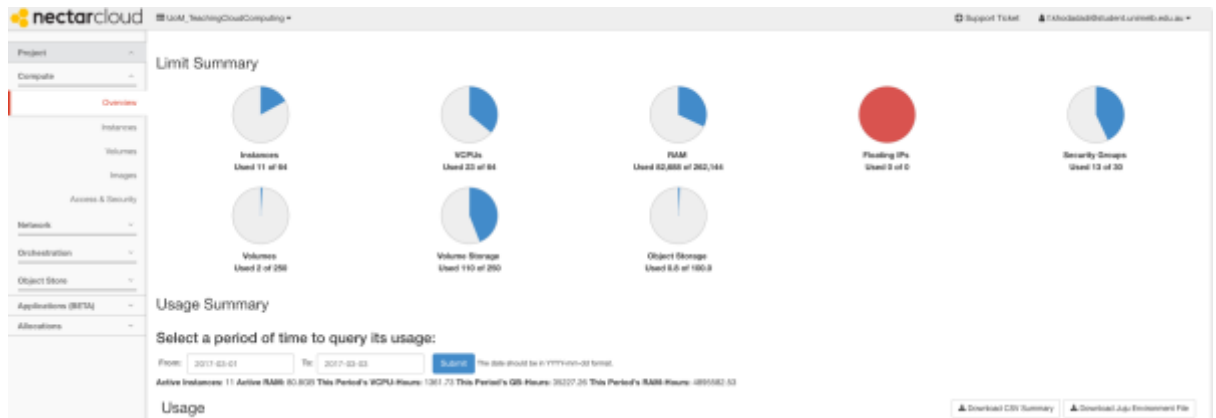


Volume Management in NeCTAR

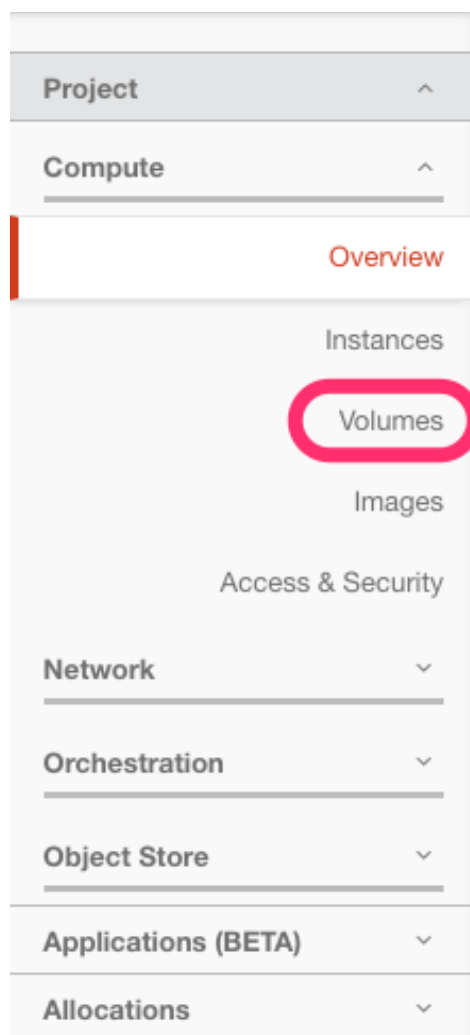
- 1- Login to the NeCTAR dashboard (refer to the tutorial demonstrating NeCTAR login procedure)



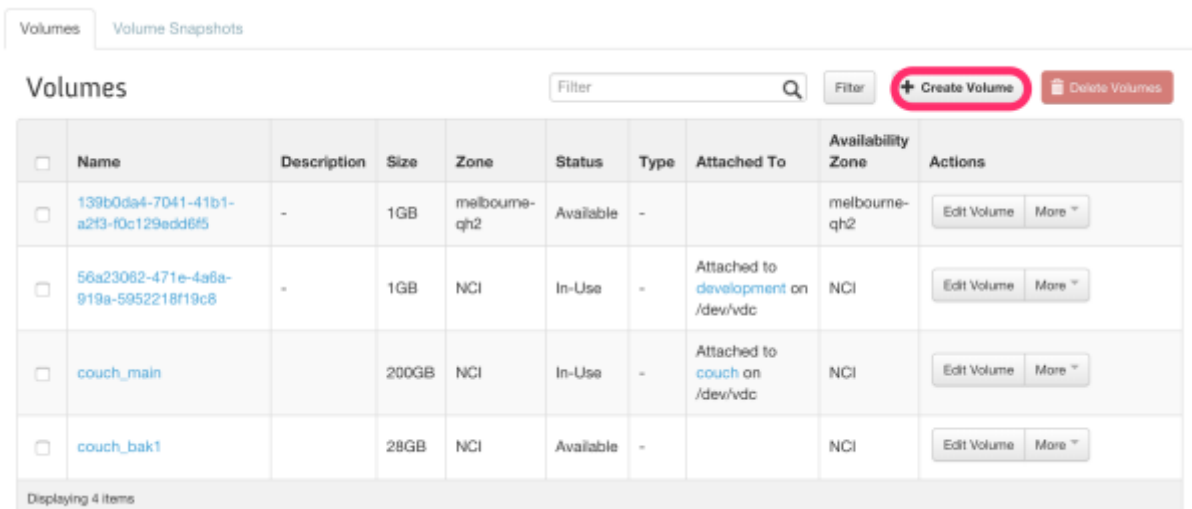
- 2- Select your desired project (note that virtual machines created in a project can not be shared and seen in another project)



- 3- Select “Volumes” from the left sidebar.



- 4- A volume is a non-ephemeral storage option provided by NeCTAR and can be attached/detached to any instance at any time. All previously created volumes will be shown under “Volumes” section and if you have created any volume snapshots, you can see them by visiting the “Volume Snapshots” tab. To create a new volume, simply click the “Create Volume” button.



- 5- In the new dialogue box, first choose a name and then specify your desired size for the new volume. Next step is selecting volume creation source, which includes

creating an empty volume, using a volume snapshot, or using an image file to create the volume. Finally, select your favourite availability zone. Best practice is to create volumes near the instances that they will be attached to.

Create Volume

Volume Name: *

1

Description:

Type:

Size (GB): *

2

Volume Source:

No source, empty volume 3

Availability Zone *

Select availability zone 4

Description:

Volumes are block devices that can be attached to instances.

Volume Limits

Total Gigabytes (230 GB)

250 GB Available

Number of Volumes (4)

250 Available

Cancel

Create Volume

- 6- When a new volume is created, it should be attached to an instance to be available and usable. To do so, at the screen shown in step 4 and next to the volume you want to attach, click the little downwards arrow button and then select “Manage Attachments”.

Extend Volume
Manage Attachments
Create Snapshot
Create Backup
Upload to Image
Create Transfer
Delete Volume

- 7- In the opened dialog box, select the name of target instance from the “Attach To Instance” drop-down list.

Manage Volume Attachments

Attachments

Instance	Device	Actions
No items to display.		

Displaying 0 items

Attach To Instance

Attach to Instance: *

Select an instance

Cancel Attach Volume

- 8- At this stage, the new volume has been created and attached to an instance, thus it is registered as a virtual device in the instance’s device list (/dev/vdc). To actually use and access it, the volume should be first formatted and then mounted. For this purpose, first create an SSH session to the instance (refer to NeCTAR virtual machine access tutorial), then enter the following command in your SSH command shell to format the volume: **sudo mkfs.ext4 /dev/vdc**
- Note that if you are creating a volume from an image or snapshot, issuing the above command will erase all the data in that volume.
- 9- Final step is mounting the volume. We suggest mounting the new volume to /mnt, but you can mount it to any desired path. Enter the following command in the SSH command shell to finalize mounting: **sudo mount /dev/vdc /mnt -t auto**
- 10- If you want to detach a volume from an instance and attach it to another instance, first you need to enter the following command in the SSH command shell to unmount the volume: **sudo umount /mnt**
- Note that in the above command, if you have used another path for mounting the volume, you have to substitute /mnt with your path.
- 11- After unmounting the volume, you can detach it from the instance by selecting “Volumes” from the left sidebar and then clicking “More” button next to your desired

entry and selecting “Edit Attachments” from the menu. In the opened dialog box, you can delete the volume from the instance as shown in the picture below.

