

IBM Application Time Facility for CICS



# User's Guide

*Version 2 Release 8 Modification 7*



IBM Application Time Facility for CICS



# User's Guide

*Version 2 Release 8 Modification 7*

**Note!**

Before using this information and the product it supports, be sure to read the general information under "Notices" on page 55.

**Third Edition (May 2007)**

This edition applies to Version 2 Release 8 Mod 7 of IBM Application Time Facility for CICS (program number 5697-N42) and to all subsequent releases and modifications until otherwise indicated in new editions.

Order publications through your IBM representative or the IBM branch office serving your locality. Publications are not stocked at the address given below.

This publication (and possibly updates) is available on the Web at <http://www.ibm.com/software/awdtools/tictoc/library/> or the IBM Publications site at <http://www.elink.ibm.com/publications/servlet/pbi.wss>.

A form for readers' comments appears at the back of this publication. If the form has been removed, address your comments to:

IBM Corporation  
H150/090  
555 Bailey Avenue  
San Jose, CA  
95141-1003  
U.S.A.

or fax your comments from within the U.S., to: 800-426-7773 or, from outside the U.S., to: 408-463-2629.

When you send information to IBM, you grant IBM a nonexclusive right to use or distribute the information in any way it believes appropriate without incurring any obligation to you.

© Copyright International Business Machines Corporation 1992, 2007. All rights reserved.

US Government Users Restricted Rights – Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

---

# Contents

About this document . . . . .	v
-------------------------------	---

---

## Part 1. Concepts and facilities . . . . . 1

### Chapter 1. An overview of ATF/CICS . . . 3

CICS resources . . . . .	3
Virtual dates and virtual clocks . . . . .	4
Independent Time of day Clocks (ITC). . . . .	4
The Virtual Clock Data set (VCD) . . . . .	4
Specifying CICS resource names in virtual clock definitions . . . . .	4

---

## Part 2. The online interface . . . . . 7

### Chapter 2. Overview . . . . . 9

### Chapter 3. Usage guidelines . . . . . 11

Online interface screen format . . . . .	11
Commands and PF keys . . . . .	11

### Chapter 4. Accessing the online interface . . . . . 13

Browsing virtual clock definitions . . . . .	13
Editing virtual clock definitions . . . . .	15
Adding standard virtual clock definitions . . . . .	16
The ADD command . . . . .	18
Adding ITC definitions . . . . .	18
The ADDC command . . . . .	20
Updating standard virtual clock definitions. . . . .	20
Updating ITC definitions . . . . .	22
Deleting standard virtual clock definitions . . . . .	23
Deleting ITC definitions . . . . .	24
Changing online user options . . . . .	25
Date formats . . . . .	25
Confirmation of deletion . . . . .	25

---

## Part 3. The command interface . . . . . 27

### Chapter 5. Overview . . . . . 29

### Chapter 6. Command syntax rules . . . . . 31

### Chapter 7. Operation control commands . . . . . 33

START command . . . . .	33
STOP command . . . . .	33
SHUT command. . . . .	33
LOAD command . . . . .	34
RELOAD command . . . . .	34
RESTART command . . . . .	35
HELP command . . . . .	35
FREE command . . . . .	36
TRACE command . . . . .	36

### Chapter 8. Virtual clock definition commands . . . . . 37

ADD, UPDATE and DELETE commands . . . . .	37
---	----

### Chapter 9. Command examples . . . . . 41

---

## Part 4. Appendixes. . . . . 43

### Appendix. Messages and codes . . . . . 45

### Notices . . . . . 55

Trademarks . . . . .	56
----------------------	----

### Index . . . . . 57



---

## About this document

This document is intended for people who use Application Time Facility for CICS® (which, from here on, is now called “ATF/CICS”). For information about installing and customizing ATF/CICS, see the *Application Time Facility for CICS Installation and Customization Guide* and the *Application Time Facility for CICS Program Directory*.

Before now, this product was known as “TICTOC/CICS”, and the product and this document retain a few references to TICTOC. These will be replaced in the next release.

This document is divided into three parts:

- Part 1, “Concepts and facilities,” on page 1 provides an introduction to ATF/CICS, describing its concepts and facilities.
- Part 2, “The online interface,” on page 7 describes how to use the ATF/CICS online interface.
- Part 3, “The command interface,” on page 27 describes how to use the ATF/CICS command interface.

At the end of this document the appendix “Messages and codes,” on page 45 lists the messages and codes that ATF/CICS issues.



---

## **Part 1. Concepts and facilities**



---

## Chapter 1. An overview of ATF/CICS

ATF/CICS is the unique software product for IBM CICS that lets different terminals, transactions, users or any combination of these CICS resources, run under different “virtual” (fictitious) dates and times.

ATF/CICS enables testing across sensitive time lines (such as end-of-period, February 29, midnight, and all other time boundaries) without requiring every transaction running concurrently in the same CICS region to receive the virtual date. This allows you to perform date simulation testing without dedicating separate CICS regions solely for this purpose.

The virtual date and time are returned to a transaction whose associated CICS resources (terminal, transaction and user IDs) are defined to ATF/CICS.

The virtual date and time values are placed by ATF/CICS into the EIBDATE and EIBTIME fields of the transaction’s EIB control block. The EIBDATE and EIBTIME fields are set by ATF/CICS at the start of the transaction’s execution and whenever the transaction explicitly requests the current date and time by issuing the CICS Command Level ASKTIME or ASKTIME ABSTIME commands.

In addition, by using ATF/CICS in conjunction with ATF, virtual dates and times are also returned to eligible transactions that issue z/OS® TIME LINKAGE=SVC and LINKAGE=SYSTEM macro calls, z/OS STCKSYNC macro calls and ATF STCK Replacement User SVC calls.

This comprehensive support provides virtual timing for transactions requesting date and time functions provided by the most popular application languages and products, including Assembler, COBOL, PL1, C, C++, Language Environment®, DB2®, NATURAL, and others.

ATF/CICS can safely be used for date simulation processing even in production environments, since only those CICS resources explicitly defined to ATF/CICS are affected. This makes ATF/CICS the perfect solution for simulating midnight rollover, period end (end of day, month, year, and so on) and time zone transaction processing.

ATF/CICS has both a convenient full screen menu driven online and a single line command interface to easily define which terminals, transactions and users are eligible to run under a virtual date. ATF/CICS requires no changes to your application programs whatsoever.

---

### CICS resources

In this document, the term “CICS resources” refers to any combination of terminal, transaction and user names as defined to CICS. Terminal, transaction and user names are also referred to as TERMIDs, TRANSIDs and USERIDs respectively.

### Virtual dates and virtual clocks

When a transaction that is eligible for ATF/CICS timing services asks for the date and time by issuing the CICS Command Level ASKTIME command or any other supported date or time request, it gets a “virtual date” based on a ATF/CICS “virtual clock” definition, instead of the real date and time settings of the operating system’s clock. In this document, the following terms are used:

- *Virtual date* refers to the date, time or both values when set by ATF/CICS and returned to the calling application.
- *Virtual clock* refers to an ATF/CICS definition consisting of CICS resource names and the virtual date to be used when a transaction, whose resource names match those of the definition, issues a CICS ASKTIME command or other supported current date/time request.
- A transaction that is eligible for ATF/CICS timing services is running *using* or *under* a virtual date. These expressions are synonymous.

When an eligible transaction begins execution, ATF/CICS starts running the virtual clock. The clock begins at the date and time specified in the virtual clock definition. The clock continues to run *for the life span of the transaction*, that is, until the transaction terminates. When a new eligible transaction starts, the clock is reset and begins running again from the date and time specified in the virtual clock definition.

---

### Independent Time of day Clocks (ITC)

You may need to perform date simulation that requires a continuous, non-resetting virtual clock running over the life span of more than one transaction. Such a clock may even be active for the duration of the CICS region’s execution.

For this purpose, there is a special type of virtual clock definition known as an Independent Time of day Clock (ITC). Each ITC definition consists of a uniquely referenced name and a virtual date that is the clock’s starting point. No CICS resource names are specified in an ITC definition. The ITC’s clock begins running once it is defined, provided that ATF/CICS has been started.

To use an ITC, define a standard virtual clock definition with the date field containing the name of the ITC to be used instead of a virtual date value.

ITCs are typically used to execute pseudo-conversational transactions under virtual timing.

---

### The Virtual Clock Data set (VCD)

Virtual clock and ITC definitions can optionally be retained in the Virtual Clock Data Set (VCD), which is a VSAM KSDS file. Definitions that are kept in the VCD remain available for future executions of the CICS region.

---

### Specifying CICS resource names in virtual clock definitions

CICS resource names defined in virtual clock definitions can include wildcard and generic pattern characters. A question mark (“?”) matches any single character in the corresponding position. An asterisk (“\*”) matches zero or more characters from the location of the asterisk to the end of the resource name.

## Specifying CICS resource names in virtual clock definitions

For example, a USERID specified as "ACCT\*" in a virtual clock definition matches any user name beginning with "ACCT". A USERID specified as A??T\* matches any user name beginning with an "A" in the first position and a "T" in the fourth position.

## Concepts and facilities

---

## **Part 2. The online interface**



---

## Chapter 2. Overview

For convenience and flexibility, ATF/CICS provides two ways for you to add, update, and delete virtual clock definitions: a full screen menu driven online interface and a single line command interface. This section describes the online interface. Part III discusses the command interface.

Both interfaces are activated by invoking ATF/CICS transaction TICT. In this document, TICT is the assumed transaction ID defined for invoking ATF/CICS. Check with your CICS system administrator to verify whether TICT or another transaction ID was assigned for invoking ATF/CICS.

The online interface displays all currently defined virtual clock definitions and easily lets you add new definitions or select existing definitions to be updated or deleted.

## The online interface

---

## Chapter 3. Usage guidelines

---

### Online interface screen format

The ATF/CICS online interface screens use a consistent format. The first three lines contain screen header information, as shown below:

```
PRODUCT ----- TITLE ----- SHORT MESSAGE  
COMMAND/OPTION ==> SCROLL ==>  
LONG MESSAGE
```

#### PRODUCT

All screens display the product name, ATF/CICS, in the upper left hand corner for easy identification.

**TITLE** Identifies the screen being displayed and a general description of the screen's function.

#### SHORT MESSAGE

Shows one of the following:

- Informational message or an error message accompanied by an audible alarm.
- Current row position (if not temporarily overlaid by a message) on scrollable displays.

#### COMMAND/OPTION

Provides a field for entering a command or menu option.

#### SCROLL

Available on scrollable displays only. Contains the default scroll amount to use with the UP and DOWN commands or their PF key equivalents. The scroll amount may be changed by overtyping the scroll field.

#### LONG MESSAGE

Displays a message when the HELP command is entered. On some screens, this line may contain column headings or other data that is temporarily overlaid by the long message text.

---

## Commands and PF keys

The following commands are available in the online interface to perform commonly used functions. Commands are entered by typing the command in a screen's COMMAND/OPTION field and then pressing the ENTER key.

Some commands have PF key equivalents. By pressing PF keys instead of typing commands, you save time and reduce typing errors.

#### HELP command

Use the HELP command to display additional long message information about the currently displayed short message shown in the screen's upper right hand corner.

The HELP command's PF key equivalent is PF key 1 or 13.

#### END command

The function of the END command is to leave the currently displayed screen and return to the previous higher level screen. When the END

## Commands and PF keys

command is entered from data input or function prompt screens, the data is processed by ATF/CICS. When the END command is entered from the ATF/CICS Primary Option Menu, the online interface is terminated.

The END command's PF key equivalent is PF key 3 or 15.

### **CANCEL command**

The CANCEL command is used to leave the currently displayed screen and return to the previous higher level screen. When the CANCEL command is entered from data input or function prompt screens, no data is processed by ATF/CICS.

The CANCEL command may be abbreviated as CAN.

### **RETURN command**

Use the RETURN command to terminate the ATF/CICS online interface and return to CICS. When the RETURN command is entered from data input or function prompt screens, no data is processed by ATF/CICS.

The RETURN command's PF key equivalent is PF key 4 or 16.

### **UP and DOWN Scroll Commands**

The UP and DOWN scroll commands can be used whenever a scrollable data screen is displayed. When scrolling is available, a scroll amount field is displayed in the screen's upper right hand corner, on the second line.

The UP command's PF key equivalent is PF key 7 or 19. The DOWN command's PF key equivalent is PF key 8 or 20.

The number of lines scrolled when you enter a scroll command or press a scroll PF key is determined by the value in the screen's scroll amount field. The scroll amount field may be modified whenever a scrollable data screen is displayed. Valid scroll amounts are:

**CSR** To scroll to the current cursor position.

**PAGE** To scroll by one full screen.

**HALF** To scroll by half a screen.

**M** To scroll to the top or bottom of data.

**1-9999** To scroll by a specified number of lines.

---

## Chapter 4. Accessing the online interface

To invoke the ATF/CICS online interface, logon to CICS and, from a cleared screen, type TICT and press ENTER. The ATF/CICS Primary Option Menu is displayed.

```
ATF/CICS ----- TICTOC PRIMARY OPTION MENU ----- ATF IS ACTIVE
OPTION ===>

Specify one of the following options:

B BROWSE      - Browse virtual clock definitions
E EDIT        - Edit and update virtual clock definitions
O OPTIONS     - Update your online session execution options
X EXIT        - Terminate and exit this ATF/CICS user session

      TT          TT
      TT          TT
TTTTTTTTTT  II  CCCCCC  TTTTTTTTTT  0000000  CCCCCC
      TT  II  CC  CC  TT  TT  00  00  CC  CC
      TT TT  II  CC  CC  TT TT  00  00  CC  CC
      TTT  II  CCCCC  TTT  000000  CCCCC

(C) COPYRIGHT IBM CORPORATION 2006 ALL RIGHTS RESERVED      VERSION 2.8.700
```

The upper right hand corner of the screen displays a short message, indicating if ATF/CICS is currently active. ATF/CICS does *not* have to be active to use the online interface or to edit virtual clock definitions.

The following options are available from the ATF/CICS Primary Option Menu:

### **B BROWSE**

Displays a scrollable list of existing virtual clock definitions without being able to change them.

### **E EDIT**

Displays a scrollable list of existing virtual clock definitions and lets you add, update and delete definitions.

### **O OPTIONS**

Changes your preference for whether or not you are to be prompted with a confirmation screen before deleting a virtual clock definition.

### **X EXIT**

Exits the ATF/CICS online interface and returns to CICS.

A detailed description of the BROWSE, EDIT, and OPTIONS menu options follows.

---

## Browsing virtual clock definitions

When you select option **B** from the ATF/CICS Primary Option Menu, ATF/CICS displays a list of all existing virtual clock definitions. Unlike option **E** (Edit), this list can only be browsed.

The Browse Virtual Clock Definitions screen is shown below:

## Browsing virtual clock definitions

```

ATF/CICS ----- BROWSE VIRTUAL CLOCK DEFINITIONS -- ROW 000001 OF 000046
COMMAND ==>
                                SCROLL==> CSR
CLOCK/TERM TRANSID  USERID  DATE          TIME STATUS  SETTING/LAST UPDATED BY
>CHICAGO              *          -01:00 ENA KEEP 96/01/06 10:35:18
>DENVER               *          -02:00 DIS KEEP 96/01/04 13:19 APLSY005
>L.A.                 *          -03:00 ENA KEEP 96/01/06 08:35:18
>LONDON              *          +05:00 ENA KEEP 96/01/06 16:35:18
>MIDNITE              +1          00:00 ENA KEEP 96/01/07 00:48:26
>2000                 2000/01/01 *          ENA KEEP 00/01/01 11:35:18
-NOTERM- INV5      INV?A* >2000          ENA      96/01/04 16:56 INVSA502
-NOTERM- INV6      INV?A* >2000          ENA      96/01/04 13:04 INVSA159
-NOTERM- INV8      INV?A* >2000          ENA      96/01/05 09:22 INVSA502
D00A      HRES      DBAHR001 >2000          ENA KEEP 96/01/05 17:09 DBAHR001
L324      FI05      *          >LONDON          ENA      96/01/06 10:29 FINAC310
L348      *          APLSY003 1999/12/31 23:59 ENA KEEP 96/01/05 16:07 APLSY003
L361      ORD?      ORDUB4* >MIDNITE       ENA KEEP 96/01/04 15:51 APLDP147
L380      FI*       FINACS* 1994/04/01 *          ENA      96/01/04 14:31 FINACS82
L47C      C1C3A001 A*       >2000          ENA KEEP 96/01/06 10:29 APLAC114
L5A*      AC*       A*       >2000          ENA KEEP 96/01/06 10:29 ACCFU375
P001      RPA5      APLDP225 -1          09:00 ENA      96/01/05 12:17 APLDP225
P001      RPAC      APLDP176 -1          09:00 DIS      96/01/05 12:40 APLDP176
R7A3      *         *         >2000          ENA KEEP 96/01/04 15:36 UVNDP001
R90C      D?DB     APLDP170 >L.A.         DIS KEEP 96/01/05 11:54 APLDP170
S195      *         APLAC94* >2000          ENA KEEP 96/01/06 08:43 APLSY017

```

Each virtual clock definition displays the following fields:

### CLOCK/TERM

For ITC definitions, this column displays the ITC's name. ITC names are 1 to 8 characters long, with ">" always specified as the first character.

For standard virtual clock definitions, this column displays the terminal ID associated with the virtual clock definition. The word "NOTERM" is displayed if an entry is associated with a non terminal oriented transaction.

### TRANSID

The transaction ID associated with the virtual clock definition. This column is not applicable to ITC definitions.

### USERID

The user ID associated with the virtual clock definition. This column is not applicable to ITC definitions.

**DATE** The virtual date that matching transactions are to run under. This can be specified as an absolute date (for example, 1999/12/31), a relative number of days from the current date (for example, +1, -365), an asterisk ("\*") for the current date, or the name of an ITC (for example, >MIDNITE).

Virtual clock definitions that are associated with non terminal transactions (TERM=NOTERM) can only specify the name of an ITC as the date value or an asterisk ("\*") for the real date. Specifying a date or relative number of days value is not allowed.

For ITC definitions, the date and time begin moving forward immediately when the ITC definition is saved with a status of ENABLE and ATF/CICS is currently active.

**TIME** The virtual time that matching transactions are to run under. This can be specified as an absolute time (for example, 17:30), a relative number of hours and minutes from the current time (for example, +01:00, -23:59), or an asterisk ("\*") for the current time.

Virtual clock definitions that are associated with non terminal transactions (TERM=NOTERM) can only specify the time value as an asterisk ("\*") for the real time. Specifying an absolute or relative time value is not allowed.

## Browsing virtual clock definitions

For ITC definitions, the date and time begin moving forward immediately when the ITC definition is saved with a status of ENABLE and ATF/CICS is currently active.

### STATUS

Indicates whether the virtual clock definition is currently enabled ("ENA") or disabled ("DIS") for use and whether the definition is retained ("KEEP") in the Virtual Clock Data Set. Only enabled entries have an effect on executing transactions.

### SETTING/LAST UPDATED BY

For enabled ITC definitions, this column displays the clock's current time. If you press the ENTER key, the time displayed is updated. For standard virtual clock definitions and disabled ITC definitions, this column displays the real date and time when the definition was created or last updated as well as the USERID who created or updated the entry.

In the Browse Virtual Clock Definitions screen example, some entries have generic TERMIDs, TRANSIDs and USERIDs (for example, USERID "INV?A\*"), while others have complete names (for example, TERMID "R90C").

Entries are sequenced and displayed in TERMID, TRANSID and USERID order, with more specific entries sequenced before generic ones. For example, an entry for TERMID 'ABCD' precedes an entry for TERMID 'ABC\*' that precedes an entry for TERMID 'A\*'. This is the same sequence used by ATF/CICS when scanning entries to determine an executing transaction's eligibility for running under a virtual date.

The list can be scrolled up or down with the UP and DOWN commands or their PF key equivalents: PF key 7 or 19 and PF key 8 or 20.

To leave the list and return to the ATF/CICS Primary Option Menu screen, use the END command or its PF key equivalent, PF key 3 or 15.

---

## Editing virtual clock definitions

When you select option E from the ATF/CICS Primary Option Menu, ATF/CICS displays a list of all existing virtual clock definitions. Unlike option B (BROWSE), new entries can be added from this list and existing entries can be updated or deleted.

The Edit Virtual Clock Definitions screen is shown here:

## Editing virtual clock definitions

```
ATF/CICS ----- EDIT VIRTUAL CLOCK DEFINITIONS --- ROW 000001 OF 000046
COMMAND ==>                                     SCROLL ==> CSR
CLOCK/TERM TRANSID  USERID  DATE          TIME  STATUS  SETTING/LAST UPDATED BY
>CHICAGO              *          *          -01:00  ENA  KEEP  96/01/06 10:35:18
>DENVER               *          *          -02:00  DIS  KEEP  96/01/04 13:19 APLSY005
>L.A.                 *          *          -03:00  ENA  KEEP  96/01/06 08:35:18
>LONDON              *          *          +05:00  ENA  KEEP  96/01/06 16:35:18
>MIDNITE             +1          *          00:00  ENA  KEEP  96/01/07 00:48:26
>2000                2000/01/01 *          *          ENA  KEEP  00/01/01 11:35:18
-NOTERM- INV5      INV?A*  >2000          *          ENA  96/01/04 16:56 INVSA502
-NOTERM- INV6      INV?A*  >2000          *          ENA  96/01/04 13:04 INVSA159
-NOTERM- INV8      INV?A*  >2000          *          ENA  96/01/05 09:22 INVSA502
D00A      HRES      DBAHR001 >2000          *          ENA  KEEP  96/01/05 17:09 DBAHR001
L324      FI05      *          >LONDON        *          ENA  96/01/06 10:29 FINAC310
L348      *          APLSY003 1999/12/31 23:59  ENA  KEEP  96/01/05 16:07 APLSY003
L361      ORD?      ORDUB4*  >MIDNITE      *          ENA  KEEP  96/01/04 15:51 APLDP147
L380      FI*       FINACS*  1994/04/01 *          ENA  96/01/04 14:31 FINACS82
L47C      C1C3A001 A*       >2000          *          ENA  KEEP  96/01/06 10:29 APLAC114
L5A*      AC*       A*       >2000          *          ENA  KEEP  96/01/06 10:29 ACCFU375
P001      RPA5      APLDP225 -1          09:00  ENA  96/01/05 12:17 APLDP225
P001      RPAC      APLDP176 -1          09:00  DIS  96/01/05 12:40 APLDP176
R7A3      *          *          >2000          *          ENA  KEEP  96/01/04 15:36 UVNDP001
R90C      D?DB      APLDP170 >L.A.        *          DIS  KEEP  96/01/05 11:54 APLDP170
S195      *          APLAC94* >2000          *          ENA  KEEP  96/01/06 08:43 APLSY017
```

The Edit Virtual Clock Definitions screen is almost identical to the Browse Virtual Clock Definitions screen in appearance except:

- The title is different on top of the screen.
- The ability to enter the line commands **A**, **U** and **D** alongside each virtual clock definition to add, update and delete the entries, respectively.

You can also use the **ADD** command on the screen's command line and press **ENTER** to add a standard virtual clock definition, or use the **ADDC** command to add an ITC definition.

The list can be scrolled up or down with the **UP** and **DOWN** commands or their PF key equivalents: PF key 7 or 19 and PF key 8 or 20.

To leave the list and return to the ATF/CICS Primary Option Menu screen, use the **END** command or its PF key equivalent, PF key 3 or 15.

## Adding standard virtual clock definitions

To add a new virtual clock definition modeled on an existing definition, type the **A** line command next to the desired entry, as in the following example:

## Adding standard virtual clock definitions

```

ATF/CICS ----- EDIT VIRTUAL CLOCK DEFINITIONS --- ROW 000001 OF 000046
COMMAND ==>
CLOCK/TERM TRANSID USERID DATE TIME STATUS SETTING/LAST UPDATED BY
>CHICAGO * -01:00 ENA KEEP 96/01/06 10:35:18
>DENVER * -02:00 DIS KEEP 96/01/04 13:19 APLSY005
>L.A. * -03:00 ENA KEEP 96/01/06 08:35:18
>LONDON * +05:00 ENA KEEP 96/01/06 16:35:18
>MIDNITE +1 00:00 ENA KEEP 96/01/07 00:48:26
>2000 2000/01/01 * ENA KEEP 00/01/01 11:35:18
-NOTERM- INV5 INV?A* >2000 ENA 96/01/04 16:56 INVSA502
-NOTERM- INV6 INV?A* >2000 ENA 96/01/04 13:04 INVSA159
-NOTERM- INV8 INV?A* >2000 ENA 96/01/05 09:22 INVSA502
D00A HRES DBAHR001 >2000 ENA KEEP 96/01/05 17:09 DBAHR001
L324 FI05 * >LONDON ENA 96/01/06 10:29 FINAC310
A L348 * APLSY003 1999/12/31 23:59 ENA KEEP 96/01/05 16:07 APLSY003
L361 ORD? ORDUB4* >MIDNITE ENA KEEP 96/01/04 15:51 APLDP147
L380 FI* FINACS* 1994/04/01 * ENA 96/01/04 14:31 FINACS82
L47C C1C3A001 A* >2000 ENA KEEP 96/01/06 10:29 APLAC114
L5A* AC* A* >2000 ENA KEEP 96/01/06 10:29 ACCFU375
P001 RPA5 APLDP225 -1 09:00 ENA 96/01/05 12:17 APLDP225
P001 RPAC APLDP176 -1 09:00 DIS 96/01/05 12:40 APLDP176
R7A3 * * >2000 ENA KEEP 96/01/04 15:36 UVNDP001
R90C D?DB APLDP170 >L.A. DIS KEEP 96/01/05 11:54 APLDP170
S195 * APLAC94* >2000 ENA KEEP 96/01/06 08:43 APLSY017

```

When you press ENTER, the following Virtual Clock Addition screen is displayed:

```

ATF/CICS ----- VIRTUAL CLOCK ADDITION -----
COMMAND ==>

Termid ==> L348 Terminal name or generic pattern
Transid ==> * Transaction name or generic pattern
Userid ==> APLSY003 User name or generic pattern
Date ==> 1999/12/31 Start date in YYYY/MM/DD format,
a number from -9999 to +9999 days,
an '*' for the actual current date
or an Independent TOD Clock (ITC) name

Time ==> 23:59 Start time in HH:MM format,
a number from -23:59 to +23:59 hours
or '*' for the actual current time

Status ==> ENABLE Specify ENABLE or DISABLE
Keep? ==> YES Save this entry for future
CICS startups? (YES or NO)

Press the END key to add the virtual clock definition.

Use the CANCEL command to cancel the request.

```

As you can see, the field values displayed are copied from the entry where the **A** line command was entered.

If you want ATF/CICS to fill in the **TERMID** and **USERID** fields with your current **TERMID** and **USERID**, blank out these fields and press the **ENTER** key.

You can change the field values as required. To save the changes and add the new definition to the virtual clock list, use the **END** command or its PF key equivalent, PF key 3 or 15. The new entry is added to the list in the proper order. To cancel the add request, key in the **CANCEL** command and press the **ENTER** key.

Both the **END** and **CANCEL** commands return you to the Edit Virtual Clock Definitions screen.

## The ADD command

You can type the ADD command to add a new virtual clock definition when no other virtual clock definitions have previously been defined, or to add a definition without modeling it on an existing definition. An example of this is shown below:

```
ATF/CICS ----- EDIT VIRTUAL CLOCK DEFINITIONS -----  
COMMAND ==> ADD                                     SCROLL ==> CSR  
CLOCK/TERM TRANSID  USERID  DATE          TIME  STATUS  SETTING/LAST UPDATED BY  
*****  
***** BOTTOM OF DATA *****
```

When you press ENTER, the Virtual Clock Addition screen is displayed with all blank fields:

```
ATF/CICS ----- VIRTUAL CLOCK ADDITION -----  
COMMAND ==>  
  
Termid  ==>      Terminal name or generic pattern  
Transid ==>      Transaction name or generic pattern  
Userid  ==>      User name or generic pattern  
Date    ==>      Start date in YYYY/MM/DD format,  
                  a number from -9999 to +9999 days,  
                  an '*' for the actual current date  
                  or an Independent TOD Clock (ITC) name  
  
Time    ==>      Start time in HH:MM format,  
                  a number from -23:59 to +23:59 hours  
                  or '*' for the actual current time  
  
Status  ==>      Specify ENABLE or DISABLE  
Keep?   ==>      Save this entry for future  
                  CICS startups? (YES or NO)
```

Press the END key to add the virtual clock definition.  
Use the CANCEL command to cancel the request.

If you desire ATF/CICS to fill in the TERMID and USERID fields with your current TERMID and USERID, leave these fields blank and press the ENTER key.

You can change the field values as required. To save the changes and add the new definition to the virtual clock list, use the END command or its PF key equivalent, PF key 3 or 15. The new entry is added to the list in the proper order. To cancel the add request, key in the CANCEL command and press the ENTER key.

Both the END and CANCEL commands return you to the Edit Virtual Clock Definitions screen.

## Adding ITC definitions

You can type the A line command next to the desired entry to add a new ITC definition modeled on an existing definition. This is shown in the following example:

```

ATF/CICS ----- EDIT VIRTUAL CLOCK DEFINITIONS --- ROW 000001 OF 000046
COMMAND ==>                                     SCROLL ==> CSR
CLOCK/TERM TRANSID  USERID  DATE      TIME  STATUS  SETTING/LAST UPDATED BY
>CHICAGO              *          *      -01:00 ENA KEEP 96/01/06 10:35:18
>DENVER                *          *      -02:00 DIS KEEP 96/01/04 13:19 APLSY005
>L.A.                  *          *      -03:00 ENA KEEP 96/01/06 08:35:18
A >LONDON              *          *      +05:00 ENA KEEP 96/01/06 16:35:18
>MIDNITE              +1          *      00:00 ENA KEEP 96/01/07 00:48:26
>2000                 2000/01/01 *      ENA KEEP 00/01/01 11:35:18
-NOTERM- INV5         INV?A*    >2000      ENA      96/01/04 16:56 INVSA502
-NOTERM- INV6         INV?A*    >2000      ENA      96/01/04 13:04 INVSA159
-NOTERM- INV8         INV?A*    >2000      ENA      96/01/05 09:22 INVSA502
D00A      HRES        DBAHR001 >2000      ENA KEEP 96/01/05 17:09 DBAHR001
L324      FI05        *          >LONDON    ENA      96/01/06 10:29 FINAC310
L348      *          APLSY003 1999/12/31 23:59 ENA KEEP 96/01/05 16:07 APLSY003
L361      ORD?        ORDUB4*   >MIDNITE   ENA KEEP 96/01/04 15:51 APLDP147
L380      FI*        FINACS*   1994/04/01 *      ENA      96/01/04 14:31 FINACS82
L47C      C1C3A001 A*        >2000      ENA KEEP 96/01/06 10:29 APLAC114
L5A*      AC*          A*        >2000      ENA KEEP 96/01/06 10:29 ACCFU375
P001      RPA5        APLDP225 -1          09:00 ENA      96/01/05 12:17 APLDP225
P001      RPAC        APLDP176 -1          09:00 DIS    96/01/05 12:40 APLDP176
R7A3      *          *          >2000      ENA KEEP 96/01/04 15:36 UVNDP001
R90C      D?DB        APLDP170 >L.A.      DIS KEEP 96/01/05 11:54 APLDP170
S195      *          APLAC94* >2000      ENA KEEP 96/01/06 08:43 APLSY017

```

When you press ENTER, the Independent TOD Clock Addition screen is displayed:

```

ATF/CICS ----- INDEPENDENT TOD CLOCK ADDITION -----
COMMAND ==>

Clock   ==> >LONDON      Independent TOD Clock (ITC) name
Date    ==> *           Start date in YYYY/MM/DD format,
                               a number from -9999 to +9999 days
                               or '*' for the actual current date
Time     ==> +05:00     Start time in HH:MM format,
                               a number from -23:59 to +23:59 hours
                               or '*' for the actual current time
Status  ==> ENABLE      Specify ENABLE or DISABLE
Keep?   ==> YES        Save this entry for future
                               CICS startups? (YES or NO)

Press the END key to add the Independent TOD Clock definition.

Use the CANCEL command to cancel the request.

```

As you can see, the field values displayed are copied from the entry where the **A** line command was entered.

You can change the field values as required. To save the changes and add the new definition to the virtual clock list, use the END command or its PF key equivalent, PF key 3 or 15. The new entry is added to the list in the proper order.

For ITC definitions, the date and time begin moving forward immediately when the ITC definition is saved with a status of ENABLE and ATF/CICS is currently active.

To cancel the add request, key in the CANCEL command and press the ENTER key.

## Adding ITC definitions

Both the END and CANCEL commands return you to the Edit Virtual Clock Definitions screen.

### The ADDC command

You can type in the ADDC command to add a new ITC definition when no other ITC definitions have previously been defined or to add an ITC definition without modeling it on an existing definition. An example of this is shown below:

```
ATF/CICS ----- EDIT VIRTUAL CLOCK DEFINITIONS -----
COMMAND ==> ADDC                                     SCROLL ==> CSR
CLOCK/TERM TRANSID USERID DATE TIME STATUS SETTING/LAST UPDATED BY
***** BOTTOM OF DATA *****
```

When you press ENTER, the Independent TOD Clock Addition screen is displayed with all fields blank, as follows:

```
ATF/CICS ----- INDEPENDENT TOD CLOCK ADDITION -----
COMMAND ==>

Clock ==> Independent TOD Clock (ITC) name
Date ==> Start date in YYYY/MM/DD format,
          a number from -9999 to +9999 days
          or '*' for the actual current date
Time ==> Start time in HH:MM format,
          a number from -23:59 to +23:59 hours
          or '*' for the actual current time
Status ==> Specify ENABLE or DISABLE
Keep? ==> Save this entry for future
          CICS startups? (YES or NO)
```

Press the END key to add the Independent TOD Clock definition.

Use the CANCEL command to cancel the request.

You can change the field values as required. To save the changes and add the new ITC definition to the virtual clock list, use the END command or its PF key equivalent, PF key 3 or 15. The new ITC entry is added to the list in the proper order.

For ITC definitions, the date and time begin moving forward immediately when the ITC definition is saved with a status of ENABLE and ATF/CICS is currently active.

To cancel the add request, key in the CANCEL command and press the ENTER key.

Both the END and CANCEL commands return you to the Edit Virtual Clock Definitions screen.

### Updating standard virtual clock definitions

You can type the U line command next to the desired entry to update an existing virtual clock definition's specifications as shown below:

## Updating standard virtual clock definitions

```

ATF/CICS ----- EDIT VIRTUAL CLOCK DEFINITIONS --- ROW 000001 OF 000046
COMMAND ==>
CLOCK/TERM TRANSID USERID DATE TIME STATUS SETTING/LAST UPDATED BY
>CHICAGO * -01:00 ENA KEEP 96/01/06 10:35:18
>DENVER * -02:00 DIS KEEP 96/01/04 13:19 APLSY005
>L.A. * -03:00 ENA KEEP 96/01/06 08:35:18
>LONDON * +05:00 ENA KEEP 96/01/06 16:35:18
>MIDNITE +1 00:00 ENA KEEP 96/01/07 00:48:26
>2000 2000/01/01 * ENA KEEP 00/01/01 11:35:18
-NOTERM- INV5 INV?A* >2000 ENA 96/01/04 16:56 INVSA502
-NOTERM- INV6 INV?A* >2000 ENA 96/01/04 13:04 INVSA159
-NOTERM- INV8 INV?A* >2000 ENA 96/01/05 09:22 INVSA502
U D00A HRES DBAHR001 >2000 ENA KEEP 96/01/05 17:09 DBAHR001
L324 FI05 * >LONDON ENA 96/01/06 10:29 FINAC310
L348 * APLSY003 1999/12/31 23:59 ENA KEEP 96/01/05 16:07 APLSY003
L361 ORD? ORDUB4* >MIDNITE ENA KEEP 96/01/04 15:51 APLDP147
L380 FI* FINACS* 1994/04/01 * ENA 96/01/04 14:31 FINACS82
L47C C1C3A001 A* >2000 ENA KEEP 96/01/06 10:29 APLAC114
L5A* AC* A* >2000 ENA KEEP 96/01/06 10:29 ACCFU375
P001 RPA5 APLDP225 -1 09:00 ENA 96/01/05 12:17 APLDP225
P001 RPAC APLDP176 -1 09:00 DIS 96/01/05 12:40 APLDP176
R7A3 * * >2000 ENA KEEP 96/01/04 15:36 UVNDP001
R90C D?DB APLDP170 >L.A. DIS KEEP 96/01/05 11:54 APLDP170
S195 * APLAC94* >2000 ENA KEEP 96/01/06 08:43 APLSY017

```

When you press ENTER, the following Virtual Clock Update screen is displayed:

```

ATF/CICS ----- VIRTUAL CLOCK UPDATE -----
COMMAND ==>

Termid ==> D00A Terminal name or generic pattern
Transid ==> HRES Transaction name or generic pattern
Userid ==> DBAHR001 User name or generic pattern
Date ==> >2000 Start date in YYYY/MM/DD format,
a number from -9999 to +9999 days,
an '*' for the actual current date
or an Independent TOD Clock (ITC) name

Time ==> Start time in HH:MM format,
a number from -23:59 to +23:59 hours
or '*' for the actual current time

Status ==> ENABLE Specify ENABLE or DISABLE
Keep? ==> YES Save this entry for future
CICS startups? (YES or NO)

Press the END key to update the virtual clock definition.

Use the CANCEL command to cancel the request.

```

When updating a virtual clock entry, the **TERMID**, **TRANSID** and **USERID** fields cannot be modified. You can only update the definition's **DATE**, **TIME**, **STATUS** and **KEEP** fields.

You can change the field values as required. To save the changes and update the definition, use the **END** command or its PF key equivalent, PF key 3 or 15. To cancel the update request, key in the **CANCEL** command and press the **ENTER** key.

Both the **END** and **CANCEL** commands return you to the Edit Virtual Clock Definitions screen.

## Updating ITC definitions

You can type the **U** line command next to the desired entry to update an existing ITC definition as shown in the following example:

```

ATF/CICS ----- EDIT VIRTUAL CLOCK DEFINITIONS --- ROW 000001 OF 000046
COMMAND ==>                                     SCROLL ==> CSR
CLOCK/TERM TRANSID  USERID  DATE          TIME  STATUS  SETTING/LAST UPDATED BY
>CHICAGO              *          -01:00  ENA  KEEP  96/01/06 10:35:18
>DENVER               *          -02:00  DIS  KEEP  96/01/04 13:19 APLSY005
>L.A.                 *          -03:00  ENA  KEEP  96/01/06 08:35:18
>LONDON              *          +05:00  ENA  KEEP  96/01/06 16:35:18
>MIDNITE              +1          00:00  ENA  KEEP  96/01/07 00:48:26
U >2000                2000/01/01 *          ENA  KEEP  00/01/01 11:35:18
-NOTERM- INV5         INV?A* >2000          ENA          96/01/04 16:56 INVSA502
-NOTERM- INV6         INV?A* >2000          ENA          96/01/04 13:04 INVSA159
-NOTERM- INV8         INV?A* >2000          ENA          96/01/05 09:22 INVSA502
D00A  HRES           DBAHR001 >2000          ENA  KEEP  96/01/05 17:09 DBAHR001
L324  FI05           *          >LONDON          ENA          96/01/06 10:29 FINAC310
L348  *             APLSY003 1999/12/31 23:59  ENA  KEEP  96/01/05 16:07 APLSY003
L361  ORD?          ORDUB4* >MIDNITE        ENA  KEEP  96/01/04 15:51 APLDP147
L380  FI*           FINACS* 1994/04/01 *          ENA          96/01/04 14:31 FINACS82
L47C  C1C3A001 A*          >2000          ENA  KEEP  96/01/06 10:29 APLAC114
L5A*  AC*           A*          >2000          ENA  KEEP  96/01/06 10:29 ACCFU375
P001  RPA5         APLDP225 -1          09:00  ENA          96/01/05 12:17 APLDP225
P001  RPAC         APLDP176 -1          09:00  DIS          96/01/05 12:40 APLDP176
R7A3  *            *          >2000          ENA  KEEP  96/01/04 15:36 UVNDP001
R90C  D?DB         APLDP170 >L.A.          DIS  KEEP  96/01/05 11:54 APLDP170
S195  *            APLAC94* >2000          ENA  KEEP  96/01/06 08:43 APLSY017
    
```

When you press ENTER, the following Independent TOD Clock Update screen is displayed:

```

ATF/CICS ----- INDEPENDENT TOD CLOCK UPDATE -----
COMMAND ==>

Clock   ==> >2000          Independent TOD Clock (ITC) name
Date    ==> 2000/01/01     Start date in YYYY/MM/DD format,
                               a number from -9999 to +9999 days
                               or '*' for the actual current date
Time     ==> *            Start time in HH:MM format,
                               a number from -23:59 to +23:59 hours
                               or '*' for the actual current time
Status   ==> ENABLE       Specify ENABLE or DISABLE
Keep?    ==> YES         Save this entry for future
                               CICS startups? (YES or NO)

Press the END key to update the Independent TOD Clock definition.

Use the CANCEL command to cancel the request.
    
```

When updating an ITC entry, the **CLOCK** name field cannot be modified. You can only update the definition's **DATE**, **TIME**, **STATUS** and **KEEP** fields.

You can change the field values as required. To save the changes and update the definition, use the **END** command or its PF key equivalent, PF key 3 or 15. To cancel the update request, key in the **CANCEL** command and press the **ENTER** key.

Both the END and CANCEL commands return you to the Edit Virtual Clock Definitions screen.

### Deleting standard virtual clock definitions

You can type the D line command next to the desired entry to delete an existing virtual clock definition as shown below:

```

ATF/CICS ----- EDIT VIRTUAL CLOCK DEFINITIONS --- ROW 000001 OF 000046
COMMAND ==>                                     SCROLL ==> CSR
CLOCK/TERM TRANSID  USERID  DATE          TIME  STATUS  SETTING/LAST UPDATED BY
>CHICAGO           *          *          -01:00  ENA  KEEP  96/01/06 10:35:18
>DENVER            *          *          -02:00  DIS  KEEP  96/01/04 13:19 APLSY005
>L.A.              *          *          -03:00  ENA  KEEP  96/01/06 08:35:18
>LONDON            *          *          +05:00  ENA  KEEP  96/01/06 16:35:18
>MIDNITE           +1          *          00:00  ENA  KEEP  96/01/07 00:48:26
>2000              2000/01/01 *          *          ENA  KEEP  00/01/01 11:35:18
-NOTERM- INV5      INV?A*  >2000          *          ENA  96/01/04 16:56 INVSA502
-NOTERM- INV6      INV?A*  >2000          *          ENA  96/01/04 13:04 INVSA159
-NOTERM- INV8      INV?A*  >2000          *          ENA  96/01/05 09:22 INVSA502
D00A      HRES      DBAHR001 >2000          *          ENA  KEEP  96/01/05 17:09 DBAHR001
L324      FI05      *          >LONDON        *          ENA  96/01/06 10:29 FINAC310
L348      *          APLSY003 1999/12/31 23:59  ENA  KEEP  96/01/05 16:07 APLSY003
L361      ORD?      ORDUB4*  >MIDNITE        *          ENA  KEEP  96/01/04 15:51 APLDP147
L380      FI*       FINACS*  1994/04/01 *          ENA  96/01/04 14:31 FINACS82
L47C      C1C3A001 A*       >2000          *          ENA  KEEP  96/01/06 10:29 APLAC114
L5A*      AC*       A*       >2000          *          ENA  KEEP  96/01/06 10:29 ACCFU375
P001      RPA5      APLDP225 -1          09:00  ENA  96/01/05 12:17 APLDP225
D P001    RPAC      APLDP176 -1          09:00  DIS  96/01/05 12:40 APLDP176
R7A3      *          *          >2000          *          ENA  KEEP  96/01/04 15:36 UVNDP001
R90C      D?DB     APLDP170 >L.A.        *          DIS  KEEP  96/01/05 11:54 APLDP170
S195      *          APLAC94* >2000          *          ENA  KEEP  96/01/06 08:43 APLSY017
  
```

When you press ENTER, the Virtual Clock Delete Confirmation screen is displayed:

```

ATF/CICS ----- VIRTUAL CLOCK DELETE CONFIRMATION -----
COMMAND ==>

Termid   : P001
Transid  : RPAC
Userid   : APLDP176
Date     : -1
Time     : 09:00

Press the END key to delete the virtual clock definition.

Use the CANCEL command to cancel the request.
  
```

To delete the definition, use the END command or its PF key equivalent, PF key 3 or 15. To cancel the delete request, key in the CANCEL command and press the ENTER key.

Both the END and CANCEL commands return you to the Edit Virtual Clock Definitions screen.

## Deleting ITC definitions

### Deleting ITC definitions

You can type the **D** line command next to the desired ITC entry to delete an existing ITC definition as shown in the following example:

```
ATF/CICS ----- EDIT VIRTUAL CLOCK DEFINITIONS --- ROW 000001 OF 000046
COMMAND ==>                                     SCROLL ==> CSR
CLOCK/TERM TRANSID  USERID  DATE          TIME  STATUS  SETTING/LAST UPDATED BY
>CHICAGO              *          *          -01:00  ENA KEEP  96/01/06  10:35:18
>DENVER               *          *          -02:00  DIS KEEP  96/01/04  13:19 APLSY005
>L.A.                 *          *          -03:00  ENA KEEP  96/01/06  08:35:18
>LONDON               *          *          +05:00  ENA KEEP  96/01/06  16:35:18
D >MIDNITE            +1          *          00:00  ENA KEEP  96/01/07  00:48:26
>2000                 *          *          2000/01/01 *  ENA KEEP  00/01/01  11:35:18
-NOTERM- INV5        INV?A* >2000          ENA      96/01/04  16:56 INVSA502
-NOTERM- INV6        INV?A* >2000          ENA      96/01/04  13:04 INVSA159
-NOTERM- INV8        INV?A* >2000          ENA      96/01/05  09:22 INVSA502
D00A      HRES        DBAHR001 >2000          ENA KEEP  96/01/05  17:09 DBAHR001
L324      FI05        *          >LONDON        ENA      96/01/06  10:29 FINAC310
L348      *          APLSY003 1999/12/31  23:59  ENA KEEP  96/01/05  16:07 APLSY003
L361      ORD?        ORDUB4* >MIDNITE      ENA KEEP  96/01/04  15:51 APLDP147
L380      FI*         FINACS* 1994/04/01  *      ENA      96/01/04  14:31 FINACS82
L47C      C1C3A001  A*       >2000          ENA KEEP  96/01/06  10:29 APLAC114
L5A*      AC*         A*       >2000          ENA KEEP  96/01/06  10:29 ACCFU375
P001      RPA5        APLDP225 -1          09:00  ENA      96/01/05  12:17 APLDP225
P001      RPAC        APLDP176 -1          09:00  DIS      96/01/05  12:40 APLDP176
R7A3      *          *          >2000          ENA KEEP  96/01/04  15:36 UVNDP001
R90C      D?DB        APLDP170 >L.A.        DIS KEEP  96/01/05  11:54 APLDP170
S195      *          APLAC94* >2000          ENA KEEP  96/01/06  08:43 APLSY017
```

When you press ENTER, the Independent TOD Clock Delete Confirmation screen is displayed:

```
ATF/CICS ----- INDEPENDENT TOD CLOCK DELETE CONFIRMATION -----
COMMAND ==>
```

```
Clock      : >MIDNITE
Date       : +1
Time       : 00:00
```

Press the END key to delete the Independent TOD Clock definition.

Use the CANCEL command to cancel the request.

To delete the ITC definition, use the END command or its PF key equivalent, PF key 3 or 15. To cancel the ITC delete request, key in the CANCEL command and press the ENTER key.

Both the END and CANCEL commands return you to the Edit Virtual Clock Definitions screen.

## Changing online user options

When you select option **O** from the ATF/CICS Primary Option Menu, ATF/CICS displays the Online Option Settings screen, as shown below.

```
ATF/CICS ----- ONLINE OPTION SETTINGS -----
COMMAND ==>

Online Date Display Format      ==> 1 ('1'-'5')
  Formats available (using January 25th, 2003 as an example):
  1 - 2003/01/25  2 - 01/25/2003  3 - 25/01/2003  4 - 25JAN2003  5 - 2003.025

Confirm Virtual Clock Deletions? ==> YES ('YES' or 'NO')
```

Press the END key to save online option settings.

Use the CANCEL command to cancel the request.

### Date formats

When ATF/CICS was installed, the system administrator selected a date format that must be used when you enter date values as input to ATF/CICS. The format selected is displayed here for your reference only. This field is protected and cannot be updated.

### Confirmation of deletion

As mentioned earlier, ATF/CICS by default displays a confirmation screen whenever you attempt to delete a virtual clock definition. If you prefer not to be prompted to confirm deletions, set the confirm deletions option to NO.

You can change the online option settings as required. To save the changes, use the END command or its PF key equivalent, PF key 3 or 15. To cancel the options update request, key in the CANCEL command and press the ENTER key.

Both the END and CANCEL commands return you to the ATF/CICS Primary Option Menu screen.

## The online interface

---

## **Part 3. The command interface**



---

## Chapter 5. Overview

The command interface lets you key in ATF/CICS virtual clock definition commands on a single line. The command interface is also used to issue operation control commands that start and stop ATF/CICS processing.

The command interface makes it easy to code predefined virtual clock definition and operation control commands in a file or library member that is defined to CICS as a sequential terminal. As a result, the commands are automatically processed when CICS is initiated.

As with the online interface, the command interface is activated by invoking ATF/CICS transaction TICT. In this document, TICT is the assumed transaction ID defined for invoking ATF/CICS. Check with your CICS system administrator to verify whether TICT or another transaction ID was assigned for invoking ATF/CICS.

## The command interface

---

## Chapter 6. Command syntax rules

All ATF/CICS commands have the following general format:

```
TICT function keyword1=parameter keyword2=parameter....
```

The command's function verb immediately follows TICT, the ATF/CICS transaction ID.

Some commands consist of a function verb alone (for example, TICT STOP), while other commands consist of one or more keywords and parameters that immediately follow the function verb (for example, TICT ADD TERM=L506 USER=S82 KEEP=YES).

Keywords must immediately be followed by an equal sign ("="), that must immediately be followed by the keyword's parameter (for example, DATE=2000/01/01).

The function verb and any keywords specified must be separated from each other by one or more blanks. Do not use commas as separator characters in ATF/CICS commands.

When commands are predefined in a CICS sequential terminal file using a file editor program (such as ISPF Edit), make sure that column 73 through 80 of the command statements remain blank and are not updated by the editor program with line sequence numbers.

## The command interface

---

## Chapter 7. Operation control commands

---

### START command

Syntax

```
▶▶—TICT—START—◀◀
```

Use the START command to initialize and activate ATF/CICS or restart ATF/CICS after it has been previously stopped.

ATF/CICS obtains its resident storage areas if they were not previously obtained and activate any existing virtual clock definitions that are in an enabled status.

Once ATF/CICS has been started, virtual clock definitions can be added, updated or deleted using the ATF/CICS online and command interfaces.

To initialize the use of ATF/CICS without activating its virtual timing services, see the description for the LOAD command, below.

---

### STOP command

Syntax

```
▶▶—TICT—STOP—◀◀
```

The STOP command immediately deactivates ATF/CICS virtual timing services without releasing ATF/CICS resident storage areas.

Existing virtual clock definitions are retained and new definitions can be added, updated or deleted using the ATF/CICS online and command interfaces.

---

### SHUT command

Syntax

```
▶▶—TICT—SHUT—◀◀
```

The SHUT command immediately deactivates ATF/CICS virtual timing services and releases all ATF/CICS resident storage areas.

---

### LOAD command

#### Syntax

```
▶▶—TICT—LOAD—————▶▶
```

Use the LOAD command to initialize ATF/CICS without activating its virtual timing services.

ATF/CICS obtains its resident storage areas if they were not previously obtained and reads the VCD dataset to load virtual clock definitions that are in an enabled status.

Once ATF/CICS virtual clock definitions have been loaded, new virtual clock definitions can be added and existing definitions can be updated or deleted using the ATF/CICS online and command interfaces.

Use the START command to activate ATF/CICS virtual timing services after initializing ATF/CICS using the LOAD command. See the description of the START command on page 33.

---

### RELOAD command

#### Syntax

```
▶▶—TICT—RELOAD—————▶▶
```

The RELOAD command causes ATF/CICS to reload the VCD dataset's virtual clock definition contents in storage. Existing definitions in storage are replaced, if a matching definition is found in the VCD dataset.

Normally, virtual clock definitions in storage that were defined with KEEP=YES have matching definition records in the VCD dataset. The use of the RELOAD command is therefore limited to circumstances where the VCD dataset was tentatively unavailable at some time since ATF/CICS was initialized.

The RELOAD command should only be issued under the circumstances described above and only after ATF/CICS has already been initialized and activated by a previously issued START, LOAD, RELOAD or RESTART command.

The RELOAD command should only be issued under the circumstances described above and only after ATF/CICS was initialized or activated by a previously issued START, LOAD, RELOAD or RESTART command or after a STOP command was issued.

## RESTART command

### Syntax

```
▶▶—TICT—RESTART—◀◀
```

The RESTART command causes ATF/CICS to reload and replace the VCD dataset's virtual clock definition contents in storage. All existing definitions in storage are replaced. Definitions that were defined with KEEP=NO are not lost. If ATF/CICS was previously deactivated using the STOP (not SHUT) command, the RESTART command also reactivates ATF/CICS.

The RESTART command should only be issued after ATF/CICS was initialized or activated by a previously issued START, LOAD, RELOAD or RESTART command or after a STOP command was issued.

## HELP command

### Syntax

```
▶▶—TICT—HELP—◀◀
      └─┬─┘
        ?
```

The HELP command displays the following ATF/CICS Command Syntax Help screen, providing a convenient summary of the most common commands:

```
TICT ?
< ATF/CICS Version 2.8.700 Command Syntax Help - D=2007/04/24 ,T=10:32:18 >
START - Activate ATF/CICS          LOAD - Load VCD records
RESTART - Reactivate ATF/CICS      RELOAD - Reload VCD records
STOP - Deactivate ATF/CICS
ADD|UPD|DEL - Add, update or delete a Virtual Clock Definition. Parameters:
  TRAN=transaction_name_or_pattern (default: any)
  TERM=termid_name_or_pattern|NOTERM (default: current terminal)
  USER=user_name_or_pattern (default: current user)
  CLOCK=clock_name (default: none)
  DATE=YYYY/MM/DD|+nnnn|-nnnn|clock_name (default: current date)
  TIME=hh:mm|+hh:mm|-hh:mm (default: current time)
  MATCH=EXACT|PATTERN (default: EXACT)
  STATUS=ENABLE|DISABLE (default: ENABLE)
  KEEP=YES|NO (default: NO)
```

```
Example 1: TICT ADD TIME=+02:00
Set the time for any transaction executed at the current terminal
2 hours ahead of local time.
```

```
Example 2: TICT DEL USER=PROD* MATCH=PATTERN
Delete all Virtual Clock Definitions with user names that begin
with the letters 'PROD'.
```

## FREE command

---

### FREE command

#### Syntax

```
▶▶—TICT—FREE—————▶▶
```

The FREE command releases all virtual clock definitions that are internally marked as exclusively held for update.

The FREE command should only be used when virtual clock definitions become inaccessible for update after they were held by another user and the hold status was not removed for unknown reasons.

An example of this is when a user invokes the ATF/CICS online interface to update a virtual clock definition and a forced logoff, session disconnect, or timeout event occurs for that terminal in the middle of the update.

---

### TRACE command

#### Syntax

```
▶▶—TICT—TRACE—————▶▶
```

The TRACE command is a diagnostic command that can be used to analyze why virtual timing services are not being received for transactions executing at the terminal from which the TRACE command was issued.

When a terminal is traced, ATF/CICS issues a write to operator (WTO) message every time a transaction executing at the terminal causes the ATF/CICS virtual timing services routine to be called.

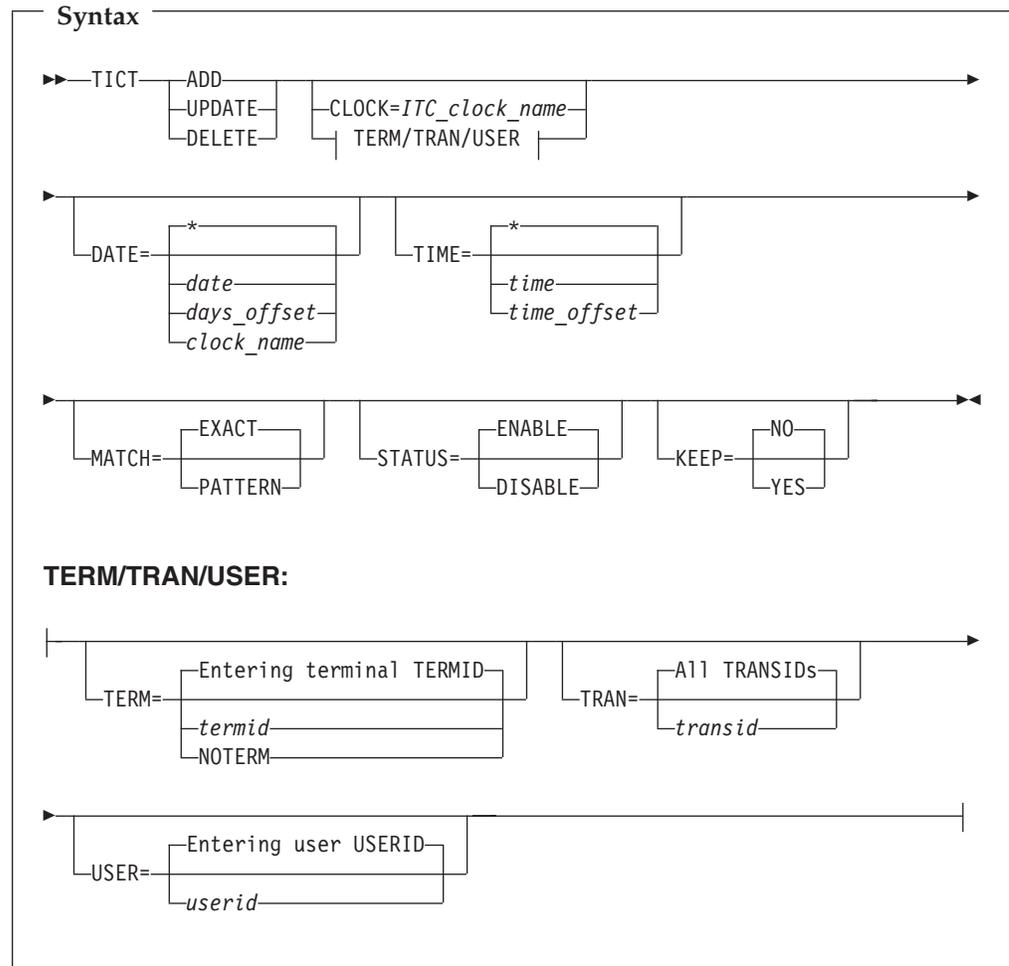
The TRACE command allows only one terminal at a time to be traced. If the trace command is entered again from the same terminal currently being traced, tracing terminates. If the TRACE command is entered from a different terminal, tracing begins for that terminal and the first terminal is no longer traced.

---

## Chapter 8. Virtual clock definition commands

---

### ADD, UPDATE and DELETE commands



Here is a description of each command keyword:

**TERM=termid**

Used for standard virtual clock definition commands. Specify a full CICS terminal ID or a TERMID name containing wildcard or generic characters.

For virtual clock definitions associated with non-terminal oriented transactions, specify TERM=NOTERM.

TERM is mutually exclusive of CLOCK for ITC definition commands only.

Default: The TERMID of the terminal where the command was entered.

**TRAN=transid**

Used for standard virtual clock definition commands. Specify a full CICS transaction ID or a TRANSID name containing wildcard or generic characters.

## ADD, UPDATE and DELETE commands

Non-displayable hexadecimal TRANSIDs may also be specified. ATF/CICS considers any TRANSID that is five to eight characters long to be a hexadecimal TRANSID. Hexadecimal TRANSIDs may consist of the characters "0" through "9", "A" through "F" and ATF/CICS wildcard and generic characters "?" and "\*".

TRAN is mutually exclusive of CLOCK for ITC definition commands only.

Default: All TRANSIDs.

### **USER=userid**

Used for standard virtual clock definition commands. Specify a full CICS user ID or a USERID name containing wildcard or generic characters.

USER is mutually exclusive of CLOCK for ITC definition commands only.

Default: The USERID of the user who entered the command.

### **CLOCK=ITC\_clock\_name**

Used for ITC definition commands. Specify a full 1 to 8 character ITC clock name with ">" as the first character (for example, >MIDNITE) or a clock name containing wildcard or generic characters.

CLOCK is mutually exclusive of TERM, TRAN and USER, that are for standard virtual clock definition commands only.

Default: None.

**DATE** The virtual date that matching transactions are to run under. DATE can be specified as:

*date* An absolute date (for example, 1999/12/31).

Absolute dates range from any date between 1900 to 2040.

*days\_offset*

A relative offset of days from the current date (for example, +1, -365).

Day offset values range from -9999 to +9999 days.

*clock\_name*

The name of an ITC (for example, >MIDNITE).

If an ITC name is specified, ATF/CICS does not confirm that a matching ITC definition exists.

### **An asterisk ("\*")**

The current date.

Virtual clock definitions that are associated with non terminal transactions (TERM=NOTERM) can only specify the name of an ITC as the date value or an asterisk (\*) for the real date. Specifying a date or relative number of days value is not allowed.

For ITC definitions, the date and time begin moving forward immediately when the ITC definition is saved with a status of ENABLE and ATF/CICS is currently active.

ATF/CICS allows an installation to customize the date format to be used for inputting and displaying absolute dates. Consult with your CICS administrator to verify what date format has been selected for use with ATF/CICS.

## ADD, UPDATE and DELETE commands

For UPDATE commands, DATE is optional. If DATE is not specified in an UPDATE command, the date setting of updated virtual clock definitions remains unchanged.

DATE is ignored in DELETE commands.

Default: Current date.

**TIME** The virtual time that matching transactions are to run under. TIME can be specified as:

*time* An absolute time (for example, 17:30).

Absolute times range from any time between 00:00 to 23:59.

*time\_offset*

A relative offset of hours and minutes from the current time (for example, +01:00, -23:59).

Hour and minute offset values range from -23:59 to +23:59 hours and minutes.

**An asterisk ("\*")**

The current time.

Virtual clock definitions that are associated with non terminal transactions (TERM=NOTERM) can only specify the time value as an asterisk (\*) for the real time. Specifying an absolute or relative time value is not allowed.

For ITC definitions, the date and time begin moving forward immediately when the ITC definition is saved with a status of ENABLE and ATF/CICS is currently active.

For UPDATE commands, TIME is optional. If TIME is not specified in an UPDATE command, the time setting of updated virtual clock definitions remains unchanged.

TIME is ignored in DELETE commands.

Default: Current time.

### MATCH

Specify EXACT to process the command against a specific virtual clock definition whose TERMID, TRANSID and USERID fields exactly match those specified in the command.

Specify PATTERN to process the command against any virtual clock definitions whose TERMID, TRANSID and USERID fields match the patterns specified in the command's TERM, TRAN and USER keyword parameters.

PATTERN is invalid in ADD commands.

Default: EXACT.

### STATUS

Specify ENABLE to activate or DISABLE to deactivate a virtual clock definition.

For UPDATE commands, STATUS is optional. If STATUS is not specified in an UPDATE command, the status setting of updated virtual clock definitions remains unchanged.

STATUS is ignored in DELETE commands.

Default: ENABLE.

## **ADD, UPDATE and DELETE commands**

**KEEP** Specify YES to retain the virtual clock definition in the Virtual Clock Data Set (VCD) for use in future executions of the CICS region.

KEEP is invalid in DELETE commands.

Default: NO.

---

## Chapter 9. Command examples

- Execute all transactions at your terminal under the virtual date setting of an ITC definition named ">NEWYORK":  
TICT ADD DATE=>NEWYORK
- Disable all virtual clock definitions that have USERIDs starting with "ACCT":  
TICT UPD TERM=\* TRAN=\* USER=ACCT\* STAT=DISABLE MATCH=PATTERN
- Add an ITC definition named ">2000AD" for year 2000 testing and keep it in the Virtual Clock Data Set for future CICS executions:  
TICT ADD CLOCK=>2000AD DATE=2000/01/01 TIME=00:00 KEEP=YES
- Add a virtual clock definition for TRANSIDs beginning with the letters "IN" that executes at the current terminal with their virtual date and time set to 4 days and 21 hours ahead of local date and time:  
TICT ADD TRAN=IN\* DATE=+4 TIME=+21:00  
or  
TICT ADD TRAN=IN\* DATE=+5 TIME=-03:00
- Delete a specific virtual clock definition whose TERMIID, TRANSID and USERID values are all set to '\*':  
TICT DEL TERM=\* TRAN=\* USER=\*
- Delete all virtual clock definitions, excluding ITC definitions:  
TICT DEL TERM=\* TRAN=\* USER=\* MATCH=PATTERN
- Update all virtual clock definitions for TRANSID "WCLI" to obtain their virtual date from an ITC named ">TOKYO":  
TICT UPD TRAN=WCLI TERM=\* USER=\* DATE=>TOKYO MATCH=PATTERN
- Start ATF/CICS and activate all enabled virtual clock definitions:  
TICT START
- Stop ATF/CICS without deleting existing virtual clock definitions:  
TICT STOP
- Display help summary information for the ATF/CICS command interface:  
TICT ?

## The command interface

---

## Part 4. Appendixes



---

## Appendix. Messages and codes

This appendix contains a listing and explanation of the messages and codes issued by ATF/CICS.

ATF/CICS messages are displayed when using either the command or online interface. In the ATF/CICS online interface, ATF/CICS messages are displayed in the screen's long message area after the HELP command has been issued when a short message appears on the screen.

When appropriate, certain ATF/CICS messages are written to the system operator console.

ATF/CICS messages displayed at the terminal are formatted as follows:

TTCnnnnl: text

Where:

**TTC** Is the fixed three-character constant prefixing all ATF/CICS messages.

**nnnn** Is the identification number assigned to the message.

**l** Is one of the following characters describing the severity level attributed to the detected event:

**I** The message is of informational value only.

**W** The message warns of possible impending problems.

**E** A severe error occurred.

**Text** is the text of the message.

---

**TTC0001I** **copyright notice**

**Explanation:** Product copyright notice.

**Programmer response:** None.

**Explanation:** Attempt was made to issue a command to start ATF/CICS when ATF/CICS is already active.

**Programmer response:** Processing continues. The issued command is ignored.

---

**TTC0010I** **ENVIRONMENT - CICS=version,  
MVS=release, CPU MODEL=number**

**Explanation:** Has begun execution and is reporting on the processing environment it has detected.

**Programmer response:** None.

---

**TTC0021I** **ATF/CICS RESTARTED  
SUCCESSFULLY**

**Explanation:** Command to start ATF/CICS when ATF/CICS was previously stopped was processed successfully.

**Programmer response:** ATF/CICS is restarted. All enabled virtual clock definitions are immediately activated.

---

**TTC0011E** **ATF/CICS version DOES NOT  
SUPPORT CICS version**

**Explanation:** Currently executing CICS version is not supported by ATF/CICS.

**Programmer response:** Processing terminates. ATF/CICS does not currently support CICS versions prior to CICS 2.1.

---

**TTC0026I** **ATF/CICS STARTED SUCCESSFULLY**

**Explanation:** Command to initialize and start ATF/CICS was processed successfully.

**Programmer response:** ATF/CICS is started. All enabled virtual clock definitions are immediately activated.

---

**TTC0020I** **ATF/CICS ALREADY ACTIVE -  
REQUEST IGNORED**

## Messages and codes

---

**TTC0027W ATF/CICS IS NOT ACTIVE - REQUEST IGNORED**

**Explanation:** Attempt was made to issue a command to stop ATF/CICS when ATF/CICS is already stopped or to shut down ATF/CICS when ATF/CICS is already shut down.

**Programmer response:** Processing continues. The issued command is ignored.

---

**TTC0028I ATF/CICS HAS BEEN STOPPED**

**Explanation:** Command to stop ATF/CICS was processed successfully.

**Programmer response:** ATF/CICS is stopped. ATF/CICS continues to retain its storage resident areas, including virtual clock definitions. Transactions that were executing under virtual time revert to receiving the real date and time when requesting it from CICS.

---

**TTC0029I ATF/CICS HAS BEEN SHUT DOWN**

**Explanation:** Command to shut down ATF/CICS was processed successfully.

**Programmer response:** ATF/CICS is shut down. ATF/CICS releases all of its storage resident areas, including virtual clock definitions. Transactions that were executing under virtual time revert to receiving the real date and time when requesting it from CICS.

---

**TTC0030I SHUT DOWN IN PROGRESS - WAITING FOR EXIT PROCESSING TO COMPLETE**

**Explanation:** Command to terminate ATF/CICS is being processed. ATF/CICS is waiting for its CICS exit routines to acknowledge termination.

**Programmer response:** Processing continues. ATF/CICS retries waiting for acknowledgement.

---

**TTC0031W SHUT DOWN CONTINUING - EXIT PROCESSING TERMINATION IS FORCED**

**Explanation:** Command to terminate ATF/CICS is being processed. ATF/CICS waited the maximum amount of time for its CICS exit routines to acknowledge termination but no response was received.

**Programmer response:** Processing continues. ATF/CICS terminates.

---

**TTC0050E AN INVALID OR NONAPPLICABLE PARAMETER WAS SPECIFIED**

**Explanation:** Command was issued using the ATF/CICS command interface that contains an invalid parameter or a parameter that is not applicable for the command issued.

**Programmer response:** The command is not executed. Correct the command syntax and reissue the command.

---

**TTC0051E THE parameter PARAMETER WAS SPECIFIED MORE THAN ONCE**

**Explanation:** Indicated parameter was duplicated within the command issued.

**Programmer response:** The command is not executed. Remove the redundant parameter and reissue the command.

---

**TTC0052E THE LENGTH OF THE parameter PARAMETER IS INVALID**

**Explanation:** Length of the value specified for the indicated parameter exceeds the parameter value's maximum length.

**Programmer response:** The command is not executed. Modify the invalid parameter value and reissue the command.

---

**TTC0055I ATF/CICS PROCESSING COMPLETED SUCCESSFULLY**

**Explanation:** ATF/CICS online interface was terminated at the user's request.

**Programmer response:** None.

---

**TTC0056W TICTOC/CICS VERSION version IS NOT SUPPORTED BY TICTOC/MVS VERSION version**

**Explanation:** Version of ATF currently executing on the system cannot be interfaced to by the current version of ATF/CICS. ATF/CICS support for z/OS date and time services is disabled.

**Programmer response:** Processing continues. ATF/CICS support is limited to setting the EIBDATE and EIBTIME fields during transaction initialization and EXEC CICS ASKTIME command processing.

---

**TTC0057W TICTOC/MVS IS CURRENTLY NOT ACTIVE**

**Explanation:** Was not executing on the system during ATF/CICS startup execution. ATF/CICS support for z/OS date and time services is disabled.

**Programmer response:** Processing continues. ATF/CICS support is limited to setting the EIBDATE and EIBTIME fields during transaction initialization and EXEC CICS ASKTIME command processing.

---

**TTC0058W TICTOC/MVS VIRTUAL TIMING SETTINGS NOT SUPPORTED BY TICTOC/CICS**

**Explanation:** Is active and the ATF Virtual Clock Dataset (VCD) contains an enabled entry that matches the current CICS region's name and has a non-current virtual date or time value (or both) specified. ATF/CICS support for z/OS date and time services is disabled.

**Programmer response:** Processing continues. ATF/CICS support is limited to setting the EIBDATE and EIBTIME fields during transaction initialization and EXEC CICS ASKTIME command processing.

To enable the ATF/CICS interface for ATF, delete or disable the matching ATF VCD entry, issue the ATF REFRESH command, restart the CICS region and restart ATF/CICS.

---

**TTC0059I TICTOC/CICS INTERFACE TO TICTOC/MVS IS status**

**Explanation:** Informational message displays whether the **status** of the ATF/CICS interface to ATF is enabled or disabled.

**Programmer response:** Processing continues. If the ATF/CICS interface to ATF is disabled, ATF/CICS support is limited to setting the EIBDATE and EIBTIME fields during transaction initialization and EXEC CICS ASKTIME command processing. For an explanation of why the interface to ATF was disabled, refer to the ATF/CICS messages issued prior to this message.

---

**TTC0100I ATF/CICS IS CURRENTLY ACTIVE IN THIS CICS REGION**

**Explanation:** Message issued when entering the ATF/CICS online interface, indicating that ATF/CICS is currently active.

**Programmer response:** None.

---

**TTC0101I ATF/CICS IS NOT CURRENTLY ACTIVE IN THIS CICS REGION**

**Explanation:** Message issued when entering the ATF/CICS online interface, indicating that ATF/CICS is not currently active.

**Programmer response:** None.

---

**TTC0150I CHANGES MADE TO USER OPTIONS HAVE BEEN SAVED AND ARE IN EFFECT**

**Explanation:** Has saved the values entered on the online interface's Online Option Settings screen.

**Programmer response:** None. The ATF/CICS Primary Option Menu screen is redisplayed. The option settings

remain in effect until the user terminates the online interface.

---

**TTC0151I OPTION SETTINGS NOT UPDATED BECAUSE CANCELED THE REQUEST**

**Explanation:** CANCEL command was entered on the online interface's Online Option Settings screen.

**Programmer response:** None. The ATF/CICS Primary Option Menu screen is redisplayed. The user's existing option settings remain in effect without any change.

---

**TTC0152E ENTER A NUMBER FROM 1 TO 5 INDICATING THE DATE FORMAT DESIRED**

**Explanation:** Invalid value was specified in the date format option field on the Online Option Settings screen.

**Programmer response:** Choose one of the five date formats from the displayed date samples and enter the corresponding number in the date format option field.

---

**TTC0153E SPECIFY 'YES' OR 'NO' TO BE PROMPTED BEFORE DELETING VIRTUAL CLOCKS**

**Explanation:** Invalid value was specified in the confirm deletions option field on the Online Option Settings screen.

**Programmer response:** Specify 'Y' or 'YES' in the confirm deletions option field if you want to be prompted to confirm virtual clock definition deletions. Specify 'N' or 'NO' to allow deletion of virtual clock definitions without being prompted to confirm the deletion request.

---

**TTC0200I THE VIRTUAL CLOCK DEFINITION WAS function SUCCESSFULLY**

**Explanation:** Request to add, update or delete a virtual clock definition was processed successfully.

**Programmer response:** None.

---

**TTC0201E VALID VIRTUAL CLOCK REQUESTS ARE ADD, UPD AND DEL**

**Explanation:** Internal error occurred while processing a virtual clock edit request.

**Programmer response:** Contact your ATF/CICS customer representative for support.

---

**TTC0202E THE field NAME OR PATTERN ENTERED IS SYNTACTICALLY INCORRECT**

**Explanation:** Indicated field does not contain a valid

## Messages and codes

name or contains invalid wildcard or generic pattern characters.

**Programmer response:** Correct the field in error and reissue the request. For an explanation of using wildcard and generic characters, refer to the topic “Specifying CICS Resource Names in Virtual Clock Definitions”.

---

**TTC0203E**    **DATE NOT IN format OR +/-NNNN  
FORMAT OR DATE+TIME OUT OF  
RANGE**

**Explanation:** Date value must be a date ranging from the year 1900 to the year 2040 in the indicated **format** or an offset of days ranging from -9999 to +9999 days.

**Programmer response:** Correct the date value and reissue the request.

---

**TTC0204E**    **TIME MUST BE IN HH:MM FORMAT  
OR RELATIVE TIME FROM -23:59 TO  
23:59**

**Explanation:** Time value must be a time ranging from 00:00 to 23:59 or an offset of hours and minutes ranging from -23:59 to +23:59.

**Programmer response:** Correct the time value and reissue the request.

---

**TTC0205E**    **MATCH MUST SPECIFY EITHER  
'EXACT' OR 'PATTERN'**

**Explanation:** MATCH parameter in the command issued is invalid.

**Programmer response:** Specify MATCH=EXACT (default) or MATCH=PATTERN and reissue the command.

---

**TTC0206E**    **A STATUS OF 'ENABLE' OR  
'DISABLE' MUST BE SPECIFIED**

**Explanation:** Status value must be either ENABLE or DISABLE

**Programmer response:** Correct the status value and reissue the command.

---

**TTC0207E**    **VIRTUAL CLOCK BEING ADDED IS A  
DUPLICATE OF AN EXISTING  
DEFINITION**

**Explanation:** Adding a standard virtual clock definition, another virtual clock definition already exists with the same terminal, transaction and user names. If adding an ITC definition, another ITC already exists with the same clock name.

**Programmer response:** Use the UPDATE function if your intention is to change the existing definition. If your intention is to add a new definition, modify one

of the definition's name fields to make the definition unique.

---

**TTC0208E**    **'TRANSID', 'TERMID' AND 'USERID'  
ARE MUTUALLY EXCLUSIVE OF  
'CLOCK'**

**Explanation:** TRANSID, TERMID and USERID parameters are only valid for commands that process a standard virtual clock definition. The CLOCK parameter is only valid for ITC definitions.

**Programmer response:** Remove the inappropriate parameter and reissue the command.

---

**TTC0209E**    **'MATCH=PATTERN' CANNOT BE  
SPECIFIED FOR 'ADD' REQUESTS**

**Explanation:** MATCH parameter cannot be set to PATTERN for ADD functions because only one definition is being added.

**Programmer response:** Remove the MATCH parameter from the ADD command or specify MATCH=EXACT (default) and reissue the command. MATCH=PATTERN can only be specified for UPDATE or DELETE functions.

---

**TTC0210E**    **INVALID CLOCK NAME REFERENCE  
SPECIFIED IN THE 'DATE'  
PARAMETER**

**Explanation:** Date value specified a non-date value that is not a valid ITC name.

**Programmer response:** ITC clock names begin with the character '>'. Modify the date value to specify a valid date or a valid ITC clock name.

---

**TTC0211E**    **AN INTERNAL INITIALIZATION  
ERROR WAS ENCOUNTERED -  
R15=code**

**Explanation:** Encountered an error in obtaining or locating its resident storage areas.

**Programmer response:** Processing terminates. This usually occurs only if the CICS region is experiencing storage shortage problems and ATF/CICS is unable to obtain the storage. If the reason for the error is unknown, make note of the indicated return **code** and contact your ATF/CICS customer representative for support.

---

**TTC0212W**    **NO MATCHING VIRTUAL CLOCK  
DEFINITIONS FOUND - NOTHING  
function**

**Explanation:** UPDATE or DELETE function request did not match any existing virtual clock or ITC definitions.

**Programmer response:** None, unless the incorrect

TERMID, TRANSID, USERID or CLOCK name was specified. In this case, modify the appropriate name field(s) and reissue the command.

---

**TTC0213I VIRTUAL CLOCK DEFINITION PROCESSING WAS CANCELED BY THE USER**

**Explanation:** CANCEL command was issue to terminate and not process a virtual clock ADD, UPDATE or DELETE request.

**Programmer response:** None.

---

**TTC0214W ENTRY IS BEING UPDATED BY USER userid AT TERMINAL termid**

**Explanation:** Attempt was made to update or delete a virtual clock definition that is currently being exclusively updated or deleted by another indicated **userid** at the indicated **termid**.

**Programmer response:** ATF/CICS protects virtual clock definitions from being modified concurrently by more than one user. Try again at a later time to modify the virtual clock definition.

---

**TTC0215I ALL HELD VIRTUAL CLOCK DEFINITIONS HAVE BEEN FREED**

**Explanation:** FREE command has successfully freed all virtual clock definitions that were found in an exclusive hold status.

**Programmer response:** None. Use the FREE command with extreme caution as it may lead to concurrent modifications of virtual clock definitions.

---

**TTC0216E DATE MUST SPECIFY AN ITC NAME OR AN ASTERISK WHEN 'NOTERM' SPECIFIED**

**Explanation:** Clock definitions that are associated with non terminal transactions (TERM=NOTERM) can only specify the name of an ITC as the date value or an asterisk (\*) for the real date. Specifying a date value or days offset value is not allowed.

**Programmer response:** Change the date value to reference the name of an ITC or set it to an asterisk and reissue the command.

---

**TTC0217E TIME MUST SPECIFY AN ASTERISK WHEN 'NOTERM' SPECIFIED**

**Explanation:** Clock definitions that are associated with non terminal transactions (TERM=NOTERM) can only specify the time value as an asterisk (\*) for the real time. Specifying a time value or time offset value is not allowed.

**Programmer response:** Set the time value to an asterisk and reissue the command.

---

**TTC0218E SPECIFY 'YES' OR 'NO' TO KEEP VIRTUAL CLOCK IN VCD OR NOT**

**Explanation:** KEEP parameter in the command issued is invalid.

**Programmer response:** Specify KEEP=NO (default) to retain the virtual clock definition only in memory or specify KEEP=YES to also save the definition in the Virtual Clock Data Set (VCD).

---

**TTC0219E 'KEEP' CANNOT BE SPECIFIED FOR 'DELETE' REQUESTS**

**Explanation:** KEEP parameter cannot be specified for DELETE functions.

**Programmer response:** Remove the KEEP parameter from the DELETE command and reissue the command. The KEEP parameter can only be specified for ADD or UPDATE functions.

---

**TTC0270E UNABLE TO CALCULATE VIRTUAL CLOCK OFFSET - R15=code**

**Explanation:** Encountered a logic error in determining a virtual clock's date and time offset from the current system clock's date and time.

**Programmer response:** Processing terminates. Make note of the indicated return **code** and contact your ATF/CICS customer representative for support.

---

**TTC0271E UNABLE TO FREE TASK TABLE STORAGE - R15=code**

**Explanation:** Was unable to release one of its previously obtained resident storage areas.

**Programmer response:** Processing terminates. This may occur when the CICS region is experiencing storage violation problems and ATF/CICS storage has been corrupted. If the reason for the error is unknown, make note of the indicated return **code** and contact your ATF/CICS customer representative for support.

---

**TTC0300I VCD FILE vcd WAS functionED SUCCESSFULLY**

**Explanation:** Virtual Clock Data Set **vcd** was successfully processed by the LOAD, RELOAD or RESTART **function** command. Copies of all virtual clock definitions are now resident in memory.

**Programmer response:** None.

---

**TTC0301E INVALID VCD I/O REQUEST INDICATOR: FILE=vcd, INDICATOR=X'indicator'**

**Explanation:** ATF/CICS VCD I/O routine encountered an internally issued invalid request to process the **vcd** file.

## Messages and codes

**Programmer response:** Processing terminates. Make note of the invalid **indicator** value and contact your ATF/CICS customer representative for support.

---

**TTC0302E UNEXPECTED DUPLICATE RECORD CONDITION OCCURRED - FUNCTION=function**

**Explanation:** DUPREC error condition was returned by CICS after ATF/CICS issued a File Control command to process the Virtual Clock Data Set.

**Programmer response:** Processing terminates. Make note of the failing I/O **function** and contact your ATF/CICS customer representative for support.

---

**TTC0303E UNABLE TO PROCESS VIRTUAL CLOCK DEFINITION - FILE=vcd, FUNCTION=function, R15=code**

**Explanation:** ATF/CICS VCD I/O routine encountered an internal error while processing the **vcd** file.

**Programmer response:** Processing terminates. Make note of the **function** and **code** values and of any other error messages that may have been issued and contact your ATF/CICS customer representative for support.

---

**TTC0304E UNABLE TO DETERMINE DEFINITION'S MEMORY ADDRESS - FILE=vcd, FUNCTION=function**

**Explanation:** ATF/CICS VCD I/O routine encountered an internal error while processing the **vcd** file.

**Programmer response:** Processing terminates. Make note of the **function** value and contact your ATF/CICS customer representative for support.

---

**TTC0305E PROCESSING OF VCD FILE vcd TERMINATED DUE TO PREVIOUS ERROR**

**Explanation:** ATF/CICS VCD I/O routine encountered an internal error while processing the **vcd** file.

**Programmer response:** Processing terminates. Make note of the error messages that were previously issued and contact your ATF/CICS customer representative for support.

---

**TTC0306W RECORD BYPASSED DUE TO PREVIOUS ERROR - PROCESSING CONTINUES**

**Explanation:** ATF/CICS VCD I/O routine encountered an I/O error while loading the VCD file into memory.

**Programmer response:** Processing continues. Make note of the error messages that were previously issued and contact your ATF/CICS customer representative for support.

---

**TTC0307E RECORD LENGTH FOR VCD FILE vcd EXCEEDS INTERNAL BUFFER SIZE BY size BYTES**

**Explanation:** ATF/CICS VCD I/O routine encountered an internal error while processing the **vcd** file.

**Programmer response:** Processing terminates. Make note of the buffer **size** deficiency value and contact your ATF/CICS customer representative for support.

---

**TTC0308I VCD FILE vcd IS EMPTY - function COMPLETED SUCCESSFULLY**

**Explanation:** Virtual Clock Data Set **vcd** was successfully processed by the LOAD, RELOAD or RESTART **function** command. However, the **vcd** contains no virtual clock definitions.

**Programmer response:** None. Use the ATF/CICS command or online interface to add virtual clock definitions.

---

**TTC0309E VCD FILE vcd CANNOT BE ACCESSED - FILE IS status**

**Explanation:** ATF/CICS VCD I/O routine attempted to access the **vcd** file but CICS indicated that the **vcd**'s **status** was closed, disabled or not defined to CICS in the File Control Table (FCT).

**Programmer response:** Processing terminates. Correct the external cause of the **vcd** file's **status** and restart ATF/CICS

---

**TTC0310E VCD I/O REQUEST FAILED: FILE=vcd, FUNCTION=function, REQUEST=request**

**Explanation:** Error condition was returned by CICS after ATF/CICS issued a File Control command to process the Virtual Clock Data Set **vcd**.

**Programmer response:** Processing terminates. Make note of the failing I/O **function** and **request** and of message TTC0311E that follows and contact your ATF/CICS customer representative for support.

---

**TTC0311E EIBRCODE=X'code', EIBRESP=X'code', EIBRESP2=X'code'**

**Explanation:** Error condition was returned by CICS after ATF/CICS issued a File Control command to process the Virtual Clock Data Set.

**Programmer response:** Processing terminates. Make note of the failing **codes** and of preceding message TTC0310E and contact your ATF/CICS customer representative for support.

---

**TTC0700E EXEC CICS command REQUEST FAILED - RESOURCE=resource, RESP=code**

**Explanation:** Unexpected error occurred when ATF/CICS issued the indicated CICS Command Level command.

**Programmer response:** Processing terminates. The message displays the symbolic identifier of the resource accessed by the CICS Command Level command and the error response code returned by CICS. If the reason for the error is unknown, make note of the indicated **resource** name and response **code** and contact your ATF/CICS customer representative for support.

---

**TTC0701E FIELD EDIT ERROR - FUNCTION=X'function', TYPE=X'type', FORMAT=X'format', R15=X'code'**

**Explanation:** ATF/CICS editing routine encountered an internally issued invalid edit request.

**Programmer response:** Processing may terminate, depending on the significance of the edit request. Make note of the indicated error information and contact your ATF/CICS customer representative for support.

---

**TTC0750W NO ADDITIONAL HELP FACILITIES ARE PRESENTLY**

**Explanation:** HELP command was issued from an ATF/CICS online interface screen that did not previously display a short message in the screen's upper right hand corner. No additional general help is currently available.

**Programmer response:** Processing continues. Future versions of ATF/CICS may provide additional help and tutorial facilities in the online interface.

---

**TTC0751E THE PF KEY, COMMAND OR OPTION ENTERED IS NOT VALID**

**Explanation:** Command or option entered in the screen's command/option field or the PF key pressed is invalid or not applicable to the current online interface screen.

**Programmer response:** Review this document for the available commands and options associated with the currently displayed screen and reenter a valid command or option.

---

**TTC0752E THE SCROLLING PF KEY OR COMMAND ENTERED IS CURRENTLY NOT APPLICABLE**

**Explanation:** Scroll command was issued from an online interface screen that does not contain a scrollable data area.

**Programmer response:** Review this document for the

available commands and options associated with the currently displayed screen and reenter an applicable command or option.

---

**TTC0753E VALID: M (MAX), P (PAGE), H(HALF), C(CSR) OR 1 TO 9999**

**Explanation:** Invalid scroll amount was specified in the screen's command field or scroll amount field.

**Programmer response:** Change the scroll amount in error to one of the valid scroll amounts shown in the message and reissue the scroll command.

---

**TTC0754E VALID: 1 TO 99999999**

**Explanation:** Invalid line scroll amount was specified in the screen's command field.

**Programmer response:** Change the line scroll amount in error to a value from 1 to 99999999, as shown in the message, and reissue the scroll command.

---

**TTC0755E VALID: A (ADD), D (DELETE) OR U (UPDATE)**

**Explanation:** Invalid line command was specified alongside a virtual clock definition's entry on the Edit Virtual Clock Definitions screen.

**Programmer response:** Change the line command in error to one of the valid line commands shown in the message and reissue the scroll command.

---

**TTC0800I INTERNAL TRACE IS NOW ON FOR TERMINAL termid**

**Explanation:** ATF/CICS TRACE command was issued at the indicated **termid**.

**Programmer response:** Processing continues. ATF/CICS trace messages is issued to the system operator console when a transaction is executed at the indicated **termid** and ATF/CICS determines the transaction's eligibility for virtual timing service.

---

**TTC0801I INTERNAL TRACE IS NOW OFF**

**Explanation:** ATF/CICS TRACE command was issued at the indicated **termid** after it had previously been issued at the same **termid** to turn internal tracing on. The current second TRACE command has turned tracing off.

**Programmer response:** Processing continues. ATF/CICS trace messages are no longer issued to the system operator console for the indicated **termid**.

## Messages and codes

---

**TTC0810E FIELD VALUES IN ERROR IN ASSEMBLED MODULE TTCCiver**

**Explanation:** Error was detected in the load module copy of assembled installation module TTCCIVER that prevents ATF/CICS from setting the EIBDATE and EIBTIME fields during transaction initialization.

**Programmer response:** Processing continues. ATF/CICS support is limited to setting the EIBDATE and EIBTIME fields during processing of any EXEC CICS command.

---

**TTC0811E CICS MODULE dfhxxxxx WAS NOT DEFINED TO BE LOADED INTO UNPROTECTED STORAGE**

**Explanation:** Needs to dynamically modify CICS module **dfhxxxxx**, listed in the message, in order to provide support for setting the EIBDATE and EIBTIME fields during transaction initialization. However, ATF/CICS determined that the module was loaded into protected storage and therefore it cannot be dynamically modified.

**Programmer response:** Processing continues. ATF/CICS support is limited to setting the EIBDATE and EIBTIME fields during processing of any EXEC CICS command. Refer to the *Application Time Facility for CICS Installation and Customization Guide* for instructions on how to customize CICS to load module **dfhxxxxx** into unprotected storage.

---

**TTC0812E CANNOT IDENTIFY CODE IN CICS MODULE dfhxxxxx - MAY BE INTERCEPTED BY ANOTHER SOFTWARE PRODUCT**

**Explanation:** Needs to dynamically modify CICS module **dfhxxxxx**, listed in the message, in order to provide support for setting the EIBDATE and EIBTIME fields during transaction initialization. However, ATF/CICS determined that the module does not contain the identifying code anticipated by ATF/CICS to be within the module.

**Programmer response:** Processing continues. ATF/CICS support is limited to setting the EIBDATE and EIBTIME fields during processing of any EXEC CICS command. Contact your ATF/CICS customer representative for support.

---

**TTC0813W CANNOT IDENTIFY CICS MODULE dfhxxxxx IN STORAGE - MAY BE INTERCEPTED BY ANOTHER SOFTWARE PRODUCT**

**Explanation:** Needs to dynamically modify CICS module **dfhxxxxx**, listed in the message, in order to provide support for setting the EIBDATE and EIBTIME fields during transaction initialization. However, ATF/CICS could not locate and identify the load point

location of the module within CICS storage.

**Programmer response:** Processing continues. ATF/CICS attempts to use an alternate method to locate and identify CICS load module **dfhxxxxx**.

---

**TTC0814W WILL ATTEMPT TO INSTALL USE OF CICS GLOBAL EXIT POINT XPCFTCH VIA ALTERNATE METHOD**

**Explanation:** Previously issued message TTC0813W.

**Programmer response:** Processing continues. ATF/CICS attempts to use an alternate method to locate and identify the CICS load module mentioned in message TTC0813W.

---

**TTC0815E CANNOT IDENTIFY LOAD POINT OF CICS MODULE dfhxxxxx**

**Explanation:** Previously issued messages TTC0813W and TTC0814W. However, ATF/CICS still failed to locate and identify CICS load module **dfhxxxxx** within CICS storage.

**Programmer response:** Processing continues. ATF/CICS support is limited to setting the EIBDATE and EIBTIME fields during processing of any EXEC CICS command. Contact your ATF/CICS customer representative for support.

---

**TTC0820W BYPASSING USE OF CICS GLOBAL EXIT POINT XPCFTCH DUE TO PREVIOUS ERROR**

**Explanation:** To this message, ATF/CICS issued one or more error messages, indicating that it could not support setting the EIBDATE and EIBTIME fields during transaction initialization.

**Programmer response:** Processing continues. ATF/CICS support is limited to setting the EIBDATE and EIBTIME fields during processing of any EXEC CICS command. Contact your ATF/CICS customer representative for support.

---

**TTC0821W CANNOT ENABLE INTERFACE TO TICTOC/MVS WITHOUT USE OF CICS GLOBAL EXIT POINT XPCFTCH**

**Explanation:** To this message, ATF/CICS issued a message indicating that it could not support the use of CICS Global User Exit point XPCFTCH due to a previous error. The use of exit point XPCFTCH is required by ATF/CICS in order to interface with ATF to support z/OS date and time services.

**Programmer response:** Processing continues. ATF/CICS support is limited to setting the EIBDATE and EIBTIME fields during processing of any EXEC CICS command. Contact your ATF/CICS customer representative for support.

---

**TTC0960E    INVALID INTERNAL PROCESSING  
REQUEST - DATA=X'code'**

**Explanation:** Encountered an internally issued invalid processing request.

**Programmer response:** Processing may terminate, depending on the significance of the request. Make note of the indicated error **code** and contact your ATF/CICS customer representative for support.

---

**TTC0961E    INTERNAL LINKAGE STACK AREA  
EXHAUSTED**

**Explanation:** Encountered an unrecoverable internal processing error.

**Programmer response:** Processing terminates. Contact your ATF/CICS customer representative for support.

---

**TTC0962E    LOAD MODULE module NOT FOUND  
- CHECK IF ASSEMBLED AND  
LINKED CORRECTLY**

**Explanation:** Load module of program TTCCIVER is not in any load library concatenated to the CICS DFHRPL DD statement.

**Programmer response:** Processing terminates. Refer to the *Application Time Facility for CICS Installation and Customization Guide* and the *Application Time Facility for CICS Program Directory* for detailed instructions on assembling and link editing program TTCCIVER for the currently executing version of CICS.

---

**TTC0963E    ENABLE EXIT FAILED -  
EIBRCODE=X'8040'. IBM PTF UN43826  
REQUIRED**

**Explanation:** CICS 2.1.2 only, ATF/CICS requires that IBM PTF UN43868 be applied. This PTF enable the use of Global User Exit point XEIOUT, whose availability is required by ATF/CICS.

**Programmer response:** Processing terminates. Contact IBM to obtain the required PTF. If CICS modules modified by the PTF reside in the LPA, an IPL may be required to make the PTF effective.

## Messages and codes

---

## Notices

This information was developed for products and services offered in the U.S.A.

IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing  
IBM Corporation  
North Castle Drive  
Armonk, NY 10504-1785  
U.S.A.

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

IBM Corporation  
Mail Station P300  
522 South Road  
Poughkeepsie New York 12601-5400  
U.S.A.

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

The licensed program described in this document and all licensed material available for it are provided by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement or any equivalent agreement between us.

For license inquiries regarding double-byte (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

IBM World Trade Asia Corporation  
Licensing  
2-31 Roppongi 3-chome, Minato-ku  
Tokyo 106, Japan

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law: INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR

## Notices

PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this IBM product and use of those Web sites is at your own risk.

If you are viewing this information softcopy, the photographs and color illustrations may not appear.

---

## Trademarks

The following are trademarks of International Business Machines Corporation in the United States, or other countries, or both:

CICS	DB2	IBM
Language Environment	MVS	z/OS

Other company, product, or service names may be trademarks or service marks of others.

---

# Index

## A

ADD command 37  
ADD online command 18  
ADDC online command 20  
ATF/CICS  
    overview 3

## C

CICS resource names  
    specifying in virtual clock  
        definitions 4  
CICS resources  
    defined 3  
clocks  
    virtual 4  
codes 45  
command interface  
    command syntax rules 31  
    overview 29  
command syntax rules  
    for command interface 31  
commands  
    examples 41  
    used in online interface 11

## D

date formats  
    displayed 25  
dates  
    virtual 4  
definition commands  
    for virtual clocks 37  
DELETE command 37

## F

FREE command 36

## H

HELP command 35

## I

Independent Time of day Clocks  
    *See* ITC  
interface command examples 41  
ITC  
    explained 4  
ITC definitions  
    adding 18  
    deleting 24  
    updating 22

## L

license inquiry 55  
LOAD command 34

## M

messages 45

## O

online interface  
    accessing 13  
    adding ITC definitions 18  
    changing user options 25  
    commands 11  
    deleting ITC definitions 24  
    deleting standard virtual clock  
        definitions 23  
    overview 9  
    screen format 11  
    updating ITC definitions 22  
    updating standard virtual clock  
        definitions 20  
    usage guidelines 11  
online user options  
    changing 25  
Operation control commands 33

## P

PF keys  
    used in online interface 11

## R

RELOAD command 34  
RESTART command 35

## S

SHUT command 33  
standard virtual clock definitions  
    deleting 23  
    updating 20  
START command 33  
STOP command 33

## T

TRACE command 36  
trademarks 56

## U

UPDATE command 37  
user options  
    changing online 25

## V

VCD  
    explained 4  
Virtual Clock Data set  
    *See* VCD  
virtual clock definitions  
    browsing 13  
    confirmation of deletion 25  
    containing CICS resource names 4  
    editing 15  
virtual clocks  
    adding standard definitions 16  
    defined 4  
    definition commands 37  
    deleting standard definitions 23  
    updating standard definitions 20  
virtual dates  
    defined 4



---

# Readers' Comments — We'd Like to Hear from You

IBM Application Time Facility for CICS  
User's Guide  
Version 2 Release 8 Modification 7

Publication No. SC31-6925-02

Overall, how satisfied are you with the information in this book?

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied
Overall satisfaction	<input type="checkbox"/>				

How satisfied are you that the information in this book is:

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied
Accurate	<input type="checkbox"/>				
Complete	<input type="checkbox"/>				
Easy to find	<input type="checkbox"/>				
Easy to understand	<input type="checkbox"/>				
Well organized	<input type="checkbox"/>				
Applicable to your tasks	<input type="checkbox"/>				

Please tell us how we can improve this book:

Thank you for your responses. May we contact you?  Yes  No

When you send comments to IBM, you grant IBM a nonexclusive right to use or distribute your comments in any way it believes appropriate without incurring any obligation to you.

---

Name

---

Address

---

Company or Organization

---

Phone No.



Fold and Tape

Please do not staple

Fold and Tape



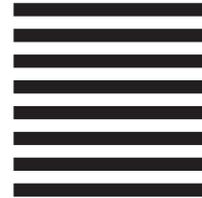
NO POSTAGE  
NECESSARY  
IF MAILED IN THE  
UNITED STATES

# BUSINESS REPLY MAIL

FIRST-CLASS MAIL PERMIT NO. 40 ARMONK, NEW YORK

POSTAGE WILL BE PAID BY ADDRESSEE

IBM Corporation  
H150/090  
555 Bailey Avenue  
San Jose, CA  
U.S.A. 95141-9989



Fold and Tape

Please do not staple

Fold and Tape





Program Number: 5697-N42

Printed in USA

SC31-6925-02

