IBM

Achieve your On Demand Business goals with optimized CICS tools for IBM System z.

ON DEMAND BUSINESS™

In today's marketplace, everything happens at an accelerated pace. Customer needs change. Business models evolve. Service oriented architectures (SOAs) are maturing. As a result, companies must anticipate and rapidly respond to customer needs and market changes. And they have to streamline and integrate core applications and systems to maximize technology resources. All in a highly secure environment.

Flexibility. Availability. Performance.

To build a responsive and highly available IT infrastructure needed to support business flexibility, organizations are turning to IBM—and discovering high-performance solutions that help them stay ahead of the technology curve. The convergence of IBM CICS® and SOA technology helps make flexible information infrastructures possible, while preserving the qualities of performance and reliability that your enterprise depends on. IBM also offers a suite of CICS tools that can help you:

- *Support application transformation and CICS technology-based SOA implementations.*
- *Enable easier CICS version-to-version migration.*
- *Reduce complexity and cost of CICS system and application management.*
- *Improve CICS application and data availability.*
- *Comply with regulations like the U.S. Sarbanes-Oxley Act.*

Manage the availability of your critical CICS applications for SOA

To be an effective On Demand Business, your applications must run 24 hours a day, 365 days a year. They must scale to support thousands of interactive users and process millions—and sometimes billions—of transactions. Organizations that run CICS systems constantly experience business pressure to improve CICS platform efficiency, maximize system availability and make the most of their CICS skills—as well as plan for Web services implementations.

CICS tools can help you manage the performance of your CICS systems, use resources more efficiently, reduce operational costs, improve productivity and reduce user-error impact on availability. Tighter and more-transparent control over various aspects of CICS performance, data availability and administration is critical to support CICS SOA and version-migration projects.

CICS Configuration Manager

Accurate and up-to-date CICS resource definitions are essential to maintain the high availability expected of your CICS environment. With tens, or even hundreds, of systems across your enterprise, maintaining these definitions can be challenging. Usually, the responsibility for managing these definitions is handled through a single administrative team. Along with the extreme complexity of CICS regions, your CICS personnel must also handle the complexities of each topology in each environment, and any required changes to the definitions. To simplify this task, IBM CICS Configuration Manager for z/OS provides easy-to-use facilities for CICS resource-definition administration and maintenance, while at the same time offering comprehensive reporting and optional change-management control facilities.

With CICS Configuration Manager, you can:

- *Manage CICS resource definitions in CICS system definition (CSD) files within your enterprise from a single point of control.*
- *Manipulate definitions seamlessly across CSD files and IBM CICSPlex® System Manager data repositories.*
- *Create, edit, compare, copy, move and remove definitions, individually or in groups.*
- *Edit definitions whether the CICS regions that use them are active or inactive.*
- *Migrate multiple definitions in a single step with the option to transform definitions automatically to match the target environment.*
- *Use the audit trail to generate reports and back out changes to any previous version of the definitions.*
- *Create reports to identify redundant definitions and analyze resource-definition status, relationships and history across any combination of CSD files and data repositories.*
- *Take advantage of the optional change-control capability where approval is required from authorized users before migrating definitions.*
- *Use an XML SOAP application programming interface (API) and batch facility for scripting and integration with your existing applications.*

CICS Configuration Manager helps improve the productivity of your IT staff, including managers, system programmers and application developers, by helping to optimize the productivity of day-to-day CICS system management and administration, simplifying resource-definition processes for new application development and deployment, improving change control and auditability, and easing migration between releases of IBM CICS Transaction Server, especially to Version 3.1. The opportunities to simplify CICS Transaction Server administration offered by CICS Configuration Manager can help reduce maintenance costs and downtime that can be caused by administrative errors.

Tivoli OMEGAMON XE for CICS
IBM Tivoli® OMEGAMON® XE for CICS helps you proactively manage complex CICS systems—including CICS applications in an IBM Parallel Sysplex® environment—to help maximize performance and to help avoid costly downtime. With a flexible, easy-to-use browser interface, Tivoli OMEGAMON XE for CICS helps you clearly see and understand application and system events. You can monitor and manage CICS transactions at higher-level and granular levels, as well as interaction with other applications, within a single interface. Tivoli OMEGAMON XE for CICS is designed to enable you to detect problems quickly and take action in real time to speed problem resolution.

From one panel, you can manage:

- *Single and multiple instances of CICS Transaction Server*
- *Large, enterprise-wide CICS configurations in Parallel Sysplex environments*
- *Related interactions with IBM DB2® databases and other system components*
- *Transactions that span across multiple systems*

To optimize the performance of your systems, you can assess how well transactions are running and instantly remove any that slow performance, while allowing other crucial operations to continue running. For example, the Virtual Storage Access Method (VSAM) record-level sharing (RLS) report enables you to identify and take action to address the source of bottlenecks that stem from locked records. Tivoli OMEGAMON XE for CICS also integrates with other Tivoli products so that you can deploy end-to-end availability management and help prevent threats to system performance before they affect service levels.

CICS Performance Analyzer

IBM CICS Performance Analyzer for z/OS is a robust offline reporting tool that analyzes the System Management Facility (SMF) records created by the CICS Monitoring Facility (CMF), CICS statistics and CICS server statistics, as well as SMF data from the related subsystems (DB2 and IBM WebSphere® MQ) and related IBM IMS™ Database Control (DBCTL) data. CICS Performance Analyzer also provides IBM z/OS® system-logger reports using system-logger data. It uses this information to produce comprehensive reports on all aspects of CICS system performance.

CICS Performance Analyzer comes with more than 100 reports designed to meet your reporting and analysis objectives. You can easily tailor these reports to your specific analysis requirements, or create your own reports using an easy-to-follow Interactive System Productivity Facility (ISPF) dialog. You can use the CICS Performance Analyzer reports to easily perform cross-system analysis. The ISPF dialog also enables you to view statistics online, and create and manage an historical database for trend analysis and capacity-planning purposes.

The easy-to-use CICS Performance Analyzer interface and detailed documentation make it a tool that can address the needs of everyone involved in CICS performance analysis, CICS system tuning and planning capacity for future use, including those who build, manage and deploy complex mainframe CICS applications. The product's level of detail and flexibility helps make it easy for you to find new ways to improve CICS system performance, reduce maintenance costs and strategically plan IT investments.

The tuning and capacity-planning capabilities of CICS Performance Analyzer complement the online monitoring facilities of Tivoli OMEGAMON XE for CICS. You can use CICS Performance Analyzer to help ensure quick response to online performance issues identified by Tivoli OMEGAMON XE for CICS. The product drills down into CICS Transaction Server and its related subsystems' performance data to identify and eliminate the cause of a problem.
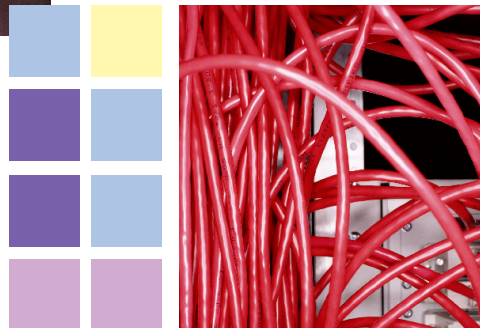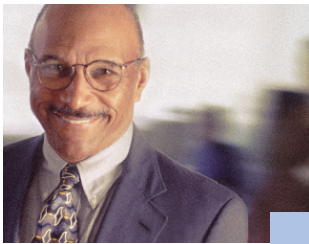
CICS VSAM Recovery

IBM CICS VSAM Recovery software helps mitigate the effects of catastrophic failure by enabling you to repair any damage quickly through:

- *Storing information, during normal operation, about changes to data in a forward-recovery log*
- *Taking control when invoked following events that result in unrecoverable loss of data*
- *Updating earlier copies (backups) of data with committed changes from forward-recovery logs*

Even though most of the focus for forward recovery is on hardware failure and software errors, you can use the same CICS VSAM Recovery facilities to protect against damaging updates made to your VSAM data—whether the intent was malicious or accidental. Selective forward-recovery capabilities enable you to recover VSAM data without applying the damaging updates based on the terminal, transaction or file ID that caused the damage. Also, change-accumulation capabilities help reduce the time necessary to perform forward recovery. And batch backout support enables updates to VSAM data sets to be automatically backed out when a batch job step fails, so that you can recover quickly from batch-processing errors and help decrease the chances that batch processing will exceed its allotted time frame (or batch window).

CICS VSAM Copy

Around-the-clock Web access to key business applications requires increased availability of online systems. Historically, when a copy of critical VSAM data was required (for example, to gather an accurate snapshot of business information for offline analysis), you had to choose between keeping the application available and having an inconsistent copy, and making the application unavailable while a consistent copy (with no incomplete units of work) was made. Now, through the unique capabilities of IBM CICS VSAM Copy software, you can produce consistent copies of VSAM files online—while keeping the application and its data available to users.

With the CICS VSAM Copy utility, you can create copies of VSAM files in CICS regions, concurrent with critical online processing. Online CICS users can continue making updates—even while the VSAM data sets are being copied. Because transaction-response time in typical user situations isn't affected, CICS users are unaware that the copy has been made. The copies produced are identical in format to copies created offline by IDCAMS REPRO.

It's about managing IT resources efficiently and effectively.

CICS Batch Application Control

With a robust batch-application control solution, you can conduct more-frequent batch runs during normal business-day processing and provide more-current data to your users. You can also reduce the number of interventions your operators and system programmers must make during off-shift hours to fix batch-related abends. IBM CICS Batch Application Control software makes it easier to manage solutions that include both online CICS and batch components.

Many businesses must schedule batch processing around their online CICS services. In this environment, CICS system administrators must handle increasingly complex tasks, especially when dealing with many CICS systems running on many IBM System z™ systems in a complex network. CICS Batch Application Control enables batch programs to dynamically change the state of CICS system-owned VSAM files, transient data queues, programs and transactions.

Because the application-development team can define all the resources relevant to each application in groups and application lists, your operations team can more easily manage applications without having to worry about which resources are part of each application.

CICS Batch Application Control can also help reduce the time required for the nightly batch window—moving your CICS applications closer to 24x7 operation.

IBM Session Manager for z/OS

IBM Session Manager provides a highly secure and user-friendly method of accessing multiple IBM OS/390® or z/OS systems from a single 3270 terminal. Features include:

- *A password-protected single menu from which users can access all applications running on any z/OS or OS/390 machine in the network*
- *Log-off procedures, security checking, audit logging, and centralized administration, operations and monitoring*
- *The potential to reduce the cost and effort associated with network administration*
- *The ability for help desk and operations personnel to more easily view user problems*
- *Centralized user ID administration and the ability to broadcast messages to users*

Online administration capabilities enable authorized users to add, delete or update applications, profiles and users. Dynamic menus enable you to manage users and applications using definitions in an external security manager, such as IBM Resource Access Control Facility (IBM RACF®). You can also hide menu entries from users, or manage it through a batch job to ease the potential administration overhead that can occur with mass updates. These features help IBM Session Manager to improve user productivity, reduce training requirements, and enhance system usage and security.

Use critical CICS resources as part of your SOA.

CICS Online Transmission Time Optimizer

IBM CICS Online Transmission Time Optimizer helps improve 3270 network-resource usage and response time, as well as user productivity, by identifying and removing repetitive data and compressing 3270 data streams. It operates efficiently and transparently to applications and users and supports both local and remote users. Repetitive characters—typically as much as 25 percent of all characters sent to terminals and other 3270 network devices—are reduced to only four bytes, reducing transmitted message size considerably.

CICS Online Transmission Time Optimizer helps minimize outbound data transmission to terminals by keeping screen layout in memory and removing data fields already present on the screen. Blank spaces are also eliminated to improve print speed.

CICS Online Transmission Time Optimizer helps minimize the need for new communications equipment by efficiently using your existing current lines, modems and controllers. Self-monitoring capabilities let you know how effective its optimization is in your environment by continually monitoring operations and reporting its own progress.

Maintain, modernize and extend CICS applications and data into SOA

CICS tools can help you to extend and modernize CICS applications and critical data efficiently. Improve programmer productivity. Increase customer satisfaction. And enable your IT assets to operate effectively as part of an SOA implementation.

CICS Business Event Publisher for MQSeries

IBM CICS Business Event Publisher for MQSeries® is a System z technology-based business rules engine. It enables you to quickly extend and reuse existing CICS applications and mainframe-based data, through events, to drive new business processes and use new technology—without having to change existing assets. This tool generates user-defined WebSphere MQ messages when an application runs particular EXEC CICS commands, or when VSAM, DB2 or IMS data is modified. By using CICS Business Event Publisher, you can enable this message generation to be transparent to CICS applications, and the applications to remain unchanged. You can use the product's Microsoft® Windows® GUI to create rules that control how WebSphere MQ messages are generated. These rules also enable you to determine which events are published, as well as the content and destination queue of the resulting messages.

You can use CICS Business Event Publisher in a variety of ways. One of the more-obvious uses is to more tightly integrate existing mainframe applications into enterprise application integration (EAI) and business-to-business (B2B) projects. Other scenarios where CICS Business Event Publisher can be of value are:

- *Error notification*
- *Threshold analysis*
- *Auditing, such as for Sarbanes-Oxley requirements*

CICS VSAM Transparency

IBM CICS VSAM Transparency helps lower the cost—and the risk—of migrating data from VSAM files to DB2 by enabling you to move the data without having to rewrite the CICS VSAM application. This capability is particularly important because it enables you to avoid delaying your data-migration initiatives because of the cost that can be associated with application rewriting and testing.

CICS VSAM Transparency includes three components:

- *Mapping component that establishes a relationship between a VSAM record and a DB2 row (which can be performed automatically for single-record VSAM data sets)*
- *Data-migration component that provides the utilities to migrate and reengineer data as required*
- *Runtime component that intercepts application calls to VSAM data sets migrated to DB2*

CICS VSAM Transparency enables you to migrate selected VSAM files as your needs dictate so that you can take advantage of new technology, while at the same time preserving valuable investments in core applications.

CICS Interdependency Analyzer

IBM CICS Interdependency Analyzer for z/OS automates the detection of runtime resource relationships within your CICS systems, and records this data in a DB2 database. It provides a comprehensive Eclipse technology-based GUI to help analyze the collected data and produce detailed reports to enable you to build a relationship road map and use this data in your daily operations. Resources identified include those associated with transactions, programs, basic mapping support (BMS) maps, files, temporary-storage queues, transient-data queues, 3270 Bridge facility, Web services, CorbaServer, and Enterprise JavaBeans (EJB) components. It also reports on DB2, IMS and IBM WebSphere MQ resources that are used by CICS Transaction Server. You can use the CICS Interdependency Analyzer GUI to run or modify supplied queries, or create your own queries. These queries enable you to perform detailed resource-relationship analyses, such as what transactions run in which regions or what affinities were found for a program, as well as resource comparison, such as comparing applications across regions.

With CICS Interdependency Analyzer, you can:

- *Understand your active CICS application inventory, especially if documentation is unavailable or incomplete.*
- *Improve your ability to maintain, enhance and migrate your business applications.*
- *Make informed decisions about the best way to split workloads for improved availability.*
- *Help minimize the impact of routine application maintenance for the user.*
- *Unlock the potential to improve application design.*
- *Help implement workload balancing across CICSPlex and Parallel Sysplex environments to provide continuous availability.*
- *Identify application components for reuse in, for example, SOA projects.*
- *Assist with CICS version-to-version migration assistance, for example, by helping to identify applications that do not conform to threadsafe standards.*

A firm foundation for success

The comprehensive portfolio of CICS tools offers the opportunity to realize the full potential of your CICS systems, whatever your business strategy. You have the potential to maintain and manage your core CICS applications more easily and at a lower cost. Using CICS tools in conjunction with other IBM tools for System z that are designed to support each stage of the SOA life cycle, you can bring together your existing investment in skills and applications to build an SOA to meet your business needs. And reap the benefits of a successful On Demand Business by seamlessly blending core business assets with new and composite applications.

For more information

To learn more about IBM CICS tools, contact your IBM representative or IBM Business Partner, or visit:

ibm.com/cics/tools