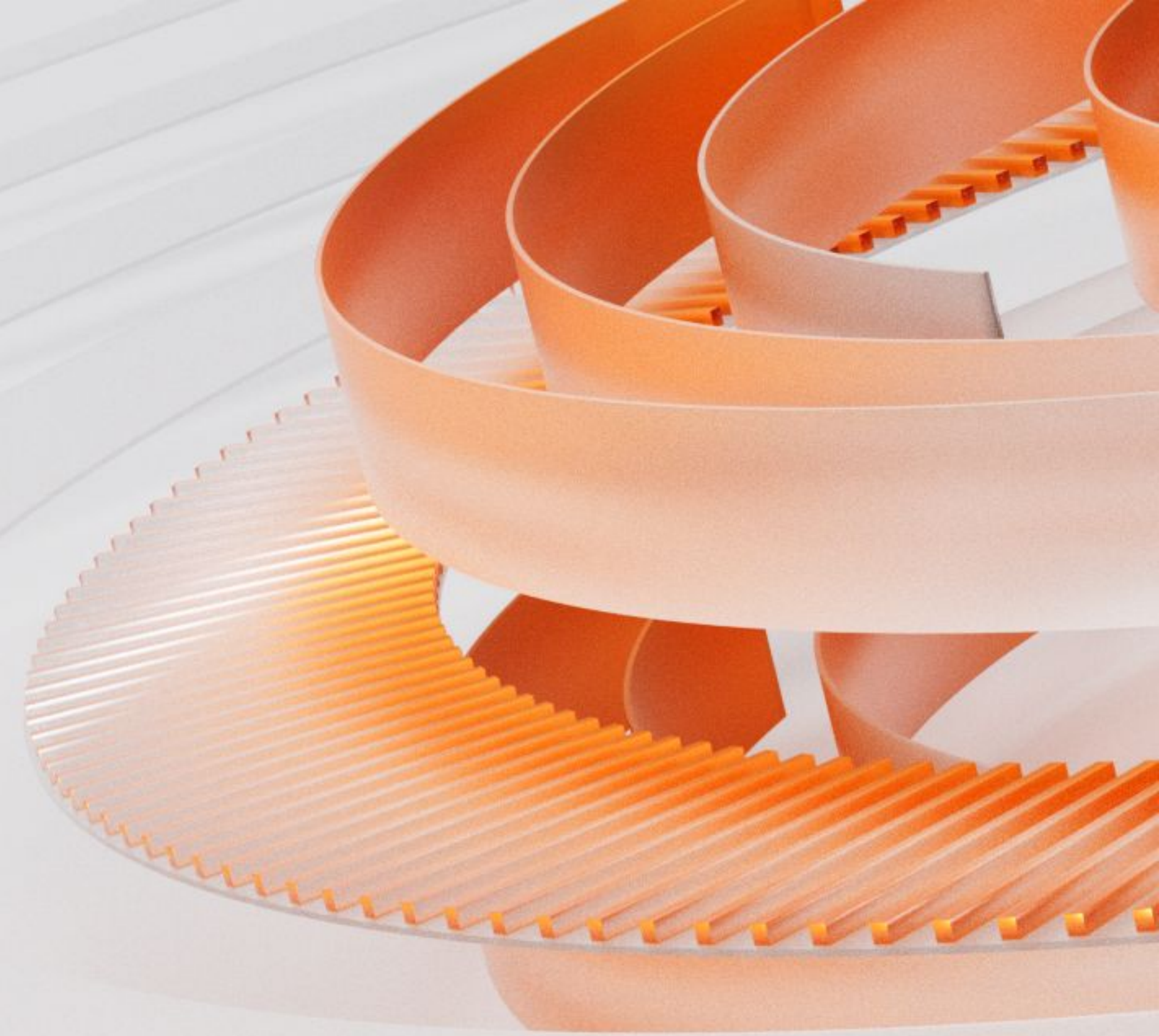


ApsaraDB for ClickHouse: A Brief Introduction

Fei Xue

OLAP Database Product Manager
Alibaba Cloud





+



Today

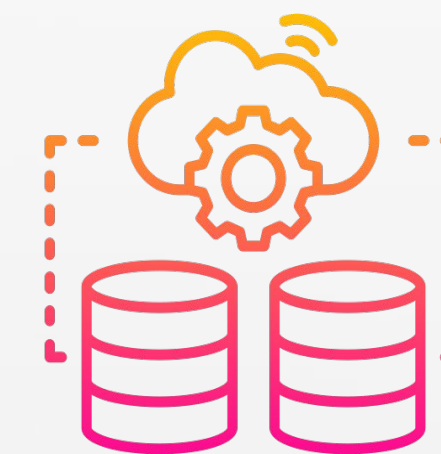
Alibaba Cloud ClickHouse Community Compatible Edition



Fully-Managed ClickHouse on Alibaba Cloud since 2020
100% OSS Compatible without deployment &
management hassles
Largest Commercial ClickHouse Cluster in the World

Coming - Beta Autumn 2023

Alibaba Cloud ClickHouse Enterprise Edition



Fully-Managed Serverless Cloud Native Clickhouse on
Alibaba Cloud
Exclusive , Proprietary Capabilities

Alibaba Cloud ClickHouse Community Compatible Edition

Alibaba ClickHouse VS Self-Managed ClickHouse

Ease-of-Use

- Ready to use out-of-the-box
- Frictionless Scaling
- Frictionless Upgrades
- Monitoring

Price Performance

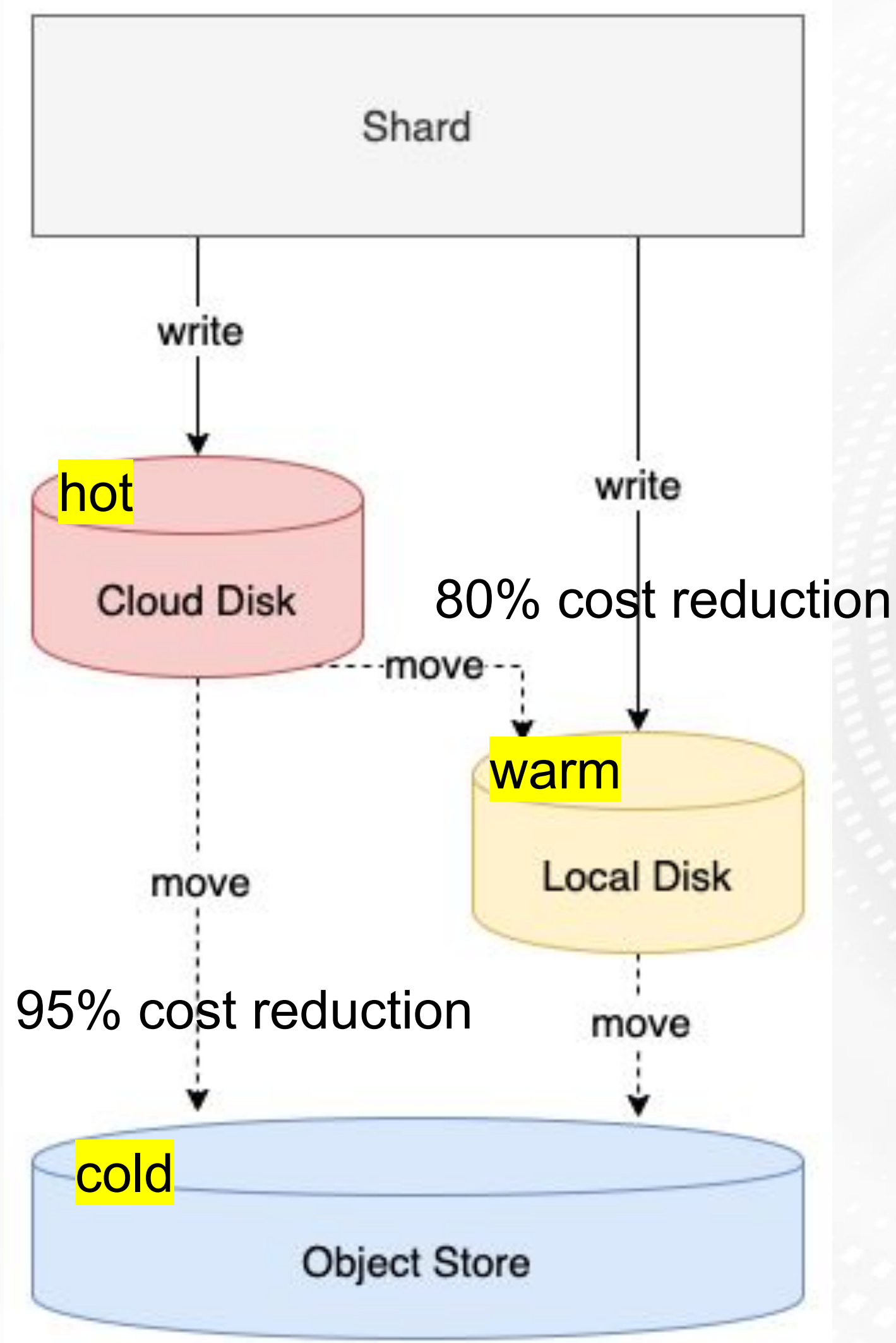
- Tiered Storage with Cloud Disk, Local Disk and Object Store
- Hot - Cloud Disk SSD
- Warm - Local Disk HDD

Security

- Encryption-at-rest Cloud Disk Encryption
- Encryption-in-transit
Https/SSL
- Backup & Restore

Community Compatible Edition - Tiered Storage

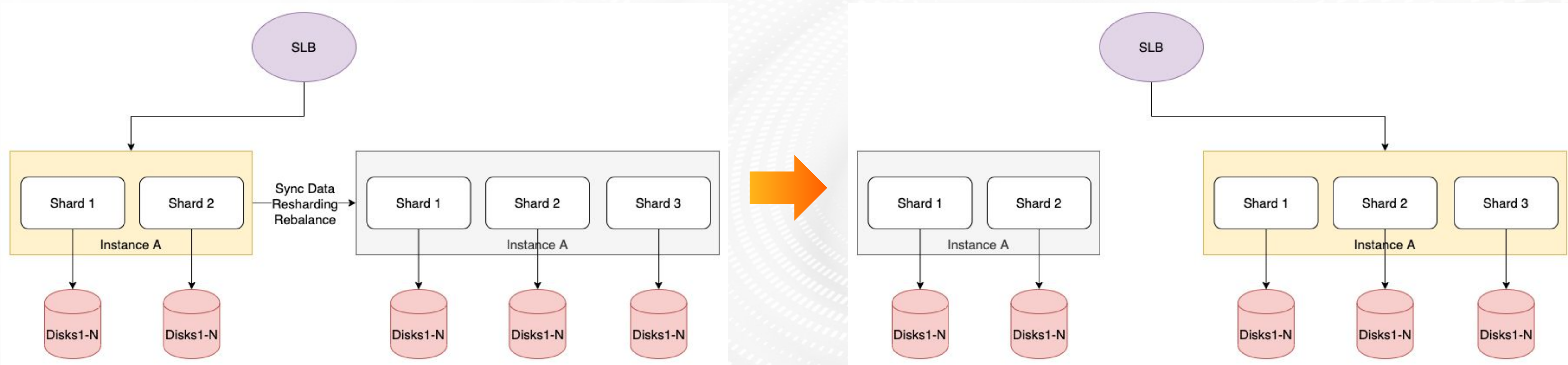
Storage of hot, warm, and cold data for the balance of price-performance



Storage Type	Use Case
Cloud disk + Object Store(OSS)	Hot/cold architecture. Data is archived to cold storage after a specified TTL.
Cloud disk + local disk	Warm/cold architecture. Frequently queried data in recent days is moved to local disks after a specified TTL.
Cloud disk + local disk + Object Store(OSS)	Hot/warm/cold architecture.

Community Compatible Edition – Auto Scaling In/Out

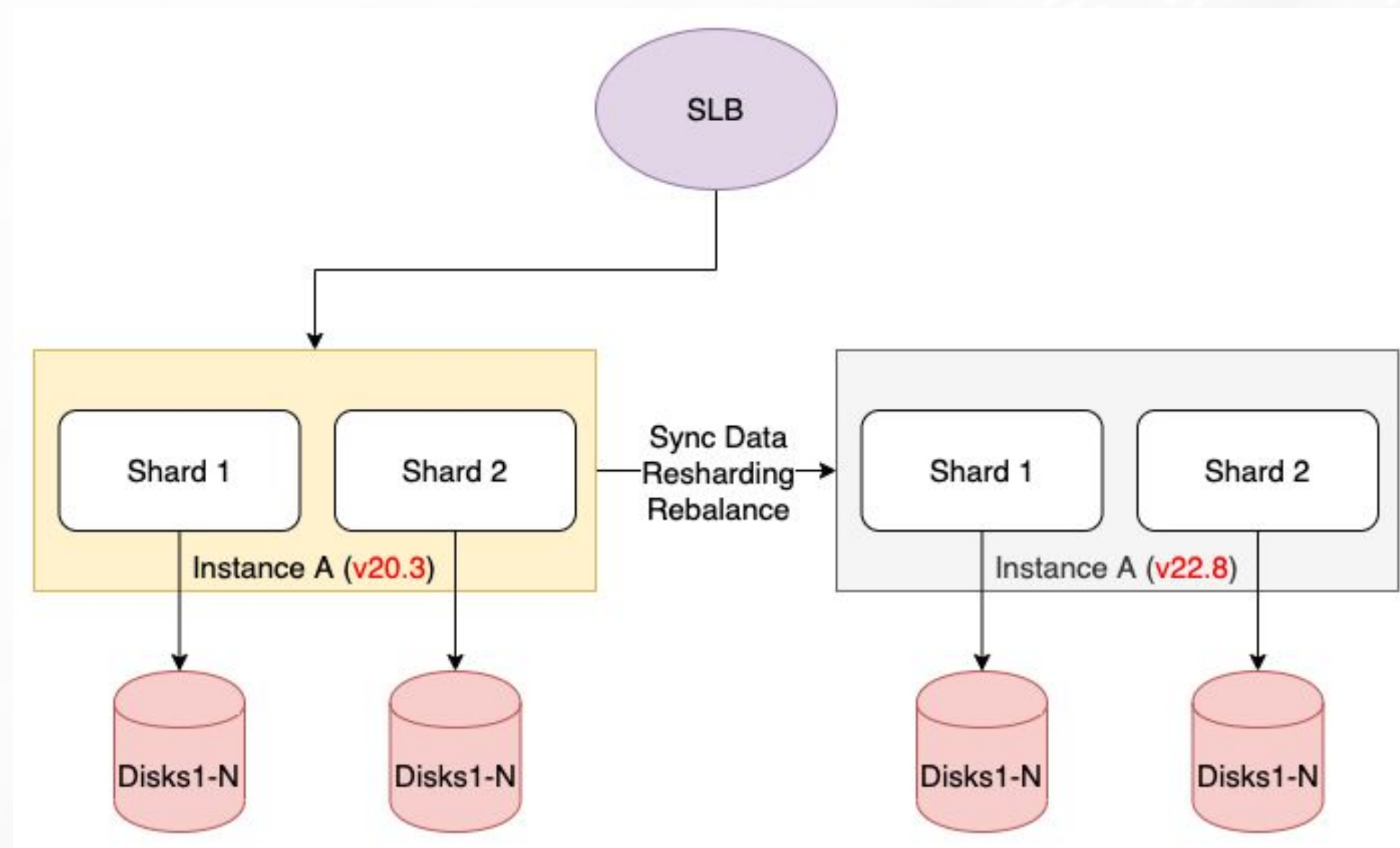
Attach SLB to the destination instance after data synchronization



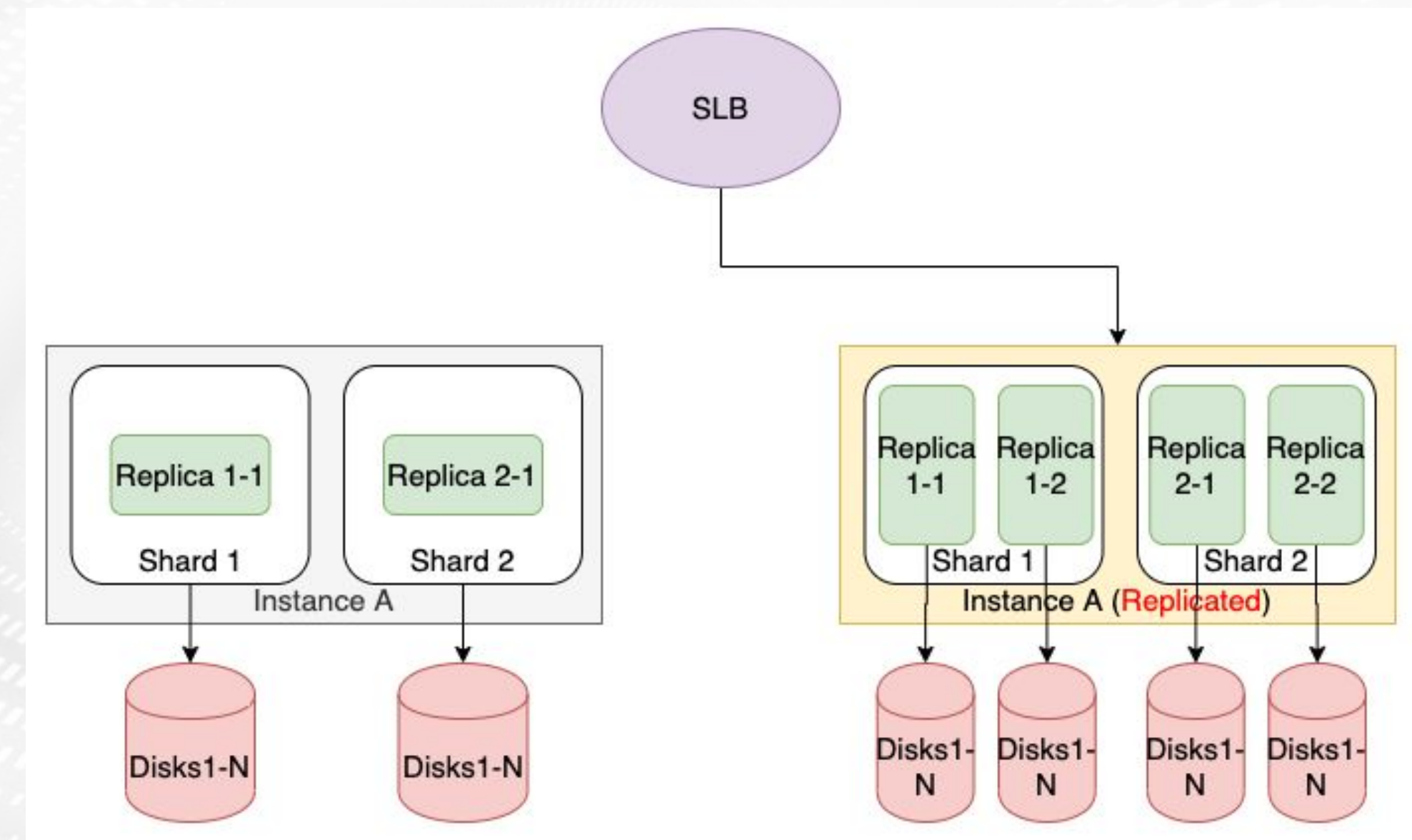
Lock-free write + Incremental Data Sync

Community Compatible Edition – Major Version Upgrade & Switchover

Attach SLB to the destination instance after data synchronization



Upgrade the major version by migrating data to a new instance to ensure compatibility.



Implement an automatic switchover between XxxMergeTree and ReplicatedXxxMergeTree.

Lock-free write + Incremental Data Sync

Alibaba Cloud ClickHouse Enterprise Edition



ClickHouse, Inc. and Alibaba Cloud Announce a New Partnership



Nick Peart
Mar 24, 2023

SAN FRANCISCO - March 24, 2023 - Today, ClickHouse, Inc. creators of ClickHouse online analytical processing (OLAP) database, and Alibaba Cloud, the digital technology and intelligence backbone of Alibaba Group, announced a partnership that will enable Alibaba Cloud to offer ClickHouse as an enterprise, first-party service on its platform. This partnership is an exclusive agreement between ClickHouse, Inc. and Alibaba Cloud in mainland China to offer a joint first-party enterprise service in APAC.

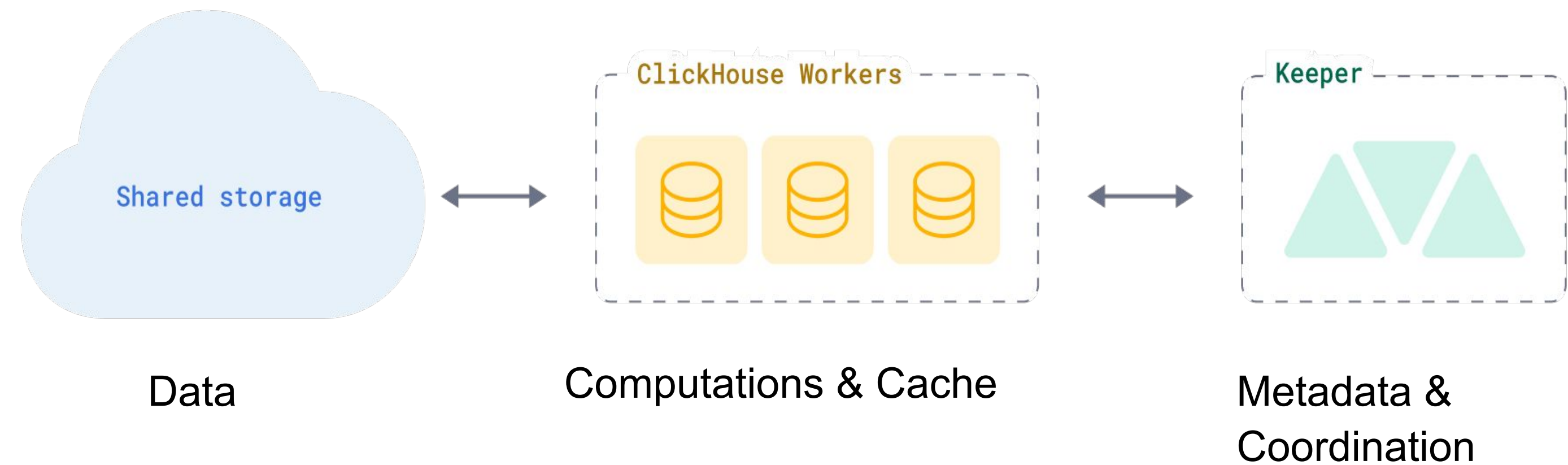
Enterprise Version = Cloud Native + Proprietary Features

What:

- change the cluster size **dynamically**;
- **scale out** both SELECT and INSERTs;
- remove the need for **resharding**;
- allow scaling **complex queries**;
- fast **UPDATE** and **DELETE**;
- no **out-of-sync** replicas;

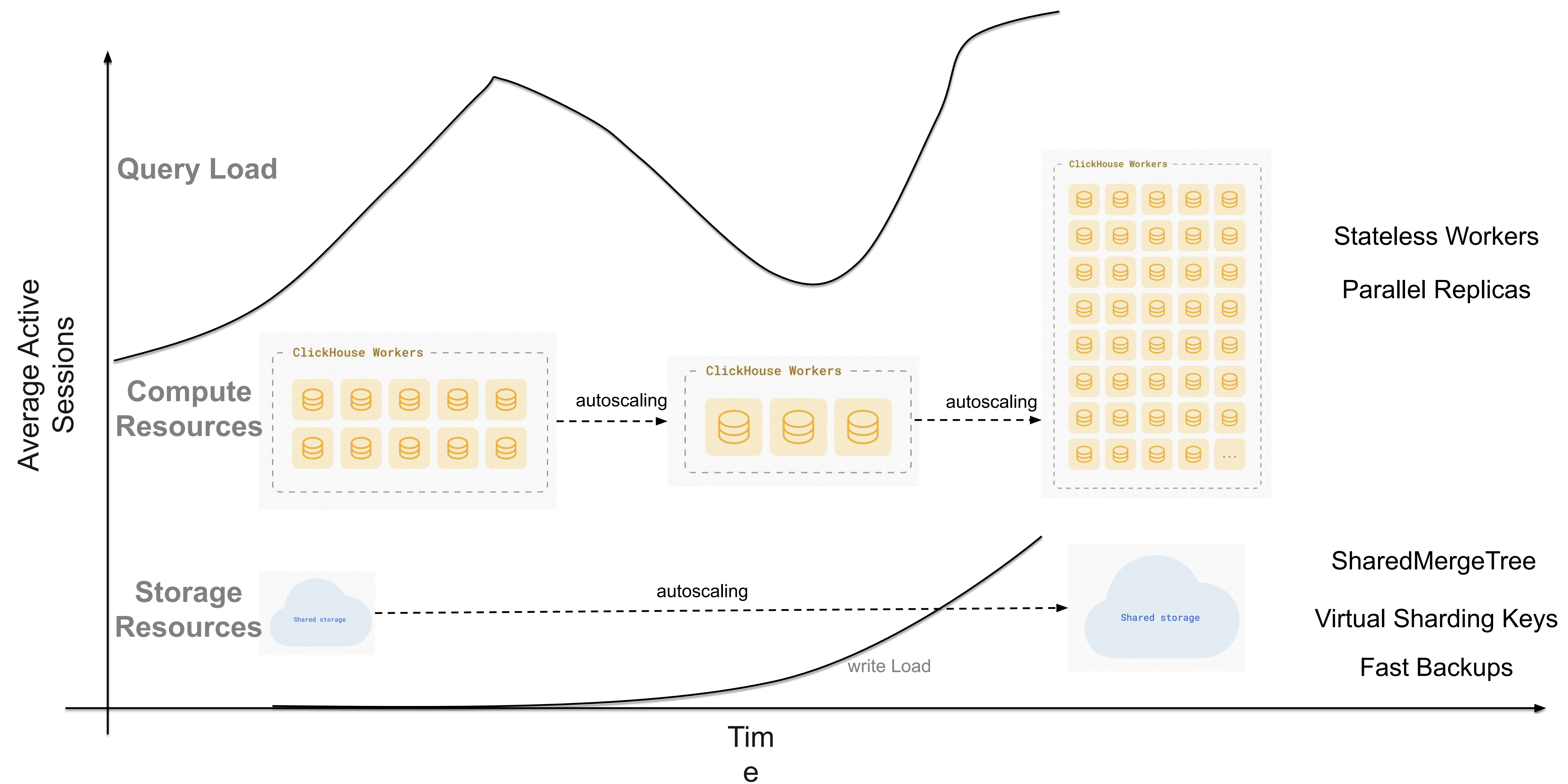
How:

- **compute and storage separation**;



Compute/Storage Separation & Autoscaling

Enterprise Only



Alibaba Cloud ClickHouse Enterprise Edition Features

	Feature
Only on Cloud 仅在阿里云 ClickHouse 企业版支持	<u>SharedMergeTree</u> Stateless workers
Better on Cloud 阿里云 ClickHouse 企业版支持更好	Lightweight update/delete Replicated Catalog Parallel Replicas Virtual " <u>sharding</u> " keys Optimization for shared storage Multi-level cache Fast backups
Both Open Source and on Cloud 企业版和开源版同时支持	<u>ClickHouse Keeper</u>

Lightweight Updates/Delete

"Patches" instead of full data rewrite.

Merge on read.

Full update in background.

Works better with SharedMergeTree!

Recap

Today

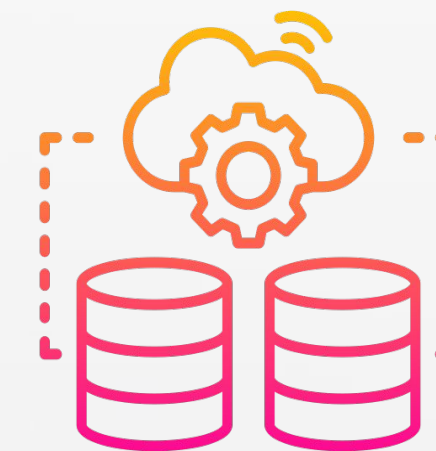
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Get Started for Free



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ApsaraDB

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