

STORAGE SYSTEMS PERFORMANCE TESTING

CLIENT OVERVIEW

Our client is one of the world's leading providers of mid-range and high-end storage systems, servers, software and services. Our client applications include end-to-end virtualization, massive consolidation, data replication and archival solutions which are widely used across industries including Telecom, Aviation and Banking among others. Our client's solution allows companies to scale up and scale down data storage capacities thereby ensuring dynamicity as required by businesses. Our client's products, services and solutions are employed by the world's leading enterprises, including more than 70% of the Fortune 100 and more than 80% of the Fortune Global 100.

KEY REQUIREMENTS

- Performing intensive tests of storage sub-systems to determine the maximum throughput / IOPS which forms the baseline input for any application level testing. This testing is very critical as this is the first level of testing for any storage sub-system
- Determining the right combination/design for each storage sub-system which includes different types of disk drives like SATA, SAS, etc. was a major challenge as there are more than 100 different combinations to choose from
- Analysing and testing the product to ensure data integrity and availability, which are the prime requirements of any data storage product to determine the reliability of storage devices
- Testing of enterprise storages which are petabytes in capacity is another key challenge. Because it takes more than a week time to prepare the test bed for exchange testing on enterprise class storage with SATA 7200K drives

KEY CONTRIBUTIONS

- Obtained the product performance measures by executing intensive tests on storage products by modifying configuration file of the testing tool (as required) to measure key performance metrics like IOPS (Input/Output Operations per Second), CPU busy, read/write latency, response time, etc.
- Designed storage systems with permutations and combinations of different types of disk drives (SSD, SATA, FC and SAS) to test the compatibility of the storage products. Additionally the system was designed so that the hardware components and the CPU remains busy throughout the test run to test system's performance threshold
- Performed drive comparison (72GB FC, 146GB FC, 300GB FC, 450GB SAS, 500GB SATA, 750GB SATA) tests, RAID level backend comparison (2+2, 3+1, 4+4, 7+1) tests, etc. to determine the versatility of any storage array with different types of disk drives
- Utilized sophisticated and most updated benchmark tools for exhaustive testing of different applications of the system, e.g. ORION for Oracle, Jetstress for Microsoft Exchange, etc.
- Used data patterns that challenge components to test for data corruption and data redundancy, ensuring data integrity and availability

KEY BENEFITS

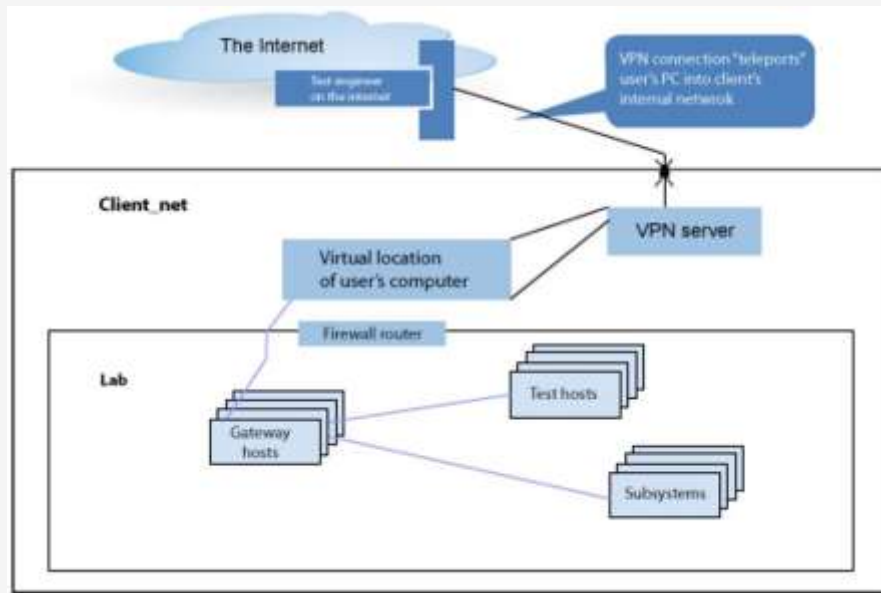
- Achieved a cost advantage to the tune of 30% due to offshore model of project execution
- Enabled 24x7 utilization of client's lab infrastructure as the offshore team operated during client's non-operative hours through remote connectivity
- Contributed in the sales cycle by analysing and fine tuning client's product performance and determining if the product configurations are equipped to handle customer workloads and throughput goals

Facilitated delivery of several more certified configurations for our client in given time as compared to competition

- Provided the most important marketing pu client's various products by publishing more t white papers for each application for both ent and modular class products in the first year engagement

- Employed static as well as dynamic provisioning and other virtualizations techniques to test enterprise class of storage which enables using the entire capacity of the storage array more efficiently
- Performed benchmark scalability test (with RAID 10, RAID 5, and RAID 6), frontend scalability test to verify the full capacity of any storage array

HIGH LEVEL ARCHITECTURE



TECHNOLOGY STACK

- Jetstress 2.1/3.0
- Iometer
- Iozone
- SPEC SFS97/2008
- Vdbench
- FileOp
- Orion
- NetBench



About Xoriant:

Xoriant Corporation is a Product Development, Engineering and Consulting Services Company, serving technology startups as well as mid-size to large corporations. We offer a flexible blend of onsite, offsite and offshore services from our eight global delivery centers with over 2000 software professionals. Xoriant has deep client relationships spanning over 25 years with various clients ranging from startups to Fortune 100 companies.