

How to Beat Amazon, Google and Microsoft

Wasabi Briefing Note

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wasabiTM
hot cloud storage

Amazon AWS, Google Cloud and Microsoft Azure are commonly referred to as the “big three” cloud providers and many assume their strangle hold on those top spots is very secure. The reality is that the big three in any industry are never secure. If another company can provide better solutions, greater focus or better pricing then they may be able to crack the big three.

The most obvious way to shake up the cloud industry is to develop a better pricing model but pricing alone won't unseat Amazon, Google and Microsoft. It will also take a better technological solution and for a smaller cloud company tighter focus.

Introducing Wasabi

Wasabi Technologies is a cloud provider focused exclusively on providing cloud storage. They don't provide cloud compute, instead they partner with other providers. As the name suggests, Wasabi hot cloud storage claims performance as a key advantage of their offering. Where most cloud storage offerings are only considered for storing cold data, Wasabi believes its performance can handle performance sensitive workloads (a.k.a. hot data).

Architected for High Performance

Like most cloud providers, the company's storage platform is an S3 compatible object store. However, unlike most cloud providers Wasabi took the time to develop their own purpose-built sequential file system for their native object store rather than relying strictly on a Linux-based open source file system. Being in direct control of how, and where, data is written to disk enables the company to deliver high performance reads and writes, something that object stores are not necessarily known for.

Thanks to native control over the disk systems, Wasabi is able to organize write I/O so that when objects are read in the future, it can be done with a single pass. To accomplish this sequentialization of random writes, Wasabi uses a flash storage front end to organize the writes prior to sending them to disk, a level of control that would not be available to them had they not written a native object store. The flash tier is also used to store the entire object store's metadata. Considering that metadata IO is a key component and also the source of IO bottlenecks for object storage systems, moving the metadata to the flash tier also helps improve performance.

Architected for Competitive Pricing

In addition to performance Wasabi also has very aggressive pricing. A key factor in Wasabi's architecture to help deliver its pricing advantage is the company's use of Shingled Magnetic Recording (SMR) hard disk drives. While SMR drives by themselves are not necessarily less 1/3 expensive than other drives, when coupled with software that leverages SMR capabilities, the net price is less expensive on a per-TB basis.

Unlike a standard hard drive which has independent tracks, the tracks on an SMR drive overlap, enabling more capacity in the same physical space. SMR drives though need to be written to intelligently and sequentially. Wasabi, thanks to their software and the use of flash and native access to the drives, can manage SMR drives perfectly. SMR drives tend to deliver 25% more capacity per drive and most cloud providers tend to use thousands of drives per data center. Consequently, the use of SMR drives gives Wasabi a significant price advantage, while still providing better performance.

Also contributing to Wasabi's price advantage is their efficient use of disk space — they are able to use more than 90% of the physical disk capacity. Considering that most file systems develop performance problems when a drive reaches 70% capacity, the ability to use another 20% of the drive combined with the 25% capacity pickup thanks to SMR use means that Wasabi might have as much as a 50% price advantage on raw parts. This advantage more than makes up for any disadvantage that Wasabi might have because it doesn't yet buy at the volume discount levels of the big three.

Partnerships

Wasabi has an impressive list of technology partners including Veeam, Actifio, Commvault, Aparavi, Cloudian, Scality, InfinitelIO, Komprise, Panzura, StorageCraft, WekaIO to name just a few. It makes sense, these companies are hurt when the cloud component of their solution is expensive or if the egress fees limit its usefulness. Wasabi can also support direct connect functionality, including Amazon AWS Direct Connect, where a compute provider can directly access Wasabi storage, eliminating internet latency.

StorageSwiss Take

Wasabi is gaining rapid traction in the market, since launching in May of 2017 the company has over 6,000 customers and 5,000 active trials. Testing and evaluating a new cloud storage provider is not as cumbersome as testing a new storage system on-premises. All a prospective customer has to do is sign-up for the free trial and start putting data in the Wasabi cloud.

Unlike a provider that is simply willing to lower prices by making less money, Wasabi is leveraging a unique set of intellectual property to exploit technology that solves the three biggest problems organizations face when selecting a storage solution; performance, price and reliability. The cost implications for the big three to retrofit their technologies, if they even can, would be tremendous. In our estimation Wasabi is here to stay and the big three may be changing sooner than conventional wisdom would have predicted.

About George Crump



Twelve years ago George Crump founded Storage Switzerland with one simple goal; to educate IT professionals about all aspects of data center storage. He is the primary contributor to Storage Switzerland and is a heavily sought after public speaker. With over 25 years of experience designing storage solutions for data centers across the US, he has seen the birth of such technologies as RAID, NAS and SAN, Virtualization, Cloud and Enterprise Flash. Prior to founding Storage Switzerland he was CTO at one of the nation's largest storage integrators where he was in charge of technology testing, integration and product selection.

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