Entering CICS Commands

Objectives

Entering CICS Commands

In this module, you will look at the roles of the data center personnel who enter CICS commands, and the levels of command authority required by the different types of commands.

You will see how to enter a CICS command through a terminal, console, and TSO session. You will also examine Job Control Language (JCL) and the CEST and CEMN transactions.

After completing this module, you will be able to:

- Identify the Command Authority Required to Invoke CEST and CEMT Transactions
- Differentiate Between CICS Commands Entered at Terminals, Consoles, TSO, and JCL
- Identify the Function of the CEST and CEMN Transactions

Applications programmer

The CEDF and CEDX transactions enable application programmers to test application programs.

Operator

Operators use the CEST and CEMT transactions to inquire on and modify CICS resources. The CEMT transaction is also used to shut down the CICS system.

Systems programmer

The systems programmer can use the CEDA transaction to define resources to the CICS system while the system is running.

The CICS term for commands is 'transactions', and the CICS system provides a wide range of transactions for CICS users. Some commands are used by systems programmers to inquire on and modify the definition and status of the resources defined to CICS.

Application programmers code CICS commands to request CICS services for their programs. Operations personnel enter CICS commands to monitor the performance of CICS and identify the source of problems.

Terminal operator

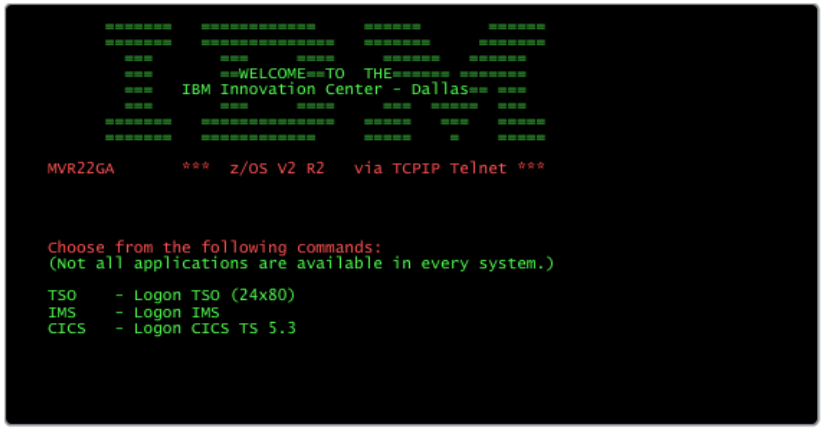
Supervisory terminal operator

Master terminal operator

Master terminal operator authority enables you to issue CEMT transactions to monitor and modify the majority of CICS system resources.

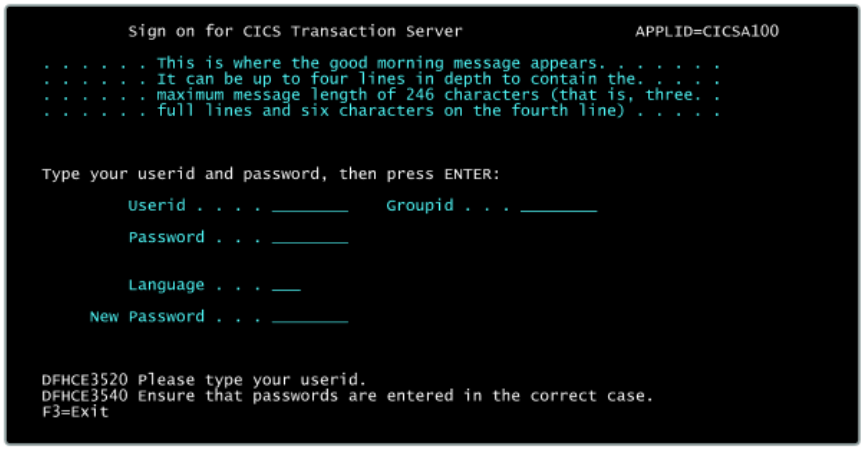
CICS provides operators with several distinct levels of command authority.

Mouse-over each level for a description.



In order to protect CICS resources, CICS will most likely be linked to an External Security Manager (ESM) such as RACF, and obtain the level of authorization defined in that product.

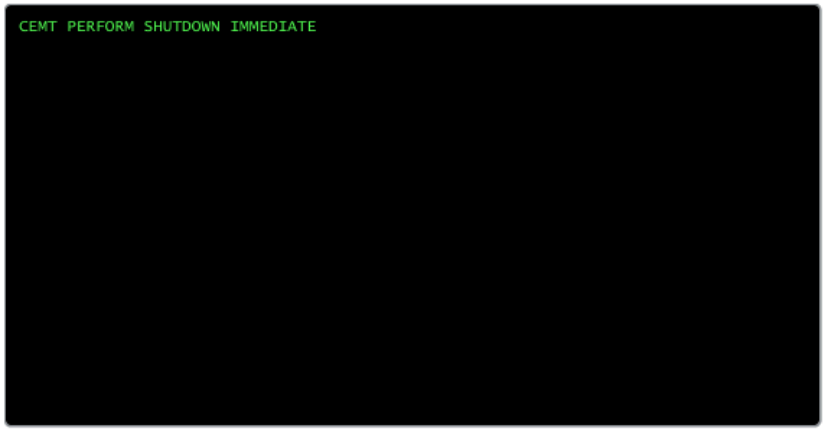
Depending on your CICS access screen, you may be able to log-on to CICS without actually signing in, as in the example shown here. This will only allow access to those transactions that the CICS default user is permitted to use, which may be limited.



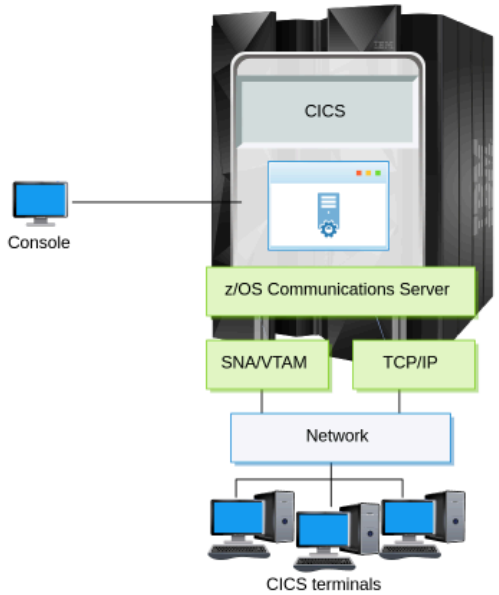
After logging onto CICS as a z/OS Communications Server application, you will receive a welcome screen similar to the one shown here. You will need to clear the screen, using the Esc key or equivalent, and then enter CEST to invoke the CICS sign-on screen.

Click **Play** to see how this is achieved.

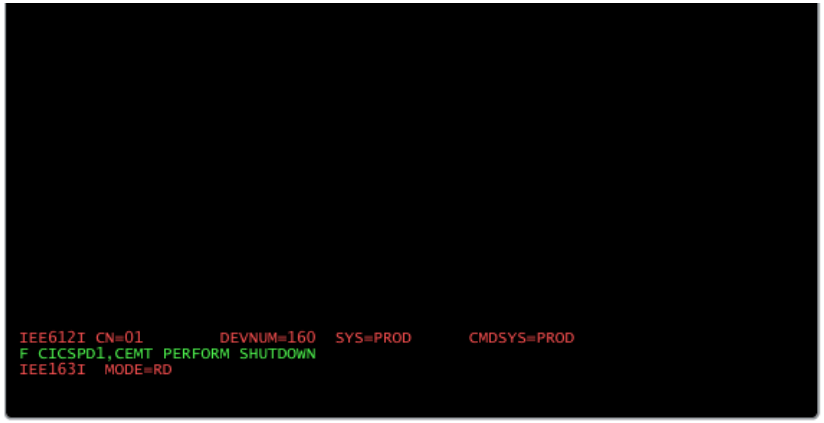
Instead of the process just described, you may just encounter a screen such as the one shown here, which requests sign-on details to your CICS system.



After signing-on to CICS, you will need to clear the screen before you are able to enter any commands. This will clear all partitions from the display and set the terminal to a base state. You can then enter CICS commands in the format shown here.



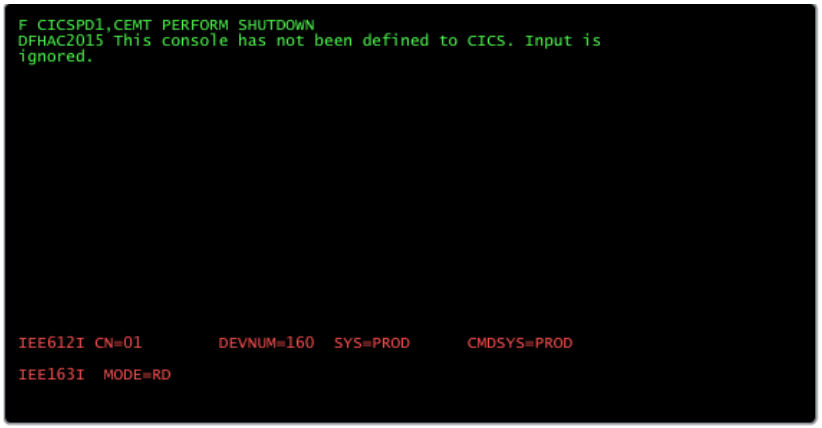
Being able to enter commands from a console is useful for operators who do not have ready access to a terminal. If the connection between the network and the terminals or system is broken, the console may be the only way for the operator to enter CICS commands.



If your system console has appropriate authority, CICS commands can be entered using the following syntax:

```
MODIFY cicsid,command
```

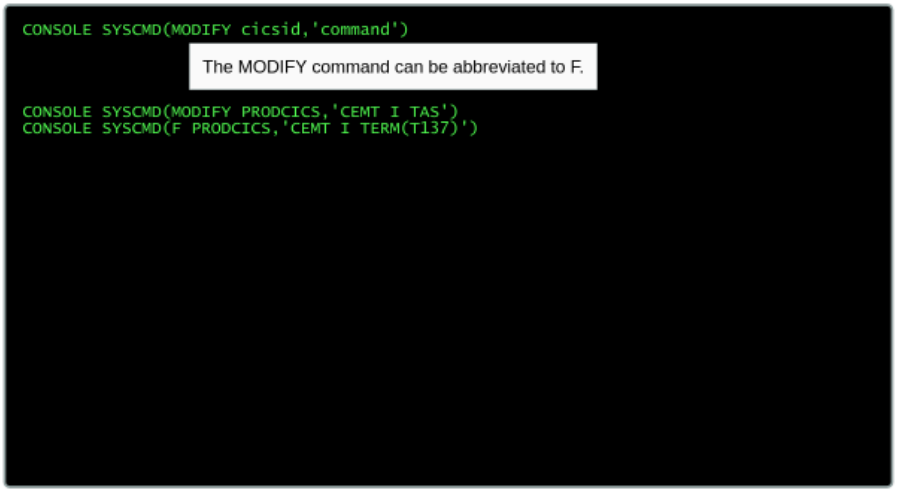
Where cicsid is the name of the job or procedure that is used to start CICS, and command is the CICS command that you want to enter, which can be enclosed in single quotes. The abbreviation F can be used in place of the MODIFY command.



The console on which you enter CICS commands must be defined to the CICS system. If it has not been defined, you will receive the following message if you try to type a CICS command on it:

```
DFHAC2015 This console has not been defined to CICS. Input is ignored.
```

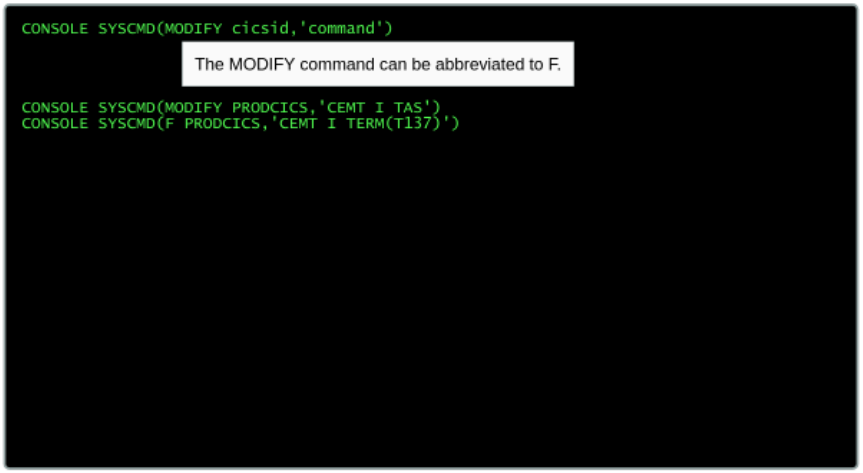
In this case, your command will be ignored.



You can enter CICS commands from TSO by invoking the following TSO CONSOLE command:

```
CONSOLE SYSCMD(MODIFY cicsid,'command')
```

Where cicsid is the name of the job or procedure that is used to start CICS, and cmd is the CICS command that you want to enter, which can be enclosed in single quotes.



Note that the entire SYSCMD parameter, which is the command that you would use if you were entering it at a console, must be enclosed in parentheses. You must also be authorized to use console commands, and you may require additional authorization to issue a MODIFY cicsid command.

```
  File  Edit  Edit_Settings  Menu  Utilities  Compilers  Test  Help
------------------------------------------------------------------------

EDIT       PRD.CICS.CNTL(CICCMD) - 01.09        Columns 00001 00072
Command ===>                                      Scroll ===> CSR
****** ************************* Top of Data ************************
000001 //CICCMD  JOB CIC301,'G HUANG',CLASS=B,MSGCLASS=X,
000002 //         NOTIFY=GDDE
000003 //*
000004 //* JOB USED TO SUBMIT CICS COMMANDS
000005 //*
000006 //IEFBR EXEC PGM=IEFBR14
000007 // F CICSPRD,'CEMT INQ TER'
000008 // F CICSPRD,'CEMT INQ TAS'
000009 // F CICSPRD,'CEMT SET TER(A110) ACQ'
000010 //
****** ************************ Bottom of Data **********************
```

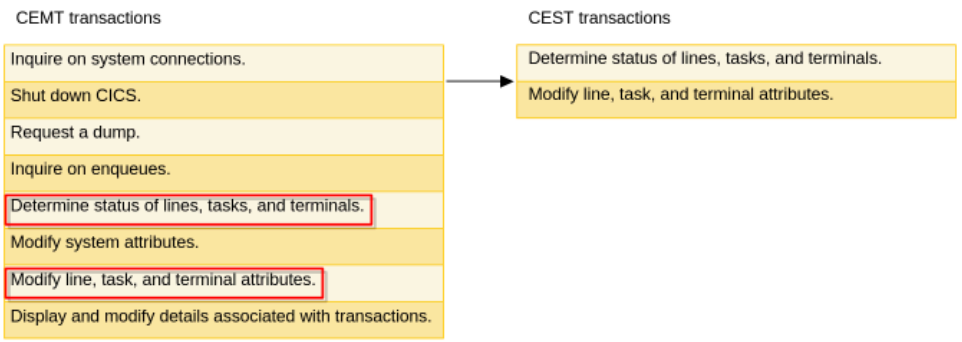
Depending on how the systems programmer has configured CICS, you may be able to submit commands to your CICS region by using JCL. The format of the actual command is the same as if you were entering it from a system console.

The IEFBR14 program that is invoked in the example here does not perform any real function, but it is often used to process statements found in the JCL step. In this case, it is CICS commands.

The CEKL transaction is used to remove tasks and should be invoked in situations where the CEMT transaction cannot be used.

All CICS transaction identifiers start with C and are four characters long.

Mouse-over each of the commonly used operator-related CICS transactions for a description.



In some organizations, the use of the CEMT transaction is limited to just a few individuals, such as systems programmers and lead operators. The CEST transactions are usually available to the majority of operators and are made up of a subset of less powerful CEMT transactions.

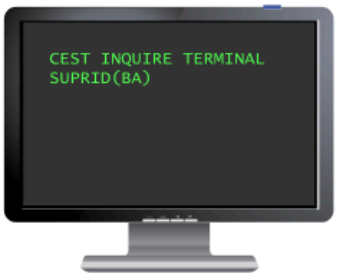
CEST transactions are limited to Inquire and Set actions, and they can only be used to reference a limited number of CICS resources.
Transaction access can also be restricted by CICS region; that is, individuals can be given restricted access, or no access level at all, to different CICS regions.

Systems programmer

Terminal list table – DFHTLTBA	
CICS terminal name	Operator identification
BI20	2UF
SJ39	F83
AWI2	SAL
O9EE	DI0
JH3K	WO4
MM98	FI0
FJKH	2IR
F98P	FC8

To understand how the CEST transaction is used, you must first understand the concept of the terminal list table (TLT). The TLT is a list of terminals that are defined by their four-character CICS terminal names or by the three-character operator identifications or opids.

A TLT can be used to group terminals that share something in common, such as a department within an organization or in a separate location. Systems programmers are usually responsible for generating TLTs.



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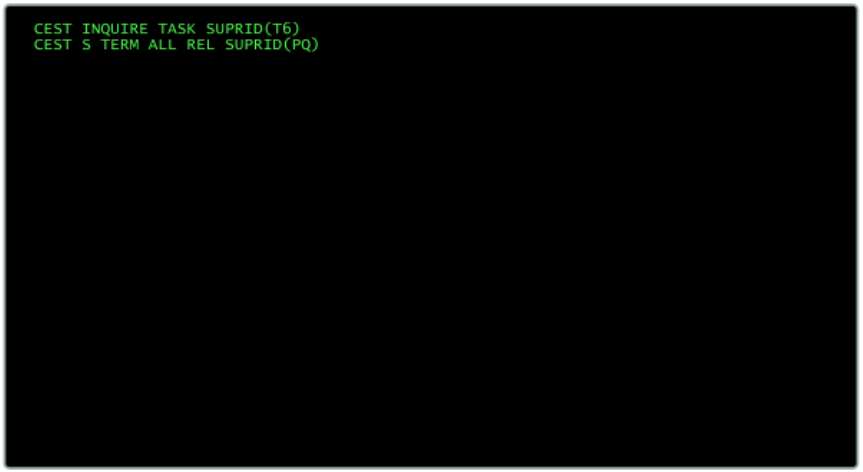
FJKH	2IR
F98P	FC8

All TLTs are created by using the following name format:

`DFHTLTxx`

Where xx is the suffix used to distinguish one TLT from another.

When a supervisory terminal command is entered, the suffix of a TLT must be specified as a parameter. This limits the effect of the command to the terminals included in the TLT and, therefore, to users in the designated department or location.



The format of the CEST command is the same as the CEMT command except that a SUPRID(xx) parameter must be supplied to indicate which TLT is to be referenced. For example, the following command will display active tasks being run on the terminals specified in DFHTLTT6:

```
CEST INQUIRE TASK SUPRID(T6)
```

CICS commands are used in these situations:

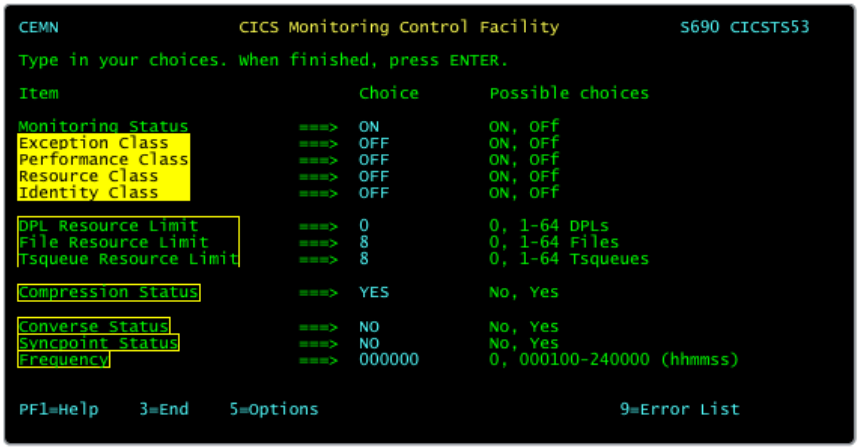
- A CICS user informs you that their terminal is not functioning properly
- CICS must be shut down
- CICS is not communicating between regions
- CICS is not taking a dump
- Two CICS tasks seem to be enqueuing each other
- A CICS task must be terminated immediately
- CICS will not shut down
- You must send a message to all CICS users

In a later CICS module you will see how CICS commands are invoked for the types of scenarios mentioned here.

Question 3 of 3

The use of CICS commands is one method of identifying CICS problems. CICS also provides you with the DFHMNDUP utility and the DFH$MOLS print program to monitor certain aspects of CICS processing, and to capture and report on the monitored data. Operators can display and modify some of these monitoring characteristics by using the CEMN transaction.

Type CEMN and press Enter.



These items can be configured to capture exception records, performance records, transaction resource monitoring records, and identity class records.

The CICS Monitoring Control Facility panel displays the state of the monitoring facility and the current monitoring settings.

Mouse-over each highlighted field for a description.