**Elasticache**

**What is Elasticache?**

* Elasticache is a web service that makes it easy to deploy, operate, and scale an in-memory cache in the cloud. The service improves the performance of web applications by allowing you to retrieve information from fast, managed, in-memory caches, instead of relying entirely on slower disk-based databases.
* It can be used to significantly improve latency and throughput for many read-heavy application workloads (such as social networking, gaming, media sharing and Q&A portals) or compute-intensive workloads (such as a recommendation engine).
* Caching improves application performance by storing critical pieces of data in memory for low-latency access. Cached information may include the results of I/O-intensive database queries or the results of computationally-intensive calculations.

**Types of Elasticache:**

* Memcached
  + A widely adopted memory object caching system. Elasticache is protocol compliant with Memcached, so popular tools that you use today with existing Memcached environments will work seamlessly with the service.
* Redis
  + A popular open-source in-memory key-value store that supports data structures such as sorted sets and lists. Elasticache supports Master / Slave replication and Multi-AZ which can be used to achieve cross AZ redundancy.

**Elasticache Exam Tips**

* Typically you will be given a scenario where a particular database is under a lot of stress/load. You may be asked which service you should use to alleviate this.
* Elasticache is a good choice if your database is particularly read heavy and not prone to frequent changing.
* Redshift is a good answer if the reason your database is feeling stress is because management keep running OLAP transactions on it etc.