Highlights

Software-Defined Flash Storage Architectures

Tuesday May 9 at 10:00 AM PST

G2M RESEARCH

Flash devices such as solid-state drives (SSDs) have increased in size to the point where an individual device can easily support multiple virtual machines.

The best way to take advantage of these capabilities is to utilize these latest SSDs as part of a software-defined storage architecture, where resources can be put together and taken apart as workloads demand.

Join our industry experts to explore best practices for SSD-based software defined architectures.

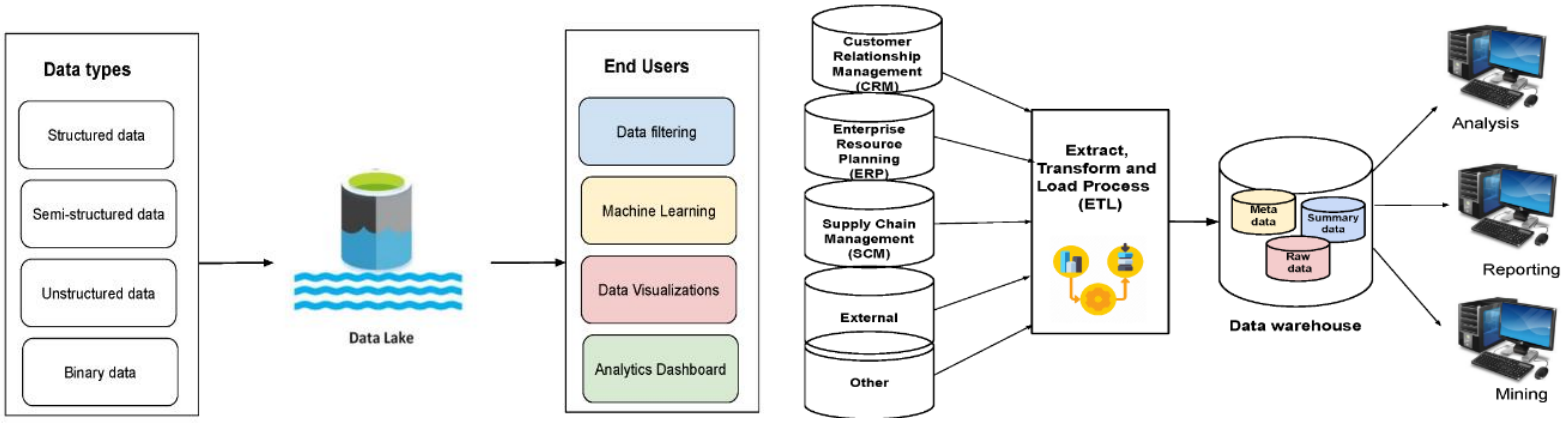
Register

Data Lake vs Data Warehouse?

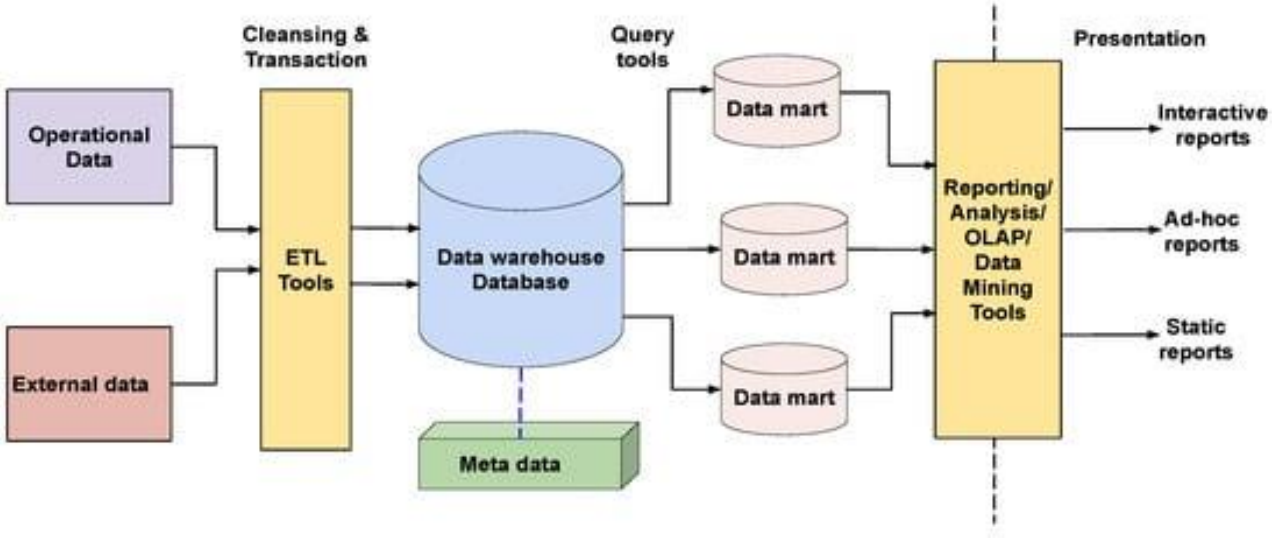
Posted by Karen Heumann, April 20, 2023

There are clear differences between data lakes and data warehouse, making each the best approach for different uses. Accordingly, most companies use both for their data storage needs.

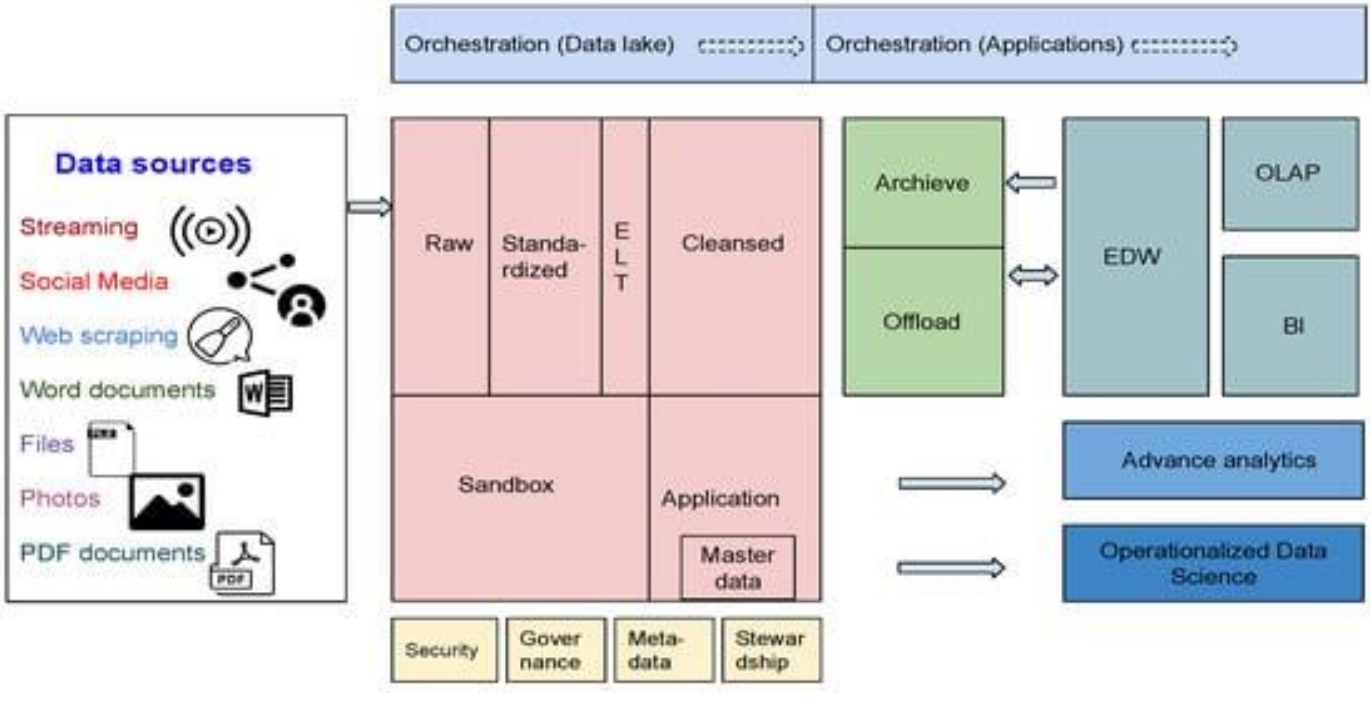
	Data Lake	Data Warehouse
Data Storage	Raw, unstructured, stored indefinitely, store any data at any scale Can also store semi-structured data such as web server logs, clickstreams, social media, and sensor data	Cleaned, processed, ready for strategic analysis based on predetermined constructs Relational data from transactional systems, operational databases
Users	Data scientists, engineers, developers, many use cases but more complex, requires expertise to utilize effectively	Data scientists, managers, business end users
Analysis	Predictive, machine learning, exploratory analytics, data discovery, data visualization, big data analytics	Data visualization, data analytics, batch reporting, visualizations
Pre-Processing	Extract, loaded, structured if needed	Extracted, scrubbed, structured for use, loaded
Schema	Defined after data is storage, process of capturing and storing data is faster, written at time of analysis	Schema defined before storage and can be written at time of analysis, longer data processing time but ready for use
Data Quality	May include duplicative, unverified and erroneous data, raw, more flexible	De-duplication, sorting, summarizing, and verification in advance, curated resulting in better data accuracy More reliable but less agile
Performance	Prioritizes storage volume and cost over performance	Designed for the fastest query performance
Security	Less secure due to volume of data	More secure because less data to manage but also data warehouse security is more mature
Cost	Inexpensive, less time to manage, lower operational costs	Higher cost, more management, additional operational costs



Data Warehouse Architecture



Data Lake Architecture



Strategic Partnership: VAST Data & HPE

Posted by Mike Heumann, April 20, 2023

VAST Data announced a strategic partnership with Hewlett Packard Enterprise to provide software for HPE GreenLake for File Storage. This new technology simplifies data management and accelerates scaling for data-intensive applications. By leveraging VAST's innovative scale-out software architecture for the new HPE GreenLake for File Storage, enterprise customers can manage unstructured data with high performance at scale to deliver superior time to data insight.

"Media creation is on the rise, across enterprise, commercial and consumer use cases. As a result, unstructured data storage is becoming increasingly necessary and increasingly complex for organizations ranging from life sciences to media/entertainment and financial services," said Tom Black, Executive Vice President and General Manager, HPE Storage. "By using VAST Data software within HPE GreenLake for File Storage, we are able to deliver a scale-out file service, designed to accelerate data-intensive workloads, which can be managed via the HPE GreenLake platform."

The new HPE GreenLake for File Storage uses VAST's Disaggregated, Shared-Everything (DASE) architecture, which IDC describes as "the storage architecture of the future." Built on HPE Alletra Storage MP and delivered as part of the HPE GreenLake cloud operational model, the new HPE data service enables enterprises to run their unstructured data workloads efficiently from one control plane. VAST software allows customers to quickly analyze all data in context and in the moment by consolidating infrastructure to accelerate training and inference time.

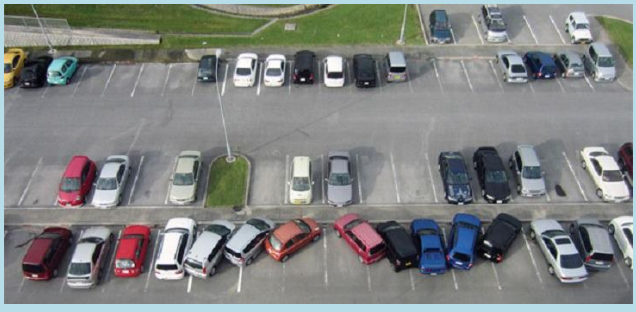
"By combining VAST Data's next-generation architecture with trusted hybrid cloud infrastructure and data services from HPE, customers now get the best of all worlds combined into a single, simple to consume solution from HPE," said Renen Hallak, Co-Founder and CEO of VAST Data. "VAST is laying the foundation for the future of data management and AI workloads, and together with HPE, we're continuing to innovate for the enterprise, where data is at the center of every application strategy and business decision."

“As a VAST and HPE customer, we see the HPE GreenLake edge-to-cloud platform as an innovative entrant in the cloud arena, which recognizes the challenge many businesses have in balancing on-prem versus cloud,” said Chris Goddard, CTO and Partner at G-Research. “The combination of HPE GreenLake with VAST’s proven file system has huge potential to reduce data complexity and further scale the performance of large machine learning workloads, both in the cloud and in on-prem native environments. HPE and VAST have been true partners in helping our business achieve the high-performance operations we have today, and we continue to explore potential new innovations with them that could further accelerate our future growth.”

“In the last few years, VAST Data has proven itself in the most demanding data-rich environments,” said Steve McDowell, Principal Analyst and Founding Partner at NAND Research. “This partnership with HPE opens up VAST’s performant, AI-ready technology to a broad swath of HPE GreenLake customers looking for scale-out file service capabilities.”

“Softcat is invested in accelerating customer outcomes with comprehensive solutions, from edge to cloud,” said David Francis, Head of Vendor Alliances at Softcat. “With over 15 years of successful partnership with HPE, we’re excited about today’s announcement of HPE GreenLake for File Storage in partnership with VAST Data, which opens up new markets and use cases for our business, and ensures our joint customers have access to the industry’s most innovative, performant technologies and flexible consumption models to meet the needs of their organization.”

Data Analytics & Finding a Parking Spot



Posted by Karen Heumann, April 20, 2023

The average work day, including commuting time and a quick lunch x 10 days each year = the time spent trying to find a parking spot in New York City. Granted, there is no available parking in NYC, but translate the numbers to many large cities or factor in your smaller city and shorter commute and it is still a significant expenditure of time. The search for parking in the US is valued at over $70B.

Smart parking leverage data analytics to save time and maximize parking efficiencies. Urban mobility hubs offer electric vehicle chargers and Wi-Fi access. APCOA is coupling these technologies with office space and shopping to allow consumers to optimize the time they are charging their car.

Kim Challis, APCOA Regional Managing Director, explains that mobility hubs are designed to bring benefits to local communities and to help car park owners make the most of the spaces they have, “It ranges from simple things like electric vehicle charging or using car parks for cycle parking. We can put in lockers so companies like Amazon and InPost don’t have to drive to every individual home, they can just drop off at the car parks.”

Available data for meaningful analytics includes payment transactions, occupancy, sensor, enforcement, length of stay. Payment data such as whether consumers are using credit cards or cash aid in facility management by streamlining schedule and frequency of collections. Occupancy trends help in planning for big events like street fairs and concerts.

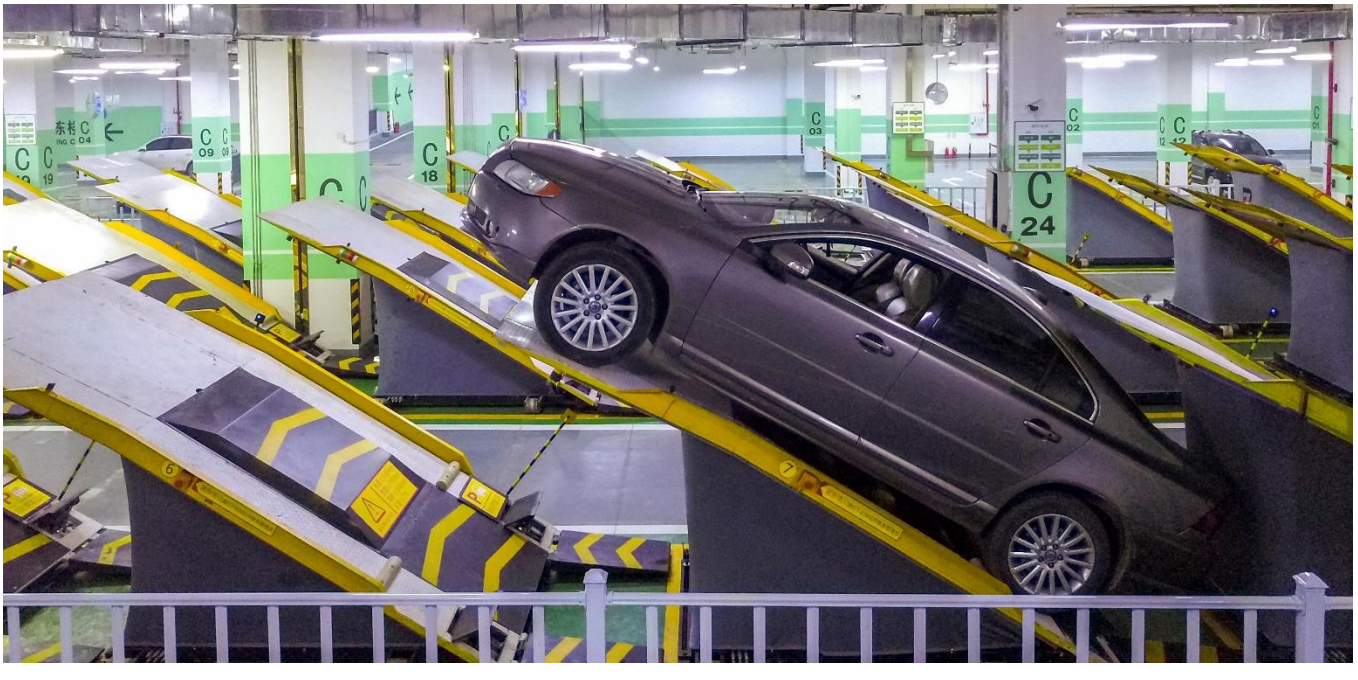
Parking programs are highly competitive and low-margin businesses. These technology tools are becoming a critical part of the business model with the added benefits of saving commuters time and aggravation plus reducing carbon emissions by taking cars off the road more quickly.

Knud Lass Lueth, Founder of IoT Analytics, points to significant results of “smart parking” technologies in San Franscico, London, Berlin, and New York City. His data indicates that 11% of parking spaces worldwide are smart and expected to reach 16% by the end of this year.

Interestingly, car parking revenue accounts for over 20% of the total ancillary revenue of airports.

Airports offer parking option including short-term, valet, shuttle, and satellite parking lots. Though some airports are utilizing data analytics to better address parking demands, there are more opportunities to align demand, pricing, occupancy, traffic flow, to increase revenue with increased efficiencies.

Successful smart parking solutions include the University of British Columbia, ParkPlus in Colorado, U-tron in Israel, and Diagonal Smart Parking Garage in China. The University of British Columbia solutions include wireless parking sensors, security network connectivity, and data retrieval for real-time monitoring of available parking space. ParkPlus uses lasers to scan cars and a robotic valet to park vehicles which parks cars in storage racks, for four tmes the storage capacity. U-tron has built automated parking structures throughout the US. U-tron uses a conveyor belt to move cars into spaces eliminating walking space around cars to allow cars to be placed just inches apart. The Diagonal Smart Parking Garage has a machine that elevates the car and holds it at an angle. The car is returned to the ground when needed. Drivers do not have to search for an available parking spot, there are no accidents, and the process is fast.



Enterprise Storage Forum Guidance: Top 20 Enterprise Data Storage Companies in 2023

Enterprise Storage Forum

Posted by Mike Heumann, April 20, 2023

Enterprise Storage Forum provides their guidance in reference to the top 20 enterprise data storage companies in 2023.

Top 20 Enterprise Storage Vendors:

1. Dell Technologies: Best for Flexible Storage
2. HPE: Best for Primary Storage
3. NetApp: Best for Unified Storage
4. IBM: Best for Secure Data Infrastructure
5. Huawei: Best for Converged Storage
6. Hitachi Vantara: Best for Industry-Critical Applications
7. Pure Storage: Best for Next-Gen Data Storage
8. Infinidat: Best for Sovereign Cloud Storage
9. Lenovo: Best for Adaptive Storage
10. Inspur: Best for Scenario-Based Storage Solutions
11. DDN(Tintri): Best for Innovative Data Storage Solutions
12. Fujitsu: Best for Software-Defined-Storage
13. Zadara: Best for Cloud Storage Solutions
14. Nutanix: Best for Cost-Effective Data Storage Plans
15. Veritas: Best for Seamless Cloud Storage
16. Commvault: Best for Intelligent Data Services
17. KIOXIA: Best for SSD Solutions
18. Pivot3: Best for All-Flash Offerings
19. Oracle: Best for High-Performance Data Storage
20. StorCentric: Best for Integrated Storage Solutions

G2M Research Multi-Vendor Webinar Series

Our webinar schedule is below. We are offering a Cybersecurity series and an Enterprise Storage & Technology multivendor series.

"The Need for Speed: NVMe™, NVMe-oF™, and Data Processing Accelerators" webinar featured Tony Afshary, Vice President, Products and Marketing at Pliops; Rob Davis, Vice President of Storage Technology at NVIDIA; and Peter Onufryk, Intel fellow for NVMexpress. Companies are focused on storage/networking/processing acceleration. Higher-level networking protocols and custom protocols for specific workloads require "offloads" to lower CPU utilization and increase application performance. Advanced storage capabilities such as those offered by NVMe and NVMe-oF can also tax CPUs, reducing cycles available for workloads. And then there is security, data resilience, and other very real needs that take CPU cycles away from workloads. This webinar explored where non-hyperscalers go to accelerate their workload in the same way hyperscalers do. The webinar video is available to view and a copy of the slidedeck is available here.

Interested in Sponsoring a webinar? Contact **G2M** for a prospectus. We can create custom webinar, custom webinar series, and add or modify topics to specifically appeal to your target audience. View our webinars and access slide deck presentations on our website.

Enterprise Storage & Technology

Software-Defined Flash Memory Architectures	May 9
Custom Pliops Webinar- More Info Soon!	June
NVMe & NVMe-oF – Past, Present, & Future	July 11
GPUs, SSDs, & Shared Memory: Accelerating Computing?	August 22

Securing Data – How Storage & Cybersecurity Technologies Can Work Together	Sept 26
The Open Compute Platform (OCP) Movement – Providing Compute-At-Scale Value to On-Premises Deployments	October 24
Storage Architectures for HPC Clusters	November 21
2024 Trends – Cloud, On-Premises, & Hybrid Compute/Storage	December 12

Cybersecurity

The Increasing Complexity of Cybersecurity Regulatory & Compliance for the Financial Services Industry	May 25
xDR- The Promise versus the Reality	August 3
10 Features of an Effective Attack Surface Management Tool	September 7
How Secure is the Cloud for Your Workloads?	October 12
Do You Need a SIEM? Use Cases Where a SIEM Makes Sense.	November 9

Upcoming Conferences

April 24-27	RSA Conference, San Francisco
May 1-3	IAHSS AC&E, Nashville, TN
May 2-4	ACT Expo, Anaheim, CA
May 9-12	Black Hat Asia 2023, Singapore
May 15-17	Forth Roadmap Conference, Portland, OR
May 16-17	SIA GovSummit, Washington DC
May 17-18	Expo Summit Global, Santa Clara, CA
May 21-25	ISC, Frankfurt, Germany
May 22-25	Dell World, Las Vegas
May 22-25	Government Fleet Expo, Dallas, TX
June 2-6	School Transportation Network Expo East, Indianapolis, IN
June 4-8	Cisco Live, Las Vegas
June 5-7	Gartner Security & Risk Managemnt, National Harbor, MD
June 7-9	Synnex Red, White and You, Greenville, SC
June 11-14	36th Electric Vehicle Symposium & Expo, Sacramento, CA
June 11-16	2023 VLSI Symposium, Kyoto, Japan
June 14-16	Interop Tokyo, Chiba, Japan
June 20-22	HPE Discover, Las Vegas
June 20-22	Info Security Europe, London
July 14-19	School Transportation Network Expo, Reno, NV
August 5-10	Black Hat USA, Las Vegas
August 8-10	Flash Memory Summit, Santa Clara, CA

August 28-31	VMWare Explore, San Francisco, CA
August 30-Sept 1	Security Expo, Sydney, Australia
September 11-13	Gartner Security & Risk Management, London
September 11-13	Global Security Exchange, Dallas, TX
September 18-20	Crowdstrike fal.con, Las Vegas
September 18-21	SDC 2023, Fremont, CA
October 2-4	DattoCon, Miami, FL
October 3-4	CyberTech Europe, Rome
October 16-19	Gartner IT Symposium/Xpo, Orlando, FL
November 15-16	Microsoft Ignite, TBD
Nov 27- Dec 1	AWS re:Invent, Las Vegas