



2010 IBM System z 银行业创新论坛

智慧银行灵动Z远 持续创新共领未来

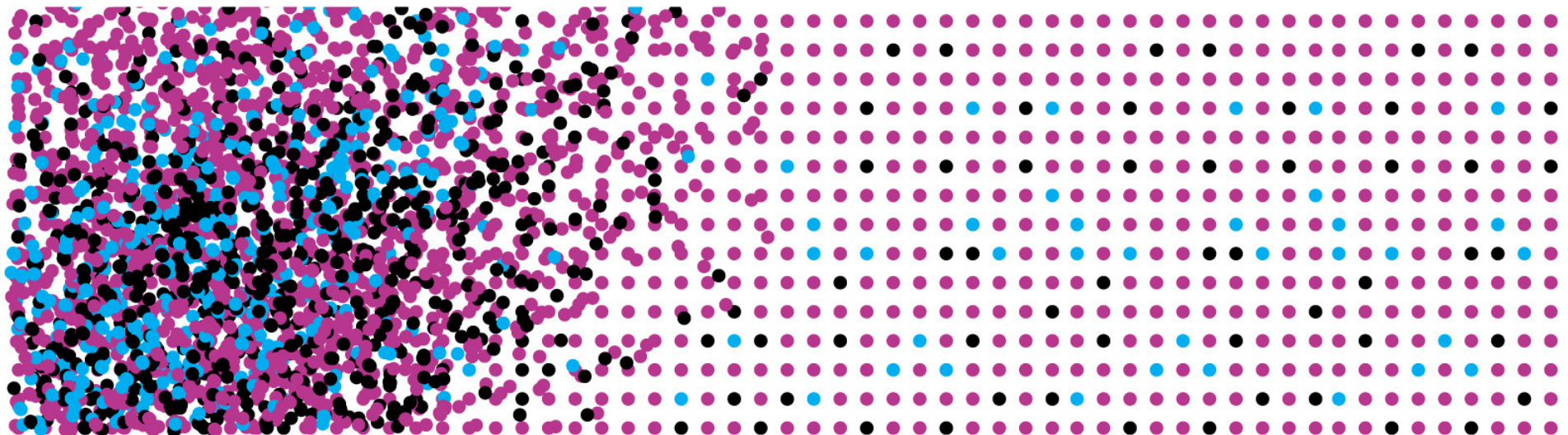


Leveraging System z for Data Warehousing and Business Intelligence

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May 2010





Discussion Topics

- Helping build a smarter planet
- The IBM Smart Analytics System 9600
- The IBM Smart Analytics Optimizer
- System z platform update





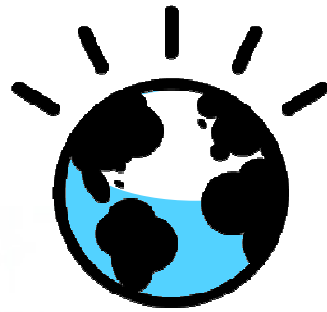
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Helping build a smarter planet



The world is changing and becoming more...



 **Instrumented**

 **Interconnected**

 **Intelligent**

The resulting explosion of information
creates a need for a new kind of intelligence

... to help build a Smarter Planet

With this change comes an explosion in information ...



... Yet organizations are operating with blind spots

Lack of Insight

1 in 3 managers frequently make critical decisions without the information they need

Inefficient Access

1 in 2 don't have access to the information across their organization needed to do their jobs

Inability to Predict

3 in 4 business leaders say more predictive information would drive better decisions

Source: IBM Institute for Business Value

Getting To The Answers Is Not Always Easy

The Pressure is On!



- ☑ No way I can deploy a new system by next quarter!
- ☑ What is our consolidated revenue?, I keep getting different answers...
- ☑ One solution, five vendors, ten support numbers, ..we might as well be system integrators.
- ☑ Revenue & profits are down,..... only thing that is up is my quota.
- ☑ Whatever I spend to solve today's problem must be relevant to solve tomorrows as well.
- ☑ Even if I had the applications I do not trust my information.
- ☑ No way my infrastructure can support these new requirements.

What Clients are Telling Us

We Need

- **We Need a Single System to Deliver Our Analytics Needs**

- ✓ Simplified planning, purchase, deployment, maintenance, and growth
- ✓ Designed for Enterprise class analytics and performance
- ✓ Pay as you grow Modular-based Deployment

- **We Need Faster Time To Value**

- ✓ Pre-Built for Rapid Deployment
- ✓ Pre-tested and Configured to your requirement
- ✓ Out of the Box Performance
- ✓ Minimized risk through standards and proven best practices

- **With Reduced Cost Of Ownership**

- ✓ Reduced integration costs
- ✓ Less Storage, Server and floor Space required
- ✓ Improved system management
- ✓ Quickly add user and data capacity to meet growth requirements

- **And Greater Access to Information and Analytics**

- ✓ Pre-Configured Business Intelligence Modules with flexibility of functionality and style of delivery
- ✓ Optimized and integrated OLAP capability gives you performance at the speed of thought



Data Warehousing on System z Value Points

- Leverage your Investment in System z
- Help Build a Smarter Planet
- Synergize with System z, z/OS and DB2
- Deliver information to your business with Mission Critical Business Intelligence



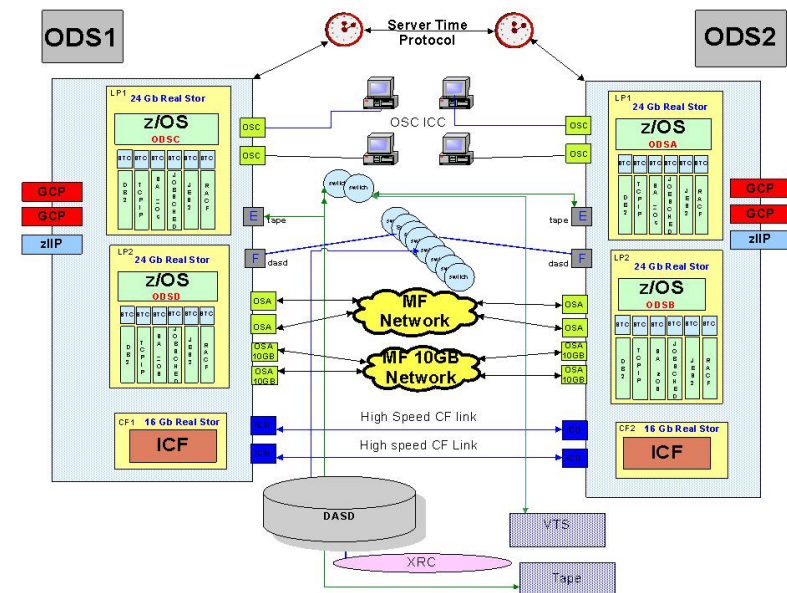
New requirements causing many to leverage System z

– “Real-Time” data access with Dynamic Warehousing

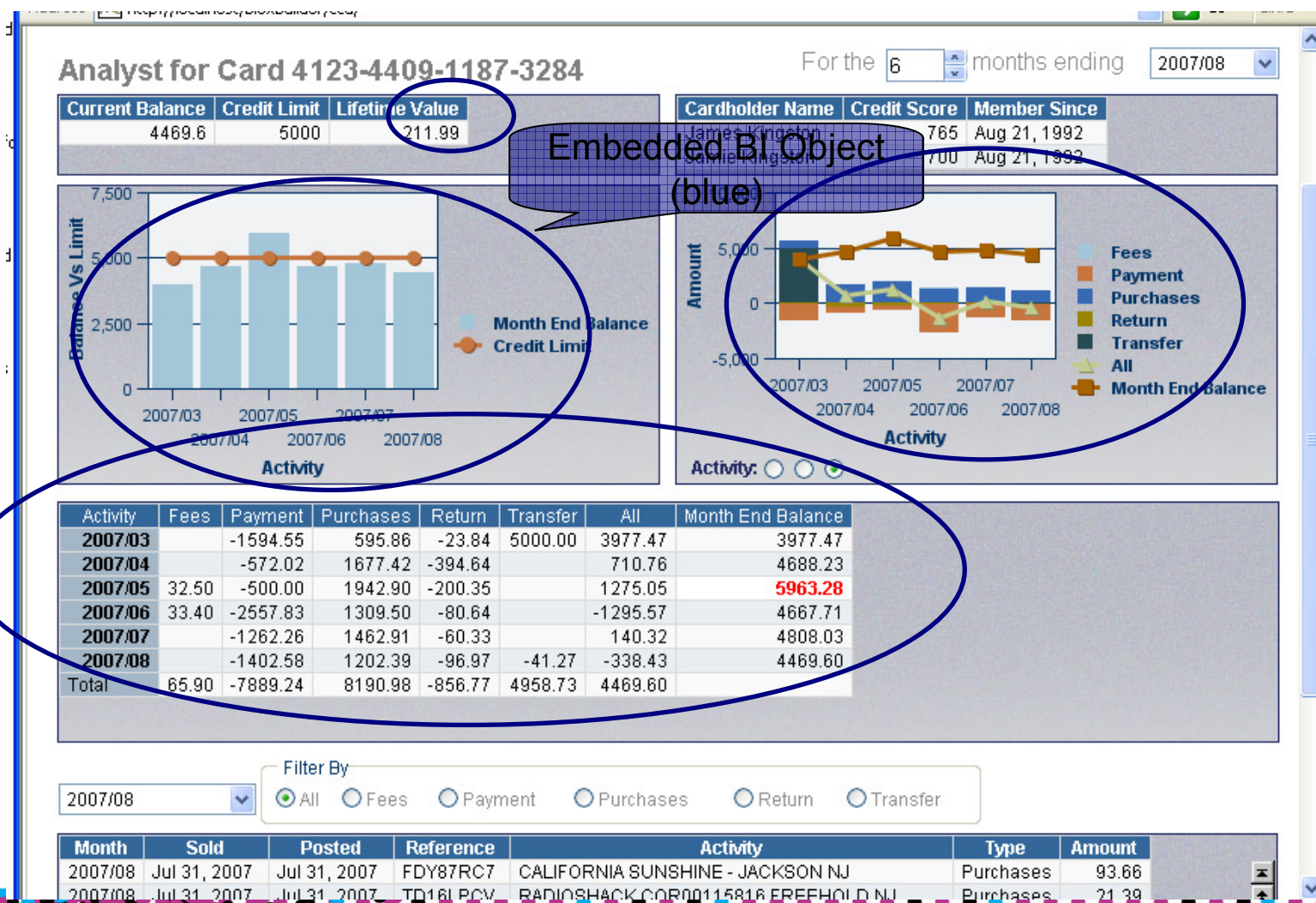
- Monthly, Weekly, and even Daily feeds are no longer acceptable
- “Fresh” data is in demand

– Example

- Customer facing 24/7 Web Access for account information
- Highly Available Operational Data Store
- Increase system responsiveness, availability and reduce the load on the back-end systems

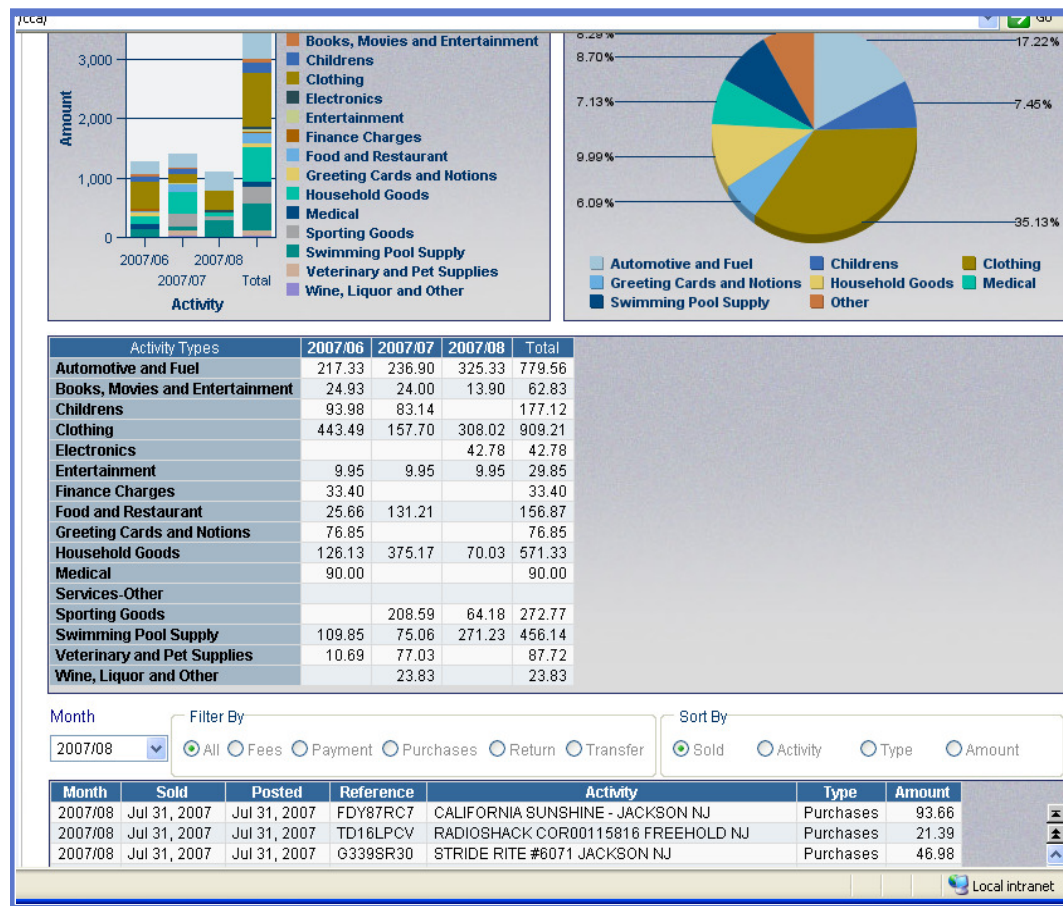


Operational Business Intelligence and Embedded Content – a Customer Service View



Credit Card Self Service

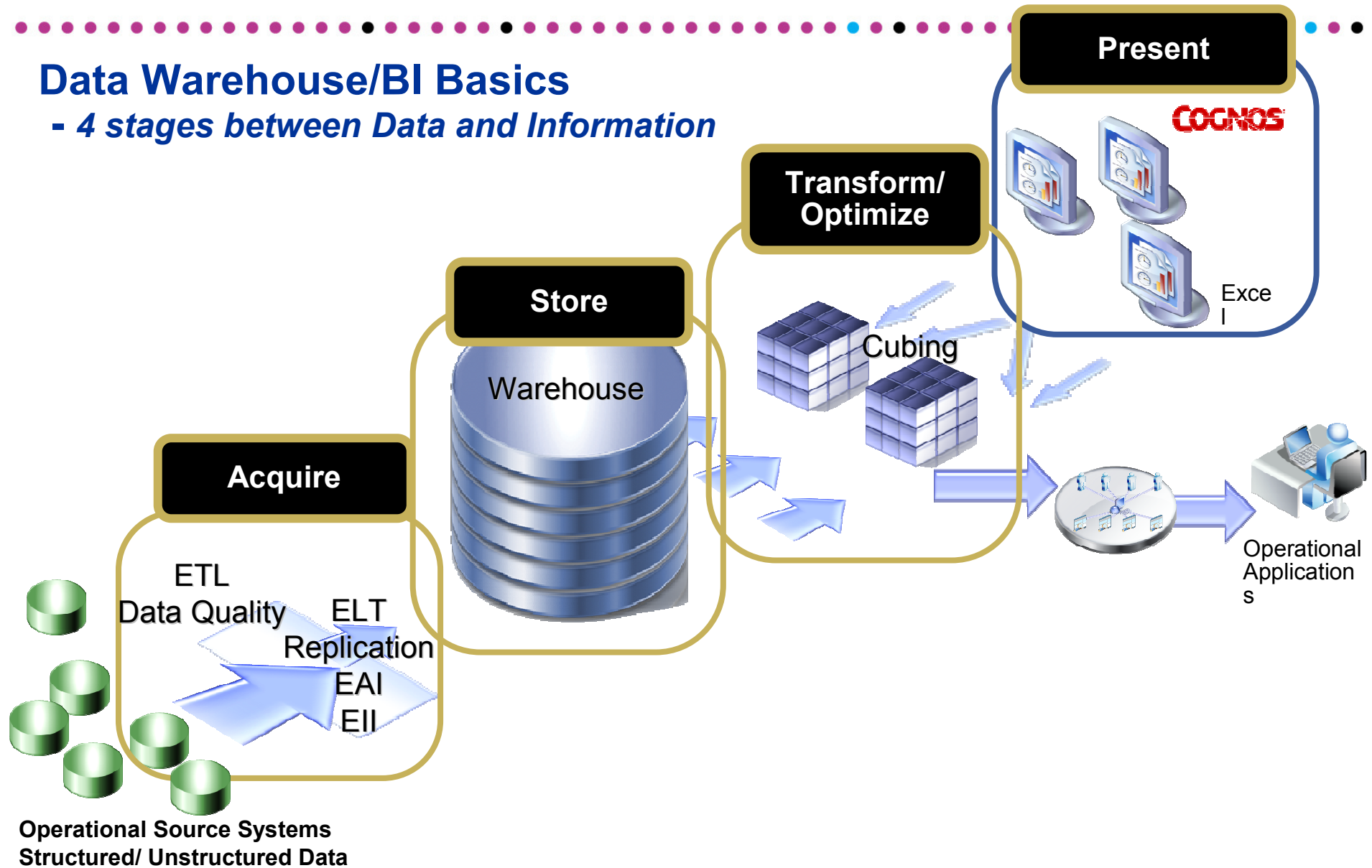
- Concept: Build strategic differentiation by providing customers access to their own data over the web



- Go beyond the transaction level and deliver information like “categorical expense reporting” via grids and trend graphs
- Since the information is not “portable” this drives further “stickiness”
- Establish differentiation from competitors

Data Warehouse/BI Basics

- 4 stages between Data and Information



Operational Source Systems
Structured/ Unstructured Data



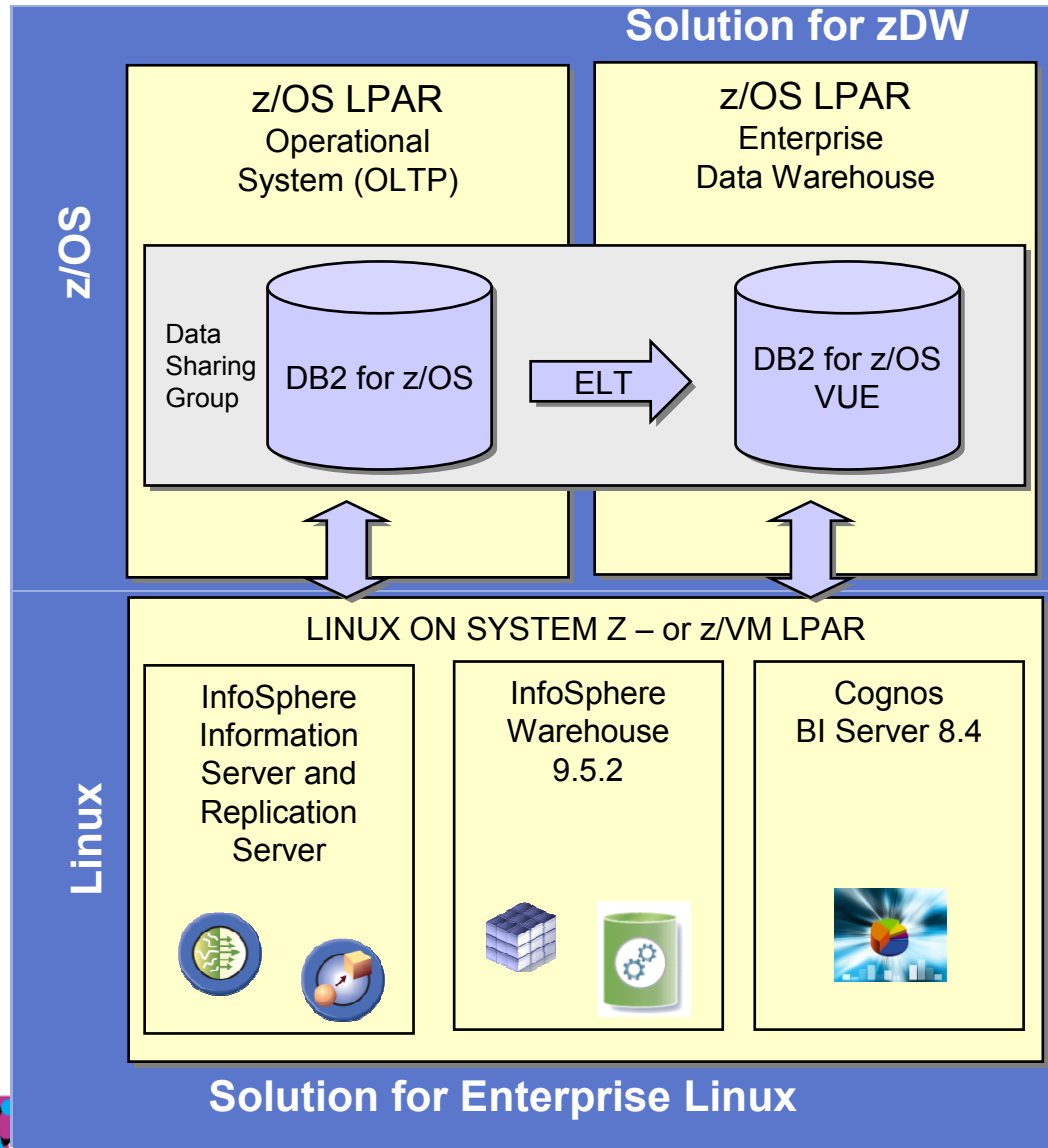
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The IBM Smart Analytics System 9600



The IBM Data Warehouse Solution on System z



- Consolidation of mission-critical data on System z
- Ability to leverage existing environment, high availability, backup and governance procedures as well as skills
- Efficient data movement between LPARs and DB2 Subsystems
- Performance and TCO improvements through cubing services (data marts) and DB2 enhancements
- Complex transformations and data quality driven from Linux on System z with Information Server
- Low Latency movement of data with Replication Server



The IBM Smart Analytics System 9600

- Is an **integrated hardware, software and services** offering that enables customers to quickly and cost effectively capitalize on game changing analytics across an enterprise
- Delivers an **expanding portfolio of easy to deploy business analytics**, that seamlessly integrate into operational fabric of a business.
- Enables a centralized view of the business, with an highly available, **advanced workload manager** that can easily prioritize critical queries within a large pool of queries.
- Drives reductions in costs with a **highly available infrastructure**, causing customers to reevaluate the mainframe.



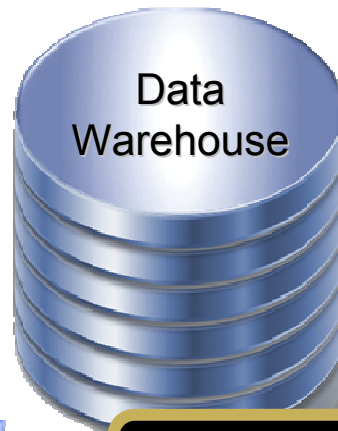
IBM Smart Analytics System 9600

High Value Dynamic Warehousing

System z
BC or EC



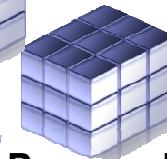
**InfoSphere
Warehouse**



Cubing
Services



Powercube
Services

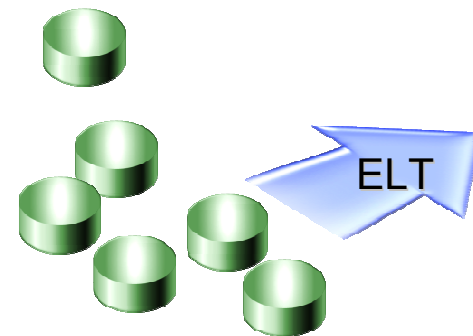


Cognos 8 BI



Cognos.
software

ELT



Operational Source Systems
Structured/ Unstructured Data

DB2 for z/OS VUE
(option for MLC)

DB2 Utilities Suite

Image Copy, LOAD, UNLOAD,
REORG, etc

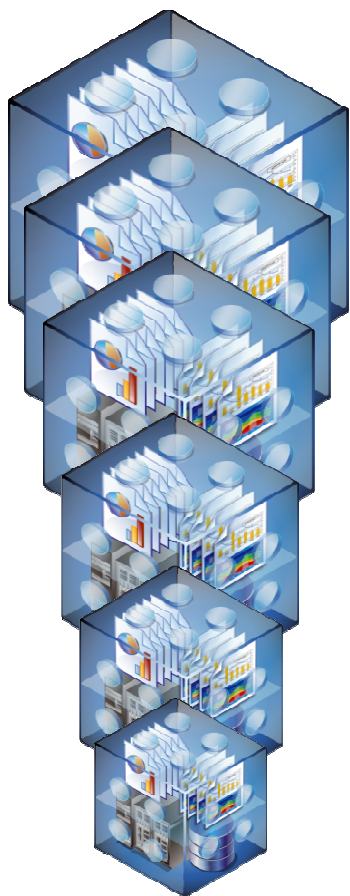
**Implementation
Services**





IBM Smart Analytics System

Pre-Set Configurations Sized to Meet Business Requirements



Data Capacity Sizing

	DB2 Base
Amt Usable Disk*	Amt User Data*
250TB	100TB
125TB	50TB
62TB	25TB
30TB	12TB
10TB	4TB
2.5TB	1TB

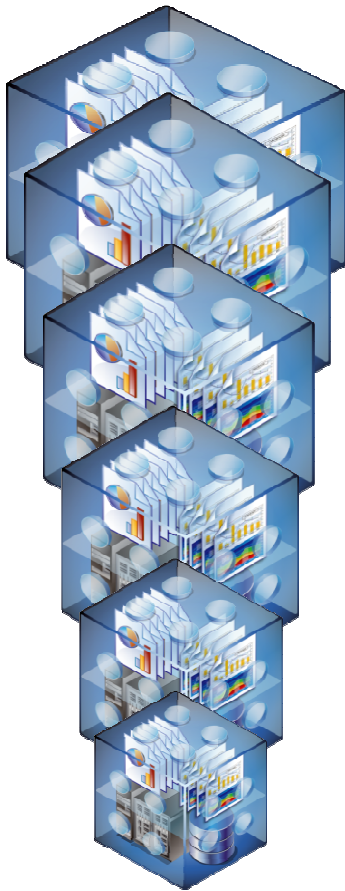
*Usable = Disk for compressed table data, indexes, work files, MQTs etc.

*User Data = Raw, uncompressed, user data



IBM Smart Analytics System

Pre-Set Configurations Sized to Meet Business Requirements



BI Capacity Sizing

Cognos Workload	
Named Users	Max Concurrent Users
10,000	100
	50
5	25

Choosing A Deployment Style



Standalone Delivery

Server delivered in “appliance-like” fashion

Virtual Upgrade Delivery

Capacity delivered as a “bolt-on” to existing server(s) or as new server(s) depending on customer needs in a “virtual appliance-like” fashion



Introduction to the IBM Smart Analytics Optimizer Statement of Direction

Statement of Direction: IBM Smart Analytics Optimizer

Product Overview

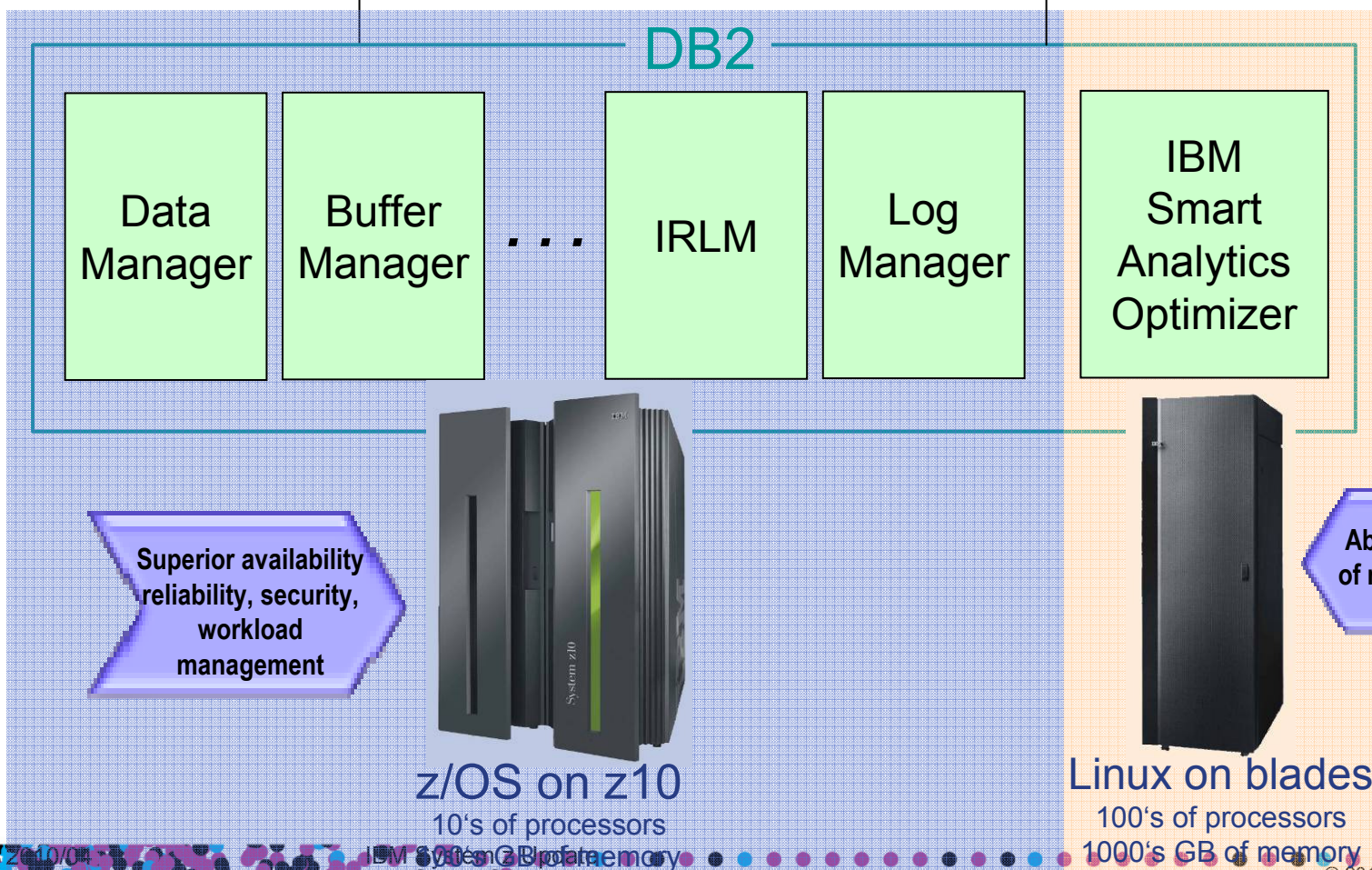
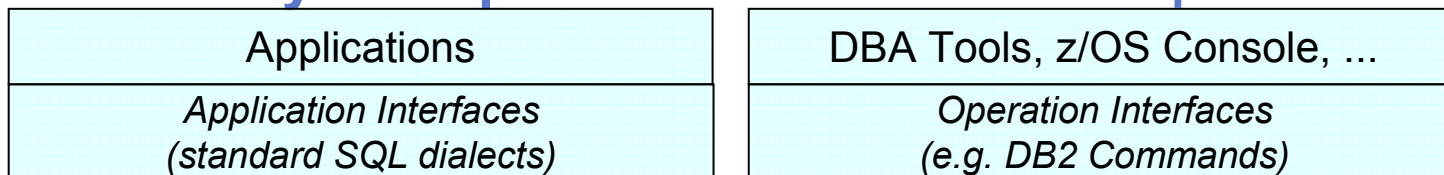
- A special purpose, network attached appliance that is an add-on to an IBM DBMS system, that offloads typical Data Warehouse / Business Intelligence queries resulting in predictable and orders-of-magnitude faster query response times while reducing overall TCO
- Combines IBM DBMS with high performance Data Warehouse query software, based on advanced in-memory scale-out cluster technologies, while keeping the complete system centrally managed with unchanged interfaces for Business Intelligence applications



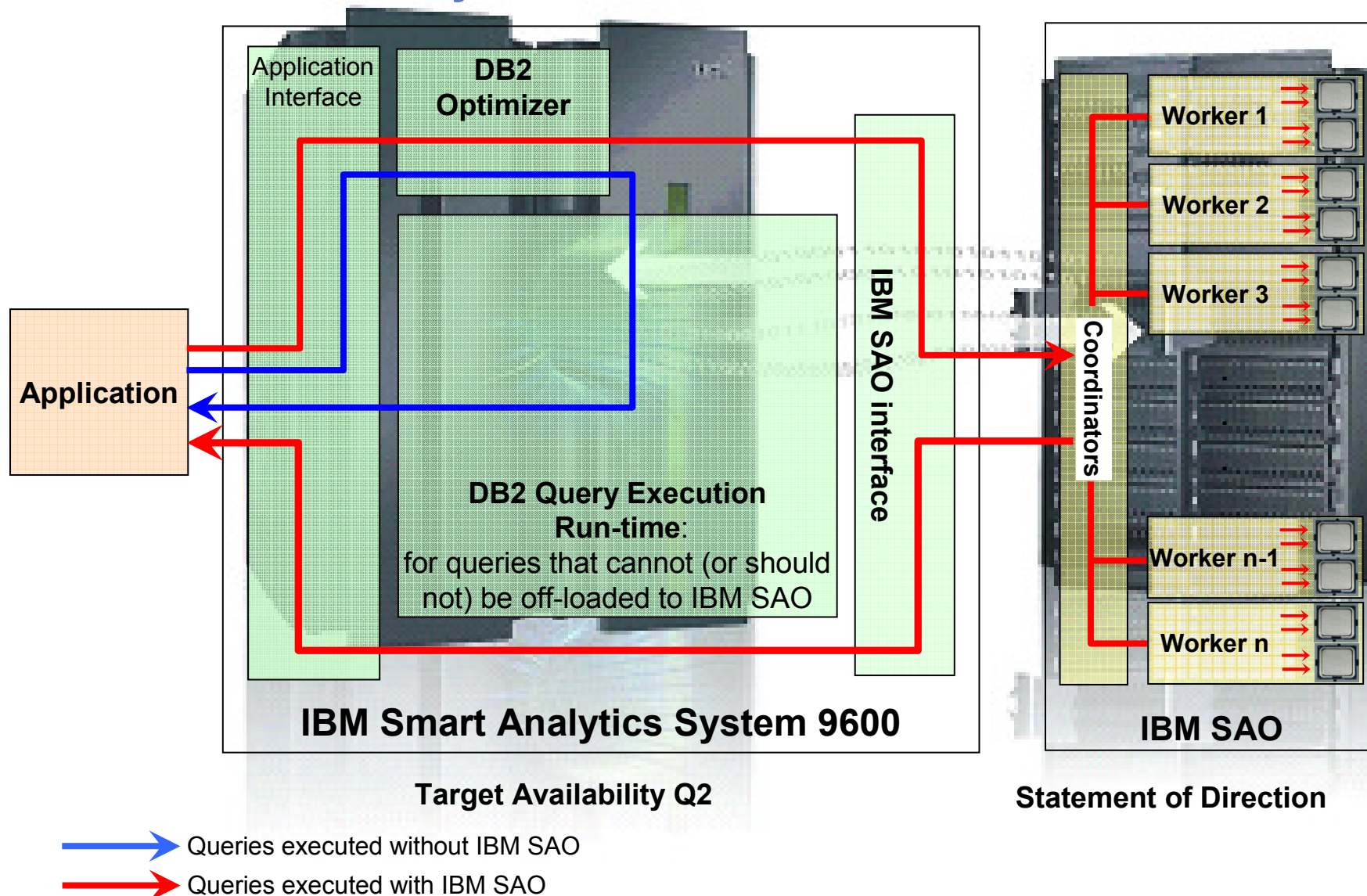
Highlights

- No changes to the applications
- DB2 transparently exploits the accelerator for application queries
- Significant price / performance and TCO improvements
- Improving performance of typical data warehouse queries 5 - 10x
- Achieving linear scalability with the number of CPUs
- Appliance-like form factor: user/reference guide assisted installation, initial configuration, hands free operation

IBM Smart Analytics Optimizer - a Virtual DB2 Component

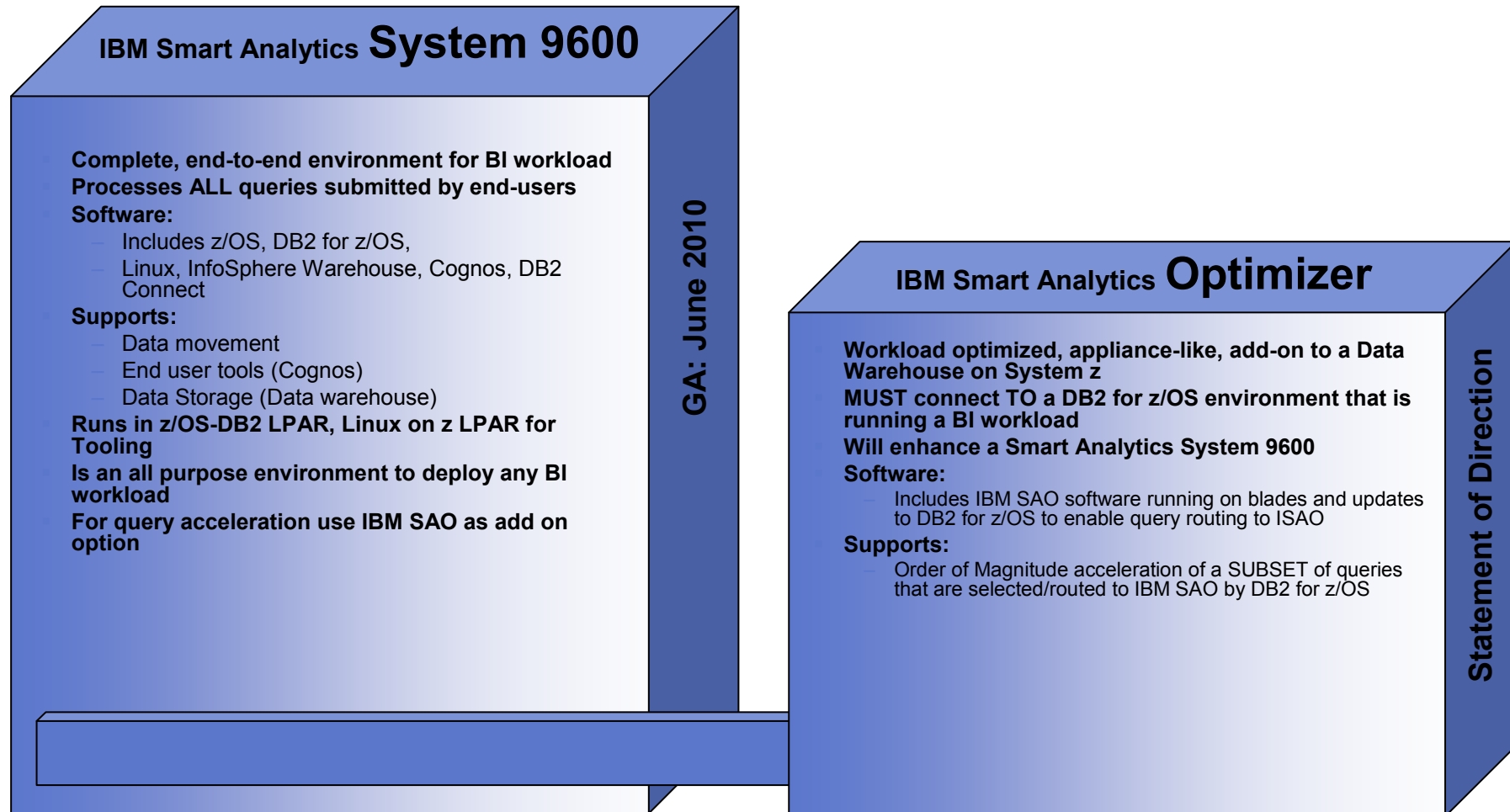


..... Future Query Execution Process Flow





Comparing the Smart offerings in System z:





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System z Platform Update





System z – Optimized for multiple workloads

IBM Smart Analytics System – 9600

An integrated, high-performance analytics solution able to adjust and grow based on business needs

IBM Smart Analytics Optimizer

(Statement of Direction)
An integrated business intelligence solution to deliver accelerated and accurate business insight

System z today

The gold standard of enterprise computing with unrivalled integration from the server to the application that delivers unrivalled throughput and performance, service qualities, and cost leadership.



System zFuture

Introducing the “First of a kind” workload optimized technology for the deployment of end-to-end solutions across a System z governed and integrated heterogeneous environment.





The future starts NOW

Our Vision:

Deliver the best of all worlds,
Mainframe, UNIX, x86 and single
function processors, integrated in a
virtualized data center in a box for
ultimate flexibility and simplicity to
optimize service, risk and cost across
multiple heterogeneous workloads.



A New Approach:

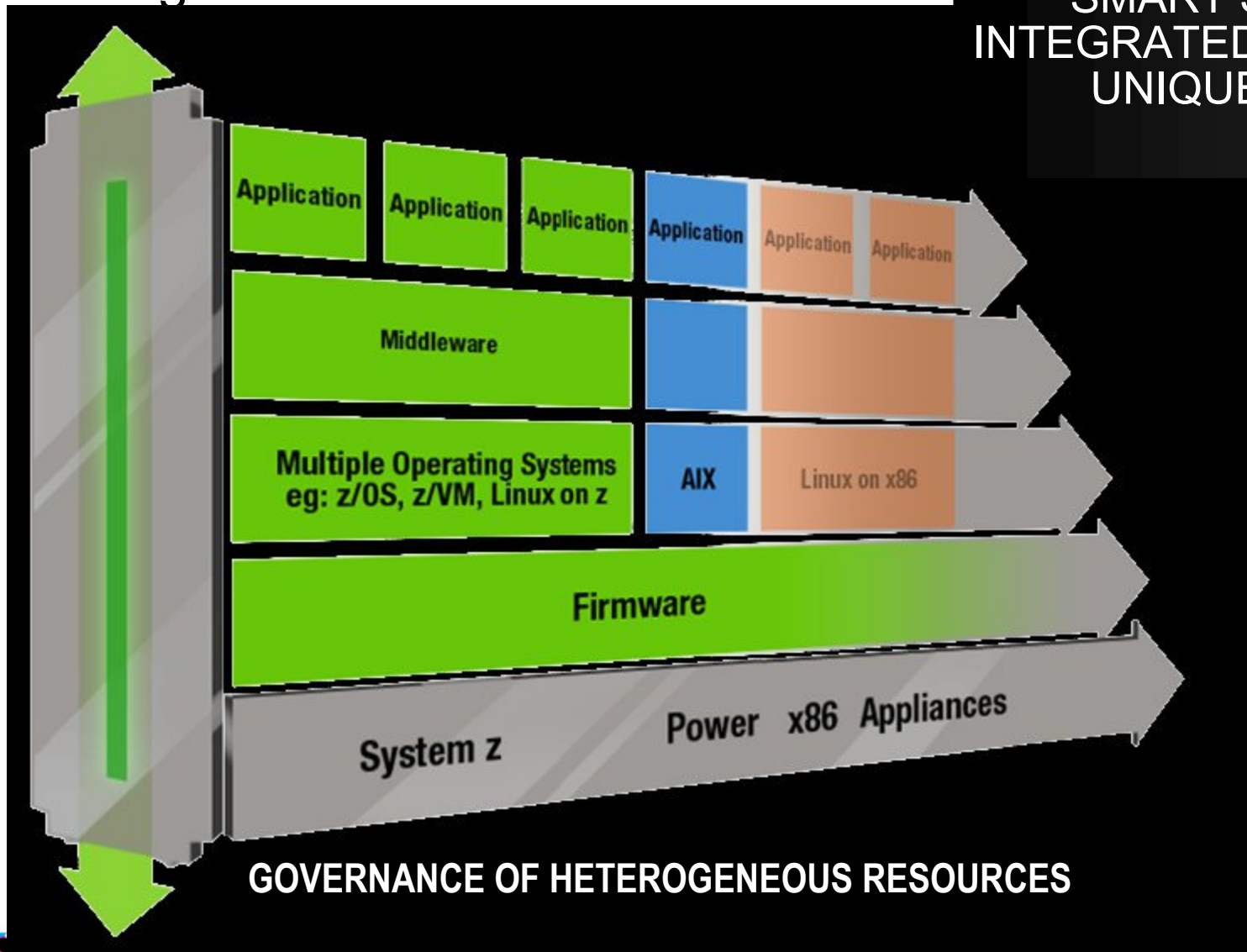
Introducing the first-of-a-kind “system of systems” for the deployment of
end-to-end solutions across a System z managed and integrated
heterogeneous environment.



zFuture integration

SMART SYSTEM
INTEGRATED STACK
UNIQUE VALUE

INTEGRATED VERTICALLY ACROSS THE STACK





System z – A smarter system for a smarter planet *The gold standard in enterprise computing*

- An ideal platform for critical business workloads
- The premiere foundation for cloud computing
- Delivering unrivalled integration across the stack
- A strategic future through workload optimized systems



The future runs on System z



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谢谢您



IBM Smart Analytics System

More Information

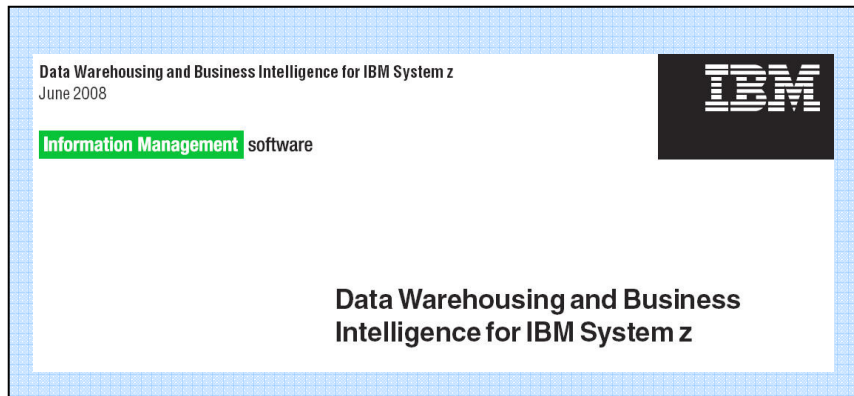
To learn more about the IBM Smart Analytics System visit:

<http://www.ibm.com/software/data/infosphere/data-warehousing/>

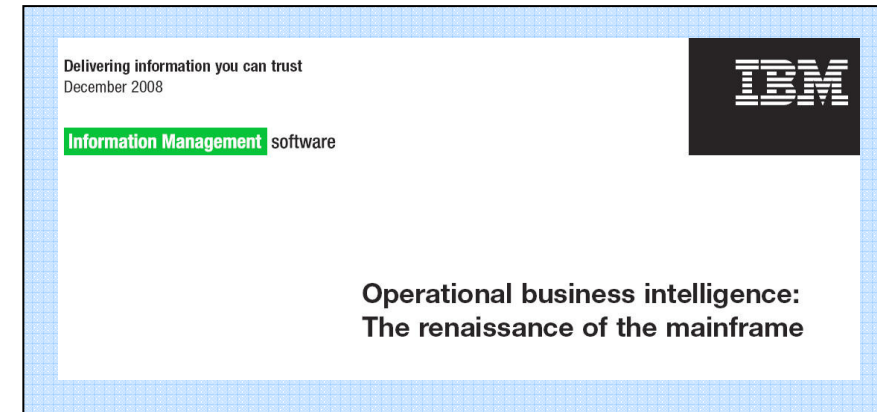




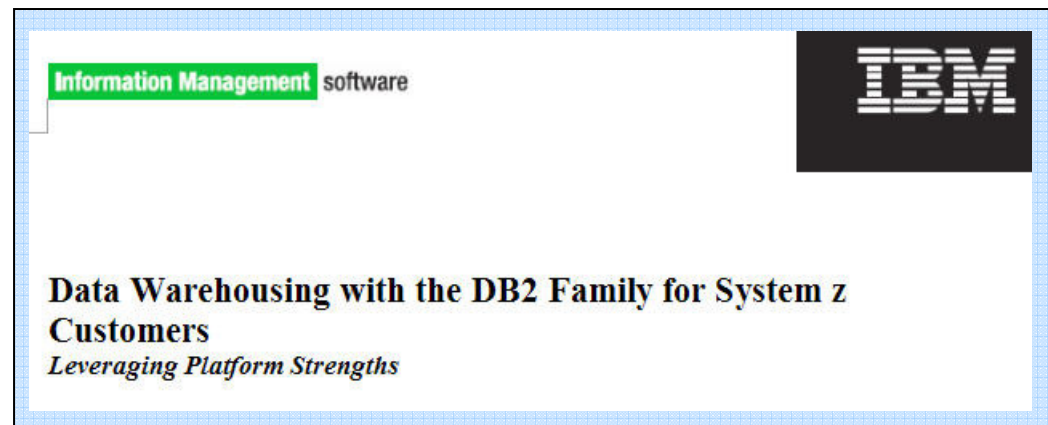
Recent Papers



ftp.software.ibm.com/software/data/businessintelligence/systemz/DW_BI_IBM_SysZ.pdf



www.ibm.com/software/data/businessintelligence/systemz/



ftp.software.ibm.com/software/data/businessintelligence/systemz/Data_Warehousing_with_DB2_for_System_z_Jan_2009.pdf



Other recent articles in the press

IBM Systems
MAGAZINE

- *Enhanced Query Parallelism with zIIP processors*
 - February 2008
www.ibmssystemsmag.com/mainframe/enewsletterexclusive/18822p1.aspx
- *Operational BI and System z*
 - March 2008
www.ibmssystemsmag.com/mainframe/enewsletterexclusive/19475p1.aspx
- *Business Intelligence's New Look: IBM extends its BI portfolio with Cognos 8 BI for Linux on System z*
 - July / August 08
www.ibmssystemsmag.com/mainframe/julyaugust08/features/20870p1.aspx
- *Take the Reins - An Information On Demand Strategy helps deliver a competitive edge for today's businesses*
 - July / August 08
www.ibmssystemsmag.com/mainframe/julyaugust08/coverstory/20860p1.aspx

DMReview.com

- *Three part series: Myths of Doing BI on the mainframe*
 - www.dmreview.com/issues/2007_53/10002140-1.html
 - www.dmreview.com/issues/2007_54/10002171-1.html
 - January 2009 features the final part in the series.



Some Key Redbooks



- **Enterprise Data Warehousing with DB2 9 for z/OS**
 - www.redbooks.ibm.com/abstracts/sg247637.html?Open
- **50 TB Data Warehouse Benchmark on IBM System z**
 - www.redbooks.ibm.com/abstracts/sg247674.html?Open
- **DB2 for z/OS: Data Sharing in a Nutshell**
 - www.redbooks.ibm.com/abstracts/sg247322.html?Open
- **System Programmer's Guide To: Workload Manager**
 - www.redbooks.ibm.com/abstracts/sg246472.html?Open
- **Workload Management for DB2 Data Warehouse, REDP-3927**
 - www.redbooks.ibm.com/abstracts/redp3927.html?Open

Cognos on
System z,
Data
Collocation,
and
InfoSphere
Warehouse
also in
progress!