What is S3 versioning, how does it work—and how do you permanently delete a specific version?

✅ **Answer:**

- **Versioning** keeps **multiple versions** of an object in the same bucket.
- If you update or delete an object, old versions are **preserved**, not overwritten or lost.

How would you permanently delete a specific version of an object?

✅ **Answer:**

- You must **delete using the object's Version ID** specifically.
- Normal delete adds a **delete marker**, doesn't erase old versions.

Demo: S3 Versioning and Permanent Deletion

🔷 Step 1: Enable Versioning on a Bucket

- AWS Console → S3 → Select your bucket → **Properties** → **Bucket Versioning** → Enable.

🔷 Step 2: Upload an Object Twice

- Upload `file.txt`.
- Modify `file.txt` (change content) and **upload again with same name**.
- Now, S3 has **two versions** of `file.txt`.

(You can check: Object → Versions tab → see both versions.)

🔷 Step 3: Delete a Specific Version (Permanent Delete)

- Go to **Versions** tab.

- **Select the specific version** you want to delete.

- Click **Actions → Delete**.

✅ Now that specific version is **permanently deleted**.

CLI Quick Commands

```bash
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# List versions
aws s3api list-object-versions --bucket your-bucket-name

# Permanently delete by Version ID
aws s3api delete-object --bucket your-bucket-name --key file.txt --version-id VERSION_ID
```

Important Point:

- Deleting without version ID just **creates a delete marker** (object looks deleted but old versions exist).

- Deleting with **version ID** removes a **specific version permanently**.

What happens when you delete an object in a versioned S3 bucket without specifying a version ID?

A. All versions are deleted permanently
B. The object is moved to Glacier
C. A delete marker is added
D. The bucket is disabled

✅ **Correct Answer:** C. A delete marker is added

How can you permanently delete a specific version of an object in S3?

A. By enabling MFA delete
B. By emptying the bucket
C. By deleting the delete marker
D. By specifying the version ID while deleting

✅ **Correct Answer:** D. By specifying the version ID while deleting

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After uploading two versions of `file.txt` in a version-enabled bucket, how can you see both versions?

A. From the S3 object's Metadata tab
B. By enabling Logging
C. From the Versions tab of the object
D. You cannot view past versions

✅ **Correct Answer:** C. From the Versions tab of the object