

Memcached vs redis

Same

At face value, Redis and Memcached look like they do the same thing.

Both Redis and Memcached:

1. Store data in memory for fast retrieval, making them perfect targets for caching.
2. Are a NoSQL data store, keeping data as key value pairs.
3. Are both open source, with plenty of documentation to help get set up.

Different

1. Sub-millisecond latency

Both Redis and Memcached support sub-millisecond response times. By storing data in-memory they can read data more quickly than disk based databases.

2. Developer ease of use

Both Redis and Memcached are syntactically easy to use and require a minimal amount of code to integrate into your application.

3. Data partitioning

Both Redis and Memcached allow you to distribute your data among multiple nodes. This allows you to scale out to better handle more data when demand grows.

4. Support for a broad set of programming languages

Both Redis and Memcached have many open-source clients available for developers. Supported languages include Java, Python, PHP, C, C++, C#, JavaScript, Node.js, Ruby, Go and many others.

5. Advanced data structures

In addition to strings, Redis supports lists, sets, sorted sets, hashes, bit arrays, and hyperloglogs. Applications can use these more advanced data structures to support a variety of use cases. For example, you can use Redis Sorted Sets to easily implement a game leaderboard that keeps a list of players sorted by their rank.

6. Multithreaded architecture

Since Memcached is multithreaded, it can make use of multiple processing cores. This means that you can handle more operations by scaling up compute capacity.

7. Snapshots

With Redis you can keep your data on disk with a point in time snapshot which can be used for archiving or recovery.

8. Replication

Redis lets you create multiple replicas of a Redis primary. This allows you to scale database reads and to have highly available clusters.

9. Transactions

Redis supports transactions which let you execute a group of commands as an isolated and atomic operation.

10. Pub/Sub

Redis supports Pub/Sub messaging with pattern matching which you can use for high performance chat rooms, real-time comment streams, social media feeds, and server intercommunication.

11. Lua scripting

Redis allows you to execute transactional Lua scripts. Scripts can help you boost performance and simplify your application.

12. Geospatial support

Redis has purpose-built commands for working with real-time geospatial data at scale. You can perform operations like finding the distance between two elements (for example people or places) and finding all elements within a given distance of a point.

LRU - OOP design

#Check Github

AWS: Elastic Cache

Amazon ElastiCache offers fully managed Redis and Memcached. With both ElastiCache for Redis and ElastiCache for Memcached you:

Amazon ElastiCache is a fully managed, in-memory caching service supporting flexible, real-time use cases. You can use ElastiCache for caching, which accelerates application and database performance, or as a primary data store for use cases that don't require

durability like session stores, gaming leaderboards, streaming, and analytics. ElastiCache is compatible with Redis and Memcached.



- **Accelerate application performance**

Access data with microsecond latency and high throughput for lightning-fast application performance.

- **Ease backend database load**

Cache your data to reduce pressure on your backend database, enabling higher application scalability and reducing operational burden.

- **Build low-latency data stores**

Use ElastiCache to store non-durable datasets in memory and support real-time applications with microsecond latency.