
# Short interview questions on Instance store.

## 🔷 Instance Store

1. **What is Instance Store, and when would you use it over EBS?**
   Instance Store provides temporary block-level storage for EC2 instances. It's ideal for temporary data like caches, buffers, or scratch data.
2. **Which EC2 instance types support Instance Store volumes?**
   Instance types like i3, d2, and h1 offer Instance Store volumes.
3. **What happens to data stored on Instance Store when an instance is stopped or terminated?**
   Data is lost when the instance is stopped or terminated.
4. **How do you ensure data persistence when using Instance Store?**
   Regularly back up data to persistent storage like EBS or S3.
5. **Can you attach or detach Instance Store volumes from running instances? Explain.**
   No, Instance Store volumes are ephemeral and cannot be detached or reattached.
6. **Describe a scenario where using Instance Store is more advantageous than EBS.**
   For high-speed temporary storage needs, like caching or buffer storage, where data persistence isn't required.
7. **How do you identify and mount Instance Store volumes on a Linux EC2 instance?**
   Use commands like `lsblk` to list block devices, then format and mount the desired volume.

8. **What are the limitations of using Instance Store for database storage?**
   Data loss upon instance stop or termination makes it unsuitable for persistent database storage.
9. **How does the performance of Instance Store compare to EBS for temporary storage needs?**
   Instance Store often offers **lower latency and higher IOPS**, making it suitable for temporary high-performance needs.
10. **What are the security considerations when using Instance Store volumes?**
    Since data isn't encrypted by default and is lost upon instance termination, sensitive data should be encrypted and not solely relied upon for storage.

## ✅ Which EC2 instances have Instance Store?

Some EC2 instance families come with **Instance Store (also called ephemeral storage)**. These include:

- **Older instance types** like:
  - `c3`, `i2`, `m3`, `r3`
- **Current high-performance or storage-optimized types**, such as:
  - `i3`, `i4i`, `d2`, `d3`, `h1`, `z1d`
  - Some `c5d`, `m5d`, `r5d` (the "d" suffix means **NVMe-based instance store** is included)

You can check in the instance type details – if it mentions *Instance Store* or *NVMe SSD*, it includes local storage.

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## ❌ Which instances do NOT have Instance Store?

Instances like `t3`, `t4g`, `m5`, `c5`, `r5` (without "d") do **not** include Instance Store. These rely entirely on **EBS volumes**.

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## 🤔 Why do only some instances have Instance Store?

Because Instance Store is **physically attached** to the host machine. AWS includes it for use cases needing:

- **High-speed local storage**
- **Temporary storage needs**
- **Low-latency access** without going over the network (like for caching, temp DB data, scratch space)

But for most general-purpose workloads, **EBS is preferred** due to its durability, flexibility, and persistence.

**What happens to the data stored in an Instance Store when the instance is stopped or terminated?**

A) Data is automatically backed up
B) Data persists permanently
C) Data is lost
D) Data is moved to Amazon S3

**Correct Answer:** C

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**MCQ 2:**

**Which of the following best describes Instance Store in AWS?**

A) Network-attached storage that supports snapshots
B) High-durability storage designed for backups
C) Temporary block-level storage physically attached to the host
D) Object storage with unlimited capacity

**Correct Answer:** C