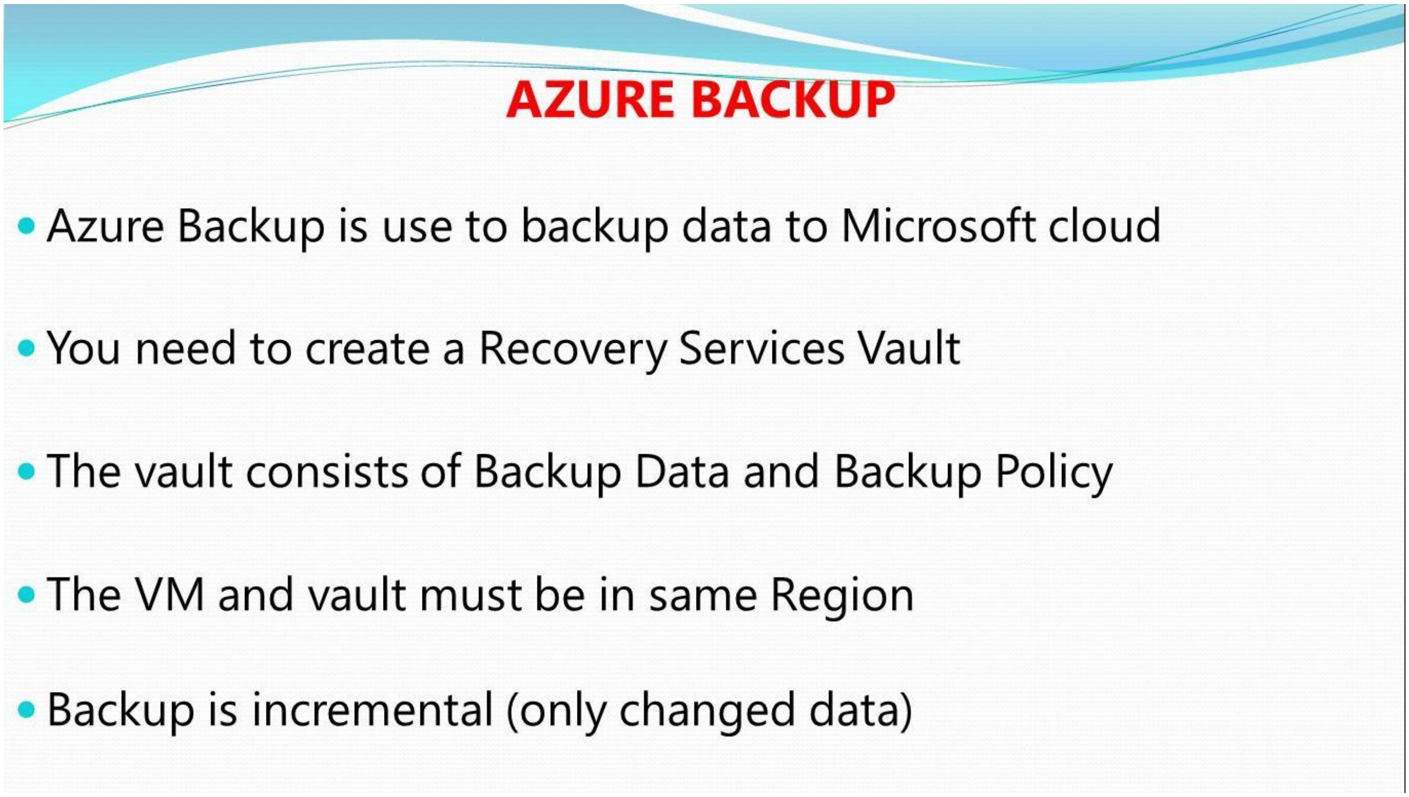
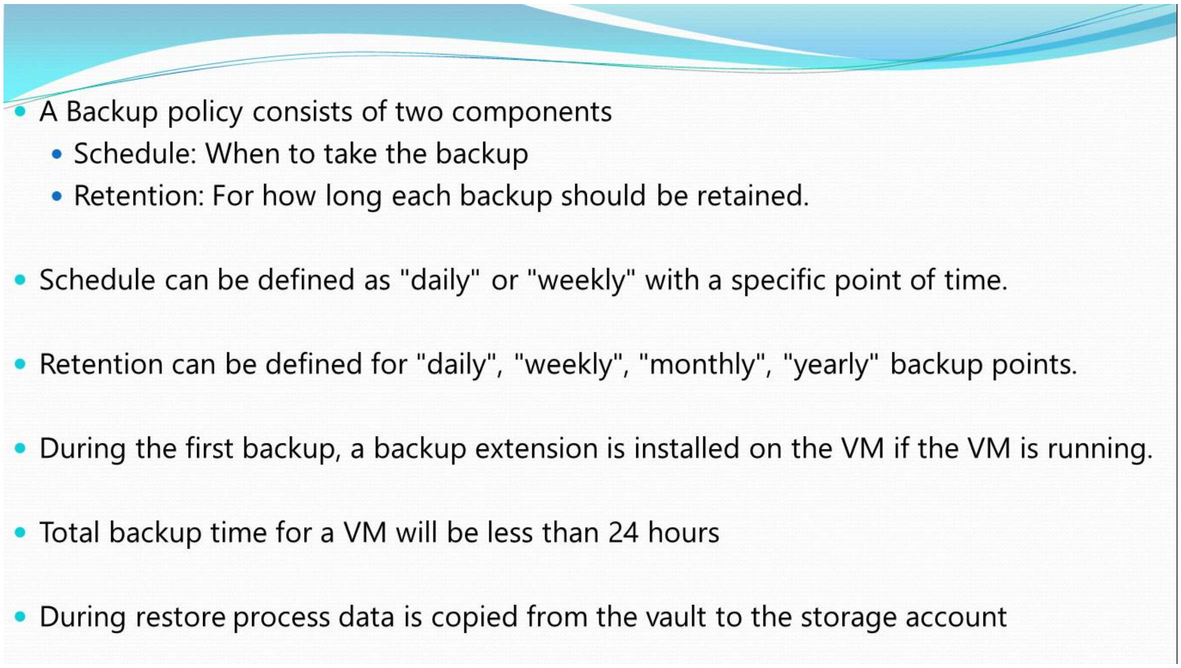
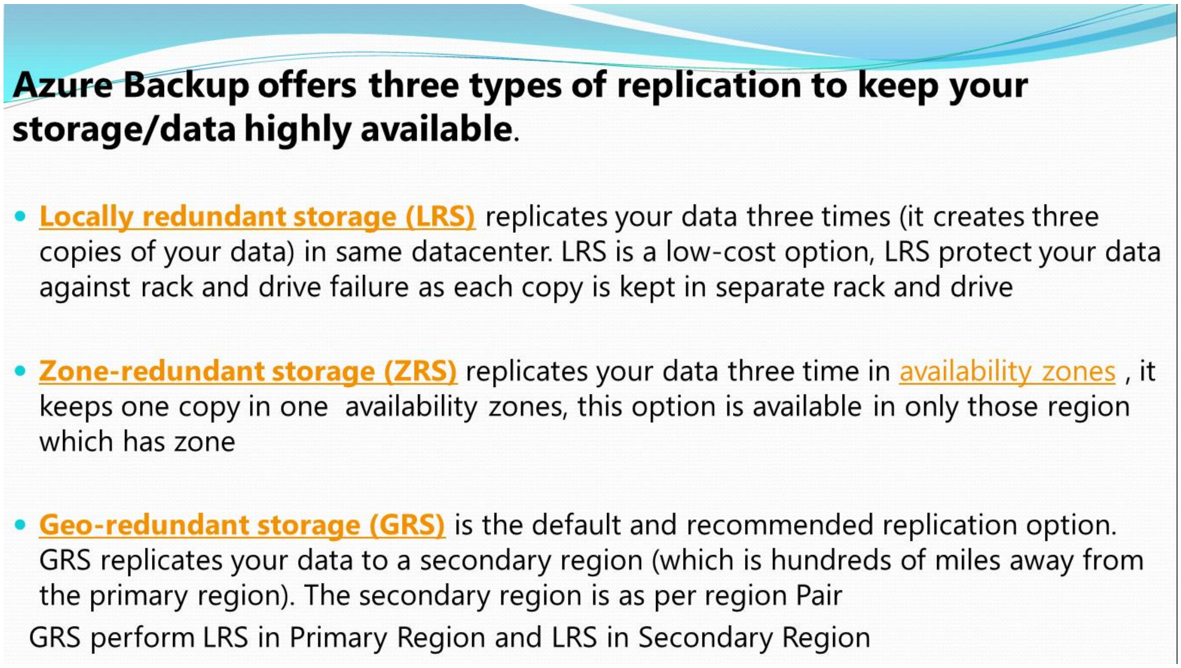


AZURE BACKUP

- Azure Backup is use to backup data to Microsoft cloud
- You need to create a Recovery Services Vault
- The vault consists of Backup Data and Backup Policy
- The VM and vault must be in same Region
- Backup is incremental (only changed data)



- A Backup policy consists of two components
  - Schedule: When to take the backup
  - Retention: For how long each backup should be retained.
- Schedule can be defined as "daily" or "weekly" with a specific point of time.
- Retention can be defined for "daily", "weekly", "monthly", "yearly" backup points.
- During the first backup, a backup extension is installed on the VM if the VM is running.
- Total backup time for a VM will be less than 24 hours
- During restore process data is copied from the vault to the storage account



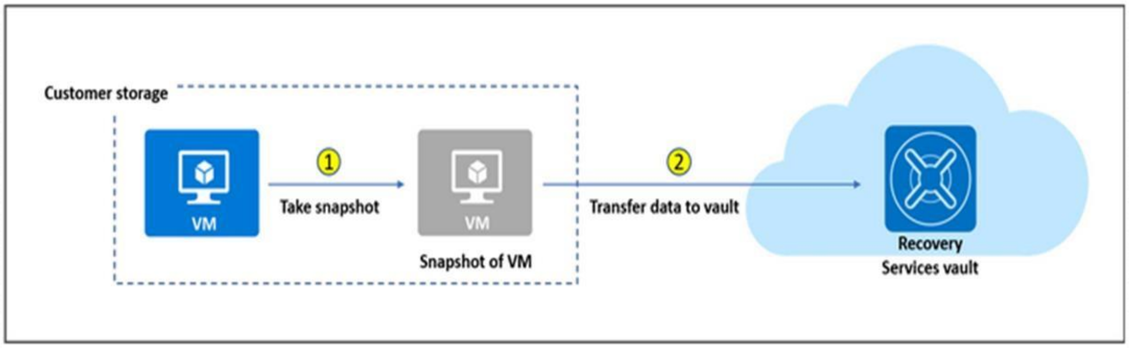
Azure Backup offers three types of replication to keep your storage/data highly available.

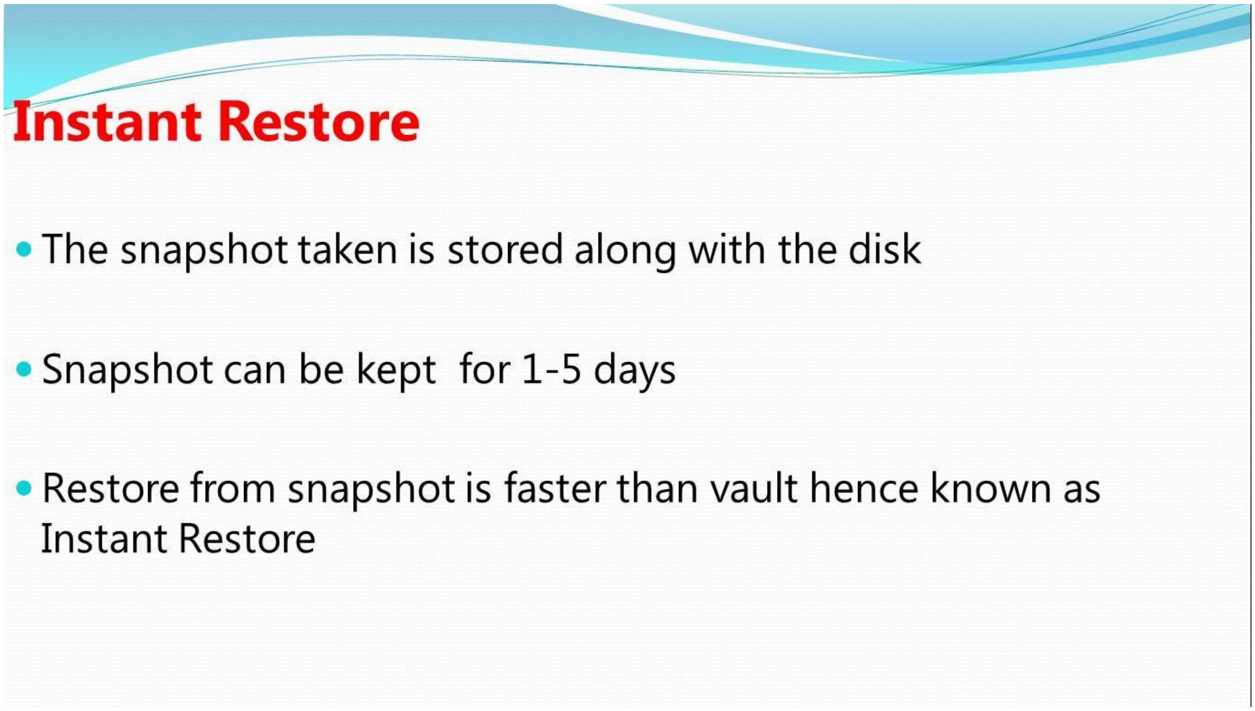
- **Locally redundant storage (LRS)** replicates your data three times (it creates three copies of your data) in same datacenter. LRS is a low-cost option, LRS protect your data against rack and drive failure as each copy is kept in separate rack and drive
- **Zone-redundant storage (ZRS)** replicates your data three time in availability zones , it keeps one copy in one availability zones, this option is available in only those region which has zone
- **Geo-redundant storage (GRS)** is the default and recommended replication option. GRS replicates your data to a secondary region (which is hundreds of miles away from the primary region). The secondary region is as per region Pair

GRS perform LRS in Primary Region and LRS in Secondary Region

The backup consists of two phases

- ❑Taking a VM snapshot.
- ❑Transferring a VM snapshot to the Recovery Services vault.



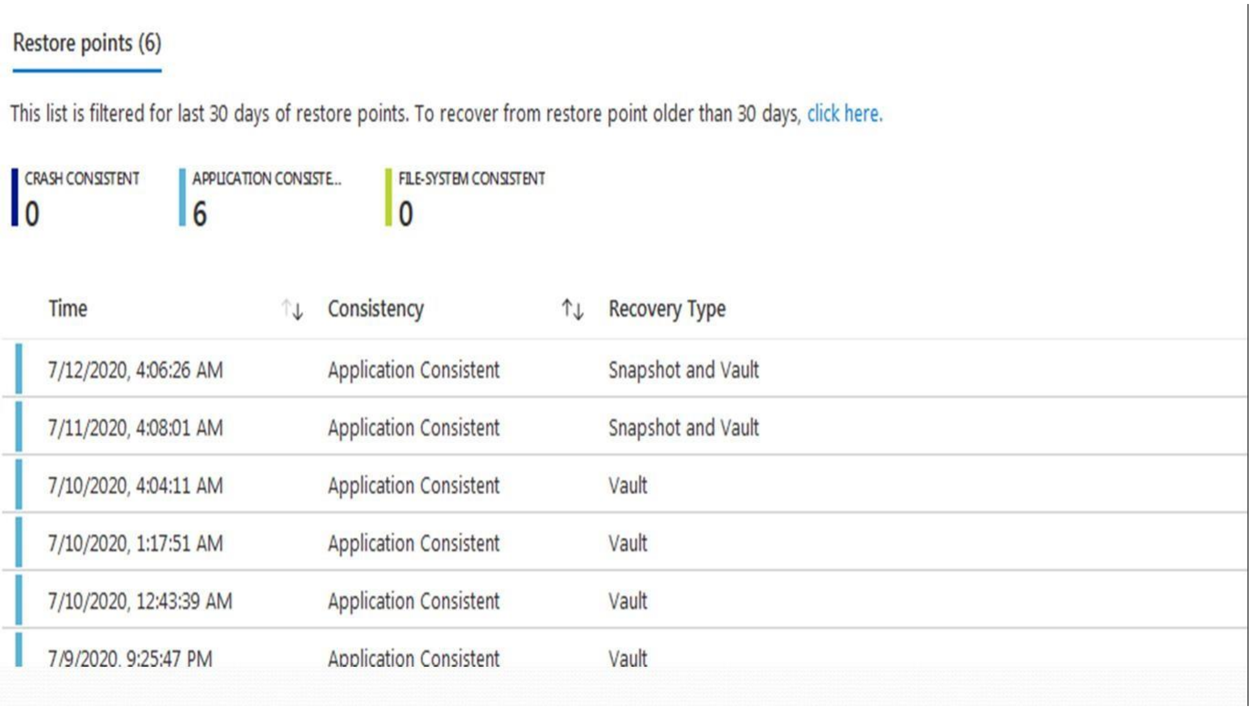


Instant Restore

- The snapshot taken is stored along with the disk
- Snapshot can be kept for 1-5 days
- Restore from snapshot is faster than vault hence known as Instant Restore

If the recovery type is “snapshot and vault”, restore will be automatically done from the local snapshot, which will be much faster compared to the restore done from the vault.

If the recovery type is “vault”, restore will be done from the vault, which will be slower



Restore points (6)

This list is filtered for last 30 days of restore points. To recover from restore point older than 30 days, click here.

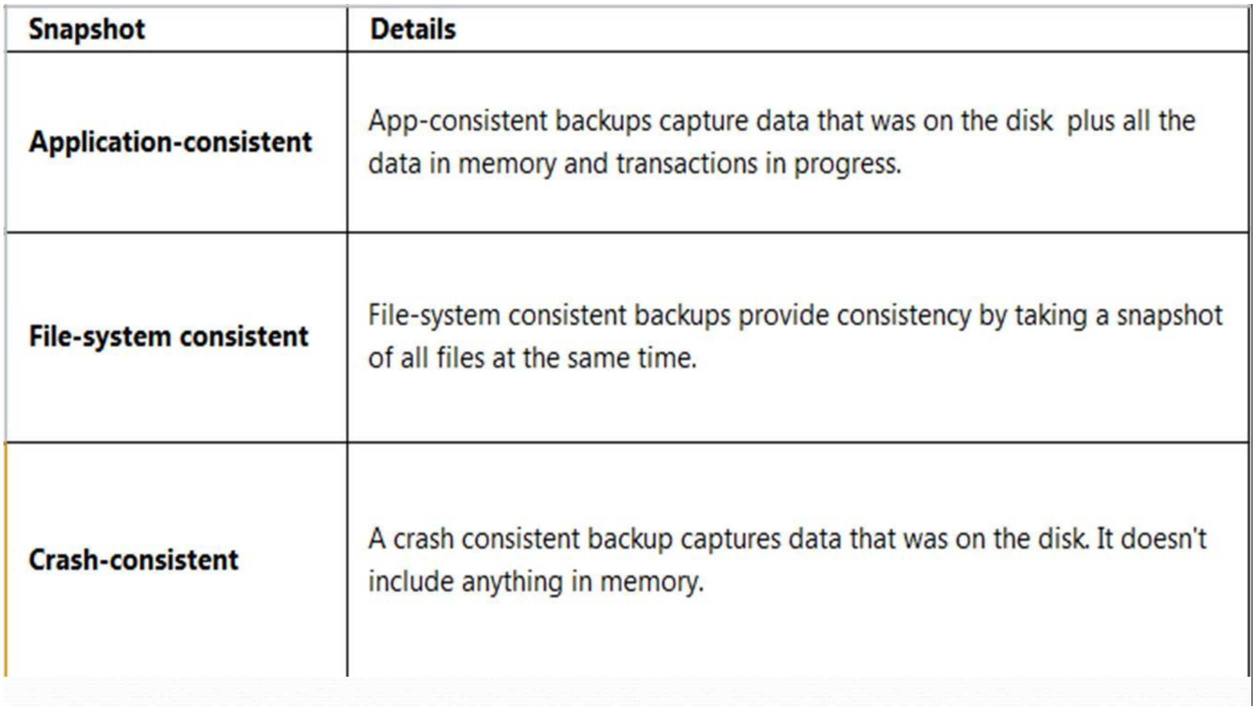
CRASH CONSISTENT 0

APPLICATION CONSISTE... 6

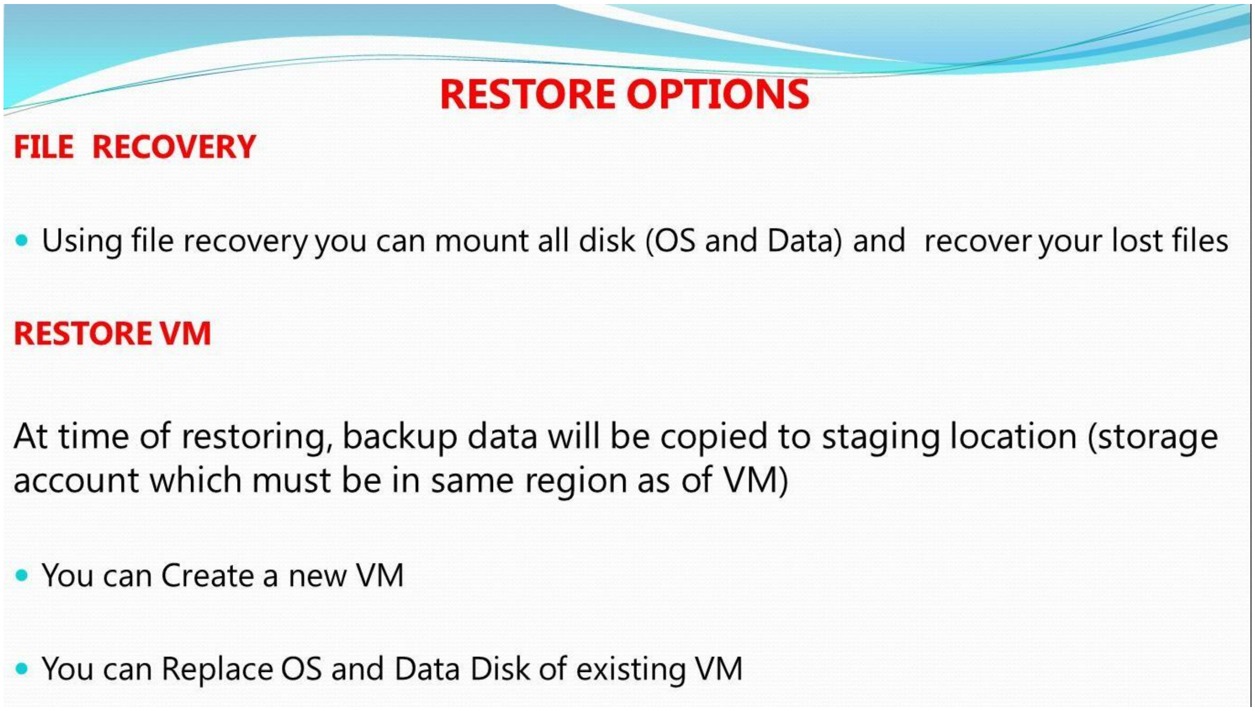
FILE-SYSTEM CONSISTENT 0

Time	Consistency	Recovery Type
7/12/2020, 4:06:26 AM	Application Consistent	Snapshot and Vault
7/11/2020, 4:08:01 AM	Application Consistent	Snapshot and Vault
7/10/2020, 4:04:11 AM	Application Consistent	Vault
7/10/2020, 1:17:51 AM	Application Consistent	Vault
7/10/2020, 12:43:39 AM	Application Consistent	Vault
7/9/2020, 9:25:47 PM	Application Consistent	Vault

Snapshot consistency



Snapshot	Details
Application-consistent	App-consistent backups capture data that was on the disk plus all the data in memory and transactions in progress.
File-system consistent	File-system consistent backups provide consistency by taking a snapshot of all files at the same time.
Crash-consistent	A crash consistent backup captures data that was on the disk. It doesn't include anything in memory.



RESTORE OPTIONS

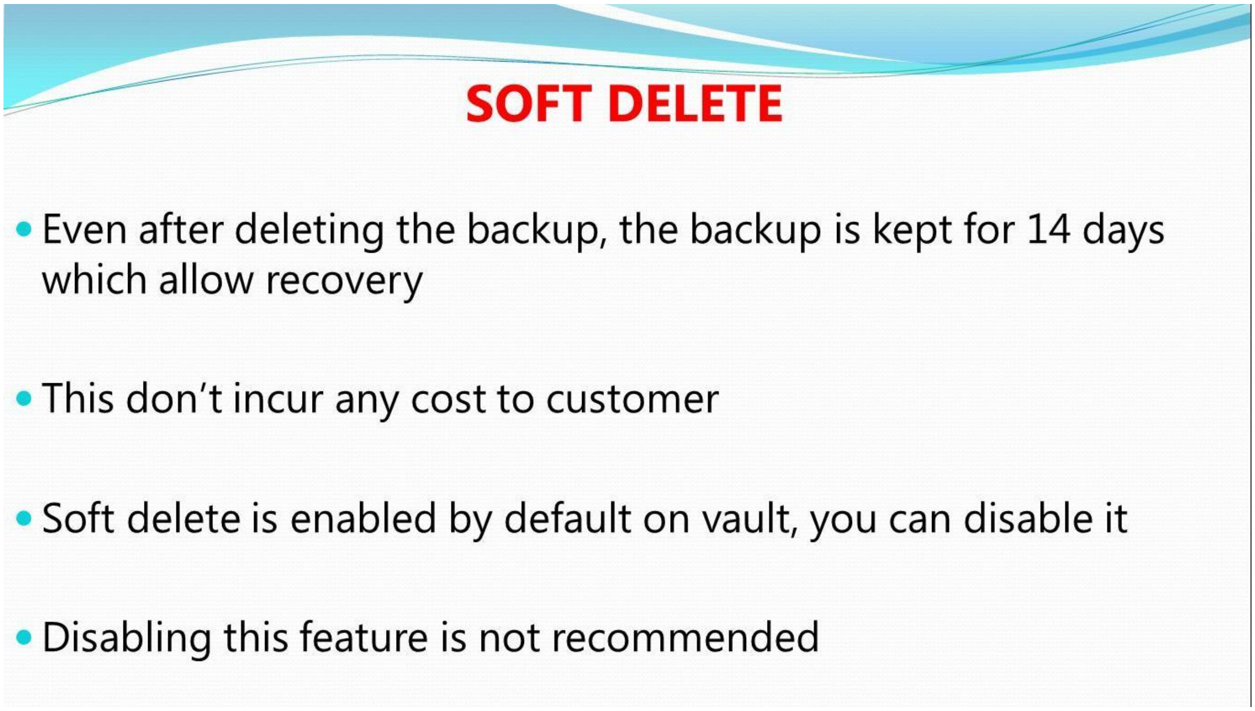
FILE RECOVERY

- Using file recovery you can mount all disk (OS and Data) and recover your lost files

RESTORE VM

At time of restoring, backup data will be copied to staging location (storage account which must be in same region as of VM)

- You can Create a new VM
- You can Replace OS and Data Disk of existing VM



SOFT DELETE

- Even after deleting the backup, the backup is kept for 14 days which allow recovery
- This don’t incur any cost to customer
- Soft delete is enabled by default on vault, you can disable it
- Disabling this feature is not recommended