

### ORACLE

Tore Bjelland Managing Director, Oracle Norway Semantic Days 2011, Oslo, Norway

### **Infiniband Switches**

### New Julich Supercomputer Center and its 2000 Node Sun Constellation System

Tuesday, June 9th, 2009

One of the First Large QDR-based InfiniBand Supercomputers

The most powerful Sun technology-based computer in Europe is now online. The new Julich Supercomputer Center is supported by 2208 node Sun Constellation System and Sun Blade X6275 server modules. The Sun Constellation Systems operate with Intel Xeon processor 5570 series and communicate



with each other via six newly developed "Project M9" InfiniBand switches from Sun that supply quad data rate (QDR) and up to 648 ports while slashing the amount of complex cabling required.

- it-nyheter døgnet rundt

NYHETSARKIV

Du er her: Computerworld >

#### Skullerud-svitsj er verdens raskeste



Ahlert Hysing

(13) AAA



Universitetet i Oslo nærmer seg verdenstoppen i regnekraft med en svitsi fra Skullerud.



STOR: Ola Tørudbakken og Eivind Rongve sammen med Magnum, Magnum ruver, Sun har derfor plassert et elg-gevir på toppen. Gruppeleder Hans A. Eide kan skimtes gjennom geviret. (Foto: Ahlert Hysing)

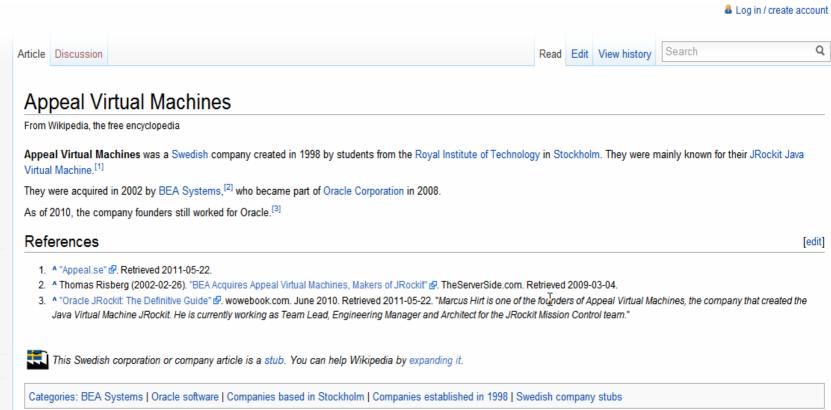


### JRockit Java Virtual Machine



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### **Open Standards - semantics**

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POSC Caesar
From Wikipedia, the free encyclopedia



This article may contain material not appropriate for an encyclopedia. Please discuss this issue on the talk page. (February 2010)

POSC Caesar Association (PCA) is an international, open, not-for-profit, member organization committed to promote the development of open specifications to be used as standards for enabling the interoperability of data, software and related matters.

PCA is the initiator of ISO 15926 "Integration of life-cycle data for process plants including oil and gas production facilities" and is committed to its maintenance and enhancement.

Nils Sandsmark has been the General Manager of POSC Caesar Association since 1999<sup>[1]</sup> and Thore Langeland, Norwegian Oil Industry Association (Norwegian: *Oljeindustriens Landsforening*, OLF), is the Chairman of the Board.

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- 1 Brief history of POSC Caesar Association
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POSC Caesar Association

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Logo for POSC Caesar Association.

Abbreviation

PCA

Formation

1997-11-14

Legal status

Association

Purpose/focus

Promote the development of open specifications to be used as standards for enabling the

interoperability of data, software

and related matters

Location

Bærum, Norway

Region served Worldwide

### From idea to product.....



### **Oracle Exa family**

**Software & Hardware - Engineered to work together** 

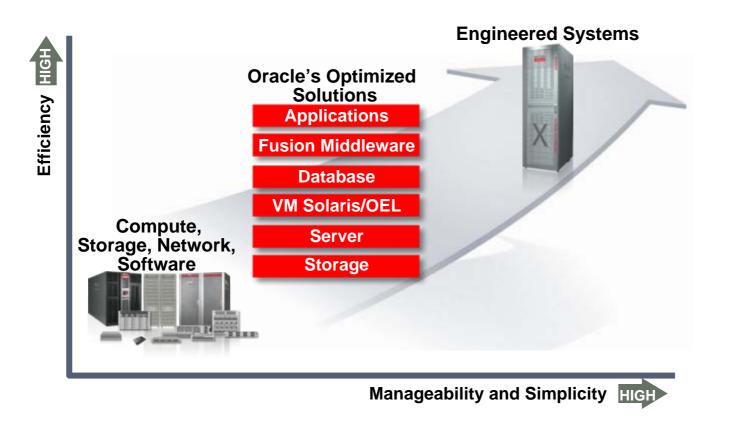
### For the Optimized Datacenter & Cloud

- Fabric Architecture (Infiniband)
- Extensive use of flash memory



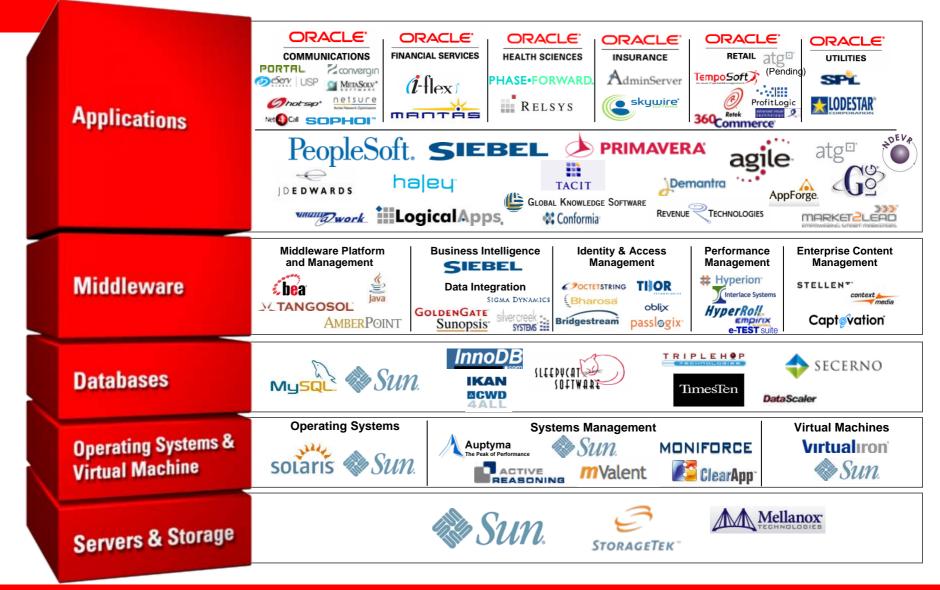
### **Oracle Addresses The Range of Customer Needs**

High Performing Application-to-Disk Solutions from a Single Vendor





### **Oracle Acquisition Strategy**



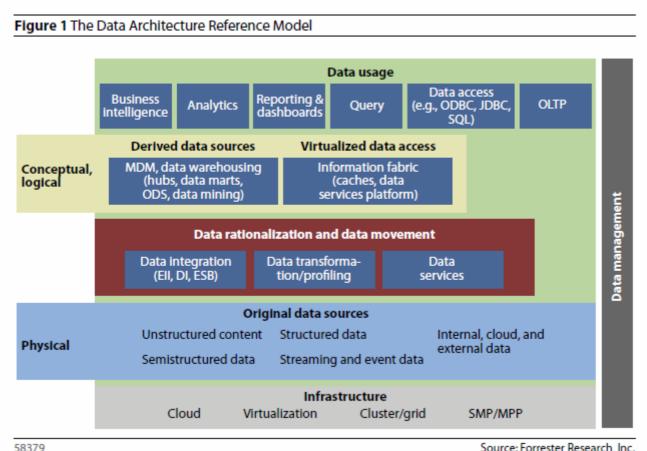
Last Update: 28-Feb-2011

### Hardware and Software Engineered to Work Together



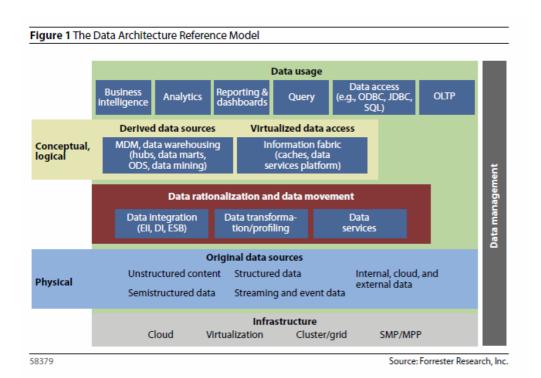
# Simplify

### Data Management Reference Model



Source: Forrester Research, Inc.

### Oracle's Primary Offerings in Semantic Technologies



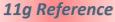
- Semantics in Integration
   Technologies
   (because information needs to integrated or related intelligently, with added value)
- Database 11g Semantic
   Technologies
   (because information needs to be stored & queried intelligently, with added value)

## In use? A Reality or a dream? Oracle Semantic Technology Adopters

### Life Sciences













### **Defense/ Intelligence**



### **Education**



### **Telecomm**



### **Clinical Medicine**





### **Publishing**



11g Reference

### **Adoption of Semantics-enabled Applications**

- Intelligence, Law Enforcement:
  - Threat analysis, asset tracking, integrated justice
- Integrated Bio-Informatics & Health Care
  - Bio-Pathway analysis, protein interaction
- Health Care Informatics
  - Patient records, reporting, bio-surveillance
- Finance
  - Fraud detection, Compliance Management
- Web and Social Network Solutions
  - Recommender, Social Network Analysis, Activity Analysis
- Media, Games, Content Management
  - Media metadata, content re-purposing
- Many more, actively looking into: Public (all registrars, tax authorities, social offices, reporting/collecting/controlling authorities...), Oil & Gas, ...

### Next steps.....

**Technology, Tools, Solutions Provider** Knowledge, R&D Fora, Standardization **Provider** 

### For More Information

http://search.oracle.com

**Semantic Technologies** 



### Google

Oracle RDF

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## Simply Put: Why Semantics? Issues in Semantic Interoperability

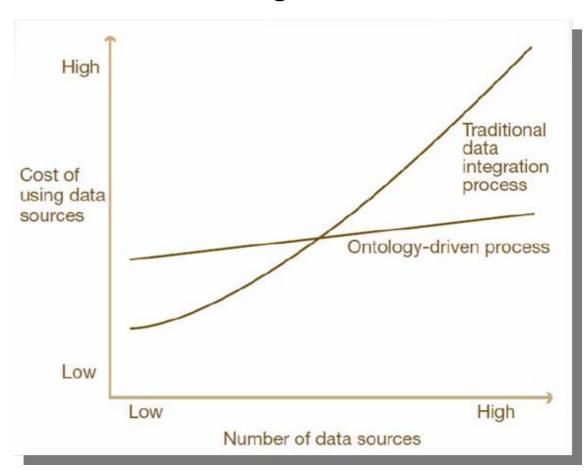
Data-centric vs. information-centric integration

So how does data become information?

By introducing semantics?

So how do we reduce cost of information (i.e., cost of inter-operability, cost of integration of information)?

By relating information instead of integrating data?



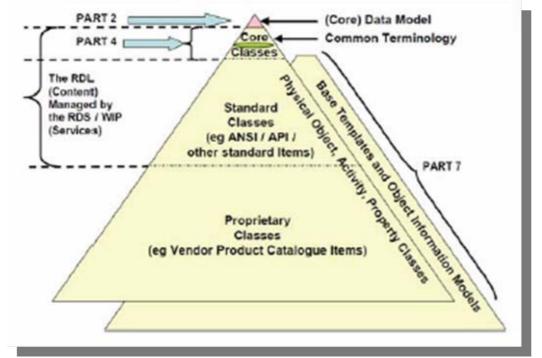
Source: PricewaterhouseCoppers

### What's Unique in Oracle's Offerings?

- In addition to being Open, Complete & Integrated, with hardware & software optimized for each other:
  - Only commercial actor with a functioning industry strength triplestore
  - Well integrated traditional & semantic technologies (Semantic DB, RDB)
  - Only vendor who has moved semantics to regular middleware (Canonical Models in Integration, AIA FP), offering true semantic interoperability in its tools
  - Very High performance, true scalability (even in ad-hoc querying, through components like Coherence, industry leadin in-memory object cache), which means that we can in effect provide semantic interoperability and sound integration both wiothin and in between upstream & downstream



## Semantics in Integration Technologies: Application Integration Architecture (AIA)



Sources: ISO 15926 Integrated Operations in the High North (IOHN) Inge Svensson, BEACON Enterprise Services, 2-June-2010, Stavanger Oracle's Canonical Model Based
Reference Architecture
for Integration

Cross-Industry Models

Industry Specific Models

Site Specific Models

Source: Oracle® Application Integration Architecture (AIA)