Keynote and CICS Family Update

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IBM

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Agenda – CICS Family Update

• New zEnterprise announcement

• CICS Product Family Updates
  • CICS TS V4
    • ILOG Rules support
    • CICS Events
    • CICS Atom Support
    • CICS Dynamic Scripting
  • TXSeries
  • CICS Transaction Gateway V8
  • CICS Explorer
  • CICS Deployment Assistant
IBM zEnterprise System – Best in Class Systems and Software Technologies

A system of systems that unifies IT for predictable service delivery

The world’s fastest and most scalable system: IBM zEnterprise™ 196 (z196)

- Ideal for large scale data and transaction serving and mission critical applications
- Most efficient platform for Large-scale Linux® consolidation
- Leveraging a large portfolio of z/OS® and Linux on System z applications
- Capable of massive scale up, over 50 Billion Instructions per Second (BIPS)

Unified management for a smarter system: zEnterprise Unified Resource Manager

- Part of the IBM System Director family, provides platform, hardware and workload management
- Unifies management of resources, extending IBM System z® qualities of service across the infrastructure

Scale out to a trillion instructions per second: IBM zEnterprise BladeCenter® Extension (zBX)

- Selected IBM POWER7™ blades and IBM System x® Blades1 for tens of thousands of AIX® and Linux applications
- High performance optimizers and appliances to accelerate time to insight and reduce cost
- Dedicated high performance private network

1 All statements regarding IBM future direction and intent are subject to change or withdrawal without notice, and represents goals and objectives only.
IBM zEnterprise System and CICS

- 96 total cores running at 5.2 GHz
- New Instructions – particularly advantageous for Java workload
- Delivers up to 60% improvement in performance and total capacity compared z10 EC

CICS Benefits

- Existing applications get immediate throughput benefit
- CICS Java applications can exploit new z-Instructions
IBM zEnterprise BladeCenter Extension and CICS

- Expanded ISV support for enterprise applications
- Targeted for applications that interact with mainframe data and transactions
- Provisioned and managed by System z

CICS Benefits

- Consolidation point for TXSeries and CICS Transaction Gateway servers
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CICS Future Directions

1. Build a enterprise level transaction processing platform
   • Supports Traditional CICS values of quality, performance and reliability
   • Supports Enterprise Modernization through
     • Mixed programming languages
     • Modern programming architectures (SOA, Web2.0 etc)

2. Simplify management and reduce skills needs for CICS system programmers and application programmers

3. Encourage a vibrant partner ecosystem and community

4. Extend reach to emerging geographies and new customers
### Business Needs

- “Ensure applications consistently deliver on business needs in all situations”
- “Provide access and links into the heart of the enterprise”
- “Quickly adapt and respond to changing customer expectations and business demands”

### Core Capabilities

- **Rock Solid SOA Application Infrastructure**
- **Connectivity & Integration**
- **Dynamic Application Platform**
The CICS Family

CICS Transaction Server
The world's most popular transaction processor

CICS Transaction Gateway
The most popular connector from WebSphere to CICS

TXSeries
IBM's popular distributed CICS offering

CICS Tools
Optimise Management of CICS
Transform and Reuse CICS Applications
CICS Governance and Compliance
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CICS Transaction Server

Out of Service Releases

In Service Releases

CICS/ESA
- Restructure
- 31 bit
- Parallel Sysplex

CICS TS
- V1 Web
- V2 Java OTE
- V3 SOA
- V4 New Workload

1990s

2000s

2010s

SHARE in Boston
CICS V4.1 - Rock Solid SOA Application Infrastructure
Announced: April 09
Generally Available: June 09

Customer References:
• John Lewis, BCX, DATEV, SEB

ISV support:
• http://www.ibm.com/software/htp/cics/partners.html

CICS Explorer
Enhanced CICSPlex SM workload management
New SPI commands for managing the CSD
Performance Improvements
MQ Group Attach
Discovery Library Adapter
IPV6
Large file hosting
IPIC Transaction Routing
Application Bundles
  - Improvements to XML parsing
Service Component Architecture
Web Services Addressing

Business events
Atom feeds
Web Services Addressing
WebSphere Registry & Repository Support
Support for distributed identities
Resource signatures

Business events
Atom feeds
RESTful interfaces
Service Component Architecture
Java 6

SHARE in Boston
ILOG BRMS System z Options

Many existing CICS applications embed rules logic

Issues

- Rules are hidden in code or isolated within the organization
- Changes are hard to track and maintain over time
- Rules used by systems have to be programmed and require IT resources
- Duplication and multiple versions of the same rules
- Lack of auditability, traceability
- Decision changes cannot be easily tested or simulated
ILOG BRMS System z Options

Write, maintain & manage rules

BRMS

Rule Repository

User Tools

CICS Application

COBOL Copybook

Rules logic compiled into new Cobol Rules Program

EXEC CICS LINK Program

Channel Container

Cobol Rules

SupportPac CA0A

Redpaper - Rules for COBOL with CICS Channels and Containers
Transform Insight into Action with CICS Events and WebSphere Business Events

Key Business information can be externalized from critical Applications as execution occurs to
- Immediately update business views
- Trigger other business behaviours

NO APPLICATION CHANGE REQUIRED
CICS and Event Processing

CICS Event Processing

Event Capture
Filtering
Enrichment
Formatting
Routing

Extensible
Secured
Monitored
etc.

WebSphere Business Events

WebSphere Business Monitor

Other Event Consumers

CICS Transaction Server V4.1

Captured
Events

Existing Business Logic

Code NOT changed

17
CICS Web 2.0 ATOM Feed

CICS File and TS resources made available as RSS feed
- Rapidly included as a standard information source
- Naturally integrated with other live data sources
- Available in standard web developer tool kits

NO APPLICATION CHANGE REQUIRED
- In CICS V3, use SupportPac CA8K to generate ATOM feeds
CICS Dynamic Scripting

Announce April 30th 2010, GA June 25th 2010

- Increase the agility and productivity of CICS Application and System developers
  - Enabling them to respond in days, rather than weeks or months
  - Without compromising the integrity of the core business systems

- New Dynamic Scripting Feature Pack for CICS
  - that embeds and integrates Project Zero technology into CICS TS
  - providing a CICS based runtime for PHP and Groovy applications.

CICS Transaction Server for z/OS

| New CICS managed PHP and Groovy apps | API | Traditional CICS Applications with 99.999% availability requirements |
CICS Dynamic Scripting Feature Pack V1.0

Traditional App Dev

Edit Cobol
Compile
Debug
LinkEdit

Transaction Start
Load Program
Run program

DFHRPL

CICS Region

New Copy

Traditional App Dev
CICS Dynamic Scripting Feature Pack V1.0

Traditional App Dev

- Edit Cobol
- Compile
- LinkEdit
- Debug

Unix zFile System

- .php
- .Groovy
- .html

DFHRPL

1001001001
0101010101
0100010000

CICS Region

Transaction Start
Load Program
Run program

New Copy

CICS Dynamic Scripting Support

SHARe in Boston
Lab Performance of Dynamic Scripting in CICS

- **3 hour test using HTTP and HTTPS.**
  - 250 HTTPS clients & 100 HTTP clients.
  - The HTTPS clients read 12,150 MB of data, and wrote 1,121 MB. The HTTP clients read 3,417 MB of data, and wrote 301 MB.

- **One CICS region, MXT=500, JVMSERVER Threads set to 50.**
  - At the end of the test, we had 4.2 million tasks, a transaction rate of 326.59 per second.
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TXSeries for Multiplatforms V7.1

**TXSeries runs and supports CICS Transactions on Distributed platforms**

**Generally Available April 2009**

**Key Characteristics:**
- An application deployment platform for C, C++, Java, COBOL and PL/I applications
- Supports a wide subset of CICS API
- Integrated inside RDz as part of a local application development environment

**New with TXSeries V7.1**
- Simplified Interoperability with CICS and CTG over TCP/IP
- Support for Channels and Containers
- Enhanced TXSeries Admin Console
- Improved system resilience and debugging
  - Memory isolation
  - Task history logging
  - Performance Probe

*Free Evaluation trial available*
TXSeries In-bound SOAP supportPac
Available November 2009

- CICS Web Services Assistant Tools generate WSDL & WSBind files from the
  C structure or COBOL copybook.
- LWI (Light Weight Infrastructure) uses the WSBind file for generating
  COMMAREA from SOAP request and vice-versa.
**TXSeries Out-bound SOAP support**

*Developer Works Article Available*

- WSDL2C Tools provided by the Apache AXIS2/C are used to generate stub files from a WSDL.
- C/C++ CICS applications calls these stub API functions to invoke Web service.
- Development methodology explained in the dW article.

**Notes:**

- COBOL CICS applications cannot be used to invoke Web services since AXIS2/C does not support COBOL programming language.
- AXIS2/C does not support on AIX platform.
- COMMAREA Data conversion is applications responsibility. No explicit support for this.
- No EXEC CICS style APIs. So the coding has to be more on C style
- No Transaction support.
TXSeries for Multiplatforms

Recent SupportPac Enhancements

IBM Migration Assistant for Oracle Tuxedo – CE01
Released: 6Jul10
- Enables Oracle Tuxedo applications to be seamlessly migrated to IBM TXSeries for Multiplatforms
- No Application changes required
- Minimal changes required to the application’s build process.

TXSeries Business Events SupportPac – CB01
Released: 15Jun10
- Enables IBM TXSeries to be a source of events to WebSphere Business Events (WBE), and to participate in event processing solutions
- Small changes required to your TXSeries application code
- Similar to Event Processing supportpac for CICS TS V3
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Enable your CICS Investment for SOA through CICS TG

- Scalable Adapter/Connector that enables modernization of CICS Applications for both J2EE and .NET environments
- High performance, high scalability, and maximum system availability
- Available on z/OS, AIX, Windows, Linux, Solaris & HPUX
- Industry proven in over 1,500 customer installations

“We tested the new CTG V8.0 High Availability exit where you can now, dynamically, modify the list of CICS Servers a CTG can target, without the need to recycle the Gateway. We also tested the complement of related commands to list and reset the CICS Server array and to control the level of message logging performed by the gateway. We are very impressed with this new functionality. It has provided, precisely, what we were looking for, in terms of dynamic control of our CTG to CICS routing.”

David Jones, Aetna

"We tested the new exits which give an out of the box capability for high availability / failover and request validation and an easy template to customise these for further requirements. "We tested the CICS TG explorer plugin which offers a quickly implemented alternative to running a full monitoring solution for CTG / ZOS and CTG / AIX"

US Healthcare Provider
CICS TG V8.0 .NET Application Support

- ECI v2 .NET API
  - .NET API for ECI calls to CICS
  - Allows CTG ECI v2 APIs to be used in .NET managed runtime for C#, C++ or VB.NET applications

- .NET Tutorial
  - Demonstrates how to use CTG/CUC ECI v1 APIs usage in .NET managed runtime
  - Category2 SupportPac
CICS TG V8.0 Explorer and Embedded

CICS Explorer Support

- Enhanced integration with CICS Explorer for easier management of CICS Transaction Gateway resources

Embeddable Version

- Embedded version available for CICS Transaction Gateway V7.2 and V8.0

![Diagram of CICS TG V8.0 Explorer and Embedded](image)
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IBM CICS Explorer - The New Face of CICS

- Modern Eclipse based Tool (Windows and Linux)
  - Free entitlement with CICS TS V3 and V4
  - Delivers revolutionary integration of development, administrative, and operations tools
  - Aimed at CICS system programmers to provide a Systems Management alternative to the ‘Green Screen’
  - Designed for both new and experienced CICS users
  - Improves the overall effectiveness of CICS System Programmers
  - Reduces the cost of ownership for key CICS applications

- Experience gets Richer when used later versions of CICS Products

Coming soon in CICS Explorer V1.0.1

- System z perspective and APIs
  - View/edit zOS datasets and zFS files
  - View/edit/submit JCL
  - View completed JES spool output
  - View completed job log
  - Hyperlink quickly from DD statements to named datasets
- Connection import/export
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<thead>
<tr>
<th>Function</th>
<th>Page 1</th>
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<tbody>
<tr>
<td>Develop Test Etc</td>
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<td>Configuration Status Control, Test</td>
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<td>Daemon &amp; Connection Status &amp; Test</td>
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<td>Status Situations Topology</td>
<td>XE</td>
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<td>Threadsafe, File, CPU, Response Time analysis Graphical and Sheet views</td>
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<td>CICS, IMS, DB2, &amp; z/OS Abend Reporting Diagnosis</td>
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<td>CICS, IMS, DB2, &amp; z/OS Observation Requests &amp; Reporting</td>
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<tr>
<td>CRUD/Install Control, Filter Topology Events, ATOM</td>
<td>APA</td>
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<td>CRUD/Install History, Audit Backout Search, Compare</td>
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<td>Execution Tree Dependencies Queries Command Flow</td>
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<td>Deployment Discovery, Visualization, Automation &amp; Control</td>
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<td>Deployment Discovery</td>
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<td>Execution Tree Dependencies Queries Command Flow</td>
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<td>Servers Agents</td>
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CICS Deployment Assistant?

- Announced: 22 July ‘10  GA: 24 Sep ‘10

New IBM tool for CICS TS V3 and V4
  - Host Components
  - CICS Explorer Plug-in

Discover and create offline model for CICS configurations
  - Start-up Options
  - Connectivity relationships
  - Sub-system dependencies

Visualize and Update CICS Systems
  - Compare model to ‘live’ CICS system
  - Clone existing systems or start new CICS regions

Exploits CICS Explorer V1.01 enhancements
  - View and work with JCL, Spool Files and Host Datasets
  - Issue MVS Commands

Intended Capabilities -

Discovery
Creation of model from customer's running system.
CICS Artifacts and bindings to other systems and resources

Policy Expert
Apply IBM and customer policies for best practice.
Compliance checking and enforcement.

Deployment
Deployment of resources as specified in a model according to chosen policies.

Model (CICS specific)
Applications, Systems, Topologies, Policies, Annotations

Foundation
Visualization, comparison, editing, versioning, sharing, server support ...

VIRTUALIZATION + STANDARDIZATION + AUTOMATION = Cost

SHARE in Boston
Summary

I ♥ CICS
Reference Material

- CICS Communities
- CICS Development Services
- CICS On Demand Seminars
CICS Communities

- **CICS home page**
  - Remember this link: [www.ibm.com/cics](http://www.ibm.com/cics)

- **CICS eNews**
  - Subscribe for news about CICS and related products

- **Twitter**
  - Subscribe to the [IBM System z channel](https://twitter.com/IBM_System_z) to get CICS Explorer news flashes

- **CICS Blog**
  - Comment and opinion at [TheMasterTerminal.com](http://TheMasterTerminal.com)

- **YouTube channels**
  - [CICS Explorer](http://CICSExplorer) - Video stuff
  - [CICSFluff](http://CICSFluff) - Other CIC

- **CICS Facebook**
Engage the IBM Hursley CICS development team to ensure that you get the maximum value from your CICS investments.

Consultants are now available via a funded services engagement directly from CICS development providing a complete range of CICS services - no one has more experience!

• For more information please contact: CICSDTS@uk.ibm.com

CICS On Demand Seminars

Free customised technical agenda of CICS TS and CICS tools products
  • Web Services, Events, Web 2.0, version upgrades, tooling etc.
Targeted at AD, System Programmers and Architects at customers’ own location
Demonstrates how to use the new features in the latest releases to leverage existing solutions
Can be tailored to customers interests

• For more information please contact: cicssem@uk.ibm.com
CICS Development Technical Services

• **Upgrade Services**
  • Efficiently update your CICS environment to the latest version to exploit new CICS features such as: Web services, IP connectivity, CICS Explorer, Event Processing, Web 2.0, Atom Feeds and PHP scripting in CICS

• **System Health Check**
  • Ensures that your CICS environment is functioning optimally. Our Best Practice Review will check your CICS configuration parameters and values and provide a report with recommendations to improve the running of your CICS business systems

• **Security and Governance**
  • This service helps you assess and ensure the security and compliance of your CICS assets. We provide a security and vulnerability Risk Assessment and make recommendations of how best to secure your CICS assets

• **Performance Optimization**
  • Get the most out of your environment, improved performance equals lower cost. We review CICS performance data from SMF records and/or CICS tooling to provide tuning recommendations and Capacity Planning advice

• **Web Services Enablement**
  • Unlock and re-use your CICS business assets in the connected world of SOA. We provide education and implementation for CICS Web services support including Rational Developer for z tooling. We can help with identifying assets for re-use in an application and legacy modernization project

• **Integration and Connectivity**
  • We provide consultancy for migration from SNA to IP connectivity as well as using connection technologies such as the CICS Transaction Gateway and Web services to provide the availability of your CICS business assets to a wider audience in an SOA

• **Systems Management**
  • Our Systems Management offering is aimed at ensuring that your CICS environment is being managed to Best Practice standards. The engagement may range from a short analysis of the CICS Systems Management tools techniques used in your enterprise, to a full implementation of CICSPlex SM, CICS Explorer and other IBM CICS Systems Management products

**Customized Workshops**

• We offer Customized Workshops to meet your education needs for the CICS Family of products. These workshops are staffed by senior CICS developers and can be run either at your location, or at an IBM location that meets with your preference.
This Redbook® focuses on the new CICS Explorer
The first part of the Redbook overviews the CICS Explorer, along with all the CICS Tools plug-ins
The second part of the Redbook focuses on different scenarios in which the CICS Explorer can be used, along with the CICS Tools plug-ins to resolve different problems

http://www.redbooks.ibm.com/redpieces/abstracts/sg247778.html

“RedBooks are very good, this one is just Excelsissimus! I can't wait for the final!”
customer feedback on public review draft
New CICS Tools analyst white paper

- **Branham Group** interviewed CICS Tools customers, with
  - CICS Interdependency Analyzer
  - CICS Performance Analyzer
  - CICS Configuration Manager

- Common business value propositions emerged, including the following examples of achievable cost savings:
  - 75% **time savings** for the identification, coding, and testing of CPSM rules, in some cases equating to the recovery of a whole month in time savings for a major affinity.
  - 90+% **time savings** to identify and validate typical performance issue related changes.
  - 66% **less time** on average to administer CICS Service Definition changes, which happen on a daily basis.
  - 2%-15% **CPU cycles** recovered through the designation of CICS applications as threadsafe

Strengthening CICS User Communities

  - USA,
    - Impact, SHARE
  - Europe,
    - CICS User Groups, Transaction and Messaging conference, GSE Nordic
  - Japan,
    - IBM Z World
  - Korea, China, Brazil, India
    - CICS User Groups

  - First place to look for CICS information
  - Product details and announcements

  - Subscribe for news about CICS and related products
Modern Customer Interaction

- Twitter – News feed and updates
  http://twitter.com/IBM_System_z

- CICS Blog – Comment and Answers
  http://themasterterminal.com

- YouTube channels – Videos, demos
  http://www.youtube.com/user/CICSEExplorer
  http://www.youtube.com/CICSfluff

- CICS Facebook

- CICS Hub at the Rational Cobol Café
Thank You