Data Sheet

Huawei All-Flash Oracle Database (OLTP) Solution
-- Providing a fast and stable experience for core apps

Oracle OLTP Business Challenges

Storage performance a bottleneck preventing rapid businesses growth

As business grows, the system of a large securities company or bank may have to process over 100 million transactions each day. This places high requirements on the storage system. In these cases, customers require a storage system with over 200 thousand IOPS performance at a latency of less than 1 ms. Simply stacking HDDs on traditional storage systems is not a solution that can meet these IOPS and latency demands.

High Business Continuity Requirements

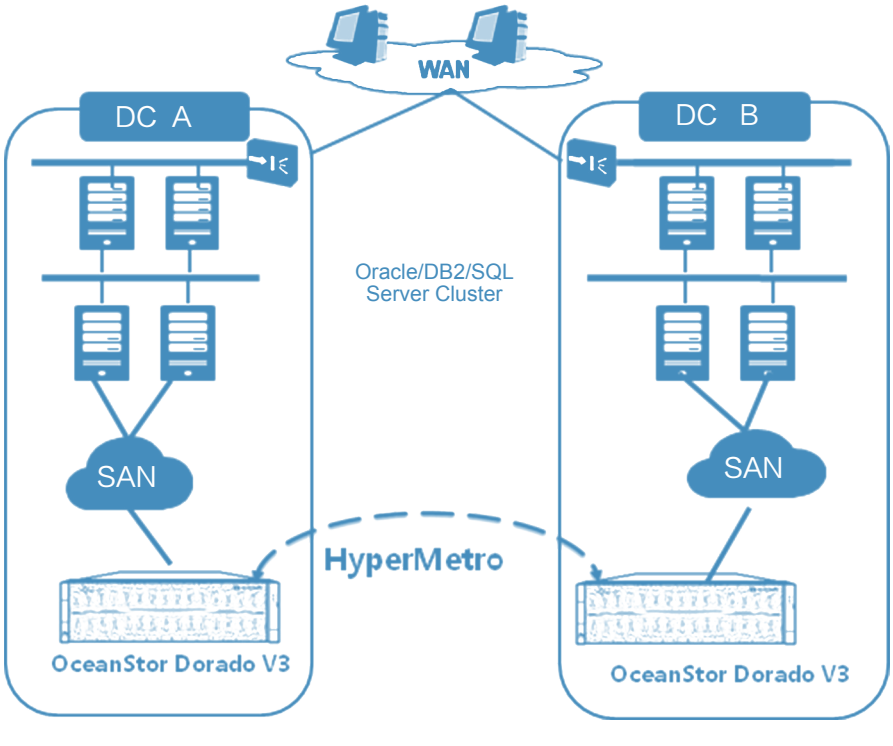
Oracle OLTP undertakes core applications which usually have extraordinarily high business continuity requirements. Information explosions can lead to increasingly higher data volume on systems, increasing the difficulty of maintaining continuity. However, currently no vendor of all-flash arrays has been able to provide a sound solution for enterprise-class data protection.

Increasing Oracle License Fees

Oracle license fees have always taken up a large proportion of the IT system O&M budget. Taking a 10 TB database as an example, Oracle license fees can account for 50% of the annual IT system maintenance costs, and will increase as the amount of data grows. This means that reducing the license fees is a critical challenge to many companies.

Huawei Oracle OLTP Solution

The Huawei OceanStor Dorado V3 all-flash database solution provides high performance, which doubles the online transaction efficiency. In addition, the outstanding 0.5 ms latency shortens I/O response time, improving storage and server resource utilization, and cutting Oracle license fees by half. The scale-out architecture provides predictable linearly-increasing performance so it is ready to support unpredictable business growth in the future. The solution provides a variety of data protection services to ensure the 24/7 non-disruptive operation of core applications.



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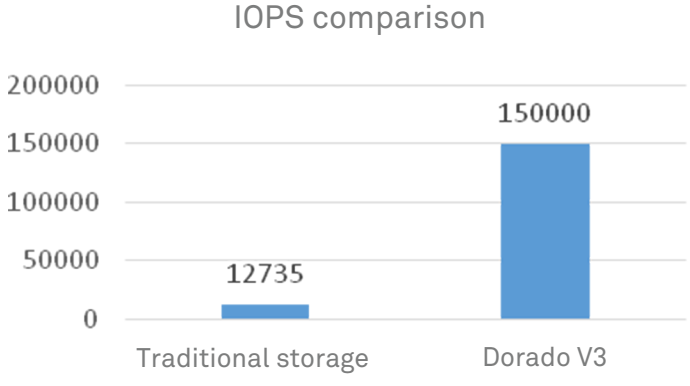
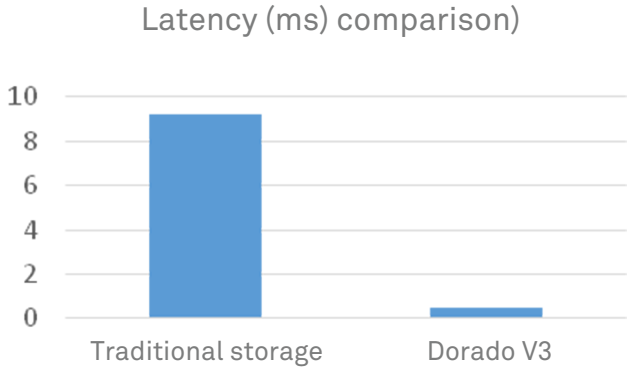
Highlights of the Huawei Oracle Database (OLTP) Solution

High performance and scalability

In a simulation test using Swingbench, one dual-controller Dorado V3 all-flash storage achieved 150,000 IOPS with 0.5 ms latency when supporting online transactions, which is a 10-fold improvement compared to traditional storage systems. The scale-out capability enables Dorado V3 to provide linearly growing performance.



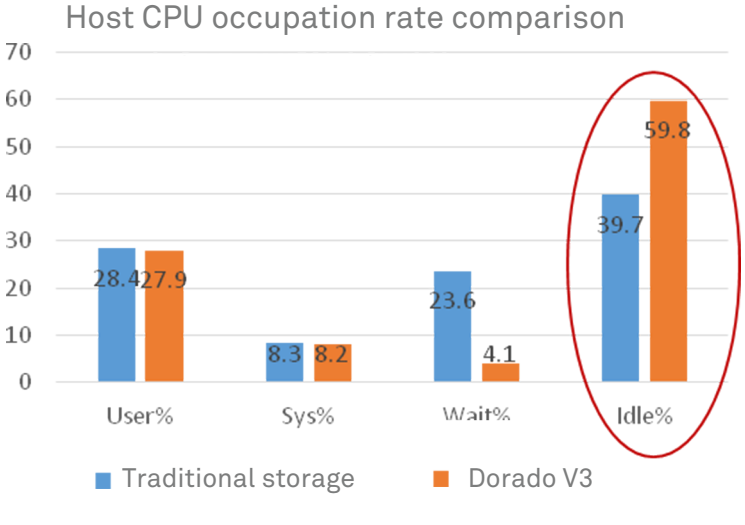


High availability

Dorado V3 all-flash storage supports HyperMetro gateway-free active-active protection, ensuring 99.9999% availability of mission-critical business. The gateway-free design reduces the number of potential faulty nodes, simplifies networking, and lowers the possibility of manual mis-operations, greatly improving system reliability. The active-active architecture achieves load balancing and enables seamless switchover.

Low cost

The ultra-low latency of Dorado V3 all-flash storage can shorten the waiting time of CPU I/Os, lowering the CPU occupation rate. This means that the same workload can be supported by fewer CPU resources, thereby saving on Oracle license fees. As shown in the following figure, 1-CPU Idle% indicates the CPU occupation rate. Under the same workload pressure, the value is 60.3% on the server with traditional storage, whereas on the server with Dorado V3, the value is only 40.2%. 50% less CPU resources were occupied to support the same workload after adoption of all-flash storage, saving 50% Oracle license fees.



Typical Configuration

In the Oracle OLTP scenario, to provide 150,000 IOPS@0.5 ms latency, configurations of the Dorado V3 are as follows:

Item	Configuration
Test tool	swingbench2.5
Database	Oracle12c
Operating system	Redhat6.5
Server	4*RH2288V2
FC switch	2*SNS2248
10GE switch	2*Quidway S6700
1GE switch	2*Quidway S5700
Storage	2*Dorado5000 V3

For More Information

To learn more about Huawei storage, please contact the local office or visit Huawei Enterprise website http://e.huawei.com.

Huawei Enterprise APP

Huawei IT

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