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# Oracle unveils second Exadata machine; Ellison steps up data warehousing push

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*This is a guest post from Larry Dignan of TechRepublic's sister site ZDNet. You can follow Larry on his ZDNet blog [Between the Lines](#), or subscribe to the RSS feed.*

Oracle chief Larry Ellison unveiled the latest version of its Exadata data warehousing appliance on Tuesday, and it's clear the company plans on increasing its data warehousing push.



Ellison's Exadata Version 2 launch had three primary goals:

Knock data warehousing rivals Netezza and Teradata;  
Show that Oracle wasn't going to let IBM punch Sun anymore;  
And illustrate some of the logic behind the Sun acquisition.

The first Exadata machine was launched in partnership with HP. This go round Exadata was built by Sun Microsystems (statement). The move made sense given Oracle's purchase of the company. The Exadata Version 2 launch also gave Sun executive vice president John Fowler an excuse to show off its the company's FlashFire technology.

Oracle's big sell is that Exadata Version 2 "was designed for online transaction processing and data warehousing," said Ellison. Running online transaction is "something Netezza can't do at all" and "something Teradata can't do at all," he added.

Ellison also added that Oracle is installing Exadata machines "within the Teradata installed base."

## Sun Oracle Database Machine Hardware Improvements

- Same Architecture as Exadata V1 Machine
- Faster CPUs, Network, Disks **Plus Flash Storage** **New**


**Latest Technologies**

**Faster**

- 50% Faster CPUs → Xeon E5500 Nehalem
- 100% Faster Networking → 40 Gb InfiniBand
- 50% Faster Disk Throughput → 6 Gb SAS Links
- 100% Faster Memory → DDR3 DRAM

**Bigger**

- 33% More SAS Disk Capacity → 600 GB SAS Disks
- 100% More SATA Disk Capacity → 2 TB SATA Disks
- 125% More Memory → 72 GB per DB Node
- 100% More Ethernet Connectivity → 4 Ethernet links per DB Node




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As for IBM, Ellison said that Exadata 2 can do faster processing at a much lower cost than Big Blue. Ellison also knocked IBM's fault tolerance and other features relative to the Exadata machine.

## Sun Oracle Database Machine

- Fastest Data Warehousing & OLTP Performance
- Best Data Warehousing & OLTP Cost/Performance
- Fault Tolerant & Scalable On-Demand



**Oracle Database Server Grid**

- 8 Compute Servers
  - 64 Cores
  - **400 GB DRAM**

**Unified Server/Storage Network**

- 40 Gb/sec Infiniband Links
- 680 Gb/sec Aggregate Throughput
- Fault Tolerant

**Exadata Storage Server Grid**

- 14 Storage Servers
- **5TB flash storage**
- 330 TB Disk Storage

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And.

**IBM 4 Times More Expensive for OLTP or Sun Oracle Exadata 4 Times Faster at Same Cost**

2 Rack Sun Oracle Database Machine

\$2,300,000

- Same Server Performance
- Same I/O Capacity
- Both with Flash
- Same Storage Capacity

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IBM's Fastest Computer

\$10,700,000

8 IBM DS8300 Turbo

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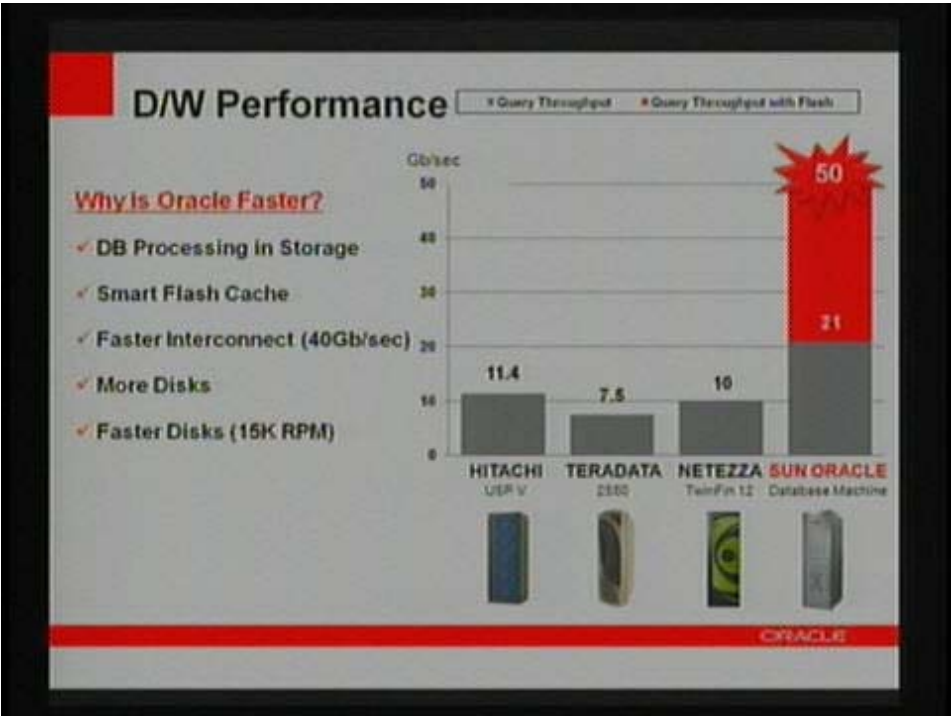
The overarching message here is that Oracle plans to take Sun's hardware business and create high margin specialized systems for tasks like data warehousing and data crunching.

Here are some selected slides from Ellison's talk:

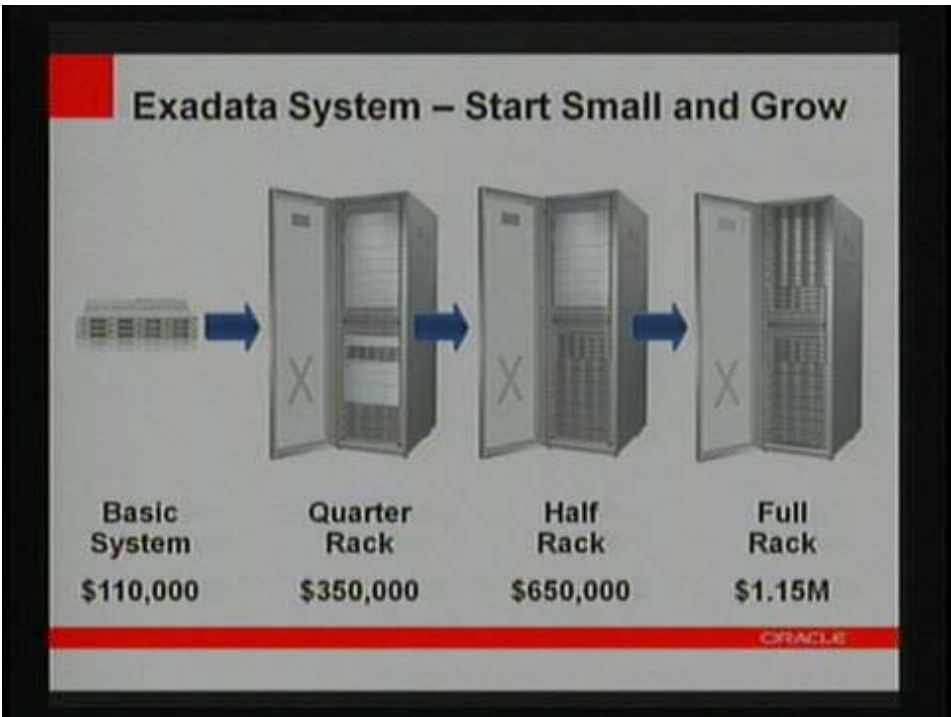
**Exadata V2: Data Warehousing**

- 1 Rack Exadata V2: Semiconductor Caches
  - Compressed 4 TB database in DRAM
  - Compressed 50 TB Database in Flash
- Data Warehousing Performance
  - 2x Exadata Version 1
  - 5x Faster than Teradata, Netezza, etc
  - 20x Faster than IBM's Fastest Computer
- Oracle 11gR2 Optimized for in Memory Queries
  - Faster than specialized In-Memory DBs

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A look at the pricing information:



### Storage Capacity Price Comparison

	SUN ORACLE Database Machine SAS	SUN ORACLE Database Machine SATA	TERADATA 2550	NETEZZA Twofin 12
Total Disk Storage	100 TB	336 TB	42TB	96 TB
User Data Capacity	140 TB	500 TB	12.6 TB	72 TB
System Price	\$1,150,000 H/W \$1,680,000 S/W*	\$1,150,000 H/W \$1,680,000 S/W*	\$819,000	\$1,480,000
Price per User TB	\$20,000	\$5,700	\$65,000	\$20,000
Software License	Perpetual	Perpetual	Partially Transferrable	Non-Transferrable

\* Use your existing database licenses; full list price for storage server software

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**Larry Dignan** is Editor in Chief of ZDNet and Editorial Director of TechRepublic. See his full profile and disclosure of his industry affiliations.

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