

# Object Storage – Part 3

This lesson continues the discussion on object storage

## We'll cover the following ^

- Standard storage
- Nearline storage
- Coldline storage
- Archival storage
- Intelligent storage class

In this lesson, we will discuss the *storage classes* that cloud object stores offer to businesses to enable them to store their data in a cost-effective way. Every storage class has a unique use case and applicability. Let's find out what they are.

## Standard storage #

*Standard storage* is a general-purpose object storage class that suits best for use cases where the data is accessed pretty frequently, like a *NoSQL* database in an online game.

Typical use cases include streaming media content and online gaming application data and serving dynamic web content, mobile applications, big data analytics, and so on.

Standard storage offers the highest level of availability and durability of data in comparison to other storage classes. It offers *low latency* and *high throughput*.

## Nearline storage #

*Nearline storage*, also known as the *Vault* or the *Standard-Infrequent Access storage* class, is a low cost, durable storage for storing data that is accessed on average once per month. The availability of this storage is a bit lower than standard storage. Also, it's comparatively cheaper.

This storage class is a middle ground between data archival and frequently accessed hot data. This kind of storage is a good fit for long-tail content that is not accessed much and data backups.

## Coldline storage #

*Coldline storage* class suits best for storing data that is accessed on average once every three months. The costs of storing data in this storage class are lower than the nearline storage.

## Archival storage #

*Archival storage* is a data storage class intended for long term data storage, storing data that is accessed less than once a year. The costs of storing data in this class are the lowest of all the storage classes.

Although the data can be accessed within milliseconds as opposed to hours or days, this storage class has no *SLA* availability. Archival storage class works best for storing disaster recovery data, historic data, etc.

Traditionally in *IT*, archival data is stored in *storage disks* or *magnetic tape*. *Magnetic tapes* that are used for storing data are also known as *tape drives*. Both ways of archiving data require a lot of management overhead.

When archiving data with an object store, we can easily access the archived data within milliseconds. We don't have to worry about managing and protecting physical tapes, replication and redundancy of tape data, and so on.

Archiving data using the cloud object store is far better than implementing traditional methods of archiving data.

## Intelligent storage class #

If the developers are uncertain about what storage class to choose, cloud providers also offer an intelligent storage class. This class continually monitors the data and splits it into two access tiers: *active* and *not so active*.

The *active tier* contains the data that is frequently accessed, and the *not so active tier* contains data that is not so frequently accessed.

If certain data in the *active tier* doesn't get accessed for a while, the intelligent tier automatically moves it to the *not so active tier*.

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With the cloud object store, developers have complete control over their data. They can set the `_ time to live (TTL)_` for their objects, archive the data that hasn't been accessed for a while, upgrade or downgrade storage classes without having an impact on the latency and the accessibility of the service, and so on.

Well, this pretty much concludes our cloud data storage chapter. Let's discuss the key factors involved when picking the right cloud provider to host our application in the next few lessons. There will be a short quiz about cloud storage in the next lesson.