

# Performance Analysis in Memory Distribution Key Value Store and Design of Storage Driver for SBK Framework

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**Abstract:** This paper aims to write the Memcached storage driver and performance analysing the Memcached. Memcached is a free and open source software, high performance, distributed memory object caching system. It is often used to speed up dynamic database-driven websites by caching data and objects in RAM to reduce the number of times, an external data source must be read. The SBK itself is a high-performance benchmark tool/framework. It massively writes the data to the storage system and reads the data from the storage system. The SBK supports multi writers and readers and also the End to End latency benchmarking. The main objective is to performance benchmark the Memcached storage driver using Storage Benchmark Kit(SBK), to speed up the performance of websites and web applications using SBK software, to extract the results of the operations which were performed on the data. The performance benchmarking is done by adding SBK driver which specifies the input/output operations of storage systems. SBK delivers the throughput and latency values for a every specific interval for live performance analytics. Memcached is a free and open-source software, high performance, distributed memory object caching system. The SBK itself is a high-performance benchmark tool/framework. The SBK supports multi writers and readers and also the End-to-End latency benchmarking. Memcached is a key-value store that keeps data in the DRAM i.e., data is not persistent. Clients communicate with Memcached through a simple set of APIs: Set, Add, replace are used to store data, Get or Remove are used to retrieve or remove data.

**Keywords:** Storage Area Network, Performance Analysis, Storage Benchmarking Kit

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