

ElastiCache



**Managed caching service which
either runs Redis or Memcached**



What is In-Memory Data Store?

Caching

Caching is the process of storing data in a cache. A cache is a **temporary storage** area. Caches are optimized for fast retrieval with the trade off that data is not durable.

In-Memory Data Store

When data is stored In-Memory (think of RAM). The trade off is high volatility (low durability, risk of data loss) but **access** to data is **very fast**.





Introduction to ElastiCache

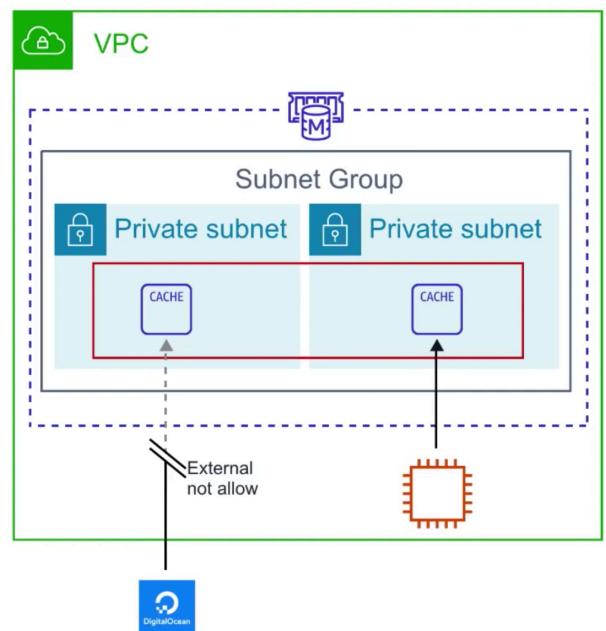
Deploy, run, and scale **popular open source compatible in-memory** data stores.

Frequently identical queries are stored in the cache.

ElastiCache is only accessible to resources operating with the same VPC to ensure low latency

ElastiCache supports 2 open-source caching engines:

1. Memcached
2. Redis





ElasticCache - Caching Comparison

Memcached is generally preferred for caching HTML fragments. Memcached is a simple key/value store. The trade off it to being simple is that its very fast

Redis can perform many different kinds of operations on your data. It's very good for leaderboards, keep track of unread notification data. It's very fast, but **arguably** not as fast as Memcached.



Don't google "Memcache vs Redis"
unless you want to read endless
arguments as if people are arguing
"Kirk vs Picard"

Sub-millisecond latency	Yes	Yes
Developer ease of use	Yes	Yes
Data partitioning	Yes	Yes
Support for a broad set of programming languages	Yes	Yes
Advanced data structures	—	Yes
Multithreaded architecture	Yes	—
Snapshots	—	Yes
Replication	—	Yes
Transactions	—	Yes
Pub/Sub	—	Yes
Lua scripting	—	Yes
Geospatial support	—	Yes



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ElastiCache *CheatSheet*

- ElastiCache is a managed **in-memory** caching service
- ElastiCache can launch either **Memcached** or **Redis**
- **Memcached** is a simple key / value store preferred for caching HTML fragments and is arguably faster than Redis
- **Redis** has richer data types and operations. Great for leaderboard, geospatial data or keeping track of unread notifications.
- A cache is a **temporary storage** area.
- Most frequently identical queries are stored in the cache
- Resources only **within the same VPC** may connect to ElastiCache to ensure low latencies.