Big Data Analytic Solution Accelerators

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Agenda

- Consumers have gained control
- IBM Big Data Platform and Accelerators
  - Enable Leading edge customers to respond
The consumer has become smarter…

**Instrumented**
- **2.267 billion** Internet users worldwide in 2011 - 15% increase since previous year
- **255 million** websites - 21.4 million added websites in ’10
- Mobile technologies has increased 92% globally and is still more widely accepted in the growth markets
- **Over 743,000** iPhone applications
- **Over 250,000** iPad applications

**Interconnected**
- **In 2012**
  - **181 million** blogs on the Internet
  - **Twitter breaks 400 billion** per day
  - **835 million** Facebook users
  - Social Networking and Blog sites:
    - Total minutes increasing **82%** Year on Year
    - Average time per person increasing **67%** Year on Year

**Intelligent**
- **Total IP traffic for 2012** will amount to more than **half a zettabyte** (or 522 exabytes). A zettabyte is a trillion gigabytes.
- **Global IP traffic will increase by a factor of four** from 2012 to 2015.
- Video on demand, IP television and Internet TV will account for nearly **90 percent** of all consumer IP traffic in 2012.
… and has seized control from traditional providers and channels.

11/01/11 Press Release:
“We have listened to our customers … As a result, we are not currently charging the fee and will not be moving forward with any additional plans to do so”

12/29/11 Press Release:
“Verizon Wireless has decided it will not institute the fee for online or telephone single payments that was announced earlier this week.”

09/29/11 (Reuters) - Bank of America Corp plans to charge customers who use their debit cards to make purchases a $5 monthly fee beginning early next year…

More than 300,000 people sign an online petition at Change.org:
Greetings,
I’m writing to express my deep concern over Bank …

Ben Rattray, Founder
Change.org
(Boston Globe, 12/31/2011)

12/29/11 “Starting January 15, a new $2 payment convenience fee will be instituted for customers who make single bill payments online or by telephone”

Within 24 hours, more than 100,000 people had signed an online petition:
Greetings, I am disappointed to learn that Verizon Wireless plans to institute a new $2 fee for paying bills online….
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IBM Big Data Strategy: Move the Analytics Closer to the Data

New analytic applications drive the requirements for a big data platform

- Integrate and manage the full variety, velocity and volume of data
- Apply advanced analytics to information in its native form
- Visualize all available data for ad-hoc analysis
- Development environment for building new analytic applications
- Workload optimization and scheduling
- Security and Governance
- Accelerators to accelerate implementation of specific use cases.
Big Data Accelerators - Introduction

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Software components that accelerate development and/or implementation of specific solutions or use cases on top of the Big Data platform
- Provide business logic, data processing, and UI/visualization, tailored for a given use case
- Bundled with Big Data platform components – InfoSphere BigInsights and InfoSphere Streams

Key Benefits
- Time to value
- Leverage best practices around implementation of a given use case.
Application Accelerators Improve Time to Value

Social Data Analytics*
Sentiment Analytics, Intent to purchase

Telecommunications Event Data Analytics*
CDR streaming analytics
Deep Customer Event Analytics

Machine Data Analytics*
Operational data including logs for operations efficiency

* = Planned for availability in 4Q2012

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Big Data Technologies Will Enable A New Generation of Applications

**Smarter Cities**
European bus company uses real-time geospatial analysis to provide passengers with location of bus and time of arrival

**Facilities Management**
Use real time data from building devices such as meters, sensors and motion detectors to monitor and manage power usage

**Healthcare**
Real-time analytics on vital signs from medical devices in a neonatal ICU to detect subtle changes and take action up to 24 hours sooner

**Law Enforcement**
Identify criminals and threats by monitoring, processing, and correlating disparate video, audio, and data feeds in real-time

At the core of these applications is the ability to process and handle large volumes of machine data in real time
Handling machine data brings unique challenges.

Data Sources and Integration
- Complex formats, no standards
- Extremely large data volumes
- Mix of enterprise and machine data
- Streaming data -and- data at rest

Analytics
- Large scale indexing
- Correlation across different data sets
- Advanced analytics for different data types

Visualizations/Actions/Outputs
- New visualizations for streaming and massive data sets
- Real-time dashboards
- Geospatial mash-up
Browse and view logs from different devices.
Overall view of logs and KPIs
Patterns of what frequently happened around the error
KPIs most influential in causing the error
Social Media Data Provides Key Insights for Business

Consumer Intelligence
- Construct comprehensive consumer profiles (e.g., interests, life events)
- Link with internal customer data and micro-segment consumers
- Continuously monitor posts for ‘monetizable intents’
- Leverage micro-segmentation for timely and targeted promotions

Business Intelligence
- Maintain comprehensive business profiles
- Analyze customer feedback by micro-segments
- Monitor customer sentiment, churn indicators, and comparison with competitors in real-time
- Engage with consumers for damage control and improved customer satisfaction

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Consumer Intelligence

Personal Attributes
- **Identifiers**: name, address, age, gender, occupation...
- **Interests**: sports, pets, cuisine...
- **Life Cycle Status**: marital, parental...

Life Events
- **Life-changing events**: relocation, having a baby, getting married, getting divorced, buying a house...

Products Interests
- **Personal preferences** of products
- **Product Purchase history**

Relationships
- **Personal relationships**: family, friends and roommates...
- **Business relationships**: co-workers and work/interest network...

Monetizable intent to buy products
- I need a new digital camera for my food pictures, any recommendations around 300?
- What should I buy?? A laptop with Windows 7 OR a Apple MacBook!!?

Location announcements
- I’m at Starbucks Parque Tezontle http://4sq.com/fYReSj

Timely Insights
- **Intent to buy** various products
- **Current Location**

Life Events
- College: Off to Stanford for my MBA! Bbye chicago!
- Looks like we’ll be moving to New Orleans sooner than I thought.

Intent to buy a house
- I’m thinking about buying a home in Buckingham Estates per a recommendation. Anyone have advice on that area? #atx #austinrealestate #austin
Business Intelligence

Attributes
- **Identifiers**: name, industry, address
- **People** employed in the company
- **Presence in Social Media** of the business and its subsidiaries

Events
- **Consumer Perspective on events**: mergers, acquisitions, change in leadership, earning reports, ...

Financial Analysis
- **Consumer Perspective** on stock price

Social Media based 360-degree Business Profiles

360-degrees of Customers
- **Micro-segmentation of customers**

Timely Insights
- **Sentiment** on products, services, campaigns
- **Incidents damaging reputation**
- **Customer satisfaction/attrition**

Relationships with Customers
- **Sentiment** on products and services
- **Suggestions** from customer feedback

Competitive Landscape
- **Competitors**
- **Comparisons** with competitors
- **Shortcomings of competitors**

Real-time Complaint & Sentiment Tracking
I am now officially on the hunt for new tv/internet provider. Comcast is horrible. Tell your friends.

I'm cancelling my @att U-Verse! I was lied to TWICE by AT&T Customer Service! Loyalty means NOTHING to them!

Real-time Competitive Intelligence
Kohl's bargains much better than in Target

#ATT can't answer YOUR support calls due to technical difficulty. Bye! You are losing a customer to Comcast!
Analysis of Event Detail Records for Customer Retention

Telcom Switch Event Detail Records + InfoSphere Streams for Mediation and Real Time Analytic Processing = Telecommunications Event Data and Analytics

Process CDRs in 1 min vs 12 hours
9 billion per day
Deduplication in Streams reduces Warehouse work
Simultaneous summaries and

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Are you exploiting your big data to improve decision-making?

- Know your customers better
- Run zero-latency operations
- Innovate new products at speed & scale
- Gain instant awareness of fraud & risk
- Exploit instrumented assets

Uncover insights in new types of data to shape business strategy

- Visit us at Kiosk #11
- Ask us how to get started with big data
- Understand why big data requires a new approach to analytics
We wrote the book on big data.

- Stop by Kiosk #11 to get your FREE copy* of the new book: “Harnessing the Power of Big Data”

  The follow-on to the most read book on big data: “Understanding Big Data”

- Boost your Big Data IQ—get details on in-motion and at-rest analytics, data discovery and integration & governance
- Understand the most common big data use cases
- Learn how to make big data projects faster to deploy and less risky

* While supplies last.
Learn from the big data experts.

Understand how shared low latency multi-tenant clusters are helping organizations maximize Hadoop performance & reduce costs

Thursday, October 25th, 2:30 - 3:10pm
Maximizing ROI by Sharing your Hadoop Big Data Cluster
Room: Regent Parlor

- How organizations can run multiple big data applications using the same infrastructure with assured SLAs
- What the real technical requirements are for a low latency multi-tenant ‘big-data’ cluster
- How enterprises can build a shared infrastructure for compute and data-intensive, low latency Hadoop and non-Hadoop applications in a single cluster

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