

COMPTE RENDU

TP 5 : Déployer un Serveur MySQL sur OpenStack

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Télécharger l'image Ubuntu Cloud:

```
stack@openstack:~/devstack$ wget https://cloud-images.ubuntu.com/jammy/current/jammy-server-cloudimg-amd64.img
--2025-04-24 21:29:49-- https://cloud-images.ubuntu.com/jammy/current/jammy-server-cloudimg-amd64.img
Resolving cloud-images.ubuntu.com (cloud-images.ubuntu.com)... 185.125.190.40, 185.125.190.37, 2620:2d:4000:1::1a, ...
Connecting to cloud-images.ubuntu.com (cloud-images.ubuntu.com)|185.125.190.40|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 668097536 (637M) [application/octet-stream]
Saving to: 'jammy-server-cloudimg-amd64.img'

jammy-server-cloudimg-amd64.img      100%[=====] 637.15M   234MB/s   in 2.7s

2025-04-24 21:29:51 (234 MB/s) - 'jammy-server-cloudimg-amd64.img' saved [668097536/668097536]

stack@openstack:~/devstack$
```

Créer une image sur OpenStack :

openstack image create --disk-format qcow2 --container-format bare --public ubuntucloud < jammy-server-cloudimg-amd64.img

```
stack@openstack:~/devstack$ wget https://cloud-images.ubuntu.com/jammy/current/jammy-server-cloudimg-amd64.img
--2025-04-24 21:29:49-- https://cloud-images.ubuntu.com/jammy/current/jammy-server-cloudimg-amd64.img
Resolving cloud-images.ubuntu.com (cloud-images.ubuntu.com)... 185.125.190.40, 185.125.190.37, 2620:2d:4000:1::1a, ...
Connecting to cloud-images.ubuntu.com (cloud-images.ubuntu.com)|185.125.190.40|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 668097536 (637M) [application/octet-stream]
Saving to: 'jammy-server-cloudimg-amd64.img'

jammy-server-cloudimg-amd64.img      100%[=====] 637.15M   234MB/s   in 2.7s

2025-04-24 21:29:51 (234 MB/s) - 'jammy-server-cloudimg-amd64.img' saved [668097536/668097536]

stack@openstack:~/devstack$ openstack image create --disk-format qcow2 --container-format bare --public ubuntucloud < jammy-server-cloudimg-amd64.img
Missing value auth-url required for auth plugin password
stack@openstack:~/devstack$ source openrc admin admin
stack@openstack:~/devstack$ openstack image create --disk-format qcow2 --container-format bare --public ubuntucloud < jammy-server-cloudimg-amd64.img
+-----+-----+
| Field | Value |
+-----+-----+
| checksum | 458301c3c514f91b809f169c49da0a43 |
| container_format | bare |
| created_at | 2025-04-24T21:30:42Z |
| disk_format | qcow2 |
| file | /v2/images/241e9c45-8003-4196-95bc-6349168848e0/file |
| id | 241e9c45-8003-4196-95bc-6349168848e0 |
| min_disk | 0 |
| min_ram | 0 |
| name | ubuntucloud |
| owner | d8608b02f1794c9fa94a2cad9accbb4 |
| properties | os_hash_algo='sha512', |
| | os_hash_value='0c0802f126784a579556f787d2616be9a80d6113329c4c6974f17d3e633f1b5d377deb26cc50ca7147463c270f7e022b5e9366169e68e8acd3398d34de0dd80', |
| | os_hidden='False', owner_specified.openstack.md5='', owner_specified.openstack.object='images/ubuntucloud', owner_specified.openstack.sha256='' |
| protected | False |
| schema | /v2/schemas/image |
| size | 668097536 |
| status | active |
| tags | |
| updated_at | 2025-04-24T21:30:46Z |
| virtual_size | 2361393152 |
| visibility | public |
+-----+-----+
```

Project / Compute / Images

Images

Click here for filters or full text search.

+ Create Image + Delete Images

Owner	Name	Type	Status	Visibility	Protected	Disk Format	Size
admin	cirros-0.6.3-x86_64-disk	Image	Active	Public	No	QCOW2	20.69 MB
admin	ubuntucloud	Image	Active	Public	No	QCOW2	637.15 MB

Créer une instance MySQL:

Project / Compute / Instances

Instances

Source

Flavor

Networks

Network Ports

Security Groups

Key Pair

Configuration

Server Groups

Scheduler Hints

Metadata

Please provide the initial hostname for the instance, the availability zone where it will be deployed, and the instance count. Increase the Count to create multiple instances with the same settings.

Project Name
admin

Instance Name
mysql-vm

Description

Availability Zone
nova

Count
1

Total Instances (10 Max)
10%

0 Current Usage
1 Added
9 Remaining

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Project / Compute / Instances

Instances

Source

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Scheduler Hints

Metadata

Instance source is the template used to create an instance. You can use an image, a snapshot of an instance (image snapshot), a volume or a volume snapshot (if enabled). You can also choose to use persistent storage by creating a new volume.

Select Boot Source
Image

Volume Size (GB)
1

Allocated
Displaying 1 item

Name	Updated	Size	Format	Visibility
ubuntucloud	4/24/25 9:30 PM	637.15 MB	QCOW2	Public

Displaying 1 item

Available
Select one

Click here for filters or full text search.

Displaying 1 item

Name	Updated	Size	Format	Visibility
cirros-0.6.3-x86_64-disk	4/24/25 9:02 PM	20.69 MB	QCOW2	Public

Displaying 1 item

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Launch Instance

Details

Source

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Metadata

Flavors manage the sizing for the compute, memory and storage capacity of the instance.

Allocated

Displaying 1 item

Name	vCPUs	RAM	Total Disk	Root Disk	Ephemeral Disk	Public
m1.small	1	2 GB	20 GB	20 GB	0 GB	Yes

Displaying 1 item

Available 11

Click here for filters or full text search.

Displaying 11 items

Name	vCPUs	RAM	Total Disk	Root Disk	Ephemeral Disk	Public
m1.nano	1	192 MB	1 GB	1 GB	0 GB	Yes
m1.micro	1	256 MB	1 GB	1 GB	0 GB	Yes
ciros256	1	256 MB	1 GB	1 GB	0 GB	Yes
m1.tiny	1	512 MB	1 GB	1 GB	0 GB	Yes
ds12M	1	512 MB	5 GB	5 GB	0 GB	Yes
ds1G	1	1 GB	10 GB	10 GB	0 GB	Yes
ds2G	2	2 GB	10 GB	10 GB	0 GB	Yes
m1.medium	2	4 GB	40 GB	40 GB	0 GB	Yes
ds4G	4	4 GB	20 GB	20 GB	0 GB	Yes
m1.large	4	8 GB	80 GB	80 GB	0 GB	Yes

Launch Instance

Details

Source

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Metadata

Networks provide the communication channels for instances in the cloud. You can select ports instead of networks or a mix of both.

Allocated 1

Displaying 1 item

Network	Subnets Associated	Shared	Admin State	Status
shared	shared-subnet	No	Up	Active

Displaying 1 item

Available 1

Click here for filters or full text search.

Displaying 1 item

Network	Subnets Associated	Shared	Admin State	Status
public	ipv6-public-subnet public-subnet	No	Up	Active

Displaying 1 item

Cancel

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Launch Instance

Launch Instance
✕ ?

- Details
- Source
- Flavor
- Networks
- Network Ports
- Security Groups
- Key Pair
- Configuration
- Server Groups
- Scheduler Hints
- Metadata

Select the security groups to launch the instance in.

▼ Allocated 1

Displaying 1 item

Name	Description
default	Default security group

Displaying 1 item

▼ Available 1

Select one or more

Displaying 0 items

Name	Description
No items to display.	

Displaying 0 items

✕ Cancel
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st
API Access
Compute
Overview
Instances
Images
Key Pairs
Server Groups
Volumes
Network
ty

Project / Compute / Instances

Instances

Instance ID =

Filter

Launch Instance

Delete Instances

More Actions

<input type="checkbox"/>	Instance Name	Image Name	IP Address	Flavor	Key Pair	Status	Availability Zone	Task	Power State	Age	Actions
<input type="checkbox"/>	mysql-vm	-	192.168.233.115	m1_small	-	Active	nova	None	Running	1 minute	Create Snapshot

Accéder à la console de l'instance :

enstack. admin
admin

API Access
Compute
Overview
Instances
Images
Key Pairs
Server Groups
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Network

To exit the fullscreen mode, click the browser's back button.

Connected to QEMU (instance-900000023)

```

Ubuntu 22.04.5 LTS mysql-vm tty1
mysql-vm login:
                    
```

Attribuer une IP flottante:

Displaying 1 item

<input type="checkbox"/>	Instance Name	Image Name	IP Address	Flavor	Key Pair	Status	Availability Zone	Task	Power State	Age	Actions
<input type="checkbox"/>	mysql-vm	ubuntucloud	192.168.233.234 172.24.4.50	m1.small	mykey	Active	nova	None	Running	10 minutes	Create Snapshot

Connexion à l'instance :

```
Connected to QEMU (Instance-00000007)

Ubuntu 22.04.5 LTS mysql-vm tty1
mysql-vm login: ubuntu
Password:
Login incorrect
mysql-vm login: _
```

Installation et sécurisation de MySQL:

```
ubuntu@mysql-vm: ~  
ubuntu@mysql-vm:~$ sudo apt update && sudo apt install mysql-server -y  
Get:1 http://security.ubuntu.com/ubuntu jammy-security InRelease [129 kB]  
Hit:2 http://archive.ubuntu.com/ubuntu jammy InRelease  
Get:3 http://archive.ubuntu.com/ubuntu jammy-updates InRelease [128 kB]  
Get:4 http://archive.ubuntu.com/ubuntu jammy-backports InRelease [127 kB]  
Get:5 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Packages [2266 kB]  
Get:6 http://archive.ubuntu.com/ubuntu jammy/universe amd64 Packages [14.1 MB]  
Get:7 http://security.ubuntu.com/ubuntu jammy-security/main Translation-en [346 kB]  
Get:8 http://security.ubuntu.com/ubuntu jammy-security/main amd64 c-n-f Metadata [13.6 kB]  
Get:9 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 Packages [3238 kB]  
Get:10 http://security.ubuntu.com/ubuntu jammy-security/restricted Translation-en [577 kB]  
Get:11 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [973 kB]  
Get:12 http://security.ubuntu.com/ubuntu jammy-security/universe Translation-en [209 kB]
```

Sécurisez l'installation avec :

sudo mysql_secure_installation

```
ubuntu@mysql-vm:~$ sudo mysql_secure_installation  
:  
Securing the MySQL server deployment.  
  
Connecting to MySQL using a blank password.  
  
VALIDATE PASSWORD COMPONENT can be used to test passwords  
and improve security. It checks the strength of password  
and allows the users to set only those passwords which are  
secure enough. Would you like to setup VALIDATE PASSWORD component?  
  
Press y|Y for Yes, any other key for No: y  
  
There are three levels of password validation policy:  
  
LOW      Length >= 8  
MEDIUM  Length >= 8, numeric, mixed case, and special characters
```

Créez un utilisateur MySQL accessible à distance:

```
ubuntu@mysql-vm:~$ sudo mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 11
Server version: 8.0.41-0ubuntu0.22.04.1 (Ubuntu)

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> CREATE USER 'admin'@'%' IDENTIFIED BY 'lbp-6600';
Query OK, 0 rows affected (0.04 sec)
```

Accès distant à MySQL:

```
stack@openstack:~/devstack$ mysql -u admin -p -h 172.24.4.222
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 8
Server version: 8.0.41-0ubuntu0.22.04.1 (Ubuntu)

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```