VULTR + **SQREAM**

SQream + Vultr GPU Acceleration for Data and Analytics

Enhance the analysis of vast datasets, and machine learning development, with unmatched performance and scalability by combining Vultr Cloud Compute and NVIDIA accelerated computing platforms infrastructure with SQream's GPU-powered data processing engine.

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Optimize Complex and Large-Scale Data with SQream and Vultr

Businesses face the dual challenge of slow data processing and escalating costs in the data analytics landscape, especially when leveraging machine learning and CPUs. To address these pressing issues, SQream has joined the Vultr Cloud Alliance program to deliver a NVIDIA GPU-accelerated comprehensive solution.

Vultr's high-performance cloud infrastructure – accelerated by NVIDIA, capable of performing exponentially more work in less time with lower energy consumption than traditional CPU-based computing – combined with SQream's data processing and analytics, enables businesses to handle massive datasets more effectively. This integration drastically reduces the need for extensive hardware investments and lowers the total cost of ownership. Optimizing resource usage and minimizing operational expenses provides rapid insights and exceptional price-to-performance. Streamlining data preparation, the deployment and management of machine learning models, SQream on Vultr enables enterprises to make smarter, faster decisions and achieve greater business success.

Data architecture challenges

The solution architecture combines Vultr's NVIDIA GPU-accelerated computing platform with SQream's patented decoupled compute and storage, enabling efficient, parallel processing of data-intensive workloads with automatic compression hyper-partitioning of the data to limit i/o bottlenecks and seamless ecosystem integration.

Data transfer and processing: Data processing with a CPU can be slow and costly, especially for large or complex data sets. For mission-critical tasks requiring near-real-time processing, parallel processing is essential for handling large-scale computations efficiently. By leveraging Vultr Cloud GPU, accelerated by NVIDIA, combined with SQream's database technology, you can maximize memory bandwidth and computational efficiency, ensuring rapid data transfer and processing with exceptional performance.

Scalability challenges and solution: SQream's GPU-accelerated software and Vultr's high-performance cloud infrastructure offer true linear scalability, outperforming traditional CPU environments that struggle as data volumes grow. Vultr Cloud GPU, accelerated by NVIDIA, ensures consistently high query performance. This scalability is crucial for businesses managing massive data, providing optimal processing efficiency and cost-effectiveness.

Vultr Cloud GPU, accelerated by NVIDIA on SQream

Vultr offers access to NVIDIA GPUs, including:

- NVIDIA H100 Tensor Core GPU
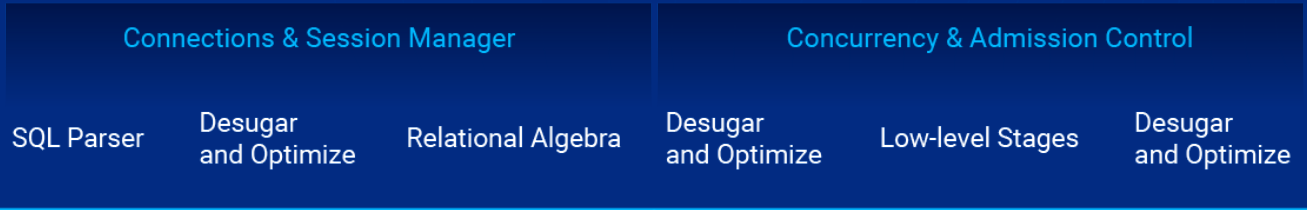- NVIDIA A100 Tensor Core GPU
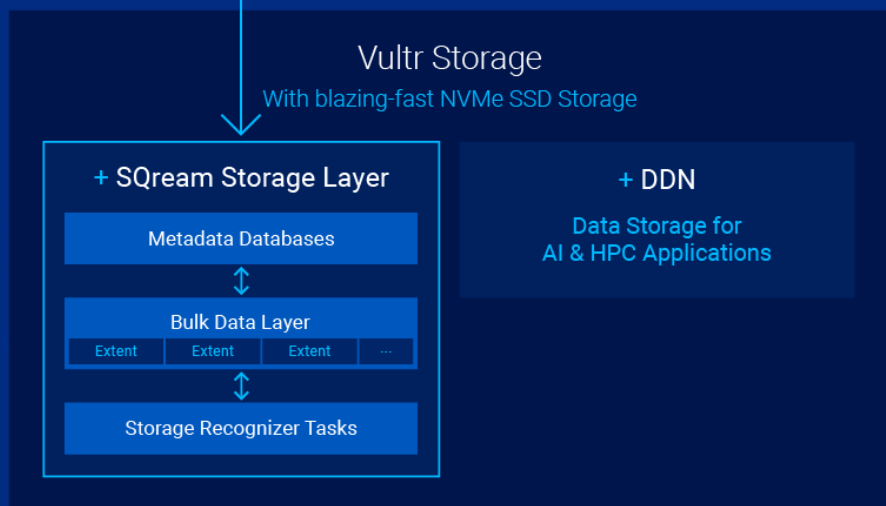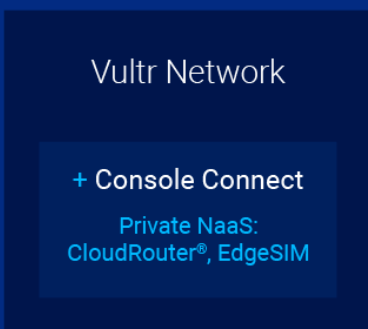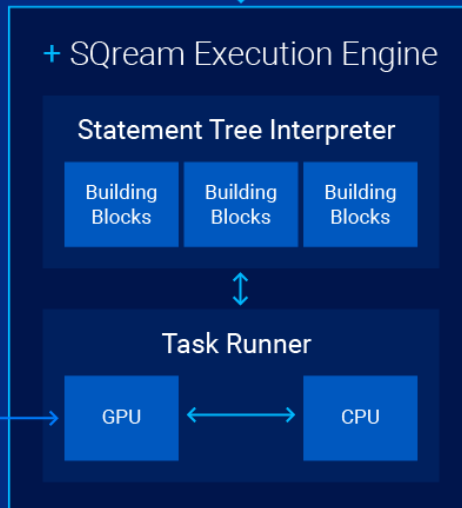- NVIDIA L40S GPU
- NVIDIA A40 GPU
- NVIDIA A16 GPU
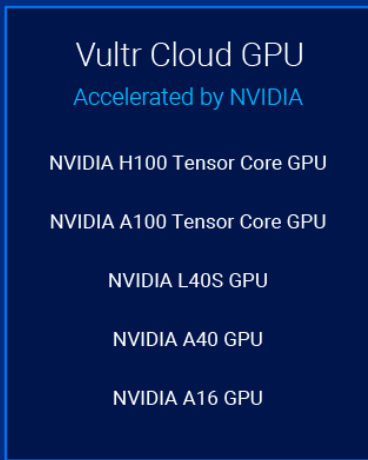
Empowering industries globally

Healthcare & life sciences: Vultr and SQream integrate cutting-edge cloud computing and data analytics to enhance various aspects of healthcare. For example, in genomic research, this technology rapidly identifies disease markers and speeds up personalized treatment development, allowing researchers to find genetic indicators of rare diseases and deliver faster, targeted therapies with improved outcomes.

Financial services: This collaboration enables financial institutions to leverage massive data processing and AI-driven insights for enhanced fraud detection and optimized risk management. For instance, institutions can swiftly identify and mitigate fraudulent transactions by integrating SQream's rapid data analysis capabilities with Vultr's low-latency cloud services, minimizing financial losses and bolstering security. This partnership enhances operational efficiency and supports regulatory compliance and customer satisfaction through tailored data-driven solutions.

Manufacturing: The Vultr and SQream collaboration helps manufacturers optimize production, reduce costs, and enhance efficiency. SQream manages vast operational data, while Vultr offers high-performance cloud infrastructure for real-time decision-making and edge computing. For example, predictive maintenance using AI can foresee equipment failures, improve fault detection, minimize downtime, and boost product quality, keeping manufacturers competitive in Industry 4.0.

Retail: The partnership between Vultr and SQream empowers retailers to enhance operations with precise, actionable insights. For example, in optimizing supply chain operations, retailers can utilize SQream's rapid data processing to analyze inventory trends and manage stock levels efficiently, while Vultr's high-speed, secure cloud infrastructure ensures real-time data accessibility and reliability. This integrated approach reduces costs, enhances operational efficiency, and improves overall supply chain performance, positioning retailers for sustained growth and a competitive edge.

Telecommunications: Vultr and SQream enable telecommunications companies to achieve real-time network analytics, enhance customer experience, and implement predictive maintenance with unparalleled efficiency. For example, in a real-time network analytics scenario, SQream's platform processes vast amounts of network data to detect anomalies and optimize performance. At the same time, Vultr's low-latency cloud infrastructure ensures seamless connectivity and rapid decision-making. This synergy enhances service quality, reduces downtime, and drives innovation in 5G and IoT technologies.

Key advantages

Ensuring data security and compliance: Vultr's secure cloud infrastructure ensures robust data security with certifications like SOC 2 Type 2, ISO 27001, PCI, HIPAA, and GDPR-compliant data centers. Partnering with SQream's compliance features, it protects sensitive data and helps businesses meet regulatory requirements, ensuring peace of mind for data-centric operations.

Complexity in managing big data: SQream's platform simplifies data management with features like ANSI-SQL syntax and automatic data compression. Vultr's automated tools and managed services, such as the Vultr Kubernetes Engine, streamline the deployment and management of big data workloads, reducing complexity.

Machine Learning: Developing machine learning models requires high computational power for complex algorithms and large datasets. Vultr's NVIDIA GPU-accelerated instances offer the needed processing speed, while SQream's GPU-based platform ensures efficient data handling and analysis for model training and deployment.

Integrate, modernize, and enhance productivity: SQream's integration with existing data pipelines ensures a smooth transition and modernization of legacy systems, while Vultr's flexible infrastructure supports this integration, offering performance boosts without major overhauls, minimizing complexity and costs. In addition, productivity for production and development is increased by streamlining big data workload management, democratizing data access, and reducing the need for extensive engineering resources.

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Learn more about SQream and Vultr

Contact us at **vultr.com** to get started. →