IBM CICS FOR WINDOWS NT V2.0 DESCRIPTION AND PREREQUISITES

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Contents

Part 1. Availability Notice

IBM releases CICS for Windows NT Version 2.0

1.1.1 Overview

IBM (TM) CICS (TM) for Windows NT (TM) Version 2.0 provides powerful transaction management capabilities for business applications and data in client/server environments.

This new member of the CICS Application Server family further demonstrates the CICS strategy to support distributed processing on a wide range of industry platforms.

Full CICS Application Server function will now be available on the Microsoft (TM) Windows NT platform and supports connectivity from multiple client platforms via the new family of IBM CICS Clients.

In addition, CICS for Windows NT offers full inter-operability with other members of the CICS family, such as CICS/ESA (TM), CICS/MVS (TM), CICS/VSE (TM), CICS/400 (TM), CICS/6000 (TM) and CICS for OS/2 (TM). It also provides CICS support for the single user at a stand-alone or host-attached workstation.

(TM) CICS - trademark of IBM Corporation.
(TM) Windows NT - trademark of Microsoft Corporation.
(TM) Microsoft - trademark of Microsoft Corporation.
(TM) IBM - trademark of IBM Corporation
(TM) CICS/ESA - trademark of IBM Corporation.
(TM) CICS/MVS - trademark of IBM Corporation.
(TM) CICS/VSE - trademark of IBM Corporation.
(TM) CICS/400 - trademark of IBM Corporation.
(TM) CICS/6000 - trademark of IBM Corporation.
(TM) OS/2 - trademark of IBM Corporation.

Planned Availability Date: January 27th, 1995.

1.2 Highlights

- CICS Application Server on Microsoft Windows NT platform.
- IBM CICS Clients support on IBM and non-IBM platforms.
- Reinforcement of CICS openness on multi-industry platforms.
- Support for client/server online transaction processing on stand-alone or host-connected local area network (LAN) configurations.
- Utilization of available CICS programming skills to the client/server envi- ronment, allowing new applications to be implemented without extensive retraining.
- Installation of CICS for Windows NT Version 2.0 from CD-ROM or diskettes.
- Use of a range of CICS-supplied transactions for administration tasks.
- Support for 32-bit applications in COBOL, C and C++.

Part 2. Description

CICS for Windows NT Version 2.0 is licensed as single-user or multi-user.

CICS for Windows NT Version 2.0 is an enabler of business critical client/server applications. It enables the customer to exploit the power of the workstation and of LANs, offering end-to-end transaction management with high integrity in a client/server environment. It makes easy the development of complex business solutions based on the easy-to-use CICS API and its facilities of Distributed Program Link (DPL), Transaction Routing (TR), Function Shipping (FS), and Distributed Transaction Processing (DTP).

With increasingly powerful server machines becoming available, CICS for Windows NT Version 2.0 multi-user provides the capability of exploiting the large LANs towards which present trends are moving, which may be standalone, networked, or host-attached. The flexibility of LAN configurations may be exploited, and if required very large LANs and/or WANs may be employed.

The advantages of connectivity to all other CICS family systems are also available. PC servers, client workstations, midrange and mainframe systems will be able to share the transaction processing workload in an optimised manner. Each transaction may be coded as multiple cooperating modules to run close to the user, local, regional or corporate data as required, or relocated as business needs change.

Easy-to-use methods for communicating between clients and server are provided by the EPI and the ECI. These allow the option for non-CICS software to co- operate with CICS applications as required.

By the connectivity of CICS for Windows NT Version 2.0, with CICS transaction processing systems and data spread across the enterprise, CICS for Windows NT Version 2.0 enables the easy expansion of existing applications and development of new applications throughout the enterprise. Exploitation is made easy by the API and Inter System Communication (ISC) facilities of CICS. The ability to employ cooperative processing through the easy-to-use ISC facility of the CICS family means that as the processing workload on the LAN server grows, it is possible to increase the system capacity.

The flexibility of LAN systems running CICS for Windows NT Version 2.0 multi-user allows existing applications to be readily extended to new users, and provides opportunity for start-up business solutions or low transaction volume and cost constrained solutions.

CICS for Windows NT Version 2.0 provides similar function to CICS for OS/2 V2.0.1. However CICS for Windows NT Version 2.0 does not support Programmable Network Access (PNA) attached ASCII terminals, applications written in PL/I or System Performance Monitor (SPM) performance monitoring. A limited number of ASCII terminals can be connected by native attachment. The functional highlights are listed below. (Where not otherwise stated each function is supported by both CICS for Windows NT Version 2.0 single-user and CICS for Windows NT Version 2.0 multi-user).

CICS for Windows NT Version 2.0 multi-user supports the LAN client/server environment. The LAN server machine will be a powerful member of the IBM Personal Computer family (or a compatible with equivalent capability) running Windows NT, and will function as a Transaction Management System. CICS for Windows NT Version 2.0 multi-user runs in the Server and provides a ″Catcher″ function to accept requests from LAN attached CICS client machines.

CICS for Windows NT Version 2.0 multi-user supports the IBM CICS Clients announced on January 26th, 1995. The CICS Clients are a family of client products for workstations running a range of operating systems. This CICS Clients family communicates by a variety of protocols and through a range of supported communication products with CICS products on all platforms. They bring the benefits of client/server operation to the entire CICS family of application servers.

The major advantages of client/server operation include the following:

- The ability to exploit productivity-enhancing workstation facilities, such as graphical or multimedia interfaces.
- The ability to exchange data directly between CICS and personal productivity applications being used at the workplace

The IBM CICS Clients offer clients for a variety of IBM and non-IBM platforms: OS/2, DOS, Windows and Macintosh. The clients have communication capabilities via the NetBIOS, TCP/IP, and APPC protocols. For details please refer to IBM announcement material for IBM CICS Clients.

The clients offer communication with the server by three alternative mechanisms. The External Call Interface (ECI) enables the design of new applications to be optimized for client/server, with the business logic on the server and the presentation logic on the client. The External Programming Interface (EPI) enables new, modern technologies, such as graphical or multi-media interfaces, to be placed in front of existing 3270 CICS applications without the programmer having to alter the application. The clients also provide terminal emulation function.

CICS for Windows NT Version 2.0 provides ECI functions which allow native Windows NT programs to call CICS programs and communicate with them via the CICS COMMAREA. All user interactions may be via the Windows NT graphical user interface.

The EPI is an interface which allows any Windows NT application program to emulate a terminal while invoking a CICS transaction. The transaction can be an unaltered existing BMS transaction, not necessarily executed locally. Thus the EPI may be accessed from CICS clients. The program using the EPI can then put a graphical front end on the application, emulate a terminal not supported by CICS for Windows NT Version 2.0, or support any device attached to the workstation.

CICS for Windows NT Version 2.0 includes emulated VSAM file management. It contains locking of files at record level, forward recovery capability and batch data sharing. It will also be possible for developers of other file managers to enable their product to act as an alternative emulated VSAM file manager.

Application programs written for other members of the CICS family may be ported to the LAN environment with minimal effort.

Applications running in the client machines, in addition to requesting CICS function from the server may interface to other local applications, and may run their own user interfaces, including advanced Graphical User Interfaces (GUIs). They will access a server through the LAN. The server may be linked to any other CICS family system for cooperative processing, including other CICS for Windows NT Version 2.0 servers.

EBCDIC support is provided. This allows application data to be passed to and received from CICS for Windows NT Version 2.0 in EBCDIC format. This offers a real saving in time and effort to customers and software vendors who develop and test applications on the workstation for production use on a CICS mainframe, or who port applications from the host to CICS for Windows NT Version 2.0. It also simplifies the development of cooperative processing applications.

CICS for Windows NT Version 2.0 supports CICS application development using Object Oriented methods. These methods - using class libraries to encapsulate function - allow greater re-use of code, which bring the benefits of programmer productivity gains, program quality and maintainability. CICS transactions, running on CICS for Windows NT Version 2.0 multi-user and CICS for Windows NT Version 2.0 single-user, can be written in the C++ language. This means that object oriented programs can access the CICS API. This brings customers the performance and flexibility gains of 32 bit CICS applications, plus the benefits of Object Oriented development methods.

Support is included for multi-session debug, which allows the user to run several simultaneous debug sessions.

The following communication protocols are supported:

- APPC
- TCP/IP
- NetBIOS

Support is provided for TCP/IP and NetBIOS communication between machines running CICS for OS/2 Version 2.0.1 and CICS for Windows NT Version 2.0.

CICS for Windows NT Version 2.0 provides an auxiliary trace formatter, exception tracing, time stamp on trace entries, trace and dump output in binary, and system trap handling. It also provides a range of serviceability and problem determination facilities, which include Sympathetic Failure Notification (SFN) between the client and the server, and additional user exits to improve, for example, determination of where an application has abnormally terminated.

It is easy to develop complex applications for the client/server environment with CICS for Windows NT Version 2.0 multi-user. The ECI, which allows logical clients to run locally in a CICS for Windows NT Version 2.0 multi-user server, is a powerful facility enabling a single machine to be used for developing and testing applications intended for client/server use on a LAN. This offers programmer convenience, reduces the hardware required for application development and testing, and reduces the potential impact on the operations of the enterprise.

Most existing mainframe and workstation based applications can be easily ported to CICS for Windows NT Version 2.0, thus adding to the range of options available to customers in obtaining applications to exploit the new environments which it supports. CICS programmers with experience in developing application for other members of the CICS Family may develop applications for CICS for Windows NT Version 2.0 with little or no retraining.

Installation of CICS for Windows NT Version 2.0 (both single-user and multi-user) is by CD-ROM or 3.5-inch diskettes. Service will be provided by Corrective Service Diskette (CSD).

In a client/server LAN running CICS for Windows NT Version 2.0 multi-user, systems tasks can be performed on the server: little administration on the clients will be necessary.

CICS for Windows NT Version 2.0 single-user provides similar functions to CICS for OS/2 V2.0.1 single user. It contains the full CICS API as implemented also on CICS for Windows NT Version 2.0 multi-user. CICS for Windows NT Version 2.0 single-user may operate attached to a mainframe, attached to a LAN, or standalone.

CICS for Windows NT Version 2.0 single-user machines capable of full-function CICS operation may, when attached to a LAN, act as clients to CICS for Windows NT Version 2.0 multi-user. They may request CICS function in the server in the same way as other client machines, but may also perform their own CICS processing. They can also accept requests from the server machine for cooperative processing, allowing, for example, a large LAN to be supported by a server assisted by one or more further machines running CICS for Windows NT Version 2.0 single-user, rather than employing a single very high-powered server machine.

Powerful facilities are provided for assisting and improving programmer productivity in the development and debug of new applications, which make CICS for Windows NT Version 2.0 single-user a valuable base for development of CICS applications for running on other CICS systems. User productivity is enhanced by the convenience of writing and testing new applications on the PC. The enterprise′s production activities are not impaired by the additional processing and risk associated with the writing and testing of new applications.

Part 3. Marketing Support Material

3.1 Promotional Material

The following promotional materials are available:

Title	Order Number
CICS Application Server Brochure	GC33-1134-01
CICS Application Server Folder	GC33-1404-00

3.2 Marketing Material

Consult the CICS for Windows NT Market Readiness Assessment supplied as part of the CICSBRO PACKAGE on MKTTOOLS for details of the deliverables featuring CICS for Windows NT.

The following packages on MKTTOOLS provide background information on the family of CICS products.

TITLE	PACKAGE NAME
Marketing Messages for CICS	TSMSGS
Transaction Systems Information News and Updates	TSINFORM
CICS Family Presentation Guide	CICSFAMN
Why CICS	WHYCICS

For the latest marketing material on CICS products refer to TSINFORM on MKTTOOLS.

3.3 Evaluation Copies

A try-and-buy no charge option of the CICS for Windows NT product is available to assist customers to evaluate the product. It may not be used in production for more than 90 days from installation. It may not be transferred. After this period, the evaluation code will issue a message on the screen to remind the customer that the evaluation period has elapsed. The customer should then be advised to purchase the product license.

Information on how to obtain the CICS for Windows NT evaluation code is contained in the CICSBRO PACKAGE on MKTTOOLS. For further details, contact the CICS for Windows NT product manager in your country or marketing unit.

3.4 The Supportpac Library

A library of materials is available to IBM services professionals to assist them to deliver CICS and MQSeries services. The library is on the TXPPACS disk managed by TOOLS at WINVMB. The materials are called SupportPacs. They include tools, methods, example code and 'how to' documentations.

Typical services which may be enabled by SupportPacs include migration services, configuration, use and optimisation, and performance tuning.

To obtain a list and catalog of SupportPacs which are currently available, type the tools command:

TOOLS SENDTO WINVMB TOOLS TXPPACS GET README PACKAGE

New SupportPacs are continually being developed, and will be added to the library as they are completed. Please send a note to TXPPACS at WINVMB if you have material which could be made available on the library.

3.5 Other Information

3.5.1 Hone

Applies to US M&S, AP, IBM LA

The configuration aid CFPC will be updated to support these products on January 26th, 1995. and will be available to customers eligible to use IBMLink. The fastpath name is CFPC.

3.5.2 Installation Support

Applies to US & Canada

Installation and technical support is provided by the Application Enabling Systems Center, Dallas, Texas.

Applies to IBM LA

Branch personnel should first query the SETI data base under ERIF on AFEHONE using keyword ′CICSNT′, for answers to installation support questions. If further assistance is required, contact the country technical specialist. Question and answer support to the technical specialist will be provided through the QUAT facility on AFEHONE.

Applies to AP

Branch personnel should first query the SETI data base under ERIF on APGHONE using keyword ′CICSNT′, for answers to installation support questions. If further assistance is required, contact the country technical specialist. Question and answer support to the technical specialist will be provided through the IQ facility on APGHONE.

3.5.3 Field Support

Branch personnel and IBM Authorized Agent Firms should contact branch and area specialist(s) for technical marketing assistance. IBM representatives are provided installation and technical support through HONE ASKQ. Questions should be researched in ASKQ using the search word ′CICSNT′, and in publications before submitting an ASKQ question.

Part 4. Publications

The following CICS for Windows NT Version 2.0 hardcopy publications will be shipped as part of the program package.

Title	Order Number
CICS for Windows NT Version 2.0 Installation	GC33-1420
CICS for Windows NT Version 2.0 Customization	SC33-1421
CICS for Windows NT Version 2.0 Operation	SC33-1422
CICS for Windows NT Version 2.0 Intercommunication	SC33-1423
CICS for Windows NT Version 2.0 Problem Determination	SC33-1424
CICS for Windows NT Version 2.0 Reference Summary	SX33-6097
CICS for Windows NT Version 2.0 Application Programming	SC33-1425
CICS Family: Inter-Product Communication	SC33-0824-02
CICS Family: Client/Server Programming	SC33-1435

These publications will also be available separately for a fee.

4.1.1 Displayable Soft Copy Publications

The following CICS for Windows NT Version 2.0 and CICS Family online publications will be shipped as part of the program package on the CD-ROM as BookManager (R) online books. These will not be available on the program package on the diskette.

Title
CICS for Windows NT Version 2.0 Installation
CICS for Windows NT Version 2.0 Customization
CICS for Windows NT Version 2.0 Operation
CICS for Windows NT Version 2.0 Intercommunication
CICS for Windows NT Version 2.0 Problem Determination
CICS for Windows NT Version 2.0 Messages and Codes
CICS for Windows NT Version 2.0 Application Programming
CICS Family: Inter-Product Communication
CICS Family: Client/Server Programming
CICS Family: API Structure

The following CICS for Windows NT Version 2.0 and CICS Family online publications will be shipped as part of the program package on the CD-ROM in Information Presentation Facility (IPF) format. They can be displayed using the IPF for Windows utility shipped with the product.

Title
CICS for Windows NT Version 2.0 Installation
CICS for Windows NT Version 2.0 Customization
CICS for Windows NT Version 2.0 Operation
CICS for Windows NT Version 2.0 Intercommunication
CICS for Windows NT Version 2.0 Reference Summary
CICS for Windows NT Version 2.0 Problem Determination
CICS for Windows NT Version 2.0 Messages and Codes
CICS for Windows NT Version 2.0 Application Programming
CICS Family: Client/Server Programming

The following CICS for Windows NT Version 2.0 online publications will be shipped as part of the program package on the diskette in Information Presen- tation Facility (IPF) format. They can be displayed using the IPF for Windows utility shipped with the product.

Title
CICS for Windows NT Version 2.0 Customization
CICS for Windows NT Version 2.0 Operation
CICS for Windows NT Version 2.0 Problem Determination
CICS for Windows NT Version 2.0 Messages and Codes

4.1.2 CD-ROM Collection Kit For Transaction Processing And Data

The following CICS for Windows NT Version 2.0 publications are offered for a fee, as BookManager (TM) online books on the IBM Online Books CD-ROM Collection Kit for Transaction and Processing Data. For ordering information, refer to programming announcement 292-717, dated December 15, 1992.

Title
CICS for Windows NT Version 2.0 Installation
CICS for Windows NT Version 2.0 Customization
CICS for Windows NT Version 2.0 Operation
CICS for Windows NT Version 2.0 Intercommunication
CICS for Windows NT Version 2.0 Problem Determination
CICS for Windows NT Version 2.0 Messages and Codes
CICS for Windows NT Version 2.0 Application Programming
CICS Family: Inter-Product Communication
CICS Family: Client/Server Programming
CICS Family: API Structure

(TM) BookManager - trademark of IBM Corporation.

Part 5. Technical Information

5.1 Specified Operating Environment

5.1.1 Hardware Requirements:

CICS for Windows NT Version 2.0 will run on all Intel-based processors in which Windows NT 3.5 or higher, is running and that meet the requirements for additional memory and hard file capacity. CICS for Windows NT Version 2.0 requires a minimum of 3MB of additional storage, and 12MB of additional hardfile for installation.

5.1.2 Software Requirements

CICS for Windows NT Version 2.0 multi-user and CICS for Windows NT Version 2.0 single-user will require one of the following operating systems:

- Microsoft Windows NT Workstation 3.5.
- Microsoft Windows NT Server 3.5.

If APPC communications is needed, the following product is required, in addition to Windows NT:

- Microsoft SNA Server 2.1

For compilers and Software Development Kits refer to the following products:

- Microsoft Visual C++ for Windows NT 32-bit Edition V1.10 or V2.0.
- Microsoft WIN32 SDK
- Micro Focus (TM) Object COBOL V3.3 for Windows NT

(TM) Micro Focus - trademark of Micro Focus Ltd.

5.1.3 Compatibility

In general, applications written in either COBOL or C for other supported members of the CICS family, will be source-compatible with CICS for Windows NT Version 2.0, provided they use only the subset of the CICS Command Level API supported by CICS for Windows NT Version 2.0. BMS maps for other supported members of the CICS family will be source compatible, provided they use minimum BMS.

The CICS Macro level API will not be supported on CICS for Windows NT Version 2.0.

This product uses existing interfaces.

5.1.4 Performance Considerations

Performance data for CICS for Windows NT V2.0 will be made available on MKTTOOLS.

5.2 Installation

CICS for Windows NT Version 2.0 single-user or CICS for Windows NT Version 2.0 multi-user server will require Windows NT Version 3.5 or later to be installed. A function for unattended CID (Configuration, Installation, Distribution) is enabled in the product.

5.3 Packaging

CICS for Windows NT Version 2.0 single-user program package includes:

- One CD-ROM
- Four 3.5-inch (1.44MB) diskettes
- IBM Program License Agreement in multi-language booklet
- License Information
- Registration Card
- Proof of License for CICS for Windows NT Version 2.0 single-user
- Product Registration Number
- Documentation

CICS for Windows NT Version 2.0 multi-user program package includes:

- One CD-ROM
- Four 3.5-inch (1.44MB) diskettes
- IBM Program License Agreement in multi-language booklet
- License Information
- Registration Card
- Proof of License for CICS for Windows NT Version 2.0 multi-user
- Product Registration Number
- Documentation

The following documentation will be included in both the CICS for Windows NT Version 2.0 multi-user and CICS for Windows NT Version 2.0 single-user program packages:

Title	Order Number
CICS for Windows NT Version 2.0 Installation	GC33-1420
CICS for Windows NT Version 2.0 Customization	SC33-1421
CICS for Windows NT Version 2.0 Operation	SC33-1422
CICS for Windows NT Version 2.0 Intercommunication	SC33-1423
CICS for Windows NT Version 2.0 Problem Determination	SC33-1424
CICS for Windows NT Version 2.0 Reference Summary	SX33-6097
CICS for Windows NT Version 2.0 Application Programming	SC33-1425
CICS Family: Inter-Product Communication	SC33-0824-02
CICS Family: Client/Server Programming	SC33-1435

5.4 Security

The security and auditability features of CICS for Windows NT Version 2.0 are supplied by the CICS for Windows NT Version 2.0 sign-on program that implements userid and password control of user access to programs, data and other resources. Additionally, user exits are provided to enable a user to provide his own security procedures if required.

The security functions of CICS for Windows NT Version 2.0 do not depend on interfaces with any external program (including the Windows NT Operating System).

The CICS Clients user will be prompted for a valid userid and password if the CICS server program or transaction being called is secure. A secure program or transaction is one defined within CICS as requiring a userid and password known to that CICS server before it can be executed.

User management is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities.

5.4.1 Program Services

Program services will be available until January 27th, 1997.