WELCOME TO
Cloud Data Services:
The Art of the Possible
Goals for Today

• Share the cloud-based data management and analytics technologies that are enabling rapid development of new mobile applications

• Discuss examples of how these technologies are being applied to transform a diverse set of industries

• Hear from you about your most pressing challenges to harness the data you have to provide additional value for your customers
Why the Journey to Cloud-based Data Services?

MISSION

To provide the best experience for developers with a comprehensive set of rich, integrated cloud data services covering content, data and analytics.

FASTER INNOVATION

Instant provisioning saves weeks of data center setup

BETTER IT ECONOMICS

Pay as you go with no big up-front capital investments

LOWER RISK OF FAILURE

Fully managed 24x7 so you can focus on new development
The Future of Analytics from Our DBaaS Offerings

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IBM Voted #1 Cloud Provider by Enterprise Users

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Based on an April 2015 451 Research survey of more than 2,000 enterprise cloud users - commissioned by Microsoft
The IBM Cloud

- “Bare-metal” outperforms virtualized
- Dedicated hardware
- 40 data centers worldwide
IBM Bluemix

Bluemix is an open-standard, cloud-based platform for building, managing, and running applications of all types (web, mobile, big data, new smart devices, and so on).

Go Live in Seconds
The developer can choose any language runtime or bring their own. Zero to production in one command.

On-Prem Integration
Build hybrid environments. Connect to on-premise assets plus other public and private clouds.

Flexible Pricing
Sign up in minutes. Pay as you go and subscription models offer choice and flexibility.

Layered Security
IBM secures the platform and infrastructure and provides you with the tools to secure your apps.

DevOps
Development, monitoring, deployment, and logging tools allow the developer to run the entire application.

APIs and Services
A catalog of IBM, third party, and open source API services allow the developer to stitch an application together in minutes.
IBM can help your organization deliver new insights at every level, and in every department, in your organization.
The Latest Cloud Analytics and Offerings
How They’re Changing Analytics & Data Management for our Clients Today
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IBM Cloudant

Cloudant is a data management solution that leverages the availability, elasticity, and reach of the cloud to create a global data delivery network that enables applications to scale larger and remain available to users wherever they are.

For apps that need:

• Elastic scalability
• High availability
• Data model flexibility
• Data mobility
• Text search
• Geospatial

Available as:

• Fully managed DBaaS
• On-premises private cloud
• Hybrid architecture
Cloudant helps make your web and mobile applications more scalable and more available to users wherever they are.

- Operational JSON NoSQL data store
- RESTful CouchDB API
- Advanced APIs
  - Replication & Sync
  - Incremental MapReduce
  - Geospatial
  - Lucene Full-text Search
- Scalable, Highly Available Performance with cross-data center data distribution & fail over
- Geo load balancing
- Offline access to the data
- Available as a fully managed cloud service and an on-premises software product – enabling hybrid deployments
Use Case 1

**Comdata**: Payment Processor leverages the advanced geospatial capabilities of Cloudant to build a new mobile application.

The combination of Cloudant’s advanced geospatial capabilities, security, and managed service give Comdata a competitive advantage in terms of the experience they can deliver to their end users.
Use Case: Comdata

Company Background:
Payment processor and issuer of fleet fuel cards headquartered in Tennessee. Improved consistency options for secondary indexes

Need:
A mobile app that delivers a better experience for end users of Comdata's payment processing system.

Success Criteria:
Show locations of vendors that use Comdata’s payment processing, enable offline usage, and optimize routes. Complete within 20 months.

Solution & Results:
• A new mobile application launched in 9 months.
• Advanced geospatial capabilities give Comdata a competitive advantage.
• Cloudant’s managed service means Comdata can keep overhead costs down.
• Comdata avoids the costs, overhead, or latencies of ETL by with the schema flexibility Cloudant’s JSON document store provides.
Use Case: Comdata - Reference Architecture

- Mobile Devices
  - Local Storage
  - User profiles, preferences, point of interest, etc.

- Cloudant
  - Geolocation information originally stored in DB2

- MobileFirst
  - MobileFirst on Softlayer
  - MobileFirst adapter

- Comdata Firewall

- Relational Database
Use Case 2

A Large Investment Research & Management Firm: needed a persistent data store to maintain and access financial analytical reports.

Cloudant’s schema-less architecture and horizontal scalability enables their users to have real-time access to reports and analytics generated by IBM PureData for Analytics.
Use Case: Investment Research & Management Firm

Company Background:
Global Investment & financial services research firm.

Need:
Provide real-time access to data for a new system of engagement application for accessing and visualizing reports from Netezza through a custom API.

Success Criteria:
- Support for high volume of user concurrency – something a warehouse environment like Netezza cannot provide
- Integration with other IBM products – like Netezza

Solution & Results:
- Schema-less architecture enables the ability to store the data without needing a schema definition prior to inserting the data from Netezza.
- Does not require time consuming schema changes when different data must be captured and processed
- With Cloudant, the firm is transforming how their users access data
1. An end user requests a dataset to be visualized by a Customer Service.

2. The request is processed through a Customer API which queries Netezza (or any other data warehouse) for the requested data.

3. Netezza returns the requested dataset back to the Customer API.

4. The Customer API internally prepares the data for visualization and storage by converting it into JSON format. A small subset of the data will be sent to the calling application for visualization while the full dataset will be persisted into Cloudant.

5. The initial requesting application can now query, page, sort, etc against the data in Cloudant until they are finished.
Welcome. Your database is ready.
Welcome to IBM dashDB. You can load your data, run SQL queries against the data, and use tools to explore predictive analysis and in-database analytics. Sample data is already loaded. Start exploring the power of dashDB!

Load your data  Go to your tables

Work Faster
IBM dashDB is the premiere cloud warehousing and data analytics tool for driving faster, deeper insights.

Load Data
Load data from your workstation, cloud storage, other databases, or from on-premises servers.

Work with Tables
Browse your data by drilling down into the tables, rows, and columns. See how your data is organized.

Run Queries
Run queries to locate or identify specific information in your data.

Connect Tools
Connect apps to the dashDB database for analysis or for expanded functionality.

Make Connections
IBM dashDB

Fast, fully managed, cloud data warehouse that leverages integrated analytics to deliver answers as fast as you can think. dashDB’s unique built-in analytics, R predictive modeling and business intelligence tools free you to analyze your data to get precise insights, quicker.

- Built-in performance with in-memory technology
- Predictive modeling built into the database (linear regression, k-means clustering, Esri compatible, and more)
- Works with an ecosystem of apps and tools
- Integrated security and maintenance
The Future of Cloud Based Analytics: A foundation with dashDB

- Fully managed data warehouse in the cloud
- In-memory acceleration capabilities with columnar technology, advanced compression, and buffer pool technology
- In-database predictive analytics & R-support
- Integrated with Cloudant for analytics on JSON data from web & mobile apps
- True “Load & Go” approach – no need to predefined indexes
- Built-in Netezza analytic algorithms

Coming in 2Q!

- Enhanced Netezza Compatibility • Oracle Compatibility Mode • MPP •
Use Case 3

A Food Distributor: had been using Oracle but required better insight into streamlining sales operations through their various channels/businesses
Use Case: Food Distributor

Company Background:
An international food distributor with zero analytics or insight around financial data from different areas of the business.

Need:
Required better insight into streamlining sales operations through their various channels (consumer, wholesale, pet food, retail).

Success Criteria:
- Traditionally, an Oracle Shop, but the marketing department brought in and required integration with Tableau
- Someone to perform rapid provisioning of the data warehouse on the cloud without requiring any DBA expertise

Solution & Results:
- They were able to access the data seamlessly using Tableau.
- Without a DBA, they were able to load data into the dashDB data warehouse and used Watson Analytics in along with dashDB to perform even deeper analytics
Use Case: Food Distributor - Architecture Details

- Softlayer Dallas
  - Public Cloud
    - dashDB

- IBM Watson Analytics

- Oracle Database Environment
  - Arkansas Datacenter
  - Financial Data

The company’s team created their own scripts to load the data.
Use Case 4

A Car Manufacturer: requires a data management or analytic solution to understand campaign effectiveness.
Use Case: Car Manufacturer

Company Background:
A multinational car manufacturer is equipping their 2015 and later models with an "interactive" infotainment system.

Need:
A data management or analytic solution to understand campaign effectiveness.

Success Criteria:
Take unstructured data, automatically format it, and report against it in the cloud, allowing the company’s marketing team & merchants to segment customers and measure campaign effectiveness.

Solution & Results:
• Provisioned a prototype environment of dashDB with Cloudant in 24 hours illustrating the speed and agility possible
• Flexibility and power of the IBM portfolio was critical for the project’s success
• The car manufacturer is getting a lot of value and analytics from their infotainment systems.
Use Case: Car Manufacturer - Architecture Details

- Vehicle Data
- Other Data Sources
- IBM Cloudant
- Cloudant Schema Discovery Protocol
- IBM Datastage
- JSON data to relational
- IBM dashDB
IBM Big Insight on Cloud
IBM InfoSphere BigInsights Enterprise Edition

Understand IBM big data tools: Explore before doing

Learn about BigInsights
Understand the tools for analyzing data at rest and gaining business insights.

Tasks

Accelerate machine log, social, and telecom metadata
If you have installed one of the IBM accelerators, you can use these for analytics.

Create a dashboard
Create a dashboard to monitor your applications...

Chain (or link) applications
Chain together several applications to run in a predefined order.

Explore and update data using sheets
Explore your data set to discover, analyze, and visualize your data.

Run an application
Run an application once, immediately.

Deploy or remove an application
Deploy an application on a cluster, or remove an application.

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IBM Big Insight on Cloud

Provision enterprise-scale, multi-node clusters on the cloud to meet your business needs. Access your provisioned clusters for simple database transactions, to augment your data warehouse, or to perform rich analytics. With BigInsights on Cloud, our clients can manage less and analyze more.

- For Production and POC deployments at scale in the cloud
- Delivers flexibility and efficiency with subscription pricing
- Scales to meet spikes in demand without on-premise infrastructure
- Drives enterprise-class, complex analytics on Big Data sets
- Available via the IBM Cloud Marketplace and Bluemix
BigInsights on Cloud – Enterprise Hadoop as a Service

Big Data – easier, faster, richer
- Analyze petabytes of any kind of data on elastic compute clusters

Easy to adopt
- Provisioned, hosted, scaled for you

Native Hadoop enriched with:
- Faster performance
  ~4x faster than open source Hadoop
- Visualization tools
- Built-in R, streaming & text analytics
- Data protection & governance

Easy to integrate
- Connect common 3rd party BI tools
Use Case 5

A Pharmaceutical Company: embarks on treatment analytics with an IBM cloud-based solution
Use Case: Pharmaceutical Company

Company Background:
A globally distributed $10+ billion pharmaceutical company

Need:
• An analytics platform to execute against a time-sensitive project focused on the benefits of a pharmacological treatment of obesity
• Analysis to be performed on Electronic Medical Records (EMR) data that the organization owns, but cannot fully analyze given system constraints.

Success Criteria:
• Apply big data technologies and analytical techniques without having to manage an analytical environment on-premises.
• Gain the necessary insights regarding the relevance of pharmacological treatment of obesity, which would allow the organization to build an economic model for obesity treatments.

Solution & Results:
• The environment was provisioned and made available to the customer in less than 48 hours to begin executing against the project
• An analysis to inform discussion about the relevance of pharmacological treatment of obesity, and to obtain costs estimates to build an economic model for obesity treatments.
What Can You Do Now?

- Go to bluemix.net and get an IBM ID to work with our Cloud Data Services offerings and many other IBM cloud and SaaS offerings.

- Contact your IBM Analytics sales rep to secure a deeper discussion into how our Cloud Data Services offerings can drive value and transformative projects within your organization.
Questions?
Thanks!