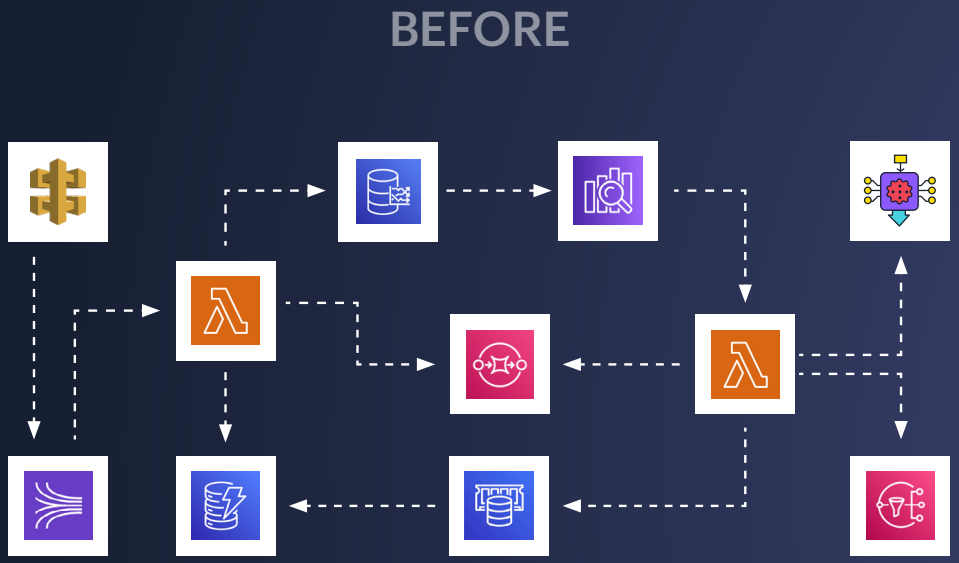
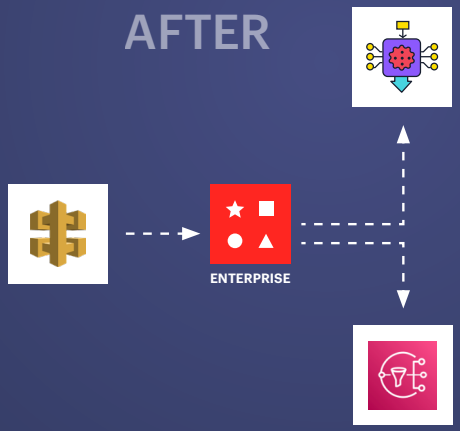
E-Book





5 Things
You Don't Know About Redis

redis

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Introduction

There are many managed Redis providers in the world and I'm sure you have used at least one of them. Perhaps you have even hosted Redis on your own. Although this can be rewarding, things can get difficult when you need to scale and that's why most people choose to use a managed Redis provider. It can be hard to know what to look for when choosing a provider.

In this eBook we will discuss why, now more than ever, people are choosing Redis Enterprise over the others. Now, I could unpack everything there is to know about Redis Enterprise but given the pace that the world moves at, you probably won't have enough time to read everything – I get it.

That's why I have condensed this eBook to the top five reasons why people choose Redis Enterprise over other providers. Each of the five sections should only take less than 90 seconds to read. So without further ado, let's get started!

Note: If you are a visual and auditory learner, check out the video series about this topic on the official Redis Youtube Channel.

01

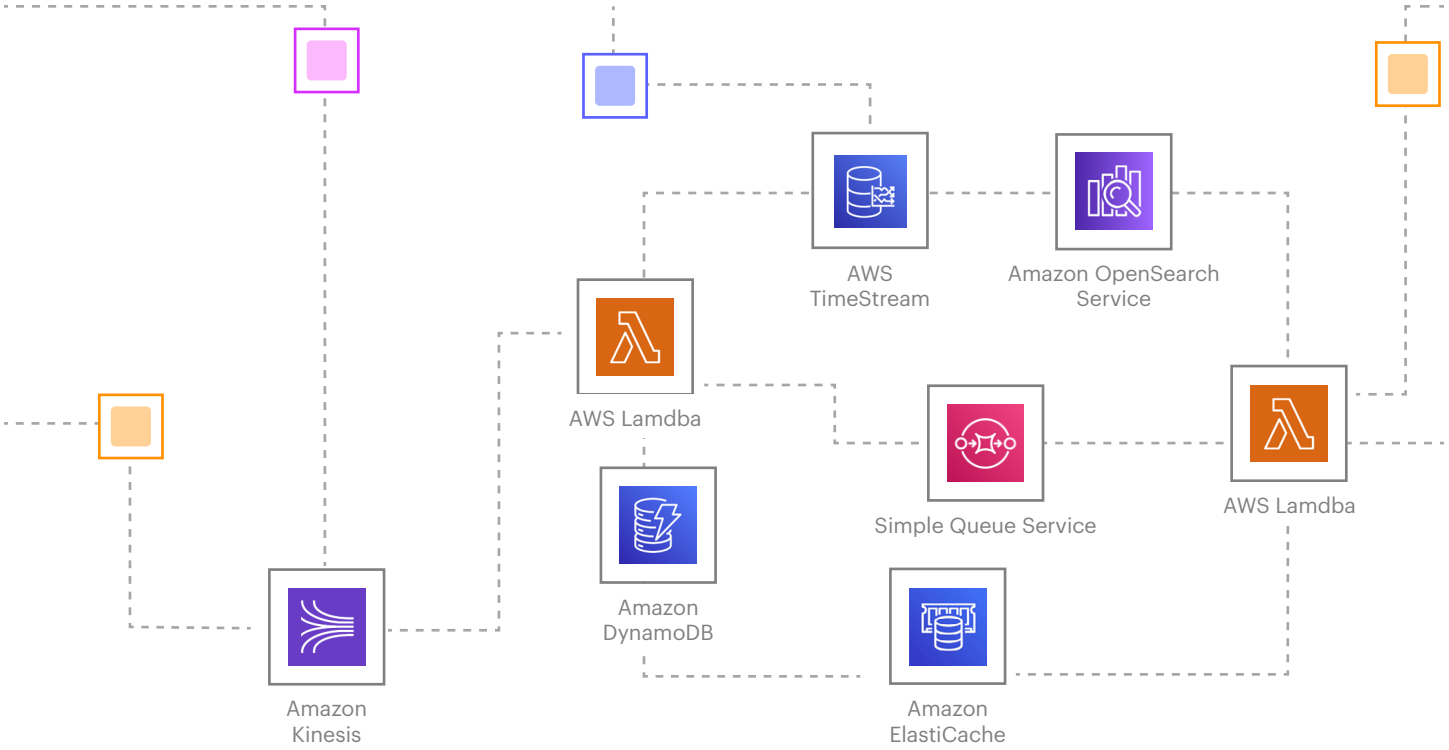
Use Redis to Simplify Your Architecture

So, what would it take to build a real-time application on AWS?

You would need to use a combination of several different services. You may want Kinesis to collect the data, DynamoDB to persist the data, and ElastiCache to quickly access frequently used data. But that's not all. You may also use TimeStream for backend analytics and OpenSearch for searching. The list goes on and on.

These are all different systems and to make them all work together, you may end up using a number of different lambda functions, Simple Queue service,and more. Now suddenly you are dealing with a very complex system. A system that may also need multiple experts to manage all of these specialized systems. So you now have a slow and complex system that's expensive to manage and might resemble something like **Picture 1.**

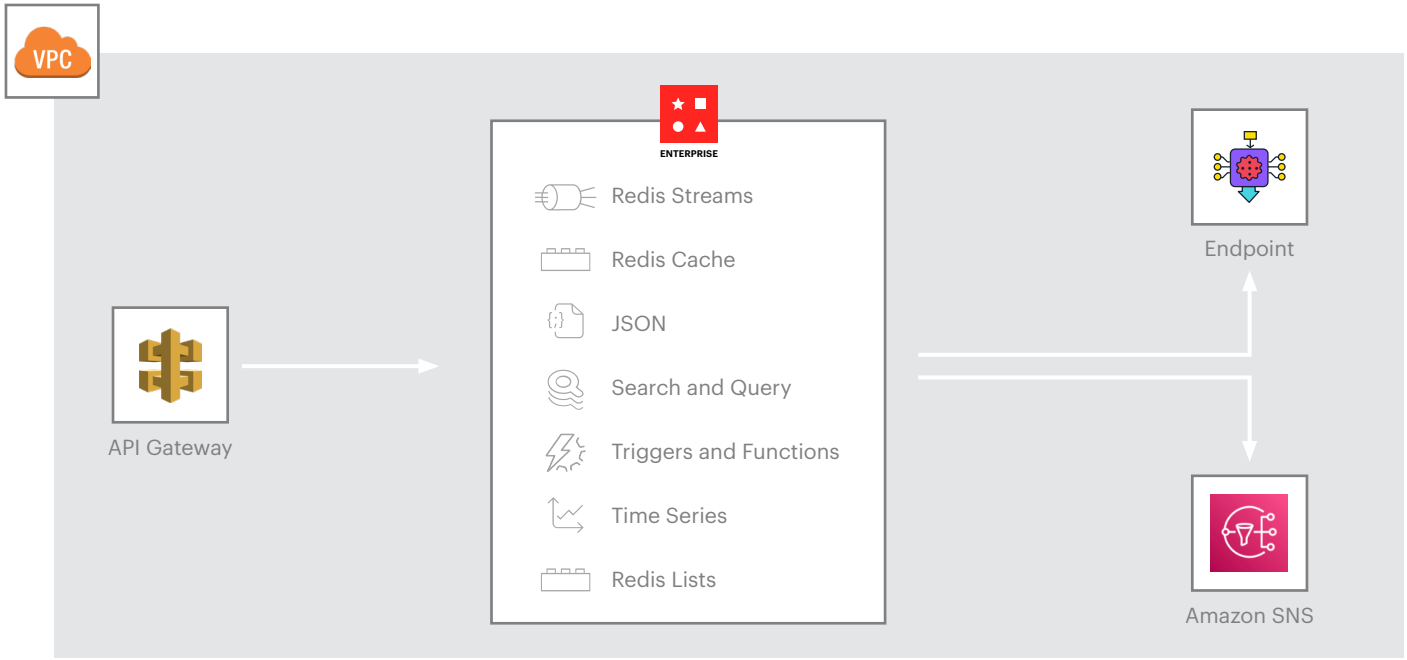
Picture 1



With Redis Enterprise, you can minimize all these complexities with a unified real-time data platform. For the same system, you can use the native features of Redis Enterprise such as:

- streams for collecting the data
- pub/sub for distributing the data
- lists for queuing
- Search and Query for analyzing
- Triggers and Functions for ETL, and
- JSON for persisting

Since everything is all in the same system, you don't need numerous experts to build and maintain it. This way, you'll end up with one fully managed system that's blazing fast and cost-effective.



Picture 2. Real-time data platform

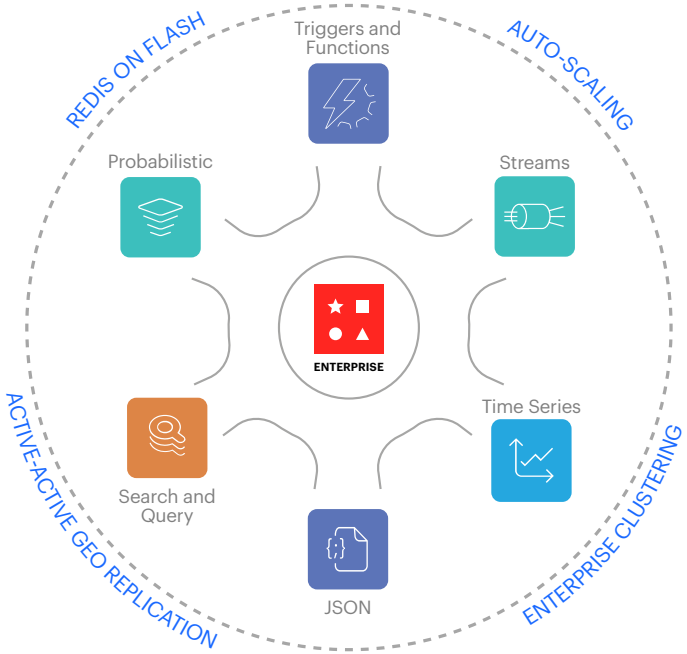
REDIS ENTERPRISE VS. OTHER SERVICES

02

Redis as a Cache versus Redis as a Primary Database

Everyone knows Redis began as a caching database but since then it has evolved to a primary database. Many applications built today use Redis as a primary database.

However, most Redis service providers support Redis as a cache – not as a primary database. This means that you need a separate database like DynamoDB in addition to using Redis. This adds complexity, compromises latency, and prevents you from realizing the full potential of Redis. You end up with something resembling **Picture 3**.



Picture 3.
Primary database

With Redis Enterprise, you can use Redis as both an in-memory cache and a primary database in a single system, thus eliminating the complexity and latency of two separate systems. Not only that, you can use it as a multi-model primary database, enabling you to build modern applications, as well as low-latency microservice-based architectures, all on top of Redis.

Instead of relying on separate databases and caches, utilize the native features of Redis Enterprise, such as:

- Streams for collecting and distributing data similar to Kafka
- JSON (powered by Search and Query) for storing and retrieving JSON documents similar to MongoDB and DynamoDB
- Search and Query for secondary indexes and searching similar to Algolia, Elasticsearch, or Amazon OpenSearch
- Triggers and Functions as a programmable way to orchestrate your data (think ETL, SQL triggers, etc.)
- Time Series for application monitoring, high-frequency trading, surveillance analytics, system stability metrics, and storing time-series data similar to Amazon TimeStream and InfluxDB
- Probabilistic for gaming (Probabilistic and Cuckoo filters, TopK, and CountMinSketch), fraud detection, and leaderboards

With Redis Enterprise you can leverage all of the above with auto-scaling, enterprise clustering, and Active-Active Geo Replication all in a single system that runs natively with core Redis.

03

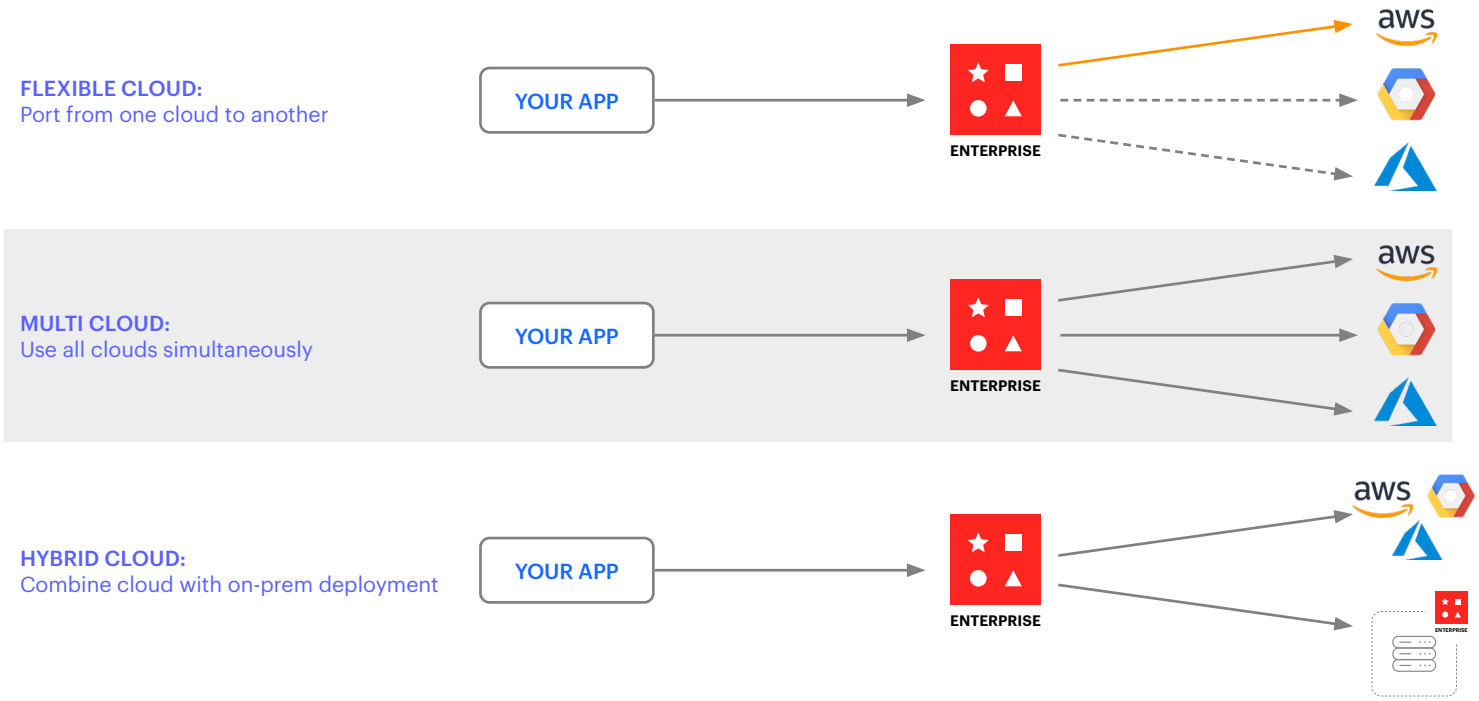
Unlock the Flexibility of Redis in any Cloud

Most Redis providers simply host open source Redis and provide Redis as a cache. They don't support Redis as a database. Not only that, they tend to lock your app into their cloud.

If you need to move to a different cloud provider for any reason, you're often restricted. This is because the rest of your data is stored in cloud-specific databases and services such as DynamoDB, Kinesis, etc. If you need to use multiple clouds simultaneously, often because of constraints on the region's availability, or specific business needs, you can't easily do that either. Lastly, if you need a hybrid cloud capability to store some private data on-premises while still using the cloud for the rest of your data, you're in for a lot of trouble. When you use other Redis providers you lose all the flexibility and you'll be "cloud locked-in".

As shown in **Picture 4**, with Redis Enterprise, you can easily move from one cloud to another because everything is stored in a single system. Redis Enterprise is available on all major cloud providers, such as Amazon AWS, Google Cloud, and Microsoft Azure, making multicloud deployments a breeze.

Redis Enterprise is available as downloadable software. Keep your private data in your private data center and store the rest in the cloud, using Redis Enterprise's hybrid deployment.



Picture 4.
Flexible deployment

04

How to Scale Redis Across the Globe

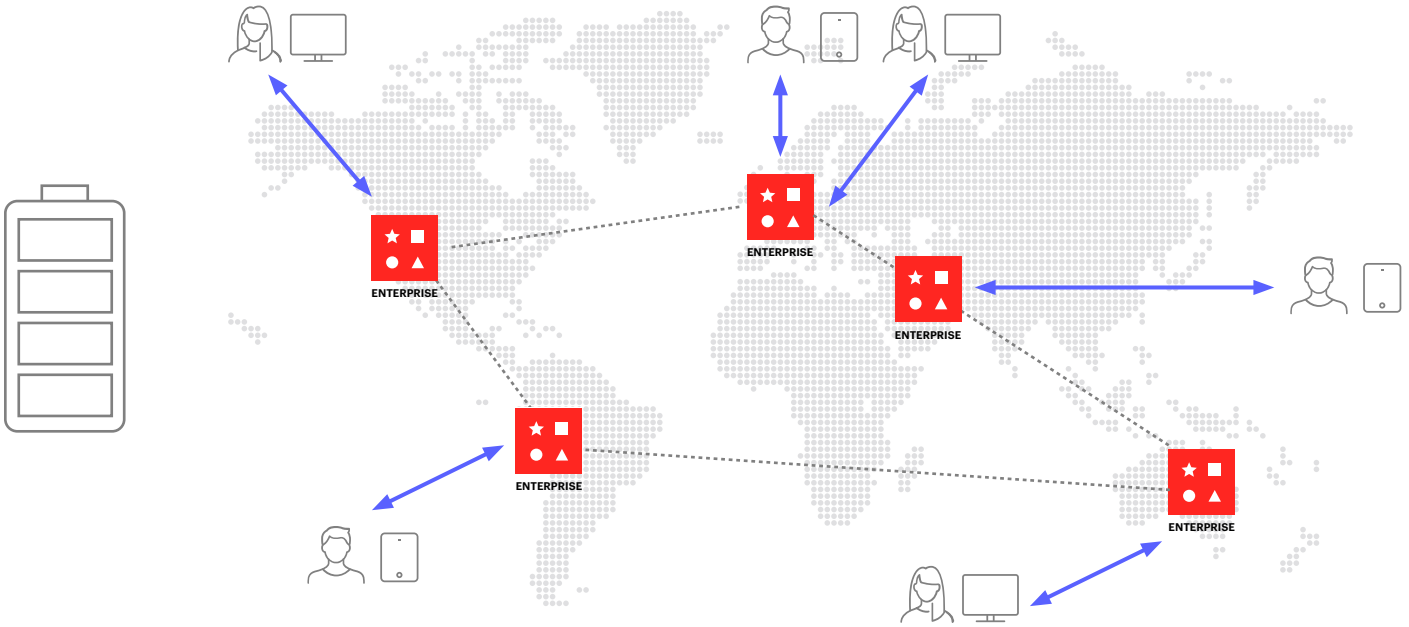
In today's world, enterprise workloads can be very demanding. Enterprise customers demand low latency and fast failover with no data loss. Applications of enterprise level need to be distributed globally while minimizing latency.

You might think throwing Redis on top of your existing database might solve this problem. Unfortunately, it only solves part of the problem. This is because most Redis providers simply host Redis OSS. They provide Redis as a cache, but not as an enterprise-grade real-time database.

Redis Enterprise provides 99.999% uptime, sub-millisecond latency, single-digit-seconds failover, Active-Active Geo-Replication, and no data loss. It's the only Redis provider that can meet the demands of enterprise customers.

As you can see in **Picture 5**, with Redis Enterprise you can have multiple primaries spread across the globe and still provide local, sub-millisecond latencies for both **reads and writes**. In order to avoid any write conflicts, Redis Enterprise uses the cutting-edge Active-Active Geo-Replication feature that's based on conflict-free replicated data types (CRDTs). Similarly, Redis Enterprise provides enterprise clustering, Redis on Flash, and many other native functions that address the enterprise solutions that you won't find anywhere else.

Picture 5.
Redis Enterprise



05

Lower the Cost of Hosting Redis

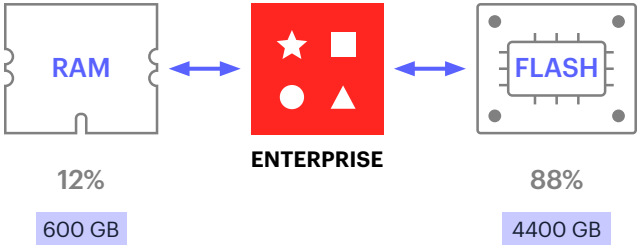
Have you ever compared Redis with other Redis providers and been surprised at the cost? It's a common question we're asked all the time. These providers allow you to use Redis as a cache and get the performance gains with sub-millisecond queries. However, the main problem is that other Redis providers don't optimize Redis to **minimize your costs**.

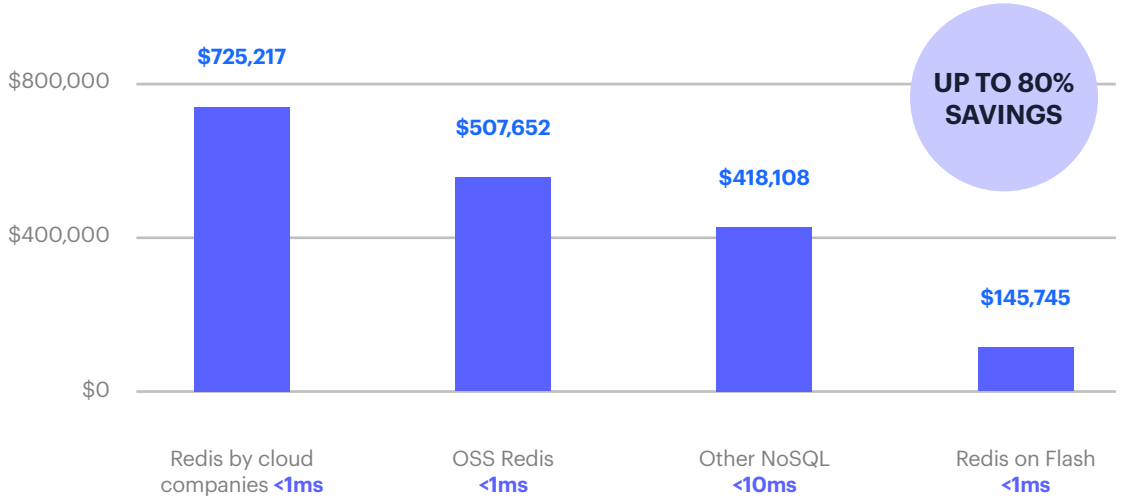
Even database solutions such as DynamoDB can be expensive and slower than Redis, with queries upwards of 10 milliseconds or more.

Even with all the added features, Redis Enterprise, starts at just $7/mo and stays as low as $0 for your first six months when you use credits. This is great for small and medium-sized businesses (SMBs), and unlike other providers, Redis Enterprise is optimized for performance and cost savings at scale.

As shown in **Picture 6**, with Redis Enterprise, you can take advantage of Redis on Flash to store terabytes of data while achieving sub-millisecond latencies and keeping costs at a minimum. This results in up to 80% savings using Redis rather than other cloud providers. So, Redis Enterprise isn't only feature-rich and blazing fast, it's also cost-effective for both SMBs and large enterprises.

Picture 6.
Cost-effective Redis





Conclusion

So that's it! There is so much more to cover and hopefully you found some of the embedded links helpful. This eBook is not meant to be a definitive guide on comparing Redis Enterprise versus other providers.

Instead, I wanted to highlight the five key pillars of Redis Enterprise. The next time you're evaluating what technologies you should use to build an app, think of Redis Enterprise for the ease of having all of the things modern applications need in a single package.

About Redis

Data is the lifeline of every business, and Redis helps organizations reimagine how fast they can process, analyze, make predictions, and take action on the data they generate. Redis provides a competitive edge to any business by delivering open source and enterprise-grade data platforms to power applications that drive real-time experiences at any scale. Developers rely on Redis to build performance, scalability, reliability, and security into their applications.

Born in the cloud-native era, Redis uniquely enables users to unify data across multi-cloud, hybrid, and global applications to maximize business potential. Learn how Redis can give you this edge at redis.com