IBM®

The future runs on System z

More Informed, Faster and More Aligned Business Decisions with Cognos BI for Linux on System z

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Dave Jeffries – Program Director, BI and PM Strategy on System z

Agenda

- Why BI on System z
  - The Products, The Driver, The Solution…
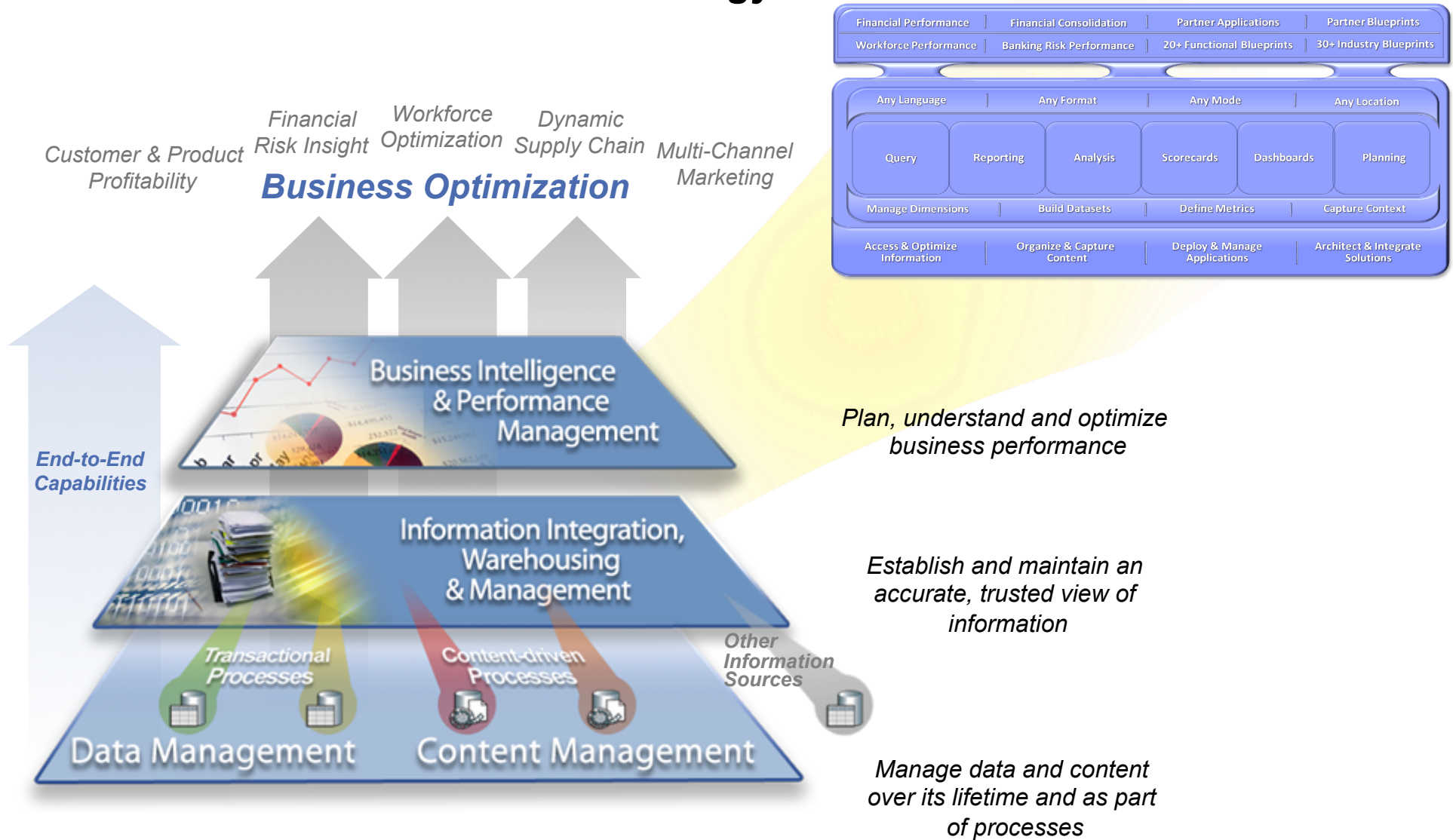 - Success Stories

- Virtualization

- Using BI with Warehousing
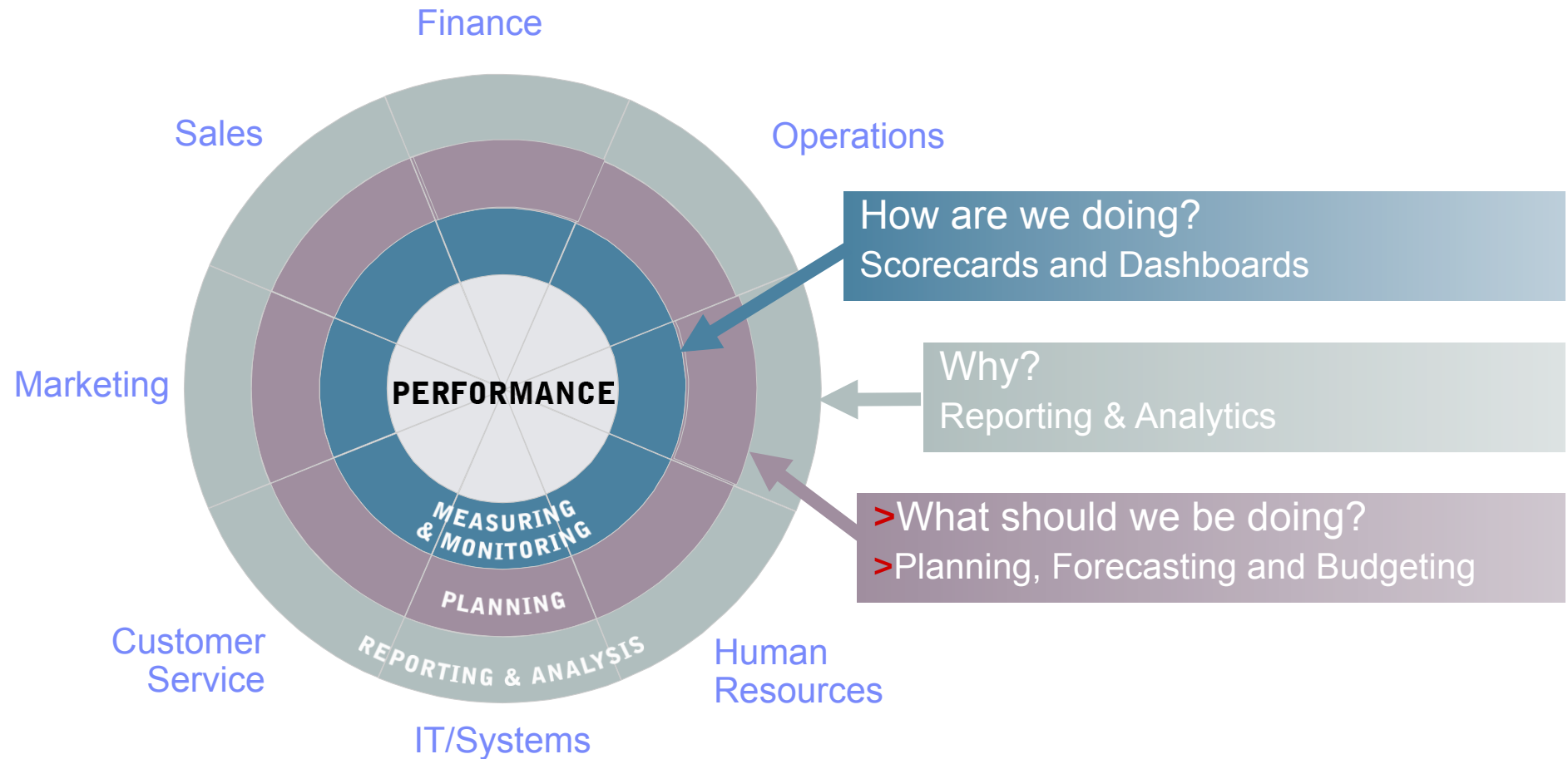 - Capabilities, Options

- Deployment Patterns

Business Intelligence

- 90% Query, charting, reporting, and dashboards

- Typically a view of "what happened?" or "where are we now?"

- Targeted at non-IT users and analysts though IT is often far more involved than they want to be

- An evolution from the mainframe to client/server and now back to a server-centric interface including System z

- End of the era of independent BI tools and the emergence of BI 'platforms'

- An area where every CIO has shown an interest

- Transitioned from a 'quaint' approach business problem solving to mission-critical in many accounts

- Complex business analytics … a 'word problem'

Performance Management
Answers three important questions that drive better performance

PERFORMANCE

MEASURING & MONITORING

PLANNING

REPORTING & ANALYSIS

Finance

Operations

Sales

Marketing

Customer Service

IT/Systems

Human Resources

How are we doing?
Scorecards and Dashboards

Why?
Reporting & Analytics

>**What should we be doing?**
>Planning, Forecasting and Budgeting

IBM Cognos 8 BI for Linux on System z
… a unique offering

- Cognos' first venture on System z – previously only LUW platforms were supported – GA in June 2008

- Customer-driven initiative – "Add value to my System z investment!"

- Provides a total System z solution from data to analysis

- Complements IBM's Data Warehousing for System z offerings

- Utilizes System z specialty engines (IFLs, zIIPs for DB2 workload)

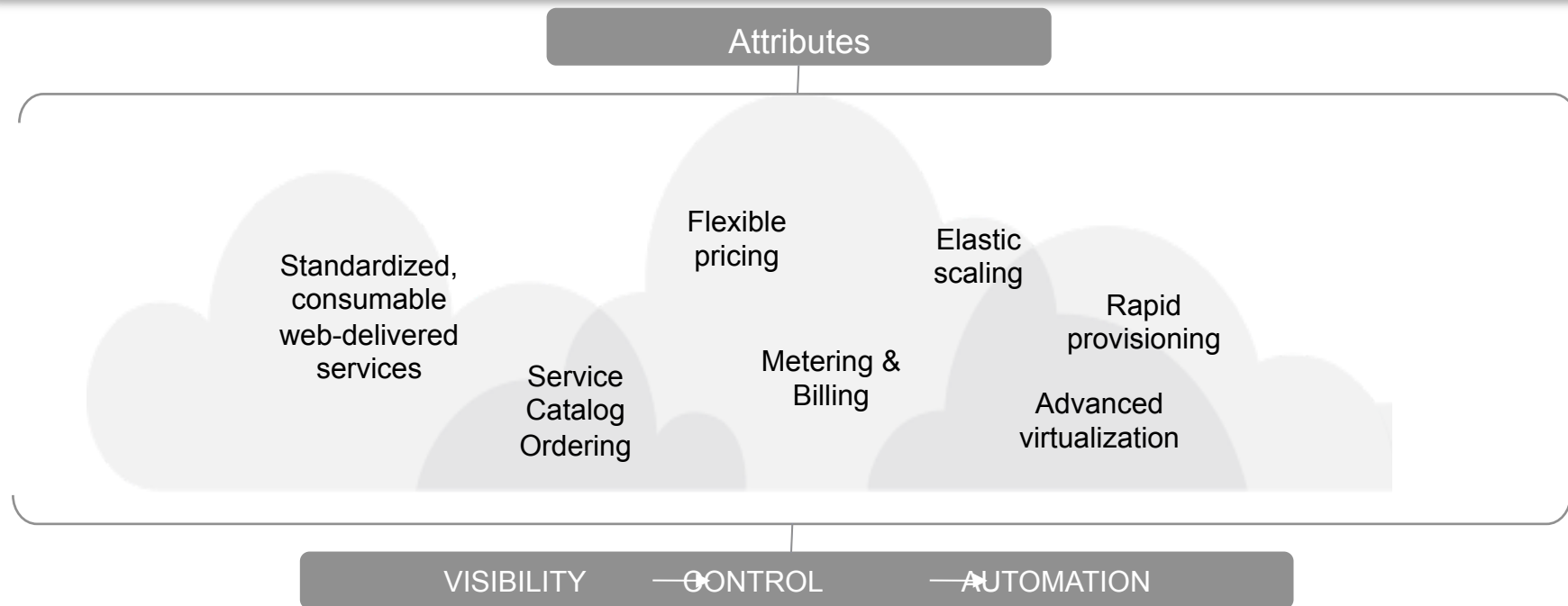- BI processes and enterprise data co-resident on System z

What does this Mean to YOU?

- To the Business:
    - The ability to increase BI usage across the organization,
    - The ability to gain faster and simpler access to the data on System z,
    - The ability to guarantee service level agreements
    - The ability to reduce operating costs
    - The ability to experience a faster time to value
- To IT:
    - The ability to offer an Enterprise BI service to the entire organization
    - The ability to simplify their BI infrastructure
    - The ability to reduce corporate IT costs
    - The ability to ensure the availability and quality of service of their mission critical BI solution
    - The ability to protect their most strategic asset – their business intelligence
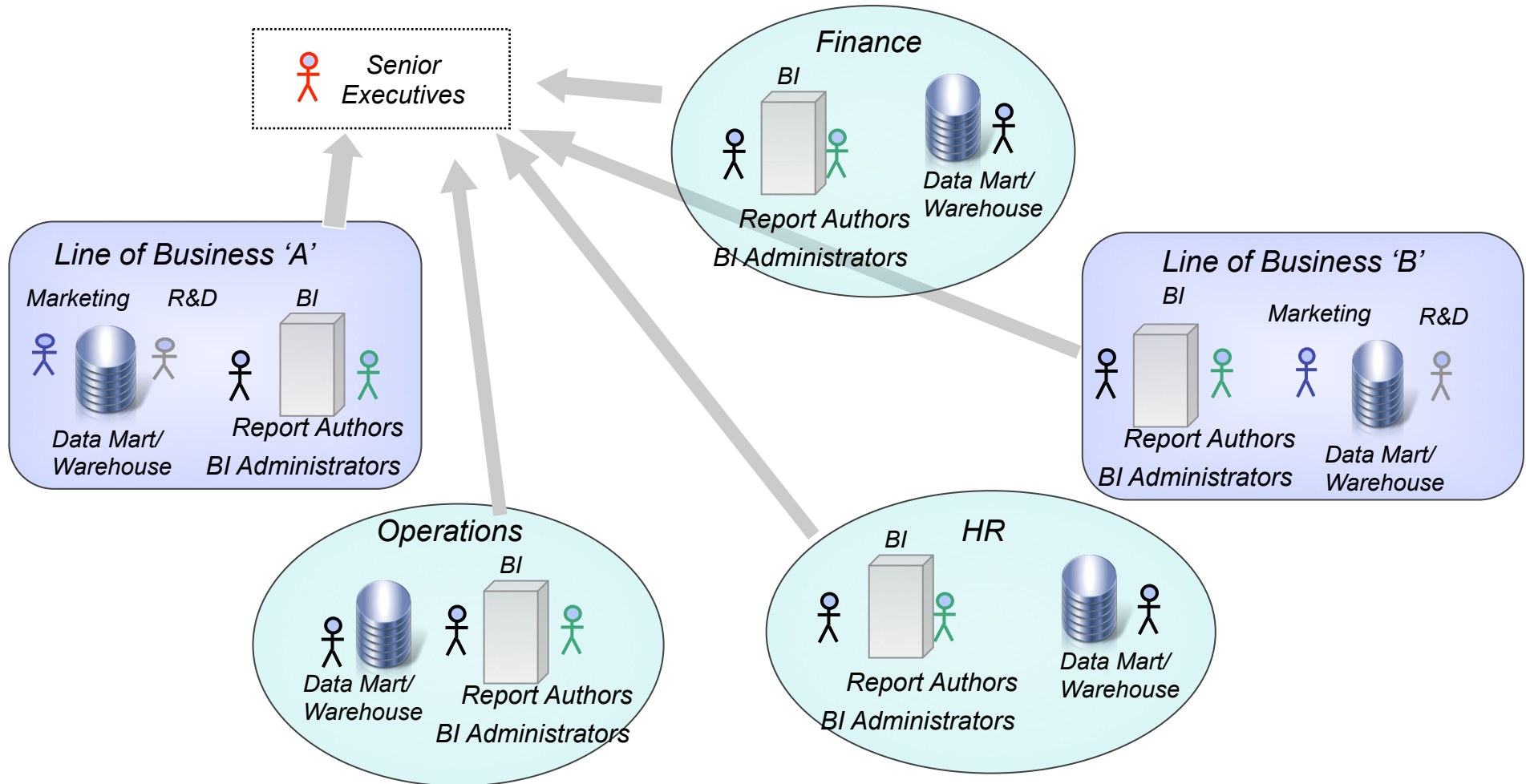
Enterprise BI and Cloud Computing

"Cloud" is an emerging consumption and delivery model for many IT-based services, in which the user sees only the service, and has no need to know anything about the technology or implementation

Attributes

Flexible pricing

Elastic scaling

Standardized, consumable web-delivered services

Rapid provisioning

Service Catalog Ordering

Metering & Billing

Advanced virtualization

VISIBILITY   CONTROL   AUTOMATION

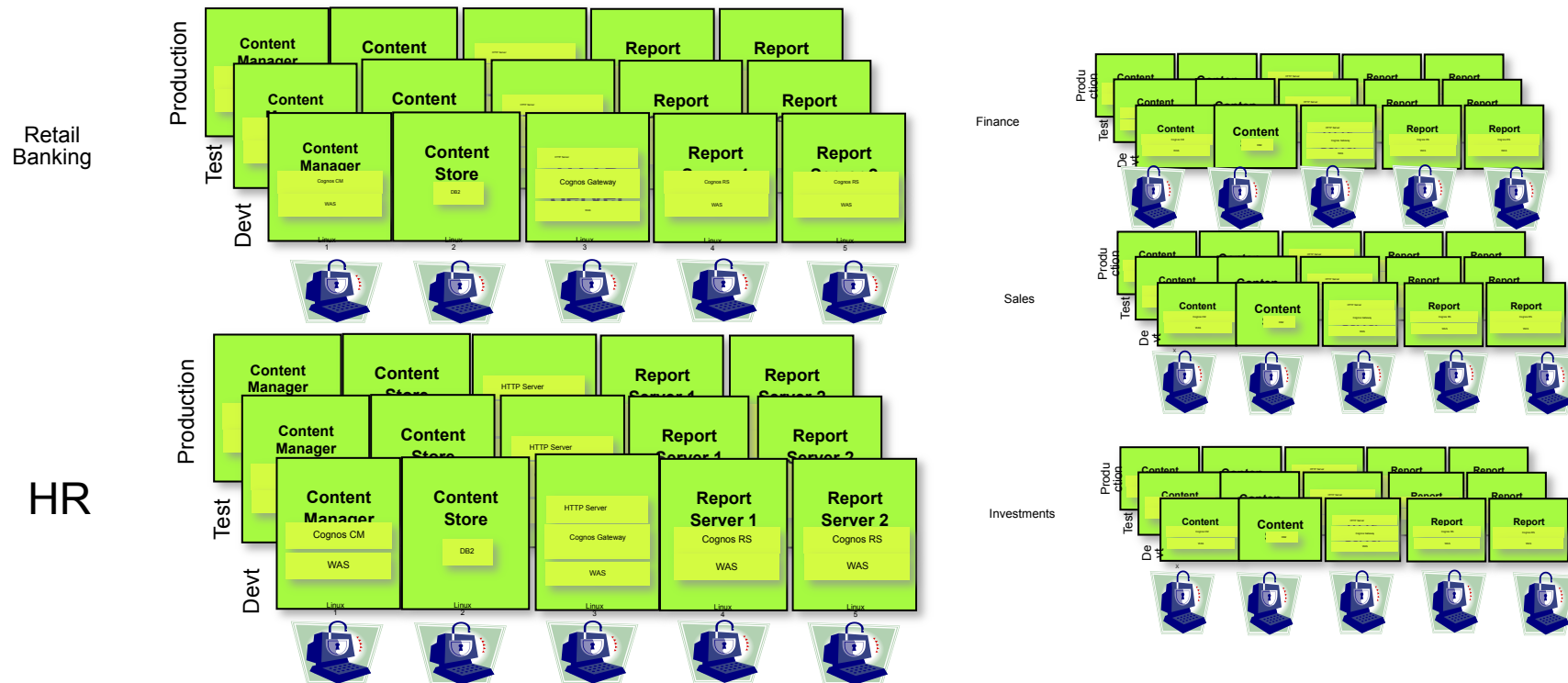....service oriented and service managed

Delivering BI to the executives who need it most is a challenge
Information must be aggregated from a series of departmental BI deployments

Each BI deployment is a silo and slightly different than every other BI deployment.

Virtualizing the Data Centre – The Sheer Complexity Issue

Multi-Tenancy Enterprise Configuration

Now imagine all those departmental servers needed…

Cognos 8 BI on System z

Combines the industry leading power of Cognos 8 BI with System z for:

- A significant savings in the:
  - Hardware,
  - Software,
  - Operating and
  - People costs
- Faster time to value:
  - A reduction in the time and speed associated with deploying BI
- Industry leading
  - Scalability,
  - Reliability,
  - Availability and
  - Security
- Simplified and faster access to the data on System z.

What does it mean to YOU?

➢ To the Business:

- The ability to increase BI usage across the organization,
- The ability to gain faster and simpler access to the data on System z,
- The ability to guarantee service level agreements
- The ability to reduce operating costs
- The ability to experience a faster time to value

➢ To IT:

- The ability to offer an Enterprise BI service to the entire organization
- The ability to simplify their BI infrastructure
- The ability to reduce corporate IT costs
- The ability to ensure the availability and quality of service of their mission critical BI solution
- The ability to protect their most strategic asset – their business intelligence

Virtualising the Data Centre - Challenges

- Imagine the challenges of…

  - ❑ Provisioning Hardware ?
  - ❑ Provisioning Software ?
  - ❑ Managing Code levels/Stack levels ?
  - ❑ Adding a change ?
  - ❑ Migrating to a new release ?
  - ❑ Bringing a new LOB on line ?
  - ❑ Creating a repeatable auditable service ?

- = Complex Environment

- = Slow responsiveness to the business

- = No Agility

Virtualising the Data Centre - Solutions

- Virtualise those services onto System z

- Support Multiple 'Multi'-Server configurations

- …or multiple single server configurations

- Provide 'cookie-cutter' service rollout

  - Common practices
    - SLAs, Security Model, Service Delivery
  - Auditable
  - Rapid delivery

- = Multi-level implementations in single System z environmen

- = Multi-tenancy operations/separation

- = Cloud-ready !

- = Agile business

Smart Analytics Cloud

A private cloud optimized for analytic services in large enterprises

	Defined as …	To create…	That delivers …
Smart Analytics Cloud	IBM Smart Business - services with industry leading hardware & software	A private cloud computing solution for business intelligence (BI) & analytics	A services solution for delivering business intelligence to the entire organization

IBM software

Cognos 8 BI
A broad range of BI capabilities

Web   Mobile   Search   Office

Reporting   Analysis   Dashboards

Open, enterprise-class BI platform

IBM hardware

IBM System z
Centralize, Virtualize & Simplify the BI infrastructure

IBM Services

- Create awareness of BI and understand the needs for a BI strategy across the organization

- Complete a readiness assessment to define the scope and priorities for the solution

- Deploy Cognos 8 BI for Linux on System z as a private cloud

- Provide the skills for the on going management & expansion of their BI private cloud deployment

Real Time Monitoring with IBM Cognos Now! - FAQ

What is IBM Cognos Now! ?

- Real time monitoring solution providing immediate operational insights to the line of business user
- Packaged as software for System z Linux
- Aggregates operational KPIs across multiple transactional systems and data sources in real time
- Provides exception notification with **_automated alerting via dashboard or email_**
- **For critical, intra-hour/day monitoring of operational KPIs and metrics and immediate corrective action/response**

Describe the typical buyer agenda

- Requires **_real time, continuous_** monitoring of aggregated KPIs from multiple source systems
- Supports the operational business users **_who need to make time sensitive decisions_**
- Does not need reporting (no reporting available with Cognos Now! for System z on Linux)
- Needs alerting capability against predetermined thresholds with exception notification

What other factors drive a Cognos Now! purchase?

- Low TCO, rapid time to market
- Information source agnostic, multiple transactional systems involved
- Key industries: banking, insurance, brokerage, telecommunications

Who are the typical users?

- Front Office and Frontline Operations agents, managers, executives
- Line of business, i.e. call center, logistics, dispatch, field service, online sales, utilities technicians, banking front office

Cognos 8 BI on System z – *Customer Successes*

- IBM FMS Team
  - Internal deployment of Cognos on System z by GBS team
  - Migration from Brio to Cognos in 4 months
  - In Production supporting up to 47000 users on System z10

- Numius Business Partner
  - Proof of concept migration from HP+Oracle+Win+Cognos to System z+ DB2z+Cognos
  - Significant performance gain – 1 report to 400+ reports
  - Customer success webcast delivered + IOD presentation

- Blueinsight
  - Internal Cognos@IBM project
  - 60+data sources, federated to System z
  - 20 LOBs consolidated and hosted

- Key Customer Value Points:
  - Utilize spare IFL capacity – virtualization/consolidation value
  - Speed to deployment/value and simplicity of migration
  - Enterprise BI Service delivery platform – standardized service offering capability with security, process compliance and predictive scalability

IBM Cognos 8.4.1 BI for Linux on System z

Product Capabilities

8.3
• Adhoc query, reporting and analysis (Query Studio, Report Studio & Analysis Studio)
• Dashboards and charting (Cognos Connection & Report Viewer)
• Event management (Event Studio)
• Integration with Microsoft Office (Go! Office and CAFÉ)
• Cube building (Transformer)

8.4
• Query Studio: more user preferences, filtering & sorting enhancements
• Analysis Studio: suppression across multiple items, display date cube last updated
• Reports: more drill through capabilities, pass filters from source report to target report, more charts and graphics
• Access WebSphere Business Glossary
• Lineage of data item life cycle
• Paramaterized SQL Governor

8.4 Extended
• Go! Search
• Virtual View Manager
• InfoSphere Federation Server
• Cubing Services (IWHz)

8.4.1
• TM1 Cubes as data source - client access only
• Mash-up

Initial Conformance

Operating System:	• DB2 z/OS 8 and 9 • DB2 LUW 9.5 • Oracle 10g • Informix Database Server 11.5 • InfoSphere Warehouse 9.5.2 for DB2 z/OS
Application Server:	• Apache Tomcat • WebSphere 6.109 (31bit) • WebSphere 6.1 64bit • Oracle Application Server (31bit) • JBoss Application Server (31bit) • SAP NetWeaver 7.0 Application Server (64bit)
Content Store:	• Derby on Linux for System z • DB2 9.5 LUW • DB2 9 for z/OS • Oracle 10g
Directory Server:	• Netscape Directory Server 6 • Sun ONE Directory Server 5.1 SP1, 5.2 • IBM Tivoli Directory Server 5.2, 6.0 • Novell e-Directory Server 8.7.3 • LDAP version 3 compliant server
Web Server:	• IBM HTTP server 2.0 • IPv6 • WebSphere Portal Server

Federated Data Sources

• Virtual View Manager (Included) – SQL Server, Oracle, MySQL, TD … require JDBC driver from z
• Federation Server ($$) – SQL Server, Oracle, MS Excel, MS Access, TD …
• Classic Fed via Federation Server ($$) – VSAM, IMS, Adabas, IDMS, Datacomm, TD …

IBM Cognos Now for Linux on System z

Product Capabilitie

- Real-time monitoring metrics

- Support for data at rest operational sources as well as data in-motion messaging sources

- Dashboards dedicated to real-time monitoring metrics

- Real-time metrics augmented with reporting objects in Cognos Connection

Initial Conformance

> Operating System:
- SUSE 10 & 11 Linux (64 bit)
- RHEL 4 & 5 Linux (64 bit)

> Metadata Database:
- DB2 LUW 8.1, 8.2, 9.1, 9.5, 9.7
- Oracle 11g, 10g

> Application Server:
- WebSphere 7.0, 6.1 (64 bit)
- JBoss 4.2.3 (64 bit)

> Directory Server:
- Netscape Directory Server 6
- Sun ONE Directory Server 5.1 SP1, 5.2
- IBM Tivoli Directory Server 5.2, 6.0
- LDAP version 3 compliant server

> Web Server:
- IBM HTTP server 6.0+
- Apache HTTP Server 2.2+

Faster Time to Value

- A z10 EC mainframe with z/VM can create a new virtual image in 10 seconds to run a new application on hardware that you already own.

- Forward binary capability for new generations. Multiple image maintenance is much faster.

- x86 Virtualization products can virtualize quickly, to a point. Extending capabilities: When will you run out of images or need a new server? Speed and ease of deploying logical and physical servers?
Technology refresh?

- Ordering and installing a new x86 server can take days or weeks. Lots of effort going to a new generation of server and operating system.

  System z with z/VM speeds server positioning and gives on demand flexibility

Proven To Scale Across the Enterprise.

- Testing demonstrated IBM Cognos 8 BI for Linux on System z **scales linearly** to large user groups

> "**Cognos, …makes it easy for companies to deploy BI and PM** to a broader user population, while **minimizing the resulting workload for IT** departments."
>
> *- Nucleus Research, Cognos Takes on the Rest of the Enterprise, November, 2007*

Linear Scalability IBM Cognos 8 BI for Linux on System z

- Testing was conducted on up to **90,000 named users**

System z is the ideal platform for private cloud computing

Economies of scale achieved with less resources, moving parts, and money, while delivering more compute capacity from system resources

Dramatic Simplification through Virtualization

IBM's Project Big Green System z consolidation results in 60-75% gross cost savings (5 yr TCO)

Unit	Distributed	System z Linux	% Reduction
Software Licenses	26,700	1,800	93%
Ports	31,300	960	97%
Cables	19,500	700	96%
Physical Network Connections	15,700	7,000	55%

TCO Reductions with Cloud Computing

IBM found cost comparisons for 100 virtual Linux servers to be cheaper with Private Clouds on z

Cost Per Image for Linux Workloads (5 Yr TCO)

Cost per Workload/Image

Private cloud delivered at substantial savings over public cloud

- Buy Standalone Servers — $375K
- Public Cloud (Amazon) — $277K
- Private Cloud VMware — $62.2K
- Private Cloud zLinux Add IFL's To z10 EC — $47.6K
- Private Cloud zLinux Buy New z10 BC — $61.3K

System z is designed for operational efficiency

▪ **Near-linear scalability**	**up to 900,000+ concurrent users; TBs of data**
▪ **"Mean Time Between Failure"**	**measured in decades versus months**
▪ **¼ network equipment costs**	**virtual and physical connectivity**
▪ **1/25th floor space**	**400 sq. ft. versus 10,000 sq. ft**
▪ **1/20 energy requirement**	**$32/day versus $600/day**
▪ **1/5 the administration**	**< 5 people versus > 25 people**
▪ **Highest average resource utilization**	**Up to 100% versus < 15%**
▪ **Capacity Management & upgrades**	**On demand; in hours, not weeks/months**
▪ **Security intrusion points**	**Reduced by z architecture and # of access pts.**
▪ **Higher concurrent workload**	**hundreds of applications versus few**

Cost Savings

Your IT Cost may vary:

Up to 80% Saving in IT Cost
Up to 96% Less Hardware
760 x86 Processor Cores vs 26 IFLs
Potential for dramatic reductions in software
expense for processor based licenses
Potential reductions in power and cooling
Up to 93% Savings in KWatts and Energy
Costs in this scenario
Up to 46% Less Space
Up to 89% People savings
Increased processor utilization
Industry leading Security

Energize your IT savings with z10 EC.

Consolidating 760 Linux servers
z/VM Virtualization versus x86
Oracle DB Workload
3-Year Total IT Cost

$56 M Savings versus
x86 without Virtualization

5.1 X

80% Savings

2.0 X

1.0 X

Legend:
- Space
- Power
- People Cost
- Software Maint
- Software
- Maint
- Hardware

760 x86 CPs

248 x86 CPs

26 z10 EC IFLs

x86 w/o
Virtualization
Sun X2100
Single Core
servers

x86
Virtualization
Dell Power
Edge Quad
Core servers

z/VM Linux on
System z10 EC

Numius's Client Success Story -
Is using Cognos 8 BI for Linux on System z, and here's why:

For internal data analysis, process management and for external communication with its 10.000 B2B clients and with about 200 B2B business partners

Requirements:

- Numius's client faced strongly degrading performance, both for database queries as well as for OLAP processing.

- Numius's client wanted to outsource entire computer infrastructure to a central computing centre.

- Numius's client wants to achieve economies of scale by simplifying the heteregenous distributed computing architecture.

- Numius's client wants to use its business intelligence tools as an individualised communication channel with its stakeholders (clients, business partners, shareholders,...)

Solution:

- To successfully port an existing business intelligence environment from an Intel-HP / Windows – HPUX – Oracle 10g – MS SQL server 2000 architecture to an IBM Cognos 8.3 on System z – IBM DB2 9 for z/OS architecture.

Results:

- The application was successfully and without loss of functionality ported to the System z platform with no redevelopment required.

- The client's application did not require a redesign to accomodate its growth in data volumes or in terms of users.

- Reports that were not practically useable at client's site now become relevant again. Reports that did not run at client's site now are runable.

- Client would be able to serve many multiples of current number of users with the very simple architecture from the PoC.

- Client could scale out to more complex architecture without increased hardware complexity.

- Test results showed System z produced 400X the output of the previous system given the same processing time

Field Management System (FMS) Success Story –
IBM is using Cognos 8 BI for Linux on System z, and here's why:

FMS: Used to track sales attainment and revenues

Requirements:

- Rapid deployment and migration needed

- Scalable architecture

- 270 concurrent users capability

- <60 second report response time

- 24x7 WW access requirement – No un-planned outage

- Data currently on DB2 LUW (AIX) environment – over 10TB in warehouse information

- LDAP authentication thru Bluepages

Results:

- System LIVE after 4 months (Migration, Devt and Test)

- Cognos 8v4 with DB2 9 FP1, WAS 6.1.0.17 cluster implementation for failover

- Supports 40,000+ User community

- Handling Territory Analysis, Weekly Reporting, Monthly Achievement reports

- Fewer reports yet more information available to sales team – federating information from multiple data sources

Miami Dade County Success Story –
MDC is using Cognos 8 BI for Linux on System z, and here's why:

MDC: Using System z to standardize on a single BI solution

Requirements:

- Demand for BI has really taken off
  - New Federal reporting requirements
  - Every new system, every new solution, every new application is having a business intelligence component

- Multiple Cognos 8 BI deployments - 6+

- Wanted an enterprise BI standardized solution, but
  - Needed higher capacity – grow from approx 400 to 1000 users
  - Do more with less - less researchers, less software, less hardware, same staff
  - Had available IFL's on System z

Results:

- 11 days to move from distributed to System z deployment model for Cognos 8 BI
  - Quickly and easily meet new requirements

- Consolidate multiple BI deployments on to a single platform

- Single point for BI administration

- Consolidate multiple disparate data sources

- Ensure 99.999% availability

- Offer a complete disaster recovery plan

- Additional green savings

50TB Summary

- System z and Cognos BI can respond to operational BI requirements
  - Successfully ran **400 active users** simulating call center agents accessing a prompted operational BI report
  - Average **1.75 seconds** response time for query and report creation per user over a 15 min run (steady state), at **56% Linux CPU** utilization
  - DB2 for z/OS provides **very efficient access** to operational BI data

- Cognos configuration options for Linux on System z
  - Multiple 31Bit WebSphere Application Servers on a single system
  - Varied resources assigned to Linux on System z and Cognos

- Load testing techniques using Rational Performance Tester
  - Strategic IBM tool for performance/load tests also recommended for customer tests

- Collateral
  - Best practices and results in Redbook
  - Collected detailed performance measurement data

Cognos 8 BI for Linux on System z - Conclusion

Combines the industry leading power of Cognos 8 BI with System z for:

- A significant savings in the:
  - Hardware,
  - Software,
  - Operating and
  - People costs
- Faster time to value:
  - A reduction in the time and speed associated with deploying BI
- Industry leading
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  - Security
- Simplified and faster access to the data on System z.

System z Virtualization and Cognos exploitation

Virtualisation – Issues, Challenges and Simplification

- Virtualising the Data Centre

    - Challenges

    - Solutions

- Typical Customer configurations

The Power and Flexibility of System z Virtualization

✓ Over 40 years of continuous innovation in virtualization technologies
✓ Architecture designed and optimized for resource over commitment
✓ Multiple images concurrently share all physical CPU and I/O resources
✓ Resources delivered as needed, automatically, based on business-oriented goals
✓ New OS images can be started without affecting ongoing work
✓ Hardware assists used to accelerate virtualization operations (e.g., SIE)

Virtualizing the Data Centre – The Utilisation Issue

Basic Distributed Configuration

Content Manager	Content Store	HTTP Server	Report Server 1	Report Server 2
Cognos CM WAS	DB2	HTTP Server Cognos Gateway WAS	Cognos RS WAS	Cognos RS WAS
Linux 1	Linux 2	Linux 3	Linux 4	Linux 5

Line Of Business A (e.g. Retail Banking)

Utilisation	10%	20%	10%	40%	40%
Unused	90%	80%	90%	60%	60%

Each machine has wasted capacity

Virtualizing the Data Centre – The Multiple Purpose Issue

Multi-level Configuration

Retail Banking

Production

Test

Devt

Content Manager	Content Store	HTTP Server	Report Server 1	Report Server 2
Content Manager	Content Store	HTTP Server	Report Server 1	Report Server 2

Content Manager
Cognos CM
WAS
Linux 1

Content Store
DB2
Linux 2

HTTP Server
Cognos Gateway
WAS
Linux 3

Report Server 1
Cognos RS
WAS
Linux 4

Report Server 2
Cognos RS
WAS
Linux 5

Used/ Unused (Prod)	**10/90%**	**20/80%**	**10/90%**	**40/60%**	**40/60%**
Used/ Unused (Test)	10/90%	10/90%	10/90%	20/80%	20/80%
Used/ Unused (Devt)	10/90%	5/95%	10/90%	10/90%	10/90%

Add that up over the environments managed…

Virtualising the Data Centre - Challenges

- Imagine the challenges of…

  - ❑ Provisioning Hardware ?
  - ❑ Provisioning Software ?
  - ❑ Managing Code levels/Stack levels ?
  - ❑ Adding a change ?
  - ❑ Migrating to a new release ?
  - ❑ Bringing a new LOB on line ?
  - ❑ Creating a repeatable auditable service ?

- = Complex Environment

- = Slow responsiveness to the business

- = No Agility

Virtualising the Data Centre - Solutions

- Virtualise those services onto System z

- Support Multiple 'Multi'-Server configurations

- …or multiple single server configurations

- Provide 'cookie-cutter' service rollout
    - Common practices
        - SLAs, Security Model, Service Delivery
    - Auditable
    - Rapid delivery

- = Multi-level implementations in single System z environmen

- = Multi-tenancy operations/separation

- = Cloud-ready !

- = Agile business

Virtualizing the Data Centre

Multi-Tenancy Enterprise
Configuration

'Private Cloud'
Architecture

Retail

HR

Sales

Content Manager	Content Store	HTTP Server	Report Server 1	Report Server 2
Cognos CM	DB2	HTTP Server	Cognos RS	Cognos RS
WAS		Cognos Gateway	WAS	WAS
		WAS		
Linux 1	Linux 2	Linux 3	Linux 4	Linux 5

Single z10 – Target Utilisation = 99%

Cognos in relation to
IBM Data Warehousing on
System z

The Bigger IBM Picture - Data Warehouse and BI on System z

OLTP data

Information Server And IS Warehouse for System z

Complete ETL and DW Build Solution

Data Warehouse

DB2 for z/OS

The Enterprise Data Warehouse

Cognos 8 BI for System z

Enterprise BI

Core Offering for Enterprise Data Warehouse and BI:

- Information Server for System z
  - A complete set of ETL tools for warehouse population and management
- InfoSphere Warehouse for DB2 on z/OS
- DB2 for z/OS, including the new DB2 for z/OS Value Unit Edition
  - A new value point for new DB2 z/OS workloads
- IBM Cognos 8 BI for System z

Data Warehouse and BI factors on System z

- The bulk of enterprise data is captured and stored on a System z platform

- The rate and volume of captured data increasing exponentially

- Data collected on System z is often replicated to a distributed platform creating lag time and substantial additional processing

- Real-time and operational uses of data (e.g. customer service) are becoming increasingly more prevalent and mission-critical

- 24x7 operation and system security/regulatory compliance are high priority within the enterprise

- Cost factors
  - Server consolidations
  - SW and hardware costs of distributed systems
  - BI Tools consolidation and standardization
  - Power consumption
  - Time to increase server processing and acquisition versus starting a new Linux image

InfoSphere Warehouse on System z

- Adds core data warehouse and analytics capability to DB2 for z/OS

  - Advanced physical database modeling and design

  - in-database data movement and manipulation capabilities of SQL Warehouse Tool (SQW)

  - Optimize multidimensional reporting and analysis of data with Cubing Service

- Additional capabilities available as part of a broad System z Solution

  - Cognos 8 BI

  - InfoSphere Data Architect

  - Information Server

  - MDM Server

  - Industry Data Models

MDM Server

InfoSphere Data Architect

Cognos 8 BI

InfoSphere Warehouse

Information Server

IBM Industry Models

IBM Cognos on System z Deployment Patterns

Accessing Different Data Sources/Content Stores Now
and in the Future

Scenarios

- Data Sources (Just *some* examples)
  - Oracle
  - SQL Server
  - Teradata
  - IMS/VSAM/Adabas etc

- Content Stores
  - Accessing an Oracle Content Store on a Different Platform

Accessing Oracle from a zLinux base

Linux on System z

LUW

Data Source — Oracle DB2 LUW,z/OS

Content Store

Report Server

Oracle ODBC Client

WebSphere App Server

WebSphere HTTP Server

Data Source — SQL Server Oracle TD DB2

Part of the Initial GA

+ Access to multiple reports on different platforms from one main platform
+ Consolidated reports across disparate data sources

Accessing SQL Server from a zLinux base (Package Solution)

Linux on System z

LUW

Data Source

Oracle
DB2 LUW,z/OS

Content Store

Report Server

Package Server

WebSphere App Server

WebSphere HTTP Server

Data Source

SQL Server
Oracle
TD
DB2

Content Store

Report Server

WebSphere App Server

+ Access to multiple reports on different platforms from one main platform
- no consolidated reports across disparate data sources
- Inhibitor to full server consolidation to zLinux

Accessing SQL Server from a zLinux base (VVM)

Linux on System z   **LUW**

Data Source — Oracle DB2 LUW,z/OS

Content Store

Report Server

Virtual View Manager

Data Source — SQL Server Oracle TD DB2

WebSphere App Server

WebSphere HTTP Server

GA in early 2009 with 8.4

+ Access to multiple reports on different platforms from one main platform
+ Consolidated reports across disparate data sources

Accessing TD from a zLinux base (Package Solution)

Linux on System z   LUW

+ Access to multiple reports on different platforms from one main platform
- no consolidated reports across disparate data sources
- Inhibitor to full server consolidation to zLinux

Accessing Teradata from a zLinux base (VVM)

Linux on System z   LUW

Data Source — Oracle DB2 LUW,z/OS

Content Store

Report Server

Data Source — SQL Server Oracle TD DB2

Virtual View Manager

WebSphere App Server

GA in early 2009 with 8.4

WebSphere HTTP Server

+ Access to multiple reports on different platforms from one main platform
+ Consolidated reports across disparate data sources

Accessing TD from a zLinux base (Future)

Linux on System z   LUW

Data Source — Oracle DB2 LUW,z/OS

Content Store

Report Server

TD ODBC Client

Data Source — SQL Server Oracle TD DB2

WebSphere App Server

Waiting for TD Client…

WebSphere HTTP Server

+ Access to multiple reports on different platforms from one main platform
+ Consolidated reports across disparate data sources

Accessing IMS/VSAM/Adabas from a zLinux base (Warehouse Solution)

Linux on System z

Data Source — Oracle DB2 LUW,z/OS

Content Store

Report Server

Data Source — IMS VSAM Adabas IDMS

Information Server

WebSphere App Server

WebSphere HTTP Server

+ Access to IMS etc data through the warehouse
- Consolidation of data ONLY at the warehouse level

Accessing IMS/VSAM/Adabas from a zLinux base (Classic Federation)

Linux on System z

Oracle
DB2 LUW,z/OS

Data Source

Content Store

Report Server

Classic Federation

Data Source

IMS
VSAM
Adabas
IDMS

WebSphere App Server

Available in early 2009

WebSphere HTTP Server

+ Access to IMS etc data through the warehouse or OLTP queries

Accessing an Oracle Content Store on a Different Platform

Linux on System z   LUW

Oracle
DB2 LUW,z/OS

Data
Source

Oracle 10g

Content
Store

Report
Server

Oracle JDBC
Client

WebSphere App
Server

WebSphere HTTP
Server

NOTE: the content store could be placed on ANY platform and accessed thru JDBC, ODBC and VVM

Federated Architecture (Customer Example)

Backup