Oracle Briefing: Oracle Technology Stack

Padraig McCarthy
Business Development Manager
Tech GB Market

• UK & Ireland Coverage

• 1.1M Companies 1-1000 employees in UK

□ 100% of business via partners – Unique in Oracle

• Tech GB Focused on 80,000 companies segmented by geography with 50 employees or greater.

• Estimated mid-market is a £12 billion opportunity in the UK (300 - 1,000 employees).

• IDC report says that the “mid Market with 100-500 employees will grow at 5.7% while 500-1000 employee space grow at 5% (Faster than enterprise space).”
SMB Challenges

- Increasing competition
- Retaining and recruiting key staff
- Identification of new markets and developing new products
- Integration of legacy systems
- Smaller IT budgets
- Compliance and regulatory issues
- Need to minimise risk and achieve low TCO
- Declining revenues, limited credit and cash flow problems
Mid-Market Business Drivers

Where do you think your organisation should invest in order to realise the most important objective ranked in the previous question? Select all that apply.

- Software applications: 67%
- Online service (e-government): 51%
- IT: 43%
- Promotion/advertising: 43%
- Outsourcing: 43%
- IP networking (integration of data networks): 42%
- Production/operations: 41%
- Plant and equipment: 40%
- Product development: 35%
- Hardware (including mobile devices): 31%
- Human resources: 29%
- Finance/accounting: 19%
- Sales/marketing/distribution: 19%
- Sales/marketing: 14%
- Other: 16%

What are the main goals driving your organisation’s IT strategy? Select up to four. (% respondents)

- Reducing costs of service (e.g., online self-service): 38%
- Raising quality of products and services: 37%
- Improving service quality (e.g., speed of fix): 33%
- Raising individuals’ productivity: 32%
- Performance management: 27%
- Increasing business flexibility: 26%
- Analysing customer requirements: 26%
- Knowledge capture and management: 26%
- Internal collaboration and communication: 25%
- Speeding time to market: 23%
- Meeting regulatory compliance: 19%
- Enabling remote/mobile/flexible working: 17%
- Collaboration and communication with partners: 14%
- Reducing headcount: 13%
- Other: 1%

ORACLE
SMB Initiatives in the market....

- McAfee Offers Trial Security Apps on Toshiba PCs for SMBs in EMEA
- Dell Introduces New SMB Server and Vostro, Latitude, and Precision PCs
- IBM Pushes Linux to SMBs via Appliances and Unveils Hardware-Based Encryption Tool
- Xerox Announces Document Management App for SMBs
- Microsoft Adds Response Point Service Providers and Peripherals
- Business Objects Upgrades BI and Reporting Products
- HP introduces Storage for Midsize Firms
- Sun launches SMB Initiative
- IBM debuts BI Tools with Cognos
- SAP joins Intel to Offer ERP Appliance, aims to Ease ERP Deployments for SMBs, and introduces New SMB Product Packages with Business Objects
- Microsoft launches Online Tools, Services, Email, and Hosted Apps for Small Businesses
- Google launches Security, Compliance, and Collaboration Services and Enables Offline Apps
- IBM targets SMBs with Sales Team Reorganization, Virtualization and Server Products, Online Services, and Server Software Acquisition
- Microsoft teams with Nortel to offer Unified Communications, Upgrades Response Point
Database and Core Technology – some views…..

- Too expensive
- No budget available
- Market is saturated
- Doesn’t do anything different to MySQL, SQL Server etc etc
- Oracle not interested
## Oracle Technology Stack

<table>
<thead>
<tr>
<th>Layer</th>
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<tbody>
<tr>
<td>Development Tools</td>
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<tr>
<td>User Interaction</td>
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<tr>
<td>Enterprise Performance Management</td>
</tr>
<tr>
<td>Business Intelligence</td>
</tr>
<tr>
<td>Content Management</td>
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<tr>
<td>SOA &amp; Process Management</td>
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<tr>
<td>Application Server</td>
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<tr>
<td>Grid Infrastructure</td>
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<tr>
<td>Enterprise Management</td>
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<tr>
<td>Identity Management</td>
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</tbody>
</table>
Oracle Technology Stack

**User Interaction**
Web 2.0 Portal, Rich Internet Apps, Mobile, Search, Desktop, Presence, VoIP

**Enterprise Performance Management**
Planning, Budgeting, Financial Management & Reporting, Scorecards

**Business Intelligence**
Data Integration, Query & Analysis, OLAP, Dashboards, Reports, Alerts, Real-Time

**Content Management**
Web Content, Document, Records Mgmt, DAM, Capture and Imaging, Archiving, IRM

**SOA & Process Management**
ESB, BPM, Workflow, BAM, Rules, B2B, MDM, Registry, Repository

**Application Server**
Java EE, Web Services, TP Monitor, Complex Event Processing, XTP, SIP

**Grid Infrastructure**
Application Clusters, In-Memory Data Grid, Metadata Services, JVM, Virtualization

**Development Tools**
Unified SOA Development Tool & Framework

**Enterprise Management**
SOA Management, Provisioning, Diagnostics, Configuration Management, Tuning

**Identity Management**
Provisioning, Access Management, Audit, Directory, Role Management, Fraud Detection
Solution

**Process Analysis**
- BPA

**Development**
- JDev

**User Interaction**
- Web Centre/SES
- Universal Content Management EE/SE

**Content Management**
- Application Server
- Application Server SE1/SE

**Application Server**
- Oracle Database – SE1/SE/EE

**Security**
- OIAM
- Database Security

**Reporting**
- Data Integrator
- BI EE/BISE1

**Monitoring**
- OEM

**Integration**
- SOA Suite
- Adapters

**Infrastructure**
- Oracle Database – SE1/SE/EE
## Enterprise Content Mgmt.
### Cost Reduction Value Propositions

### Why ECM now?

<table>
<thead>
<tr>
<th>Value Prop</th>
<th>Principle</th>
<th>Costly Issue</th>
<th>Cost Reduction with Oracle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Universal Content Repository</td>
<td><img src="image" alt="Consolidation" /></td>
<td>• Content scattered across multiple file servers, apps and other systems</td>
<td>• Eliminate duplicate storage</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Lower cost of finding documents</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Consolidate branch office file servers</td>
</tr>
<tr>
<td>Efficient Web Content Mgmt.</td>
<td><img src="image" alt="Process Automation" /></td>
<td>• High costs for implementing and maintaining web sites</td>
<td>• Multi-site shared services model</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Self-service, delegated admin., delegated contributing</td>
</tr>
<tr>
<td>Automate Paper-based Processes</td>
<td><img src="image" alt="Process Automation" /></td>
<td>• Large amounts of paper</td>
<td>• Automate end-to-end capture and imaging process</td>
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<tr>
<td></td>
<td></td>
<td>• High cost of back-office processing staff</td>
<td>• Lower staff cost</td>
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<tr>
<td></td>
<td></td>
<td>• Erroneous duplicate data entry</td>
<td>• Reduce errors</td>
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</tbody>
</table>
# Application Server SE1/SE

<table>
<thead>
<tr>
<th>Product</th>
<th>Processor</th>
<th>NUP</th>
<th>notes</th>
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<tbody>
<tr>
<td>Application Server SE1</td>
<td>£2,945</td>
<td>£91</td>
<td>-Max 2 Sockets</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>-Min 5 NUP</td>
</tr>
<tr>
<td>Application Server SE</td>
<td>£5,840</td>
<td>£117</td>
<td>-Max 4 Sockets</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-Min 5 NUP</td>
</tr>
<tr>
<td>Enterprise Edition</td>
<td>£17,773</td>
<td>£355</td>
<td>-Min 25 NUP per processor</td>
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<td></td>
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<td>-Options</td>
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</table>

Solution
Enterprise Content Mgmt.
Cost Reduction Value Propositions

Why Oracle ECM?

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</thead>
<tbody>
<tr>
<td>Pre-built Apps</td>
<td>Pre-built</td>
<td>• Cost of capturing and storing sales contracts from CRM and invoices, bills from ERP</td>
<td></td>
</tr>
<tr>
<td>integrations</td>
<td></td>
<td></td>
<td>• Substantially lower deployment cost with pre-packaged integrations</td>
</tr>
</tbody>
</table>
Universal Content Management

• UCM SE
  • Out of box solution for web based management of documents, email and media rich files
  • In built security features, workflow and metadata and full text search capabilities
  • Allows mid-size companies to rapidly create policies and procedures, sales kits, marketing collateral, internal knowledge bases and ISO 9001 documentation

• Easily upgrade to UCM EE for advanced features such as:
  • Advanced document management
  • Digital Asset Management
  • Web content management
## UCM pricing

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<tr>
<td>UCM SE</td>
<td>£29,199</td>
<td>£609</td>
<td>- Max 4 Sockets</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>- Min 10 NUP</td>
</tr>
<tr>
<td>UCM EE</td>
<td>£58,397</td>
<td>£1,168</td>
<td>- Min 10 NUP per processor</td>
</tr>
</tbody>
</table>

### Solution
Oracle WebCenter Suite
The Next Generation of User Interaction

- A new platform for user interaction
- Combines the best of:
  - Portals (portlets, customization)
  - Rich client development frameworks
  - Web 2.0 Collaborative & Content Services
- SOA enabled, hot-pluggable
- Supports the latest Java UI standards: JSF, JSR-227, JSR-168, JCR 1.0
- Foundation for Fusion Applications
WebCenter Services

- Embed Web 2.0 style communication and collaboration services directly into JSF applications
- Services include:
  - Content/Document Management
    - Oracle Content Database Suite: enterprise-grade document management solution
  - Enterprise Search
    - Oracle Secure Enterprise Search: search and access secure content from a variety of repositories across the enterprise
  - Instant Messaging and Presence (HotSip)
    - Real-time interaction via chat, on-line availability and communication
  - Discussion forum (OEM from JiveSoft)
    - Collaborative, on-line discussion forums, threads and responses
  - Wiki (OEM from YAWiki)
    - self-service, community oriented content publishing and sharing
Oracle WebCenter Suite 10g Release 3

WebCenter Enabled Applications

WebCenter Services
- Content
- Search
- Discussions
- Wiki
- VOIP
- Presence/IM

JDev
- WebCenter Extension
- WebCenter Framework
  - Portlet Runtime
  - Content Integration
  - JSF Portlet Bridge
  - Customizable components
  - Resource Catalog

ADF
- JSF
- AJAX
- Active Data

Application Server 10g Release 3
WebCenter Anywhere

Connected Devices
- Browsers on PDAs, Smartphones

Mobile Voice
- Cell Phone, Regular Phone

Mobile Messaging
- E-mail, SMS, MMS, Fax, Voice, Pager

Telnet
- Industrial devices and warehouse situations

Solution
# Business Intelligence
## Cost Reduction Value Propositions

### Why Business Intelligence now?

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</table>
| Enterprise-wide consistent BI Platform | Consolidation               | • Need to resolve ongoing inconsistencies between financial and operational analytic results | • BI EE semantic model creates enterprise-side data consistency  
• Avoid manual resolution of inconsistencies |
| Self-service Reporting            | Process Automation          | • “Reporting clerks and BI analysts” human resource costs to create reports | • Self-service reporting capability allows business users to create report without additional reporting clerks/ BI analysts |
## Business Intelligence  
### Cost Reduction Value Propositions

**Why Oracle Business Intelligence?**

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</thead>
<tbody>
<tr>
<td>Suite for Relational + OLAP</td>
<td><img src="image" alt="Suite" /></td>
<td>• Need to license technologies from multiple vendors to solve all analytic needs</td>
<td>• Efficiencies from single vendor BI stack including relational, R-OLAP and M-OLAP</td>
</tr>
<tr>
<td>Highly scalable BI Platform</td>
<td><img src="image" alt="Best of Breed" /></td>
<td>• Need to purchase large amounts of HW to carry out complex analytical calculations</td>
<td>• Oracle Business Intelligence is highly scalable and therefore reduces the amount of HW necessary</td>
</tr>
</tbody>
</table>
Typical SMB BI Pains
Flying without instruments

• Departmental & systems stovepipes of information with multiple versions of truth
  • No “big picture” of business performance
  • Difficult to share information consistently across the enterprise
• Information is out of date and not easy accessible in custom solutions
• Can’t respond to information needs without reliance on IT involvement and subsequent delays
• “Spreadsheet hell” –
  • Unmanageable multiple versions
  • Repeated manual data integration each time reports needed
  • Risks of incorrect results due to calculations or missed data cleansing steps
  • Current data available, but access to historic data very limited
Oracle Business Intelligence Standard Edition One

Components

Operational Reporting

Interactive Dashboards

Ad-hoc Analysis

Simplified Business Model and Abstraction Layer

Oracle BI Server

Intelligent Caching Services

Calculation and Integration Engine

Intelligent Request Generation and Optimized Data Access Services

Oracle Data Mart

OLTP & ODS Systems

Data Warehouse Data Mart

Oracle OLAP

MSFT AS

SAP BW

Files

Excel

XML

Business Process
Business Intelligence SE1 Price

- £609 per named user
- Min 5 users and Max 50
- Run on one server with Max of 2 CPU’s
- Data sources for BI server and BI Publisher limited to DB SE, one other database and unlimited number of flat files
- OWB can pull data from any data source but the target database must be SE1 database
Key Differentiators

• SE1 Complete BI System in a box
  • MS offers five different products
• SE 1 supports Windows and will support Linux
  • Microsoft is MS only
• SE-1 includes leading components
  • MS components not as mature as competition (IDC/Forrester)
• SE-1 features user tools
  • MS BI tools are a mix of developer and business user tools

Solution
High Yield Questions by Job Role

Uncover Customer Pains

- How many BI tools do you have in total? Have you a full understanding of the costs associated with integrating & managing them?
- How much resource do you spend on evaluating point BI software solutions?
- Is it easy to cope with the changing BI needs of users?

- How easy is it for you and your staff to share and compare BI information?
- How reliable is the information that is provided to you for decision making? And what would make it more reliable?
- How many different BI tools do you and your team use to do your jobs?

- How reliable is the information that is provided to you for decision making? Do all the departments work off the same information?
- How easy is it for the managers of different parts of the business to compare their performance? How could it be made easier?

- How many BIW tools do you have? What is the impact on architecture?
- Do you have a single BI suite that can fulfil all your current & future needs?
- Would it not be valuable to have a single business metadata layer for all data?
- How does your BI architecture accommodate change and growth?

Solution
Identity Management

- Manage end to end lifecycle of users across enterprise resources
- Integrated management framework for Web SSO, Access policy creation and enforcement, user self-registration and self-service, delegated administration, password management
- Identity Federation: Standards based framework with other third party solutions
Identity & Access Management

Access Control
- Authentication & Authorization
- Single Sign-On
- Federation
- Web Services Security

Identity Administration
- Identity Lifecycle Administration
- Role & Membership Administration
- Provisioning & Reconciliation
- Compliance Automation

Directory Services
- Virtualization
- Synchronization
- Storage

Audit & Compliance
- Audit Data
- Attestation
- Segregation of Duties
- Controls

Management
- Service Levels
- Configuration
- Performance
- Automation
Oracle IAM Products

Access Control
- Oracle Access Manager
- Oracle Enterprise Single Sign-On
- Oracle Identity Federation
- Oracle Web Services Manager

Identity Administration
- Oracle Identity Manager

Directory Services
- Oracle Virtual Directory
- Oracle Internet Directory (with Directory Integration Platform)

Audit & Compliance
- Oracle Identity & Access Management Suite

Management
- Oracle Enterprise Manager for Identity Management
Identifying Customer Pains

• Increased Security and Regulatory Compliance
  • Do you have one common view of your end user?
  • How do you provision and de-provision users?
  • Do you know who has access to what application across your company?
  • How do you ensure data privacy, security, and auditability?
  • How do you ensure privacy of your customers’ profile data?
  • How is your compliance planning going?

• Supporting Business Expansion
  • How do you manage millions of customer/consumer profiles?
  • How do you add new partners to your systems, quickly and securely?
  • Which applications will your partners need to access?

• Cost Reduction
  • How much do password resets cost your company?
  • How much of every development dollar spent is focused on security instead of core functionality?
  • How critical is reducing time to market for new web applications?

Solution
### Why SOA & BPM now?

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<tr>
<td>BPM instead of packaged apps</td>
<td>Process Automation</td>
<td>• Traditional approach: buy and deploy packaged application&lt;br&gt;• Often “rip &amp; replace”</td>
<td>• Re-use existing apps&lt;br&gt;• Implement business process that spans existing apps</td>
</tr>
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</table>
# SOA and BPM

## Cost Reduction Value Propositions

**Why Oracle SOA Suite & BPM Suite?**

<table>
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</table>
| Pre-integrated SOA Suite    | ![Suite Icon](suite_icon.png)                  | • Need to integrate multiple vendor point solutions  
• Support from multiple vendors                     | • Reduced complexity from “single tool stack”  
• Reduces interoperability risk                       |
| Single vendor BPM           | ![Suite Icon](suite_icon.png)                  | • Different point products for system-, human- and document-oriented processes                          | • Reduced complexity from “single tool stack”  
• Reduces interoperability risk                       |
| Replace costly pure play solutions | ![Suite Icon](suite_icon.png)                  | • Unviable and high cost point solutions as part of SOA architecture                                    | • Reduced complexity from “single tool stack”  
• Reduce maintenance costs  
• Avoid risk of vendor going out of business          |
| AIA - pre-built integrations | ![Pre-built Icon](pre-built_icon.png)          | • Custom-architected integration  
• High system integrator costs  
• Apps upgrades drive constant integration maintenance | • Substantially lower cost of building & maintaining apps integrations                            |
SOA suite

• Comprehensive, hot pluggable software suite for the building, deployment and management of SOA architecture
• Increases ability to predict and adapt to change
• Simplifies IT environment by being provisioned, deployed, managed, monitored as a single cohesive infrastructure
• Ease of maintenance of IT infrastructure
The Oracle SOA Technologies

- **BPA Suite**: Analyst Tools
- **JDeveloper**: App Dev Framework
- **BAM**: Events, Business Monitoring
- **BI**: Analytics
- **BPEL Process Manager**: Native BPEL, Human Workflow, Business Rules
- **Enterprise Service Bus**: Multi Protocol, XSLT Transform, Routing
- **Adapters**: Apps DB, ODI, B2B, SES
- **ODI**: Bulk ETL, Partners, RFID
- **Solution**: J2EE Application Server, Oracle AS, JBoss, WebLogic, WebSphere
Development Environment

- Integrated development Environment for modelling, debugging, optimising and deploying Java applications
- J2EE development with features that enable visual and declarative development.
- Oracle JDeveloper & Oracle Application Development Framework
  - Productivity increases for all developers
  - Visual & Declarative
  - Framework advantages w/o lock-in
  - Promotes Metadata Usage
  - Simplifies Service Oriented Development
- Common Framework
  - J2EE, BPEL, XML, Portal, Wireless, Data, etc.
  - Common Gestures
  - Common Concepts (Data, Visual, etc.)
Full Lifecycle Support

- Design
- Code
- Deploy
- Tune
- Analyze
- Debug
- And Test
- Versioning
Oracle BPA Suite

Business Process Architect

Oracle SOA Extensions

Business Process Simulator

Business Process Publisher

BUSINESS PROCESS ANALYSIS SUITE
Oracle Business Process Analysis Suite

COMPONENTS

- **Business Process Architect**—Standards-based tool for process modeling. Uses various standards-based notations and templates such as BPMN, EPC, etc.

- **Business Process Repository Server**—Server component for sharing the process repository across multiple users in a collaborative environment

- **Business Process Simulator**—Tool for simulating the process models based on a set of discrete events to do "what if" analysis

- **Business Process Publisher**—Publishes process models to a large audience outside of the core team designing the process models

- **Oracle Extensions for SOA** – Allows bi-directional integration with Oracle SOA Suite  
  *(Available in next release)*
Business Process Analysis

- Adapters is a critical and integral part of the Fusion Middleware / SOA Suite
### 300+ Connectivity Solutions

#### Applications
- Oracle Applications
- SAP R/3
- Peoplesoft
- JD Edwards
- Siebel
- Clarify
- Lotus Notes
- Ariba
- AXIOM mx/open
- Baan
- BroadVision
- Clarify
- Commerce One
- Hogan Financials
- i2 Technologies
- Lawson
- Livelink
- Manugistics
- Microsoft CRM
- Vantive
- Walker Interactive
- Remedy
- Sales Force

#### Databases
- Oracle 8i and above
- IBM DB/2 UDB
- Informix
- Clarion
- Clipper
- Cloudscape
- DBASE
- Dialog
- Essbase
- FOCUS Data Access
- Great Plains
- Microsoft SQL Server
- MUMPS (Digital Standard MUMPS)
- Navision Financials (ODBC 3.x)
- Nucleus
- Paradox
- Pointbase
- PROGRESS
- Red Brick
- RMS
- SAS Transport Format
- Sybase
- Teradata
- Unisys DMS 1100/2200
- UniVerse

#### Technology
- SOAP
- HTTP, HTTP-S
- Email – POP3, SMTP, IMAP
- FTP, FTP-S
- Flat File
- LDAP
- JMS
- Oracle AQ
- IBM MQSeries
- TIBCO Rendezvous
- Socket

#### Legacy
- CICS
- IMS/DB
- IMS/TM
- VSAM
- ADABAS
- Natural
- Tuxedo
- CA-Datacom
- Screen Scraping
- CA-IDMS
- C-ISAM,D-ISAM,K-SAM, QSAM
Oracle, The Information Company

<table>
<thead>
<tr>
<th>Enterprise Manager</th>
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<tbody>
<tr>
<td>• Configuration Management</td>
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<td>• Service Level Management</td>
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<td>• Application Performance Mgmt</td>
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<td>• Lifecycle Management</td>
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<tr>
<td>• Dashboards</td>
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<td>• Heterogeneous Support</td>
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<tr>
<th>Database Grid Computing</th>
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<tr>
<td>• Database</td>
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<tr>
<td>• Real Application Clusters</td>
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<tr>
<td>• Partitioning</td>
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<tr>
<td>• OLAP and Data Mining</td>
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<tr>
<td>• Security</td>
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<td>• Spatial</td>
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<tr>
<td>• Oracle Lite</td>
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<table>
<thead>
<tr>
<th>Fusion Middleware</th>
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<tbody>
<tr>
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<tr>
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<tr>
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<tr>
<td>• Data Hubs</td>
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<tr>
<td>• Collaboration Services</td>
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<td>• Java Development Tools</td>
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<table>
<thead>
<tr>
<th>Information Age Applications</th>
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<tr>
<td>• E-Business Suite</td>
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<tr>
<td>• PeopleSoft Enterprise</td>
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<td>• Siebel</td>
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<td>• JD Edwards</td>
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<td>• Oracle Retail</td>
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<td>• i-Flex</td>
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<td>• Communications Billing</td>
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<td>• Utilities</td>
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<td>• ProfitLogic</td>
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<td>• G-Log</td>
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</tbody>
</table>
Oracle: Worldwide #1 RDBMS Vendor Overall

- IBM: 30.6%
- Oracle: 41.3%
- Microsoft: 13.4%
- Other: 14.7%
Oracle Database Editions

- **Standard Edition One** (2 processor max)
- **Standard Edition** (4 processor max)
- **Enterprise Edition** (Unlimited processors)
# Database pricing

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<tr>
<td>DB Standard Edition</td>
<td>£2,945</td>
<td>£91</td>
<td>-Max 2 Sockets</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-Min 5 NUP</td>
</tr>
<tr>
<td>Standard Edition</td>
<td>£8,887</td>
<td>£178</td>
<td>-RAC free</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-Max 4 Sockets</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-Min 5 NUP</td>
</tr>
<tr>
<td>Enterprise Edition</td>
<td>£24,121</td>
<td>£482</td>
<td>-Min 25 NUP per processor</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-Options</td>
</tr>
</tbody>
</table>
Key Differentiators

• Business Agility
  • Oracle DB allows customers to adapt to change faster (ASM, data security, HA and scalability)

• Data Protection
  • Oracle DB has far more extensive security (Audit Vault, DB Vault, VPD, Label based security, fine grained auditing)

• Workload Demand Flexibility
  • Oracle allows users to add extra capacity as needed (RAC)

• Real World Performance
  • Oracle proven leadership in TPC results

• Manageability
  • Substantial advantage in manageability
<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
<th>Time (mins)</th>
<th>Complexity (steps)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>SQL Server</td>
<td>Oracle</td>
</tr>
<tr>
<td>1</td>
<td>Install db/software/out-of-box setup</td>
<td>31</td>
<td>19.3</td>
</tr>
<tr>
<td>2</td>
<td>Create 2nd database server/instance</td>
<td>6.42</td>
<td>6.83</td>
</tr>
<tr>
<td>3</td>
<td>Setup proactive monitoring</td>
<td>1.83</td>
<td>.5</td>
</tr>
<tr>
<td></td>
<td><strong>Category Sub-Total</strong></td>
<td><strong>39.3</strong></td>
<td><strong>26.66</strong></td>
</tr>
<tr>
<td></td>
<td>% difference -- (SS - Oracle)/SS*</td>
<td></td>
<td>32%</td>
</tr>
<tr>
<td></td>
<td><strong>DBA Workday Savings</strong></td>
<td></td>
<td>1.6%</td>
</tr>
<tr>
<td>4</td>
<td>Create user with roles, privileges</td>
<td>.7</td>
<td>.7</td>
</tr>
<tr>
<td>5</td>
<td>Create tablespace/filegroup</td>
<td>.58</td>
<td>.7</td>
</tr>
<tr>
<td>6</td>
<td>Add space to database</td>
<td>.33</td>
<td>.5</td>
</tr>
<tr>
<td>7</td>
<td>Create table</td>
<td>.33</td>
<td>.5</td>
</tr>
<tr>
<td>8</td>
<td>Create index</td>
<td>.83</td>
<td>.8</td>
</tr>
<tr>
<td>9</td>
<td>Reclaim space due to fragmented data</td>
<td>3.7</td>
<td>.9</td>
</tr>
<tr>
<td>10</td>
<td>Load data from text file</td>
<td>3.9</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td><strong>Category Sub-Total</strong></td>
<td><strong>10.3</strong></td>
<td><strong>7.6</strong></td>
</tr>
<tr>
<td></td>
<td>% difference -- (SS - Oracle)/SS*</td>
<td></td>
<td>27%</td>
</tr>
<tr>
<td></td>
<td><strong>DBA Workday Savings</strong></td>
<td></td>
<td>8.9%</td>
</tr>
<tr>
<td>11</td>
<td>Configure and perform full backup</td>
<td>1.75</td>
<td>0</td>
</tr>
<tr>
<td>12</td>
<td>Recover dropped table</td>
<td>7.17</td>
<td>.33</td>
</tr>
<tr>
<td>13</td>
<td>Recover data file</td>
<td>5.58</td>
<td>5.33</td>
</tr>
<tr>
<td>14</td>
<td>Recover from erroneous transaction</td>
<td>7.17</td>
<td>2.67</td>
</tr>
<tr>
<td></td>
<td><strong>Category Sub-Total</strong></td>
<td><strong>21.67</strong></td>
<td><strong>8.33</strong></td>
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<tr>
<td></td>
<td>% difference -- (SS - Oracle)/SS*</td>
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<td>62%</td>
</tr>
<tr>
<td></td>
<td><strong>DBA Workday Savings</strong></td>
<td></td>
<td>8.3%</td>
</tr>
<tr>
<td>15</td>
<td>Diagnose performance problem</td>
<td>9.25</td>
<td>2.0</td>
</tr>
<tr>
<td>16</td>
<td>Tune resource-intensive SQL</td>
<td>10.0</td>
<td>1.5</td>
</tr>
<tr>
<td>17</td>
<td>Tune memory</td>
<td>0</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td><strong>Category Sub-Total</strong></td>
<td><strong>19.25</strong></td>
<td><strong>5.0</strong></td>
</tr>
<tr>
<td></td>
<td>% difference -- (SS - Oracle)/SS*</td>
<td></td>
<td>74%</td>
</tr>
<tr>
<td></td>
<td><strong>DBA Workday Savings</strong></td>
<td></td>
<td>19.3%</td>
</tr>
<tr>
<td></td>
<td><strong>Overall Total</strong></td>
<td><strong>93.08</strong></td>
<td><strong>46.66</strong></td>
</tr>
<tr>
<td></td>
<td>% difference -- (SS - Oracle)/SS*</td>
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<td>47%</td>
</tr>
<tr>
<td></td>
<td><strong>Total DBA Workday Savings</strong></td>
<td></td>
<td>38.2%</td>
</tr>
</tbody>
</table>
How Secure is Your Data?

Publicly Reported Data Breaches

Source: DataLossDB http://datalossdb.org
Oracle Database Security
Auditing and Configuration Scanning

Monitoring
Configuration Management
Audit Vault
Total Recall
Oracle Database Security

Fine Grain Access Control

Monitoring

Configuration Management

Audit Vault

Total Recall

Access Control

Database Vault

Secret Label Security
Oracle Database Security

Data encryption and masking

Monitoring
- Configuration Management

Access Control
- Database Vault

Encryption and Masking
- Advanced Security
- Secure Backup
- Data Masking

Audit Vault
- Total Recall
- Secret
- Label Security
## Comparable Pricing

<table>
<thead>
<tr>
<th>Product</th>
<th>Oracle</th>
<th>SQL Server</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB Standard Edition 1</td>
<td>$5,800 Per Socket (2)</td>
<td>$3,889 Per Processor (2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ram 3GB</td>
</tr>
<tr>
<td>Standard Edition</td>
<td>$17,500 Per Socket (4)</td>
<td>$5,999 Per Processor (4)</td>
</tr>
<tr>
<td>Enterprise Edition</td>
<td>$47,500 CPU No limit</td>
<td>$24,999 CPU No Limit</td>
</tr>
<tr>
<td>Express Edition</td>
<td>Free</td>
<td>Free</td>
</tr>
</tbody>
</table>