



## IBM CICS Transaction Server for Windows, Version 5.0

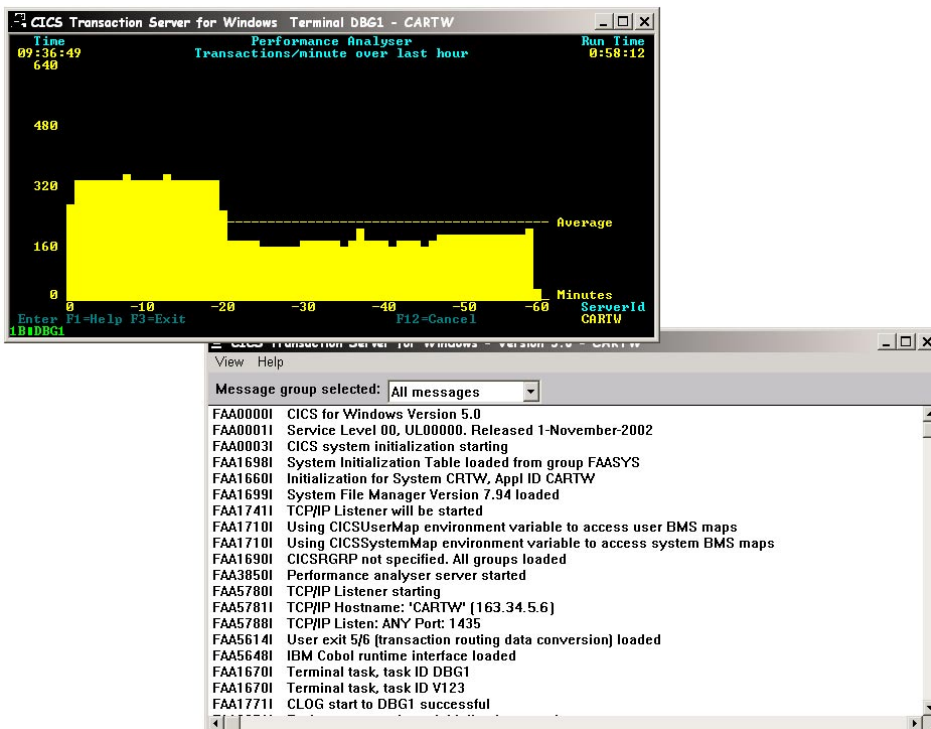
### Highlights

- **Allows you to easily migrate to Microsoft Windows NT or Windows 2000 platforms from IBM CICS Transaction Server for OS/2**
- **Manages high-performance applications and data sources in a branch office environment**
- **Gives you a robust, enterprise-wide coordination and integration server**
- **Offers you the reliability and data integrity necessary to run your business-critical applications**
- **Provides a CICS API on a slim, easy-to-install codebase**

IBM CICS® Transaction Server for Windows, Version 5.0 can help you move forward with a sound e-business strategy at a pace that makes sense for your enterprise—while minimizing your risk. If you are currently using IBM CICS Transaction Server for OS/2, Version 4.1, CICS Transaction Server for Windows gives you an advanced transaction processing solution so that you can continue to run existing applications as you migrate to the Microsoft® Windows® platform.

### Get the most out of your transaction management resources

CICS Transaction Server for Windows, Version 5.0 offers an ideal environment to develop and deploy CICS applications. This robust, enterprise-wide coordination and integration server can manage high-performance applications and data sources in a branch office environment with all the reliability, availability and data integrity you've



With the CICS Transaction Server for Windows, Version 5.0 performance analyzer, you can learn how your system uses CICS transactions and resources to help you tune the system for optimum performance.

come to expect from CICS Transaction Server for OS/2, Version 4.1. It provides a comprehensive CICS application programming interface (API) on an easy-to-install codebase that makes best use of your resources. Specific functions include:

- *Integrated performance analyzer function*
- *Programming language support for COBOL, C, C++ and PL/I*
- *Support for the master terminal (CEMT) function for management of CICS resources*
- *Interfaces for external security manager, external file manager and resource definition*
- *Support for dynamic resource installation (CEDA)*
- *Support for multiregion operation (MRO)*
- *Front-end programming interface (FEPI) Logical Unit 0 (LU0) support*
- *National language support with messages, screens and help text in multiple languages on one CD-ROM*

### **Maximize workstation function**

As a member of the long-established CICS family of high-integrity transaction managers, CICS Transaction Server for Windows, Version 5.0 enables complex transaction management applications in a Web or client/server environment—to support users' business-critical processes. It handles interactions between workstation users and application programs so you can have predictable, fast and reliable responses to user requests.

CEMT means you can use a command-line interface for fast-path management of system tasks, transactions and connected systems. You can inquire about or set the status of system resources—allowing you to locally manage system transactions and resources. A full resource definition interface provides an *inquire and set* API so that users can add, delete, retrieve, browse or modify large numbers of resource definitions, available using the CEDA transaction, in a batch mode.

### **Performance analyzer**

CICS Transaction Server for Windows, Version 5.0 includes a performance analyzer that serves as a statistics and monitoring tool. This tool provides information explaining how your system uses CICS transactions and resources to help you make decisions about tuning the system for optimum performance. With the performance analyzer, you can:

- *Get important routine performance management information that can help you quickly resolve performance issues.*
- *Take advantage of a robust tool for capacity planning, a high-level, application trace and application timing probe.*
- *Enable other remote CICS systems to interrogate the transaction statistics and user clock data held on CICS Transaction Server for Windows, Version 5.0.*

## Interoperability

CICS Transaction Server for Windows, Version 5.0 offers flexible intercommunication facilities, so you can configure and support it across a variety of networks:

- *Distributed program link allows a transaction to link to programs on a connected CICS system.*
- *Transaction routing enables a terminal user in one CICS system to run transactions in any connected CICS system.*
- *Function shipping means application programs in one CICS system can access resources, like files or queues, in another CICS system.*
- *Distributed transaction processing provides a means for communication between transactions running in different systems, regardless of whether the partner system is a CICS system.*
- *Asynchronous transaction processing, a form of function shipping request similar to distributed transaction processing, allows a CICS transaction to start a transaction in a remote CICS system and pass data to it.*
- *The external call interface (ECI), available for use with IBM CICS Transaction Gateway or IBM CICS Universal Client, enables a non-CICS application to call a CICS Transaction Server for Windows, Version 5.0 program synchronously or asynchronously. The ECI offers a simple interface that allows non-CICS software to cooperate with CICS server applications, communicating through a communications area (COMMAREA).*
- *The external presentation interface (EPI), available for use with CICS Transaction Gateway or CICS Universal Client, allows any Windows application program to emulate a terminal while invoking a CICS transaction. The transaction can be any 3270 transaction running under CICS.*
- *IBM WebSphere® MQ supports the use of message queuing in CICS applications, can participate in CICS synchronization point (sync point) processing and supports triggering of CICS applications.*

## Data management

CICS Transaction Server for Windows, Version 5.0 provides facilities used by applications of transient data, to handle queues of data being sent to a device—like a printer—and temporary storage. Interfaces within the server give you access to data held in databases and operating system data sets. CICS Transaction Server for Windows supports use of transient data, temporary storage, file control and access to various database managers, including IBM DB2® Universal Database™. File control supports transactional-record-level file access.

During the normal execution of a task, CICS Transaction Server for Windows, Version 5.0 logs information about all protected data—or recoverable resources—being changed. If the transaction fails or is cancelled, updates to recoverable files will be

automatically backed out, safeguarding other tasks from accessing potentially corrupted data. Applications can specify intermediate sync points at which data updates are logically completed.

### Presentation management

Commercial applications characteristically use predefined screen presentations, or forms. These appear in Web-based applications, as well as in traditional terminal-oriented transactional and database applications. CICS basic mapping support (BMS) augments the design of form-based applications, so that you can abstract many device dependencies from the application code and specify them in a separate map library. You can use BMS maps without changing or recompiling them across all members of the CICS family, enabling application porting. By generating maps at compilation time, you can verify that any given device class performs at an optimum level.

### Realtime services

CICS Transaction Server for Windows, Version 5.0 contains a number of functions that supervise and control the resource allocation within the system—providing an interface to your operating system functions. This enables CICS Transaction Server for Windows to optimally manage its transaction workload. These functions include:

- *Task control to manage the status of all CICS tasks. You can efficiently allocate operating system processes so that a separate process is not required for each terminal or operator. You can assign priorities to transactions, operators and devices. And the sum of these priorities determines the overall priority of a given task. Security checking allows you to determine whether to allow a user access to the system—with either user authorization facilities or external security facilities through runtime user exits.*
- *Program control to associate a task with the appropriate application program. Many tasks may use a shared copy of the program.*

- *Storage control to acquire, control and free dynamic storage used for programs, input and output areas and work areas.*
- *Timer services function to allow applications to start and control a range of time-dependent actions, such as starting a particular transaction at a certain time of day, or signaling when a specified period has elapsed.*

### Application development services

You can write applications for CICS Transaction Server for Windows, Version 5.0 in COBOL, C, C++ or PL/I and incorporate CICS commands within the program to invoke the required CICS functions. Facilities to assist in development of applications include:

- *A command language translator to preprocess source-code CICS commands into the form required by the relevant language compiler. (PL/I does not have a translator but uses an integrated preprocessor.)*

- *The execution diagnostic facility that enables application testing and debugging online.*
- *A command-level interpreter for online syntax checking and optional command execution.*
- *Extensive trace and formatted dump facilities, including auxiliary trace formatter, exception tracing, time stamp on trace entries, trace and dump output in binary and system trap handling to help determine problems and delog applications.*
- *Multisession debug to allow you to run several, simultaneous debug sessions.*
- *Sympathetic failure notification (SFN) between client and server to help increase availability by allowing CICS Transaction Server to recover from error situations.*

**Performance and systems management**  
CICS helps enable optimum performance for transactional applications by incorporating numerous features designed for high-performance opera-

tion, effective workload management in uniprocessor or multiprocessor systems and performance monitoring of actual workloads under a variety of conditions. CICS Transaction Server for Windows, Version 5.0 incorporates a high-performance record-oriented file system, an efficient transaction scheduling and dispatching mechanism and a workload-balancing system which allows you to distribute transactional workloads over a pool of application server processes. So you can fully exploit uniprocessor systems as you transparently exploit symmetric multiprocessor (SMP) systems. And maximize your system's scalability in the process.

CICS Transaction Server for Windows, Version 5.0 includes a comprehensive facility for resource definition online (RDO), so that CICS resources like files, queues, programs and transaction definitions can be defined interactively. You can also query and vary the status of these resources with the master terminal facility—offering you increased management control.

### **A scalable, portable transaction platform**

Based on proven CICS technology, CICS Transaction Server for Windows, Version 5.0 provides a robust and open platform on which to build transaction management applications. Applications that are easily portable to other CICS environments. Manageable from a single point of control. Interoperable across networks to maintain integrity and dependability. And because CICS Transaction Server for Windows, Version 5.0 is particularly suited for transaction systems based on CICS Transaction Server for OS/2, Version 4.1, you can migrate to the Windows environment with almost no change.

### **For more information**

CICS Transaction Server for Windows, Version 5.0 gives you a low-volume, low-cost solution that can grow as your needs dictate. To learn more, visit:

**ibm.com/cics**

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## IBM CICS Transaction Server for Windows, Version 5.0 at a glance

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### Hardware requirements

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- CICS Transaction Server for Windows, Version 5.0 can run in all machines that the operating systems run, provided they have sufficient memory and hard-file capacity.
- The memory requirement for CICS Transaction Server for Windows, Version 5.0 depends on its use, particularly the number of concurrent tasks run and requirements of the applications. Similarly, the requirement for hard-file size depends on what is installed, including softcopy books.

### Software requirements

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*CICS Transaction Server for Windows, Version 5.0 requires any of the following operating systems:*

- Windows NT® Server, Version 4.0, with Service Pack (SP) 6
- Windows 2000 Server, with SP2
- Windows 2000 Advanced Server, with SP2

*Note 1: CICS Transaction Server for Windows, Version 5.0 does not support the Windows Terminal Server or Windows Terminal Services environments for either supported Windows platform. They may be supported through the CICS Transaction Gateway.*

*Note 2: To support the command files (including sample command files) included in CICS Transaction Server for Windows, Version 5.0, Object REXX for Windows must be installed. If Object REXX is not already installed, CICS transaction Server for Windows, Version 5.0 will install Object REXX, Version 2.1.*

*CICS Transaction Server for Windows may be used with:*

- CICS Universal Clients, Version 3.1 or higher
- CICS Universal Clients, Version 5.0
- CICS Transaction Gateway, Version 4.0 or higher
- IBM MQSeries® for Windows, Version 5.2
- Database: DB2 Universal Database for Windows, Version 7.2
- Compilers:
  - IBM VisualAge® PL/I, Enterprise Version 2.1 for Windows and IBM OS/2®
  - IBM VisualAge COBOL for Windows NT, Version 3.0
  - Microsoft Visual C++, Version 6
  - Micro Focus Object COBOL, Version 4.0

*Note 3: CICS Universal Client or CICS Transaction Gateway, at any level, can't be installed in the same machine as CICS Transaction Server for Windows, Version 5.0. A single copy of CICS Universal Client, Version 5 is included with this product and automatically installed on other systems for communication with CICS Transaction Server for Windows, Version 5.0, but not installed on the same systems as CICS for Windows.*

*Note 4: Customers using applications compiled using Micro Focus Object COBOL, Version 4.0 need to ensure that the appropriate Micro Focus runtime libraries are available to their applications. These libraries are not included in CICS Transaction Server for Windows, Version 5.0.*

### Communications support

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- For NetBIOS communications, support is integrated within the operating system.
- For APPC (LU6.2) communication with CICS Universal Clients and other CICS systems:
  - IBM Communications Server for Windows NT and Windows 2000, Version 6.1.1
  - Microsoft SNA Server, Version 4.0, with SP4
  - Microsoft Host Integration Server 2000
- For TCP/IP communications, support is integrated within the operating system.

*Note 5: CICS Transaction Server for Windows supports communication using TCP6.2, allowing SNA LU6.2 messages to be passed over a TCP/IP network.*

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