



Company: Worlds leading producer of delicious and distinctive tasting juices, jams & jellies made from Concord and Niagara grapes grown only in the US and part of Canada.

Background: Customer spent 1½ years implementing a scale out architecture for the corporate applications (ERP, Demantra, Oracle) using Linux/Oracle/RAC on 2/4 way Intel Xeon servers with OCFS, NFS and SAN storage. Customer has spent the last 18 months implementing a new IT architecture and design, using advanced IBM technology and virtualization.

Challenge/Problem/Requirements: As the migration to the new architecture progressed, along with continued business growth and demands on the I/T computing infrastructure, they out grew the 2-node (4-way processor node) RAC clusters and scaled out to 4-node RAC clusters only to find they still could not meet their requirements as the scaling was not linear. Customer has a challenge with limited floor space, power availability, as well as remote replication requirements.

Test /Benchmark: ATS configured a trial IBM p570 4-way p5 1.65Ghz processors with 8G of RAM and SAN storage with AIX/Oracle to parallel run one of the customers two hour Demantra workloads which was hosted on Dell 4-way 3.2Ghz Xeon processors with 8G of RAM and EMC Clarion CX600 storage with Oracle. ATS configured and tuned AIX, p570 and SAN for optimal performance for Oracle based on ATS Best Practices.

Results were a 2.8 times through-put improvement with the workload completing in 43 minutes and a price/performance ratio of 1.9 times the cost. Some workloads experienced a 5 times improvement.

Solution/Implementation: Customer switched to pSeries Oracle/RAC and pSeries virtualization for scale up and scale out architecture. A Server consolidation was then performed of the 30 DELL servers (86 CPUs) and SAN storage to (2) IBM p570 with 25 LPARs, GFPS, Oracle RAC and IBM DS6800 SAN storage for both Open and zSeries storage. Customer had many stand alone servers with all direct attached storage. We architected and implemented the following designs.

IBM p5 APV Implementation:

- (2) p570 Servers with 25 LPARs
 - Multiple LPARs (Oracle RAC DB, Appl LPARs)
 - Shared Processors both capped and uncapped
 - Dual VIO Servers (vSCSI and vLAN)
 - Virtualized Fiber Adapters
 - Virtualized SCSI controllers and disks for rootvg boot
 - Virtualized Ethernet Adapters – Etherchannel
 - Virtualized internal Ethernet network – VLAN
 - Virtual and Real Ethernet for RAC/GPFS LAN
- Benefits (*Maximize investment of resources*)
 - Server consolidation of 30 Dell systems totally 86 Xeon processors, 34 GigE adapters, 46 HBAs and 296GB RAM
 - 2.8 Times the throughput at 1.9 times the costs
 - Eliminate dedicated processors
 - Maximize utilization of all processors
 - Shared adapters between LPARs with low I/O usage
 - Reduced Ethernet/HBA SAN adapters and ports
 - Two LPARs rootvg share single SCSI disk
 - Private ‘high speed’ network for inter-LPAR communication
 - Reduces the number of I/O drawers/adapters required