



# Wasabi Performance Benchmark Report

Comparing Performance Between  
Wasabi & AWS S3

## Executive Overview

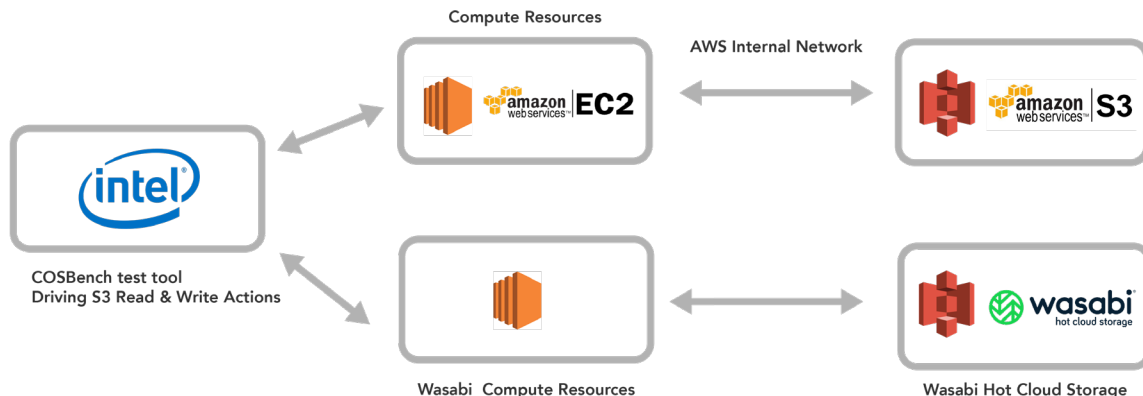
Wasabi is transforming cloud storage by offering a new approach that is less expensive and faster than the popular AWS Simple Storage Service (AWS S3). As cloud object storage use-cases continue to grow, so does the need for increased performance. Gone are the days where object storage was seen as a place to “set it, and forget it”. Increasingly, customers require millisecond access to their stored data. They need to upload their data fast, so they can move on to other projects or save data center resources such as CPU cycles.

Wasabi’s performance advantages are derived from our innovative architectural design attributes. Wasabi’s performance advantages, relative to competitive public cloud object storage services, have been proven in both laboratory and real-world customer environments.

To demonstrate the performance advantages of Wasabi’s hot cloud storage service relative to AWS S3, the Wasabi Performance and Certification Team (PACT) conducted a series of performance benchmark tests with both the Wasabi and AWS S3 services. The tests were based on industry-accepted testing methodologies for evaluating cloud storage performance.

## Testing Methodology

Wasabi’s performance testing is based on the use of the Intel [COSBench \(Cloud Object Storage Benchmark\) testing tool](#). This test tool is used to run a series of tests against both AWS S3 and Wasabi to compare the write and read performance of the two storage services in various configurations. As part of the test cycles, we tested object sizes ranging from 10 KB to 10 MB and compute thread counts from 1 to 30. The two AWS S3 & Wasabi configurations that were tested are shown in Figure 1 below.



**Figure 1 – Performance Testing Configuration**

The AWS EC2 compute + AWS S3 storage configuration shown at the top of Figure 1 serves as the baseline for the comparison testing. In this configuration, AWS EC2 was connected to AWS S3 directly over the AWS us-east internal data center network. The EC2 machine configuration was m2xlarge with 10 Gb/s interfaces and the AWS S3 config was S3 Standard.

The Wasabi compute + Wasabi storage test configuration shown in Figure 1 involves the use of Wasabi compute resources in the same us-east data center as Wasabi hot cloud storage. For this configuration, the Wasabi compute machine was comparable in size to the AWS EC2 machine and was connected to the Wasabi storage service over the Wasabi internal data center network using 10 GB/s interfaces.

## Testing Results & Analysis

Wasabi conducted 40 different tests that measured both read and write performance with a range of object sizes and the number of compute threads. Using the Intel COSBench tool, Wasabi ran each object size and thread combination against both the AWS and Wasabi configurations. The throughput results for each combination are provided in the tables below.

**Write (PUT) Throughput - MB/s**

Object Size	10KB		100KB		1MB		10MB	
	AWS	Wasabi	AWS	Wasabi	AWS	Wasabi	AWS	Wasabi
Threads								
1	0.19	0.64	1.74	11.02	11.71	27.00	27.88	79.79
5	0.94	6.83	8.41	29.01	56.22	139.80	160.42	378.66
10	1.96	11.83	16.79	104.86	111.07	349.11	281.42	740.88
20	3.79	12.23	29.94	176.44	213.80	542.33	574.50	1,280.00
30	5.44	16.98	47.99	153.29	331.03	963.75	827.99	1,830.00

Table 1. Write (PUT) Performance

**Read (GET) Throughput - MB/s**

Object Size	10KB		100KB		1MB		10MB	
	AWS	Wasabi	AWS	Wasabi	AWS	Wasabi	AWS	Wasabi
Threads								
1	0.47	0.10	4.41	16.80	31.72	38.28	70.40	117.71
5	2.48	10.07	18.01	79.45	90.49	187.88	343.07	681.66
10	4.98	17.64	42.53	147.59	235.20	354.32	628.58	577.43
20	11.47	17.74	98.01	156.98	597.85	943.83	1,190.00	2,400.00
30	22.89	15.68	148.90	272.46	1,020.00	1,310.00	1,220.00	2,900.00

Table 2. Read (GET) Performance

## Single Threaded Write Performance

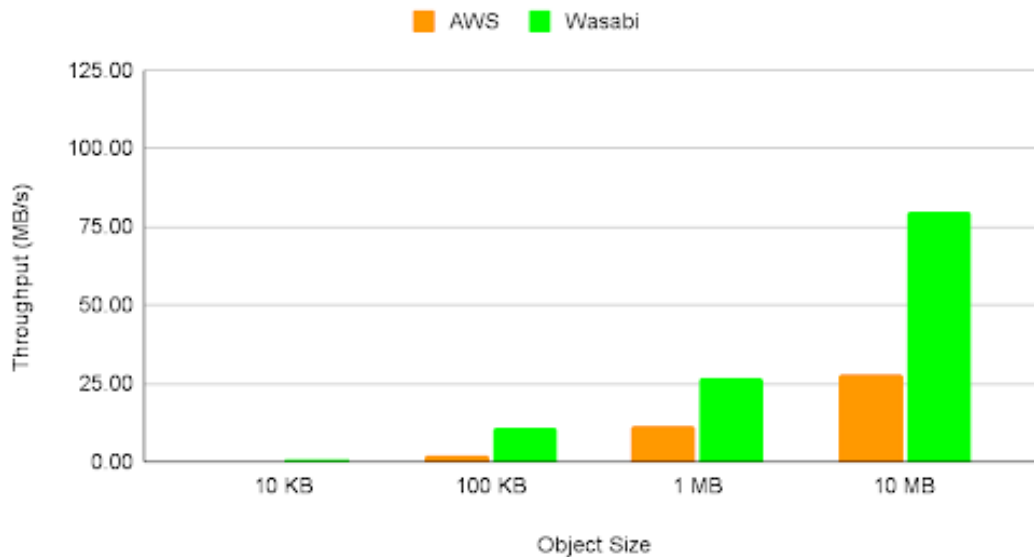


Figure 2. Comparison of Write (Put) performance for a single thread with various object sizes

## Single Threaded Read Performance

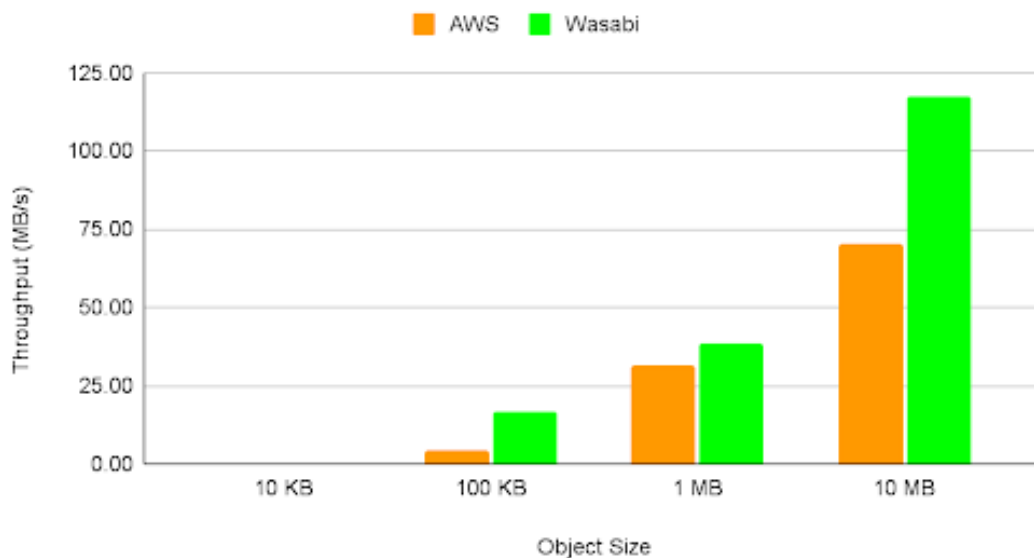


Figure 3. Comparison of Read (Get) performance for a single thread with various object sizes

## Summary

This testing illustrates that the purpose-built cloud object storage system built by Wasabi offers meaningful performance advantages over AWS S3 Standard in the majority of thread and object size combinations. As you can see from the tables above, Wasabi displayed a considerable performance advantage, outperforming AWS in 37 of the 40 combinations measured.

### ABOUT WASABI

Wasabi provides simple, predictable and affordable hot cloud storage for businesses all over the world. It enables organizations to store and instantly access an unlimited amount of data at 1/5th the price of the competition with no complex tiers or unpredictable egress fees. Trusted by tens of thousands of customers worldwide, Wasabi has been recognized as one of technology's fastest-growing and most visionary companies. Created by Carbonite co-founders and cloud storage pioneers David Friend and Jeff Flowers, Wasabi is a privately held company based in Boston.

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