Samsung Cloud Platform

Database

CacheStore

A Key-value In-Memory Data Store with Fast Data Processing Capabilities

CacheStore provides an environment that automatically creates and configures Redis database, and to ensure the proper management of a single instance or critical data, features such as high availability capability, read/replication, backup/restoration, patch, parameter management, auditing, and monitoring were added, thereby automating DB lifecycle management. Redis is a NoSQL DBMS for processing and analyzing big data and a key-value data store system that runs in in-memory. Owing to its low data processing time, it can build a data-intensive application or enhance the performance of the existing application.

Excellent Performance
Redis is used as an in-memory data store or cache to support applications requiring an immediate response. In addition, cluster configuration distributes resources through other servers when there is an overload in the node, thereby enabling efficient and high-performance data processing.

Convenient DB Management
CacheStore uses a web-based console to automate DB managers' tasks, allowing easy access for anyone to be able to create and manage databases. With Samsung Cloud Platform taking care of complicated database management, users can focus on application development and service operation.
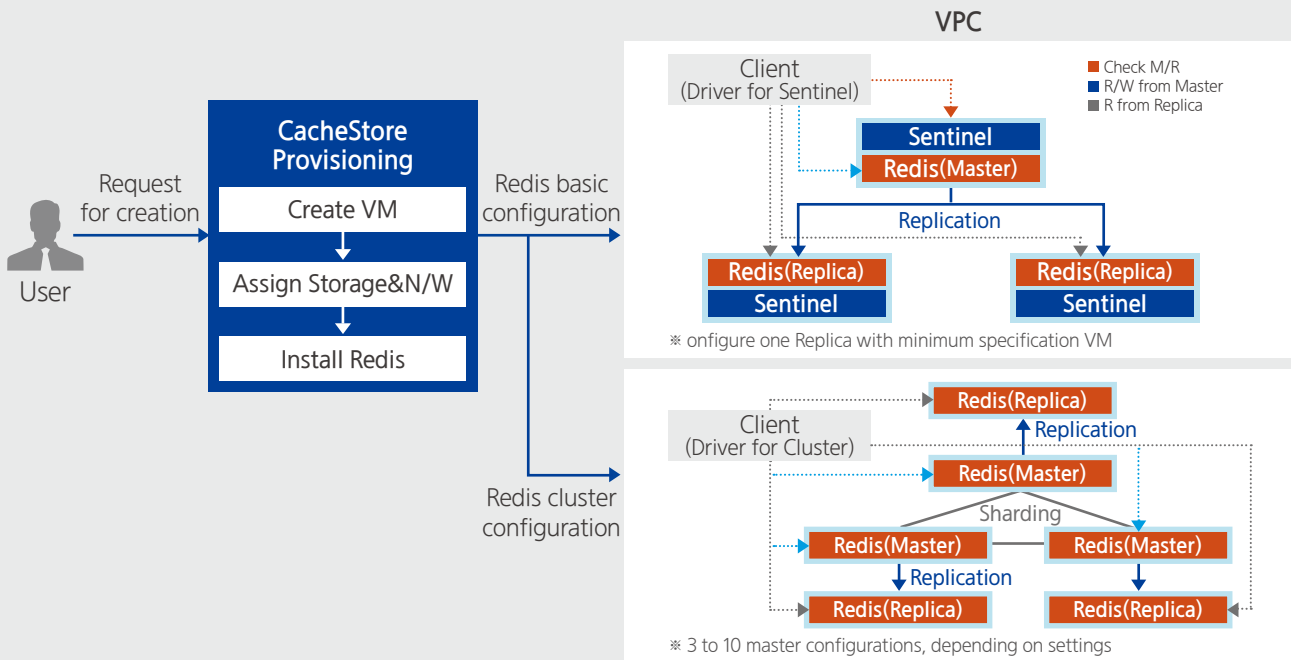
Outstanding Reliability and Availability
CacheStore offers optimized environments to securely manage customers' data based on Samsung SDS' decades of experience and know-how on DBMS management. The highly reliable high performance infrastructure and sync replication architecture developed by Samsung SDS also ensure high availability.

Robust Security
VPC(Virtual Private Cloud)-based network access architecture enables easier separation of databases and Security Group allows secure access while automated vulnerability diagnosis and analysis preemptively responding to security threats.

Service Architecture

VPC

Client (Driver for Sentinel)

Check M/R
R/W from Master
R from Replica

Sentinel
Redis(Master)

Replication

Redis(Replica)
Sentinel

Redis(Replica)
Sentinel

※ onfigure one Replica with minimum specification VM

Client (Driver for Cluster)

Redis(Replica)
Replication
Redis(Master)
Sharding
Redis(Master)   Redis(Master)
Replication
Redis(Replica)   Redis(Replica)

※ 3 to 10 master configurations, depending on settings

User

Request for creation →

CacheStore Provisioning

Create VM
↓
Assign Storage&N/W
↓
Install Redis

→ Redis basic configuration

→ Redis cluster configuration

Key Features

• **Rapid and safe DB creation**
  - Auto provisioning : Automatically install standard version Samsung Cloud Platform database using VM with various spec
  - HA configuration : Select from the following options based on user workload
    · Sentinel-based HA configuration(single master - replica)
    · Data sharding where up to 10 master nodes are configured with Redis cluster(multi master - replica)

• **Simple and convenient DB management**
  - Backup : Store in Object Storage using Redis backup
  - Recovery : Able to recover to a specific point in time or present time based on backup files(data) stored in Object Storage
  - User parameter setting : Set parameters regarding better DB performance and security
  - Change default user password
  - Rename command : Change the default command to a user-defined one
  - Node management : Ensure availability by adding master after the initial configuration of a Redis cluster. Data is automatically redistributed during node expansion.

Pricing

• **Billing**
  - Provided in VM package, composed of VM & BM costs
    · Without contract : Hourly charge based on metering information of server(DB) status being 'on'
    · Contracted : Fixed monthly charge according to contract terms

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※ CacheStore service provides Redis 7.2.0, an open source key-value system that runs in in-memory.

FOR MORE INFORMATION

SAMSUNG SDS

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