St. JOSEPH'S GROUP OF INSTITUTIONS
OMR, CHENNAI - 119

aws

Placement Empowerment Program

Cloud Computing and DevOps Centre

Take the snapshot of your vm,terminate the vm and restore it from the snapshot.

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Introduction :

Taking a snapshot of a virtual machine (VM) is a crucial step in preserving its current state, including the disk, memory, and configurations, which can be used for backup, testing, or recovery purposes. The process begins by creating a snapshot, which acts as a restore point, allowing you to revert to that state if needed. Once the snapshot is taken, the VM can be safely terminated, freeing up resources while ensuring that the saved state remains intact. When required, the VM can be restored from the snapshot, recreating the exact environment as it was at the time of the snapshot. This approach is widely used for system updates, software testing, and disaster recovery, as it ensures minimal downtime and maintains data integrity while providing a reliable rollback option.

Overview :

Taking a snapshot of a virtual machine (VM) captures its current state, including disk, memory, and configurations, allowing for quick recovery if needed. This is useful for backup, testing, and recovery purposes. Once a snapshot is taken, the VM can be terminated to free up resources while preserving its state. Later, the VM can be restored from the snapshot, bringing it back to the exact saved state. This process ensures minimal downtime, data integrity, and a reliable rollback option in case of failures or system changes.

Objective:

The objective of this task is to:

***Backup and Recovery** – Preserve the VM's current state to enable quick restoration in case of failures.*

***Minimal Downtime** – Ensure business continuity by quickly restoring a terminated VM when needed.*

***Testing and Experimentation** – Allow safe testing of updates, configurations, or software changes with a rollback option.*

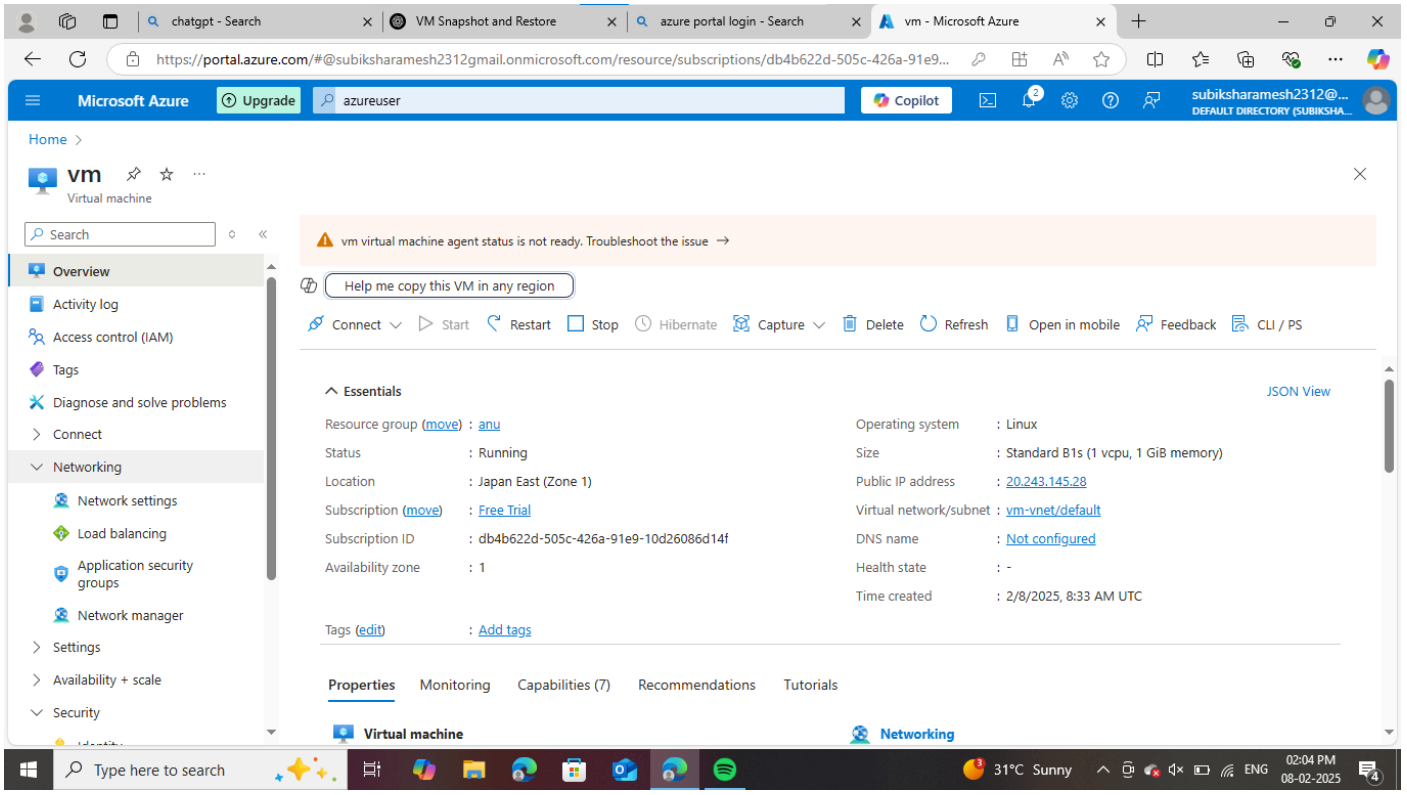
Resource Optimization *– Free up cloud or on-premise resources by terminating VMs without losing their state.*

Disaster Recovery *– Provide a fail-safe mechanism to restore critical workloads in case of system crashes.*

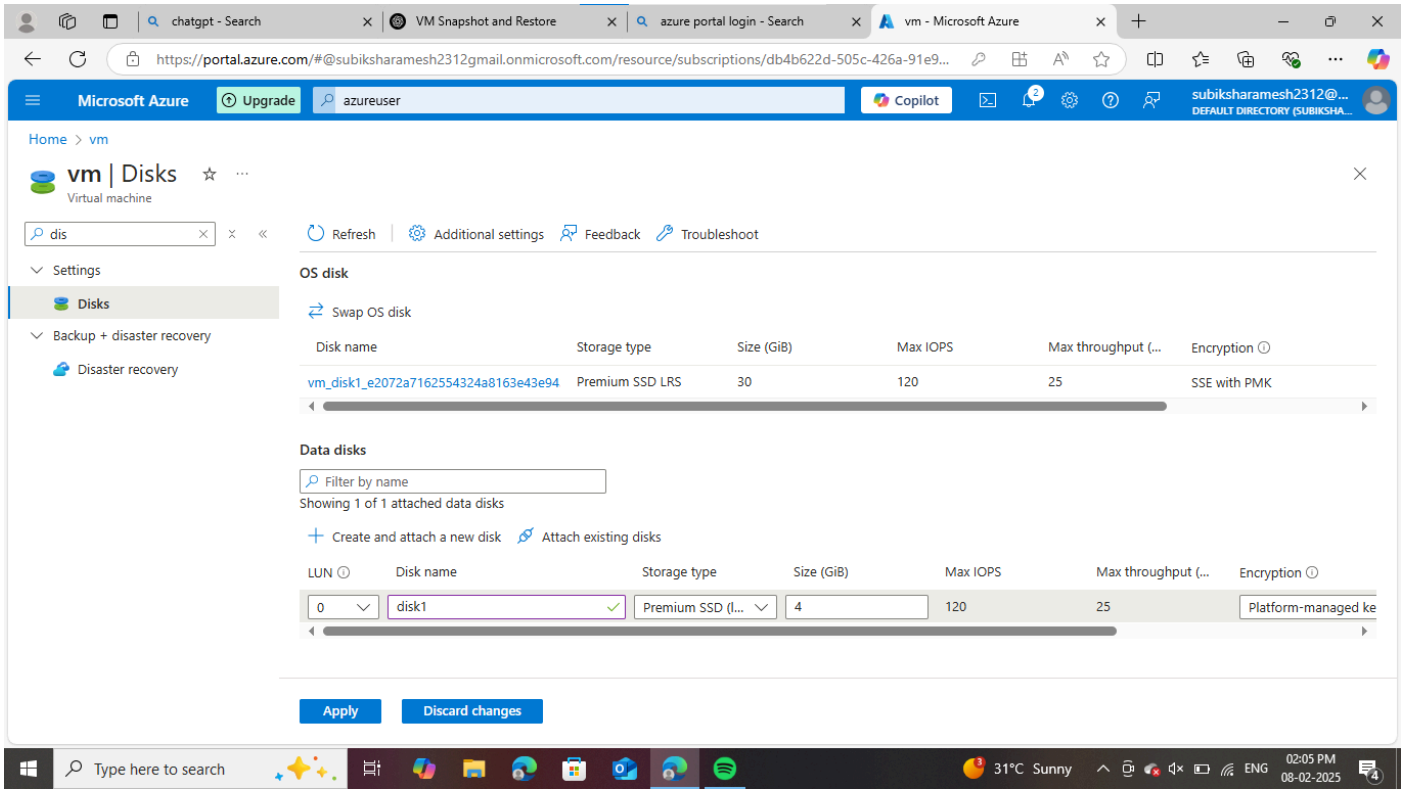
Version Control *– Maintain different versions of a VM to track changes and revert when necessary.*

Step-by-Step procedure :

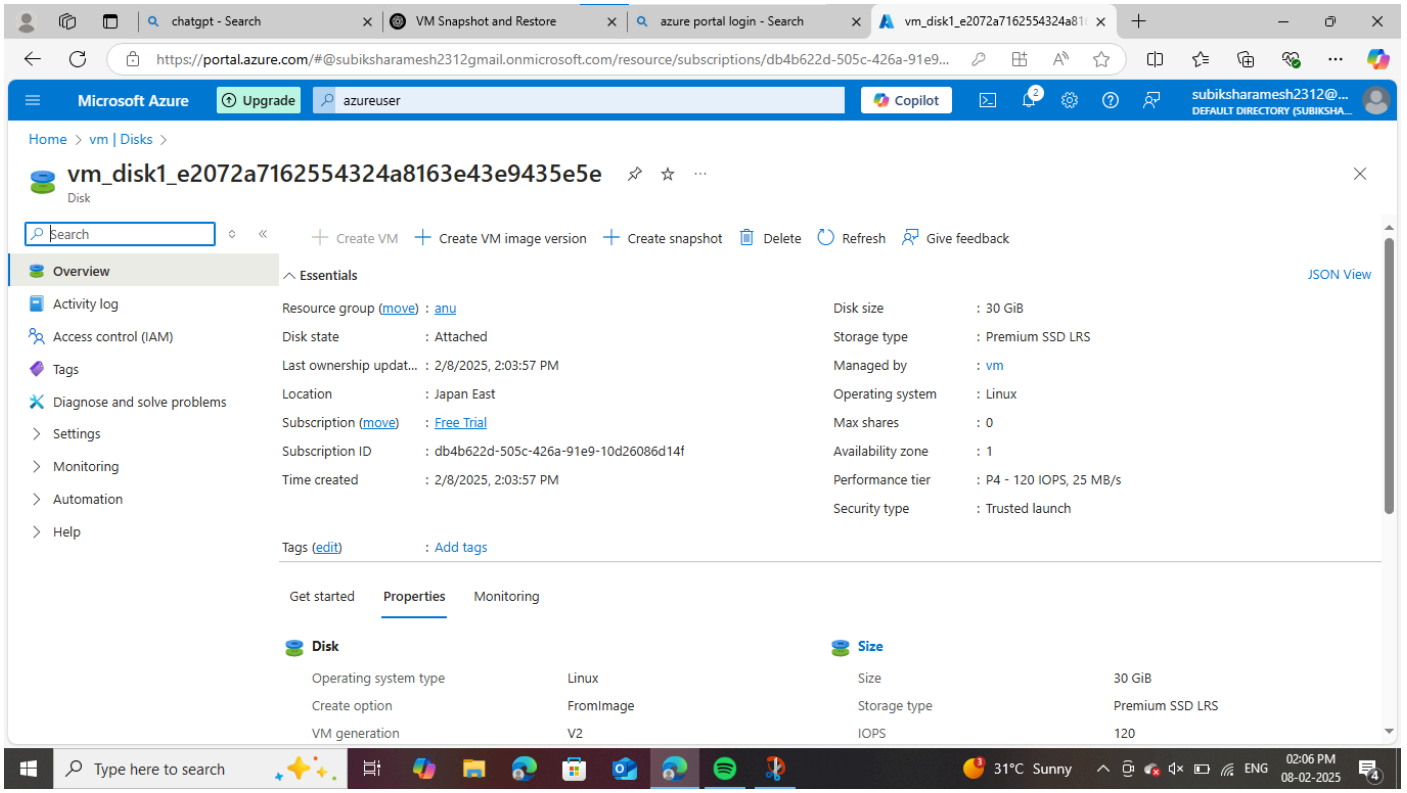
STEP 1 :*Create a virtual machine*



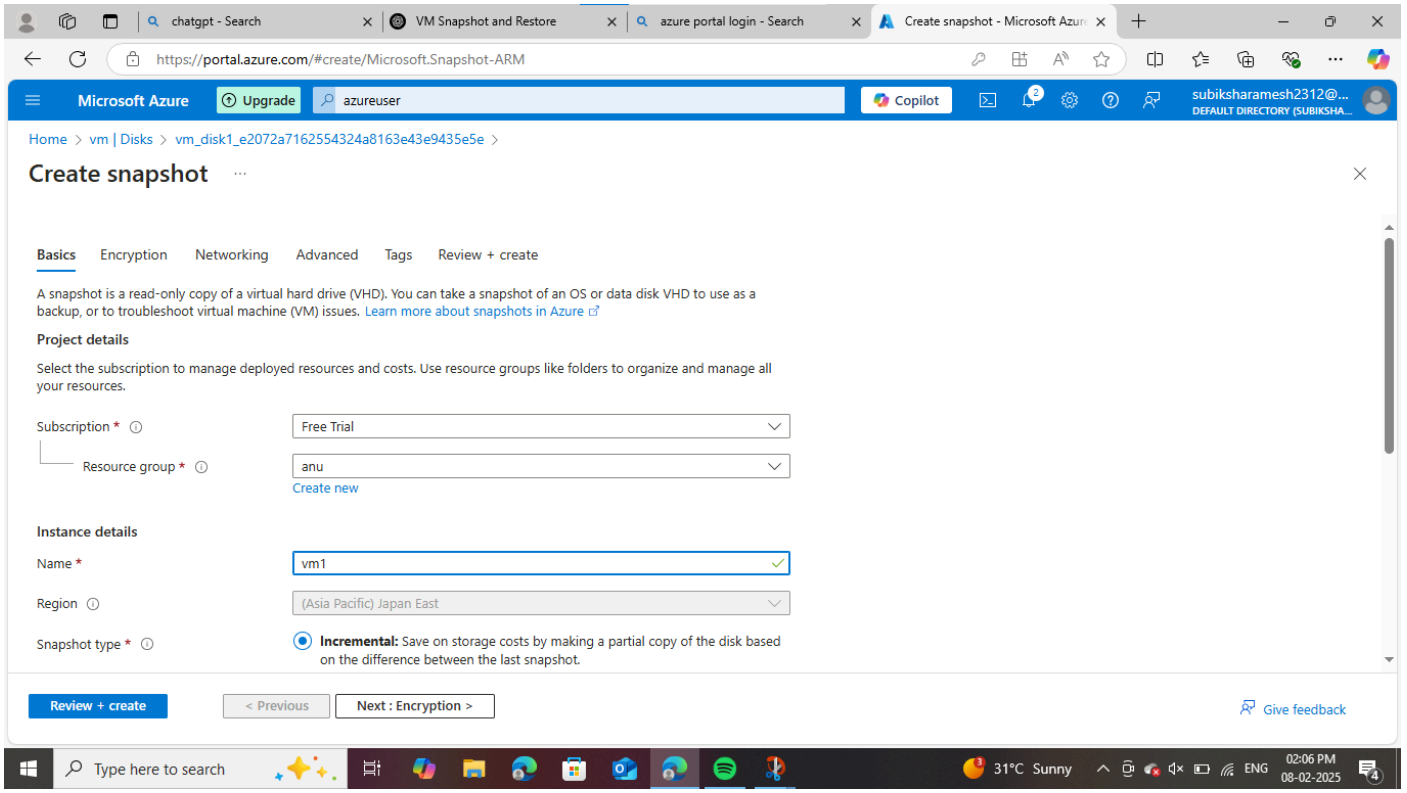
STEP 2:under vm,navigate to disks

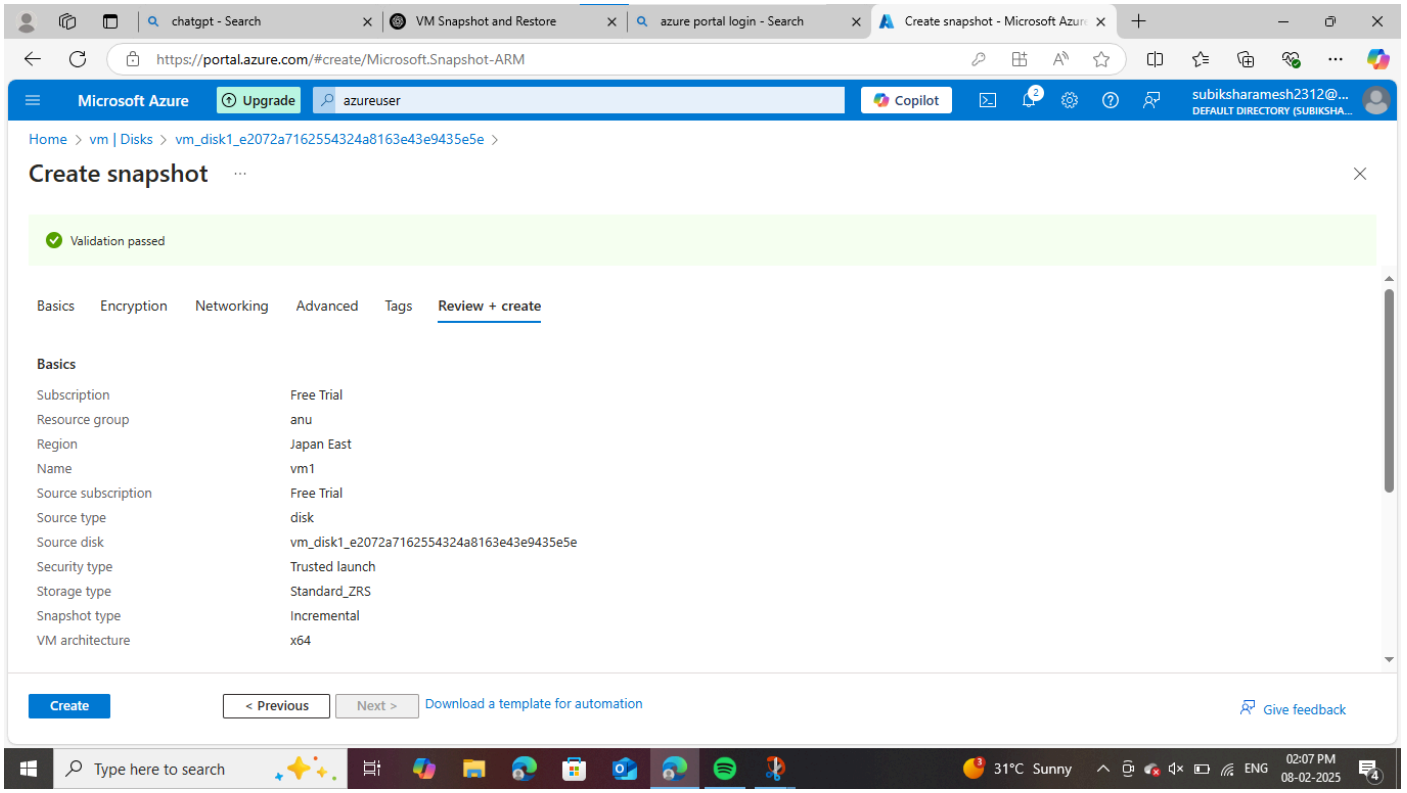


STEP 3:Inside the disks,open to create snapshot :

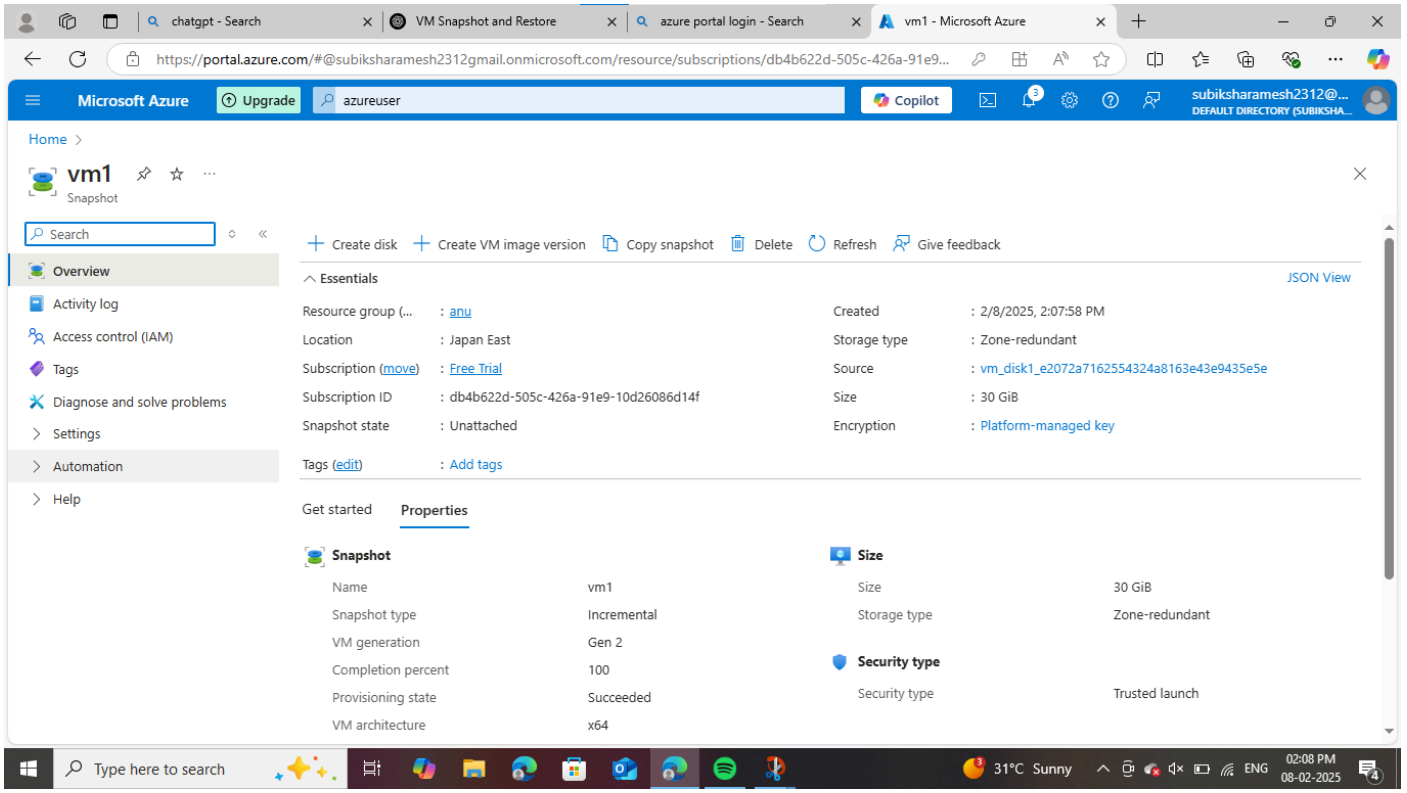


STEP 4:Now create a snapshot of that vm using vm's disk

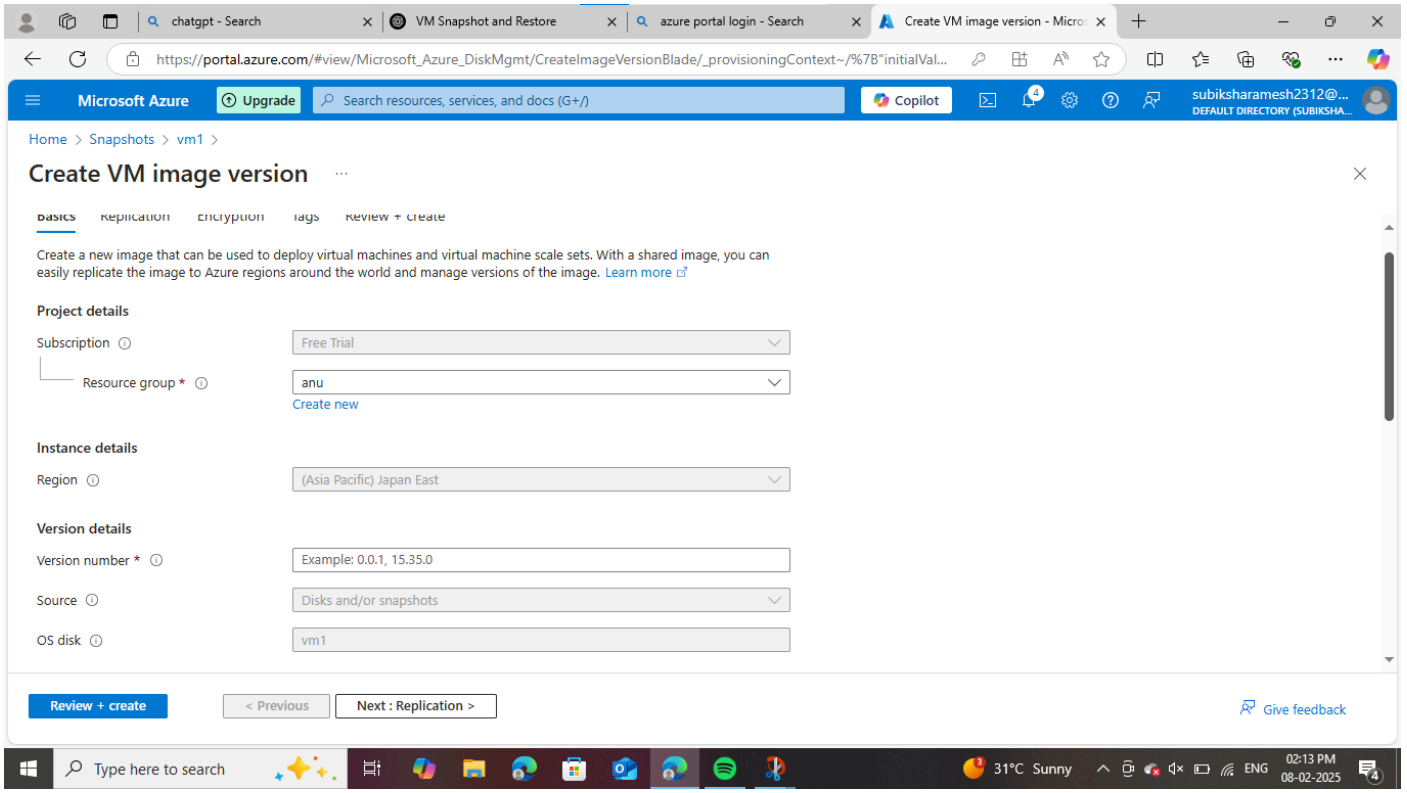


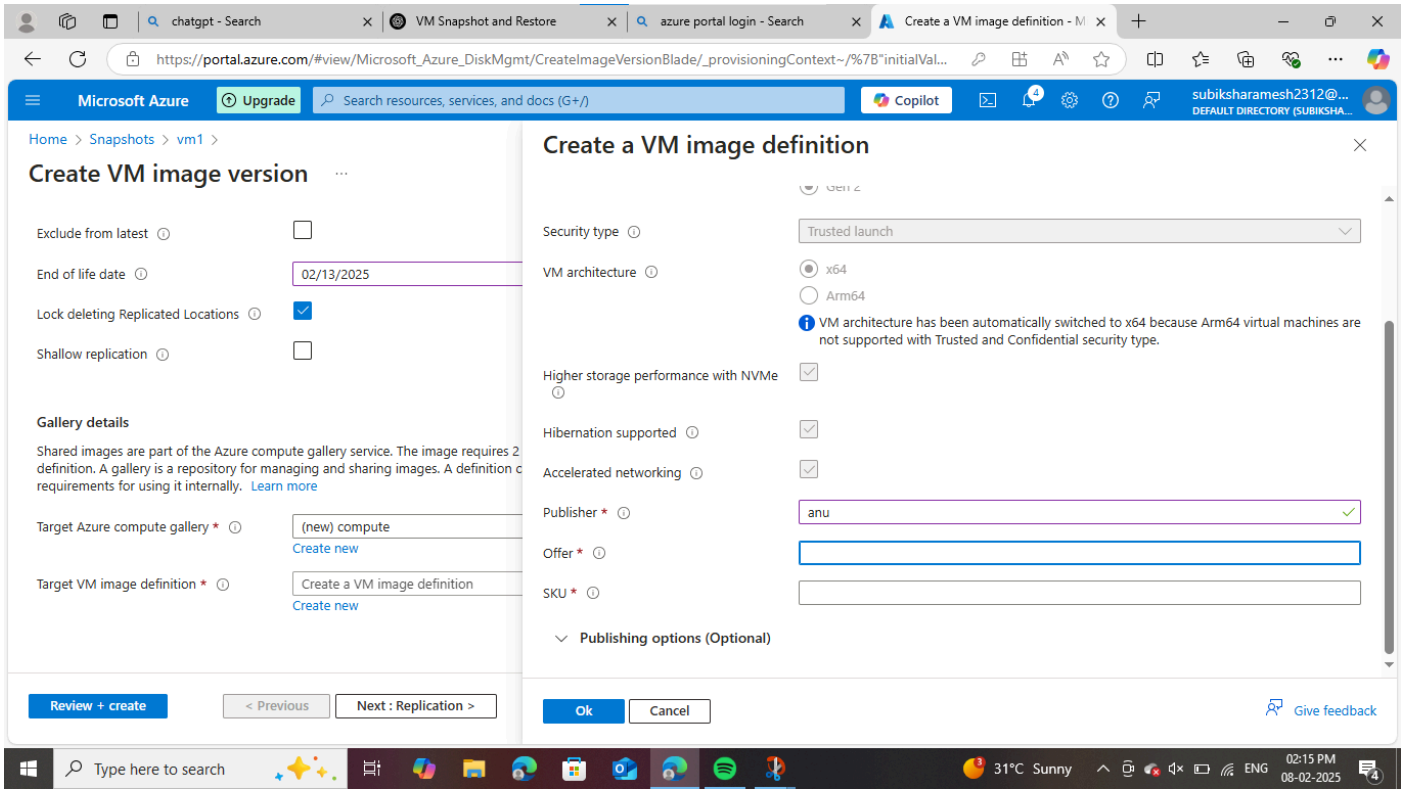


STEP 5:under the created snapshot,click on create a image version

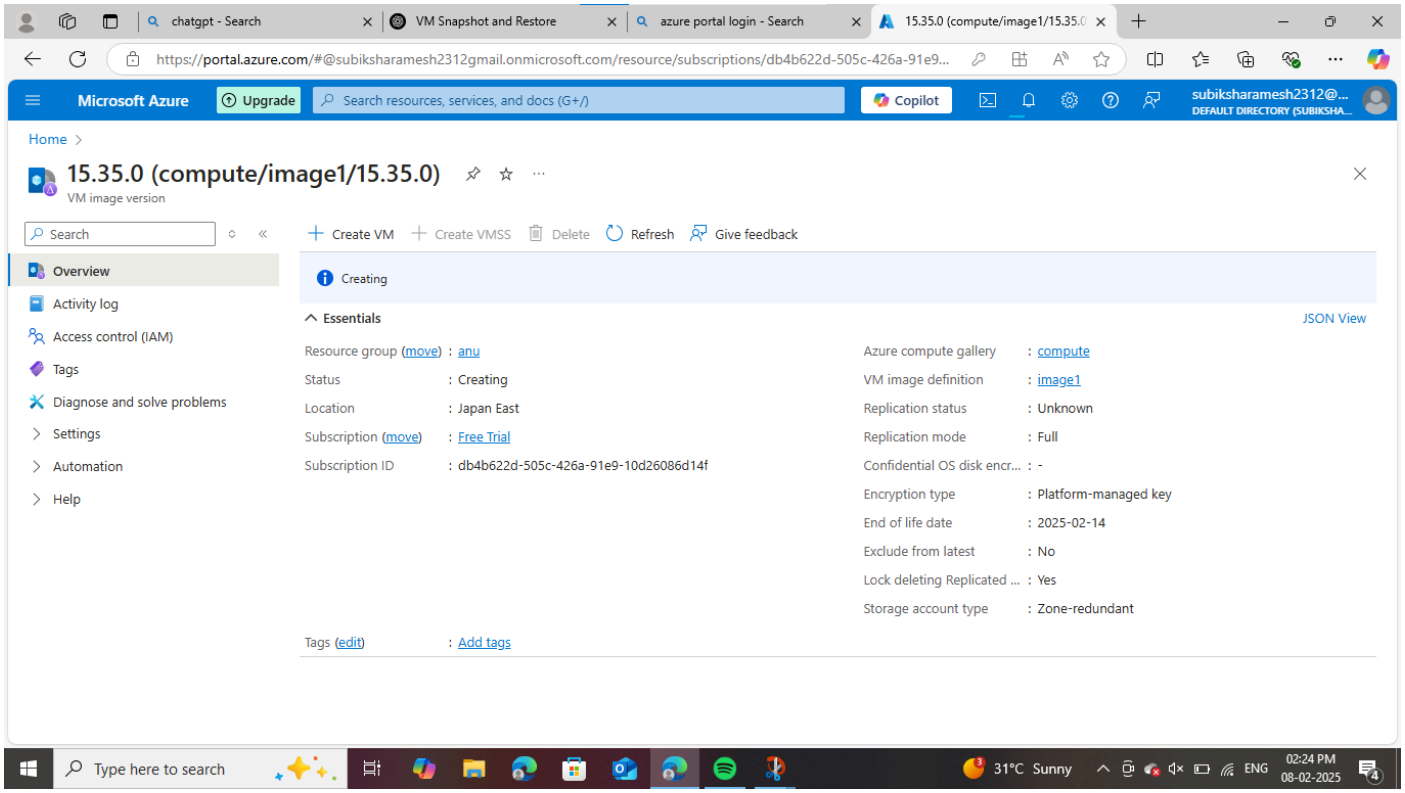


STEP 6:create a vm image version with specified version number and image-definition

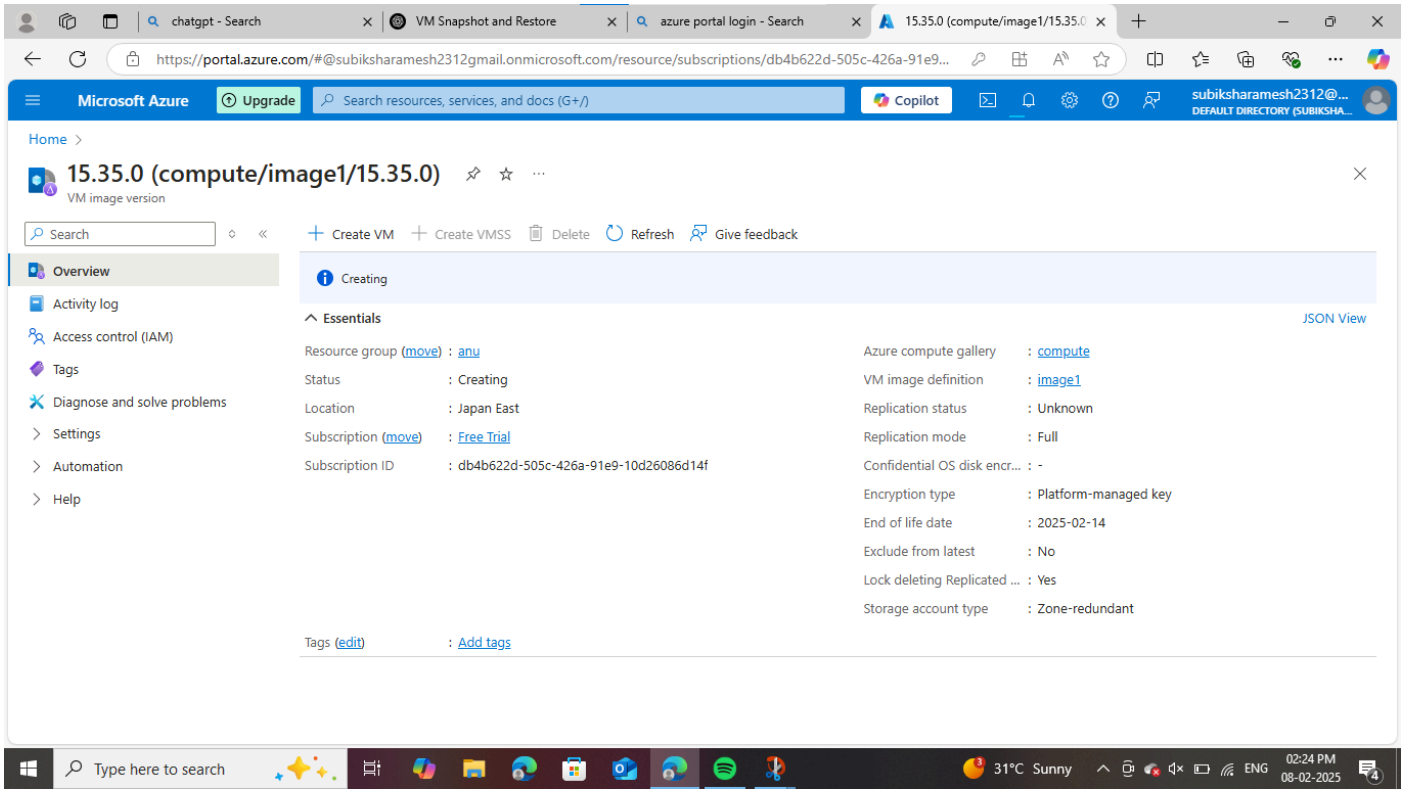




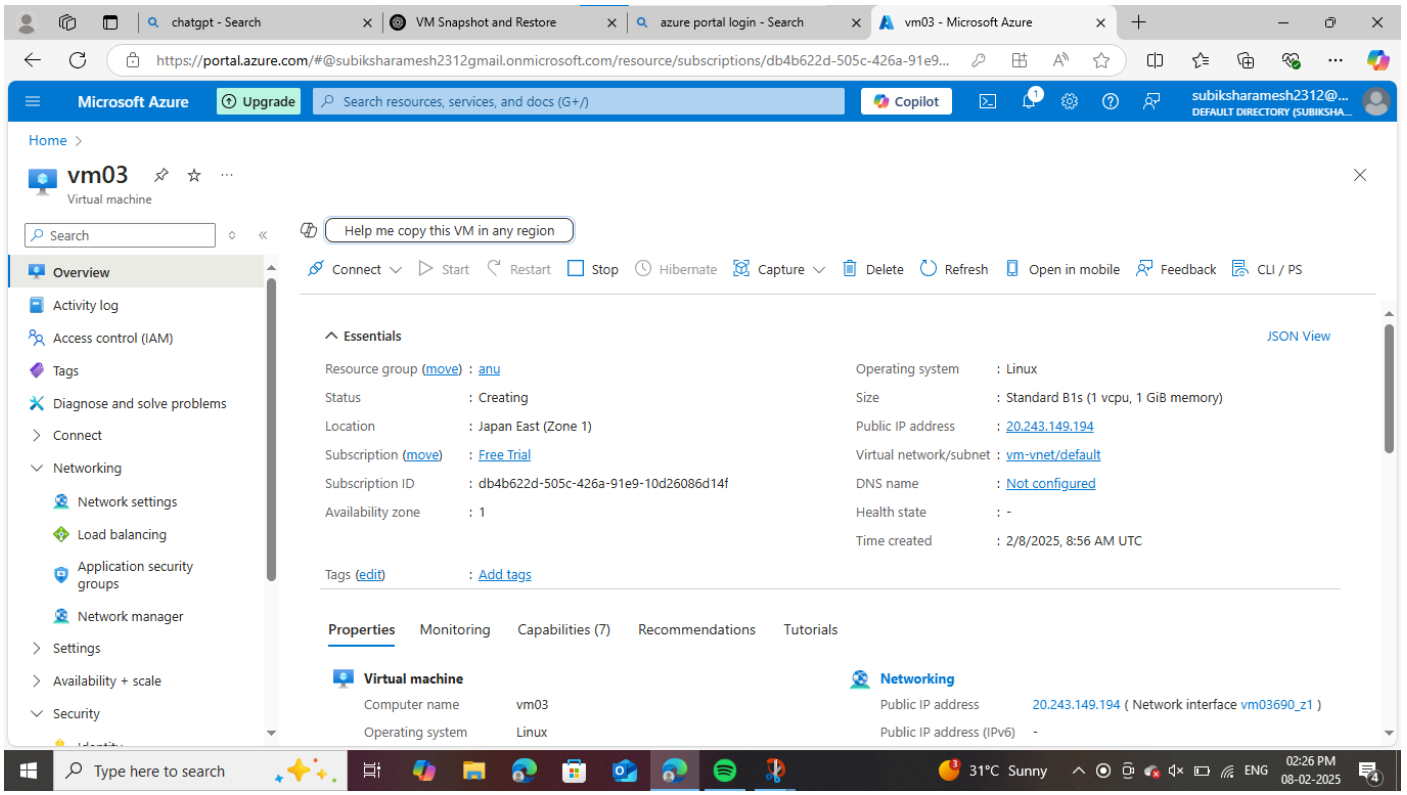
STEP 7:Hence the vm image version will pass the validation process



STEP 8:now create a vm under the same disk of the old vm:



STEP 9:The new vm will be created using the disk



Outcome :

The outcome of taking a snapshot, terminating, and restoring a virtual machine (VM) is a streamlined and efficient approach to ensuring data protection, disaster recovery, and optimized resource management. By capturing the VM's current state, including its disk, memory, and configurations, snapshots provide a reliable restore point, allowing users to revert to a stable environment whenever needed. This process minimizes downtime, enhances system resilience, and ensures business continuity by enabling quick recovery in case of failures, accidental deletions, or system crashes. Additionally, it supports software testing, updates, and development workflows by allowing experimentation without permanent risk. Terminating VMs after taking snapshots helps in freeing up cloud or on-premise resources while retaining the ability to restore them when required. Ultimately, this approach improves operational efficiency, reduces costs, and provides a structured rollback mechanism for maintaining system stability and security.