VIOLIN
Better Business Performance

CONSOLIDATE AND SCALE WITHOUT IMPACT

- Maximum throughput to support consolidation of mixed workloads in the face of exponential data growth

- Consistent microsecond latency at any scale and any workload

- Scale the number of transactions at a sustained and predictable performance

- Increase the density of databases without I/O performance constraints

- Pay-as-you-grow pricing for non-disruptive capacity upgrades

LOWER TCO

- Decrease power, cooling and space expense by up to 80%

- Reduce cost per transaction by reducing cores thus a reduction in licensing

- Better utilize existing storage capacity, including backups and archiving

Consolidate Oracle Databases to Improve Performance while Reducing Costs

Consolidate and run Oracle Databases on VIOLIN's All Flash Storage Solution to achieve higher transactional throughput, simplified management, and lower total cost of ownership

Business Drivers for Optimizing Database Environments

Today's enterprises are under constant pressure to reduce costs, improve performance and increase revenue. The onus is on IT to support the rapid growth in data, along with real-time processing demands and detailed analytics requests, all while reducing operational costs. With smaller budgets, IT is pressured with the operational and capital expense stemming from thousands of independent databases, each deployed on its own servers, and all taking vast amounts of data center real estate. As a result, IT is looking to consolidation as a way to achieve:

- Cost reductions from reduced data center sprawl and number of database licenses
- Increased agility to drive both the top and bottom line
- Reduced operational complexity and risk through automation and standardization
- Higher customer satisfaction through higher service levels

Database Consolidation Drivers

Legacy storage systems are an inhibitor for database throughput given the requisite performance demand of consolidated workloads. The time it takes to read or write the data from storage directly impacts the database performance. Legacy hard disk drives are unable to keep up with Oracle's multi-tenant workloads. In consolidated and mixed workloads, the I/O becomes even more random, IOPS requirements go up, and therefore storage performance becomes even more critical. In order to support a consolidated mix of workloads, storage requirements dictate:

- Sufficient capacity to store data
- The ability to service the number of I/O requests at any specific time (high OPS)
- The ability to deliver low, consistent I/O response time for a mix of multiple workloads featuring both sequential and random data access patterns

All Flash Arrays Enable Oracle Database Consolidation

With legacy storage, database workloads tend to be segregated to reduce performance impact. For instance, Online Analytical Processing (OLAP) workloads require high throughput storage systems, whereas Online Transactional Processing (OLTP) workloads require high performance storage that can address random requests. These workloads are split, and datasets get copied into different environments. VIOLIN All Flash Arrays overcome the limitations of legacy storage by allowing systems to run mixed workloads on the same database while delivering optimum performance for all. This enables consolidation, therefore eliminating the need to create two or more databases with the same data just to support different workload patterns.

VIOLIN All Flash Arrays address the I/O limitations of traditional solutions enabling you to achieve sustained peak performance. Whether you use Oracle databases for data warehousing, OLTP, or OLAP, VIOLIN ensures the lowest latency for data access, provide high bandwidth, and scale to hundreds of terabytes to accommodate even the largest Oracle databases, regardless of workload type.

Consolidate and Scale Without Performance Degradation

The VIOLIN plug-and-play installation provides resilient performance for all types of workloads, easily scaling with any increase in the number of concurrent users, databases or database size, without penalty.

As more databases are consolidated onto the same storage platform, the I/O generated from the different workloads becomes more random, and latency more pronounced. For storage to be high performance, it needs to meet both the random I/O and latency requirements of consolidated, mixed workloads. VIOLIN's all flash architecture and patented vRAID technology deliver predictable, linearly scaling low latency and high IOPS so more databases can be consolidated onto a single array. This eliminates the need for data marts, allowing you to run analytic and reporting queries directly on the production database.

As a result, you can have better performance at a lower $/GB than disk with the ability to support a mix of workloads with higher concurrency. In addition, VIOLIN's pay-as-you-grow pricing lets you scale capacity without having to order and install it in advance, which more closely aligns CAPEX with the benefit received. You can non-disruptively scale in 8.8 TB increments from 8 TB up to 140 TB, depending on your model.

All Flash Arrays Drive Agility and Service Levels

Consolidation drives standardization and automation in the infrastructure, and therefore improves a business' ability to respond to change. The ability to automatically scale (up/down) operations in order to meet changing business needs is critical from both a cost and operational perspective.

A typical data center houses databases running different versions on various operating systems. No matter how stringent deployment procedures are, if databases are built manually, then each will have subtle differences. Standardization and automation improve the manageability of your environment and reduce administrative complexity. This result is higher service levels with consistent performance even during peak loads.

Reduced Total Cost of Ownership

To achieve minimum latency and maximum IOPS, legacy solutions have been over-provisioned or software workarounds used to mitigate but not fully eliminate the issue. These workarounds incur both capital as well as operational expenditures due to their inherent inefficiency and low utilization.

VIOLIN All Flash Arrays enable the consolidation and scalability of your Oracle databases, all while providing a reduction of:

- 30% - 70% in database licensing costs
- 60% - 90% in power, cooling, and storage footprint
- 30% - 80% in processor cores required