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Do more with Redis Enterprise Cloud

{ Don't struggle with Performance, Scale, and Cost }

SUYOG KALE, Solution Architect Manager @ Redis | 2022

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Agenda

Cloud adoption and growth

Need of real-time data platform

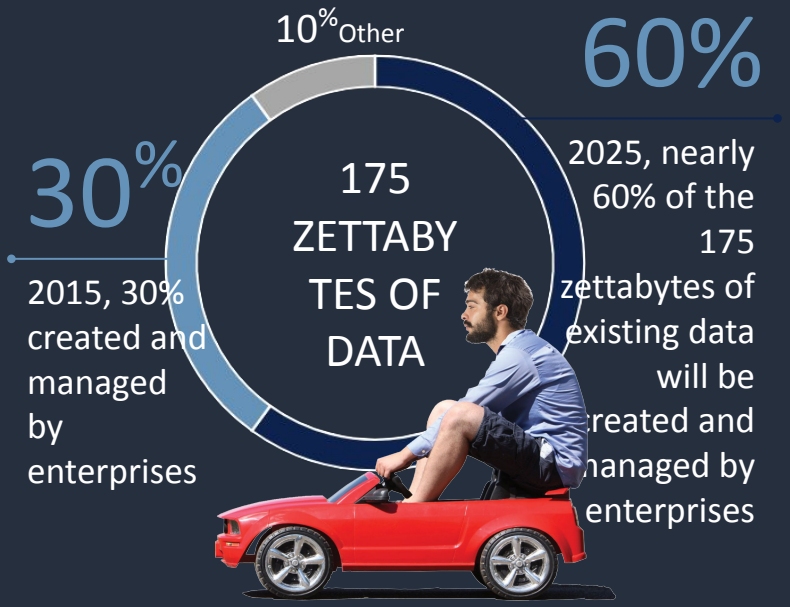
Challenges with other caching solutions

Why Redis Enterprise Cloud?

Cloud Provides Enormous Value

- Agility: **build new digital apps quicker** to gain new revenue streams
- **Consolidate data silos** to gain new visibility and streamline business
- **Simplify operations** and reduce TCO
- **Scale** your business up and down instantaneously with elasticity.

… And Data Is The Lifeblood of Modern Applications



91% of organizations moving to the cloud specify mass data fragmentation as the cause of not fully realizing cloud benefits

Cloud is fueling the DBMS Market Growth

- The cloud is forcing the DBMS Market to shift from on-prem to the cloud
- ⅓ of all $52+B in DBMS revenue is all about Cloud and growing
- Public cloud spending will grow from $229 billion in 2019 to nearly $500 billion in 2023 - IDC
- By 2023, cloud data management will account for 50% of DBMS revenue in a nearly $100 billion market

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Modern applications and infrastructure need a real-time data platform

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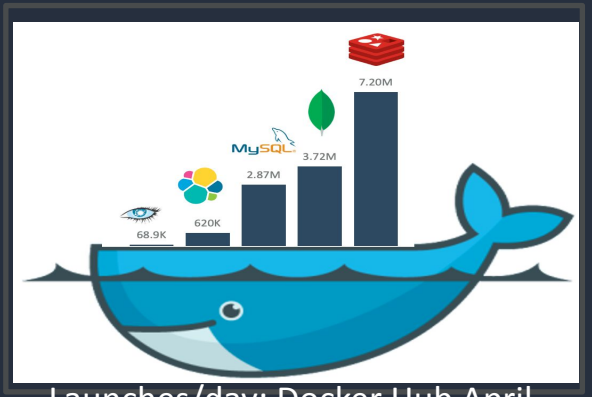
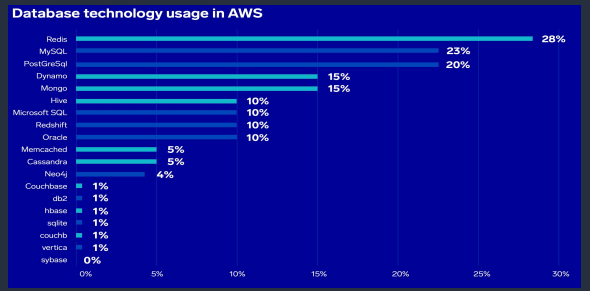
Redis is popular with developers due to speed

MOST LAUNCHED

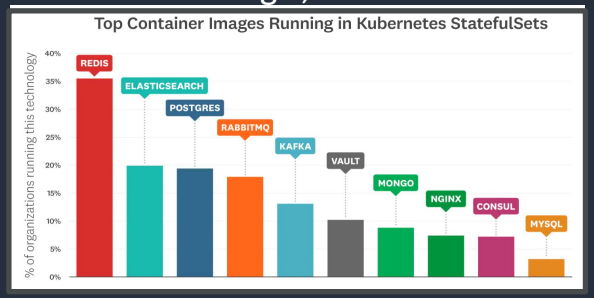


Launches/day: Docker Hub April, 2021

MOST USED

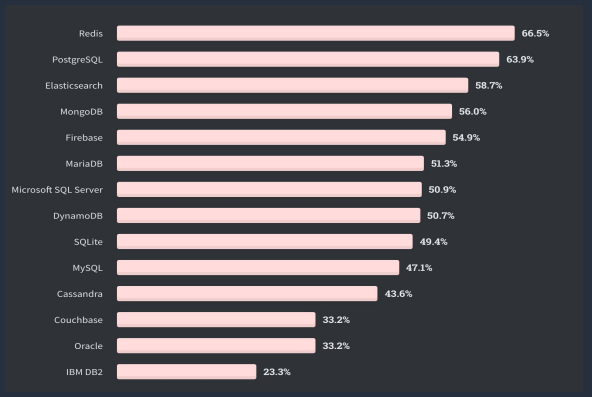


Sumo Logic, Nov. 2020



Datadog, Nov. 2020

MOST LOVED



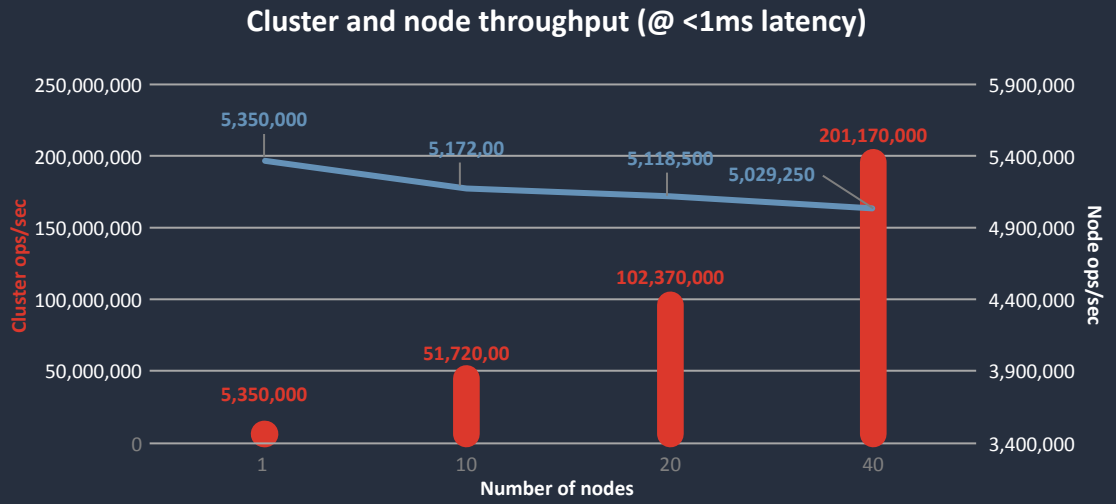
Stack Overflow, 2017, 2018, 2019, 2020,2021

Yes, we provide way more value than any other version of Redis

Customer challenge	Redis Enterprise solution	Redis OSS
Hybrid & multicloud	Fully-managed in AWS, Azure, and GCP	Lock-in with cloud vendor
Struggle delivering real-time at all times	Real-time at all times with 99.999% Uptime	Significant downtime with 99.9% Uptime
Difficulty supporting business at global scale	Active-Active Geo Distribution	Limited Active-Passive
Keeping Redis costs under control	Cost effective at scale with Redis on Flash, multitenancy	Expensive at scale
Lack of true Redis Expertise	Managed and supported by the creators of Redis	Support provided by generalists from cloud
Inability to meet additional real-time use-cases	Real-time data platform	Cache only

Redis Enterprise enables instant performance at petabyte scale

- True shared-nothing architecture to enable **linear scaling**
- Fully utilizes **multi-core** architecture
- Automated **scaling** and **resharding** without downtime

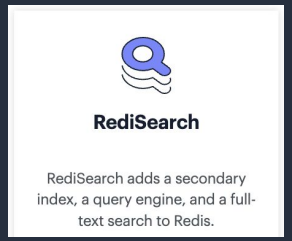


Redis Enterprise extends linear scalability with **200M ops/sec** @ **<1ms** latency on only 40 AWS instances

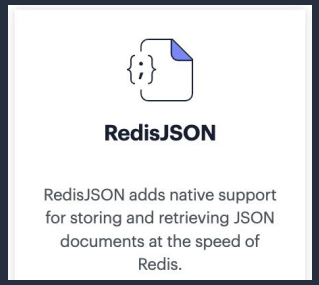
Multiple data models with unprecedented performance

Key-value and data structures **(7x - 50x)**

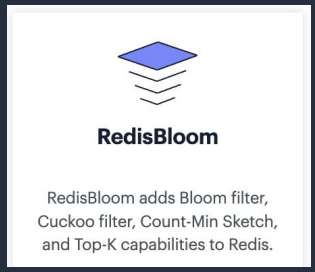
- Dedicated engine for each data model
- Model engines can be selectively loaded, according to use case
- All model engines access the same data, eliminating the need for transferring data between them



Search **(4x - 100x)**



JSON **(10x)**



Bloom **(17x)**

Streams **(500x)**

*** Performance advantage**

Redis Enterprise unifies data across clouds and regions with Active-Active

- Consistent datasets for any environment (on-premises, hybrid, or multi-cloud)
- Easier to develop cloud-native and geo-distributed apps
- Enables high performance and highly responsive apps

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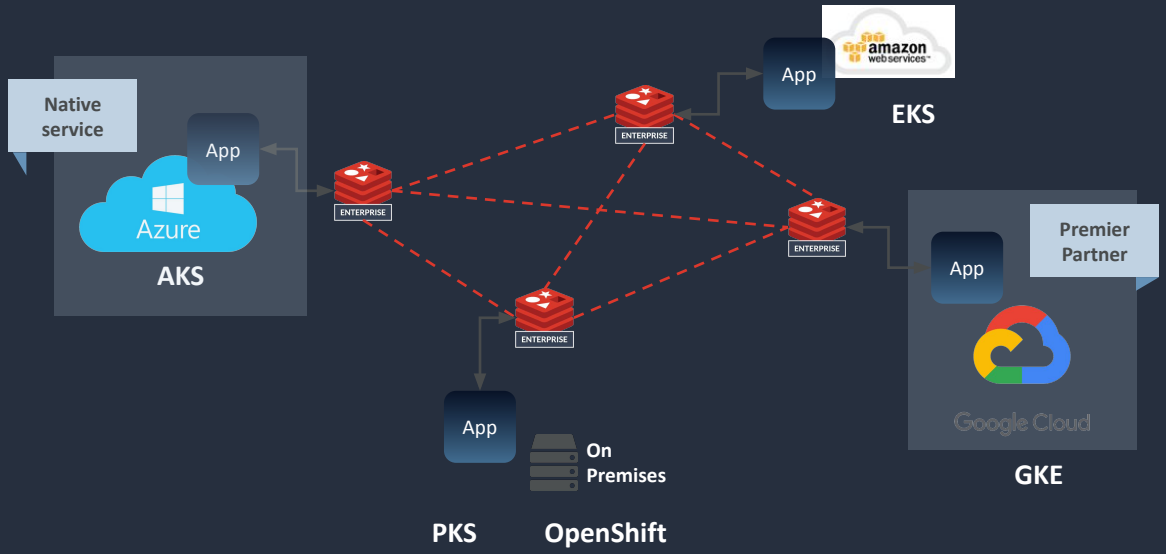
Redis Enterprise enables hybrid and multi-cloud deployments

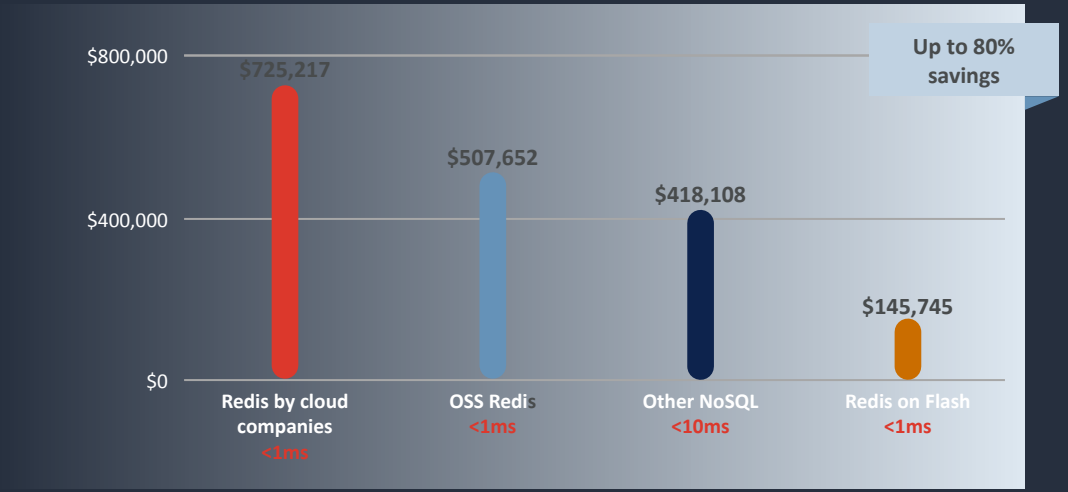
- Flexible deployment options
- Built for any flavor of the cloud
- Fully managed support for Microsoft Azure, Google Cloud, and AWS
- Avoid vendor lock-in and cloud sticker shock
- Unify your data-layer across the deployment environment



Redis Enterprise reduces TCO for larger datasets

(1TB replicated dataset (2TB total) @ 100K ops/sec)

- Compute real-time analytics with minimal resources
- 3M ops/sec @ < 1ms latency on a single server



Redis Enterprise Cloud with Redis on Flash allows me to **handle peaks** in traffic that grow 2000% without any need to scale my database infrastructure."

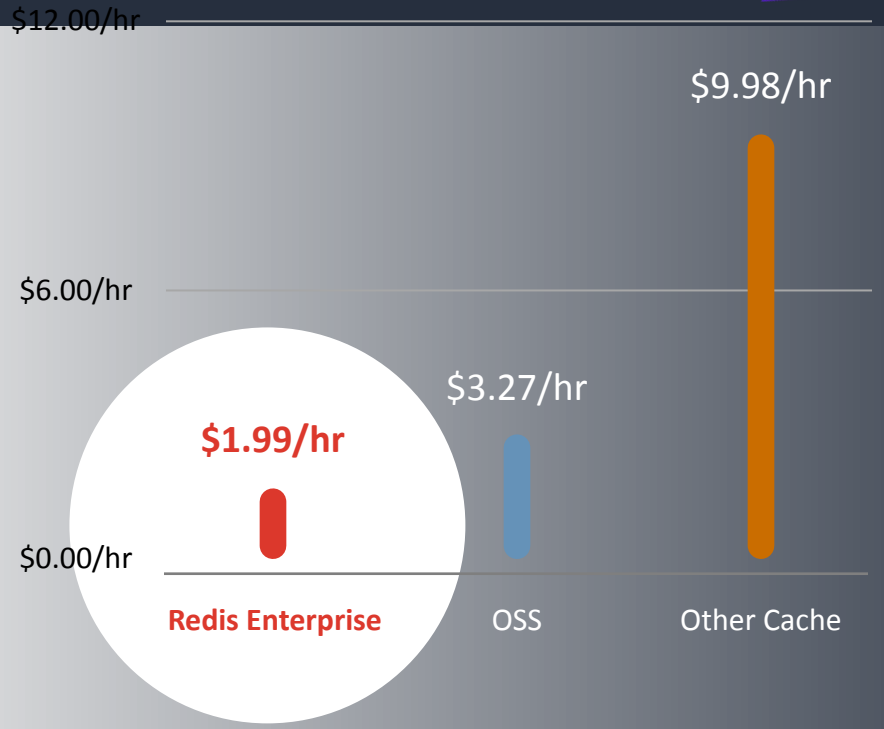
—Redis Enterprise customer

Multi-tenant architecture lowers TCO

64
REDIS INSTANCES

10GB
TOTAL MEMORY

100K ops/sec
TOTAL THROUGHPUT



Redis Enterprise helps you realize the promise of the cloud

True high availability with upto 99.999% SLA

Sub-millisecond latency at infinite scale

Lower TCO

Multiple data models

Global data distribution with Active-Active across regions, clouds, and hybrid environments

Do More With Redis Enterprise Cloud

Applications for Data Economy

- Features serving for real-time data
- Programmable data operations across data models
- Fast transaction, in-transit data processing

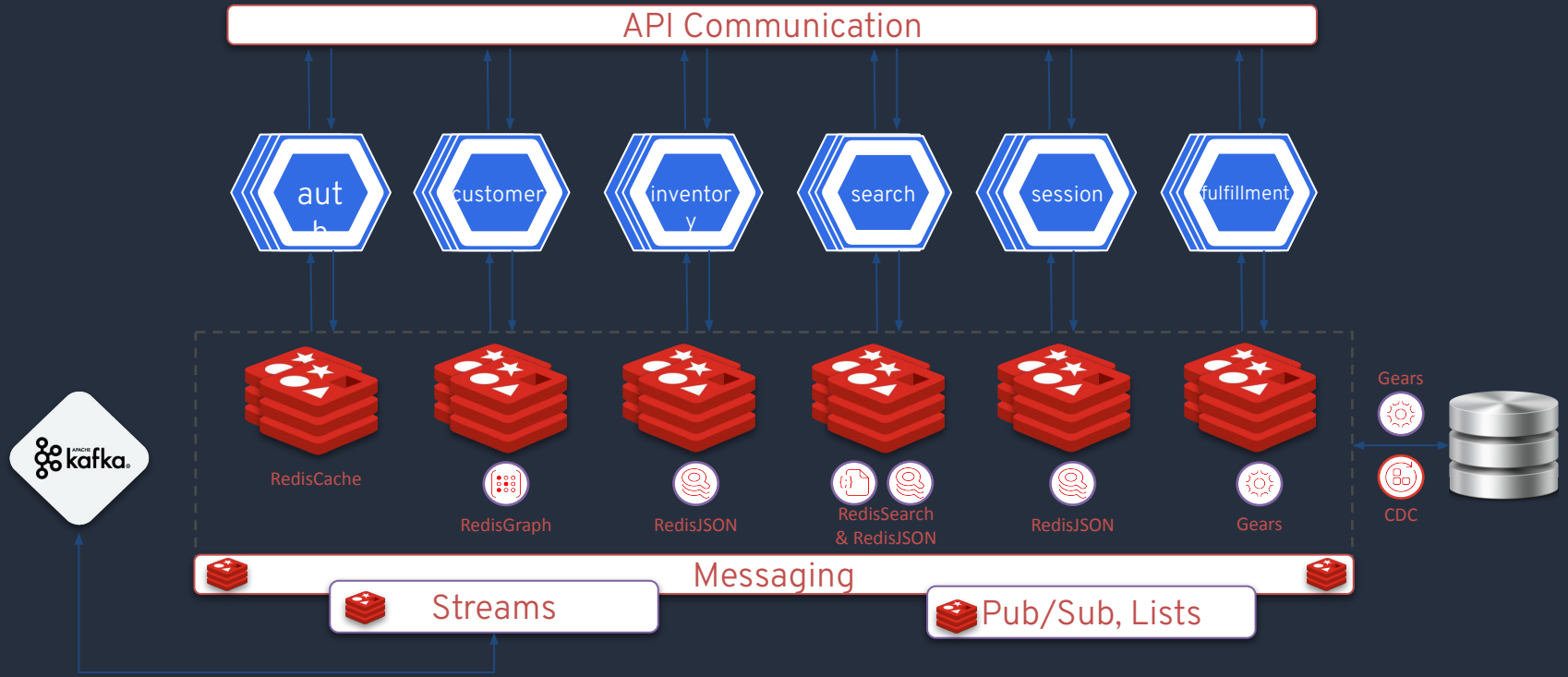
Data Models for Application Modernization

- JSON, Timeseries, Streams, and BloomFilter
- Extensive indexing and search capabilities
- Unprecedented performance with single unified interface

Real-time DB and Enterprise Caching

- Sub-millisecond latency under any load
- Five-nines (99.999%) uptime with active-active
- Effective TCO with multi-tenancy and tiered memory access

Redis & Microservices / Event Driven Architectures



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Suyog Kale

Solution Architect Manager

redisenterprise
CLOUD

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Thank you!

See you at the AWS Community Day Pune 2023