IBM System z Forum

System z Software Update
Agile Development and Deployment
for the 21st Century

Steve Talbot-Walsh,
Senior System zSW Client Architect (zCA)
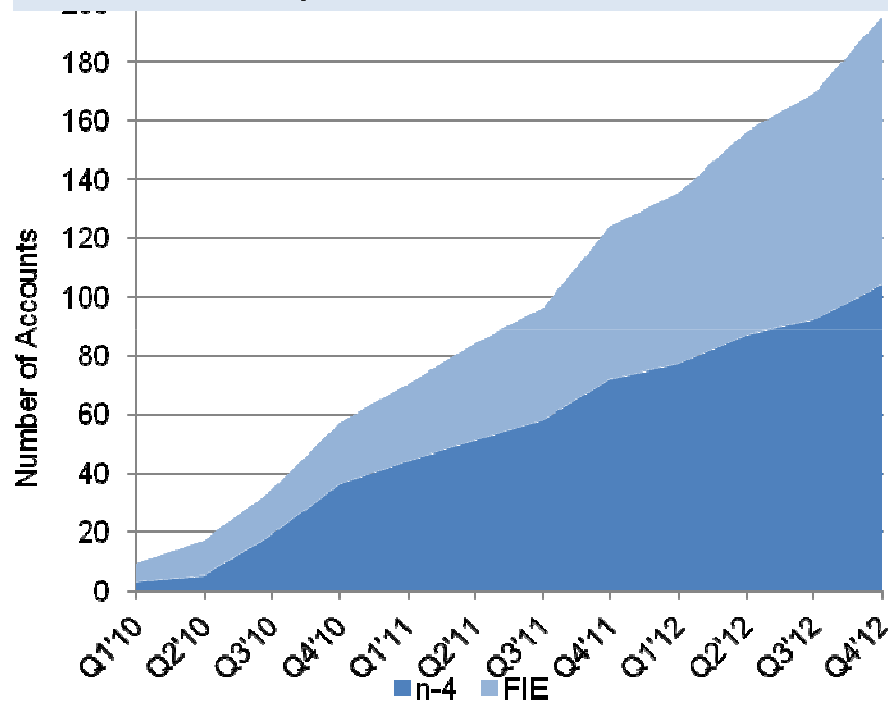
May, 2013

System z is growing strong!

IBM

190+ new accounts since zEnterprise launch in 2010

Number of Accounts (y-axis: 0, 20, 40, 60, 80, 100, 120, 140, 160, 180)

x-axis: Q1'10, Q2'10, Q3'10, Q4'10, Q1'11, Q2'11, Q3'11, Q4'11, Q1'12, Q2'12, Q3'12, Q4'12

Legend: n-4, FIE

THE WALL STREET JOURNAL.

"….it's nice to see the system alive and strong after all these years, and **continuing to aggressively pursue new markets**… a remarkable tale of longevity in one of the fastest changing industries in the world. …

The Economist

"Like IBM itself, **the mainframe has stayed relevant by adapting** — whereas the PC, its supped slayer, has stayed pretty much the same and is now being pushed aside."

TIME Magazine

"Now it seems entirely plausible that **mainframes will outlive all of us** — and might be around even after the PC as we've known it for the past few decades has evolved into something new and unrecognizable."

System z software – NEW solutions

IBM

for development, deployment and automation of workloads

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**

IBM COBOL continues to power business critical applications
Enterprise COBOL for z/OS v5.1

IBM®

- Enterprise COBOL v5.1 delivers **performance improvements of greater than 15%[1] over v4** for CPU-intensive batch applications on System z

- Allows users, who implement **sub-capacity tracking, to reduce their administrative overhead**

- Deliver **new programming and application modernization capabilities. Users can deliver enhancements** to business critical applications **quicker with less cost and lower risk**

What's new:

Performance

- Advanced optimization technology designed to optimize COBOL programs and fully exploits System z hardware (z10, z196, zEC12).

- Supports a new level of z/OS System Management Facilities (SMF) tracking.

- New features to improve application modernization capabilities and programmer productivity

- Support latest Middleware (CICS, DB2, IMS)

- Supports the ecosystem of COBOL development tools supplied by IBM and ISVs.

> *"Our testing of COBOL V5 shows a significant performance improvement for math. As a financial services company with a continually narrowing batch window, that improvement is very important to us. It will help us meet our Service Level Agreements and reduce cost driven by CPU utilization."*
>
> *Michael A Todd, Software Architect, a multi-national financial services company*

[1] *Performance measures vary from customer to customer*

Enterprise Application Development made easy

Rational Developer for the Enterprise v9.0
Rational Developer for System z v9.0

- **Design, code, build, and test mobile apps** that run on a wide variety of mobile devices. Quickly refactor and extend existing back-end services and data to new mobile UIs

- Supports enterprise system platforms with a single, comprehensive development environment– **from Windows to Linux to IBM i to AIX to System z,** across the enterprise with Rational Developer

- Modern IDE features enable **new developers** to System z application development to apply advanced tools to **COBOL, PL/I, Java, JCL, CICS,** IMS, Batch, Stored Procedure

- Powerful, **easy to use editors** with immediate, in-context assistance and navigation of host-based applications

What's new:

- Integrated mobile development support with tighter Worklight integration
- Shared infrastructure and common behaviors across the IDE offerings
- Enhanced JCL editing
- Automate unit testing with zUnit
- Headless code review and code coverage
- Support for CICS TS 5.1

Increased productivity in application development
INTER Versicherungsgruppe

Need:

Motivate young developers to embrace the world of the mainframe and match development capabilities of large companies with fewer staff

Solution:

Deployed Rational Developer for System z as a modern toolset for supporting mainframe processes in an Eclipse development environment

Consistent
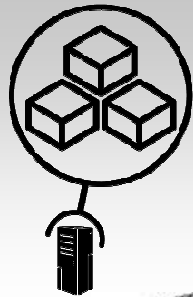integration and automation in software development

Collaboration
between IT team and technical departments

Modern tools
for young developers

" *An efficient software development environment is in many ways similar to a good manufacturing plant* "

Mobile computing – the next wave of computing for System z

IBM

Mobile and System z

Build mobile applications

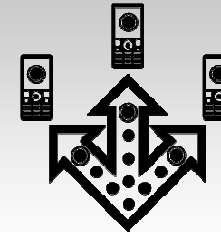**Connect** to, and run System z applications in support of mobile

Built a mobile app for students to get schedules, emergency information, grades and other academic info

Manage mobile devices and System z applications

Secure my mobile business

Developed a mobile app in just three months for citizens to send their taxes securely via mobile

Extend existing business capabilities to mobile devices

Transform the business by creating new opportunities

Developed a citizen-centric application including real-time public bus, camping permits and city work

- **NEW! CICS TS Feature Pack for Mobile Extension V1.0 and PLANNED! IMS 13** with native JSON support

- **NEW!** I**BM Mobile Development Lifecycle Solution v4** for development of multiplatform mobile applications

- **NEW!** Secure access to System z and mobile acceleration using Worklight capabilities with **IBM Integration Bus on z/OS V9.0**

- **NEW! IBM DataPower Gateway Appliance V6** allowing IMS transactions to consume external web services

- **NEW! IBM Mobile Messaging client** updates to extend mobile devices to WebSphere MQ on z/OS

- **NEW! Cognos Mobile on z/OS** for view of dashboards, reports, etc.

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Automate and Manage Business and System Processes
IBM Business Process Manager Advanced for z/OS, V8.5

Enhanced!

- **Built-in dashboards** to help improve business process outcomes and enable the creation of custom dashboards

- Delivers high scalability and transactional integrity for **automated straight through processing** supporting thousands of transactions per second

- Takes advantage of WebSphere Optimized Local Adapter (WOLA) technology for **high-speed integration** with co-located COBOL, PL/I, and assembler applications in CICS, IMS, or batch environments at in-memory transfer speeds

What's new:

- Simplified installation, configuration, and administration on z/OS to help reduce time and effort

- Performance and process instance details dashboards

- Exploits improved sharing of IBM WebSphere MQ and IBM DB2 resources to support high-availability configurations

Enhancing user experience in managing change
IBM Operational Decision Manager for z/OS, V8.5
IBM Business Rules for z/OS, V8.5

- **Captures and codifies** business policies, practices and regulations

- **Automates decision making** with the fidelity of a subject matter expert

- **Enables changes** to be easily made **by business people**

What's new:

– New PL/I Language support extending the ability of customers to leverage decision management and modernize their application assets to PL/1 assets

– Expand support for Decision Engine
  Decision Engine now available on WAS for z/OS

– Improved CICS and IMS integration
  Persistent connection support for IMS

– Simpler deployment configuration
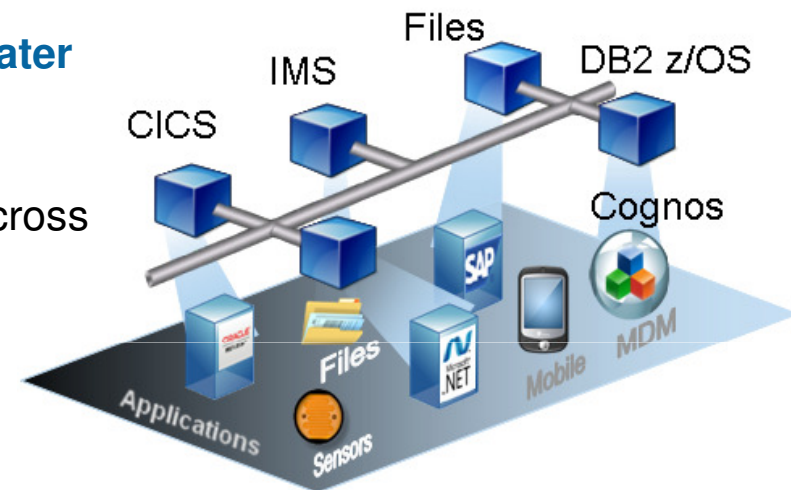 Control card based deployment definitions

Quickly and easily integrate across business systems
IBM Integration Bus for z/OS v9.0

- **Reduce costs** through avoiding rework and simplifying maintenance of integration logic
- Add, replace or upgrade systems easily creating **greater flexibility** due to anonymity between producers and consumers
- **Capture in-flight data** to sense what's happening across the business and enable Business Intelligence and Analytics

What's new:

- Easy application integration for Java developers using RAD/WAS via patterns and graphical service mapping

- Simplified Creation of Integration Services on z for Process Designers and new applications anywhere

- Integrated workload traffic shaping using policy-driven enforcement to protect systems from overload

- Embedded Rules engine and rule authoring tools for development of integration solutions that enable business users to modify rules on in-flight data

- New edition for entry-level use cases on z/OS

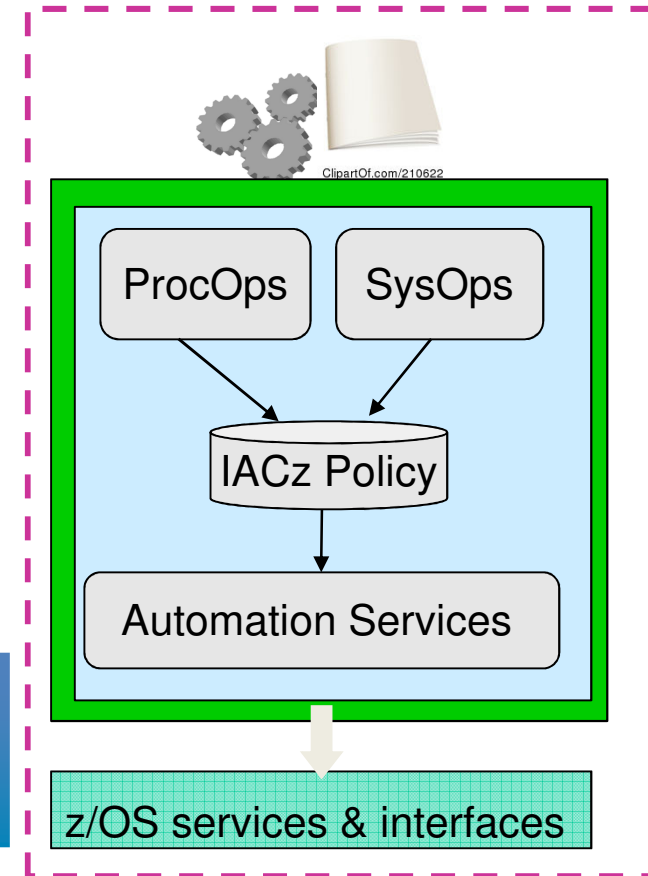# Gain value of system automation with a single simple solution

IBM Automation Control for z/OS (IACz)

- **Easy to install & configure** - Smart Configuration Assistance dramatically improves Time To Value

- **Policy-based & Goal-driven** – Maximize efficiency and availability of critical systems and applications.

- **Lightweight** - Reduces both administrative and operational tasks as well as customization and programming effort with wizard based approach

- **Integrated** – With z/OS and IBM Tivoli solutions to improve efficiency and availability

New product to enable users to react to events as a human would, but much faster, more efficiently and effectively.
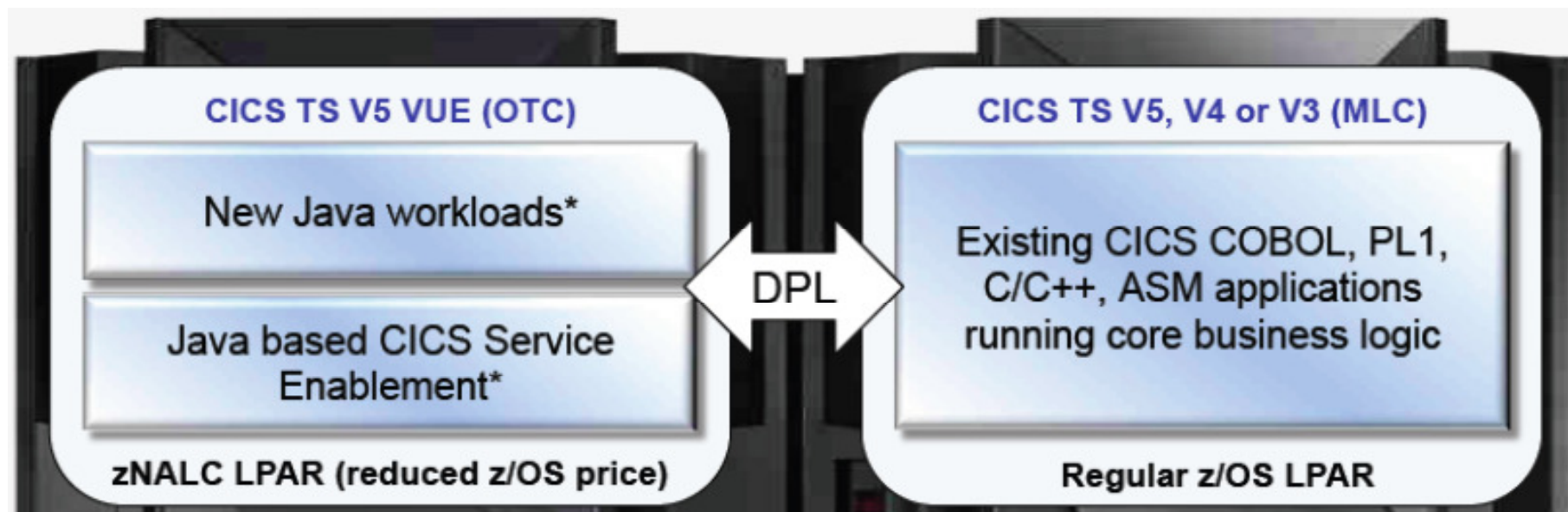
ClipartOf.com/210622

ProcOps

SysOps

IACz Policy

Automation Services

z/OS services & interfaces

Rapidly deploying new Java application workloads in CICS
IBM CICS Transaction Server for z/OS Value Unit Edition V5.1

New!

- **CICS One time charge** – alternative pricing model for new applications using a one-time-charge metric

- **zNALC Pricing** – reduced price for the z/OS operating system on LPARs that run a qualified application

- **Non-disruptive** – does not require an upgrade of existing CICS TS system

For new Java workloads and service enablement

CICS TS V5 VUE (OTC)

New Java workloads*

Java based CICS Service Enablement*

DPL

CICS TS V5, V4 or V3 (MLC)

Existing CICS COBOL, PL1, C/C++, ASM applications running core business logic

zNALC LPAR (reduced z/OS price)

Regular z/OS LPAR

Rapidly expand new workloads in IMS
IMS Database Value Unit Edition

New!

- **Enables IMS 12 data sharing clients access** to IMS data for net new workload

- **Net new applications or workloads for Java or SQL** through IMS Open Database, from applications on WebSphere Application Server on z/OS or CICS TS VUE

- **Cost savings** by moving Java workloads for zIIP offload

- **Additional new customized capabilities** addressing business growth based on key business initiatives added, including services-oriented architecture (SOA), enterprise and mobile access strategy, and operational business intelligence (BI)

- **Leverages the unique industry-leading performance and workload management capabilities** of the IMS data server.

For new Java and SQL workloads or applications

Bank of Tokyo-Mitsubishi UFJ (BTMU) develops a robust SOA platform

Need:

Satisfy customer demand for access to financial services anytime, anywhere, through any device, using only its existing IT assets.

Solution:

zEnterprise 196 with SUSE Linux Enterprise Server as the operating system, divided by IBM logical partitioning. An MQ-based, high throughput messaging backbone was then built using IBM WebSphere Message Broker

18%
increase of re-utilization rate of services (As of March/2012)

Zero impact
on existing systems

Single query work process
vs. original nine step process

" *Without the SOA platform, it would be difficult to build systems to support new services at the speed demanded by management. We have really benefited from developing the SOA platform as a way of resolving management issues.* "

System z software – designed for any workloads on System z

IBM ⚙

Modern application development tools for multi-platforms

Complete solutions for handling **high-volume mobile** workloads

Easily connect and manage **business and system processes**

End-to-end automation of the entire enterprise

Advanced analytics for insight into real-time decisions

Secured solutions for the full application lifecycle