CICS Tools Overview
February 2005

CICS Tools | IBM UK Laboratories

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Preface

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Portfolio Overview

Problem Determination Tools

File Manager
Fault Analyzer
Debug Tool
Debug Tool Utilities
IBM Application Monitor
IBM Workload Simulator

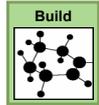**CICS Tools**

CICS Interdependency Analyzer
CICS Performance Analyzer
OMEGAMON XE for CICS
CICS Business Event Publisher
CICS VSAM Transparency
CICS Batch Application Control
IBM Session Manager
CICS VSAM Recovery
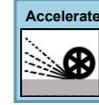CICS VSAM Copy
CICS OTTO

and more coming !

WAS/z Tools

WS Application Monitor
WS Workload Simulator
WS Asset Analyzer
WS Enterprise Developer

Rational/z Tools

Function Tester Extension
Performance Tester
Application Lifecycle Manager

Modernize

Build

Model & Discover	Develop & Integrate	Test, Deploy & Manage
Rose/XDE WSAA CICS IA	WSED HATS	CICS Tools PD Tools IBM WS IBM AM

Rational Tools

Improve

Accelerate

Host Integration Tools

Personal Communications
Host Publisher
Host On Demand
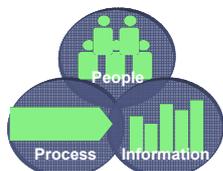Host Access Transformation Server

Runtimes

WebSphere Application Server
CICS, IMS, DB2
Enterprise COBOL/PL/I
Host Access Transformation Server

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zSeries Software *for the On Demand World*
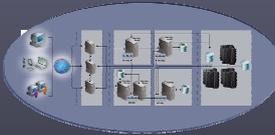
Business Integration

Infrastructure Management

Platform Readiness

People

Process   Information

Application and Integration Infrastructure

Business flexibility
through integration of people, processes and information within and beyond the enterprise

Optimize IT
through integration of management tools and information across the end to end systems infrastructure

Resilient, Available and Secure
the underpinnings of an On Demand Infrastructure

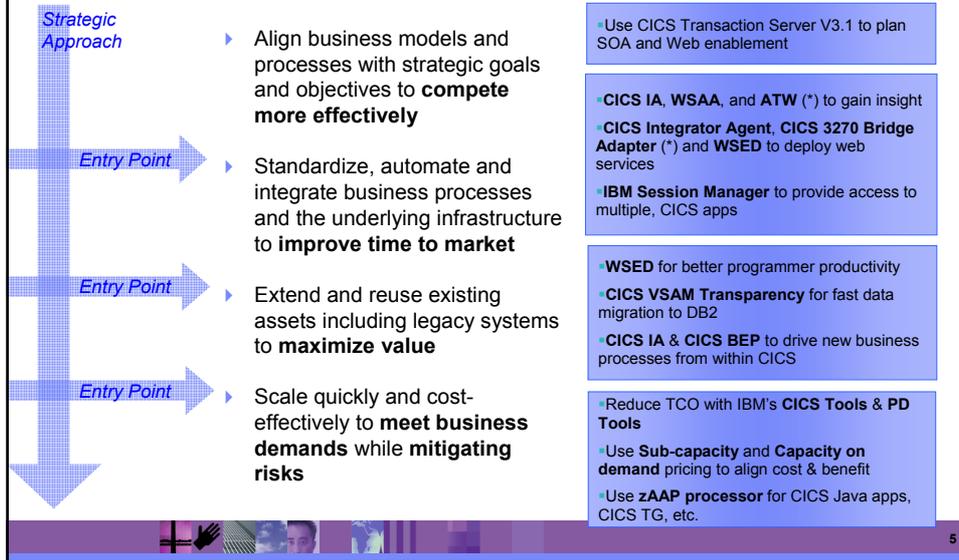| CICS TS & CICS Tools for Application Transformation	CICS TS & CICS Tools for Operational Efficiency	CICS TS 3.1 and CICS Tools support for V-V

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CICS and CICS Tools Enable Increased Business Flexibility
Where you start depends on business priorities

Strategic Approach

▶ Align business models and processes with strategic goals and objectives to **compete more effectively**

- Use CICS Transaction Server V3.1 to plan SOA and Web enablement

Entry Point

▶ Standardize, automate and integrate business processes and the underlying infrastructure to **improve time to market**

- **CICS IA**, **WSAA**, and **ATW** (*) to gain insight
- **CICS Integrator Agent**, **CICS 3270 Bridge Adapter** (*) and **WSED** to deploy web services
- **IBM Session Manager** to provide access to multiple, CICS apps

Entry Point

▶ Extend and reuse existing assets including legacy systems to **maximize value**

- **WSED** for better programmer productivity
- **CICS VSAM Transparency** for fast data migration to DB2
- **CICS IA** & **CICS BEP** to drive new business processes from within CICS

Entry Point

▶ Scale quickly and cost-effectively to **meet business demands** while **mitigating risks**

- Reduce TCO with IBM's **CICS Tools** & **PD Tools**
- Use **Sub-capacity** and **Capacity on demand** pricing to align cost & benefit
- Use **zAAP processor** for CICS Java apps, CICS TG, etc.

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CICS Application Transformation Tools

Vision Statement

Tools to provide cost-efficient CICS application change / reuse / integration and enable our Customers' legacy IT for SOA

Target customers

CICS customers, particularly those implementing on demand strategies, running WebSphere / CICS mixed workload environments or implementing SOAs

Key Customer Pains

- Poor application knowledge, especially CICS **runtime** applications

- Need **comprehensive** tools to **extend** core applications and data into the on demand world

- Need to **reuse CICS assets** in an SOA as provider & requester

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Transform your CICS applications

Extend and modernize CICS applications efficiently

Improve programmer productivity

Increase customer satisfaction

Enable IT for SOA

CICS Application Transformation Tools

CICS Business Event Publisher for MQSeries®
- Create and manage outbound events using WebSphere MQ without changing existing CICS applications

CICS VSAM Transparency
- Enable VSAM to DB2 migration without rewriting applications

CICS Interdependency Analyzer
- Understand your active application inventory for efficient maintenance and upgrades

WebSphere Studio Enterprise Developer
- Efficiently develop and maintain a new generation of CICS COBOL or JAVA applications

CICS Integrator Agent (in CICS TS V3.1)
- *Deploy modeled web service flows across CICS applications (Commarea & 3270)*

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IBM

CICS Subsystem Management Tools

Vision Statement

Tools to enable cost-efficient CICS subsystem lifecycle management

Tools to contribute to business flexibility

Target customers

CICS customers – primarily those running competitive ISV tools looking for lower-cost alternatives with equivalent function

Key Customer Pains

- Clients with tools from other vendors are experiencing …
  - **Excessive** and **unpredictable** rises in the **cost** of software
  - **Inhibited** migration to new SW levels and deployment of new e-business applications
  - Need for **lower costs** while meeting SLAs

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Manage your CICS subsystem

Reduce down time

Use CICS resources more efficiently

Control software cost

Improve end-user productivity

Coming Soon!
CICS Configuration Manager (*)
- Manage, replicate, and deploy CICS system definitions

CICS Subsystem Management tools

CICS Performance Analyzer
- Comprehensive off-line performance reporting and analysis for tuning and capacity planning

OMEGAMON XE for CICS
- Real-time and historical performance monitoring and troubleshooting solution for CICS TS

IBM Session Manager
- Provide secure, reliable, and easy access to multiple z/OS and OS/390 applications from a single terminal

CICS Online Transmission Time Optimizer
- Optimize 3270 data streams to increase your system performance

CICS VSAM Recovery
- Automate recovery of lost VSAM data

CICS VSAM Copy
- Create point-in-time copies of VSAM files concurrent with business-critical online processing activity

CICS Batch Application Control
- Simplify and automate batch access to CICS resources

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CICS Transaction Server V3.1

- CICS is IBM's premier transaction processor for the z/OS that provides:
  - An efficient and optimized runtime for the extension and reuse of existing CICS applications
  - Services to easily develop applications that exploit new technologies by building on CICS skills
  - First class management and support of mixed application types and workloads

- CICS TS V3.1 will be available 25 March 2005

Increased ease of CICS Integration	• Web Services capabilities to extend CICS applications to a Services Oriented Architecture • Support for industry-leading SSL and TLS protocols
Enhanced Application transformation	• Ability to leverage single development tool for application transformation and integration • Optimized CICS data exchange capabilities
Improved performance & Enterprise Management	• Extension of CICSPlex SM Web User Interface • Improved workload throughput • Enhanced C/C++ programs performance

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CICS Tools Support for CICS Transaction Server Version to Version Migration

- All tools exploit CICS TS 3.1 functionality where relevant
  - Exploitation and support at GA
- Improved speed of version to version migration projects
  - Prepare for migration: prioritize and optimize
    - Application understanding
      - CICS IA and WSAA
    - Performance and application analysis to improve application design and performance
      - CICS PA
  - Improve speed of migration – move trough Test, Q&A and into production faster
    - CICS Configuration Manager for improved productivity and control
    - CICS IA for improved quality of testing
  - Make applications threadsafe
    - CICS IA provides information needed to understand which applications conform to threadsafe standards
    - CICS PA reports can show CICS TCB usage by your threadsafe CICS applications
  - Enable CICSPlex SM
    - CICS IA identifies affinities
    - CICS Configuration Manager simplify resource definitions management in CICSPlex SM environments
- Improved efficiency to support SOA and Web Services implementations
  - CICS Subsystem management tools help move closer to 24/7 operation, a key requirement for SOA.
    - CICS BAC potentially shortens the batch window
    - CICS VR provides automatic recovery of VSAM data to improve uptime
    - CICS IA and CICS PA help improve availability
  - CICS VT enabling the move of data from VSAM to DB2, which opens the data up to WebSphere based services.

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CICS Tools Support for CICS Transaction Server V3.1 at GA

CICS Tool	Support for CICS TS 3.1	APAR number	Comments
CICS Performance Analyzer V1.4	Support/exploitation	In CICS PA 1.4	Exploitation at 3.1 GA
OMEGAMON XE for CICS	Support		Exploitation at 3.1 GA
CICS Interdependency Analyzer V1.3	Support/exploitation, PTF required	TBD	Separate exploitation PTF 2Q
CICS VSAM Recovery V3.3 and V3.2	Support	None	Exploitation is not applicable
Session Manager V1.2 and V1.1	Support	None	Exploitation is not applicable
CICS Business Event Publisher V1.2	Support/exploitation, PTF required	TBD	Separate exploitation PTF 2Q
CICS OTTO V1.1	Support	None	Exploitation is not applicable
CICS VSAM Transparency V1.1	Support	None	Exploitation is not applicable
CICS VSAM Copy V1.1	Support, PTF required	TBD	Exploitation is not applicable
CICS Batch Application Control V1.1	Support, PTF required	TBD	Exploitation is not applicable

Earlier releases of the tools do not support CICS TS V3.1

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Reference

zSeries Enterprise Tools Summary
http://www.ibm.com/software/info1/websphere/index.jsp?tab=landings/ets
CICS Tools WEB Sites ...
http://ibm.com/cics/products/tools.html
http://ibm.com/cics/library/

IBM Software Group

Appendix: Product Summaries

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CICS Business Event Publisher

- What does it do?
  - ‣ Creates MQPUT messages for MQSeries queues from events in CICS, IMS and DB2 *without changing existing applications*
  - ‣ Events are based on user-specified rules, Queue names and MQPUT options
  - ‣ Provides easy-to-use workstation GUI for selection and rules creation
  - ‣ Real time action and results
- Why do I need it?
  - ‣ Offers low-cost, low-risk integration strategy
  - ‣ Fast, powerful, yet simple way to drive business processes from existing CICS, IMS and DB2 applications

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CICS Interdependency Analyzer

- What does it do?
  - ‣ Automated on-line discovery of application code
  - ‣ Automated discovery of runtime relationships in CICS
  - ‣ Provides flexible reports to help clients understand interdependency and affinity data in their daily operations
- Why do I need it?
  - ‣ Improve CICS application maintenance, reuse, modification and new application development and save time and money
  - ‣ Enable faster application migration
  - ‣ Minimize the impact of routine application maintenance for the end user
  - ‣ Improve CICS systems and application design to help improve availability, especially for 24x7 and e-business projects
  - ‣ Implement workload balancing for continuous availability

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CICS VSAM Transparency

- What does it do?
  - ▸ Enables migration of data in VSAM to DB2 without changing application programs
  - ▸ CICS and batch programs access data in DB2 under the control of CICS VT
- Why do I need it?
  - ▸ Fast, low-risk migration from VSAM to DB2
  - ▸ Simple migration - completely separate from application program
  - ▸ Gain transparent access to data in DB2
  - ▸ Move to a single source of production data
  - ▸ Migrate individual VSAM files as required
  - ▸ New applications can be fully DB2 technology-based
  - ▸ Preserve investments in legacy applications

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WebSphere Studio Enterprise Developer

- What does it do?
  - ▸ Modernizes CICS COBOL application development via an eclipse workstation-based IDE
  - ▸ Increases CICS COBOL developer productivity
  - ▸ Integrates both COBOL and JAVA application development for the mainframe

- Why do I need it?
  - ▸ To reduce application development time and cost
  - ▸ Allows CICS COBOL developers to easily create new applications including web services
  - ▸ Enables efficient development and integration of mixed workload applications

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CICS Batch Application Control

- What does it do?
  - ▸ Enables a batch-job step to change the state of relevant CICS resources
  - ▸ Tracks resource state change requests across participating CICS systems and batch streams
  - ▸ Ensures resources are in their correct state when CICS regions start
  - ▸ Powerful "group" feature enables a job step to change the state of all resources associated with an application
- Why do I need it?
  - ▸ Reduces errors and abends related to batch processing
  - ▸ Reduces manual interventions by operators and system programmers
  - ▸ Moves your CICS applications closer to 24x7 availability

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CICS Configuration Manager(*)

- What does it do?
  - ▸ Provides the ability to manage CICS resource definitions including
    - ▪ Create, Update, Delete, Copy, Replicate
  - ▸ Provides the ability to "change manage" definitional change through the various user environments (e.g. Development, Test, Production)
  - ▸ Provides the ability create customized reports, enabling users to identify redundant definitions, resource relationships, change management history
  - ▸ Provides audit, back-out and change authorization capabilities
- Why do I need it?
  - ▸ Greatly simplifies the task of managing new application development through test and deployment
  - ▸ Speeds version to version migrations of both CICS and CICS apps
  - ▸ Simplifies CICS systems administration thus lowering costs and reducing downtime due to administrative errors

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CICS Performance Analyzer

- What does it do?
  - ▶ Enables off-line performance analysis of CICS, and CICS-related DB2, WebSphere MQ, and MVS SMF records, as well as IMS information
  - ▶ Provides flexible reporting and analysis capabilities with supplied reports or your own reports for day-to-day performance analysis
  - ▶ Historical data processing for trending and capacity planning
- Why do I need it?
  - ▶ Reduce cost of effort to analyze performance
  - ▶ Improves tuning and capacity planning analysis
  - ▶ Helps take proactive approach to CICS systems tuning
  - ▶ Helps plan capacity for optimal performance
  - ▶ Helps review application performance and identify potential to improve application design
  - ▶ Use with online monitors to quickly identify and correct causes of online problems

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OMEGAMON XE for CICS

- What does it do?
  - ▶ Enables proactive management of performance and availability of CICS systems – including CICS in Parallel Sysplex environments
    - Helps identify bottlenecks at the record level
    - Can trace transactions from one system to another
    - Helps detect application performance problems
  - ▶ Eases creation of complex thresholds, situations and alerts without deep scripting or coding skills
  - ▶ Facilitates automated responses to alerts
- Why do I need it?
  - ▶ Maximizes performance and availability of CICS systems
  - ▶ Speeds problem identification and resolution
  - ▶ Helps allocate resources for better performance
  - ▶ Automated responses allow for less repetition of manual tasks

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CICS VSAM Copy

- What does it do?
  - ▶ Creates CONSISTENT copies of VSAM data sets
    - While they remain online and open to CICS applications for update
    - While they are closed to CICS
- Why do I need it?
  - ▶ Create ad hoc copies of VSAM data sets
    - Without affecting current performance of running CICS applications
    - Produced copies are consistent (no incomplete units of work)
  - ▶ Work towards 24*7 VSAM availability
    - No need to take the data set offline from CICS before creating copy

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CICS VSAM Recovery

- What does it do?
  - ▶ Recovers CICS and batch VSAM data after physical or logical corruption
  - ▶ Removes updates made by failed batch job steps
  - ▶ Reapplies changes made by applications since last data back up.
- Why do I need it?
  - ▶ Reduce business cost of VSAM errors
    - Reduce impact of batch window processing errors
    - Helps you detect and reverse errors
    - Reduce the impact for VSAM data users against the effects of physical loss or incorrect update
      - Reduce cost of down time
      - Helps you minimize recovery time

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CICS Online Transmission Time Optimizer

- What does it do?
  - 3270-type data stream optimization
  - Examines outgoing data streams and dynamically compresses them
  - CICS-specific solution; interface familiar to CICS systems programmers
  - Collects statistics
  - Optimization features are easily controlled
- Why do I need it?
  - Reduces network load
  - Helps to increase the productivity of the network without rewriting applications
  - Minimizes the need for new communications equipment
  - Easy to install, customize and use

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IBM Session Manager

- What does it do?
  - Provides a password-protected single menu from which users can access all applications running on any z/OS or OS/390 machine in the network
  - Provides log-off procedures, security checking, audit logging and centralized administration, operations, and monitoring
  - Reduces cost and effort associated with network administration and brings benefits to helpdesk and operations personnel who can easily view user problems
  - Offers centralized user ID administration and the ability to broadcast messages to end users
- Why do I need it?
  - Improve user productivity
  - Reduce training requirements and help desk costs
  - Enhance system usage
  - Provide increased security

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