

# Google Cloud : The Next Level

Disks in Compute Engine



# Google Cloud Certification

- All Compute Engine needs Disk to read/write data or to operate.
- **Persistent Disk** - Single root disk attached to VM.
  - Common and Default Option
  - Not Directly attached to Compute Engine, but Network Attached Disk
  - Standard and SSD options available
- **Local SSD** - Directly attached to Compute Engine VM
- **Cloud Storage Bucket** - Infinite Space
  - No Block Storage allowed.

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## ➤ Persistent Disks

- Persistent Disk is Default and Only Boot Option for Compute VM
- Network Attached Disk. Array of multiple Disks.
  - Redundancy, Reliability, Performance
  - Benefit of RAID (Redundant Array of Independent Disks)
    - RAID 0 (Striping) - Stream of data is divided into multiple segments or blocks and each of those blocks is stored on different disks.
    - RAID 1 (Mirroring) - Data is mirrored or cloned to an identical set of disks so that if one of the disks fails, the other one can be used.

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## ➤ Persistent Disks

- Very flexible and Powerful.
- Independent from VM not physically attached.
- Can be Detach/Move.
- Can be read multiple instance at Once.
- Preserve Data even after deleting Instance.
- Resize, Move, Attach additional Disk- even when in-use.
- Performance scale with Size.
- SSD Options are available.
- Encryption - Google Encryption or Custom Encryption.

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## ➤ Local SSD -

- Highest Performance Disk
- Physically attached to VM
- Can't be boot disk
- Must create on Instance Creation
- Fix in Size and attach upto 8 Disk
- All Data lost in case Instance Terminate
- Only Support Google Supplied Encryption.
- Can attach Local SSD and Persistent Disk to same Instance

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- Cloud Bucket Storage -
  - Can't be a Boot Disk
  - Most Flexible, Durable, Scalable Disk Options
  - Lower Performance then Other Disk Options
  - Global accessibility
    - Instance multiple region/zone can use the same bucket.

# Thank You...

Don't be the Same! Be Better!!!

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