

## Lab 11: Managing Volumes on Command Line

### Objective 1.

Scope **amy/sales-crm**.

#### Create a New Volume:

- Name: **sales-vol1**
- Description: **Database Volume for sales-crm Project**
- Volume Source: **empty volume**
- Type: **no volume type**
- Size: **1**

Start the Instance **insta2**.

**Attach the Volume sales-vol1 to Instance insta2.** Check the device name.

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### Objective 2.

Scope **amy/sales-crm**.

Login to Instance **insta2**.

#### Create **ext3** type **filesystem** on newly attached Volume:

```
sudo mkfs.ext3 /dev/vdb
```

Mount the Volume:

```
sudo mount /dev/vdb /mnt
```

Create a file with Instance “stamp”:

```
hostname >> /mnt/file.txt
```

```
date >> /mnt/file.txt
```

Verify the file:

```
pg /mnt/file.txt
```

**Unmount the Volume and Detach from the Instance.**

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### Objective 3.

Scope: **amy/sales-crm**.

**Create a New Snapshot sales-vol1-snap1 of the Volume sales-vol1.**

**Create a New Volume from the Snapshot:**

- Name: **sales-vol2**
  - Volume Source: **Snapshot**
  - Snapshot Source: **sales-vol1-snap1**
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#### **Objective 4.**

Scope **lisa/crm-dev**.

**Create a Volume Type sales-vol-type-2** to enable Volume scheduling to Backend **LVM-2**.

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#### **Objective 5.**

Scope **lisa/crm-dev**.

**Change Storage Quota Volumes** to **50** for Project **crm-dev**.

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#### **Objective 6.**

Scope **amy/sales-crm**.

**Create a New Volume from Image:**

- Name: **sales-vol3**
- Description: **Boot Volume Created from Image cirros**
- Volume Source: **image**
- Use image as source: **cirros**

**Launch a New Instance from Bootable Volume:**

- Name: **sales-vm3**
- Description: **Instance Created from Bootable Volume sales-vol3**
- Boot Source: **Volume**
- Flavor: **m1.tiny**
- Network: **public**
- Security Groups: **default** and **sales-crm-sg2**

Attach a Volume **sales-vol2** to Instance **sales-vm3** and mount it to **/mnt**.

Create an Instance “stamp” in the file **/mnt/file.txt**:

```
hostname >> /mnt/file.txt
```

```
date >> /mnt/file.txt
```

Verify the file:

```
pg /mnt/file.txt
```

Copy the file to Instance Volume:

```
cp /mnt/file.txt ~/history.txt
```

Unmount the Volume and Detach from the Instance.

Shutdown the Instance.

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### Objective 7.

Scope: **amy/sales-crm**.

**Create a Volume Transfer** for **sales-vol2**.

Note down Transfer ID and Authorization ID.

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### Objective 8.

Scope: **admin/demo**.

**Accept the Volume Transfer**, using the Transfer ID and Authorization ID noted in Objective 7.

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### Objective 9.

Scope: **lisa/crm-dev**.

Create a Volume Type **crm-dev-encrypted** to accomodate Volume Encryption.

**Create Volume Encryption:**

- Provider: **nova.volume.encryptors.luks.LuksEncryptor**
- Control Location: **front-end**
- Cipher: **aes-xts-plain64**
- Key size: **256**

Create a New Volume **sales-vol4** of type **crm-dev-encrypted** and size **1**.

## Objective 10.

Scope: **amy/sales-crm**.

### Create a Backup of Volume **sales-vol1**.

Create a New Empty Volume:

- Name: **sales-vol5**
- Description: **Backup Restore Volume for demo Project**
- Volume Source: **empty volume**
- Type: **no volume type**
- Size: **1**

Restore Backup of **sales-vol1** to **sales-vol5**.

Start up the **insta2** Instance, Attach and mount the Volume **sales-vol5** in **/mnt2** directory.

Create a file with Instance “stamp”:

```
hostname >> /mnt2/file.txt
```

```
date >> /mnt2/file.txt
```

Verify the file:

```
pg /mnt2/file.txt
```

Detach the Volume **sales-vol5** and Shutdown **insta2** Instance.

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