DATA SHEET

Redis Enterprise

Overview

Applications today are required to process millions of data points within milliseconds to meet user and business response time expectations. As crucial business decisions become automated, the high throughput and low latencies of in-memory databases become a significant competitive edge in operational, analytic, or hybrid use cases.

Redis, the world's most popular in-memory database platform, has been the choice of developers worldwide for delivering millions of operations per second at sub-millisecond latencies with the fewest resources. Redis Enterprise technology encapsulates open source Redis, while fully supporting all of its commands, data structures, and modules. It adds exceptional flexibility, stability, high performance, and unmatched resilience with multiple deployment options and topologies that include CRDT based geo-distributed Active-Active architectures, built-in secondary indexing and support for very large data sizes by extending to SSDs.

Redis Enterprise enhances popular Redis use cases like high speed transactions, job & queue management, user session stores, real-time data ingest, notifications, content caching, time-series data and many more.

Solutions powered by Redis Enterprise include real-time E-commerce, mobile, social, personalization, metering, IoT and fraud detection.
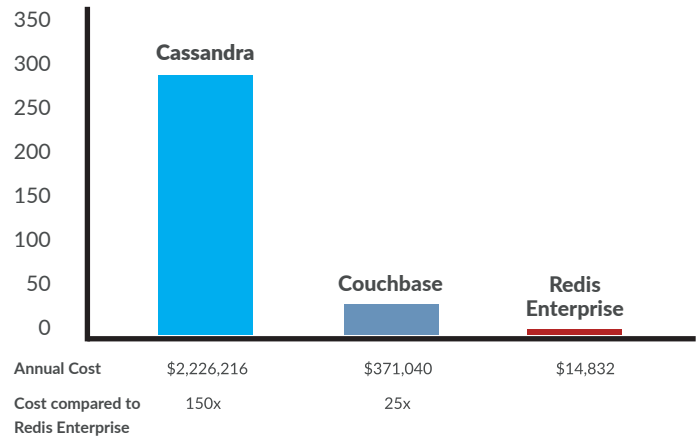
CISCO

"Redis Enterprise has brought new possibilities and reliability to our Jabber application."

Nathan Basanese
CISCO SYSTEMS

Servers Needed for 1 Million Writes/Second

Annual Cost	$2,226,216	$371,040	$14,832
Cost compared to Redis Enterprise	150x	25x	

Redis Enterprise delivers the maximum throughput with the lowest number of servers, slashing operational costs by up to 99% (Google Cloud Platform performance benchmarks)

Quick Facts: Redis is #1:

- Most loved database – StackOverflow
- Most popular NoSQL on AWS – Sumologic
- Database on Docker - Datadog
- In growth, among top 3 NoSQL databases - DB-Engines.com
- Database used by Node.js developers - Node.js
- Highest satisfaction among NoSQL - G2Crowd

Redis Enterprise Deployment Options

	VPC (Managed)	Software	Cloud (Hosted)
Environments			
Clouds	AWS, Azure, GCP	Any Cloud or Private Data Center	AWS, Azure, GCP, Softlayer
Fully Hosted			x
Shared Cloud Environments			x
Fully Managed	x		x
VPCs/Dedicated Cloud Environments	x	x	
Private Data Centers		x	
Features			
Infinite Seamless Scalability	x	x	x
True High-Availability & Instant Auto-Failover	x	x	x
Persistence, DR, and Backups	x	x	x
Sustained Performance at Scale	x	x	x
Redis on Flash	x	x	
Active-Active Geo-Distribution (CRDT-Based	x	x	
Active-Passive Geo-Distribution ("Replica Of")	x	x	
Built-In Enterprise Search	x	x	
Integrated Modules: ReJSON, Redis Graph & Redis ML	x	x	

Redis Enterprise Advantages

HA, Durability, DR

- Tunable features for replication and persistence to maintain high performance when persisting data to disk
- Rack-aware, cross-datacenter/region/cloud in-memory replication with unique WAN compression technology
- Instant automated failure detection and failover to protect your applications against unplanned downtime, outages, and data loss
- Policy driven data persistence, continuous replication, backups and disaster recovery for full resilience
- Periodic backups to AWS S3, Azure Blob Storage, Google Cloud Storage, OpenStack Swift, or an FTP server

Active-Active Geo Distribution (CRDTs)

- Achieve local latency and global availability, with reads/writes in multiple geographical regions to the same dataset
- Built-in consensus-free conflict resolution for simple and complex data types with strong eventual consistency, simplifying development of globally distributed applications

Robust Security

- SSL-based encrypted communication with clients, administrators and across clusters
- Certificate and password-based authentication; role-based authorization for administration
- Monitoring and alerting, with administrator action logging for forensics

Performance at Scale

- Dynamic scaling across servers, and without downtime or application-level changes by simply adding/removing nodes and shards to/from the cluster
- Full support for all Redis commands when running clustered Redis
- Zero-latency distributed proxy accelerates throughput by reducing context switching overhead, maximizing command pipelining, supporting long-lived socket-based persistent connections with Redis instances, and other optimizations
- Unlimited database connections to support architecture scaling
- Amplified performance by running multiple Redis instances on multiple cores on the same servers
- Shared-nothing cluster architecture with separate management and data paths that enables linear performance scalability and an easy, non-intrusive upgrade process

Built-In Search

- Rapid-fire simultaneous real-time indexing and search
- Text, numeric and geospatial searches, with filtering, stemming and auto-complete
- Secondary indexing of data from any DBMS to boost query performance

Redis Enterprise Flash + More Savings

- Supports Flash memory as a RAM extender; ideal for large dataset sizes
- Uses tiered memory access to deliver the same sub-millisecond latencies as RAM while reducing costs by 70% or more
- Built-in multi-tenancy with a Docker-like architecture maximizes resource utilization

Automation and Support

- Flawless orchestration of Redis Enterprise platform with BOSH integration
- UI, CLI or API-based automated administrative operations like sharding, re-sharding, shard-migration and re-balancing performed without disrupting applications in any way
- 24x7 enterprise-grade support backed by expertise in managing and scaling 550K+ Redis databases for thousands of customers in production worldwide
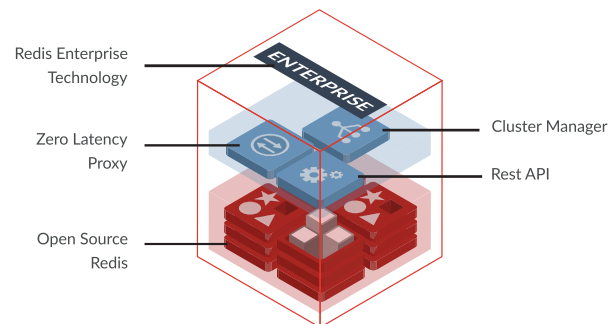
Redis Enterprise Node – *Redis Enterprise technology delivers high-availability, effortless scaling and stable high performance Redis databases*
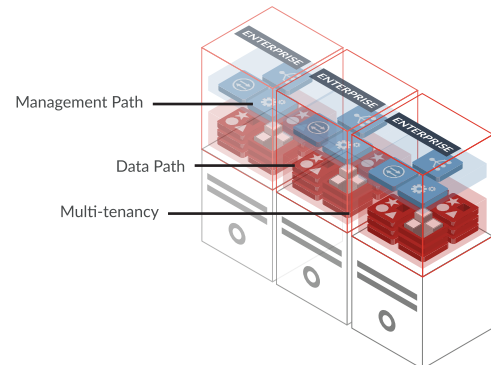
Shared Nothing Dynamic Cluster Architecture maximizes performance and resource utilization in distributed environments

Integrated Modules

- Built-in modules such as JSON, graph, machine learning model serving extend the range of data processing scenarios your application can take advantage of
- Enterprise modules with built-in multi-shard coordination and cluster support enable rapid innovation
- Custom modules deliver tailored functionality for scaled out environments