An Integrated Big Data & Analytics Infrastructure
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Big Data & Analytics as a Service Components

Unstructured Data / Sparse Data of Value

Structured Data / Highly dense data

Acquire

Organize

Analyze & Decide
Incremental Value by including Big Data?

- Collect unsolicited opinions on services
- Determine public / group mood
- Analyze data from sensors & other automated devices
<table>
<thead>
<tr>
<th>CHALLENGES</th>
<th>STRATEGY</th>
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<tr>
<td>• Fragmented Solutions</td>
<td>• Specialized but integrated data stores and tools</td>
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<td>• Difficulty of Self-Service BI</td>
<td>• Flexible, guided, automated, easy-to-use tools, data discovery</td>
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<td>• Data Not Current</td>
<td>• Solutions for Just-in-Time well-understood data</td>
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<td>• Time to ROI / Development Time</td>
<td>• Horizontal and industry pre-built solutions, appliance-like solutions &amp; Cloud solutions where feasible</td>
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<td>• Rapidly Growing Diverse Data &amp; User Communities</td>
<td>• Enterprise class solutions serving 1000s of users optimized for diverse workloads and providing 100s TB of data (and more)</td>
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<td>• Deployment Manageability, Security &amp; Expense</td>
<td>• Pre-integrated solutions that are centrally managed with advanced security / governance</td>
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</table>
Oracle’s Software Components…

Unstructured Data / Sparse Data of Value

Structured Data / Highly dense data

Acquire

Organize

Analyze & Decide

Cloudera Hadoop

Oracle NoSQL DB

Oracle Transactional Database & Applications

Oracle Data Integrator / Connectors

Endeca Information Discovery

Oracle Data Warehouse & Embedded Analytics

Oracle BI Foundation Suite
... and Engineered Systems

Unstructured Data / Sparse Data of Value

Structured Data / Highly dense data

Acquire

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Cloudera Hadoop

Oracle NoSQL DB

Oracle Transactional Database & Applications

Oracle Data Integrator / Connectors

Oracle Data Warehouse & Embedded Analytics

Exadata Platforms

Big Data Appliance

Exalytics In-Memory Machine

Endeca Information Discovery

BI Foundation Suite
Matured vs. New Data Analysis Processes

Matured

- DECIDE
- ACQUIRE
- ORGANIZE
- ANALYZE

New

- DECIDE
- ACQUIRE
- ORGANIZE
- ANALYZE
Data Discovery – Value in Sources of Data?

Typical Website Analytics Solution Build-out

- Oracle Database DW
- Website Logs & Data
- Oracle NoSQL DB
- Surfing Site
- Sensors
Determine Value of Data of All Types

Typical Website Analytics Solution Build-out

- Endeca Information Discovery
- Oracle Database DW
- Cloudera HDFS
- Unstructured / Semi-Structured Data
- Sensors
- Website Logs & Data
- Oracle NoSQL DB

Surfing Site
Valuable Data Found – Now Store it Securely

Typical Website Analytics Solution Build-out

- Endeca Information Discovery
- Oracle Database DW
- Cloudera HDFS

Discoveries

Persistent Data Store for All Data of Value

MapReduce code separates valued data, then sent to Oracle Loader for Hadoop Load Mappings produced via Oracle Data Integrator

Sensors

Website Logs & Data

Web Log Data

Oracle NoSQL DB

Surfing Site
Deploy Widely Available Reports & Analytics

Typical Website Analytics Solution Build-out

Endeca Information Discovery

Oracle Database DW

Persistent Data Store for All Data of Value, **In-DB Analytics**

Cloudera HDFS

MapReduce code separates valued data, then sent to Oracle Loader for Hadoop
Load Mappings produced via Oracle Data Integrator

Oracle BI Foundation Suite

Enterprise-class BI tools & dashboards for reporting & analysis

Website Logs & Data

Oracle NoSQL DB

Surfing Site

Sensors
Feed the Recommendation Engine

Typical Website Analytics Solution Build-out

- **Endeca Information Discovery**
- **Oracle Database DW**
- **Oracle BI Foundation Suite**
- **Cloudera HDFS**
- **Oracle Real-Time Decisions**

**Persistent Data Store**
for All Data of Value, In-DB Analytics

MapReduce code separates valued data, then sent to Oracle Loader for Hadoop Load Mappings produced via Oracle Data Integrator

- **Website Logs & Data**
- **Oracle NoSQL DB**

Update Website Recommendations

Surfing Site
Make Well-Tuned Real-Time Recommendations

Typical Website Analytics Solution Build-out

- **Endeca Information Discovery** → **Oracle Database DW**
- ** Oracle Database DW** → **Oracle BI Foundation Suite**
- **Endeca Information Discovery** → **Cloudera HDFS**
- **Cloudera HDFS** → **Website Logs & Data**
- **Website Logs & Data** → **Oracle NoSQL DB**
- **Oracle NoSQL DB** → **Oracle Real-Time Decisions**
- **Oracle Real-Time Decisions** → **Recommend**
- **Sensors** → **Website Logs & Data**
- **Website Logs & Data** → **Location & User Profile**
- **Location & User Profile** → **Surfing Site**

Persistent Data Store for All Data of Value, In-DB Analytics

MapReduce code separates valued data, then sent to Oracle Loader for Hadoop Load Mappings produced via Oracle Data Integrator

**Oracle BI Foundation Suite**

**Oracle Database DW**

**Oracle NoSQL DB**

**Website Logs & Data**

**Location & User Profile**

**Surfing Site**

**Recommend**
Summary: Our Customers’ Goals

Better Insights, Decisions, Actions

- From measurement to analysis, forecasting & optimization
- Insights across time, functions and roles
- Persistent version of the truth for ALL DATA

Complete, Open, Integrated

- From discovery to dashboards to analytics to data management
- Standards based & blending of Open Source components
- Systems & software integration & optimization

World Class Analytics Infrastructure

- Best of Breed capabilities at each layer of the stack
- Complete analysis of ALL DATA
- Enterprise Architecture: scalable, reliable, manageable & secure