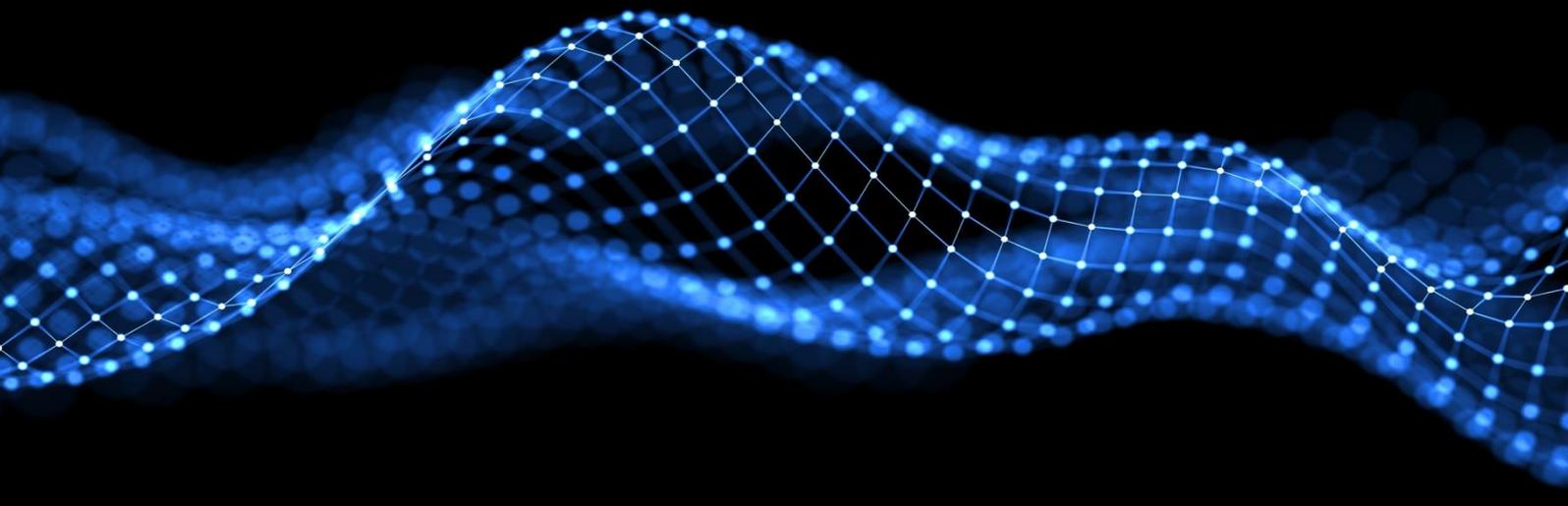# VAST Data - Gemini

The Architect's View™

VAST Data recently announced a new sales model branded "Gemini" that separates the hardware and software acquisition processes. Customers now have the option to buy each component separately, albeit from the current single VAST hardware provider. This adjustment to the sales model represents a choice for customers that may have better purchasing power while benefiting VAST in their move towards IPO.

Background

VAST Data, Inc. is a New York-based start-up founded in January 2016. The company has developed a scale-out storage platform based on persistent memory and NAND flash storage that provides petabyte-scale for object and NAS workloads.

The VAST Universal Storage platform takes advantage of the unique features of Intel Optane memory to implement both a metadata store and write I/O landing zone for unstructured data. The majority of content is then stored on NAND flash, using extremely wide striping technology and a "write new" process that gains benefit from converting random to sequential I/O. As a result, VAST is able to offer highly favourable economics with a guarantee of up to ten years on hardware.

Typical customers are petabyte-scale, taking advantage of the high bandwidth and throughput the solution offers. The back-end hardware is essentially an optimised "JBOF – Just a Bunch of Flash" disk shelf with NVMe over Fabrics connectivity.

What is Gemini?

Gemini was announced on 6 April 2021 as a disaggregated purchasing model for the Universal Storage Platform. The new commercial model enables customers to separate the

hardware and software licensing costs to provide pricing transparency while matching system performance to the requirements of applications. The software component becomes a consumption-based feature.

Customer Business Value

The separation of hardware and software costs is a positive move for customers, as it breaks the traditional refresh cycle experienced with legacy external storage vendors. As flash storage is likely to have a longer lifetime, IT organisations can choose to "sweat" the hardware asset and simply pay for the "right to use" from the software. Large IT organisations, such as those typically targeted by the VAST Universal Storage Platform, may already have significant buying power and be able to leverage the benefit of their existing relationships to obtain, for example, cheaper media than the standard open market.

Market Positioning

The disaggregated hardware/software model is widely used within the enterprise. Software-Defined Storage started the transition to disaggregation over a decade ago, albeit with solutions that placed the hardware design and management burden on the customer. In the last few years, vendors have moved to a hardware model where the specific configuration is designed for the storage platform – SoftIron is an excellent example of this. In solutions where the performance or

capability of a storage system relies on close links between hardware and software, we will continue to see vendor-recommended or designed hardware solutions, even if the purchasing model is disaggregated.

From an IPO perspective, the effort required (and margin received) on hardware is low compared to pure software businesses, so VAST Data is clearly keen to remove the hardware drag of product inventory and support from their bottom line. This approach is likely to be widely adopted within the industry, except for companies (Dell, HPE) specifically in the hardware business and already have well-established and mature global support organisations.

Caveats

The full detail behind the Gemini commercial model still needs some explanation. In the legacy model, vendors sell hardware with perpetual software licenses that are closely coupled. After three or four years, the hardware is amortised and refreshed with a new solution, including some buyback on the original system. The VAST Gemini model enables

hardware to be kept on the floor much longer than average, after which the customer has the burden of covering the hardware refresh cost. However, maintenance on existing hardware continues while a software subscription is in place. Potential customers need to work with VAST Data to understand the TCO implications of using the Gemini model and determine where the best combination of perpetual versus consumption purchase works best for their IT organisation and business. This is the same process as any disaggregated storage consumption model.

The change of commercial model in on-premises storage represents a rethink for many businesses that have built purchasing decisions around a three or four-year refresh cycle. However, the transition also represents an opportunity to be more flexible in vendor choice and (for those businesses able to deliver it) will be beneficial for vendors and customers alike.

Reference Information

Further details on VAST Data and Universal Storage can be found in the following Architecting IT blog posts:

- VAST Data goes software-only – what does this mean for customers? (Published 8 April 2021)
- VAST Data launches with new scale-out storage platform (Published 14 March 2019)
- Persistent Memory in the Data Centre (Published 16 July 2020)
- Moving to Unstructured Data Stores (Published 12 May 2020)

Further details on VAST Data can be found with the following Storage Unpacked podcasts:

- #198 – Software-Only Storage Vendors (Published 16 April 2021)
- #105 – Introduction to VAST Data (Part I) with Howard Marks (Published 21 June 2019)
- #106 – Introduction to VAST Data (Part II) with Howard Marks (Published 26 June 2019)