Managed redis and memcache caching service .

Used for cache and data

Provide high availability

when using Redis we can connect from App Engine flexible, App Engine standard, Compute Engine, Cloud Functions, Cloud Run as well as Kubernetes Engine clusters.

Cloud Memorystore Redis can scale as needed nd it can scale up to 300 gigabytes of storage and provide up to 12 gigabytes per second of network throughput.

In Cloud Memorystore, when we talk about Redis, what we're talking about is a Redis protocol compliant service.

And it comes in two tiers.

There's the Basic tier.

Now with the Basic tier, there's no replication, there's no cross zone replication

and there's no automatic failover.

Now with the Standard tier however, you can have replication with your cache

and you can have cross zone replication as well, along with automatic failover.

So, if high availability is important to you then you definitely want to use Standard tier.

If you're in a development environment and you want to keep your cost low

then Basic Tier makes sense.

Now, Cloud Memorystore also supports Memcached which is another popular caching platform.

It's a distributed in-memory key value store.

And here we typically use that for things like reference data, database query caching, and session caching.

Anytime you have a one-to-one correlation like between a session and a- and some data that you want to store, or if you are- have multiple users querying a database

and they often query use the same query so they're pulling back the same data rather than going back to the database to get that same data over and over again,

you can cache query results and then retrieve them from the cache much faster.

Now Memcached is structured a bit differently. It's an instance and an instance is one cluster.

And within that cluster we have a number of things we can configure,

like the number of nodes, he number of virtual CPUs,

and the amount of memory we have allocated to Memcached. So there's a maximum of 20 nodes. All the nodes have the same configuration and they can have between 1 and 32 virtual CPUs and between 1 and 256 gigs per node.

Now the max in an instance- maximum memory in an instance is five terabytes.

So, if you have very large caching needs then Memcached is appropriate.

As you may remember, Redis has a maximum of 300 gigabytes.

So, for much larger caches you probably want to look at Memcached.

And Memcached supports a number of services, including Compute Engine, Kubernetes Engine,

Cloud Functions, App Engine.

It does not support Cloud Run at the moment at the time of this recording.

That will almost certainly change at some point in the future, but for now it's- Cloud Run is not supported.