



Licensed Program Specifications

CICS Transaction Server for VSE/ESA Release 1.1.1 Program Number 5648-054

IBM® CICS® Transaction Server for VSE/ESA™ Release 1.1.1 delivers the CICS Web Support that was announced with CICS TS for VSE/ESA R1 together with other functions previously only available on the z/OS® (OS/390®) platform.

CICS Web Support

CICS capability in the World Wide Web environment has been introduced with new function and a highly customizable interface.

HTTP requests can be sent from a Web browser to CICS TS for VSE/ESA. CICS processes the request and returns the results to the web browser. Transactions conducted on the Web can now benefit from the high level of throughput that CICS provides.

The CICS Web support allows customers with a secure private network to use the proven transaction processing qualities of CICS for transactions conducted over the Web. New and existing CICS applications can now take advantage of the richness of the user interface provided by Web browsers.

The CICS Web Support has been structured as a CICS domain, providing improved reliability and serviceability.

Addition of new EXEC CICS application programming interface commands for the manipulation of web entities allows the definition and management of HTML templates.

A Web browser is an HTTP client. The Web browser constructs an HTTP request, which is passed across the network to TCP/IP for VSE/ESA in the server. TCP/IP for VSE/ESA relays the request to the CICS Web Interface, which calls a CICS program to service the request. The output from the CICS program is sent back to the Web browser in an HTTP response.

The CICS Web Support can be used to allow Web browsers to use:

- existing CICS programs and the transaction processing services they provide, and
- newly-created CICS programs that exploit the facilities of HTTP and the hypertext markup language (HTML).

The HTTP request is subject to the limitations of the remote procedure call model of distributed computing because:

- it is not possible to coordinate changes to recoverable resources in successive requests to the same CICS system, and
- committing changes to recoverable resources is under the control of the CICS system, not the web browser.

The called program executes under a CICS transaction that has no principal facility. This means that certain application programming interface commands cannot be used. These include:

- Terminal control commands that refer to the principal facility
- Options of EXEC CICS ASSIGN that return terminal attributes
- BMS commands
- Signon and signoff commands.

In addition the CICS Web Support, in conjunction with the 3270 bridge, can be used to provide Web browser access to existing 3270-based transactions without requiring any application changes.

Bridging to CICS 3270 Applications

The 3270 bridge also provides a means of using 3270-based CICS transactions other than from a terminal.

The bridging facility allows existing applications to be integrated into new applications, using a BMS applications data structure, or the non-BMS datastream, that the application produces without

requiring changes to the existing applications. This supports pseudo-conversational transactions, conversational transactions, transactions with multiple units-of-work (UOWs), and started transactions.

The business logic can be accessed, without the need to separate it from the presentation logic, by intercepting the terminal application programming commands issued.

For those applications without the original source statements of their BMS maps, a tool is provided to regenerate the macros from the runtime object mapset load module.

CICS starts a bridge transaction to manage access to the 3270-based transaction. CICS understands the transport mechanism through which the request to run the 3270 application was received, whether it is the Web, or one determined by the customer.

The bridge transaction specifies a user-replaceable module that is a message-driven program responsible for supplying details of the 3270 transaction to be run and which context to use. It is subsequently invoked for each terminal/BMS request issued by that transaction.

The data is then either received from, or passed to, the transport mechanism for shipping to the end-user applications, or used for integration with new applications in the same CICS region.

In addition to any application-specific code written by the customer, sample generic code is supplied using temporary storage or transient data as the transport mechanism. This is also adapted for use with MQSeries®.

The bridge is a fundamental part of one of the new CICS Web functions.

Other enhancements

Temporary storage has been enhanced to support queue names of 16 characters.

A transaction-based CEDF has been added which has the name CEDX. This can be used to monitor and debug non-terminal transactions. The transaction you specify for debugging can be:

- initiated without an associated terminal. For example, by an EXEC CICS START command, or by a transient data queue trigger level, or
- initiated at a terminal, which can be either the EDF terminal or a different terminal.

New product packaging

CICS Transaction Server for VSE/ESA provides a new version of CICS, CICS/VSE® 2.3, and REXX for CICS in a single licensed product, with one program number. The documentation supplied with the product (although described as Release 1) is an updated, maintained version with several new publications added to support the new functions.

Included in the CICS Transaction Server for VSE/ESA are the following components:

CICS/VSE Version 2 Release 3

During the transition to CICS Transaction Server for VSE/ESA R1.1.1, customers may want to have both CICS TS and CICS/VSE 2.3 active at the same time. To allow for this CICS/VSE 2.3 is included at no additional charge in the CICS Transaction Server package. CICS TS and CICS/VSE Version 2 Release 3 may run independently, or be connected by MRO.

REXX for CICS

REXX for CICS Transaction Server for VSE/ESA provides a native REXX-based application development, customization, prototyping and procedures language environment for REXX/CICS, along with associated runtime facilities.

Report Controller Facility (RCF)

Both the Report Controller Facility for CICS/VSE 2.3 and the Report Controller Facility for CICS Transaction Server for VSE/ESA are included in the product package at no additional charge.

RCF provides distributed control over printing and printer devices. It is designed so that anyone, with data processing skill and with no previous knowledge of CICS can control the printing of reports. By reports, we mean spool files managed by RCF via VSE/POWER.

End-user departments, operations staff, and programmers can use RCF in different ways to manage report production. Control over when,

where, and how reports are printed, and by which printers, can be given to the people concerned with those reports and printers. Printers may be owned by CICS, or by VSE/POWER.

RCF provides:

- special options of the EXEC CICS SPOOL commands, for writing programs to create reports,
- an on-line tool for managing reports created either by using these commands, or by batch programs, and
- an interface that transfers reports to CICS printers.

CICS Distributed Data Management (CICS/DDM)

CICS Distributed Data Management (VSE) (CICS/DDM (VSE), program number 5686-018) is now included as a no-charge optional feature of CICS Transaction Server for VSE/ESA R1.1.1.

Softcopy versions of the manuals

A set of the unlicensed publications for CICS Transaction Server for VSE/ESA R1 in softcopy is also shipped on the VSE Collection on CD-ROM (SK2T-0060) and the VSE Collection on DVD (SK3T-8348), and on the CICS Transaction Processing and Data Collection Kit CD-ROM (SK2T-0730) as both softcopy books and PDF files.

A separate product kit on CD-ROM containing both the licensed manuals for CICS Transaction Server for VSE/ESA R1 only, in softcopy and PDF format, and can be ordered for a fee. However, the licensed book Supplementary Data Areas is only available in hardcopy format for a fee.

Specified Operating Environment

CICS Transaction Server for VSE/ESA R1.1.1 will run with all currently-supported versions of VSE.

Machine Requirements

The software required by CICS TS for VSE/ESA R1.1.1 is supplied as part of the VSE system package. CICS TS for VSE/ESA R1.1.1 runs on processors capable of supporting VSE in ESA mode or 64-bit mode. The 64-bit mode is available with z/VSE™ 4.1 and later. These processors include IBM Enterprise Systems Architecture/390® (ESA/390) and z/Architecture™ processors that meet the requirements of the host operating

system, CICS access methods, and user application programs. 370 and XA processors are not supported.

To use storage protection facilities, you need an ESA/390 or z/Architecture processor that supports the subsystem storage protection facility, and meets the requirements of the host operating system, CICS, the access methods, and your own application programs. For a list of hardware supported, refer to the *Planning* manual that has been made available with the Version and Release of the VSE operating system you are using.

Guidance information on environmental requirements is contained in the *CICS TS for VSE/ESA Release Guide* (GC33-1645).

Licensed Program Materials Availability

Restricted materials – Yes. This licensed program is available with source licensed-program materials for some modules designated as “RESTRICTED MATERIALS OF IBM.” In addition, some modules are available without source licensed-program materials.

These modules are available in object code. The remaining modules are available with source licensed-program materials. Source licensed-program materials are not available for some modules.

Source code for management modules is in assembler language. Sample program source code is in COBOL, C, PL/I, and assembler language.

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