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CICS Tools 2007 Overview

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Preface

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Agenda

- **Business Problems faced by CICS customers**
- **CICS Tools for Application Transformation**
- **CICS Tools for IT Service Management**
- **CICS Tools for Governance and Risk Management**
- **Summary**
- **Backup material**



Business Problems faced by CICS customers

- **Need to increase responsiveness to business requirements**
 - ▶ Modernize mainframe platform to support SOA and Web services
 - ▶ Develop and deploy new workloads to leverage the unique performance, availability, security, and cost benefits of System z.
 - ▶ Enable easier version-to-version upgrades - especially to CICS Transaction Server for z/OS® V3

- **Optimize management of the IT environment**
 - ▶ Reduce cost and complexity
 - ▶ Meet demanding SLAs

- **Improve governance and compliance**
 - ▶ Maintain VSAM data integrity
 - ▶ Avoid risk of regulatory non-compliance



CICS Tools play many roles

Product	Role	Application Transformation	IT Service Management	Governance and Compliance
CICS Interdependency Analyzer		√	√	√
CICS VSAM Transparency		√	√	
CICS Configuration Manager		√	√	√
CICS Performance Analyzer		√	√	√
CICS VSAM Recovery			√	√
CICS Batch Application Control			√	
Session Manager			√	√
CICS Online Transmission Time Optimizer			√	





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CICS Tools for Application Transformation



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Transform your CICS applications

Extend and modernize CICS applications efficiently

Improve programmer productivity

Increase customer satisfaction

Enable CICS for SOA

CICS Tools for Application Transformation

CICS Interdependency Analyzer

- Understand your active application inventory for efficient maintenance and upgrade

CICS VSAM Transparency

- Enable VSAM to DB2 migration without rewriting applications

CICS Configuration Manager

- Supports CICS development with management of CICS resource definitions

CICS Performance Analyzer

- Understand CICS application performance before deployment into production

Also important:

WebSphere Developer for zSeries

- Efficiently develop and maintain a new generation of CICS COBOL, PL/I or Java applications





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CICS Tools for Application Transformation

CICS Interdependency Analyzer for z/OS



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CICS Interdependency Analyzer for z/OS (CICS IA)

■ Key features

- ▶ Captures resource relationships such as
 - programs with potential affinities
 - resources used by a transaction - Programs, Files, TSQs, TDQs plus DB2, MQ and IMS DB
 - resources no longer used
 - transactions with affinities to other transactions and the type and lifetimes of these affinities
 - sequencing of transactions within an application
 - transactions with affinities to particular CICS regions
- ▶ Run-time and batch reporting tool
- ▶ Relationship data loaded onto a DB2 data base
 - Query interface and sample queries provided for comprehensive analysis

■ CICS Support

- ▶ CICS Transaction Server for z/OS, V2 and V3
- ▶ CICS Transaction Server for OS/390 V1.3

New in CICS IA V2.1

- CICS TS V3.2 toleration PTF
- Sample queries to highlight applications that are most sensitive to CICS version changes

Coming soon

- CICS TS V3.2 exploitation PTF
- Powerful new Eclipse-based UI
- Sample queries to identify applications suitable for use as Web services
- Support for Natural 4GL
- DB2 UDB support



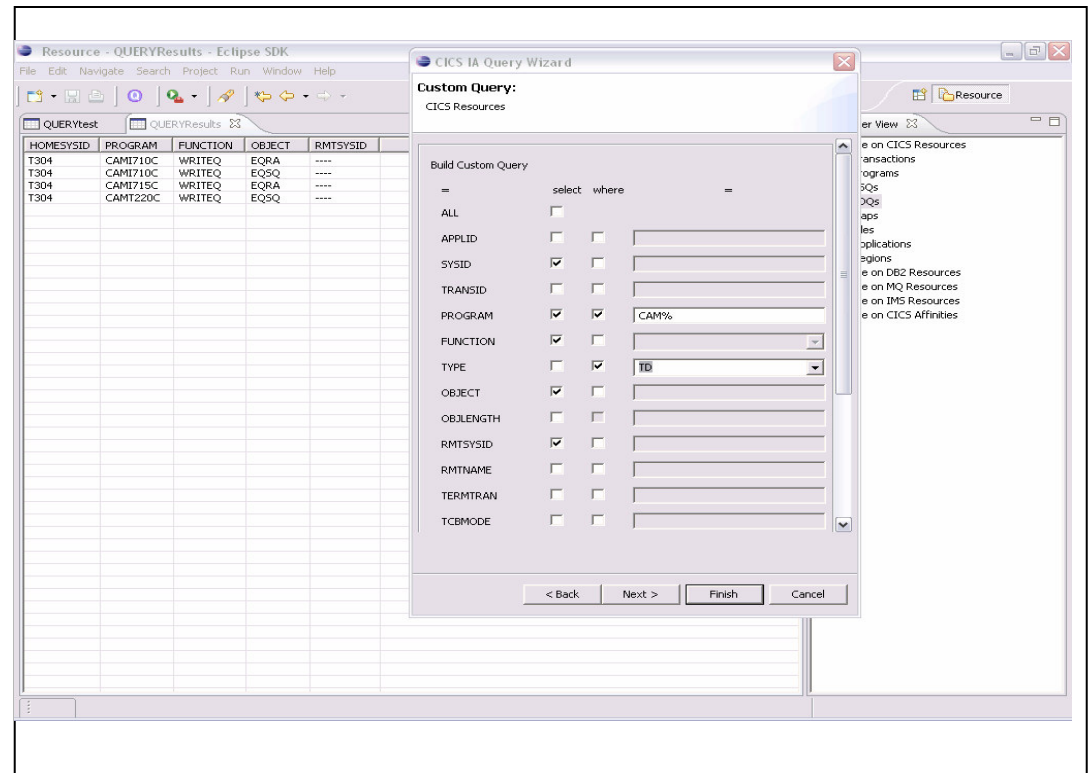
CICS Interdependency Analyzer for z/OS (CICS IA)

Problem

- Large retail company with complex business applications needs to allow any transaction to run in any CICS region to improve availability. All transactions must be examined to eliminate restrictions or affinities that may exist today.

Solution

- CICS IA automates collection of the data they need, loads it in a DB2 database for ease of processing and helps create CSD definitions when applications are moved to a different region.
- Also helps speed problem determination, e.g. by determining the logical flow of programs within a transaction.



Value

- Helps customers under time pressure or without deep CICS skills to change complex applications with reduced risk of problems. Supports ITIL processes such as Change and Release Management.



Other CICS IA customer scenarios

- **Large bank**

- ▶ Need to consolidate data centres following mergers/acquisitions
- ▶ Hundreds of CICS regions, transactions not following naming conventions
- ▶ Solution – CICS IA
 - Used to define applications to clarify the picture of transaction and resource flow

- **Large outsourcing company**

- ▶ Incorporate the workloads of their customers into their data centers
- ▶ These workloads are often not documented well and need ‘cleaning up’ following acquisitions/mergers and other changes
- ▶ CICS IA is used to understand the workloads and identify potentially dead code





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CICS Tools for Application Transformation

CICS VSAM Transparency for z/OS

A decorative horizontal bar with a purple background, featuring a series of colorful squares (cyan, green, yellow, red) and various icons (a starburst, a person's face, a globe, a cross, a globe, a grid of circles) on the left side.

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CICS VSAM Transparency for z/OS (CICS VT)

■ Key features

- ▶ Migrate VSAM files to DB2 without changing application programs
- ▶ Single copy of the data
- ▶ CICS and batch programs access data in DB2 under the control of CICS VT
- ▶ Data migrated to DB2 can be accessed natively by new programs
- ▶ Existing programs enhanced using SQL
- ▶ Lower risk migration strategy

■ CICS Support

- ▶ CICS Transaction Server for z/OS, V2 and V3
- ▶ CICS Transaction Server for OS/390 V1.3

New in CICS VT V1.2

- CICS TS V3.2 support without modification
- CICS TS V3.2 threadsafe File Control API performance benefits
- Dual Mode Facility assists with testing of migrated data
- Automated Mapping Facility now supports PL/I and Assembler
- Re-entrant SQL driver modules



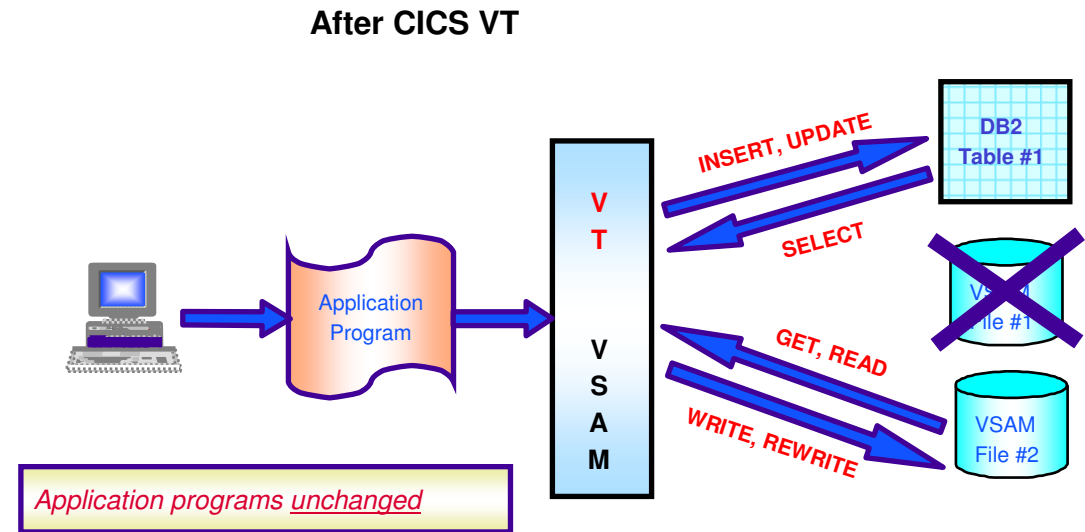
CICS VSAM Transparency for z/OS (CICS VT)

Problem

- Large telecoms company see VSAM in CICS and batch processing as an inhibitor to growth. They wanted a DBMS solution to improve the access to data, but didn't want to convert their applications.

Solution

- CICS VT enables the migration of data from VSAM files to DB2 tables. It ensures continued access to the data in DB2, without modification to the CICS or batch VSAM application programs and with only minor changes to CICS and batch configurations.



Value

- Lowers risk of migration and better sharing between online, batch and distributed applications. Improved availability (24/7) and scalability and ability to use DB2 tools for maintenance and reorganisation.





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CICS Tools for IT Service Management



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Optimize management of CICS performance and availability

Reduce down time

Use CICS resources more efficiently

Control software cost

Improve end-user productivity

CICS Tools for IT Service Management

CICS Configuration Manager

- Manage, replicate, and deploy CICS system definitions

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

CICS VSAM Recovery

- Automate recovery of lost VSAM data

CICS Batch Application Control

- Simplify and automate batch access to CICS resources

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





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CICS Tools for IT Service Management

CICS Configuration Manager for z/OS

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CICS Configuration Manager for z/OS (CICS CM)

■ Key features

- ▶ Create, Update, Delete, Copy, Replicate CICS resource definitions
- ▶ Change management through the life-cycle stages, e.g. development, test, production
- ▶ Create customized reports to identify redundant definitions, show resource relationships and change management history
- ▶ Audit, back-out and change authorization capabilities

■ CICS Support

- ▶ CICS Transaction Server for z/OS, V2 and V3
- ▶ CICS Transaction Server for OS/390 V1.3

New in CICS CM V1.2

- CICS TS V3.2 support PTF
- Migration of resource definitions between partitioned environments
- Integration with change management solutions
- Data take-up utility to speed up initial deployment
- Usability and reporting enhancements
- Journal Offload Utility
- Mixed RLS and non-RLS CSDs



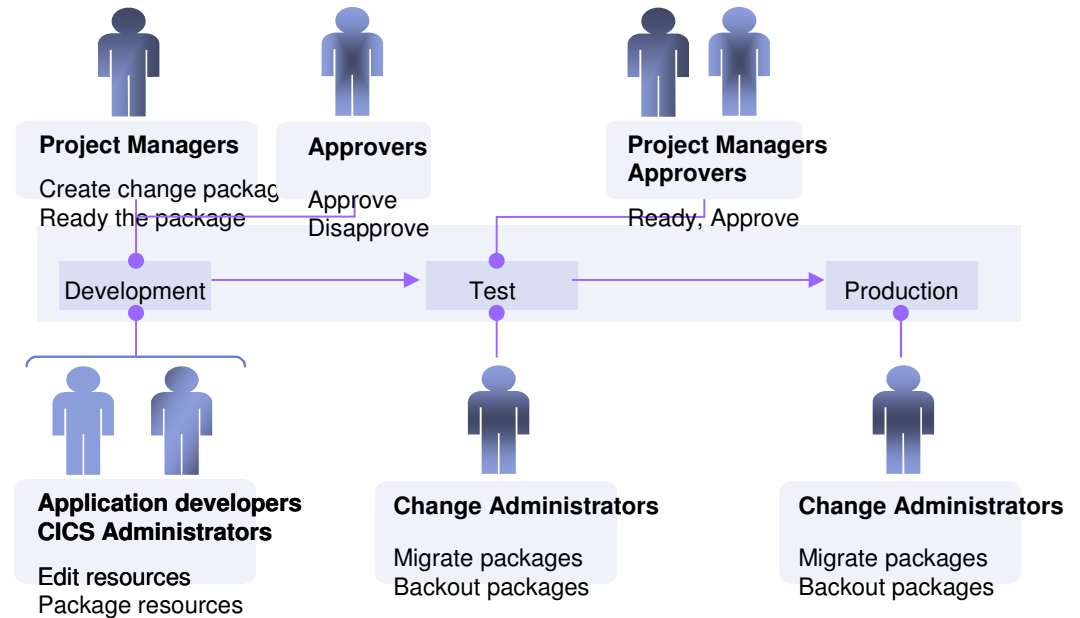
CICS Configuration Manager for z/OS (CICS CM)

Problem

- Configuring CICS systems consists of creation, modification and migration of CICS resource definitions across complex development, test, and production environments with definitions stored in CSD files or CICSplex SM data repositories

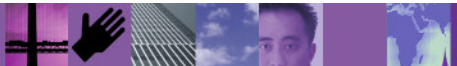
Solution

- CICS CM provides easy-to-use facilities for CICS resource-definition administration and maintenance, with comprehensive reporting and optional change-management control facilities. CICS CM controls all CICS definitions through a single interface and integrates with existing system management processes.



Value

- Simplified and controlled management of CICS application development aids systems administration, lowers costs, reduces risk of downtime due to user errors and speeds version to version migration





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CICS Tools for IT Service Management

**Managing Performance with
CICS Performance Analyzer for z/OS**

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OMEGAMON XE for CICS

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CICS Performance Analyzer for z/OS (CICS PA)

▪ Key features

- ▶ Comprehensive Performance Reporting and Analysis for CICS
 - ▶ Including DB2, WebSphere MQ, and MVS System Logger
 - ▶ Extensive Tabular Reports and Extract Data Sets
 - ▶ Historical Database (HDB)
 - ▶ Trending and Capacity Planning
 - ▶ ISPF Dialog to build, maintain, and submit reports and extracts
 - ▶ Comprehensive reporting of CICS Statistics data

▪ CICS Support

- ▶ CICS Transaction Server for z/OS, V2 and V3
- ▶ CICS Transaction Server for OS/390 V1.3

New in CICS PA V2.1

• CICS TS V3.2 support including:

- Compressed SMF type 110 records
- Higher precision (12-byte) clock fields
- New and updated statistics fields and records
- Extended integration with OMEGAMON XE for CICS
- New transaction profiling reports
- New distribution reports
- New and updated sample reports
- Additional enhancements delivered via the service channel
- Historical Reporting using [SupportPac CP12](#)



CICS Performance Analyzer for z/OS (CICS PA)

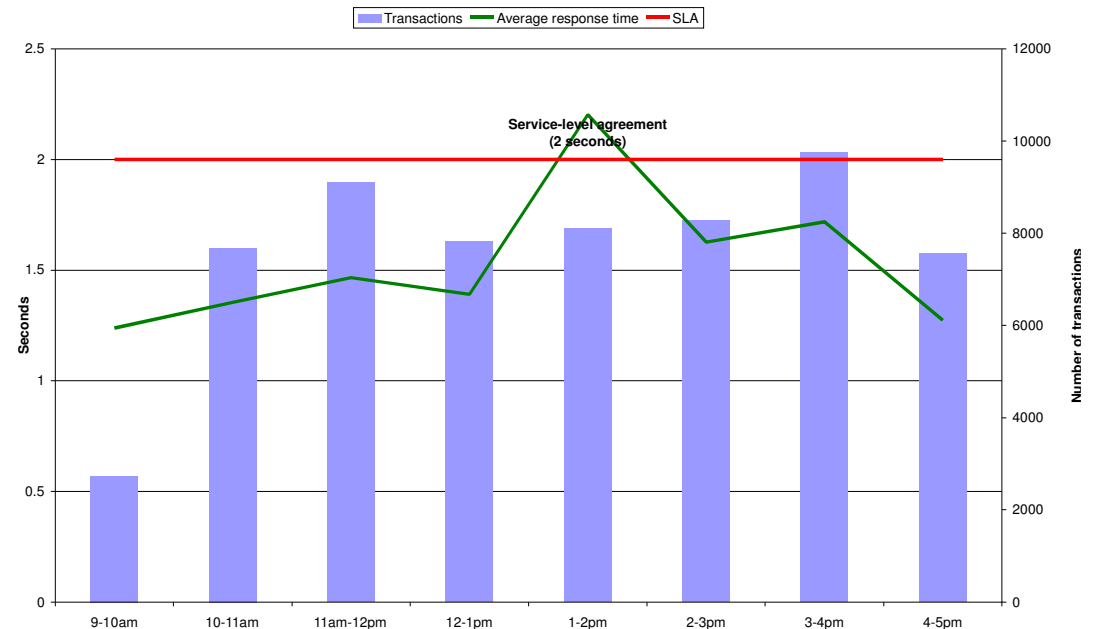
Problem

- Need to report on performance, assess the impact of changes, and anticipate trends leading to poor CICS performance and take action rapidly when problems occur to meet ever more demanding service-level commitments.

Solution

- CICS PA is a CICS system and application performance reporting and analysis solution built to address the needs of everyone involved in CICS performance analysis and CICS system tuning and planning capacity for future use, including those who build, manage, and deploy complex mainframe CICS applications.

ORDR transaction: Wednesday, September 27, 2006



Value

- CICS PA provides the level of detail and flexibility that easily helps find new ways to improve CICS system performance, lower maintenance costs, and strategically plan IT investments.



OMEGAMON XE for CICS on z/OS

■ Key features

- ▶ Real time CICS monitoring
- ▶ Single portal for all OMEGAMON XE, ITM* and ITCAM! monitors
- ▶ Region-level CICS subsystem monitoring
- ▶ Identify and fix CICS problems quickly
- ▶ View critical CICS performance data including CICS Region Overview, Transaction Analysis, Temporary Storage Usage, Connections Analysis, DB2 Summary and Task data, VSAM Analysis

■ CICS Support

- ▶ CICS Transaction Server for z/OS, V2 and V3
- ▶ CICS Transaction Server for OS/390 V1.3

New in OMEGAMON XE for CICS V4.1

- **CICS TS V3.2 support PTF**
 - CICS TS 3.2 support PTF also available for OMEGAMON XE for CICS V3.1
- **New Dynamic Workspace Linking**
- **Globalization and translation in nine languages**
- **Historical Pruning & Aggregation**

* IBM Tivoli Monitoring

! IBM Tivoli Composite Application Manager



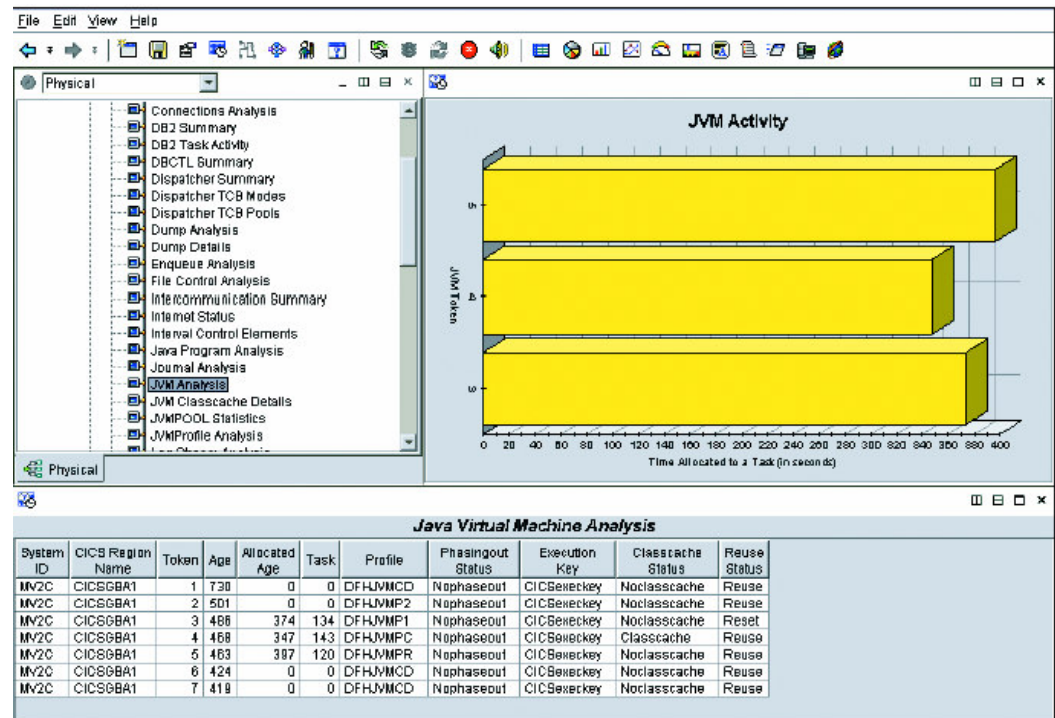
OMEGAMON XE for CICS on z/OS

Problem

- Customers with business-critical CICS applications cannot wait to hear about issues that might compromise their demanding performance and availability service-level agreements.

Solution

- OMEGAMON XE for CICS is the performance and availability solutions to help proactively manage multi-region CICS applications. With a flexible, easy-to-use browser interface, it helps to understand application and system events and monitor and manage CICS transactions at the big picture and granular levels.



Value

- Reduced problem isolation and resolution time
- Ease-of-use improvements with local language
- Enhanced support with plug-ins and documentation





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CICS Tools for IT Service Management

CICS Batch Application Control for z/OS



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CICS Batch Application Control for z/OS (CICS BAC)

■ Key features

- ▶ Enables a batch-job step to change the state of relevant CICS resources
- ▶ Tracks resource state change requests across participating CICS systems and batch stream
- ▶ 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

■ CICS Support

- ▶ CICS Transaction Server for z/OS, V2 and V3
- ▶ CICS Transaction Server for OS/390 V1.3

New in CICS BAC V1.1.1

- CICS TS V3.2 support PTF
- Security enhancements
- ISPF-based administration interface



CICS Batch Application Control for z/OS (CICS BAC)

Problem

- Many businesses schedule batch processing around their CICS services and CICS system administrators must handle increasingly complex tasks, especially when dealing with many CICS systems running on System z

Solution

- CICS BAC ensures that each resource is in its correct state, eliminating a major source of batch-related errors and failed processing, reducing the need for manual intervention. Automation frees operators and system programmers for more vital tasks and may reduce the time required for the nightly batch window or remove the need for region re-starts.

Maintain Properties for File BRQFILE in CICS Region IYCYZC2E

File Help

Save Upload Download Cancel User ID Set Host Help

CICS Batch Application Control for z/OS

File options | **File state information** | Transaction list | Program list

Click **DOWNLOAD** in the toolbar above to download the most recent information.

(Information is current as of 2004/10/08 at 14:02:30)

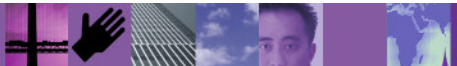
Data set name: DEMOCICS.CA1E BRQFILE

Last processed		Last state	
Date	10/08/2004	Enabled or disabled?	Disabled
Time	14:00:35	Open or closed?	Closed
Job number	J0806306	Readable?	Yes
Job name	CBKJCLF1	Browsable?	Yes
Procedure name		Addable?	Yes
Job step name	S1	Updatable?	Yes
System ID	MV2E	Deletable?	Yes
Processed by	Batch request utility	Allocation disposition	Share

Host: winmv2e.hursley.ibm.com.56677 CP: UK English / Gaelic - 285 Capture Mode

Value

- CICS BAC can improve availability by minimizing the risk of extending the batch window by reducing CICS application downtime resulting from errors and manual intervention





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CICS Tools for IT Service Management

Improving User Access with
IBM Session Manager

&

CICS Online Transmission Time Optimizer

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IBM Session Manager for z/OS (Session Manager)

▪ Key features

- ▶ Secure and user-friendly method of accessing multiple OS/390 or z/OS systems from a single 3270 terminal - SNA and TCP/IP
- ▶ Password-protected menu gives access all applications in network
- ▶ Log-off procedures, security checking, audit logging and centralized administration, operations, and monitoring
- ▶ Benefits to helpdesk and operations personnel - Spy function
- ▶ Benefits in training staff – Demo function
- ▶ Centralized user ID admin and the ability to broadcast messages to end users
- ▶ Session recovery across the Sysplex

▪ **Session Manager has no specific CICS requirements and works with z/OS V1.4, or later, including z/OS.e**

New in Session Manager V1.3

- **CICS TS V3.2 support without modification**
- **Workload balancing and shared configurations**
- **User customization**
- **System management menu**
- **Improvements in Online Administration usability**

Coming soon in Session Manager V2.1

- **High application availability and near-continuous operations in a Parallel Sysplex environment**



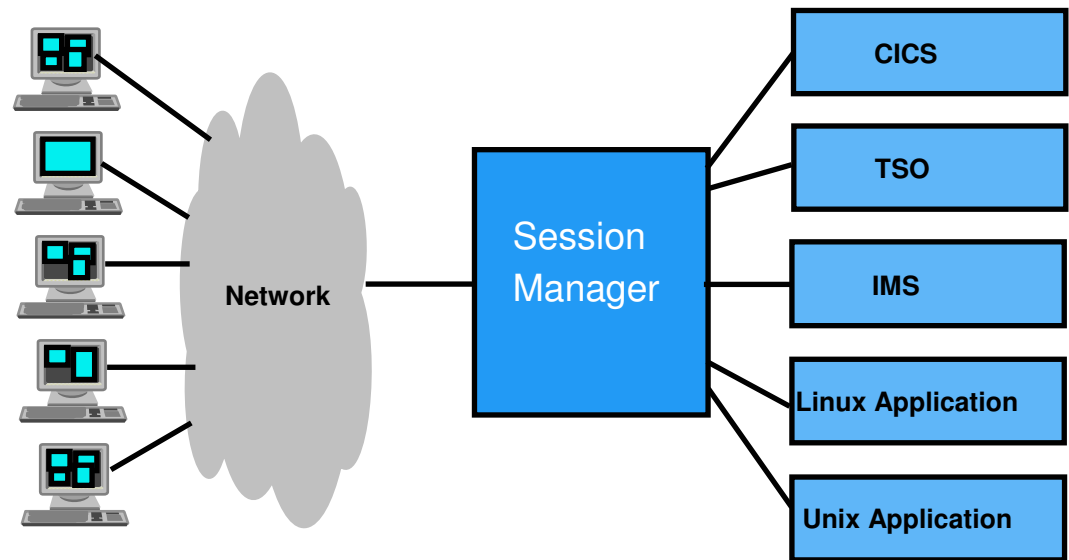
IBM Session Manager for z/OS (Session Manager)

Problem

- Users need to move smoothly and quickly between tasks, switching between applications frequently throughout the day while keeping track of the state of the different applications and the systems they run on.

Solution

- Session Manager is a VTAM or TCP/IP session manager that offers secure and user-friendly access to multiple z/OS systems from a single 3270 terminal or equivalent. It gives users a single secure sign-on, and allows controlled access to all of their applications from multiple concurrent virtual sessions using a wide range of tools and facilities.



Value

- Users can access the information they need without having to know where the applications are or what system they run on, helping to reduce system-administration time, providing faster access to a variety of applications while minimizing training requirements.



CICS Online Transmission Time Optimizer for z/OS (CICS OTTO)

■ Key features

- ▶ Identifies and removes repetitive data
- ▶ Compresses 3270 data streams
- ▶ Only changed data sent to the terminals
- ▶ Optimizes messages to increase printer speed
- ▶ Selective exclusion and inclusion of terminals and transactions
- ▶ Optional exit to change the data stream
- ▶ Compression status monitoring

■ CICS Support

- ▶ CICS Transaction Server for z/OS, V2 and V3
- ▶ CICS Transaction Server for OS/390 V1.3

New in CICS OTTO V1.2

- CICS TS V3.2 support without modification
- Improved compression status management
- Improvements in viewing trace data
- New system options to exclude transactions and terminals from optimization more easily
- Additional end-user help
- Improved documentation



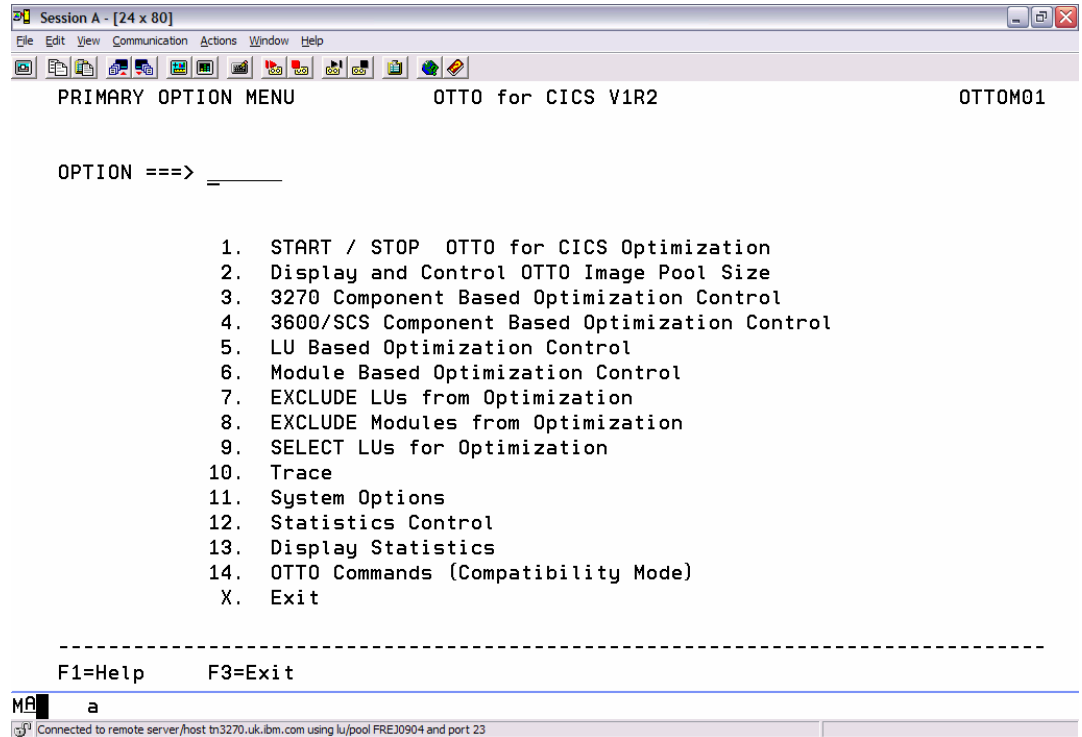
CICS Online Transmission Time Optimizer for z/OS (CICS OTTO)

Problem

- Demanding service-level agreements force you to reduce the frequency of communication bottlenecks and cost pressures make it harder to justify new communication equipment or communication bandwidth.

Solution

- CICS OTTO provides low cost basic compression and optimization of CICS 3270 and LU type 2 outbound data streams in a cost-effective and easy to use package.



```

Session A - [24 x 80]
File Edit View Communication Actions Window Help
PRIMARY OPTION MENU          OTTO for CICS V1R2          OTTOM01

OPTION ==> _____

1. START / STOP OTTO for CICS Optimization
2. Display and Control OTTO Image Pool Size
3. 3270 Component Based Optimization Control
4. 3600/SCS Component Based Optimization Control
5. LU Based Optimization Control
6. Module Based Optimization Control
7. EXCLUDE LUs from Optimization
8. EXCLUDE Modules from Optimization
9. SELECT LUs for Optimization
10. Trace
11. System Options
12. Statistics Control
13. Display Statistics
14. OTTO Commands (Compatibility Mode)
X. Exit

-----
F1=Help   F3=Exit
MA a
Connected to remote server/host tn3270.uk.ibm.com using lu/pool FREJ0904 and port 23

```

Value

- Improves 3270 network resource utilization and response time
- Transparent to users and applications





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CICS Tools for Governance and Risk Management



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Improve CICS Governance and Compliance

Reduce risk of failure

Ensure compliance

Increase availability

Improve data integrity

CICS Tools for Governance and Risk Management

CICS Interdependency Analyzer

- Ensure all components are changed and tested, to reduce risk of deploying untested applications

CICS Configuration Manager

- Gain tighter control over CICS administration and maintain compliance with change management policies

CICS Performance Analyzer

- Determine that CICS capacity can meet performance expectations and reduce the risk that performance problems will effect the business

CICS VSAM Recovery

- Quickly recover from errors and reduce the need for off-line processing to exceed its batch window

IBM Session Manager

- Controlled access to the correct applications with speedy application reconnection following failures



CICS VSAM Recovery for z/OS (CICS VR)

■ Key features

- ▶ Change accumulation
- ▶ Export and Import commands
- ▶ Batch support including logging
- ▶ NOTIFY support for IBM and non-IBM backups
- ▶ Supports backups created by Backup-While-Open (BWO)
- ▶ Automated recovery
- ▶ backup process invocation from CICS VR panel interface
- ▶ Preallocates the target data set prior to restore
- ▶ Provides authorization management for the panel interface
- ▶ Provides test-only forward recovery and backout
- ▶ Disaster recovery report:
- ▶ Panel Interface usability enhancements including:

■ CICS Support

- ▶ CICS Transaction Server for z/OS, V2 and V3
- ▶ CICS Transaction Server for OS/390 V1.3

New in CICS VR V4.2

- CICS TS V3.2 support
 - Extended addressability Entry Sequenced Data Sets (ESDSs)
 - Backout failure detection operates in a thread-safe mode
- Integration with external backup products, including IBM ABARS
- Manual control of VSAM Sphere reorganization
- Enhanced logging support
- Other enhancements including hardware backup support and customer requirements



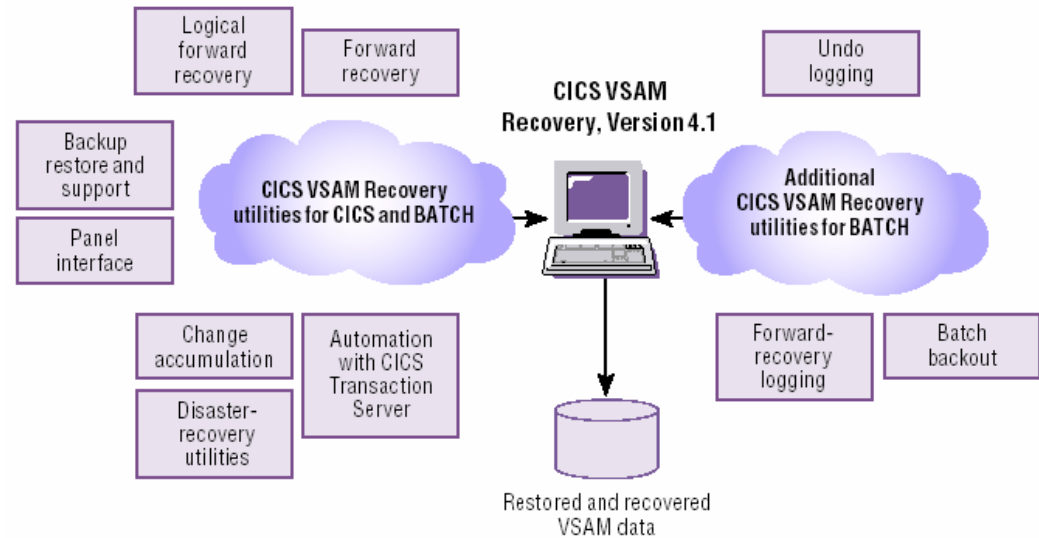
CICS VSAM Recovery for z/OS (CICS VR)

Problem

- Business critical VSAM data files used by CICS and batch applications can be damaged or corrupted due to physical or logical loss, e.g. disk failure, data deletion, disasters, incorrect updates being applied etc.

Solution

- CICS VR provides forward recovery for VSAM files updated by CICS and batch applications



Value

- CICS VR recovers CICS and batch VSAM data from physical or logical corruption, helping you to recover from errors quickly, reducing the need for off-line processing to exceed its batch window and so improving the availability of your CICS systems. Data integrity and system availability are key requirements for all well-governed IT systems.





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Summary



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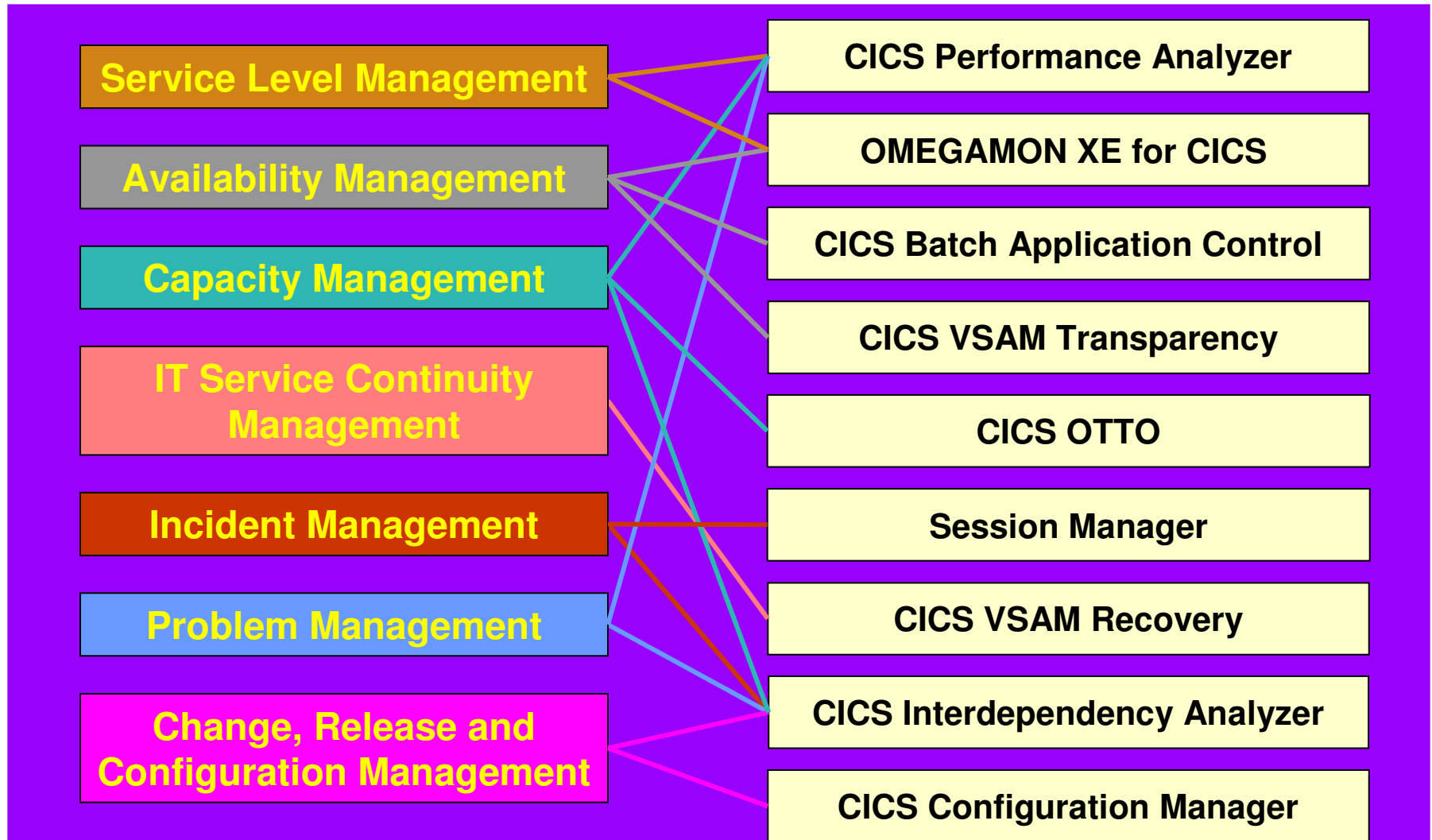
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CICS Tools play many roles

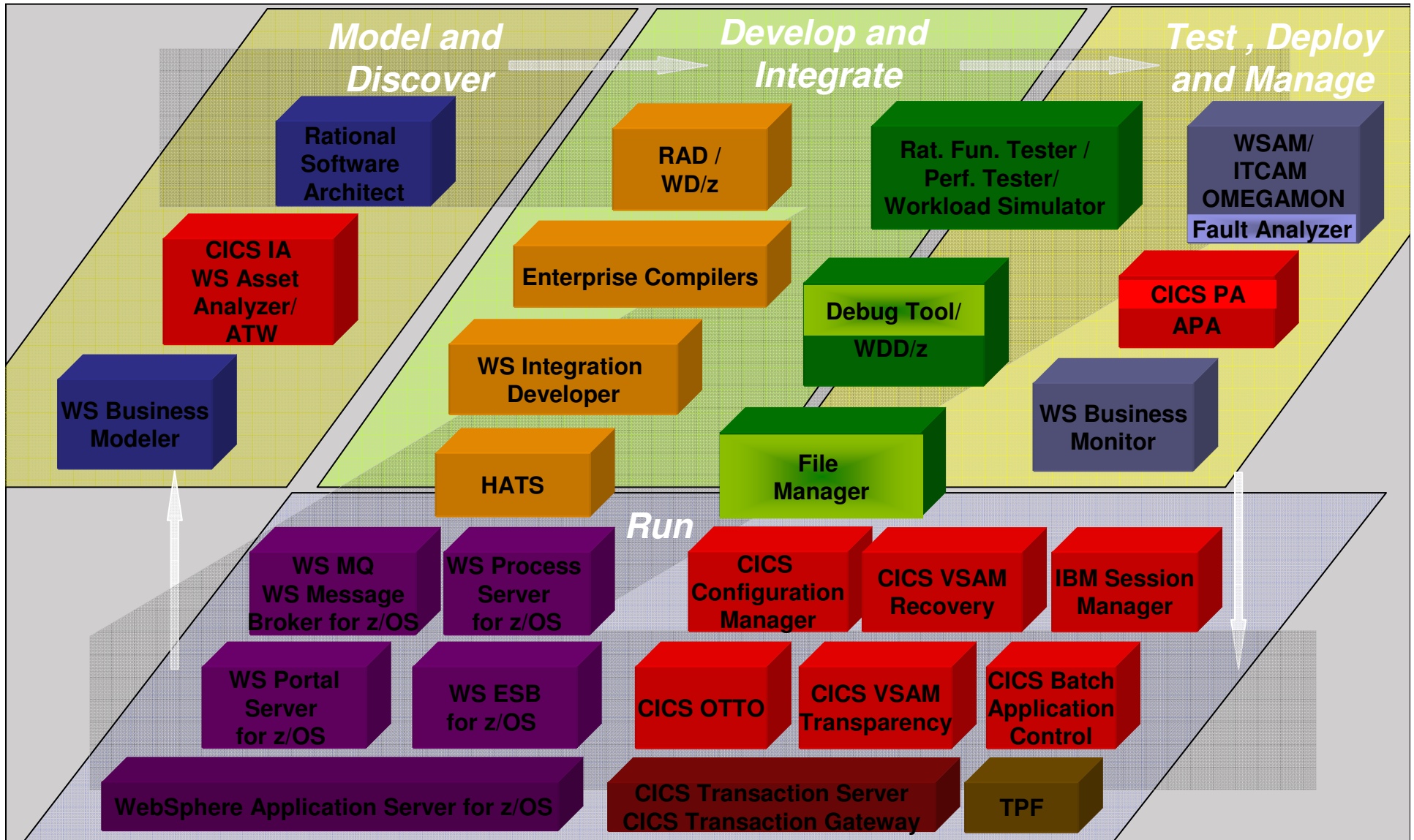
- **Application Transformation**
 - CICS Interdependency Analyzer
 - CICS VSAM Transparency
- **IT Service Management**
 - CICS Configuration Manager
 - CICS Performance Analyzer
 - CICS VSAM Recovery
 - CICS Batch Application Control
 - CICS Online Transmission Time Optimizer
- **Governance and Risk Management**
 - CICS VSAM Recovery
 - Session Manager



CICS Tools support IT Service Management processes



CICS Tools are part of the Enterprise Platform Software Portfolio



SCLM Advanced Edition / ClearCase/ ClearQuest



IBM Software Group

Backup material



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Further information

CICS Tools site

www.ibm.com/cics/tools

Try CICS Tools for free for 60 days

www.ibm.com/software/os/zseries/trials/cicstools/

Program numbers (licence):

CICS Configuration Manager	5697-I78
IBM Session Manager	5655-K01
CICS VSAM Recovery	5655-H91
CICS VSAM Transparency	5655-I76
CICS Batch Application Control	5697-I94
CICS Performance Analyzer	5655-F38
CICS Interdependency Analyzer	5697-J23
CICS OTTO	5655-I05

Get the CICS PA SupportPac CP12: Historical Database Reporting

www.ibm.com/support/docview.wss?uid=swg24011321



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- ▶ Redbook: CICS Interdependency Analyzer, SG24 -6458-00
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