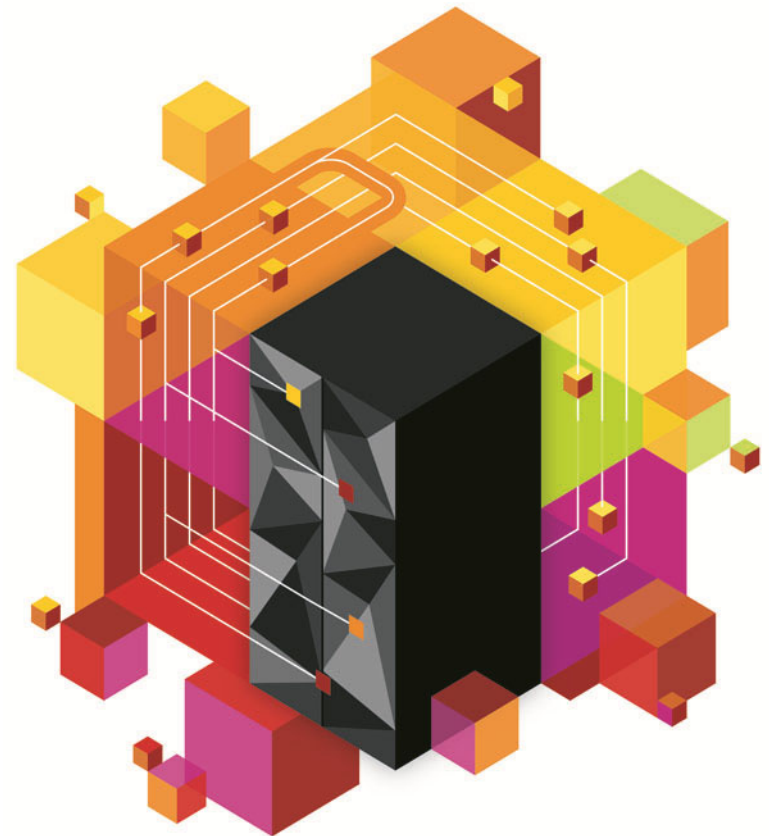


# zEnterprise Server and Software – Driving New Levels of Performance and Cost Efficiency



**Karmjeet Kahlon,**  
Director, Worldwide zEnterprise Software Sales  
IBM Software Group



# Strategic Priorities for System z.

*Enhance ... Optimize ... Expand:*



**Operational analytics capabilities**

**Dynamic and efficient shared hybrid computing infrastructure**

**Capacity, throughput to handle high-volume mobile workloads**

**Qualities of service for multi-tenant, centrally managed workloads, ie., clouds**

**Intelligent, secure data vault with auditable protection**

**Continuous availability innovations**

**Efficient at Scale**

**Operational Analytics**

**Ultimate Security**

# Cloud, analytics and mobile aren't simply remaking computing... ...they are revolutionizing business models

**Cloud**



**Mobile & Social**



**Analytics**



**Reshape Customer Experiences**  
**Reduce Costs**  
**Capture New Business**

**Security**



## Business and IT face significant challenges in all of these areas

### Analytics



**85%** indicated that most of the source data for driving operational analytics **resides on the mainframe**

### Mobile



Enabling mobile as a new channel and **connecting to back-end data** is among the **top three concerns** of global CIOs

### Cloud



Enterprises see **private cloud as the on ramp** to cloud for the next 24 months

### Security



External threats are rated as a big challenge with **two-thirds of CIOs expected to spend more on security** over the next two years



# Redefining the art of the possible on a smarter planet

## Analytics



- **Financial institutions** detect fraudulent money laundering activities
- **Insurers** discover suspicious claims before payment to minimize loss
- **Retailers** boost revenue through discovery of customer buying behaviors

## Mobile



- **Banks** offer mobile applications for anytime, anywhere banking services
- **Education institutions** provide real-time access to university information systems to improve the student experience
- **Local governments** expand and coordinate city services through citizen-centric applications

## Cloud



- **City Governments** ensure effective administration of citizen services
- **Universities** provide students virtual desktops with flexible, reliable and secure access
- **Insurers** rapidly develop and provide new offerings at lower costs

## Security



- **Retailers** ensure compliance with Payment Card Industry (PCI) data security standards
- **Financial institutions** manage security keys and ensure availability and protection of sensitive information
- **Healthcare** payers and providers secure patient data and comply with HIPAA

# Organizations that embrace this technological shift are reshaping the value they deliver through improved services



What if you could empower the general public to create citizen-centric applications with access to years worth of city data?

**Self-service secure cloud portal and mobile** applications enrich civic life



What if you could more quickly and nimbly enrich the customer experience with increased product personalization?

**Core-banking solution** establishes a single source of customer information



What if various city departments could act and respond as a single, coordinated unit to deliver citizen services?

**Analytics-driven system** assesses, analyzes and responds more quickly to citizens



What if you could create the ultimate security environment, including an enterprise-wide encryption service?

**Cryptographic coprocessors** secure 2B transactions / month with enterprise-wide encryption services

## zEnterprise is the ultimate for cost and efficiency



- **Energize your enterprise** applications through integration, embedded analytics and enterprise mobile optimization
- **Save money** through consolidation on Linux with and an efficient cloud delivery model
- **Secure it all** with confidence on a trusted and resilient infrastructure



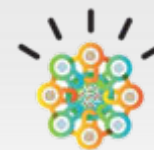
An Integrated  
Data & Analytics  
Engine



Efficient, Agile  
Cloud Computing  
Foundation



Sophisticated  
platform for  
Mobile Computing



Ultimate in  
Trusted Security  
& Resiliency



## The new IBM zEnterprise EC12 gives you more

### More Performance

**25%** performance boost per core running at 5.5 GHz

**50%** more capacity for traditional workloads

**30%** improvement for SAP workloads

**2X** increase in RAIM memory



### More Value

**45%** improvement in Java workloads

**25%** more configurable cores for client use

**\$0.70 / day** per virtual Linux server

**50%** lower TCA for Oracle Enterprise database solutions

***zEC12: A Smarter Computing infrastructure that is Cloud Ready, Data Ready and Security Ready, enabling a Smarter Planet™ for today and tomorrow***



# Innovations available on zEC12



## Highest Security

EAL5+ security for ultimate security of data and applications

*EAL5+*

## High Speed Cryptography

Protect sensitive data from unauthorized users in addition to credit transaction verification support

*Crypto Express4S chip*

## Proactive Systems Health Analytics

Availability by detecting unusual system behavior for faster problem determination and resolution

*IBM zAware*

## SSD Flash Exploitation

Availability at critical times like market open or during abnormal situations; New coupling & Linux exploitation

*IBM Flash Express*

## Hybrid Computing

x86 blade resource optimization; Alert & notification for blade virtual servers;

*zBX, zManager*

**zEnterprise compilers (COBOL, PL/I, C/C++)** provide an optimized application infrastructure for increased software performance

# zEnterprise: An Integrated Data & Analytics Engine

57%

Our data is **scattered** in too many places (top response)

89%

Above all else, our data must be **secure** (tied for top response)

89%

When we access data it should appear as a **single source** of the truth (tied for top response)

## Data Ready:

Enterprise data hub

High-volume secure and reliable transaction processing

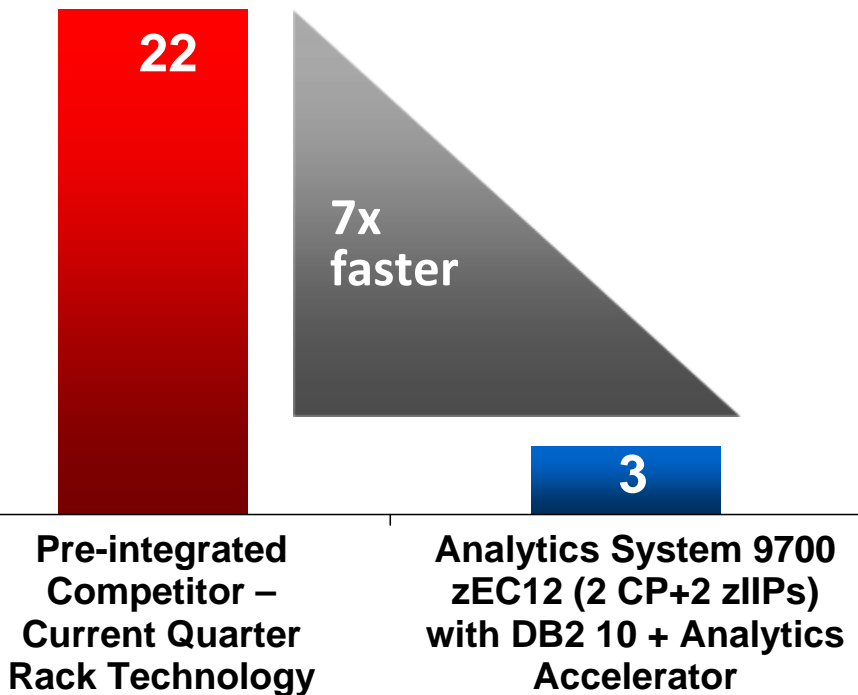
Integrated, real-time operational analytics

***Enterprise data repository that integrates operational analytics into the fabric of your business for accelerated insight***

# The zEnterprise Analytics System 9700 with the DB2 Analytics Accelerator beats the competition head to head

*Elapsed Time To Complete BI Day  
Fixed Execution Test*

Hours to Complete Workload



- Driving analytics against transactional data on a centralized, highly available and scalable platform
- Eliminate data transfer costs and accelerate decision making through ETL avoidance
- Dynamic routing for most efficient fit for purpose execution architecture
- A single paradigm for data security, logging, access and backup/recovery

Study based on preliminary measurements and projections using BI Day Tests. Performance numbers may vary based on workload profiles and capacity of machine



## zEnterprise: A Holistic Cloud Computing Platform

80%

Of enterprises consider security the #1 inhibitor to cloud adoptions

48%

Of enterprises are concerned about the reliability of clouds

33%

Of respondents are concerned with cloud interfering with their ability to comply with regulations

### Cloud Ready:

Elastic, virtually limitless expansion

Shared everything design

Secure hybrid computing with centralized management

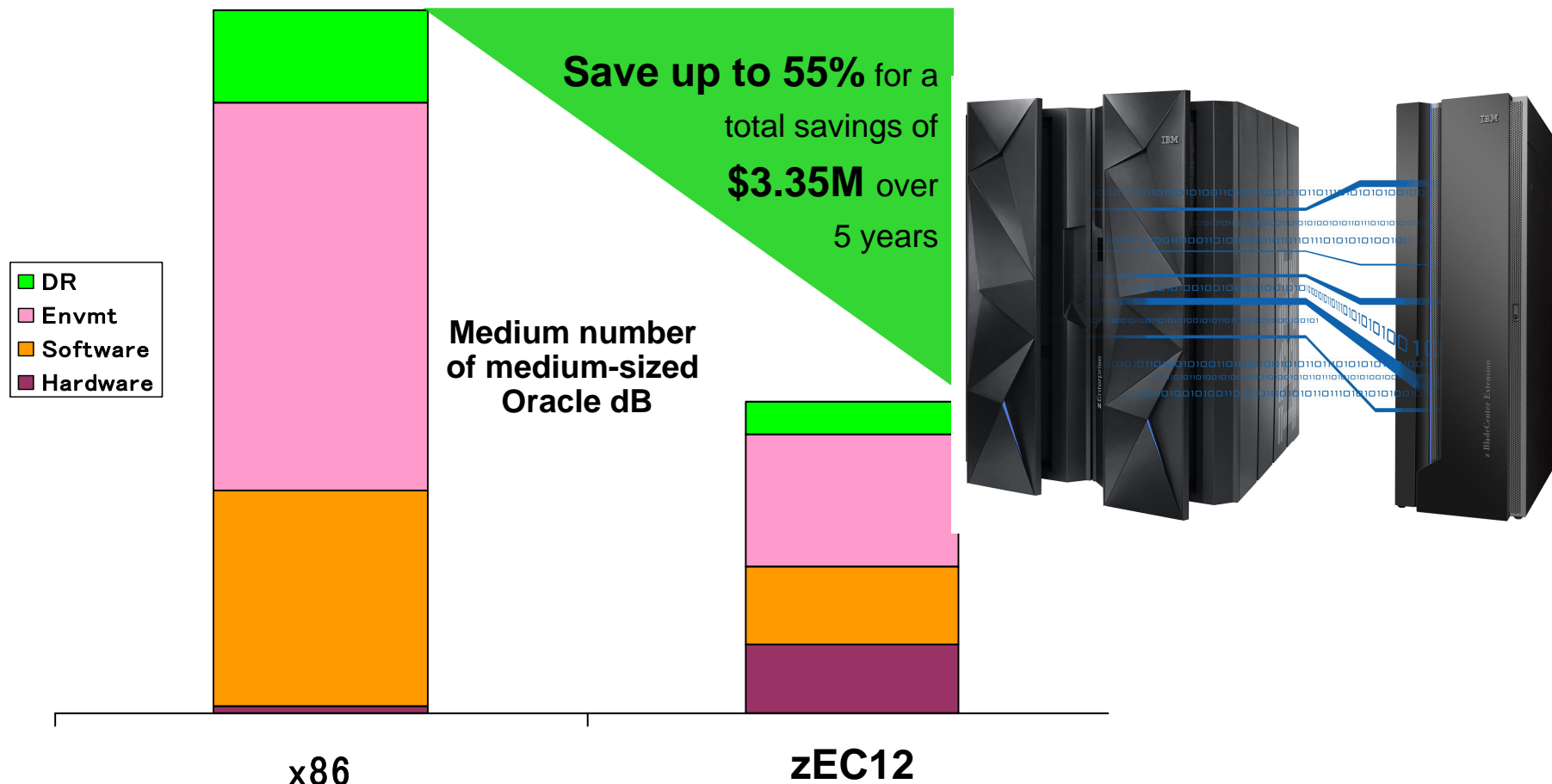
Built on open industry standards

***Integrate, automate and orchestrate on a highly secure, scalable and agile enterprise cloud***



# Enterprise Linux Server: a cost busting consolidation platform

*Consolidate* hundreds of distributed workloads onto a single system to improve efficiency and reduce costs to reinvest in new business capabilities



Based on preliminary measurements and projections comparing Oracle DB on x86 2 chip 8 core 2.13GHz blades vs. zBC12 and ELS solution edition pricing. Subject to change and results may vary based on numerous factors.

## zEnterprise: Sophisticated System for Mobile Computing

76%

Of CIOs are investing  
in mobile security

\$534B

Dollars in mobile  
transactions by 2015

67%

Of CIOs are investing in mobile  
application virtualization



### Mobile Ready:

Build and connect to back end systems

Secure and manage with the  
highest level of security

Extend and transform capabilities  
to mobile devices

***Connecting backend systems to mobile devices to turn  
each interaction into an opportunity***

## zEnterprise: A Trusted hub for Enterprise Data Security

55%

Of IT Executives that believe protection of data is paramount

60K

Average number of times per day an IT Infrastructure is attacked

\$5.5M

Average total organization cost of a data breach



### Security Ready:

Ultimate data security protection

Built-in cryptography

Unmatched resiliency and availability

***Trusted security and reliability for critical business processes, applications and data***

## Workload Development

- Simple to use tools for mainframe development with new **Enterprise COBOL compiler, Rational Developer for System z, and Rational Developer for Enterprise**
- Build and connect Mobile apps with System z data with new **CICS TS Feature Pack for Mobile Extension, IBM Mobile Messaging client, Cognos Mobile on z/OS and other solutions**



## Workload Deployment and Automation

- Automate, connect and manage Business and System process with new **Business Process Manager Advanced for z/OS, Operational Decision Manager for z/OS, and Integration Bus on z/OS**
- Rapidly deploy new Java workloads with new **CICS Transaction Server for z/OS Value Unit Edition and IMS Database Value Unit Edition**
- End to end simple automation with new **IBM Automation Control on z/OS**





# Deep investments across the ecosystem to accelerate adoption of new zEnterprise technologies and Industry solutions



**Poughkeepsie**  
CoC for Smarter Cities  
IOC Showcase



**Montpellier**  
CoC for FSS Industry Solutions  
Smartbank  
Insurance Showcase



**Gaithersburg**  
CoC for Cloud Technology  
Cloud Test Drive  
Wildfire Workshop



**Boeblingen**  
CoC for Analytics  
Demos for DB2 Analytics Accelerator &  
Smart Analytics Accelerator Workshop



- Global investments in zEnterprise & Smarter Computing Client Design Center capabilities and resources
- Technical skills development and placement with new alliances between IBM, Universities and clients
- New ISVs, MSPs and Business Partners supporting the platform
- Migration and Implementation Services



## A zEnterprise for Everyone

*Freedom to choose the “right sized” mainframe to fit your needs*

- 1 Energize your enterprise** applications through integration, embedded analytics and mobile access
- 2 Save money** through consolidation on Linux and efficient cloud delivery model
- 3 Secure it all** with confidence on a trusted infrastructure

*The secure cloud for data analytics and enterprise mobile optimization*