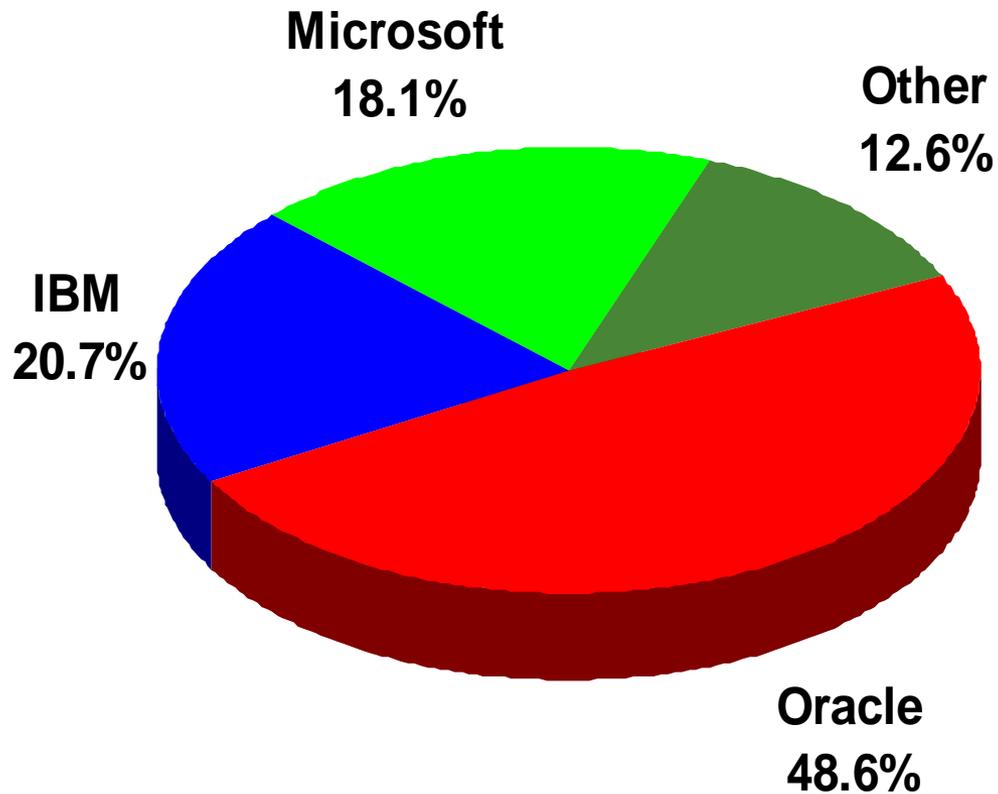
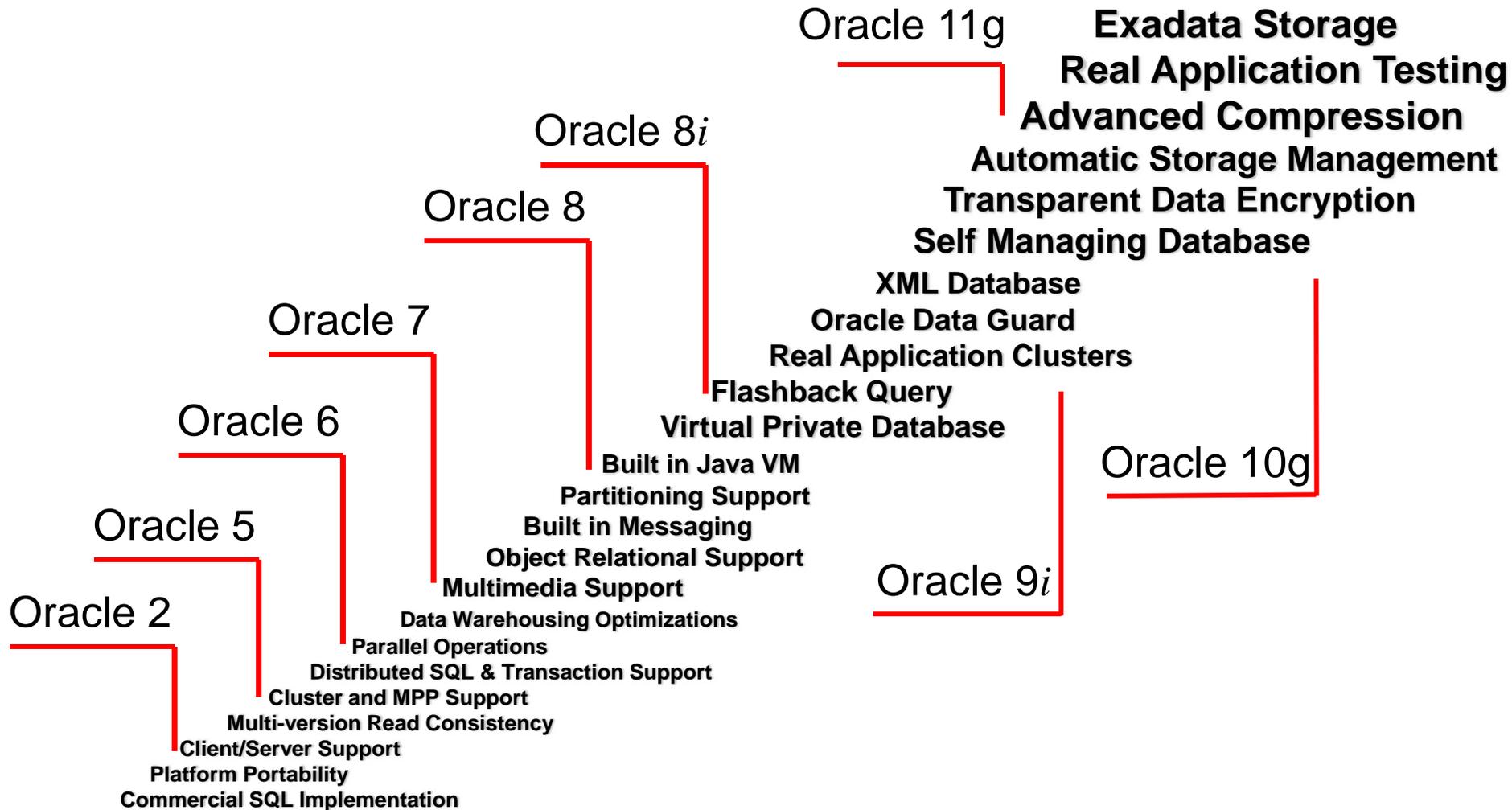


ORACLE®

Oracle #1 RDBMS Vendor



Continuous Innovation

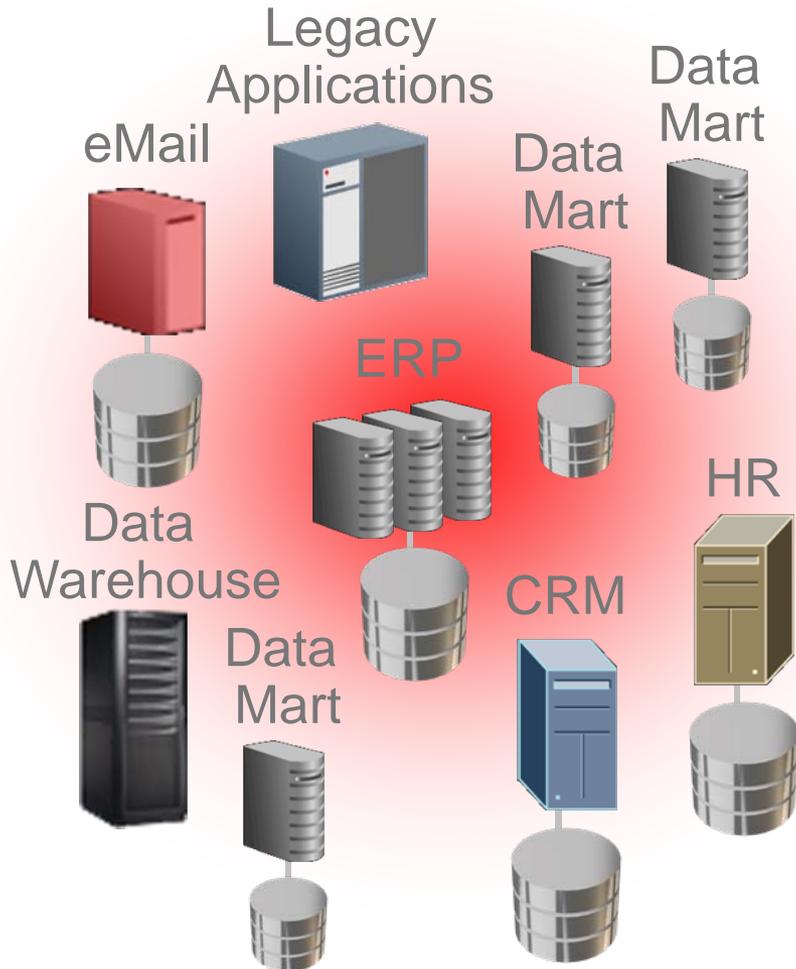




**EXTREME
PERFORMANCE**

ORACLE®

Is This Your Data Center?

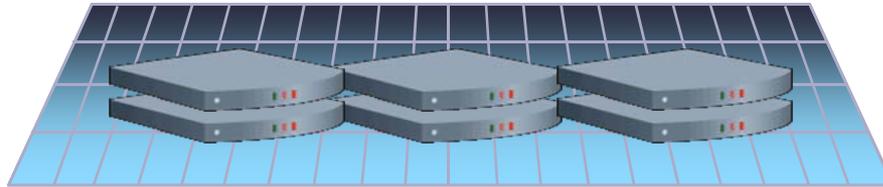


- Multiple vendors products
- Lots of processor power
- Separate storage silos
- Different operating systems

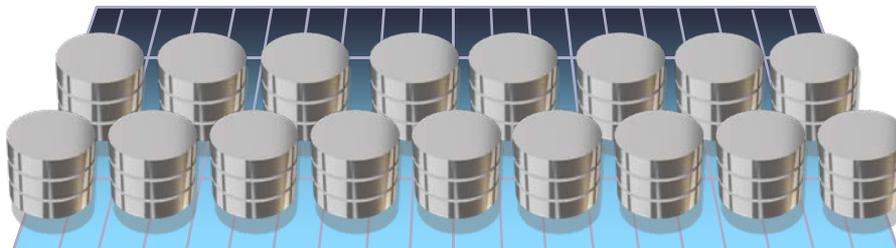
Consolidate onto the Grid

Use low-cost server and storage grids

Application Servers



Database Servers



Storage

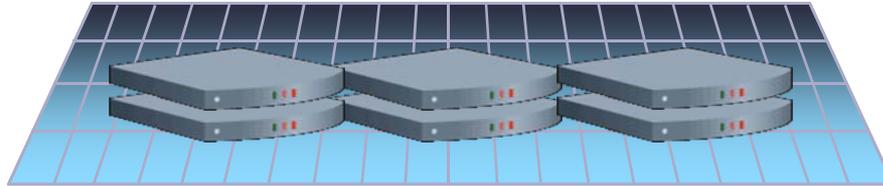


Management

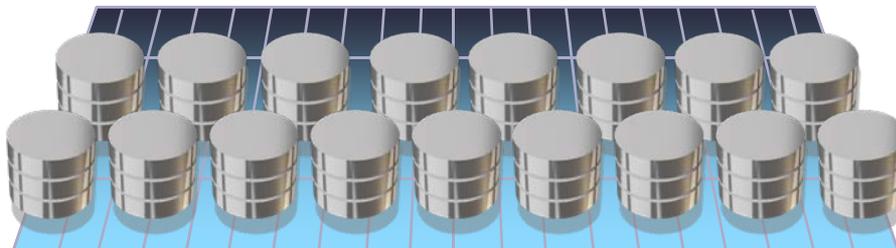
Consolidate on the Grid

Oracle's Grid Computing Architecture

Fusion Middleware



Real Application Clusters



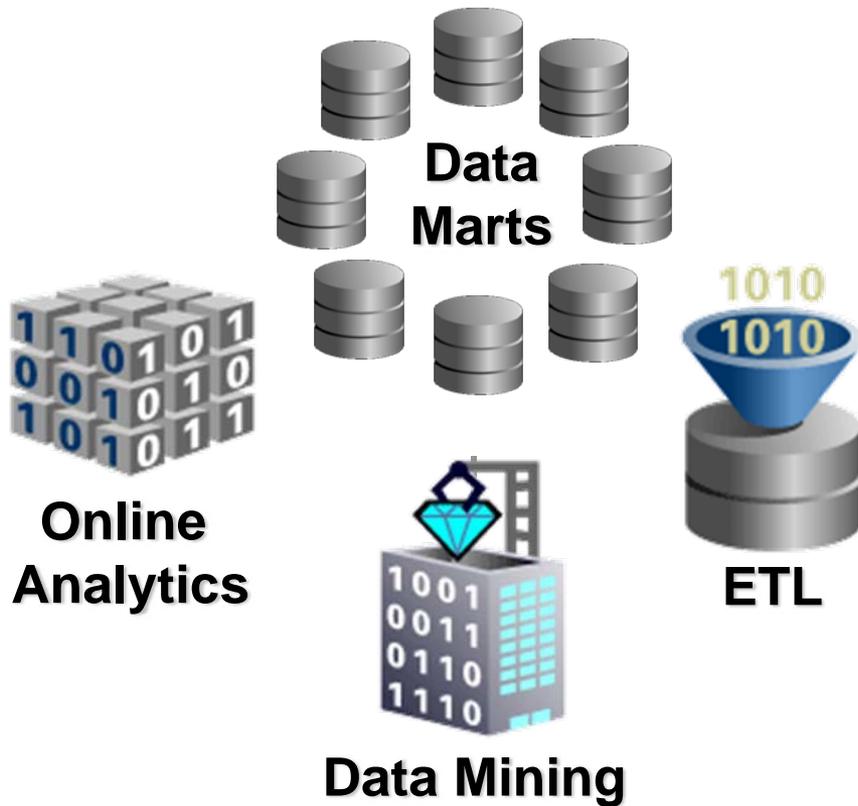
Automatic Storage Management



Grid Control

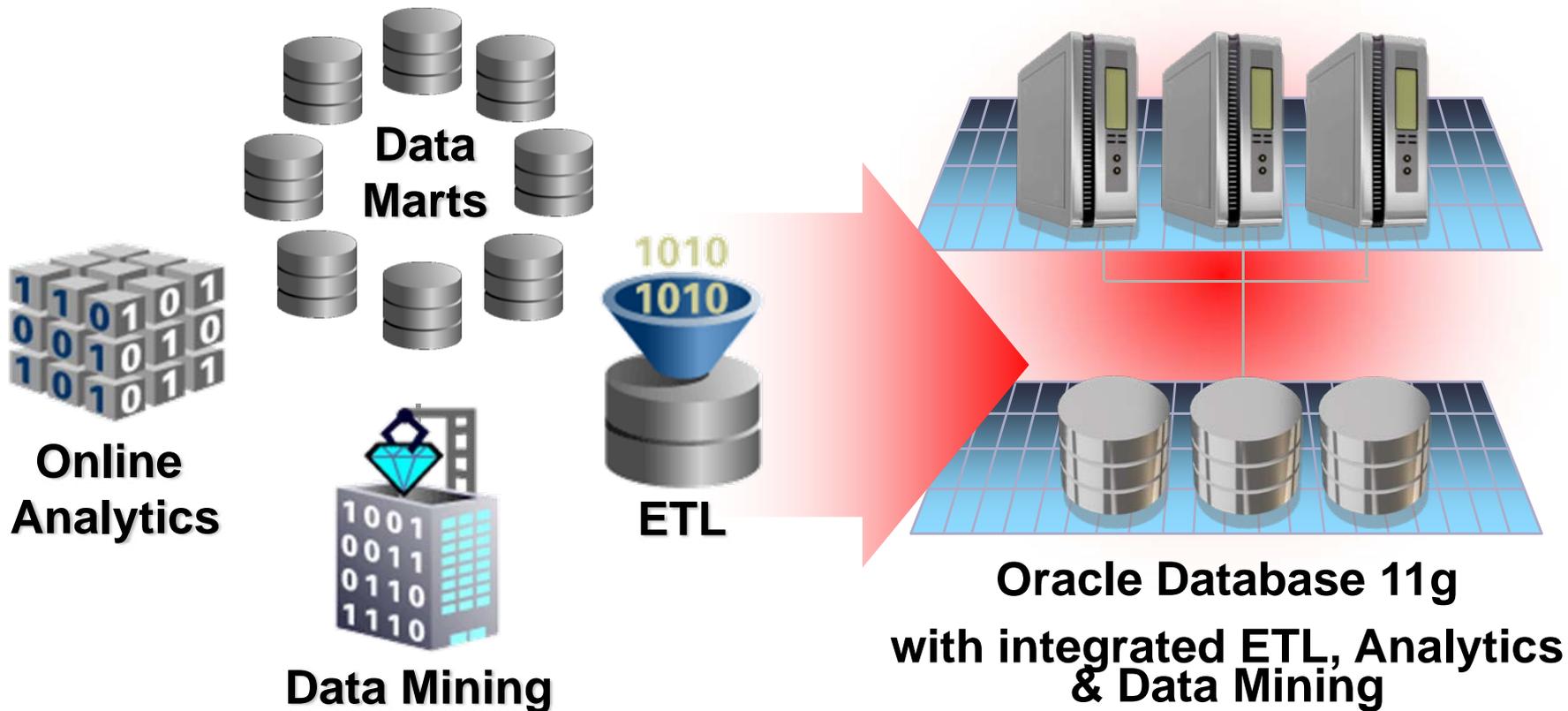
Distributed Data Marts and Servers

Expensive data warehouse architecture



Consolidated Data Warehouse

Single source of truth



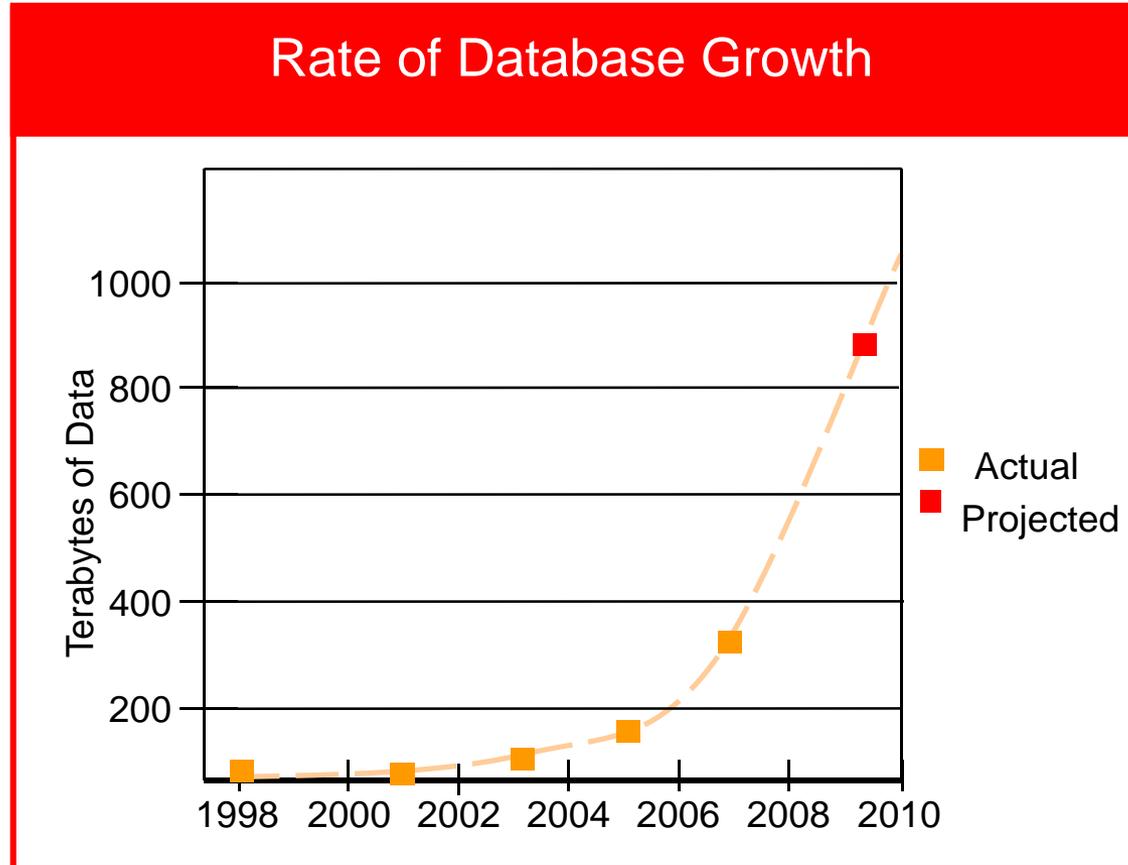
Data Warehousing Optimizations

Working smarter not harder ...

Key Features	Oracle Database 11g
Partitioning	✓
B-tree Indexing	✓
Bitmap Indexing	✓
Join Indexing	✓
OLAP Cubes	✓
Data Mining	✓
Query Results Cache	✓
ETL & Data Quality	✓

Data Warehouses Growing Rapidly

Tripling In Size Every Two Years



Oracle's First Hardware Product

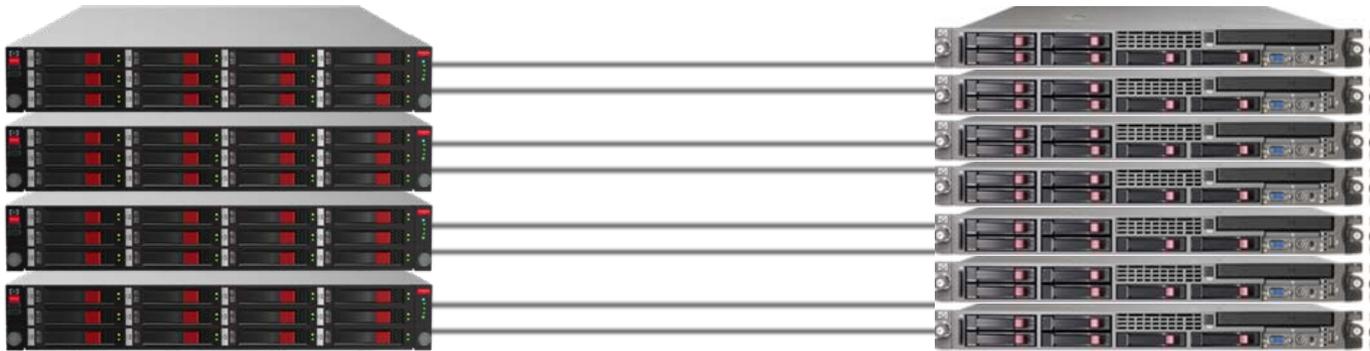
The HP Oracle Exadata Storage Server



- 2 Intel processors, 8 cores
- 12 disk drives, up to 12 TB raw storage
- Oracle Enterprise Linux OS
- Oracle Database 11g

Brawnier Hardware

Wider Pipes and More of Them



Exadata Storage Server Grid

Oracle Database Server Grid

- 2 InfiniBand pipes 1 GB/sec – per storage server

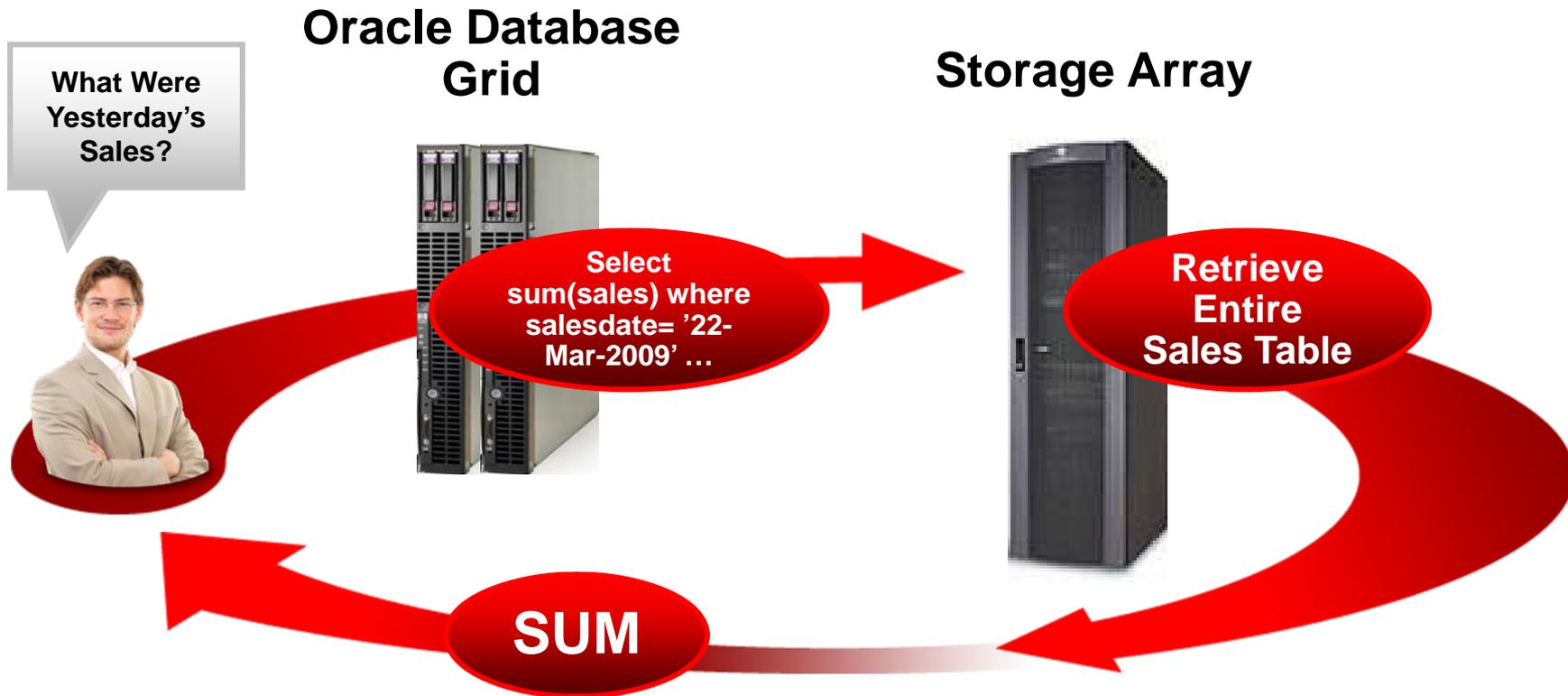
Brainier Software

Reduces Data Going through the Pipes

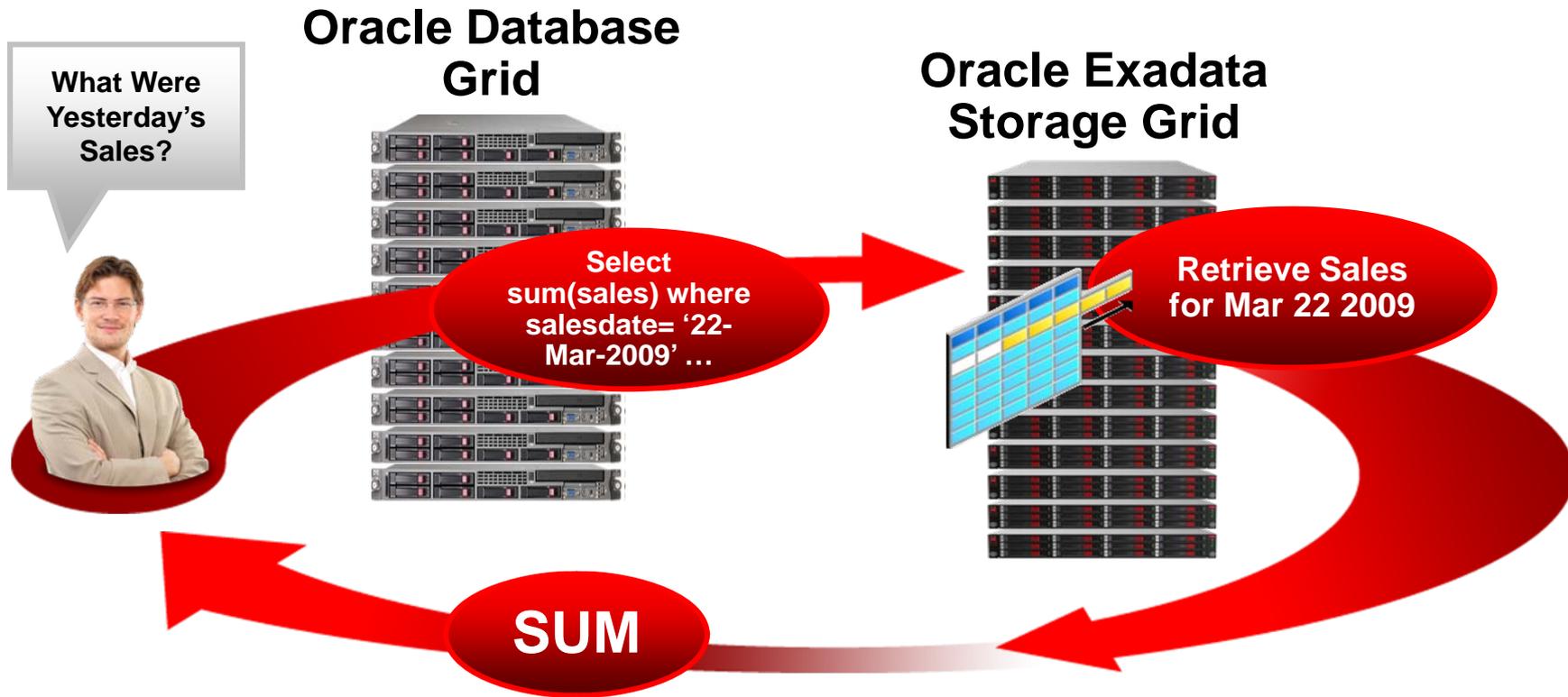


- Intelligent storage server
 - Unique ‘smart scan’ technology
- Returns query result set
 - Not disk blocks

Query Processing: Using Traditional Storage

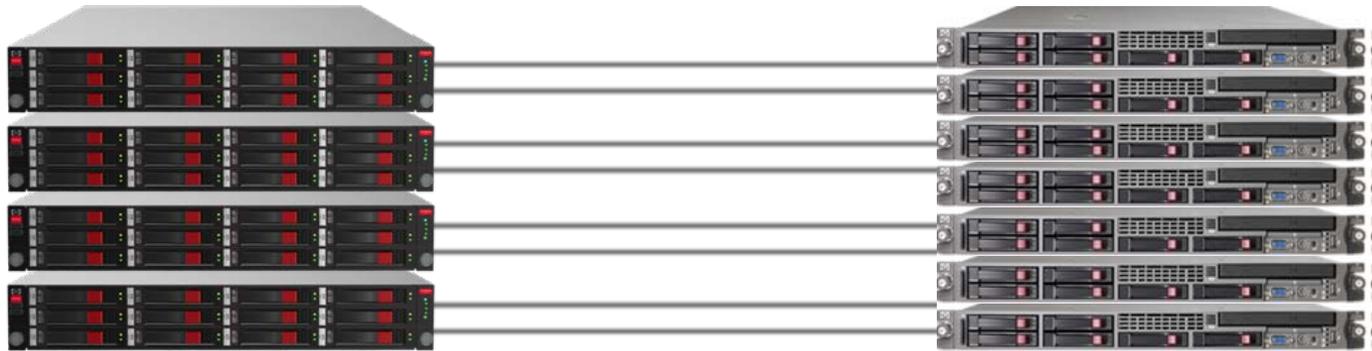


Query Processing: Using HP Oracle Exadata Storage Server



Oracle Grid Computing Architecture

Add Capacity – On Demand – One Server At A Time



Exadata Storage Server Grid

Oracle Database Server Grid

HP Oracle Database Machine

ANNOUNCING
The World's Fastest
Database Machine

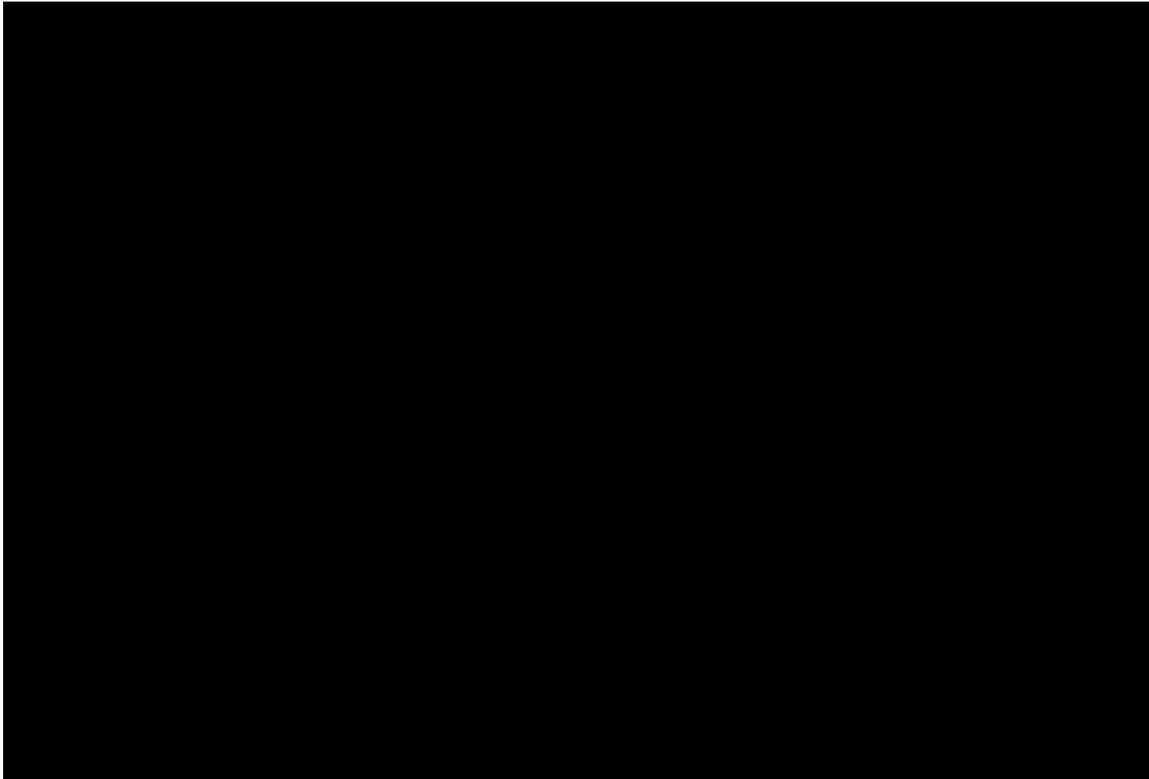


**Hardware
by HP.**

**Software
by Oracle.**

The HP Oracle Database Machine

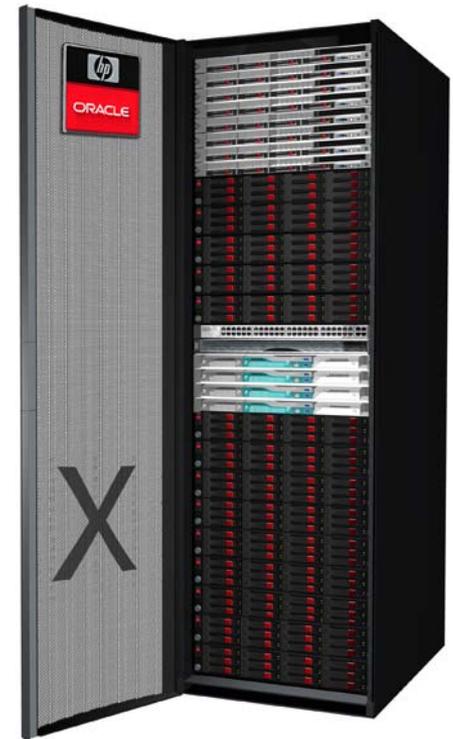
An Introduction...



HP Oracle Database Machine

Scale by Adding More Database Machines

- 8 Oracle Database 11g servers
 - Oracle Enterprise Linux
 - Oracle Real Application Clusters
 - Oracle Partitioning
- 14 HP Oracle Exadata Storage Servers
 - 112 Intel Processor Cores
 - 168 SAS or SATA Disk Drives
- 4 Infiniband switches
 - 14 GB/Sec. data bandwidth



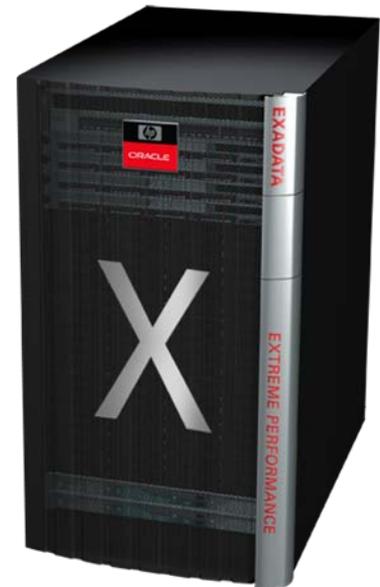
Completely Scalable and Reliable

- Massively parallel architecture
 - Scale out all components
 - Data bandwidth scales linearly
 - No application changes required
- Fully fault tolerant
 - Redundancy of all components
 - Oracle Real Application Clusters
 - Automatic Storage Management



HP Oracle Database Machine Half Rack

- 4 Oracle Database 11g Servers
 - Oracle Enterprise Linux
 - Oracle Real Application Clusters
 - Oracle Partitioning
- 7 HP Oracle Exadata Storage Servers
 - 56 Intel Processor Cores
 - 84 SAS or SATA Disk Drives
- 2 Infiniband switches
 - 7 GB/Sec. data bandwidth

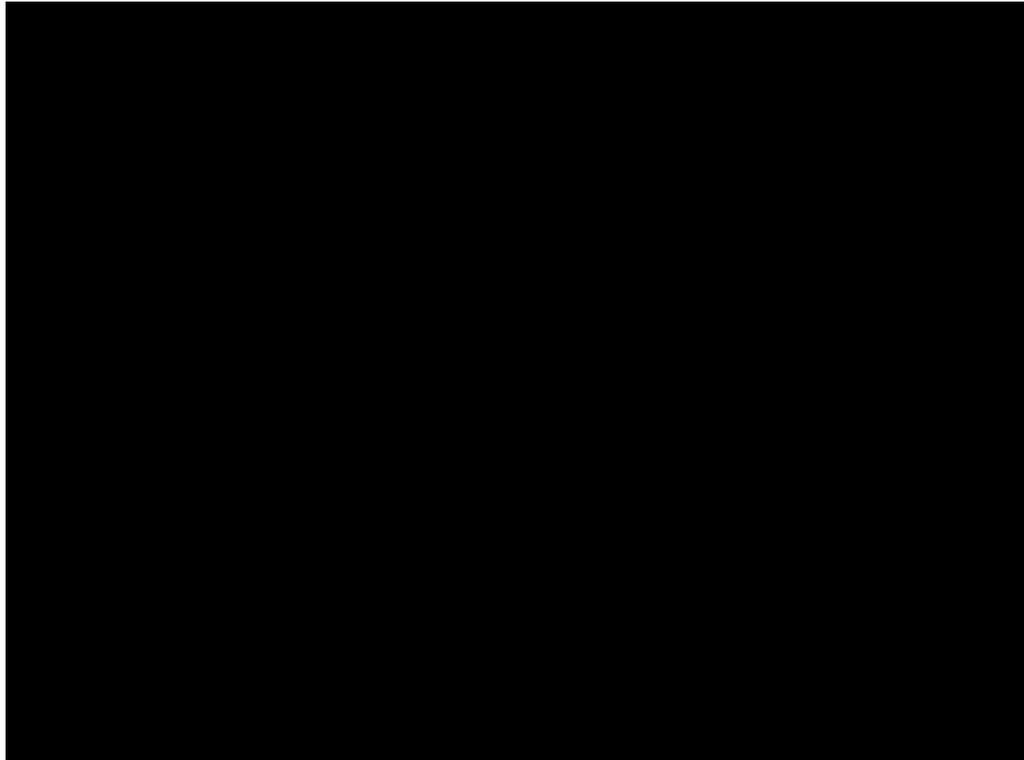


Extreme Performance Gains

Customer benchmark results...

Customer	Industry	Average Performance Gain
M'Tel	Telecommunications	28x
LGR	Telecommunications	20x
Giant Eagle	Retail	16x
The CME Group	Finance	15x

What Oracle's Customers Say...



In Summary

- Two new products from Oracle
 - HP Oracle Exadata Storage Server
 - HP Oracle Database Machine
- Extreme Performance
 - At least 10x faster than current data warehouse
- Unlimited Scalability
 - Linear scale-out storage, data bandwidth and processing
- Enterprise Ready
 - Hardware from HP and software from Oracle
 - All software pre-installed and configured ready to run





Runs Oracle Data Warehouses 10x Faster

Hardware by HP. Software by Oracle.

ORACLE®