

Q4 System z Software Update

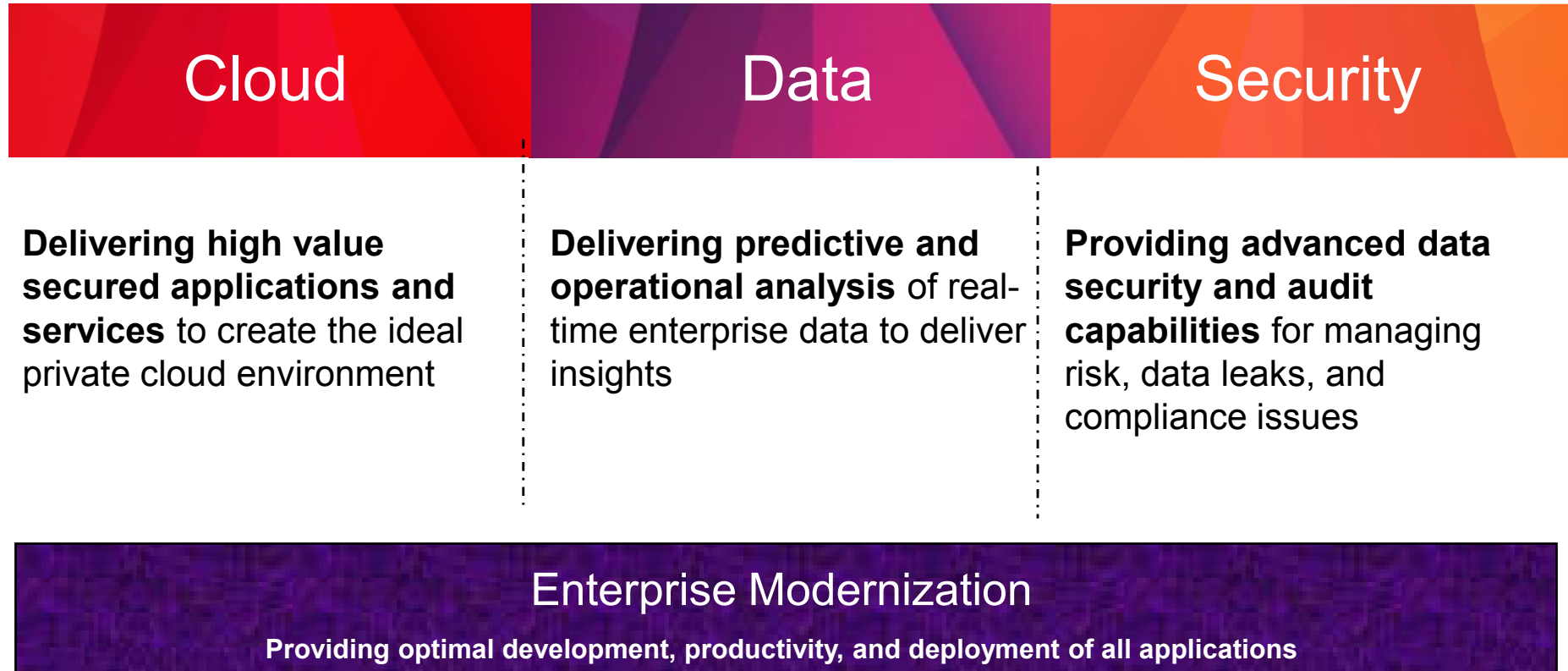


Steve Talbot-Walsh

Senior System z Client Architect (zCA)

Nov, 2012

IBM Software for zEnterprise solves key Business Initiatives



“The new zEnterprise is the heart of our health insurance system,We have grown from 400,000 to 1.7 million transactions per day, and we continue to enjoy full availability of services and data around the clock.” Mirjana Kregar, CIO at ZZZS



The fastest cloud ready application infrastructure



Up to

15%

**CPU cost savings
immediately with
CICS**

Up to

25%

**Performance
improvement with
CICS and zEC12**

- **Reduced complexity** with new application and platform constructs
- **Standardize deployment and operations** with new policy attributes and autonomics
- **Maximize platform** value with complementary integrated tools
- **Centralize administration** with integrated provisioning, monitoring, and service management



**IBM CICS Transaction Server
for z/OS V5.1 and tools**



**IBM OMEGAMON Family V5.1
Linux on System z Roadmap**

Cloud-style CICS Applications and Infrastructure

CICS Transaction Server for z/OS V5.1



- **Simpler and faster** development, deployment and operations with cloud-style CICS
- **New** CICS web application capability, built on the WAS Liberty Profile
 - **NEW! Platform as a Service (PaaS)** capabilities that can be used to host Software as a Service (SaaS)-based CICS applications.
 - **NEW! Policy-based management** to automatically modify the behaviour of tasks that exceed predefined thresholds, during runtime.
 - **NEW! Fast and lightweight Java web container** combining Java Servlets and JSPs with fast local access to CICS applications.
 - **NEW! Capability and scalability advancements** that allow CICS applications to do significantly more, with much greater ease.



*DATEV enhances response times for the CICS Transaction Server software by a **factor of five***

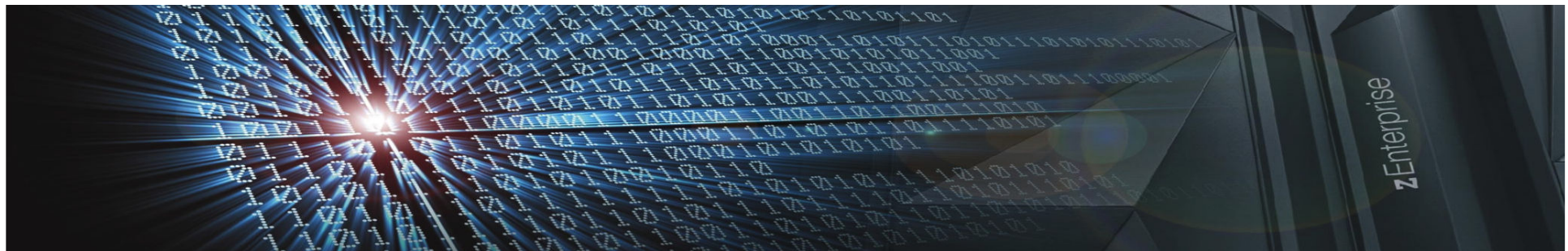
CICS Transaction Server – Business perspective

- CICS TS is the world's premier enterprise class transaction processor
- CICS TS is designed to enable customers to create and maintain a competitive advantage
- CICS TS continues to deliver innovative and essential technology to enable customers to deliver on their business imperatives, now and into the future

Large scale business critical workloads, some > 1bn transactions per day

Large installations with mixed workloads continue to support core business

CICS web services is the most successful CICS feature in the last 10 years



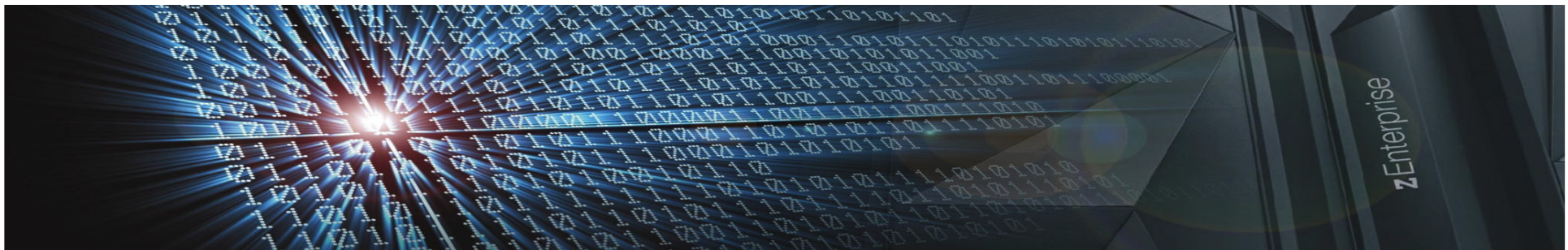
Current challenges

- Critical importance is that operational costs are kept as low as possible
- Increased pressure to be able to deliver results faster and more efficiently
 - Current operational practices often inhibit the speed of delivery
- How do you keep pace with rapidly changing technology and trends?
 - Consider the rapid growth of mobile devices and workloads, as well as cloud technology and services
 - Can you cope with the demands of the future?

***Operation Efficiency:
Controlling cost***

***Service Agility:
Deliver results faster***

***Cloud Enablement:
A long term investment***



Announcing the new CICS Portfolio V5.1 release

Operational Efficiency

- *Greater capacity* - achieve cost savings through consolidation
- *Managed operations* - control critical resource thresholds with policies
- *Increased availability* - reduce the need for planned downtime
- *Deeper insight* - extend performance and compliance information



Service Agility

- *First-class applications* - create agile services from existing assets
- *First-class platforms* - create agile service delivery platforms
- *Modern interfaces* - build rich web experiences for critical applications
- *Foundational enhancements* - extend core capabilities

... with **Cloud Enablement**

Consistent with the IBM Cloud Computing strategy
Positioning customers for the next transformational era in technology
Moving towards a cloud oriented service delivery platform

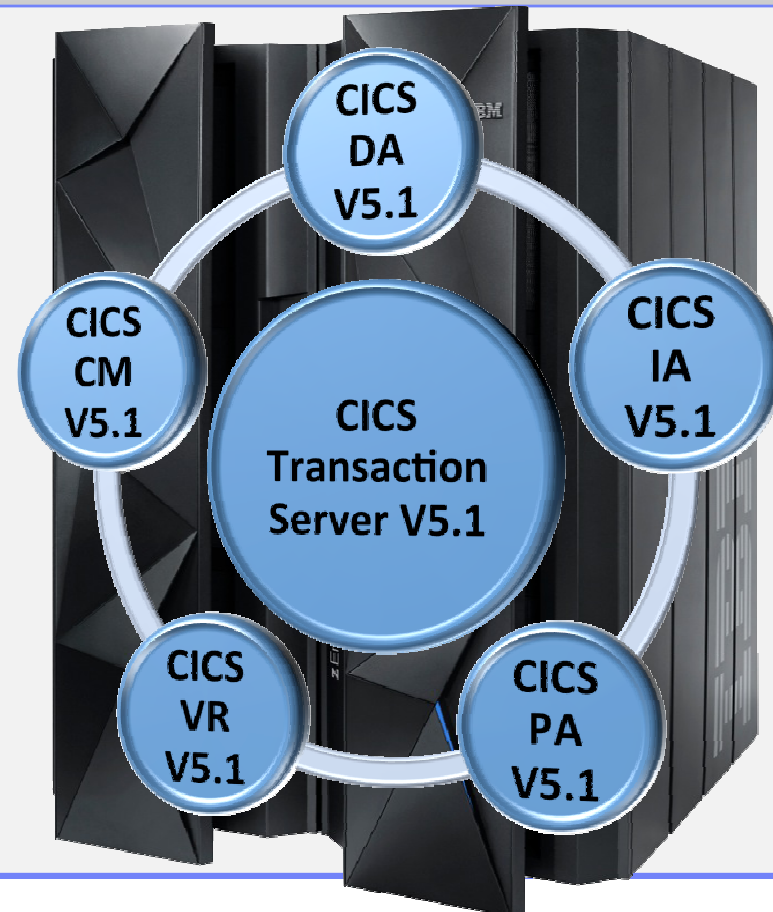
New CICS V5.1 tools deliver the complete solution



Five core foundational CICS Tools – updated to exploit TS V5.1

Fully integrated with the CICS Explorer...

- **Five core tools support and extend the CICS runtime**
- **Discovery and visualization aids insight**
- **Automation speeds service delivery and ensures standardization and governance**
- **Modern, integrated user interfaces lower skills barrier**
- **Day-1 exploitation of CICS TS V5.1 new capabilities reduces time to value**



CICS Deployment Assistant for z/OS V5.1



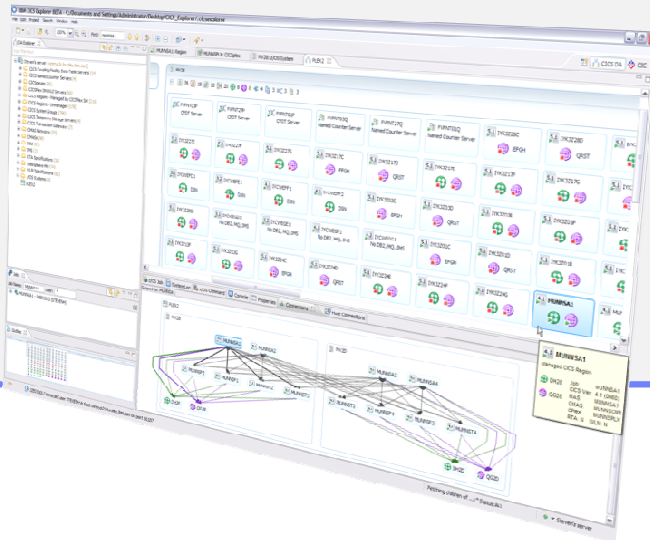
Topology insight through discovery

CICS DA enables you to...

- Visualize and manage your CICS topology
- Discover existing regions and sub-systems
- Automatically create a new CICSplex
- Plexify and clone CICS regions
- Start and stop a CICS region

What's new in CICS DA V5.1...

- Enriched discovery of over 30 entities
- Improved visualization with tagging and filtering
- Export model for external reporting
- CICS TS V5.1 upgrade cheat sheet
- IPv6 support
- Virtual IP addressing support
- Clone JCL improvements
- Serviceability enhancements
- Connections view with scoping



CICS DA - Plexify your unmanaged regions

Benefits

- 3 steps to a managed region
- Manage your region from the CICS SM Explorer perspective

Discover

DA Explorer window showing a context menu for a connection. The menu items are: New, Open Visualization, Export to File as CSV..., Refresh Status, Connect (DA), Discover (highlighted), Load..., Properties..., and Delete Connection.

Ok then

Visualize
Unmanaged regions

Dialog box titled 'Add CICS region to CICSplex'. It contains fields for 'Select a CICSplex:' (with options CICSPLX1 and WUIPLEX), 'Choose some groups:' (with option AORS), and 'Choose an owning CMAS:' (with option CPSMCMAS). Buttons for 'Finish' and 'Cancel' are at the bottom.

Manage

SM Explorer window showing a grid of unmanaged regions. A context menu is open over the 'CICACB05' region, with options: New, Open, Edit tags..., Refresh Status, Delete Model Element, Start region, Stop region, Add to CICSplex (highlighted), and Show SIT Parameters.

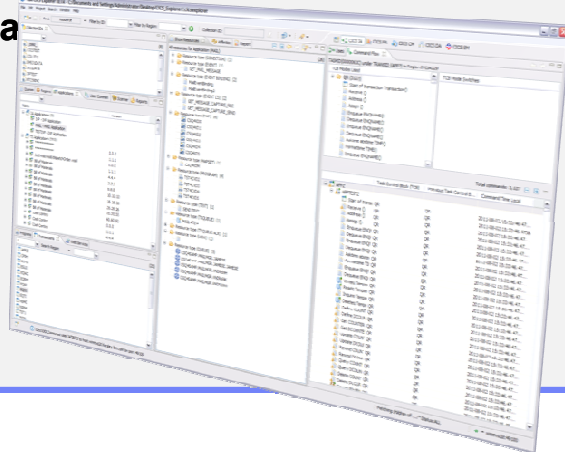
CICS Interdependency Analyzer for z/OS V5.1



Application insight

CICS IA enables you to...

- Identify threadsafe / non-threadsafeprograms
- Highlight CICS web service candidates
- Speed CICSplex® SM workload management
- **Advanced CICS command flow ana**



What's new in CICS IA V5.1...

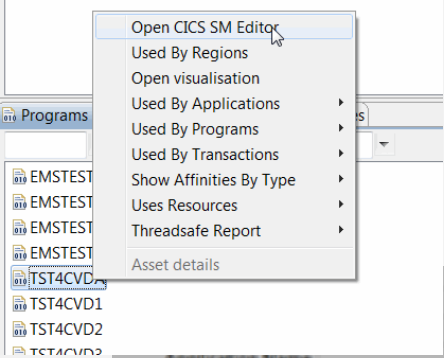
- CICS Business Events support
- Support for building CICS Applications
- Improved CICS Explorer views
 - Plug-in control for data collection
 - Command Flow self-service
 - Enhanced business application analysis
- CICS user exit detection and mapping

Using CICS IA data to define Applications in TS 5.1

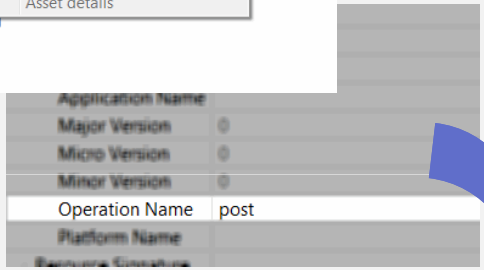
Benefits

- **Upfront knowledge of resources required to define an Application Bundle**

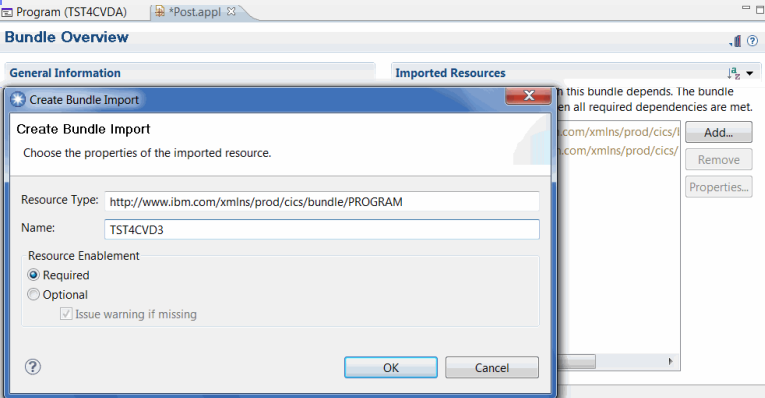
Open CICS SM Editor and assign an entry point



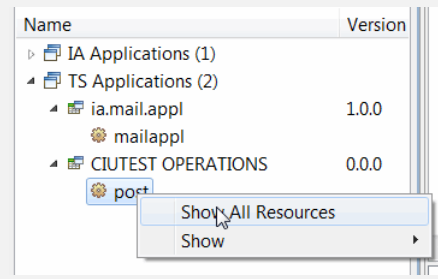
Collect and load data into DB2




Define bundle using IA information



Show All Resources





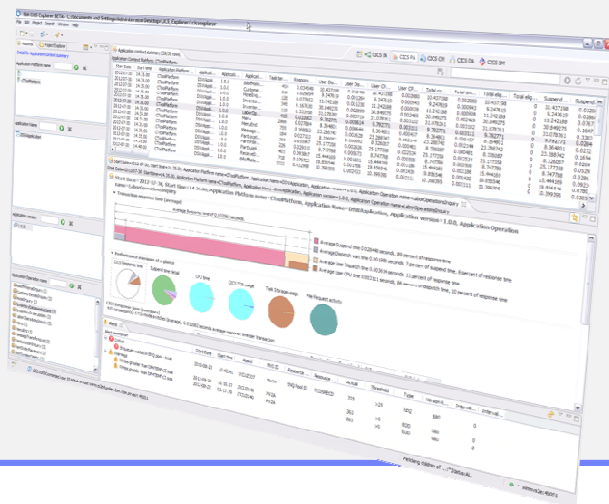
CICS Performance Analyzer for z/OS V5.1



Application insight

CICS PA enables you to...

- Comprehensive Performance Reporting and Analysis for CICS including DB2, WebSphere MQ, and MVS System Logger
- Understand trends and develop capacity plans
- View statistics and create statistical alerts



What's new in CICS PA V5.1...

- CICS TS V5.1 support for Application, Platform, and Policy
- Several UI enhancements:
 - Application centric view
 - Customizable sheet views
 - Wait Analysis
 - Improved Navigation
 - Export and Import capability
 - Batch statistics reporting for CICS TG
 - Statistics filtering
 - CPU totals on MQ reports

CICS VSAM Recovery for z/OS V5.1



Reduce the risk to your data

CICS VR enables you to...

- Manage and automate the recovery of damaged, corrupted, or lost VSAM files for both the CICS and Batch environments.
- Supports backups created by Backup-While-Open (BWO)
- Test forward recovery and backout
- Produce disaster recovery reports

What's new in CICS VR V5.1...

- Replication logging in support of the GDPS-Active-Active availability solution
- Batch logging enhancements
- Batch backout improvements
- Migration utility enhancements
- Logstream printing and other usability enhancements



CICS Configuration Manager for z/OS V5.1



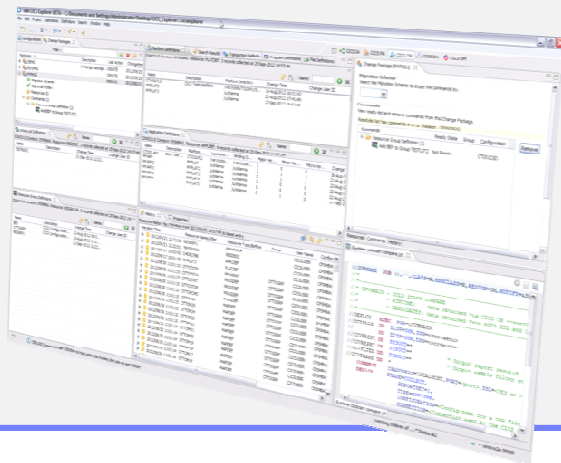
The value of control

CICS CM enables you to...

- Manage changes throughout the life-cycle
- Create reports to identify redundant definitions, show resource relationships, and change management history
- Manage audit, back-out, and change authorizations

What's new in CICS CM V5.1...

- Support for Application, Platform, and Policy resources
- Enhanced plug-in with Packaging and Deployment Analysis
- Sort in Package view and Ready list
- Command stack improvements
- Remove empty Group from the CSD List
- SSL support for plug-in connection
- Audit trail for Install and NewCopy



Simplify problem determination while reducing resource usage

OMEGAMON V5.1 Product Family

Reduce system and application outages with increased productivity

Simplify monitoring with ability to view enterprise summary of multiple sysplexes and subsystems

Decrease resource usage by taking advantage of zIIP specialty processor

Improve availability with enhanced monitoring support across zEnterprise and zBX

NEW! OMEGAMON XE for Mainframe Networks V5.1
NEW! OMEGAMON for z/OS Management Suite V5.1



Up to **75%** improvement in the ability to find and fix performance problems

Up to **73%** of CICS SLA processing offloaded

Develop a cloud infrastructure with System z

Linux on System z Cloud Roadmap

3

Orchestrate

Modernize System z by moving to Private Cloud in a stepwise approach

2

Automate

1

Integrate

"Take out cost"
Consolidate and Virtualize

Differentiation

zEnterprise System
z/VM 6.2
Linux on System z

"Simplify"
Automate and Manage Better

Standardization

Tivoli Provisioning Manager 7.2
zEnterprise Starter Edition for Cloud
Cloud Ready for Linux on z
SmartCloud Provisioning 2.x
SmartCloud Entry 2.3

"Seamless"
Service Lifecycle Management

Service Management

Tivoli Service Automation Manager 7.2.4
System z Solution Edition for Cloud Computing

2013

- Updated! SmartCloud Provisioning
- Updated! SmartCloud Entry
- New! Smart Cloud Orchestrator (includes TPM and TSAM)

Superior Data and Analytics Solutions

Up to **95%** Reduction in data warehousing storage costs



IBM DB2 Analytics Accelerator V3



High volume operational and complex queries with new Incremental update and storage savers to deliver up to

2000x in performance



Blending applications with analytics with new Netezza MPP and System z SMP technologies

IBM zEnterprise Analytics System 9700/9710



Comprehensive query and reporting with new dashboard capability extending to mobile devices



Cognos BI 10.2

Accelerating decisions to the speed of business

IBM DB2 Analytics Accelerator V3



Best of both worlds

System z + Netezza technology

Delivers unparalleled, mixed workload performance for complex analytic business needs.



- **Add-on appliance technology** integrated and managed with DB2 for z/OS LPAR and transparent to applications
- **Designed for long-running queries** with optimal performance
 - **NEW! High Performance Storage Saver** provides the performance of the Accelerator, while removing the cost of storage on the zEnterprise
 - **NEW! Incremental Update**, which propagates data changes for high-speed use as they occur, enabling current information to be made available immediately
 - **NEW! Sophistication of the System z workload manager** down to the individual queries within the Accelerator

Flexibility in Critical Data Decision Systems

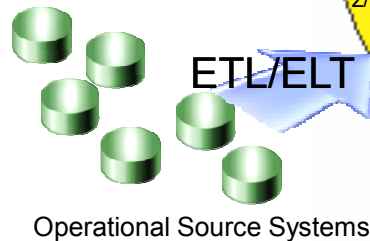
IBM zEnterprise Analytics System 9700/9710



**Blending
Netezza MPP
and System z
SMP
technologies**



**NEW
inclusion of
DB2
Analytics
Accelerator.**



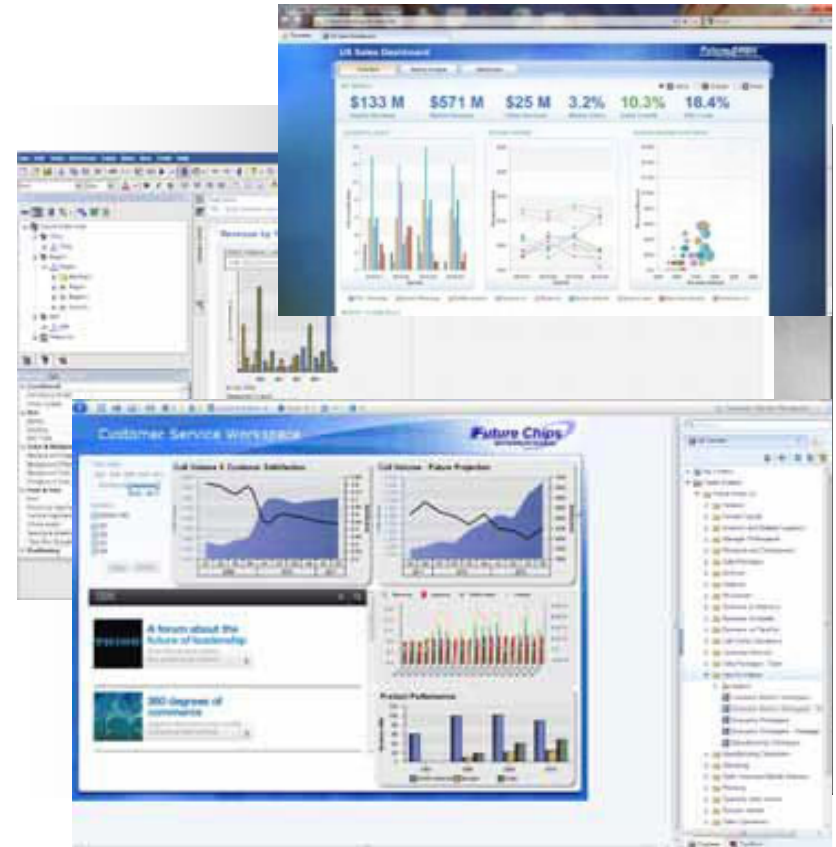
Gain value from Business Information

IBM Cognos Business Intelligence 10.2 for Linux on System z and z/OS

- Deeper understanding of trends, opportunities, weaknesses and threats
 - **Query & Reporting:** Comprehensive query and reporting capabilities.
 - **Analysis:** Drive better, smarter business decisions with wide-ranging analysis capabilities
 - **Dashboarding:** Monitor, measure and manage corporate performance at a glance.
 - **Real-time Monitoring:** View up-to-the second relevant information in context with BI information

NEW!

- Merge of external data into Cognos reports
- Full fidelity publish capability to publish and share content
- Visualization coach to assist in viewing relevant information
- Mashup services



Up to
32%

**Performance
improvement with
Cognos and zEC12**

Enhanced analytics. More availability. Better performance

DB2 Next QPP (DB2 v11)

▪ Continuous Availability Features

- Online REORG: less disruption, better handling of very large tables/indexes
- DROP COLUMN, other online schema change improvements
- Extended log record addressing capacity (1 yottabyte)
- Improved autonomies which reduces costs and improves availability

▪ Enhanced business analytics

- Temporal and SQLPL enhancements
- Transparent warm/cold archiving
- IDAA enhancements
- More efficient inline database scoring enabling predictive analytics

▪ Simpler, faster DB2 version upgrades

- No application changes required for incompatible SQL
- Access path stability improvements
- Improved quality, product stability at ESP start and at GA

Performance Improvements

Up to **30%** for query workloads

Up to **10%** for TPC-E like workloads

Up to **5%** for OLTP (including SAP day posting)

Reduce cost. Simplify transactions. Improve performance

IMS vNext QPP (IMS v13)

- **Reduce TCO and complexity**

- Reduce MIPS usage across IMS and system generation complexity
- Extend TCP/IP support to InterSystems Communication (ISC)
- Improve IMS Shared Queues processing

- **Application Simplification and Enablement**

- Allow alter of High Availability Databases and Data Entry Databases without a DB outage
- Support database versioning
- Extend SQL support
- Extend IMS application callout capabilities
- Expand connectivity for IMS Java applications (host)
- Improved usability for application calls to WebSphere MQ

- **Availability, Scalability and Performance**

- Reduce bottlenecks and general performance improvements
- Increase maximum number of concurrent application threads/regions
- User exit enhancements to refresh without an outage

Create more intelligent networks of business partners, customers and suppliers

IBM Sterling B2B Integrator V5.2.4 and IBM Sterling File Gateway V2.2.4 for Linux on z

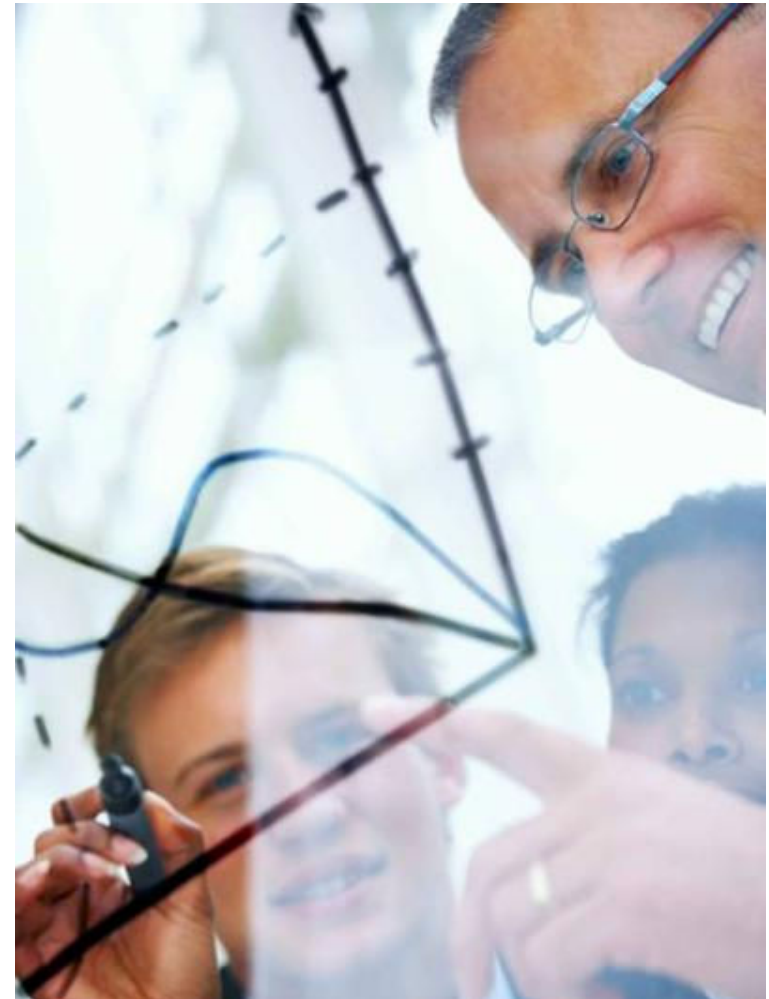
IBM Sterling B2B Integrator V5.2.4

- Enables the secure integration of complex B2B processes with diverse partner communities, providing a single, flexible B2B gateway that enables companies to solve all of their B2B integration needs.

IBM Sterling File Gateway V2.2.4

- consolidates disparate centers of file transfer activity, and facilitates the exchange of file-based information securely, in virtually any format, protocol, and file size.

Now on Linux on z!!



Securing your data and applications

Customers have seen.....

Up to **70%** savings in audit and compliance overhead

Up to **52%** lower security administrator efforts

Secure critical information

Enhance security intelligence of the mainframe with new integration with QRadar SIEM

Complete, cross platform, solution to address database security and compliance requirements with new Database Activity Monitoring capabilities



IBM Security zSecure Suite V1.13.1



IBM InfoSphere Guardium V9.0

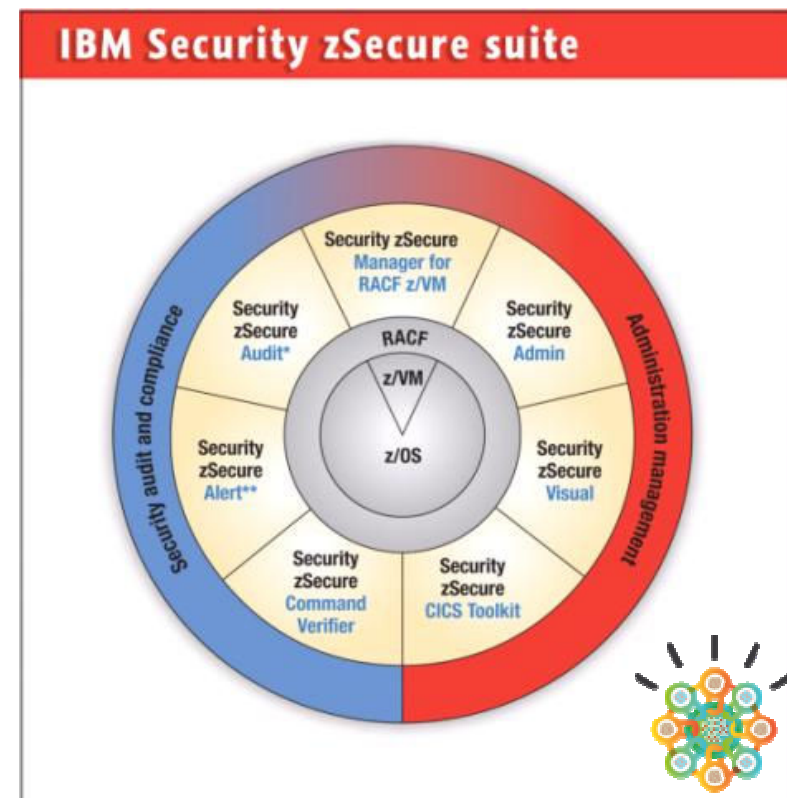
Enhance security intelligence, automate compliance reporting, and simplify administration

IBM Security zSecure suite V1.13.1

- Enhance mainframe security intelligence
- Automate audit and reporting to detect potential threats and exposures, issue real-time alerts, and initiate remediation
- Integrate application security with DB2, IMS and CICS for compliance reporting
- Simplify security administration to improve productivity and ROI
- Perform RACF database cleanup to remove unused or obsolete authorizations

NEW!

- Integration with QRadar
- Expand integration points with DB2
- Enhanced RACF data base cleanup capabilities
- Support for CICS Transaction Server V5.1



Address database security and compliance requirements

IBM InfoSphere Guardium V9.0



- Simplest, most robust solution for assuring the privacy and integrity of trusted information in the data center
 - **NEW! Database Activity Monitoring (DAM) capabilities** to address both security and compliance needs, prevent data breaches, monitor privileged users, ensure data integrity, and reduce cost of compliance
 - **NEW! Database Vulnerability Assessment (VA) capabilities** for database configuration, operating system parameters, and analysis based on database activity

**Now
support
for zBx**



IBM InfoSphere Guardium S-TAP on z/OS V9 – Announced October, 2012

- The function of the Guardium S-TAPs for DB2, IMS and VSAM is to collect Audit information of access to these datastores
- This allows organisations to prevent data breaches and fraud and assure data governance while reducing cost and complexity
- **Guardium S-TAP for DB2 V9 improvements:**
 - Simpler architecture (single started task instead of four)
 - Better recoverability and failover
 - More zIIP eligible workload
 - Superior performance
- **Guardium S-TAP for IMS V9 improvements:**
 - Simpler architecture (reduced number of started tasks)
 - Better recoverability and failover
 - More zIIP eligible workload
 - Simpler operation
- **Guardium S-TAP for VSAM V9 improvements:**
 - Better recoverability and failover
 - Record Level Monitoring(!)
 - Simpler operation



Contact John McKinnon
(mmcmcki@au1.ibm.com)
for more details.

This is not him.
(But it could be)



Solutions to modernize the Enterprise

Up to **31%**
improvement to PL/I-
based CPU intensive
applications

*“Metal C in z/OS XL C/C++ is
yet another powerful tool
helping turn the economics of
System z software
development into a complete
equation”
..Rocket Software*

- **Accelerate mainframe application delivery** with new features to automate unit testing of COBOL , PL/I, and CICS application test regions
- **Unified environment for multiplatform development and team collaboration** with new capabilities to help automate development of high quality code with a z/OS unit test framework, code review, and code coverage
- **Compilers optimized for the zEC12** with new Enterprise PL/I for z/OS and updated C/C++ compilers
- **Automate event and rule-based decision logic** with new options to host within your CICS, IMS Batch and COBOL Batch applications



IBM Continuous Integration for System z

IBM Integrated solution for System z development



Enterprise PL/I for z/OS compiler

IBM Operational Decision Manager for z/OS

Expedite mainframe application delivery

IBM Continuous integration for System z



- A complete solution for planning, automating, and monitoring application quality and testing, as well as linking testing to build and provisioning of application environments as a seamless process
 - **Efficient mainframe and multiplatform application interface testing** including test case result reporting
 - **Determine status of cross-platform application testing progress and quality** in real-time prior to test execution



NEW!

- Inclusion of Rational Test Workbench to automate and drive application testing of mainframe interfaces including web services
- Unit testing enhancements for COBOL, CICS, and PL/I applications
- Automated provisioning of test data into VSAM

Modernize and Manage Your zEnterprise Decision Logic

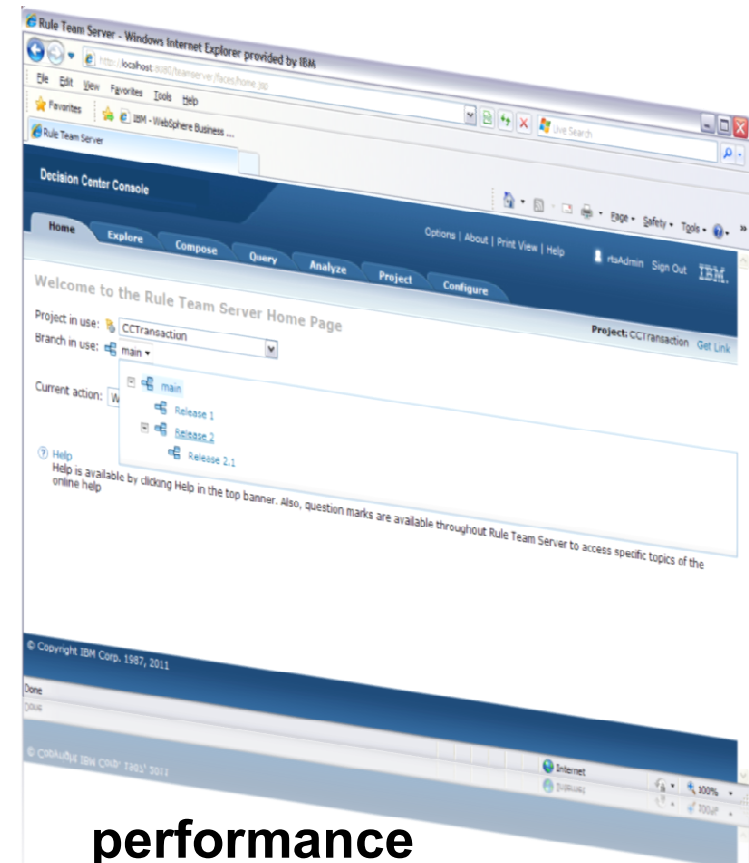
IBM Operational Decision Manager for z/OS v8.0.1



- Improves the quality of transaction and process-related decisions in critical mainframe applications
 - Provides multiple z/OS specific runtimes to automate event and rule-based decision logic with options to host within your CICS, IMS Batch, COBOL Batch applications
 - Optimize rule execution to address competitive native COBOL execution to ensure adoption with COBOL application

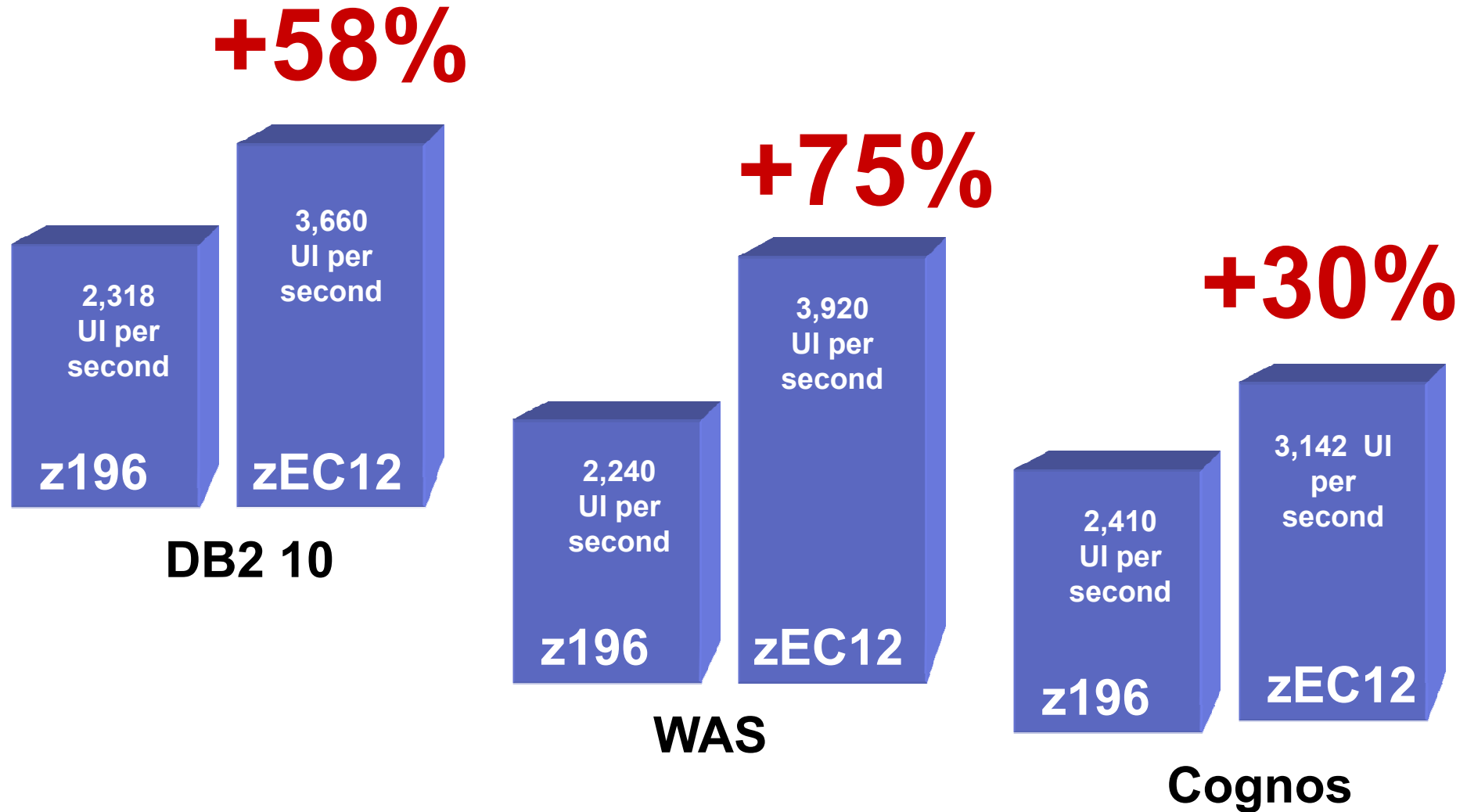
NEW!

- Provide support for IMS transactional applications with rule execution
- Optimize rule execution to address competitive native COBOL execution
- Support for zEC12



Up to **30%** performance improvement with ODM and zEC12

Optimized for critical data workloads



City and County of Honolulu

Need:

Increase government transparency and provide more of the city's financial data information to its citizens, increase community involvement and improve the efficiency and responsiveness of its work order system.

Solution:

Consolidated onto System z to create a secure custom cloud environment for its citizens to improve information and service delivery.



Results:

Consolidating and running Linux on System z has simplified administration, reduced costs and improved efficiency.

One week to mere hours

Reduced time to deploy applications from one week to mere hours

68%

Lowered database licensing costs by 68 percent

USD \$1.4 million

Helped increase tax revenue by USD \$1.4 million in three months through support for new property tax appraisal system

Thank you.

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