

## Boosting Test/Dev Operations with Oracle- and SQL-based ERP at Sanmina

Sanmina is a leading custom manufacturer of some of the most complex and innovative optical, electronic and mechanical products in the world. Their customers are leading worldwide-based OEMs in the communications networks, computing and storage, medical, defense and aerospace, industrial and semiconductor, multimedia, automotive, and clean technology sectors.

Sanmina uses a complex set of Oracle and SQL-based ERP processes to manage their internal 60 TB ERP environment. The main applications are comprised of server-based Oracle on Linux and SQL Server on Windows environment. They also use ESX-based MySQL and Postgres VMs. The servers are connected to a shared SAN that uses a hybrid storage array that provides about 100,000 IOPS and 1ms of latency.

### Challenges

Sanmina was unsatisfied with the performance of their ERP application after experiencing massive customer growth. Their current storage vendor provided them with a quote to move to an all-flash configuration, but the quote did not meet their needs, so they evaluated the Vexata VX-100F Scalable NVMe Storage Array.

### Results

Sanmina replaced their hybrid storage with a Vexata VX-100F NVMe-based storage array. They also replaced a 72-core quad socket server needed by their hybrid storage with a smaller and less expensive 28-core dual socket server since Vexata got more benefit from a CPU core than their legacy hybrid solution. Sanmina's ERP applications ran faster, they got 5M IOPS and 200µs of latency. Using the Vexata solution gave them tier 0 performance across their large ERP environment at a fraction of the cost of their existing storage platform.

- **5X** more transactions/s without increasing database license/server costs
- **50X** higher IOPS
- **50%** savings in storage and server costs over the AFA quote from their current storage vendor
- **2.6X** fewer cores needed by their Oracle and SQL servers
- **Significant** TCO savings by replacing a 72-core quad socket server with a 28-core dual socket server

Feature	VX-100F	Current Storage Array	Comparison
<b>Server needed for storage</b>	28-core dual socket server	72-core quad socket server	2.6X Fewer Cores
<b>Performance</b>	5M IOPS 200 µs Latency	<100K IOPS >1000µs Latency	50X Higher IOPS >5X More Transactions
<b>Maximum DB kept in flash</b>	Up to 435TB	8TB (Flash Cache)	54X Bigger DB

Sanmina was so impressed with the results that they plan to move their data warehouse and OLTP pre-production systems to the VX-100F. Additional cost savings will be realized in the future, as they plan to consolidate 120 TB in storage that they use for Oracle, SQL Server, MySQL, Postgres, and six production ERP database copies onto the VX-100F.

ABOUT VEXATA: Founded on the premise that every business is challenged to deliver cognitive, data-intensive applications, Vexata delivers 10x performance AND efficiency improvements at a fraction of the cost of existing all-flash storage solutions.

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