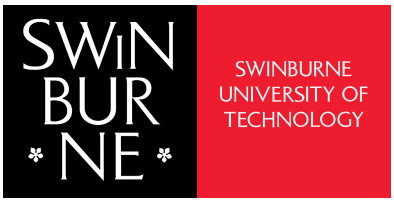

ACF Lab 4: Working with EBS

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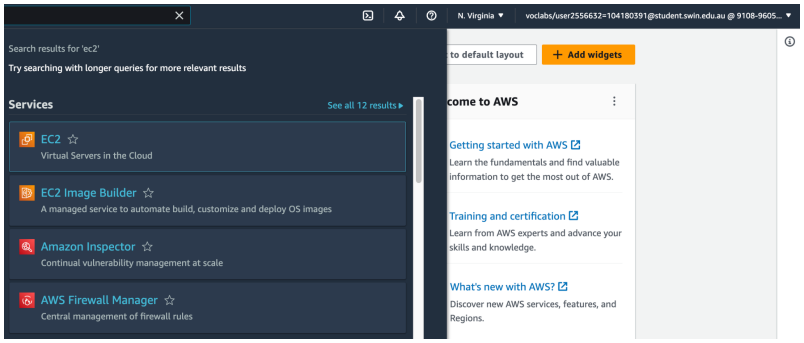
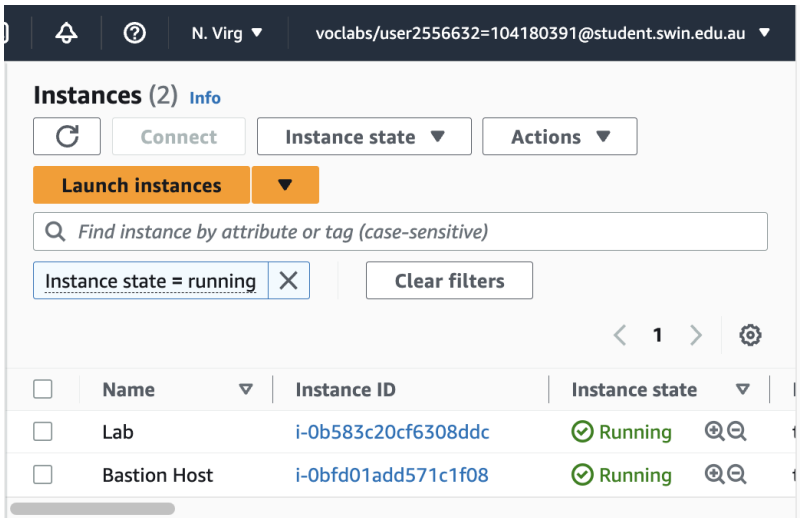
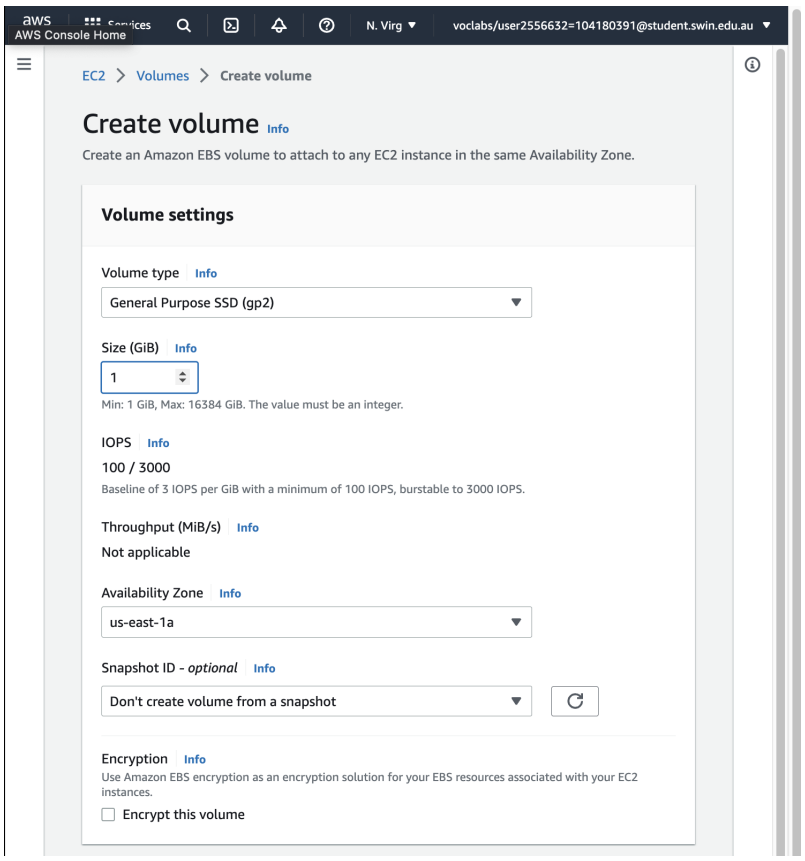
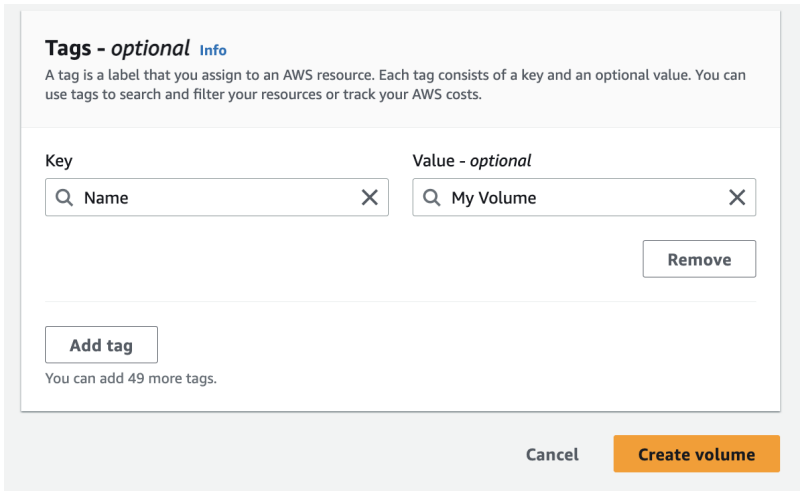
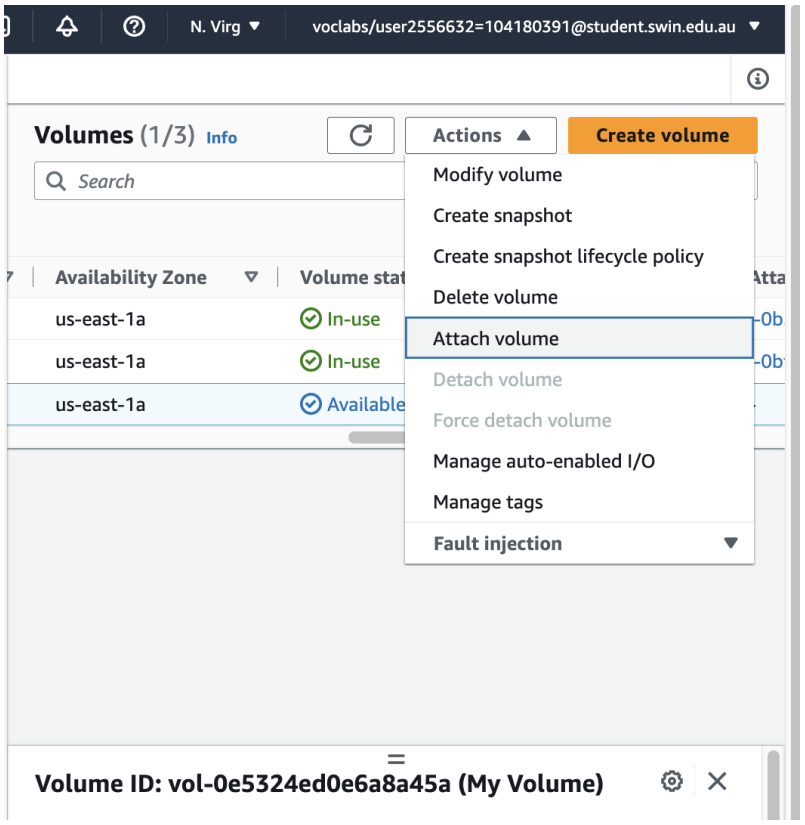
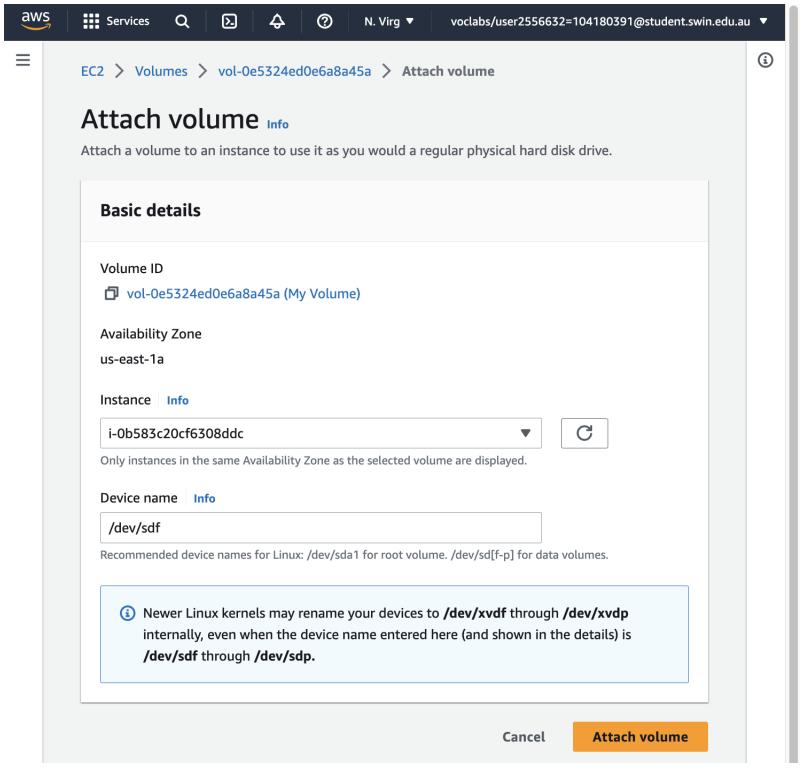
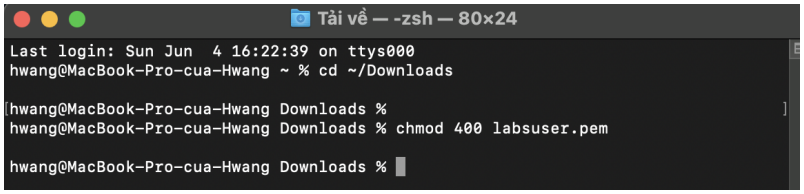
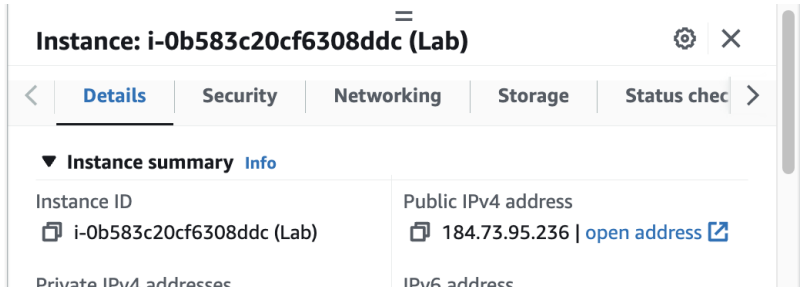
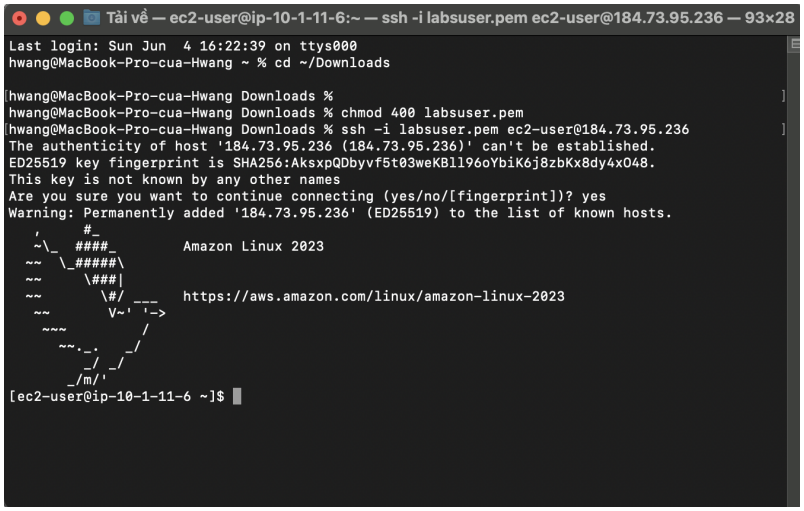
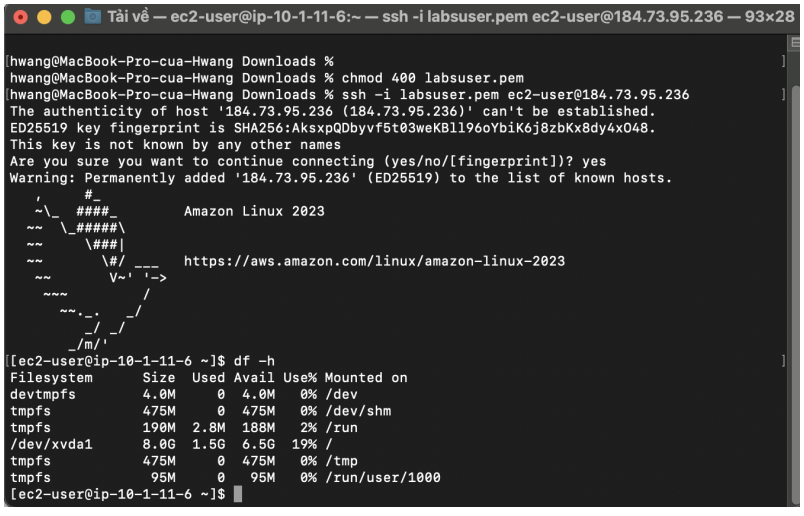
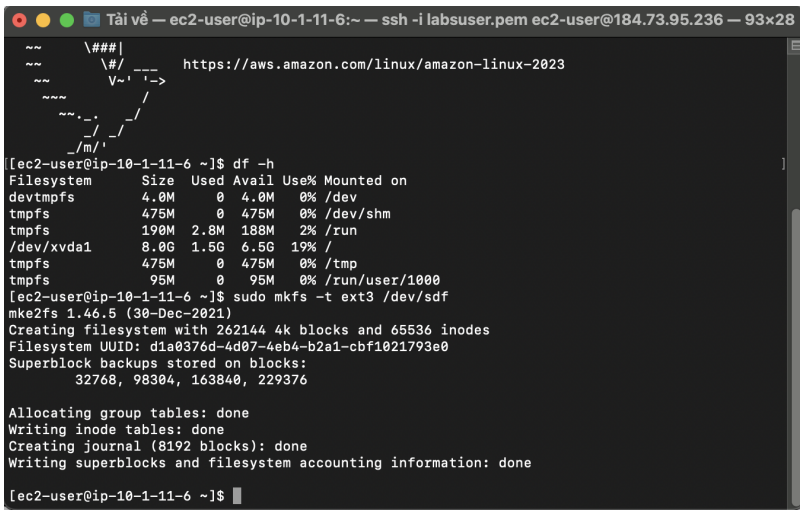
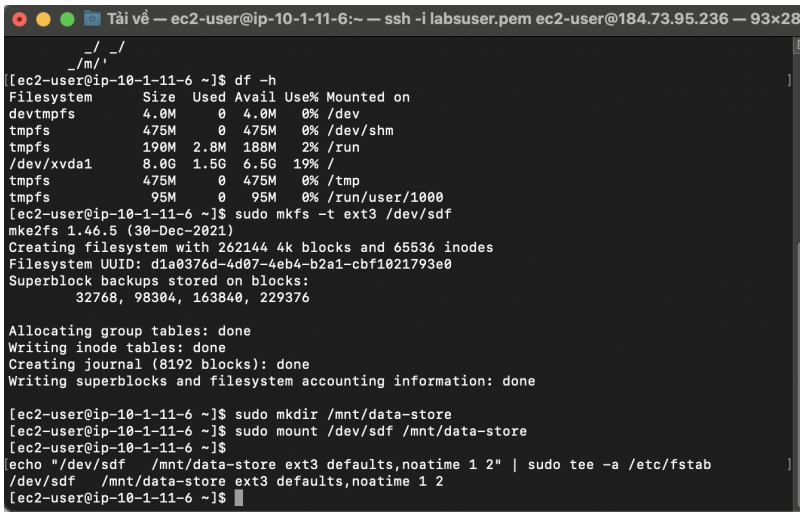
Step	Description	Screenshot
1	In the AWS Management Console, on the **Services menu**, click **EC2**.	
2	An Amazon EC2 instance named Lab has already been launched for the lab.	
3	In the left navigation pane, choose **Volumes**.	

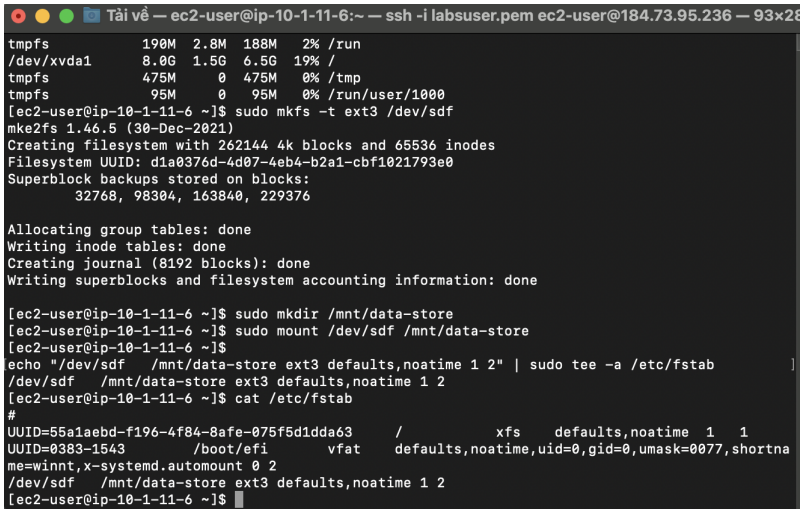
4	Choose **Create volume** then configure: - **Volume Type**: General Purpose SSD (gp2) - **Size** (GiB): 1 - **Availability Zone**: Select the same availability zone as the EC2 instance.	
5	In the **Tag Editor**, enter: - **Key**: Name - **Value**: My Volume Choose **Create Volume.** Wait for the volume to change from the **Creating state** to the **Available state**	

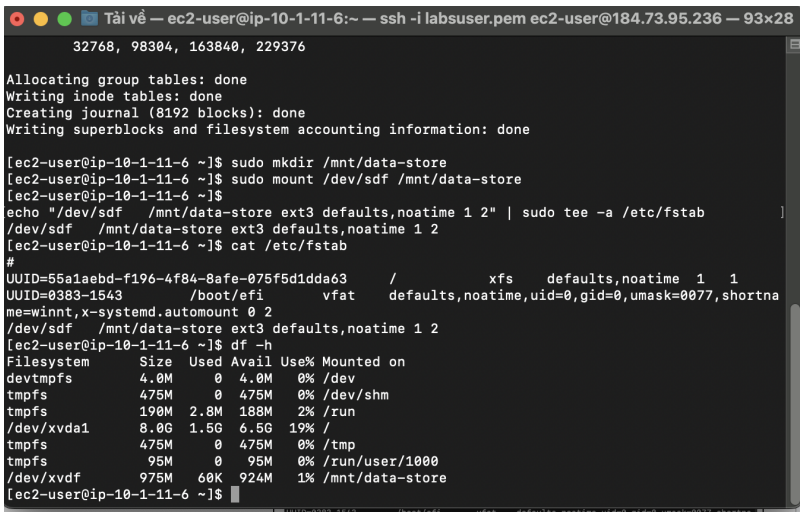
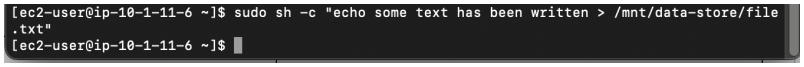
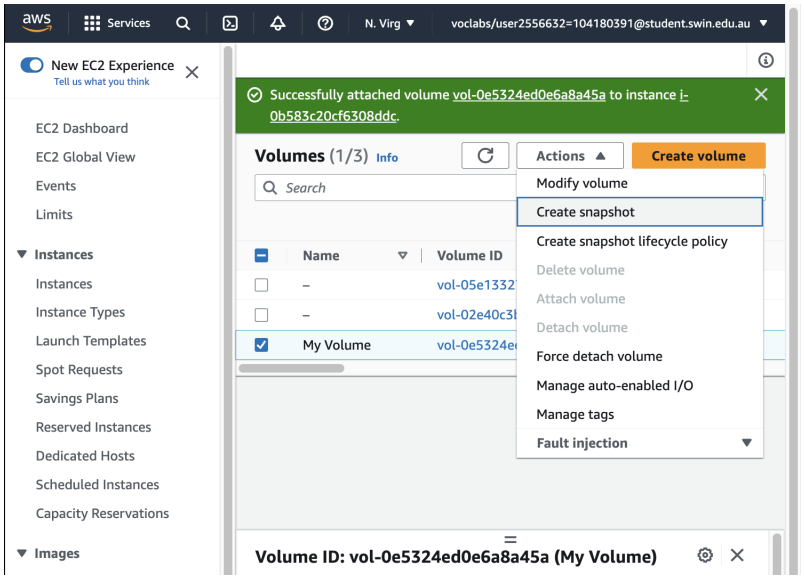
6	Select **My Volume**. In the **Actions** menu, choose **Attach volume**.	
7	Choose the **Instance** field, then select the instance that appears (Lab). The **Device** field is set to **/dev/sdf**. Choose **Attach volume**. The volume state is now **In-use**.	

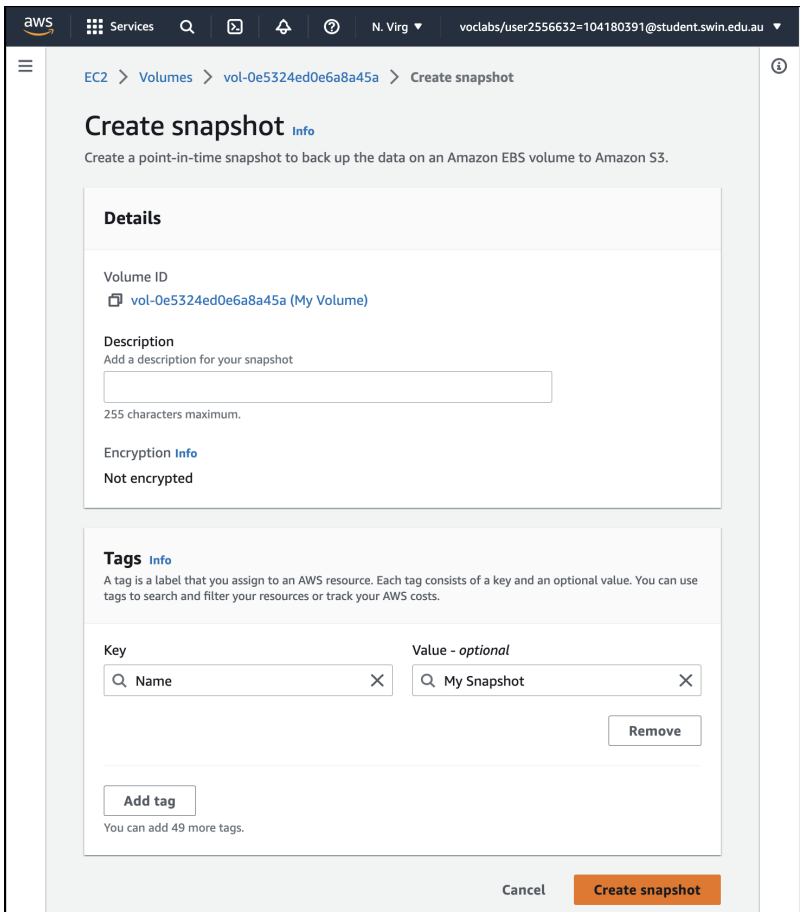
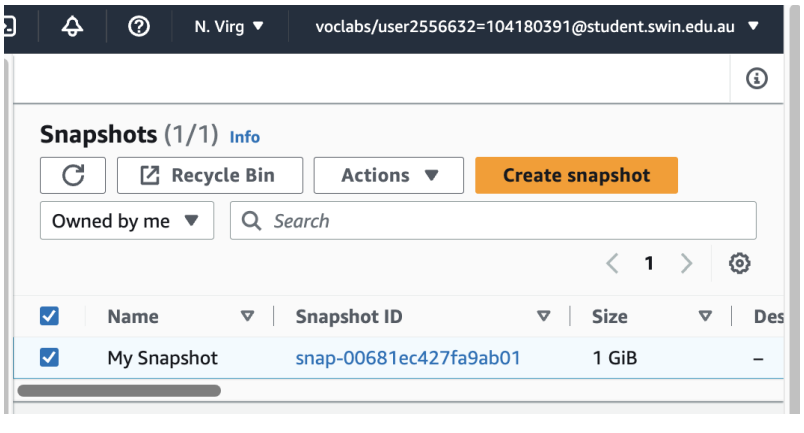
8	Open a terminal window, and change directory cd to the directory where the labsuser.pem file was downloaded. Change the permissions on the key to be read only.	
9	Get the public IPv4 address of the instance.	
10	Connect to the SSH server via Terminal. `ssh -i labsuser.pem ec2-user@<public-ip>`	
11	View the storage available on the instance. `df -h`	

12	Create an ext3 file system on the new volume. `sudo mkfs -t ext3 /dev/sdf`	

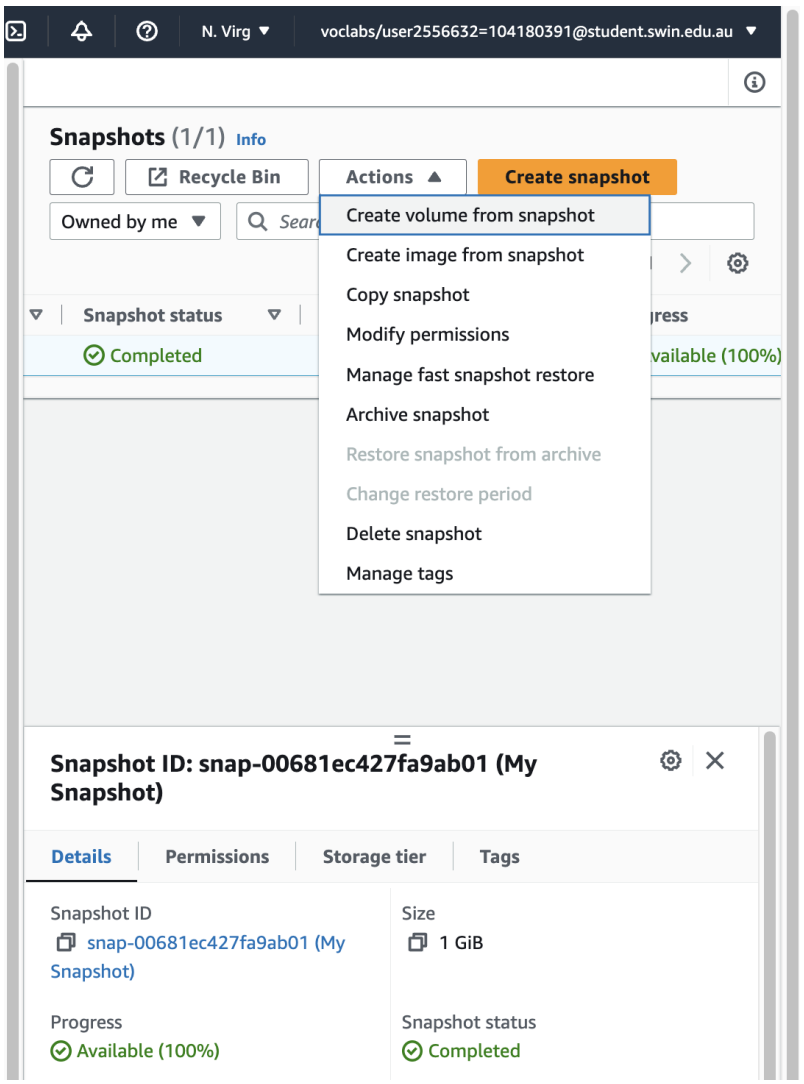
13	Create a directory for mounting the new storage volume.
	`sudo mkdir /mnt/data-store`
	
	Mount the new volume.
	`sudo mount /dev/sdf /mnt/data-store`
	
	To configure the Linux instance to mount this volume whenever the instance is started, add a line to /etc/fstab.
	
	`echo "/dev/sdf /mnt/data-store ext3 defaults,noatime 1 2" | sudo tee -a /etc/fstab`
		

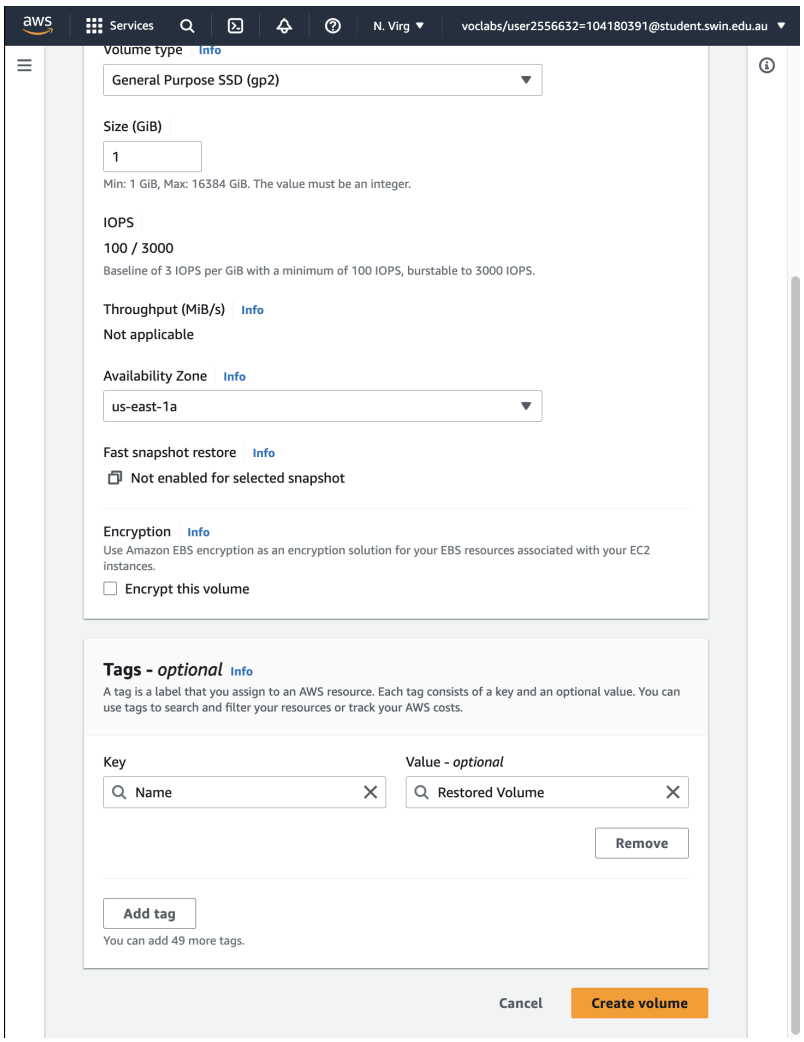
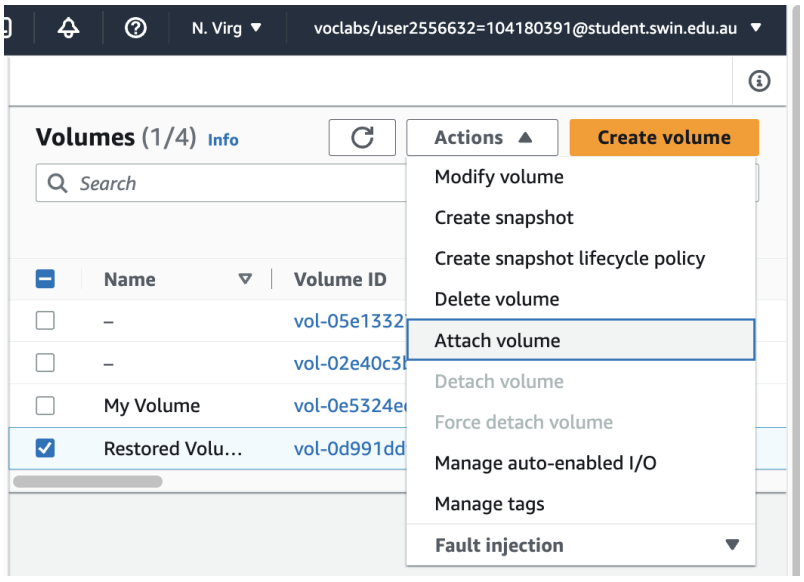
14	View the configuration file to see the setting on the last line.	

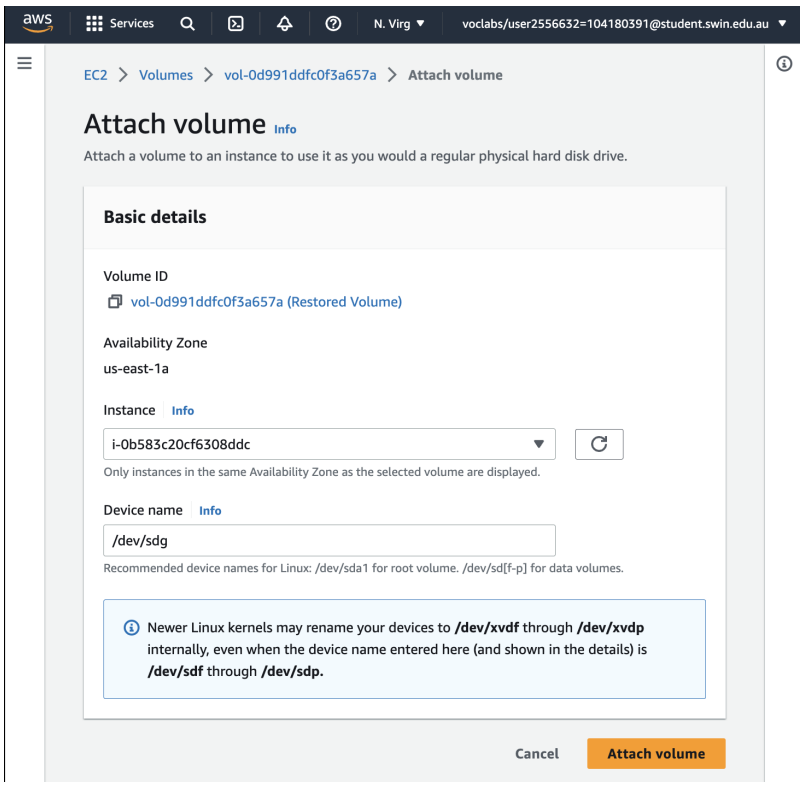
15	View the available storage again. `df -h` The output will now contain an additional line - /dev/xvdf:	
16	On the mounted volume, create a file and add some text to it. `sudo sh -c "echo some text has been written > /mnt/data-store/file.txt"`	
17	Verify that the text has been written to the volume. `cat /mnt/data-store/file.txt`	
18	In the AWS Management Console, choose **Volumes** and select **My Volume**. In the **Actions** menu, select **Create snapshot**.	

19	Choose **Add tag** then configure: - **Key**: Name - **Value**: My Snapshot - Choose **Create snapshot**	
20	In the left navigation pane, choose **Snapshots**. The snapshot is displayed. The status will first have a state of **Pending**, which means that the snapshot is being created. It will then change to a state of **Completed**.	

21	In your remote SSH session, delete the file that was created on the volume.
	`sudo rm /mnt/data-store/file.txt`
	Verify that the file has been deleted.
	`ls /mnt/data-store/`
	The file has been deleted.
		

22	In the AWS Management Console, select **My Snapshot**. In the **Actions** menu, select **Create volume from snapshot**.	

23	For the Availability Zone, select the same availability zone that was used earlier. Choose **Add tag** then configure: - **Key**: Name - **Value**: Restored Volume - Choose **Create volume**	
24	In the left navigation pane, choose **Volumes**. Select **Restored Volume**. In the **Actions** menu, select **Attach volume**.	

25	Choose the **Instance** field, then select the (Lab) instance that appears. The **Device** field is set to **/dev/sdg**. Choose **Attach volume**. The volume state is now **in-use**.	

26	Create a directory for mounting the new storage volume.
	`sudo mkdir /mnt/data-store2`
	Mount the new volume.
	`sudo mount /dev/sdg /mnt/data-store2`
	Verify that the volume you mounted has the file that wá created earlier.
	`ls /mnt/data-store2/`
	file.txt is displayed.