TDIL		
genda		
09.00 - 09.15	Welcome	
09.15 - 09.45	Leveraging System z for Information on Demand	•
09.45 - 10:45	Hints and tips to get the most out of DB2 9 for z/OS	Þ
10:45 - 11:00	Coffee	
11:00 - 12:00	DB2 X for z/OS Technical Preview	•
12:00 - 13:00	Lunch	
13:00 - 14:00	New Opportunities for Enterprise Data Warehousing on System z	•
14:00 - 14:30	The next generation in Data Warehousing featuring IBM Smart Analytics Optimizer on System z	•
1 <mark>4:</mark> 30 - 14:45	Coffee	
14:45 - 15:45	Strategic DB2 Tools Update	•
15:45 - 16:00	Wrap-up	

TTALE

## **DB2 for z/OS The Team in Nordics !**







Surekha Parekh DB2 for z/OS Market Manager United Kingdom Jim Reed Program Director IM System z USA John B. Tobler DB2 for z/OS Software Engineer USA



Dirk Johann IT Architect DWHz at <u>IBM Lab Germany</u> Germany



Peter Schouboe z/IM Nordic Software sales Denmark

## Stay in Touch with DB2 for z/OS



## The World of DB2 for z/OS

DB2 for z/OS

DB2 for z/OS, the most robust and	Latest Activity	🍬 Edit
cost effective data server for your environment	Julian Stuhler joined Surekha Parel       DB2 for z/OS       What's On       DB2 for z/OS	kh's group 12 minutes ago
Badge Sedit	If you missed a live well worry. This group will lis	bcasts or Telcon then don't ist all DB2 for z/OS webcasts &
The World of DB2 for z/OS	year !	ble to you FREE on demand all
DB2 for z/OS, the most robust and cost effective data server for your environment	Julian Stuhler and Laura Hood joine	ed <u>Surekha</u> 13 minutes and
	DB2 9 for z/05 is here Are you using DB2 for z group and stay in touch	z/OS version 9 ? I h with latest updat

## facebook

All Groups My Groups



DB2 for z/OS - What's On ! Created by <u>Surekha Parekh</u>

#### DB2 10 for z/OS Beta – Subgroup - LinkedIn Group





#### DB2 10 for z/OS

DB2 10 for z/OS Beta was announced on 9th February 2010. Join this group to stay in touch with all the latest developments around DB2 10 for z/OS. Owner: Surekha Parekh | 473 members | Member | Share



#### Data Warehouse & Business Intelligence on System z

Data warehousing and business intelligence solutions on the System z platform help drive smarter business decisions across the entire organization Owner: Surekha Parekh | 38 members | Member | Share



#### DB2 for z/OS - What's On !

Go to 
Actions

Carlos Carlos

DB2 Tools for z/OS SUBGROUP a subgroup of DB2 for z/OS - What's On !

Go to - Actions -

## **Staying In Touch with DB2 for z/OS**



### IDUG – Social Marketing – 1000's of members



Go to - Actions -

## Leveraging System z for Information On Demand

Slide 1 of 221

Smart Ways to Reduce Costs and Deliver a Competitive Edge

Jim Reed Program Director, Silicon Valley Lab



#### The Explosion of Data is Creates New Challenges

## **91%**

of CIO's believe that existing reporting processes do not meet future requirements for timely information.

## 33%

33% of consumers notified of a security breach will terminate their relationship with the company they perceive as responsible.

## \$40 billion

Consumer product and retail industries lose about \$40 billion annually, or 3.5 percent of their sales, due to supply chain inefficiencies.

## 75%

of data is replicated – over 50% of the time to more than one system.

## Leveraging Information & Analytics...

... is now the top priority for CIOs, and organizations that do so outperform their peers...



3/4s of CIOs anticipate moving to a strongly centralized, shared infrastructure to improve economies of scale



**Information-Led Transformation** Information-Led Transformations will Change Business the Same Way as ERP & CRM...

#### **Business Analytics** & Optimization

8.2%

CGR



**Business Automation** 3.6% CGR

### **2X**

**Client Investment in Business Optimization Projects is Growing** over Twice as Fast as **Business Automation** 

**Business** Intelligence

Resource Planning

**Business** Automation

# Organizations will reach a tipping point when they apply real-time analytics at the point of impact



# Getting started with an information-led transformation



## System z Software Strategy

#### **Capitalize on Traditional System z Strengths**

- Batch and Transaction processing, Messaging, Quality of Service, Data Serving
- Optimize to the evolving System z Hardware design point

#### **Extend Value Proposition to New and Mixed Workloads**

- Systematic re-engineering of the software stack for SOA
- Integrate with Modern Application Development Environments
- Deliver extensive Data Management services
- Leverage the wave of workload consolidation; zLinux
- Simplify System z make it easier to install and manage for better TCO
  - New faces of z
  - More end-to-end management capability from a z central point of control
  - Simplified labor intensive tasks

#### **Continue Momentum with the System z Ecosystem**

- Attract new System z customers and ISV application workloads
- Enable new Hybrid and Cloud environments
- Make System z relevant to the new IT generation



## Information-Led Transformation for System z

More new capabilities delivered in the past 4 years than the first 40 years of the mainframe

0 0	0	0	e comunications	
Fransis Petersena Hangemet Hanar Sasta Neogenari	Cross Industry	Burghy Dyar Datione R	Mangamer Manufig Mangamer	
Business Analytics & Optimization Platform				
Performance Management & Analysis	Productive Analytics	Process Optimization		
	Trusted Information Platf	urm		
Information Integration & Master Data Management	Enterprise Content Management	Data	a Warshousing & ta Management	

Business Analytics DB2 and IMS Active-Active for z/OS DB2 10 for z/OS Cognos 8 Bl for z/OS DB2 Sort for z/OS IMS Tools Solution Packs for z/OS Entity Analytics for System z Master Data Management for z/OS Smart Analytics Optimizer for z/OS IMS 11 for z/OS Content Integrator for z/OS

InfoSphere Warehouse for System z FileNet Content Manager for System z Cognos 8 Bl for System z InfoSphere MDM Server for System z 2009

Information-Led Transformation

#### **Business Intelligence**

Optim Data Governance for System z Information Server for System z Content Manager 8.4

Information On Demand 2008

software

**DB2**.

### 2000

**Data Warehousing** 

InfoSphere<sup>®</sup> software irehousing FileNet.

software

Information Agenda

Cognos, software



## Taking it to the Next Level: Predictive Analytics

Richmond County Police pinpoints hotspots & leads to 20-30% decease in violent crimes

**Center for Disease Control** Characterizes disease & quickly assess medical needs in real-time

Cablecom GmbH Doubled ability to predict churn & reduced actual churn 10 fold



#### **Infinity Property & Casualty Corporation**

Real-time claims scoring starts fraud investigations within 24hrs. vs. 2 weeks



# But, the mainframe costs too much

## **Introduction to Solution Editions**

#### [August 14, 2009]

## System z Solution Edition Series announced by IBM

(Telecomworldwire Via Acquire Media NewsEdge) IBM (NYSE:IBM) announced on Friday the System z Solution Edition Series - seven integrated hardware, software and services packages.

#### A solution edition is an aggressive pricing / packaging concept for targeted workloads/use cases on System z.

- Delivers tangible savings in hardware, software, and services
- Leverages the strengths of System z to deploy key workloads, including Business Intelligence, Data Warehousing, application development, ACI, SAP, security, WebSphere and cloud computing

Solution	New Price
Data Warehousing	36-54% reduction
Application Development	~50% reduction
SAP Apps	50-70% reduction





## **Solution Editions for System z Making an Impact**



# Korean bank dumps Unix boxes for mainframes Seoul of a new machine

By Timothy Prickett Morgan

BC Card, the largest credit card processor in South Korea, is dumping its Unix servers, made by HP and Sun running Oracle and moving its processing applications to mainframes from IBM leveraging DB2 & Replication Server.

BC Card is a new mainframe customer – the sale was driven by the recently announced System z Solution Editions

IBM Press Release



## **Introducing the Smart Analytics Cloud**

A private cloud optimized for analytic services in large enterprises

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

#### **IBM software**



#### **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



## **Smart Analytics Cloud in the IBM corporation**



Our commitment to informed decision making led us to consider Blue Insight on System z, which is the enabling foundation that makes possible **+\$20M savings over 5 years**.

-IBM CIO Office

- Blue Insight: IBM's deployment is the world's largest private cloud computing environment for business intelligence and analytics that will provide more than 200,000 IBMers with the ability to extract information from around the world to make smarter decisions through information empowerment – no matter where the data resides
- IBM Smart Analytics Cloud: a services based solution offering to enable large enterprise clients to build their own private cloud environment with easily consumable business intelligence services, system and software

#### IBM Blue Insight results:

- Consolidating +20 multi-product, departmental BI deployments to Cognos 8 BI on System z
- Realizing value from +60 data sources across IBM representing +1PB of data
- Deploying private cloud self service to support +200,000 named users across our global workforce (120K by mid-year 2010, expanding to 200K by 2011)
- 56% cost savings per user (grows with volume)
  - \$7,775,767 Infrastructure cost savings realized with z10 technology
  - \$2,558,525 Business Intelligence Competency Center (BICC) cost savings;
- Elasticity in a shared server model supporting SLAs for diverse tenants; Speed to value and reduced capital spend (26 weeks to 2 weeks)



## Momentum with DW & BI on System z



Miami Dade County standardized on Cognos 8 BI for System z to meet increasing BI requirements – they took only 11 days to migrate from their distributed servers





#### Benefiting from the Cloud on Sys z

IBM's Field Management Systems group (FMS) deploys Cognos BI on System z to track sales attainment & revenue. They have scaled the system to 40,000 users in 4 months.

#### Smarter Healthcare with Sys z

The University of North Carolina hospital system was able to drive **DOWN** the cost of their healthcare while improving patient information quality and availability.







Oracle + Sun: Transforming the IT Industry

At Oracle, we plan to reshape the industry with a complete business system made up of specialized hardware, dedicated operating system and integrated software components . . . something that only Oracle can deliver.

> Larry Ellison January 27, 2010

## System z futures for a workload-optimized world

Re-write the rulebook and set new standards for business-centric IT with IBM System z, to be the world's premier workloadoptimized platform for enterprise applications



#### **Our Vision:**

Deliver the best of all worlds, Mainframe, UNIX<sup>®</sup>, x86 and single function processors, integrated in a single system for ultimate flexibility and simplicity to optimize service, risk and cost across multiple heterogeneous workloads



## The Dynamic Infrastructure Journey



© 2010 IBM Corporation

#### IBM

## The Dynamic Infrastructure Journey





## The mainframe cannot scale like a distributed system

## Bank Of China Parallel Sysplex Benchmark

Near-Linear Scalability on a Parallel Sysplex running CICS and DB2 in a single system image with No Partitioning Required



Huge scale up, requires huge I/O bandwidth capacity

#### IBM

#### System z With DB2 Scales Further Than Best HP Superdome Banking Benchmark

#### Kookmin Bank

- IBM System z9 and DB2
- TCS BaNCS (Cobol)
- 15,353 Transactions/second
- 50 Million Accounts
- IBM benchmark for customer
- Bank of China \*\*
  - IBM System z9 and DB2
  - TCS BaNCS (Cobol)
  - 8,024\*\*\* Transactions/second
  - 380 Million Accounts
  - IBM benchmark for customer

#### HP/Temenos \*

- HP Itanium
- Temenos T24 (Java)
- 2,153 Transactions/second
- 13 Million Accounts
- Largest banking benchmark performance claimed by HP

#### System z and BaNCS Online Banking Benchmarks



\* SOURCE: TEMENOS BENCHMARKS; http://h71028.www7.hp.com/enterprise/downloads/TemenosBenchmark.pdf

\*\* SOURCE:http://www.enterprisenetworksandservers.com/monthly/art.php?2976 Source: InfoSizing FNS BANCS Scalability on IBM System z - Report Date: September 20, 2006

\*\*\* Standard benchmark configuration reached 8,024 tps, a modified prototype reached 9,445 tps

#### IBM

#### System z With DB2 Scales Further Than Best HP Superdome Banking Benchmark, with Java

#### Kookmin Bank

- IBM System z9 and DB2
- TCS BaNCS (Cobol)
- 15,353 Transactions/second
- 50 Million Accounts
- IBM benchmark for customer
- IBM Benchmark
  - IBM System z10, WAS, DB2
  - Temenos TCB (Java)
  - Result of preliminary Temenos TCB optimization prototype

#### System z and Temenos TCB Online Banking Benchmarks



- HP/Temenos \*
  - HP Itanium
  - Temenos T24 (Java)
  - 2,153 Transactions/second
  - 13 Million Accounts
  - Largest banking benchmark performance claimed by HP

\* SOURCE: TEMENOS BENCHMARKS; http://h71028.www7.hp.com/enterprise/downloads/TemenosBenchmark.pdf



# Though it's time to start thinking differently about infrastructure.

# Infrastructure needs to become more dynamic.

## **The Three Levels of Business Intelligence**







	Strategic BI	Tactical BI	Operational BI
Business focus	Achieve long-term business goals	Manage tactical initiatives to achieve strategic goals	Manage and optimize daily business operations
Primary users	Executives & business analysts	Executives, analysts & LOB managers	Analysts, LOB managers and users, and operational processes
Time- frame	Months to years	Days to weeks to months	Intra-day
Data	Historical data	Historical data	Real-time, low-latency & historical data

#### **Copyright Claudia Imhoff**



## **Business Challenges and Technology Trends**

#### Changing business requirements

- BI/DW becoming mission critical and requires OLTP-like QoS
  - reliability, continuous availability, security, mixed workload management, ...
  - orders of magnitude faster execution of complex, ad hoc queries
  - predictable query performance
- Shift towards dynamic DW and operational BI
  - Combining OLTP and OLAP workloads
- Traditional performance tuning tools of the trade such as indexing, prebuilt aggregates and MQTs struggling to keep the pace
  - Require top DBA expertise and sophisticated tools
  - Even then not good enough due to ad-hoc, unpredictable nature of the workload

#### Technology trends

- Very large number of processor sockets and cores
- Massive amounts of real memory
- Specialized physical data designs: row-store vs. column-store

## A revolutionary workload-optimized system

#### **IBM Smart Analytics Optimizer for DB2 for z/OS – Technology Preview**

## Benefits of a System z workload optimized infrastructure

- Extending System z operational control to heterogeneous environment.
- Reduced cost by deploying best-fit technology to drive efficiencies across integrated solutions.

### Benefits of a Smart Analytics Optimizer

- Exceptional performance through data in memory.
- z/OS<sup>®</sup> and DB2<sup>®</sup> controls and secures critical data.
- Reduced administration costs.
- Optimizes technology usage to deliver the right level of service, with lower risk and at reduced cost.



An integrated business intelligence solution to deliver accelerated and accurate business insight

\*SOD: All statements regarding IBM's future direction and intent are subject to change or withdrawal without notice, and represent goals and objectives only.

#### Over 50 Billion Transactions Per Day run through IMS

## Investing in Innovation

Generally Available October 30, 2009

#### **Easier than Ever**

**IMS 11** 



Direct distributed access to IMS Data

Reduces processing costs up to 67%

#### **Easier Application Programming**

- IMS DL/I knowledge not needed
- Java SQL support

**On-line DB Reorganization** 

25% CPU Time Reduction

#### **New Enterprise Suite**

- Repackaging of IMS middleware
- Easier to order and install



#### Enterprise Data Governance

- Data breaches, corporate mistakes, use of bad data continue to make headline news
- Every organization is concerned with regulatory compliance, security, privacy, data quality. Bad data is bad for business.
- IBM created three entry points that enable customers to address their more pressing needs while embracing other aspects of data governance as and when required :
  - Information Quality understand, analyze, cleanse, transform, deliver
  - Lifecycle Management collect, store, process, optimize, manage, report, retain
  - Information Protection security, privacy, audit, logging, reporting

**Accenture survey** 75 percent of CEOs want to better manage and use their information ,78 percent believe they can achieve better competitive advantage, only 15 percent are comprehensively managing their data.

Data Governance is fundamental to successful BI and DW projects.

Enhance

#### **IBM Data Governance – A model for success**

- Lower Risk and Cost
- Increased profitability
- Competitive differential
- IT / Business data responsibilities
- Custodial care of data
- Organizational behaviour
- Quality and integrity of all data
- Information collection, use, retention, and deletion
- Mitigate risk and protect data assets.
- Architected design for availability and distribution of data
- Common semantics
- Monitor / measure data value, risk



Outcomes

Value Creation

**Data Risk Management &** 

Compliance

© 2010 IBM Corporation



## Enterprise Content Management on System z









### Academic Initiative System z Milestones

- ✓ 650 schools, over 50,000 students in 61 countries worldwide
- Student Contests in 15 countries with 22,000 students
- IBM Student Opportunity System (Student resume database)
- Entry Level Mastery Test (Validate student skills)
- Community involvement (Roundtables, partnerships, hiring)
- Access to Mainframes worldwide for teaching (6 University hubs)
- ✓ 30 Courses available (foundational to advanced), Ongoing faculty education
- More educators and students are embracing IBM Enterprise Systems
- Students are getting jobs



" 'Master the Mainframe Contest' helped me get a job at Bank of Montreal."

Elizabeth Bell, Georgian College



## System z: The platform for the future

## "you cannot think seriously about your longer-term IT architecture without thinking equally seriously about what today's mainframe environment has to offer"



<u>CIO Magazine: Mainframe computing is</u> <u>set for a rebirth – September 29, 2009</u>





Typical Utilization for Servers Windows: 5-10% Unix: 10-20% System z: 85-100%

System z can help reduce your floor space up to 75%-85% in the data center





System z can lower your total cost of ownership, requiring as little as 30% of the power of a distributed server farm running equivalent workloads

The cost of storage is typically three times more in distributed environments

