# What's New With IBM z/OS Tools?

**Last updated: Tuesday, 07 October 2014**

# Agenda

**Introduction**     Context for the AIM z/OS Tools

**Value**                 Why are customers buying IBM's z/OS Tools

**Scenarios**         How z/OS Tools help clients  achieve business value

**Next Step**         How IBM can help
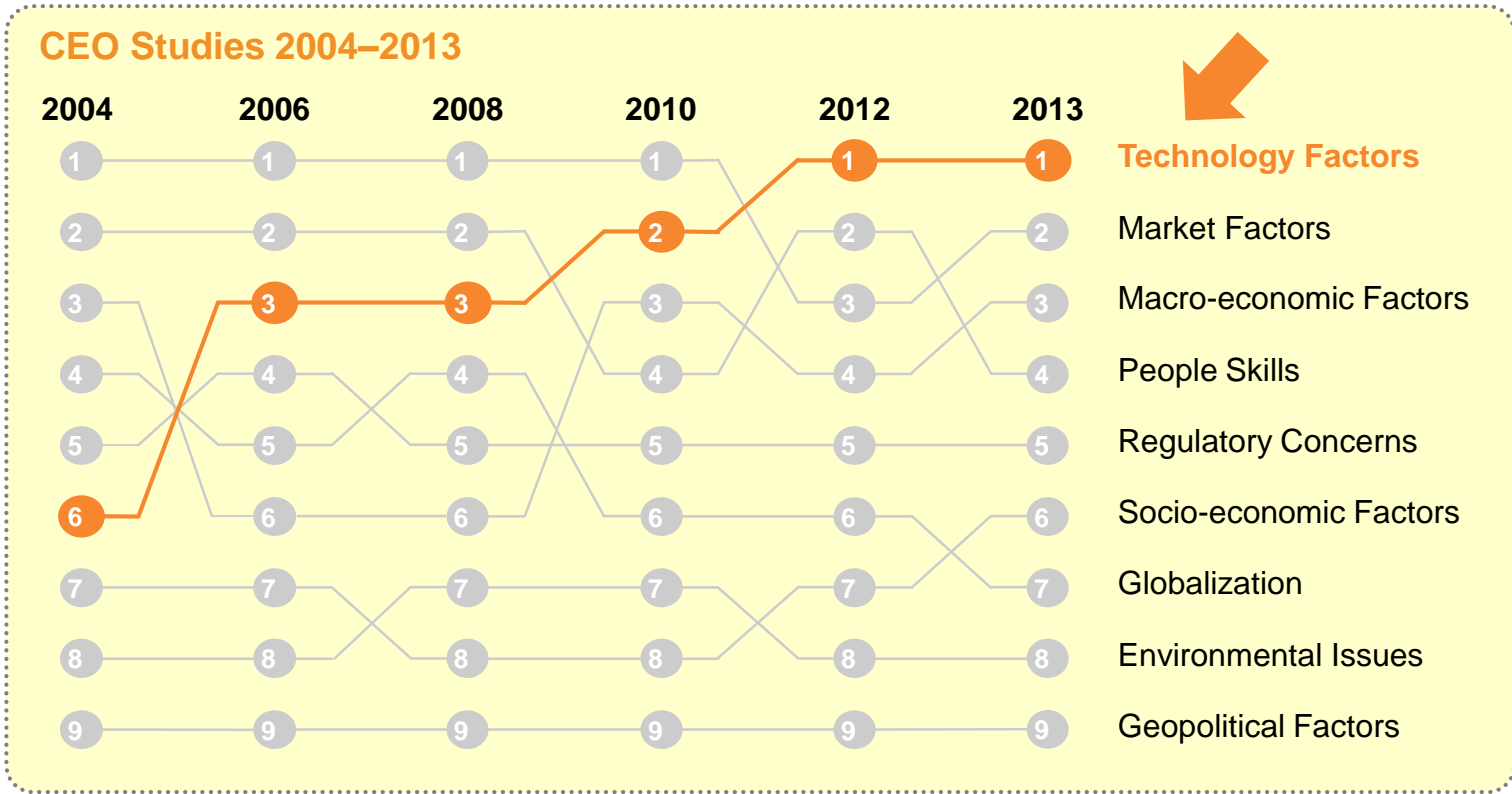
**Backup**             Product level details

# Context for the AIM z/OS Tools

# CEOs identify technology as the most important external force impacting their organizations

**External forces that will impact the organization**



**CEO Studies 2004–2013**

| 2004 | 2006 | 2008 | 2010 | 2012 | 2013 | |
|------|------|------|------|------|------|---|
| 1 | 1 | 1 | 1 | 1 | 1 | **Technology Factors** |
| 2 | 2 | 2 | 2 | 2 | 2 | Market Factors |
| 3 | 3 | 3 | 3 | 3 | 3 | Macro-economic Factors |
| 4 | 4 | 4 | 4 | 4 | 4 | People Skills |
| 5 | 5 | 5 | 5 | 5 | 5 | Regulatory Concerns |
| 6 | 6 | 6 | 6 | 6 | 6 | Socio-economic Factors |
| 7 | 7 | 7 | 7 | 7 | 7 | Globalization |
| 8 | 8 | 8 | 8 | 8 | 8 | Environmental Issues |
| 9 | 9 | 9 | 9 | 9 | 9 | Geopolitical Factors |

# Software delivery is at the heart of today's top technology trends

**Big Data**
Insights on new products by more efficiently interpreting massive quantities of data

**Cloud**
Demand for apps requires fast, scalable environments for dev and test, as well as production

**Social Business**
Broader set of stakeholders collaborate to deliver continuous innovation and value

**Instrumented Products**
Industry requirements demand faster response to regulations and standards, with traceability and quality

## Software delivery

**Mobile**
Modern workforce expects constantly updated software to connect to enterprise systems
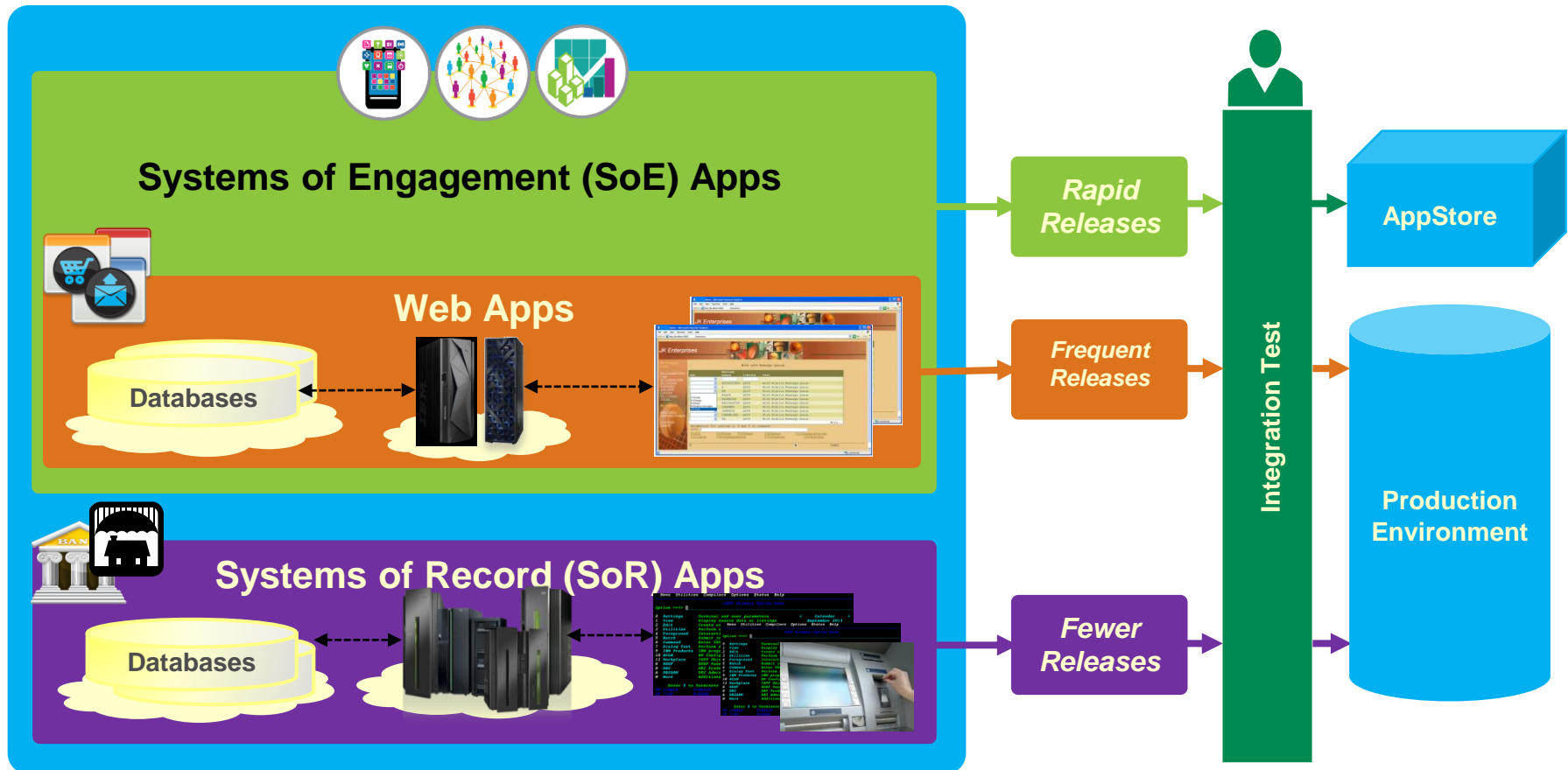
**Intelligent/ Connected Systems**
Software components in smart products driving increased value and differentiation
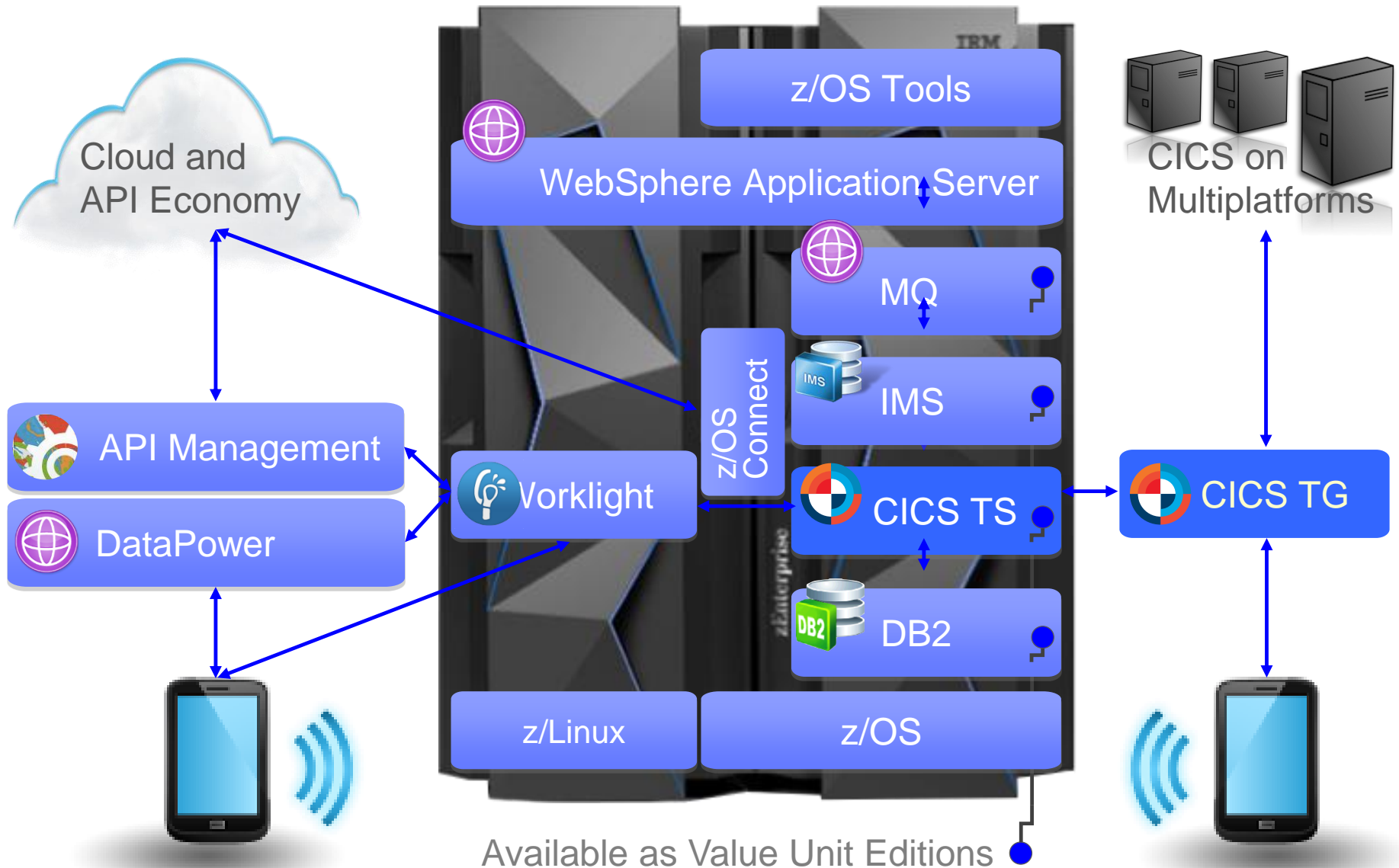
# Today's Systems landscape

**Bringing together the people, processes, and tools across the entire software delivery lifecycle – spanning mobile to mainframe platforms**



Systems of Engagement (SoE) Apps

Web Apps

Databases

Systems of Record (SoR) Apps

Databases

Rapid Releases

Frequent Releases

Fewer Releases

Integration Test

AppStore

Production Environment

# Systems of Engagement meet Systems of Record



Cloud and API Economy

API Management

DataPower

Worklight

z/OS Connect

z/OS Tools

WebSphere Application Server

MQ

IMS

CICS TS

DB2

z/Linux

z/OS

CICS on Multiplatforms

CICS TG

Available as Value Unit Editions

# Systems of Record can be complex systems built on decades of continuous & incremental development

Change?

Optimize?
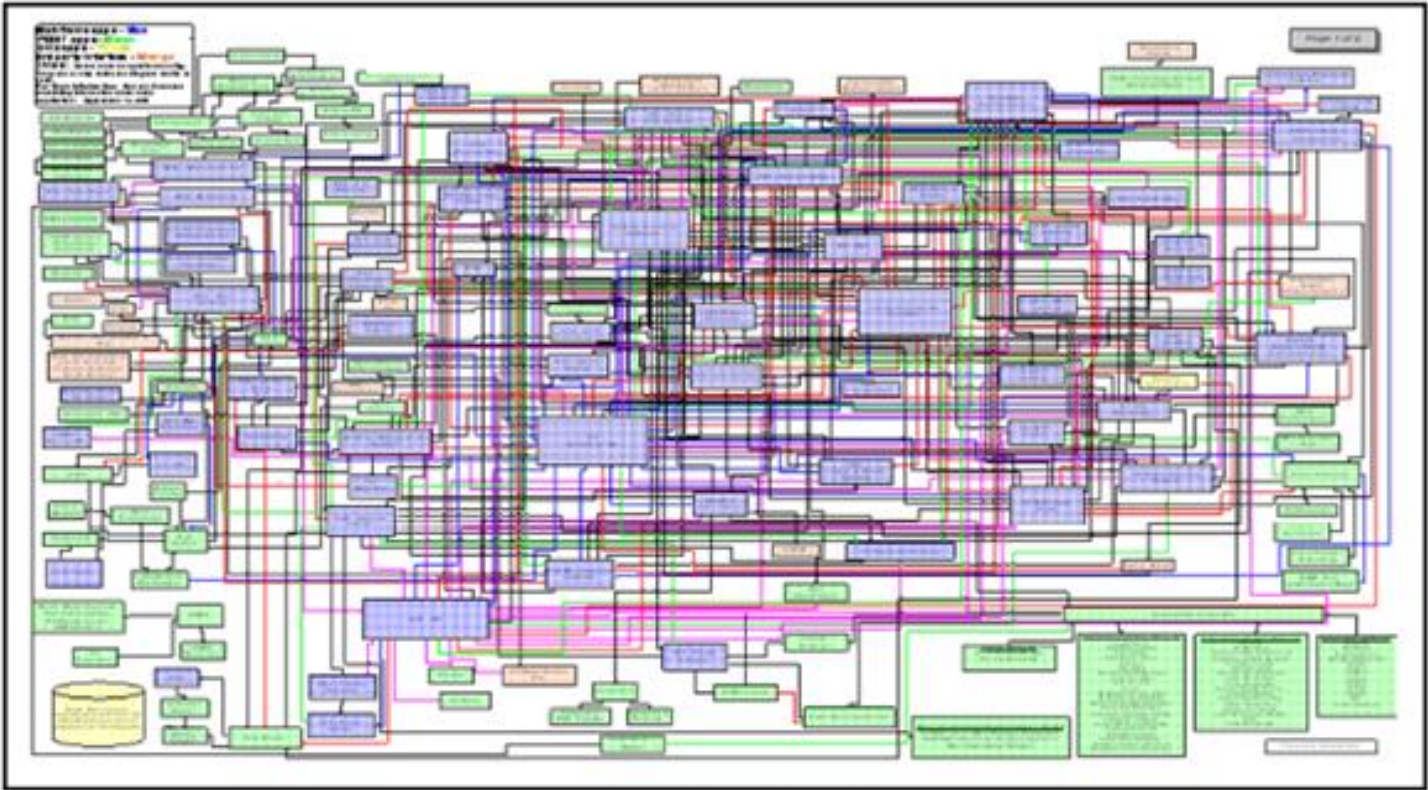


Modernize?

Where do I start?

Re-use?

# Why z/OS tools are more important than ever?

According to IBM's The Global CEOs Study 2013, CEOs cited technology as the number-one factor they see impacting their companies … in front of people skills, market factors and macroeconomic factors.

Businesses who can establish software delivery as their core competency will be able to exploit the emerging technology trends.

Going mobile? Vanson Bourne research firm reports 62% of 520 CIOs interviewed enabled back-end functions to support e-commerce and mobile applications – mature technology and tooling helps do this quickly and easily.

Mainframe systems are typically complex built on decades of incremental development. The right tools are must to be Agile & Responsive, and support 24x7 operation with increased workload by new mobile applications

System z - an ideal home for Mobile Workloads

# Leverage common tools to build enterprise applications

Integrated tooling to respond to mobile dynamics

**IBM CICS Tools**
**IBM Problem Determination Tools**
**IBM Rational Developer for the Enterprise**
**IBM Rational Team Concert**
**IBM Worklight**
**IBM z/OS Explorer**
**IBM Enterprise COBOL, PL/I, C/C++**

## Enabling you to…

- Optimise applications, data, infrastructure, and processes

- Modernize applications, data, infrastructure, and processes

- Locate and diagnose problems and test and validate the solutions



MOBILE   .NET   JEE   COBOL   RPG

*Worklight*
An IBM® company

***Continuous Delivery***

***Open Lifecycle and Service Management Integration Platform***
*Jazz*

# IBM DevOps assists agile software delivery

Adopt a collaborative DevOps approach to seize market opportunities and reduce time to customer feedback



Continuous Business Planning

Collaborative Development

Continuous Customer Feedback and Optimization

**Plan and Measure**

**DevOps – Continuous innovation, feedback and improvements**

**Monitor and Optimize**

**Develop and Test**

**Release and Deploy**

Standards

Ecosystem

Best Practices

Continuous Monitoring

Continuous Testing

Continuous Release and Deployment

**Accelerate software delivery –** *for faster time to value*

**Balance speed, cost, quality and risk –** *for increased capacity to innovate*

**Reduce time to customer feedback –** *for improved customer experience*

# Why are customers buying IBM z/OS Tools?

# AIM zTools: InfraAppData Optimization, Modernization, Diagnostics for Enterprise

## Diagnostics
### Finding and fixing problems

Application failure analysis

Performance analysis for reduced resource consumption

Problem replication and test

As a **Sysprog, Developer, Tester** they help me to locate and diagnose problems and test and validate the solutions

## Modernize
### Doing new things

Discovery and documentation of application and system topology and relationships. Insight and understanding – faster and risk-reduced development. Mobile and distributed applications connectivity

V2V upgrades and data modernization

Integrated tooling and DevOps

As a **Developer, Architect, LOB**, they help me to modernize my applications, data, infrastructure, and processes

## Optimize
### Doing things better

Identification of potential improvements (thread-safe, workload management, consolidation, etc), performance trending, capacity planning

Configuration of applications
Provisioning of subsystems (new and cloning)

Data management (selective replication, validation, recovery)

As a **Sysprog** - they help me to optimise my applications, data, infrastructure, and processes

# Scenarios

# Why do you need AIM z/OS Tools?

**Problems**

- Market forces drive increased use and enhancements to SoRs
- Complex interrelated infrastructure, applications, and data
- Processes and infrastructure unsuited to continuous application delivery
- Specialised skill  requirements to build and deploy applications

**Key Solutions**

- Discovery and documentation of CICS applications and systems.
- Identification of service, mobile, and event-enablement candidates
- Connecting mobile, J2EE, and client-server applications to CICS
- Modelling, creating, and testing new data schemas across z/OS, VSAM, DB2, IMS, and MQ sub-systems
- Support for V2V upgrades
- Migrating VSAM data to DB2 without application change
- DevOps: Automation capabilities to assist in implementing DevOps
- Integrated tooling

# Three steps to **Service Agility**

## Modernize CICS-based systems of record



### Step 1

Adopt a collaborative **DevOps** approach with **integrated tooling** to respond to new dynamics

### Step 2

**Mobile- and service-enable** application assets to extend access to new channels
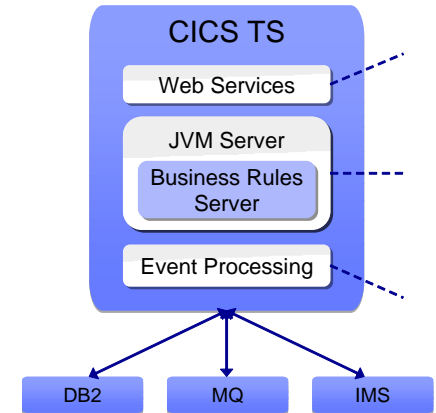
### Step 3

**Event-  and rule-enablement** to deliver data analytics from dynamic applications

**"The combination of CICS products helped streamline processes, increase productivity and reduce errors commonly introduced by change, and helped take advantage of new features of CICS release enhancements and adhere to ITIL requirements." Leading healthcare provider**

# Three steps to **Data Modernization**

Adding new data fields and converting EBCDIC data to UNICODE
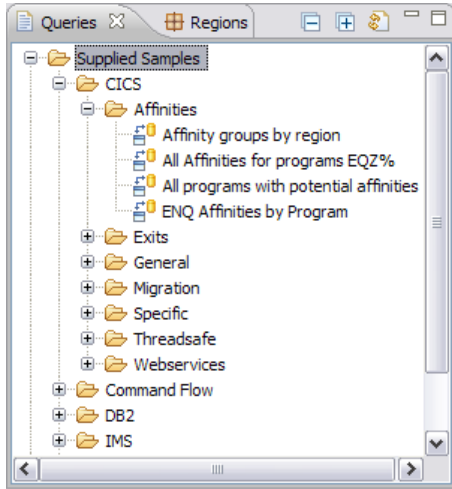


## Step 1

Identify CICS programs & data affected by this change
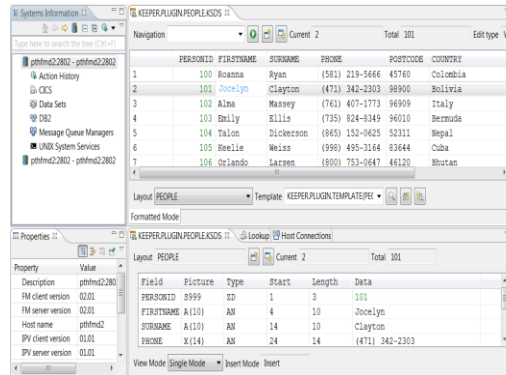
## Step 2

Create masked test data in new format and initialize new fields to something sensible
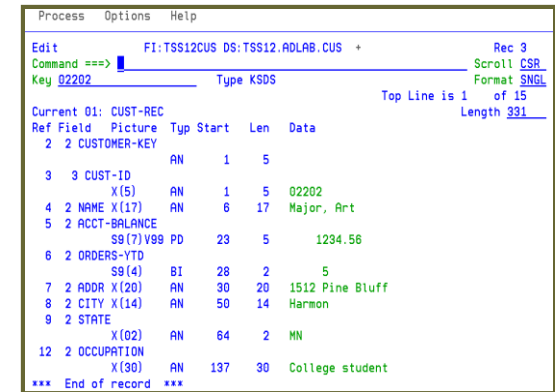
## Step 3

Copy the current production data to the new format , converting text data from EBCDIC to UNICODE and the initialized new fields

**Major US manufacturer** Purchased FM to copy data from EBCDIC to UTF8.  This was a need for them and could not be fulfilled by the CA File Master product.

# Why do you need AIM z/OS Tools?

**Problems**

- Need for positive ROI for z/OS investment – MIPS reduction, reuse of existing assets, competitive pricing
- Infrastructure unsuited to mobile workload dynamics – performance, availability, recovery, etc
- Specialised skill requirements to optimize applications and systems

**Key Solutions**

- Threadsafe optimization, region consolidation, workload mgt, etc
- Performance reporting, accounting, SLA reporting, etc
- Capacity planning and trending of z/OS application performance to ensure SLA compliance
- Automated cloning of CICS regions
- Automated administration, auditing, standardization, and control of CICS configuration changes
- Identification of unused CICS programs and resources
- Consistent management of all z/OS, VSAM, DB2, IMS, and MQ data objects in development, test, and production
- Recovering VSAM files after failure in CICS and batch
- Financial optimization opportunities

# Three steps to CICS **Operational Efficiency**

Optimize applications, systems, and processes to achieve more with less



**CICS TS V5.2**
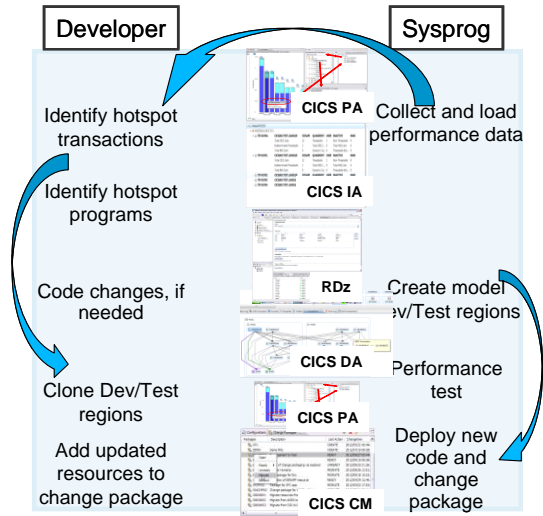
## Step 1

**Threadsafe** analysis and implementation to reduce CPU utilization by up to 15%
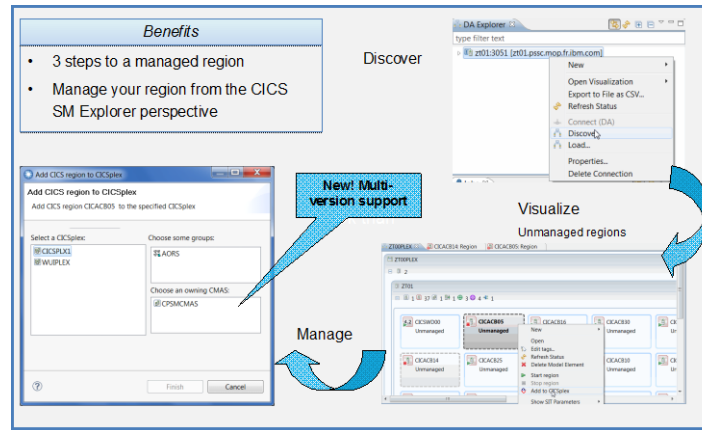
## Step 2

**Workload Management** to cope with mobile scalability and availability needs
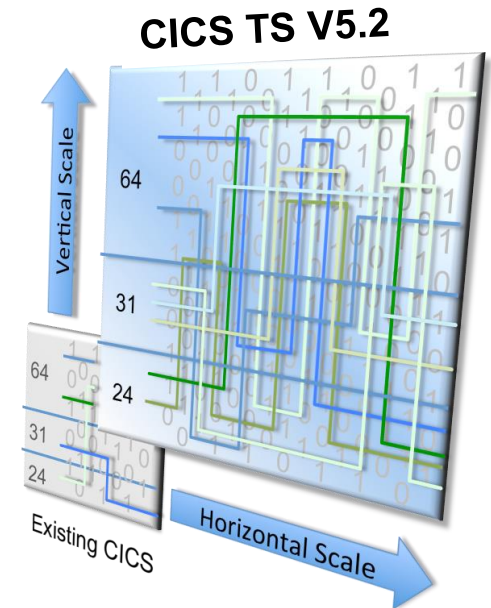
## Step 3

Region **Consolidation** to reduce management overhead and CPU utilization (up to 10%)

*"Improved application performance by 10–20 percent and reduced the cost of processing claims, positioning it to handle growing numbers of claims"*

# Modernizing the mainframe: Humana takes CICS to the next level

Webcast – September 24, 2014

http://www-01.ibm.com/software/os/systemz/webcast/24sep/

**IBM**

## Highlights

### Topics

Getting insight into the entire CICS environment with multi-role tools

Reducing skills required and effort to manage and optimize domain power-tools

Faster hand-over between roles with less rework using collaborative tools

Simplifying tasks for new and experienced users through integrated tools

### Speakers

*Eric Higgins*, Certified IT Specialist, CICS Tools, IBM Software Group

*Craig Whitaker*, Technology Manager, Transaction & Service Oriented Infrastructure, Humana

**Broadcast date:** September 24, 2014, 11:00 a.m. EDT / 3:00 p.m. GMT / 4:00 p.m. BST

Like many other industries, the landscape of healthcare insurance is changing dramatically with many uncertainties. Part of the challenge is to ensure that the infrastructure and applications that run the core business have the flexibility, durability, and elasticity to adapt to immediate demands, as well as to be strategic for the long-term.

## Webcast

If your industry is experiencing similar pressures, join us for this complimentary webcast to learn how Humana is exploiting CICS® Tools and CICS Explorer® in its environment. These CICS solutions will support modernization and optimization activities around Humana's core applications to run the business for the foreseeable future.

## Register online right now

Register now for this webcast by logging onto ibm.com/software/systemz/webcast/24sep

Join us after the webcast for a live question-and-answer session. This webcast will also be available for replay after the event.

# Threadsafe Optimization

**Extracting Optimum Performance from CICS**

**Threadsafe** analysis and implementation to reduce CPU utilization by up to 15%

**Developer**

**Sysprog**

Identify hotspot transactions

Identify hotspot programs

Code changes, if needed

Clone Dev/Test regions

Add updated resources to change package

**CICS PA**

**CICS IA**

**RDz**

**CICS DA**

**CICS PA**

**CICS CM**

Collect and load performance data

**New! Multi-version support**

Create model Dev/Test regions

Performance test

Deploy new code and change package
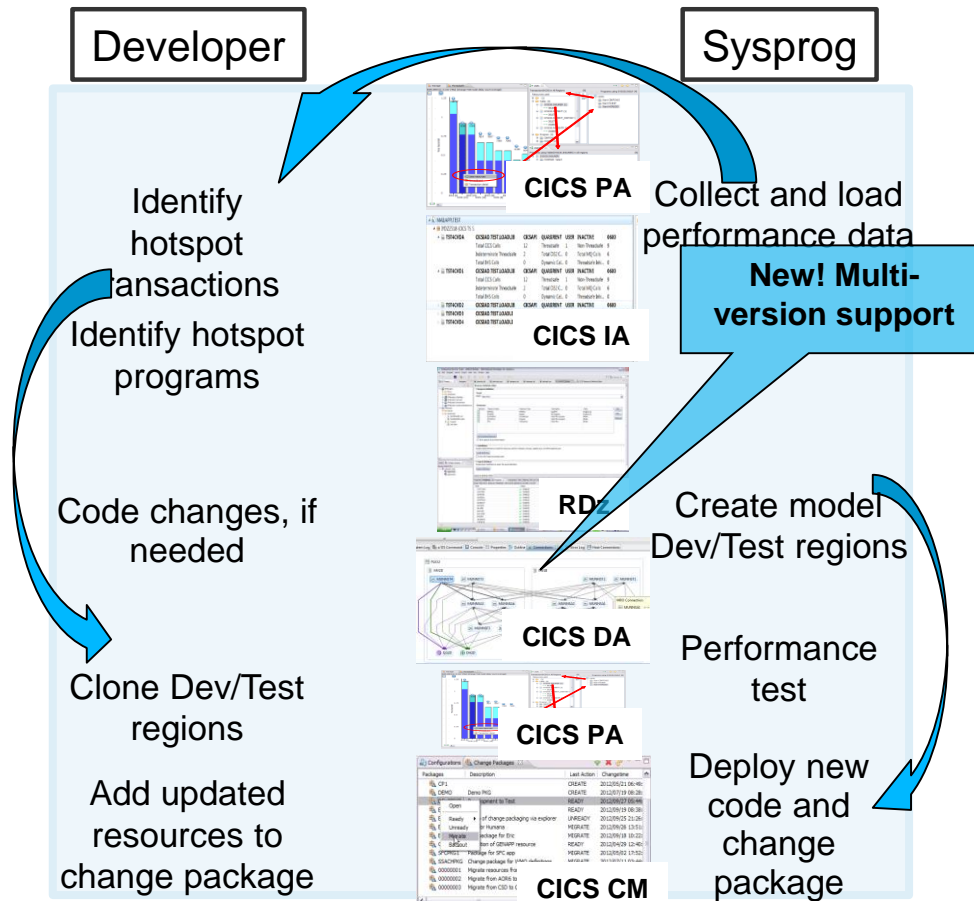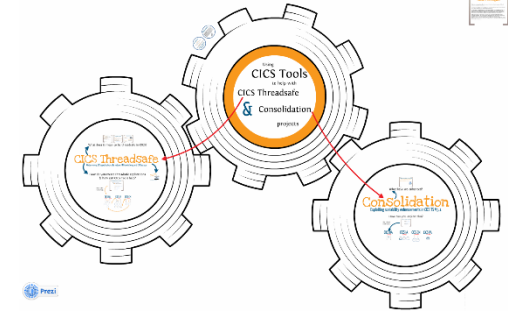
- Reduce CPU usage
- Defer capacity upgrades
- Improve response times
- Increase multi-processing

- Insight
- Analysis
- Change control

**"By making only one major application threadsafe we were able to save 700 MIPS"** *Major US Bank*

# HUK-COBURG



**HUK-COBURG**
Aus Tradition günstig

**One of the largest insurance companies in Germany. Insures more than 8.5 million clients.**

- Challenge
  - Reduce CPU usage in its IBM System z9® Enterprise Class mainframe to cut operating costs.

- Solution
  - Implemented threadsafe following hands-on usage of the IBM CICS tools (Performance Analyzer, Interdependency Analyzer, and Configuration Manager).

- Benefit
  - "We've embraced threadsafe functionality to **help us cut our CPU usage by 550 MIPs, or about US $440,000 in annual operating expense**, which really proves the efficiency of IBM CICS technology."

IBM Case Study

http://www-05.ibm.com/de/follow-z/pdf/Referenz-april-HUK-COBURG_EN.pdf

# Availability workload management
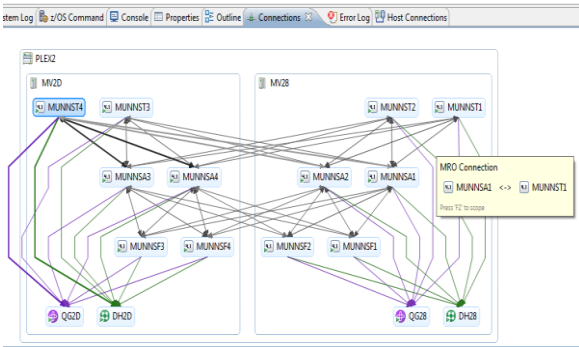






**1**

**Understand** the system & application's performance and topology

**2**

**Extend** the environment and **implement** workload management definitions

**3**

**Validate** the results

# Performance workload management
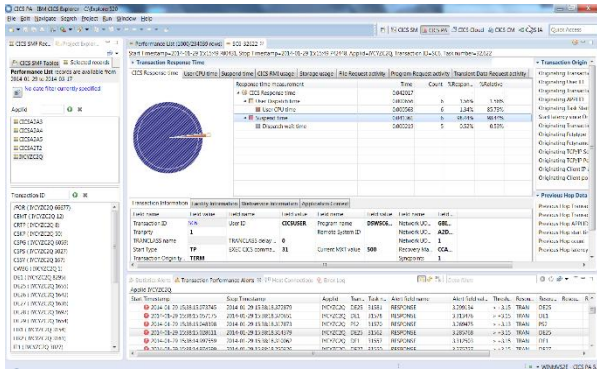






**Understand** current performance
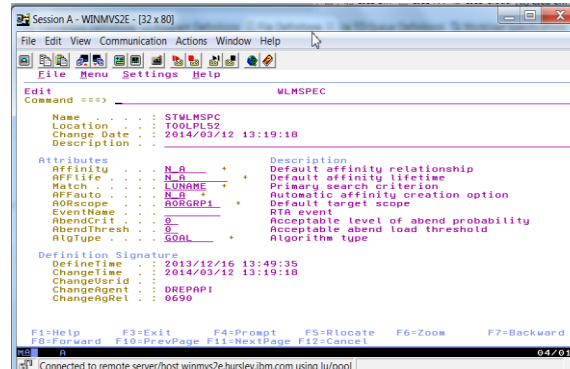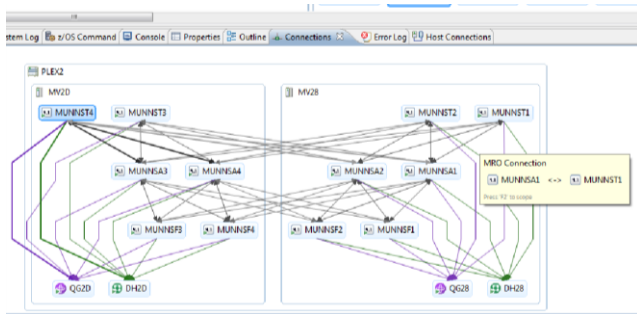
**Implement** an adaptable workload management system
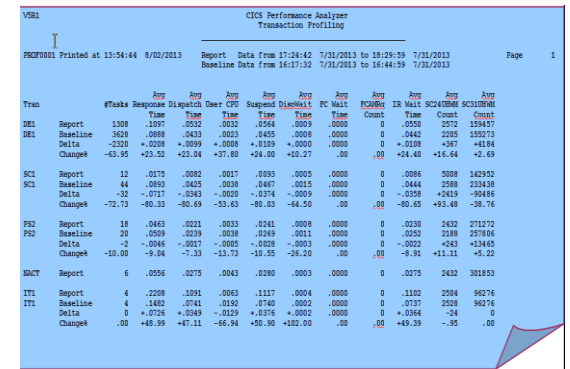
**Validate** the results

# Consolidation

Region Consolidation to reduce CPU utilization (up to 10%)
and management overhead



## A

### Step 1

Analysis and planning

## B
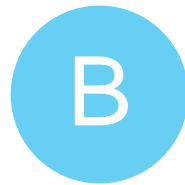
### Step 2

Implementation & tuning

## C
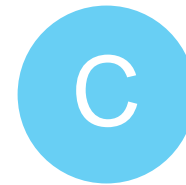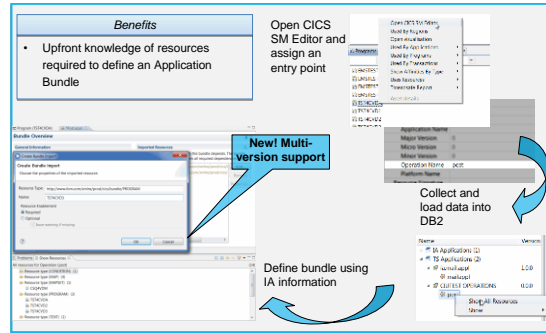
### Step 3

Validation

# Three steps to **CICS Cloud enablement**

Support CICS cloud initiatives to simplify system management and rapid application deployment.
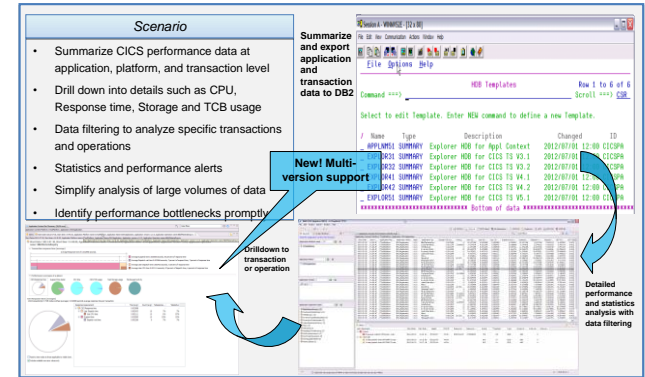


### Step 1

Analysis and definition of CICS cloud **Applications**

### Step 2

Plan and build CICS cloud **Platforms**

### Step 3

**Deploy and manage** CICS cloud **Applications** and **Platforms**

# CICS PA gives CICS cloud Performance insight

## Scenario

- Summarize CICS performance data at application, platform, and transaction level

- Drill down into details such as CPU, Response time, Storage and TCB usage

- Data filtering to analyze specific transactions and operations

- Statistics and performance alerts

- Simplify analysis of large volumes of data

- Identify performance bottlenecks promptly

**Summarize and export application and transaction data to DB2**

**New! Multi-version support**

**Drilldown to transaction or operation**

**Detailed performance and statistics analysis with data filtering**

# Three steps to **Financial optimization**

Get more for your money

**Step 1**

**Replace 3rd party products**
with IBM z/OS Tools

**Step 2**

**Save even more** with
IBM Solution Packs

**Step 3**

**Move OpEx to CapEx** with
CICS TS VUE

# Replace 3rd party products with IBM z/OS Tools

Affordable Pricing - generally 25+% less than ISV

All Inclusive of Languages - COBOL, PL/I, Assembler, C/C++

All Inclusive of Subsystems - CICS, IMS, DB2, MQ, WAS

SMP/E Installed and Maintained - reduces impact on Systems Staff

Can be pre-installed as part of a z/OS upgrade - reduces impact on System Staff

No Software Keys - reduces impact on Systems Staff / Supports Disaster Recovery Strategy for Testing / Implementation

Includes both 3270 and Workstation Interfaces - no additional charges, no additional licensing, no per seat limits

# Save even more with IBM Solution Packs

## CICS Optimization Solution Pack for z/OS V5.2 (Just refreshed)

**Quickly optimize performance and availability of CICS systems and applications** with CICS Interdependency Analyzer, CICS Deployment Assistant, CICS Performance Analyzer, CICS Configuration Manager

## CICS Modernization Solution Pack for z/OS V5.2 (Just refreshed)

**Understand deployed CICS application and system resources, connect from non-mainframe devices, and create CICS infrastructure to support the increased workload** with CICS Interdependency Analyzer, CICS Deployment Assistant, CICS Transaction Gateway for z/OS

## Upgrade from standalone products using trade-ups

## IBM Problem Determination Solution Pack for z/OS V1.1 (4Q refresh)

**Cost effective problem analysis for z/OS sub-systems and languages with both GUI & 3270 interface** with File Manager, Fault Analyzer, Debug Tool for z/OS, Workload Simulator, Hour Glass, Data Set Commander

## IBM Problem Determination Testing Solution Pack for z/OS V1.1 (4Q refresh)

**Reduce testing time, improve application reliability and user diagnosis capabilities, and improving user's ability to regulate and monitor testing activities** with Debug Tool, Workload Simulator, Hour Glass

## IBM Problem Determination Modernization Solution Pack for z/OS V1.1

**Address your problem analysis needs and provides tools that decrease development time, improve performance and reliability and reduce diagnosis time** with Application Performance Analyzer, Debug Tool, Fault Analyzer, File Manager

# Move OpEx to CapEx with CICS TS VUE

**VUE**

*CICS TS Value Unit Edition –* *For new Java workload and service enablement*

*Responding to customer demand for an alternative pricing structure*

| CICS One-time-charge | zNALC pricing | TS V5.1 avoiding SVC |
|---|---|---|
| *Alternative pricing model for new applications\* using a one-time-charge price metric* | *Reduced price for the z/OS operating system on LPARs that run a qualified application\** | *CICS TS VUE is a separately licensed program and does not initiate Single Version Charging* |

**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 (discounted z/OS)**

**Regular LPAR (full-price z/OS)**

\* zNALC approval is required for each application

# Why do you need AIM z/OS Tools?

**Problems**

- Slow problem resolution extends downtime
- High resource consumption by z/OS applications.
- Problem replication ? What's this?
- No automated test script generation

**Key Solutions**

- Automated fault analysis, accelerated problem determination, and built-in fix advice
- Application program debugging across mixed languages and sub-systems
- Early identification and validation of performance issues
- Identify resource bottlenecks to improve application and sub-system performance
- Test data creation and manipulation
- Driving, measuring, and comparing performance and other test workloads
- DevOps: Analysis result of production systems can be used by developers directly

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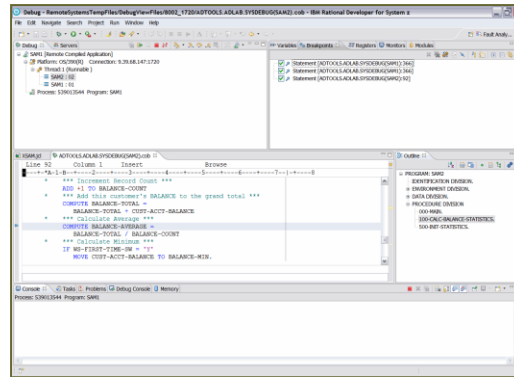# Three steps to **Problem Diagnosis**

Faster problem identification and resolution
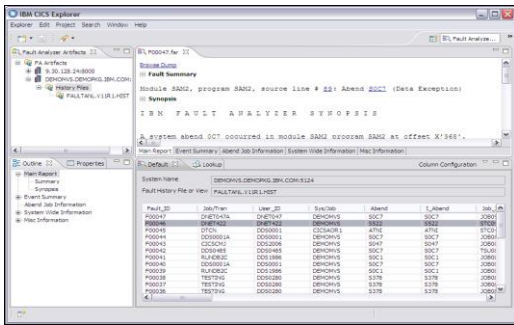


### Step 1

Automated fault and performance
alerts with diagnostic advice

### Step 2

Drill-down into problems with
analysis tools
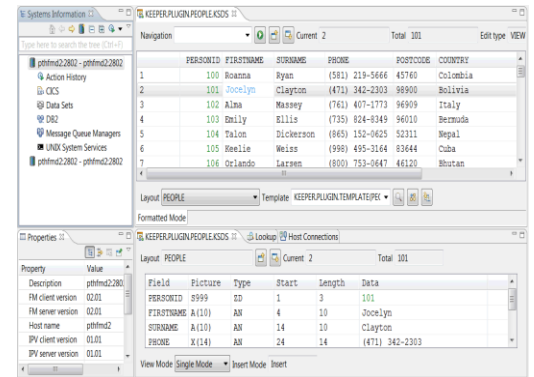
### Step 3

Fix problem, for example,
make a change in data source

# Three steps to **Performance Problem Elimination**

## Looking for Trouble?



**Step 1**

Identify CICS transaction needing response time improvement



**Step 2**

Understand transaction's resource consumption at much deeper level



**Step 3**

Test changes and measure results to ensure success

# Next Step:   How IBM can help

# Resources

Web pages updated for V5.2 and V13 – translated versions available
> http://ibm.com/cics/tools
> http://ibm.com/software/awdtools/deployment
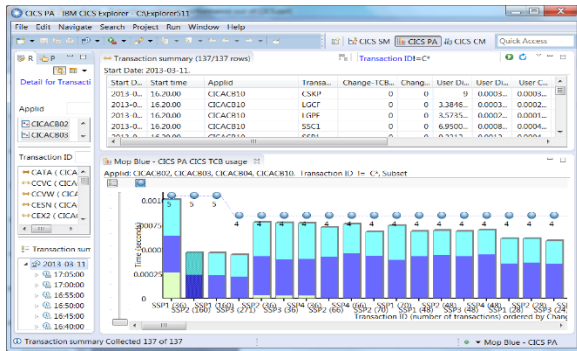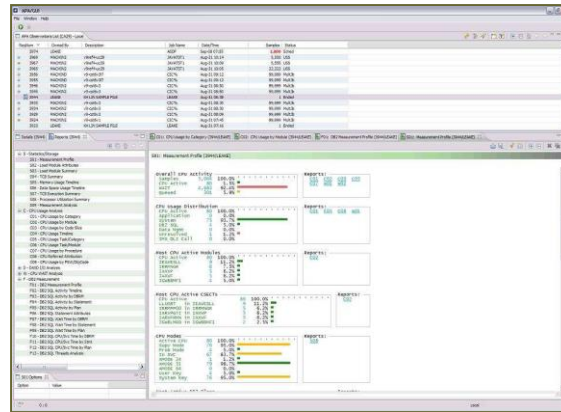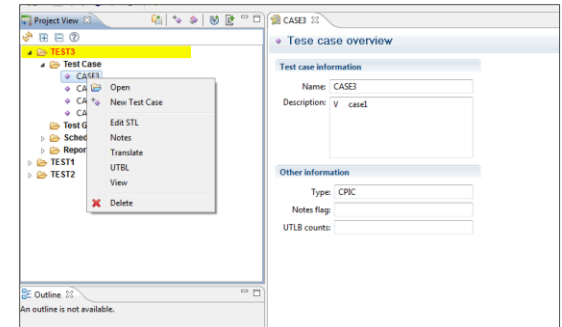
Updated datasheets on web pages

Announcement letters – CICS TS V5.2 link, CICS Tools V5.2 link, CICS TG V9.1 link, PD Tools V13 link

Launch presentations and replays – CICS community – CICS V5.2 launch wiki page

Analyst reports
> IBM CICS Tools: Discovery and Optimization for the Next Generation link
> IBM PD Tools – leads the pack again  link

Threadsafety & Consolidation - extracting optimum performance from CICS Prezi YouTube

Social media
> Catch up with CICS on Facebook at CICS Hursley or WebSphere and CICS Support
> Watch videos on YouTube - CICS and CICS Tools and  IBM System z PD Tools
> View presentations on Slideshare
> Follow IBM_CICS on Twitter
>> http://www.ibm.com/support/docview.wss?uid=swg21384915
> See multiple channels by using the CICS Social Media Aggregator.

Subscribe to
> CICSbuzz for the latest z/OS Tools newshttp://www-01.ibm.com/software/htp/cics/enews/
> Debug Tool newsletter http://www-01.ibm.com/support/docview.wss?uid=swg21422089

# CICS related technical services

**CDS01/CDS10 CICS Health Check**
*A best practice review to ensure that your CICS environment is functioning optimally.  We check CICS configuration parameters and values and provide a report recommending performance improvements.*

**CDS02 Upgrade Assistance**
*We will efficiently update your CICS environment to the latest version to exploit new features such as: Mobile, Web services, IP connectivity, SAML Security tokens, CICS Explorer ®, Event processing, Web 2.0 and Atom feeds, PHP scripting in CICS.*

**CDS03 Security + Governance**
*Helps to ensure the security and compliance of your CICS assets.  In addition to general security consulting, this service provides you with a security and vulnerability Risk Assessment of your CICS environment.*

**CDS04 Performance Optimization**
*Get the most out of your environment as improved performance lowers cost.  We review CICS performance data from SMF or CICS tooling.  We provide tuning recommendations, cap planning, and scalability guidelines.*

**CDS05 Customized Workshops**
*We provide Architecture, Design, and Integration Workshops, Proof of concepts, either onsite at your location or at IBM® Hursley.*

**CDS06 Web services**
*Unlock and reuse your CICS business assets in the connected world of SOA.  We provide education on CICS web services support including Rational® Developer for z tooling.  We help you to identify assets for reuse and assist you with implementing Web services in your environment.*

**CDS07 Integration + Connectivity**
*Connect to and exploit your CICS assets.  We provide CICS Transaction Gateway installation and configuration, WebSphere Application Server configuration, and sample programs to drive CICS from WebSphere Application Server.*

**CDS08 Systems Management**
*Use this service to optimize the manageability of your CICS environment with CICS Explorer and CICSPlex® SM with the goal to reduce costs and improve availability.*

**CDS09 Event Processing**
*Use this service to integrate your CICS environment into an Event Processing framework to allow you to respond quicker to business opportunities and threats – without changing your existing CICS application.*

**ibm.com/cics/services**
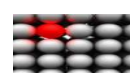
# Problem Determination Tools services

IBM provides the following services for the Problem Determination tools, enabling clients to successfully deploy the Problem Determination tools and give their staff the skills they need to get the most from the tools:

Installation and Customization Assistance

3rd party tool migration - FileAid/MVS to File Manager, Hiperstation to Workload Simulator

Training  - Application Performance Analyzer, Debug Tool Basic & Advanced, Fault Analyzer, File Manager Base (Basic & Advanced), File Manager DB2, File Manager IMS, Workload Simulator, Hourglass

   Each class is four (4) hours in duration, except for Workload Simulator, which is eight (8) hours and Hourglass, which is two (2) hours.

   On-site or webcast (remote) workshop – both with hands-on lab exercises

For details, contact: ?

# Backup:   Product level details

# CICS Interdependency Analyzer for z/OS V5.2

## *What's new in CICS IA V5.2?*

- Support for CICS® Transaction Server V5.2
- Enhanced cloud application analysis
- New resource use and dependencies by platform
- New visualization of TCB, region, and application switches
- New plug-in view for Program Details
- New affinity analysis in the plug-in
- New Dependency collection sampling technique
- Deeper thread-safe analysis

## *CICS IA enables you to…*

- Visualize application flow and structure
- Identify mobile and web service candidates
- Identify threadsafe / non-threadsafe programs
- Isolate and remove affinities
- Speed CICSPlex® SM workload management
- Advanced CICS command flow analysis
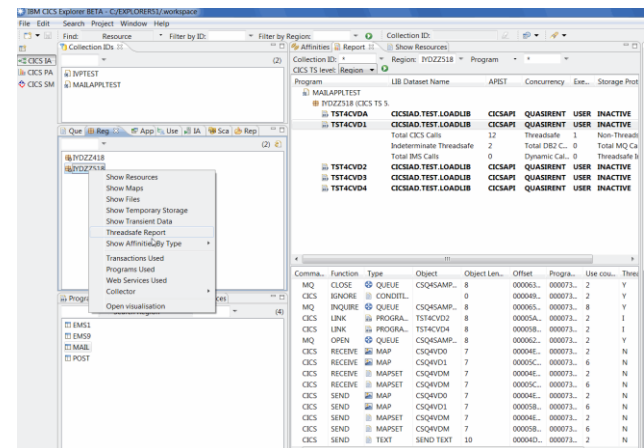
# CICS Deployment Assistant for z/OS V5.2

## *What's new in CICS DA V5.2?*

- Support for IBM CICS Transaction Server V5.2
- New RESTful API to access model
- Cloning of unmanaged and cross-logical partition (LPAR) regions
- New Comparison view
- New TCP/IP usage report.

## *CICS DA enables you to*

- Visualize and manage your CICS topology
- Discover existing regions and sus-systems
- Automation creates new CICSplex
- Plexify and clone CICS regions
- Start and stop a CICS region
- Share model with other applications
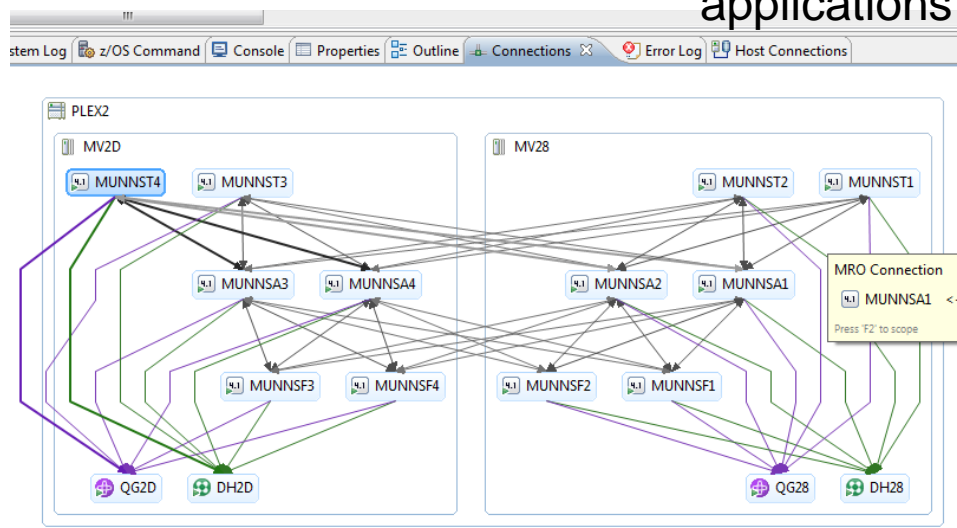
# CICS Performance Analyzer for z/OS V5.2

### *What's new in CICS PA V5.2?*

- IBM CICS Transaction Server V5.2 support
- Performance summary reports for platforms and applications
- Multi-version analysis of dynamic mobile applications
- Reporting, visualization, statistics alerts and analysis enhancements
- Transaction Performance Alert plug-in view
- Visualization of the performance of individual transactions

### *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

45
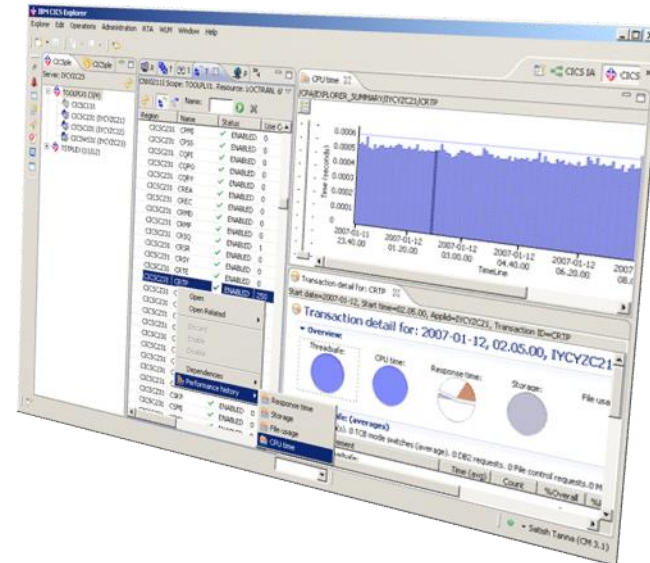
# CICS Configuration Manager for z/OS V5.2

## What's new in CICS CM V5.2?

- Plug-in support for migration schemes
- New deployment analysis from plug-in
- New support for IBM CICSPlex SM topology and workload management definitions
- New support for NIST SP800-131A security standard
- New migration of TCPIPSERVICE and IPCONN definitions for high availability connections

## 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
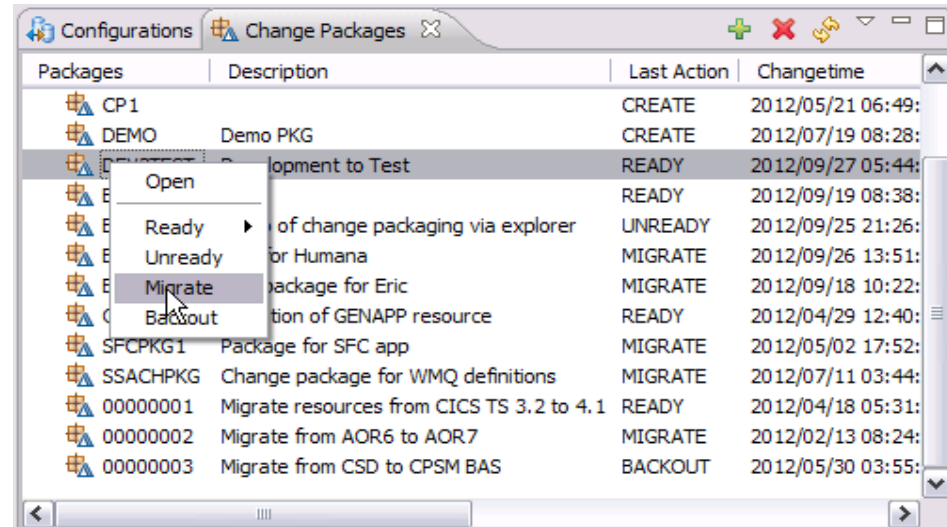
# CICS Transaction Gateway V9.1
*Mobile integration, robust connectivity, and strong security options*

## Service enablement

Mobile integration with JSON web services

- *Dynamic routing of mobile workload*
- *Shared tech with CICS TS + z/OS connect*
- *JSON xform from COBOL, C and PL/1*
- *Full monitoring and statistics*

## Secure connectivity

SSL for .NET applications

Full NIST SP800-131A compliance

TLS 1.2 secure connections for

- *Java JCA .NET APIs to the Gateway*
- *Gateway to CICS with IPIC connections*

## Foundation

Exploit zEC12 hardware with SDK 7.1

Virtualized CICS servers with IBM RTW

- *Build test-suites for Java/JCA ECI applications*

Channel data for request monitoring

API support for latest Windows

## Modern connectivity

Connection management

- *For 24x7 continuous operation*

Exploits IPIC heartbeat support

- *Improved availability across larger TCP/IP networks*

# CICS VSAM Recovery for z/OS V5.2

### CICS VR *enables you to…*

- Supports backups created by Backup-While-Open (BWO)
- Automate recovery
- Test forward recovery and backout
- Produce disaster recovery reports
- Implement continuous availability solution

### *What's new in CICS VR V5.2?*

- CICS Transaction Server for z/OS V5.2 support
- Migration and coexistence enhancements
- Message and report enhancements
- Scavenger and registration enhancements

CICSVR complete recovery

48
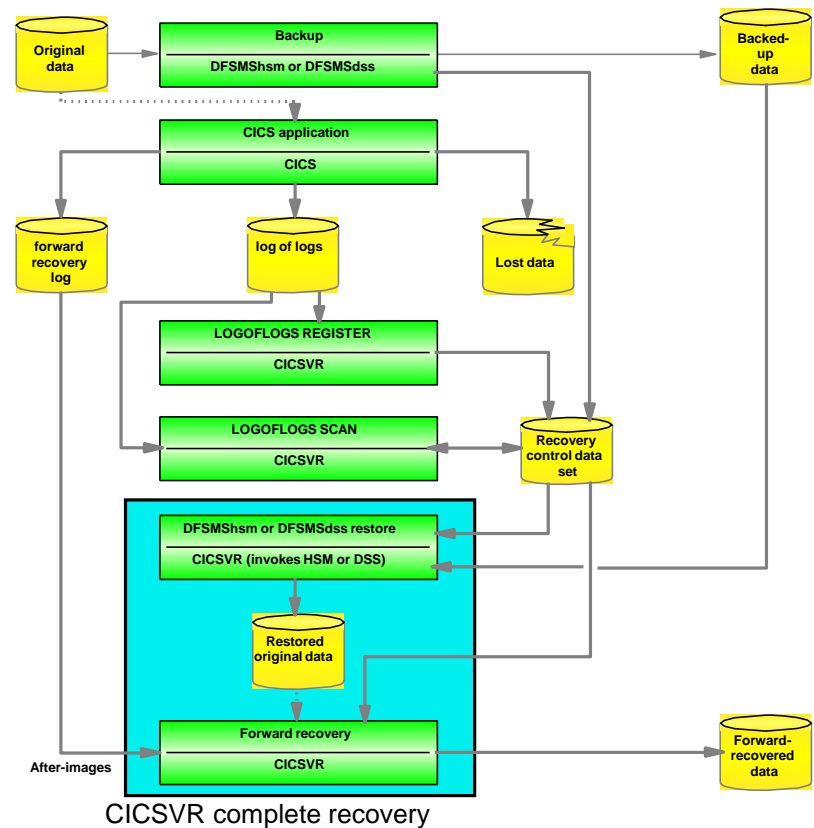
# IBM Debug Tool V13

- **IBM Debug Tool** can help you increase debugging efficiencies and reduce application development cycle times.

- Program testing and analysis aid that helps you examine, monitor, and control the execution of application programs on z/OS (CICS/DB2/IMS/COBOL/PLI/ASM,C/C++/ASM/JAVA w Toolkit)

- Proven 3270-based interface and free graphical user interface.

**What's new?**

- Smooth debugging mixed apps JAVA/COBOL/PLI

- Improved Code Coverage

- Automatic start IMS MPP regions, dynamic routing of transactions

- IMS Startup Cross Reference table for WASz and Web started transactions

- RDz Playback

- Support for DB2 V11, IMS V13, CICS TS 5.1, z/OS 2.1, WASz 8.5,, COBOL V5.1, Enterprise PLI V4.4, C/C++ for z/OS 2.1, RDz 9.0

- A range of other enhancements to address key customer requirements
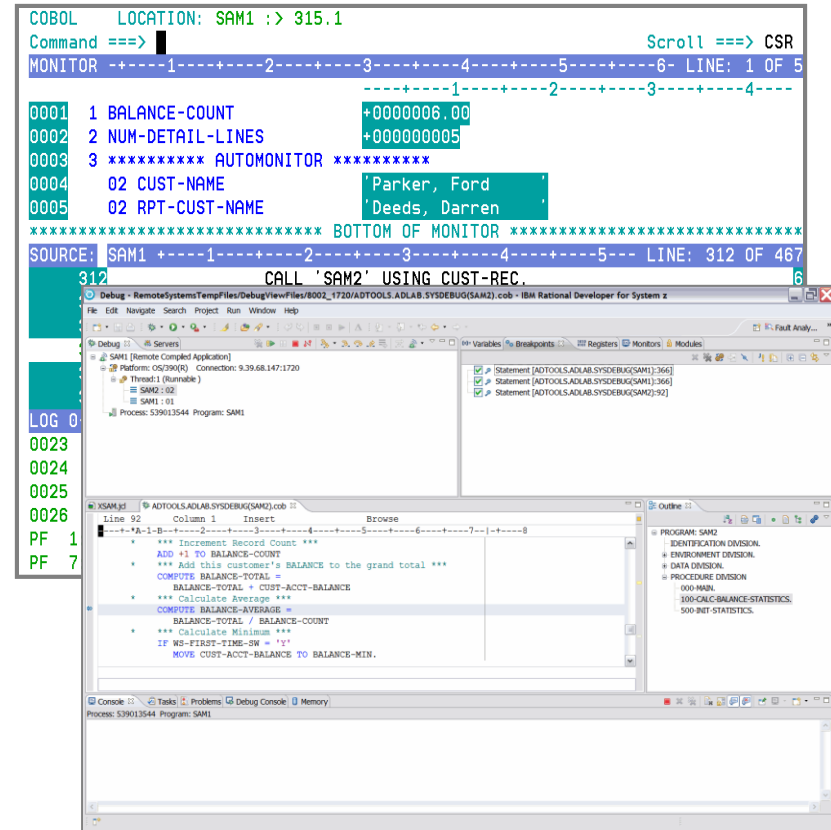


*Source code debugging to improve development productivity*

*Pinpoint the cause of enterprise application failures*

# IBM Fault Analyzer V13

- **IBM Fault Analyzer** improves developer productivity and decreases deployment costs by helping to analyze and correct application failures quickly (CICS/DB2/IMS/MQ/COBOL/PLI/ASM/ C/C++/ASM/JAVA).

- Develop and test new and existing applications more productively, helping to reduce costs along the way.

- Proven 3270-based interface and free graphical user interface.

**What's new?**

- Optimize
  - Sidefile checking and reporting
  - Customer specific module and abend descriptions
  - ISPF Virtual Relief

- Modernize
  - Enhanced web interface using Dojo

- Enhanced Java support

- Support for DB2 V11, IMS V13, CICS TS 5.1, z/OS 2.1, COBOL V5, PL/I V4.4, Java V7

- A range of key customer requirements



*Helps to identify the cause, analyze the failure, and fix the problem*

# IBM File Manager V13

- **IBM File Manager** allows you to manage production, test, and development data across multiple formats and storage media.

- Create, edit, copy, browse, extract, print, and compare enterprise data (VSAM/DB2/IMS,CICS/MQ)

- Proven 3270-based interface and free graphical user interface.

**What's new?**

- IMS GUI
- FM DB2 enhancements
- Batch template and update support
- UNICODE and various CCSIDs support
- Support for DB2 V11, IMS V13, CICS TS 5.1, MQ8.5, z/OS2.1, PL/I 4.4,
- DB2 Large Object (LOB) including XML columns
- A range of other enhancements to address key customer requirements



*Data management tool supporting key file structures like VSAM, DB2, CICS, and IMS*

# IBM Application Performance Analyzer V13

- **IBM Application Performance Analyzer** helps maximize the performance of your applications and improve the response time of your online transactions and batch turnaround.

- Identify constraints and improve the entire application's performance no matter where the problem resides (CICS/ IMS/DB2/MQ/COBOL/PLI/ ASM/JAVA)

- Proven 3270-based interface and free graphical user interface.

### What new?

- Enhanced support for WebSphere and Java

- Sampling enhancements to improve accuracy of reports

- WAS Phase 2 to support simultaneous sampling of servant regions, CICS and DB2 activity

- Support for DB2 V11, IMS V13, CICS TS V5.1, z/OS 2.1, WASz V8.5, COBOL V5.1, PL/I V4.4, Java V7

- A range of  key customer requirements
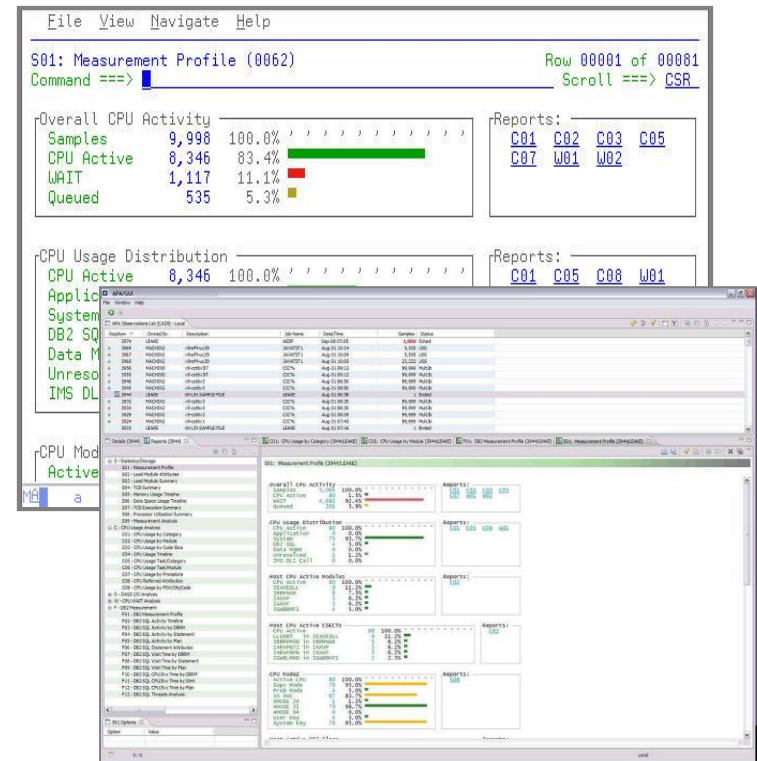


*Monitor and optimize performance at the application level*

# IBM Workload Simulator

- **IBM Workload Simulator** helps eliminate the need for large amounts of terminal hardware and terminal operator time for testing.

- Ideal for stress, performance, regression, function, and capacity planning tests.

- Proven 3270-based interface and new free graphical user interface.

**What's new?**

- Graphical user interface (GUI) updates provides access to the power of the host product
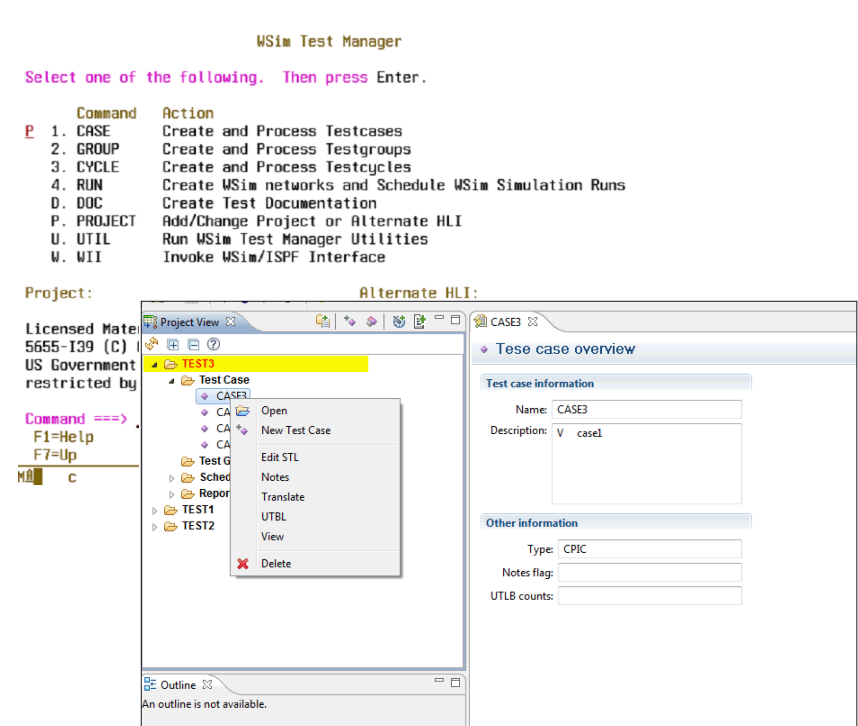


*Simulates a network of terminals and the associated messages*

# IBM HourGlass V7.1

- **IBM HourGlass** allows testing of time-sensitive application programs without dedicated individual LPARs or costly IPLs

- Provides support for popular middleware elements such as DB2, IMS, CICS, and COBOL, on the z/OS platform.

- Proven 3270-based interface and batch interface options.

**What's new?**

- Support for SYSPLEX synchronization

- Additional CICS, IMS invocation command options supported

- Dynamic update of repository

- JES exit to ensure time options are valid

```
------------------ IBM HourGlass: Control Overview ---------------1 of 1000
Command ===>

Cmd Sel/Stat/Disp Type  Name     Owner  Job/name  User-ID   Date        Time
    DISA          DB2   CEDB001  AGGUSR PLAN1     USRDEV    2006-01-01  M0100
    ENAB          DB2   CEDB002  AGGUSR PLAN2     TSONAM    2006-02-01  M0100
    ENAB          IMS   CEIM001  AGGUSR REG1      USRDEV1   2006-01-01  P0100
    DISA          IMS   CEIM002  AGGUSR REG2      USRDEV2   2006-02-01  M0200
    DISA          JSCD  CEJS001  AGGUSR                     2006-01-01  M0400
    DISA          JSCD  CEJS002  AGGUSR                     2006-02-01  A1600
    ENAB          MBAT  CEMB001  AGGUSR USRJOB1             2007-01-01  M0100
    ENAB          MBAT  CEMB002  AGGUSR USRJOB2             2007-02-01  P0100
    ENAB          MBAT  CEMB003  AGGUSR USRJOB3             2007-03-01  M0300
    ENAB          MBAT  CEMB004  AGGUSR USRJOB4             2007-04-01  P0200
    ENAB          MBAT  CEMB005  AGGUSR USRJOB5             2007-05-01  M0500
    ENAB          MBAT  CEMB006  AGGUSR USRJOB6             2007-06-01  M0100
    ENAB          TSOI  CETI001  AGGUSR           USRDEV    2005-11-30  M0100
    DISA          TS0I  CETI002  AGGUSR           USRHRQ    2005-05-01  M0400
```

*Simulates date and time for future and past dates, time zone shifting, etc.*

# Data Set Commander V8.1

- **IBM Data Set Commander** provides efficient tools and shortcuts to improve handling of PDS and PDSE.

- Fully automated facility to manage caching of PDS and PDSE members.

- Fully compatible replacement for IEBCOPY, enhancing capability to manage and manipulate PDS and PDSE.

- Manage PDSE member generations (versions)

- Integrated front end to ISPF. It enhances ISPF functions, including browse, edit, TSO shell, and DSLIST, UNDELETE, and provides many additional capabilities

**What's new?**

- Automated PDS/PDSE caching (LLA)

- Manage PDSE member generations (versions)

```
-DSC-                        LLA Monitor Options Menu
Command ===>

Monitor State: ACTIVE   Timer: UNIT=1s DELAY=2s AUTO=10m POLL=5m PAUSE=0s
Authorization: FULL

===> _    Enter selected option as follows:

      1_  Display defined LLA library groups

      2_  Display monitored LLA libraries

      3_  Display monitored load modules
```

```
-DSC-                        LLA Monitored Modules          Row 1 to 14 of 25,552
Command ===>                                                    Scroll ===> CSR

Monitor State: ACTIVE
Authorization: FULL

Main commands: R Refresh  S Sort list  X Exit to main menu
Line commands: R Refresh  B Browse

  Sta  Module    Data Set Name                              Last Refresh
_ ACT  IDIADOP   LNKLST.FAULTANL.V12R1.SIDIMOD1             13/09/11 13:20
_ ACT  IDIEDPIE  LNKLST.FAULTANL.V12R1.SIDIMOD1             13/09/11 13:20
_ ACT  IDIEEDE   LNKLST.FAULTANL.V12R1.SIDIMOD1             13/09/11 13:20
_ ACT  IDITR410  LNKLST.FAULTANL.V12R1.SIDIMOD1             13/09/11 13:20
_ ACT  IDITR510  LNKLST.FAULTANL.V12R1.SIDIMOD1             13/09/11 13:20
_ ACT  IDITR520  LNKLST.FAULTANL.V12R1.SIDIMOD1             13/09/11 13:20
_ ACT  IDITR530  LNKLST.FAULTANL.V12R1.SIDIMOD1             13/09/11 13:20
_ ACT  IDITR620  LNKLST.FAULTANL.V12R1.SIDIMOD1             13/09/11 13:20
_ ACT  IDITR630  LNKLST.FAULTANL.V12R1.SIDIMOD1             13/09/11 13:20
_ ACT  IDITR640  LNKLST.FAULTANL.V12R1.SIDIMOD1             13/09/11 13:20
_ ACT  #VSFSTUB  CEE.SCEERUN
_ ACT  ABA       SYS1.LINKLIB
_ ACT  ACCOUNT   SYS1.LINKLIB
_ ACT  ACFTAP    SYS1.MIGLIB
```

*Provides useful, cost-saving capability
in daily handling of data sets.*

# IBM Problem Determination Tools V13

## *What's new in PD Tools V13?*

- New **IBM Problem Determination Tools Studio** pre-packaged with plug-ins
- Significant improvements to Debug Tool, Fault Analyzer, File Manager, Application Performance Analyzer, Workload Simulator, HourGlass , and Data Set Commander
- Support for z/OS V2.1, DB2 V11, IMS V13, CICS TS 5.1, WASz 8.5, COBOL V5.1, Enterprise PLI V4.4, C/C++ for z/OS V2.1, Java V7, and RD/z V9.0
- Java enhancements for APA, DT and FA allowing PD Tools to work in a "mixed mode" environments

## *PD Tools provides …*

- Five tools addressing z/OS problem resolution needs  - Debug Tool, Fault Analyzer, File Manager, Application Performance Analyzer and Workload Simulator
- Subsystem and language support traversing z/OS provided in a timely manner when subsystems and languages are updated
- Improved TCO with full function tools at competitive price