136.123.33 [Copy](#)

Username: opc

Primary VNIC

Private IP Address: 10.0.0.3

Network Security Groups: None [Edit](#)

Subnet: [Public Subnet-mds_vcn](#)

Private DNS record: Enable

Hostname: mds-client

Internal FQDN: mds-client... [Show](#) [Copy](#)

Launch Options

NIC Attachment Type: PARAVIRTUALIZED

Remote Data Volume: PARAVIRTUALIZED

Firmware: UEFI_64

Boot Volume Type: PARAVIRTUALIZED

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14. The state 'Running' indicates that the Virtual Machine is ready to use.

Compute - Instances - Instance details

1

RUNNING

MDS-Client

Start

Stop

Reboot

Edit

More Actions

Instance information

Shielded instance

Oracle Cloud Agent

Tags

General information

Availability domain: AD-3

Fault domain: FD-3

Region: iad

OCID: ...qys4va Show Copy

Launched: Wed, Feb 16, 2022, 19:16:20 UTC

Compartment: priscilagalvao40 (root)/Test_1

Capacity type: On-demand

Instance details

Virtual cloud network: MDS-VCN

Maintenance reboot: -

Image: Oracle-Linux-8.5-2022.01.24-0

Launch mode: PARAVIRTUALIZED

Instance metadata service: Versions 1 and 2 Edit ⓘ

Live migration: Use recommended default ⓘ

Maintenance recovery action: Restore instance

Shape configuration

Shape: VM.Standard.E2.2

OCPU count: 2

Network bandwidth (Gbps): 1.4

Memory (GB): 16

Local disk: Block storage only

Instance access

You connect to a running Linux instance using a Secure Shell (SSH) connection. You'll need the private key from the SSH key pair that was used to create the instance.

Public IP address: 150.230.173.204 Copy

Username: opc

Primary VNIC

Private IP address: 10.0.0.4

Network security groups: None Edit ⓘ

Subnet: Public Subnet-MDS-VCN

Private DNS record: Enable

Hostname: mds-client

Internal FQDN: mds-client... Show Copy

Launch options

NIC attachment type: PARAVIRTUALIZED

Remote data volume: PARAVIRTUALIZED

Firmware: UEFI_64

Boot volume type: PARAVIRTUALIZED

In-transit encryption: Disabled

Secure Boot: Disabled

Measured Boot: Disabled

Trusted Platform Module: Disabled

Task 3:Connect to Compute Instance with SSH Key

To connect to **myclient** you will need to properly setup your SSH command. Do the following steps:

- 1. Copy the public IP address of the active Compute Instance to a notepad

a. Go to Navigation Menu Compute Instances

ORACLE Cloud

Search for resources, services, and documentation

US East (Ashburn)

MySQL

DB Systems in plearn83 (root) Compartment

Create MySQL DB System

Actions

| | Name | DB System State | High Availability | HeatWave Cluster | HeatWave State | Created |
|--------------------------|--------|-----------------|-------------------|------------------|----------------|---------------------------------|
| <input type="checkbox"/> | MDS-HW | Active | Disabled | Disabled | - | Thu, Sep 16, 2021, 21:10:06 UTC |

0 Selected

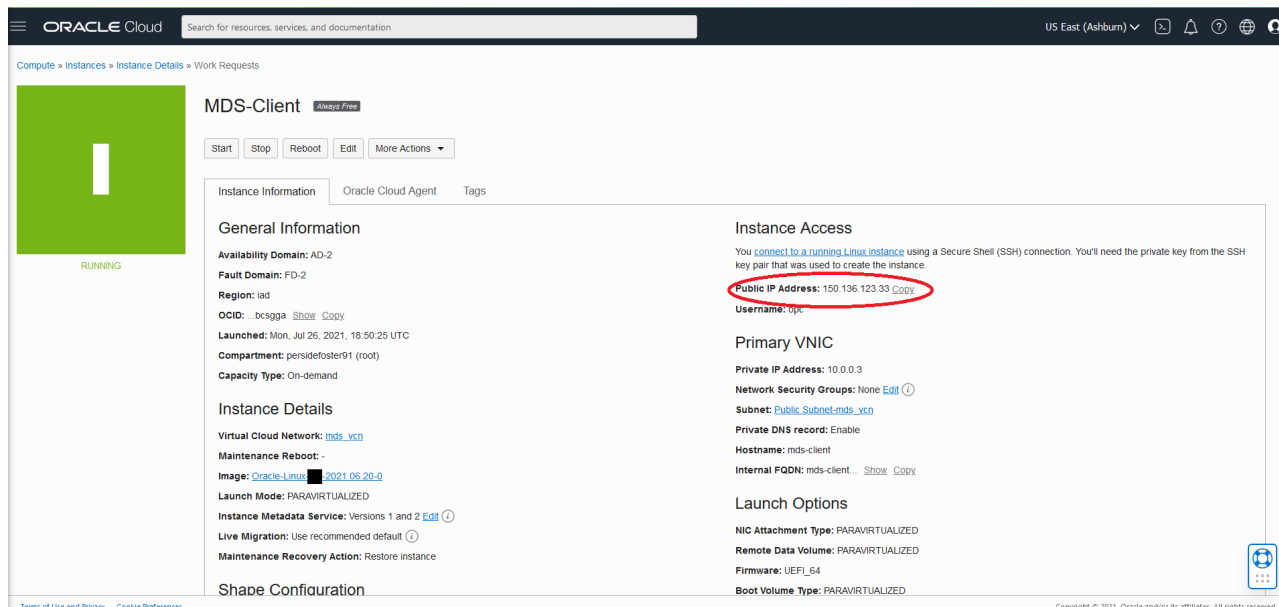
Showing 1 item < 1 of 1 >

List Scope

Compartment

plearn83 (root)

b. Click the **myclient** Compute Instance link



c. Copy **myclient** plus the **Public IP Address** to the notepad

2. Indicate the location of the private key you created earlier with **myclient**.

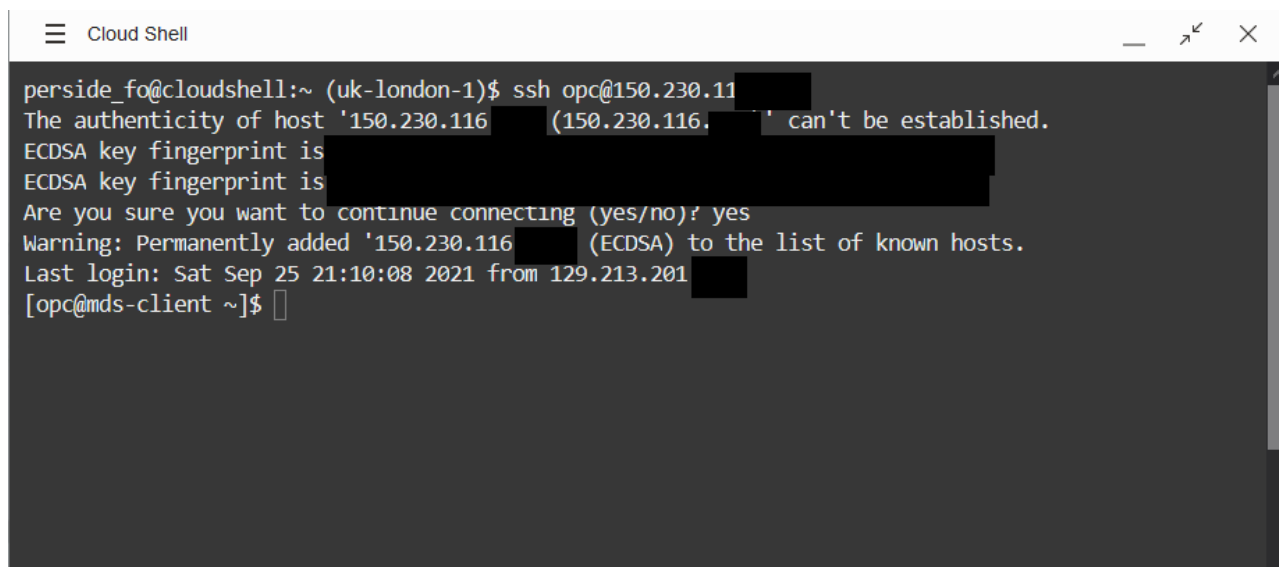
Enter the username **opc** and the **Public IP Address**.

Note: The **myclient** instance shows the Public IP Address as mentioned on TASK 5: #11

(Your SSH login command should look like this:

ssh -i ~/.ssh/id_rsa opc@132.145.170...)

```
<copy>ssh -i ~/.ssh/id_rsa opc@<your_compute_instance_ip></copy>
```



**** You are ready to install MySQL on the Compute Instance****

You may now proceed to the next lab

Acknowledgements

- **Author** - Dale Dasker, MySQL Solution Engineering
- **Last Updated By/Date** - <Dale Dasker, April 2022