Big Data

Industry Report 2011

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Big Data Industry Report Outline

Big Data: New Opportunities for Enterprises

Business and IT leaders now face significant opportunities and challenges with big data — that is data sets that are so large they are difficult to store, manage and analyze. The report delineates the existing operational challenges businesses face and how enterprise IT leaders can harness the deeper insights provided by Big Data to manage complex operational problems and empowering businesses in knowledgeable decision-making to get the competitive advantage for their companies. It lays out the rapidly evolving big data business and technology ecosystem - different big data technologies from Hadoop and emerging NoSQL derivatives to cloud-based collaboration tools.

Harnessing the Competitive Advantages of Big Data

Although Hadoop initially has been used by large web companies such as Google, Yahoo, Facebook for applications such as search engines, but its potential is much, much more. This report details what Hadoop is (and isn't), brings into focus the key technologies and their interplay, provides a perspectives on different players, who's doing what to productize them and how they fit into the ecosystem. It profiles the growing number of companies — from startups like MapR to Cloudera, the present leader in the space leveraging Hadoop plus 52 others – both announced and in stealth, to the strategies being adopted by Relational Database/Data Warehousing/ Business Intelligence/Data Integration incumbents like Oracle, IBM, Microsoft, SAP, Teradata, SAS, Microstrategy etc. to embrace the emerging technologies while new Big Data Infrastructure entrants the likes of EMC, NetApp, Cisco, Dell, Fujitsu, HP, Adobe and scores of others planning new products to address this space. . It charts out the SWOT analysis of both leaders and new suppliers as well as their competitive positioning and strategies.

The report outlines how the market opportunities in Big Data are crystallizing to pick up serious steam while taking into account the challenges still hindering widespread adoption and where potential users can expect the market to go. It presents a 5 year market forecast 2010-15, market shares of leaders, likely M& A scenarios and examines go-to-market plans of leaders to provide big data solutions for several vertical industries such as financial services, healthcare and media. Finally it provides recommendation for vendors, channel players, end users and investors for timely play to leverage the opportunities presented by the emerging big data markets.

T A B L E O F C O N T E N T S

Outlook: New Technologies, Emergent Opportunities and Market Sizing.

3. Market Segments & Product Requirements

Existing DBMS Markets by Segments

- Data Warehousing, Business Intelligence & Analytics, Data Integration & MDM
- Capabilities of Existing Solutions
- Market Sizing and Growth by Segments
- Market shares by Segment

SQL vs NoSQL Market Segments
Killer Applications benefitting most from Hadoop
Hadoop now a full-fledged market
Big-data-as-a-Service, Analytics databases

Hadoop Usage Profiles

- Companies using Hadoop & State of Deployment (Research vs. Production)
- Applications Targeted
- Deployment Size, Average Cluster Size, I/O Utilization
- Hardware Deployed (Servers/cores, Storage, Networks, Management Tools)
- Performance Bottlenecks (Cluster Inter-nodal Latency, Storage Size, SSDs, Network I/O BW)
- High Availability/SPOF in HDFS, HA in NameNodes
- Role of Requirements for Snapshots, Mirroring, Full Random RW File System

Big Data by Industry

- Requirements by Industry – Financial Services, HealthCare, Retail, Govt., Media, Travel, Web 2.0 etc
- Adoption by Verticals – Financial Services, Health Care, Retail, Govt, Media, Travel, Web 2.0 etc.
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4. Market Forecast & Market Shares

Market Forecast by Market Segment 2011-15 (SQL vs NoSQL)
Market Forecast by Technology Infrastructure (HW- Servers, Storage, Networking Equipments)
Market Forecast by SW Infrastructures (Distributions, Tools)

Hadoop based HW Equipments Shipments by Units, ASP, Revenues
(Servers, Storage, Networking Equipments)
Hadoop based HW Equipments Shipments by Region
(North America, EUMEA, APAC, ROW)
WW Spending Forecast by Content (Creation and Production)
WW Spending by Content Tools (Content Management, Aggregation and Delivery Tools)

5. Enabling Technologies & Standards

Relational Database Management Systems
Modified RDBMS architecture for EDW supporting Data Analytics
Comparing Hadoop/NoSQL vs. SQL/RDBMS
Defining Big Data: New Data Types & Complexity, Roaring Data Volumes & Velocity
How it works: Hadoop/HDFS and MapReduce,
Open-Source Options: Apache Hadoop and Others
In-database Analytics
Visualization
Collaboration: Corralling Big Data for Results
Big Data Limitations

Hadoop Distributions, Tools and Products

The Distributions

- Apache Hadoop,
- Cloudera's Distribution for Apache Hadoop (CDH)
- IBM Distribution of Apache Hadoop
- DataStax Brisk
- Hadoop Stack
  - HDFS (Distributed File system), MapReduce (Job Scheduling), HBase (Realtime Query), Pig (Data Flow), Hive (Batch SQL), Sqoop (Data Import), Avro (Serialization), HiPAL, Zookeeper (Coordination), Chukwa (Displaying Monitoring Analyzing Logs), Cassandra, Eucalyptus etc.
  - ISVs Supporting Hadoop

Standards & Standards Organizations

Emerging Standard Bodies & Progress
Open Source & Apache Standards
Proprietary Offerings
Benchmarks

6. Competitive Products & Positioning

Big Data: Value Chain and Delivery Formats
Big Data: Birth of a new Ecosystem
- Big-data use cases proliferate
- NoSQL finds its role
- Big data, small power bills
- Storage still matters

Hadoop Distributions, Tools & Products
Impact of Hadoop NoSQL on Oracle, IBM, Microsoft, Others

7. Major Suppliers & Supplier Strategies

All 106 Companies in BigData Marketplace
Big Data based Products/Tools/Services Offerings
Existing & Emergent Enterprise Market Leaders now targeting Hadoop – Enterprise
(IBM, SAP, HP, Oracle, Teradata, Informatica, Vertica, Versant …)
(EMC, Dell, NetApp, Cisco….)
Overview
Management
Technology
Products
- SW Stack (Analytics platform, Business Intelligence, Data Integration)
- Hardware stack

Customer Base
Delivery Model
SWOT Analysis (Strengths & Weaknesses …)
Hadoop Startups – Company Profiles
(Cloudera, DataStax, KArmasphere, MapR, Aster Data, MarkLogic, Platform, Quest SW, Pervasive SW, Pentaho, 10Gen, 1010Data, Hypertable, Tableau ….)
Internet Market Leaders targeting Hadoop – Web
(Yahoo!, Google, AWS, FaceBook, eBay, Zynga…),

8. Routes-To-Market /Channels of Distribution

Present Go-to-Market Models
Pricing Structures by Direct, OEM, Indirect Channels

9. Recommendations

Recommendations specifically for Vendors (Incumbents and Emergents)
Recommendations for Channel - System Integrators, VARs and Distributors
Recommendations for End Users in Major Industries impacted by Big Data
Recommendations for Investors (Investment Bankers & Venture Capital)

10. Methodology, Resources & Appendices

Methodology
Resources & References
Financial Analysts Reports
Survey/Interviews with VCs, Investment Bankers
Surveys/Interviews with major companies - Incumbents and Start-Ups
Appendices