

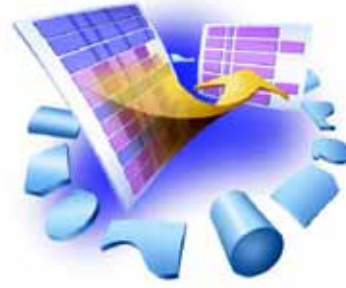


IBM Software Group

## IBM File Manager for z/OS IMS Feature

Program Number 5655-S14

### Tutorial



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Welcome to the tutorial for the IMS feature of IBM's File Manager for z/OS, one of the IBM zSeries problem determination tools.

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Welcome to the tutorial for the IMS feature of IBM's File Manager for z/OS, one of the IBM zSeries problem determination tools.



## File Manager IMS training: sections

- Using templates and views
  - About templates and views
  - Create and save a new template
- Browsing or editing an IMS database with a template
  - Starting the editor
  - The display formats and zoom
  - Display different segment types
  - Find, change, scope, and locate data
  - Insert, repeat, repeat all, and delete segments
  - End, quit, save, undo, and cancel



This is part two of the section that describes how to browse or edit a database using a template. It starts where part one left off. In this part, you will learn about some of the commands to work with data, such as find, change, insert, and repeat. You will also learn how to exit from the editor, while either saving or canceling your changes.



## Find, change, scope, and locate data

### Topics in this section:

- What commands are used to work with data?
  - **Find**
    - search for data in segments
  - **Change**
    - search for and modify data in segments
  - **Locate**
    - search for column names
  - **Show**
    - display all segment types, or only one type
    - adjust the scope to only one, or all types
  - **Scope**
    - adjust the scope to the entire database, or only segments in the current DB record



Next you will see commands commonly used to work with data. Find commands are used to search for data in segments. Change commands search for and modify data in segments. Locate is used to search for column or field names. The Show command is used to control whether the browser or editor should display all segment types, or only one type. And the scope command is used to adjust the scope of Find and Change commands.




## Start the editor

```
Process  Options  Help
-----
FM/IMS          Edit : Database Positioning
Command ==> _____ Scroll CSR

Subsystem IMSA Database USRSCN Key sequence Format TABL
View C Temporary
Cmd SXE Level Segment Description len Key value
s SX 1 CUSTADDR 10 0003874923
  X 2 TOTUSE 6 .....
  X 3 PRMUSE 8 .....
  X 3 OFFUSE 8 .....
  X 4 OFFDTL 8 .....
  X 2 BALDUE 6 .....
  X 3 BALHIST 6 .....
**** End of data ****

F1=Help F2=Split F3=Exit F4=CRetriev F5=Key >= F7
F8=Forward F9=Swap F10=Actions F12=retrieve
```



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In this example, the editor will be used. In earlier sections, you saw how to start the editor. Starting from the database positioning screen, select a segment type for positioning, and press Enter.



## Positioned to the top of the database

```
Process  Options  Help
-----  -
FM/IMS                               Edit : IMS Database USRSCN
Command ==>                          Scroll CSR
      CHKPID FM000001 Autosave ON  SHOW SUP ON  Scope DB  Format TABL
      SEGA-ACCOUNT-NUM SEGA-CUSTOMER-PHONE-NB SEGA-CUSTOMER-NAME
Cmd Level Segment      #2          #3          #4          +
      AN 1:10          AN 11:10          AN 21:30
      <---+---->      <---+---->      <---+----1---+--->
      **** Top of window ****
      1  CUSTADDR  1111111111  7233439938  JOHN SMITH
      2  TOTUSE   Key=200303
      3  PRMUSE   Key=20030301
      3  OFFUSE   Key=20030301
      4  OFFDTL   Key=00:00:00
      4  OFFDTL   Key=18:32:05
      2  BALDUE   Key=200303
      3  BALHIST  Key=200302
      3  BALHIST  Key=200303
      1  CUSTADDR  2111111111  8133249846  JOAN SMITH
      2  TOTUSE   Key=200303
      3  PRMUSE   Key=20030301
F1=Help   F2=Format  F3=Exit   F4=CRetriev  F5=RFind   F6=RChange
F7=Up     F8=Down    F9=Swap   F10=Left    F11=Right  F12=Retrieve
```

\*\*\*\* Top of window \*\*\*\*

You can modify data by overtyping the green fields. When you press **Enter**, the data is immediately written to the database. Changes can be cancelled to the previous checkpoint.

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Here, the editor is positioned to the top of the database, that is, to the first root segment. Of course, in the editor, you can modify data by overtyping data in the green fields. If you make a change and press Enter, the change is immediately written to the database. However, your changes can be cancelled back to the most recent checkpoint.

## Find command and Repeat Find

Command ==> **f joan** **Enter**

FM/IMS Edit : IMS Database Chars 'joan' found

Command ==> **Scroll CSR**

CHKPID FM000001 Autosave ON SHOW SUP OFF Scope DB Format **TABL**

Cmd	Level	Segment	#2	#3	#4	+	
			AN 1:10	AN 11:10	AN 21:30		
			<---+---->	<----->	<-----1----->		
			**** Top of window ****				
1		CUSTADDR	1111111111	7233439938	JOHN SMITH		
2		TOTUSE	Key=200303				
3		PRMUSE	1 segment				
3		OFFUSE	Key=2003030				
4		OFFDTL	2 segments				
2		BALDUE	Key=200303				
3		BALHIST	2 segments				
1		CUSTADDR	2111111111	8133249846	<b>JOAN SMITH</b>		
2		TOTUSE	Key=200303				
3		PRMUSE	30 segments				
3		OFFUSE	Key=2003030				
4		OFFDTL	3 segments				

F1=Help F2=Format F3=Exit F4=CRetrieve F5=RFind F6=RChange  
F7=Up F8=Down F9=Swap F10=Left F11=Right F12=Retrieve

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Here is a Find command. F space and a search string is entered. Segments are searched starting with the current segment. The next occurrence of the data is found, and the cursor is positioned on the data. Notice that PF5 is a repeat find. PF5 is pressed.



## Find command and Repeat Find

```
Process  Options  Help
-----  -
FM/IMS          Edit : IMS Database USRSCN  Chars 'joan' found
Command ==>      Scroll CSR
                CHKPID FM000004 Autosave ON  SHOW SUP ON  Scope DB  Format TABL
                SEGA-ACCOUNT-NUM SEGA-CUSTOMER-PHONE-NB SEGA-CUSTOMER-NAME
Cmd Level Segment #2 #3 #4 +
                AN 1:10 AN 11:10 AN 21:30
                <---+----> <---+----> <---+---->
  1  CUSTADDR 9983874923 3273325564  Joan B. 00NE
  2  TOTUSE  Key=200303
  3  PRMUSE  Key=20030301
  3  PRMUSE  Key=20030302
  3  PRMUSE  Key=20030303
  3  PRMUSE  Key=20030304
  3  PRMUSE  Key=20030305
  3  PRMUSE  Key=20030306
  3  PRMUSE  Key=20030307
  3  PRMUSE  Key=20030308
  3  PRMUSE  Key=20030309
  3  PRMUSE  Key=20030310
  3  PRMUSE  Key=20030311
F1=Help  F2=Format  F3=Exit  F4=CRetriev  F5=RFind  F6=RChange
F7=Up    F8=Down    F9=Swap  F10=Left    F11=Right  F12=Retrieve
```

The next occurrence of the data is found

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And the search continues through the data base, stopping at the next occurrence.



Find command

Command ==> **f rd #5** **Enter**

FM/IMS Edit : IMS Data SCN Chars 'rd' found  
 Command ==> CHKPID FM000004 Autosave ON SHOW SUP ON Scope DB Format TABL  
 SEGA-CUSTOMER-ADDRESS

Cmd	Level	Segment	AN	51:40
1	CUSTADDR	6	PRARIE	RD WY 323423-123456
2	TOTUSE			Key=2003030
3	PRMUSE			Key=20030301
3	PRMUSE			Key=20030301
3	PRMUSE			Key=20030301
3	PRMUSE			Key=20030301
3	PRMUSE			Key=20030305
3	PRMUSE			Key=20030306
3	PRMUSE			Key=20030307
3	PRMUSE			Key=20030308
3	PRMUSE			Key=20030309
3	PRMUSE			Key=20030310
3	PRMUSE			Key=20030311

F1=Help F2=Format F3=Exit F4=CRetriev F5=RFind F6=RChange  
 F7=Up F8=Down F9=Swap F10=Left F11=Right F12=Retrieve

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There are optional parameters on the Find command. You can limit the scope of a Find command to only a particular field or column. Use this syntax, F space search string space # column reference number. Notice that every field is given a column reference number. In this example, only column number 5, which is the SEGA-CUSTOMER-ADDRESS field is searched.

## Root First command

Command ==> root first Enter

---

FM/IMS Edit : IMS Database USRSCN

Command ==> Scroll CSR

CHKPID FM000004 Autosave ON SHOW SUP ON Scope DB Format TABL

SEGA-CUSTOMER-ADDRESS

Cmd Level Segment #5

AN 51:40

<---+---1---+---2---+---3---+--->

\*\*\*\* Top of window \*\*\*\*

— 1	CUSTADDR	666 PRARIERD, WY 323423-123456
— 2	TOTUSE	Key=200303
— 3	PRMUSE	Key=20030301
— 3	PRMUSE	Key=20030302
— 3	PRMUSE	Key=20030303
— 3	PRMUSE	Key=20030305
— 3	PRMUSE	Key=20030306
— 3	PRMUSE	Key=20030307
— 3	PRMUSE	Key=20030308
— 3	PRMUSE	Key=20030309
— 3	PRMUSE	Key=20030310
— 3	PRMUSE	Key=20030311

The **ROOT FIRST** command repositions to the top of the database

F1=Help F2=Format F3=Exit F4=CRetriev F5=RFind F6=RChange  
 F7=Up F8=Down F9=Swap F10=Left F11=Right F12=Retrieve

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Find commands change the database position to the segment where the data was found. Here is an easy way to get back to the top of the data base, to the first root segment, the command ROOT FIRST. Enter.

Change command

Command ==> c somewhere NOWHERE #5 Enter

---

FM/IMS Edit : IMS Database USR 1 string(s) changed

Command ==> Scroll CSR

CHKPID FM000005 Autosave ON SHOW SUP ON Scope DB Format TABL

SEGA-CUSTOMER-ADDRESS

Cmd	Level	Segment	AN 51:40
			<---+---1---+---2---+---3---+--->
1		CUSTADDR	565 MAIN ST. <u>NOWHERE</u> XS 123456-123456
2		TOTUSE	Key=200303
3		PRMUSE	Key=20030301
3		PRMUSE	Key=20030302
3		PRMUSE	Key=20030303
3		PRMUSE	Key=20030304
3		PRMUSE	Key=20030305
3		PRMUSE	Key=20030306
3		PRMUSE	Key=20030307
3		PRMUSE	Key=20030308
3		PRMUSE	Key=20030309
3		PRMUSE	Key=20030310
3		PRMUSE	Key=20030311

The database was scanned, starting from the current position, until a match was found, and the data changed.

F1=Help    F2=Format    F3=Exit    F4=CRetriev    F5=RFind    F6=RChange  
 F7=Up      F8=Down      F9=Swap    F10=Left      F11=Right    F12=Retrieve

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That repositioned to the first root segment in the data base. You can use a change command to search for and change data in segments. In this example, the command Change somewhere nowhere #5 is entered on the command line. The next occurrence of the string somewhere was found, and changed to nowhere in field number five.

## Change extended command

Command ==> **CX** Enter

Command ==> cx Scroll CSR  
t TABL

Extended Command Entry

C Complete typing the CHANGE command and press Enter.

CHANGE ==> 'Some large string in the database I want to change'  
 ==> e' 'A much shorter string'  
 ==> \_\_\_\_\_  
 ==> \_\_\_\_\_  
 ==> \_\_\_\_\_

F1=Help F2=\$plit F3=Exit F9=Swap F12=Cancel

3 PRMUSE Key=20030307  
 3 PRMUSE Key=20030307  
 3 PRMUSE Key=20030307  
 3 PRMUSE Key=20030310  
 3 PRMUSE Key=20030310

Use the **CX** command to change large strings that are too big to fit on the command line

F1=Help F2=Format F3=Exit F4=CRetriev F5=RFind F6=RChange  
 F7=Up F8=Down F9=Swap F10=Left F11=Right F12=Retrieve

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Have you ever been in a situation where the text string you were searching for was so long that you could not fit the entire find or change command on your command line? This special command is designed to handle just that situation. The CX command opens a pop-up window where you have the equivalent of an expanded command line. First type CX on the command line and press Enter. Then you can enter the from and to strings in the pop-up window.

Be aware that there is also an FX command that does the same thing for Find commands.







## Find and Change commands: Entering strings

- Entering strings in FIND and CHANGE:
  - FIND abc or CHANGE abc xyz
    - not case sensitive
  - FIND 'abc' or CHANGE 'abc' 'xyz'
    - not case sensitive
    - can contain spaces, or be a null value
  - FIND C'aBc' or CHANGE C 'aBc' C 'XyZ'
    - case sensitive
    - can contain spaces, or be a null value
  - FIND X'C1' or CHANGE X'E7' X'5F'
    - can contain any hex values

Here is a review of find and change commands. The first example shows simple Find and Change commands. It will search for data starting at the current position in the data base. Data values can be typed without quotation marks, as in the first example, or with quotation marks, as in the second. Quotation marks are needed if the data contains spaces.

In the first two examples, the searches are not case sensitive. To make your search case sensitive, type it as in the third example. Also, you can enter hexadecimal data strings as shown in the fourth example.



## Find and Change commands: Limiting fields or columns searched

- FIND abc 50 85 or CHANGE abc xyz 50 85
  - Search only between positions 50 through 85
- FIND abc #5 or CHANGE abc xyz #5
  - Search only in one field
  - Uses column reference number in TABL and SNGL formats
- FIND abc (#5 #12 #3) or CHANGE abc xyz (#5 #12 #3)
  - Search multiple fields
  - Separate field numbers with either commas or spaces
- FIND abc #2-#9 or CHANGE abc #2-#9
  - Search multiple fields within a range
- FIND abc #15(2) or CHANGE abc xyz #15(2)
  - Search an array field

There are other optional parameters that affect find and change commands. In the first example, only the data in segments between columns 50 through 80 are searched. In the second example, only data in field number 5 are searched. You can also limit the search to a list of fields, as shown in the third example, by listing the column reference numbers within parentheses. The fourth example shows how you can search for data in a range of columns by specifying two field numbers with a dash character between them. The last example pertains only to fields that are defined as arrays. For example, a field defined in a COBOL copybook with an OCCURS clause is an array. For array fields, you can specify the array subscript in parentheses after the column reference number.





## Find and Change commands: Changing the scope

- FIND ALL abc or CHANGE ALL abc xyz
- FIND ALL abc #5 or CHANGE ALL abc xyz #5
  - Search for all occurrences
- Other parms that affect scope:
  - FIRST, NEXT, ALL
  - GET (n) limit the number of segments searched
  - SEG (name) search only a specific segment type
  - DB search the entire database
  - REC search within the current database record
  - DEP search only dependent segments

And there are other parameters that affect the scope of Find and Change commands. Use a Find All or Change All command to search the entire data base. These can be used to get a count of how many times data is found, or to automatically change every occurrence of data in an entire database.

Use a FIRST parameter to begin the search at the beginning of the data base, starting at the first root segment. The NEXT parameter is the default, and makes the search start from the current position. The GET parameter is helpful when you are working with a very large data base. Since search commands scan the data base until a match is found, if you have a data base with millions and millions of segments, the search can possibly take a long time. The GET operand tells File Manager to stop searching after a certain number of segments have been read, to avoid those run away searches.

The SEG parameter can be used to limit the search to only one segment type. The DB parameter specifies that the entire data base is within scope. The REC parameter limits the search to only the current data base record. The current data base record is defined as the current root segment and all of its dependents. Finally, the DEP parameter limits searches to only dependent segments of the current segment.

## Locate command

Command ==> l address Enter

```

FM/IMS                               Edit : IMS Database USRSCN
Command ==>                           Scroll CSR
      CHKPID FM000006 Autosave ON     SHOW SUP ON Scope DB Format TABL
      SEGA-CUSTOMER-ADDRESS
Cmd Level Segment
      AN 51:40
      <---+---1---+---2---+---3---+--->
      **** Top of window ****
  ___ 1  CUSTADDR 666 PRARIERD, WY 323423-123456
  ___ 2  TOTUSE  Key=200303
  ___ 3  PRMUSE  Key=20030301
  ___ 3  PRMUSE  Key=20030302
  ___ 3  PRMUSE  Key=20030303
  ___ 3  PRMUSE  Key=20030305
  ___ 3  PRMUSE  Key=20030306
  ___ 3  PRMUSE  Key=20030307
  ___ 3  PRMUSE  Key=20030308
  ___ 3  PRMUSE  Key=20030309
  ___ 3  PRMUSE  Key=20030310
  ___ 3  PRMUSE  Key=20030311
F1=Help   F2=Format  F3=Exit   F4=CRetriev F5=RFind   F6=RChange
F7=Up     F8=Down    F9=Swap   F10=Left  F11=Right  F12=Retrieve
  
```

Use **Locate** to find a column name. Any part of the column name can be used.

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Find and change commands work with data in data bases. But the Locate command is used to work with metadata, or data about data. Here is an example. The command LOCATE ADDRESS was entered. That located a field that contained the character string ADDRESS. Use locate to find a field name.

## Locate command

FM/IMS
EQ1

Command ==> L #2 Enter

CHKPID FM000006

Command ==> #2 Scroll CSR

CHKPID FM000006 Autosave ON SHOW SUP ON Scope DB Format TABL

Cmd	Level	Segment	#2	#3	#4	+	
		AN	1:10	11:10	21:30		
			<---+---->	<---+---->	<---+----1----->		
			**** Top of window ****				
___	1	CUSTADDR	0003874923	3273325564	BILL B. UFFALO		
___	2	TOTUSE	Key=200303				
___	3	PRMUSE	Key=20030301				
___	3	PRMUSE	Key=20030302				
___	3	PRMUSE	Key=20030303				
___	3	PRMUSE	Key=20030305				
___	3	PRMUSE	Key=20030306				
___	3	PRMUSE	Key=20030307				
___	3	PRMUSE	Key=20030308				
___	3	PRMUSE	Key=20030309				
___	3	PRMUSE	Key=20030310				
___	3	PRMUSE	Key=20030311				

F1=Help    F2=Format    F3=Exit    F4=CRetriev    F5=RFind    F6=RChange  
 F7=Up    F8=Down    F9=Swap    F10=Left    F11=Right    F12=Retrieve

Use the **Locate** to find a column reference number

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You can also locate a field by it's reference number. Here, the command LOCATE #2 was used to reposition the display to field number 2.



## Locate command

- LOCATE price or LOCATE FLD price
  - Position to a field containing 'price' in the name
- LOCATE #15
  - Position to a field reference number
- LOCATE #12(6)
  - Position to an occurrence in an array
- LOCATE #12(8,5)
  - Position in a multi-dimensional array

Use the Locate command to reposition the display to find a field. You can specify any part of the field name as an operand, as shown in the first example. The second example shows how the field reference number can be used. In the third and fourth examples, the locate command is used to reposition to specific array occurrences of a field.



## Changing the scope

- There are parms on the Find and Change commands that affect the scope. For example:
  - F abc REC
  - C abc xyz SEG(SUBURB)
- You can also affect the scope with these commands:
  - **Show**
  - **Scope**
  - **Zoom**

There are different ways to affect the scope of Find and Change commands. You have seen that there are parameters on the commands that limit scope. For example, the REC parameter limits the scope to only the current data base record, and the SEG parameter limits the scope to only a particular segment type.

However, you can also effect the scope by using the SHOW, SCOPE, and ZOOM commands, as you will see next.



## Show command

- The SHOW command controls whether “suppressed” segments are:
  - Displayed or hidden
  - In or out of scope
- Definition: “Suppressed segment”:
  - A segment not of the currently formatted segment type
- With the setting: **SHOW SUP OFF**
  - Suppressed segments are not displayed and are out of scope
- With the setting: **SHOW SUP ON**
  - Keys of suppressed segments are displayed, and suppressed segments are in scope

The SHOW command controls whether suppressed segments are displayed or not. It also controls whether suppressed segments are in scope or out of scope. Before you understand what a SHOW command does for you, you should understand the definition of a suppressed segment. And here it is. A suppressed segment is any segment that is not of the currently formatted segment type. Remember that only one segment type is displayed at a time in table or single formats. Any segment types that are not fully displayed are suppressed.

The command: SHOW SUP OFF specifies that suppressed segments are not to be displayed, and that they are out of scope.

The opposite command: SHOW SUP ON specifies that suppressed segments should be displayed, and that they are in scope.

Find command with SHOW SUP OFF setting

Command ==> **f main** Enter

FM/IMS Edit : IMS Database Chars 'main' found  
 Command ==> **SHOW SUP OFF** Scope DB Format TABL  
 CHKPID FM000001 Autosave ON

SEGA-CUSTOMER-ADDRESS  
 AN 51:40  
 <---1---2---3--->

Cmd	Level	Segment	Address
1	1	CUSTADDR	565 MAIN ST. ANYWHERE, KS 123456
2	2	TOTUSE	Key=200303
3	3	PRMUSE	1 segment
3	3	OFFUSE	Key=20030301
4	4	OFFDTL	2 segments
2	2	BALDUE	Key=200303
3	3	BALHIST	Layout=SEGY2-PAST-PERIODS
3	3	BALHIST	Layout=SEGY1-CURRENT-PERIOD
1	1	CUSTADDR	565 MAIN ST. NOWHERE, KS 123456-123456
2	2	TOTUSE	Key=200303
3	3	PRMUSE	30 segment
3	3	OFFUSE	Key=200303
4	4	OFFDTL	3 segment

F1=Help F2=Format F3=EXIT F4=Retrieve F5=RFind F6=RChange  
 F7=Up F8=Down F9=Swap F10=Left F11=Right F12=Retrieve

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Here is an example of how to use SHOW commands. First, notice that the SHOW setting is always displayed just under the command line. In this case, the SHOW SUP OFF setting is in effect. With SHOW SUP OFF, only the current segment type is in scope. A FIND command is entered. Notice that the data was found in the segment in the top of the display, which is a CUSTADDR root segment. The data string was also found in another segment of the same type further down. But the other segment types were not searched.



## The SHOW SUP ON command

```
Process  Options  Help
-----  -
FM/IMS                               Edit : IMS Database USRSCN
Command ==> show sup on                Scroll CSR
                               CHKPID FM000001 Autosave ON  SHOW SUP OFF Scope DB  Format TABL
                               SEGA-CUSTOMER-ADDRESS
Cmd Level Segment
      AN 51:40
      <---+---1---+---2---+---3---+--->
      **** Top of window ****
  ___ 1  CUSTADDR 666 PRARIERD, WY 323423-123456
  ___ 2  TOTUSE   Key=200303
  ___ 3  PRMUSE   29 segments
  ___ 3  OFFUSE   Key=20030301
  ___ 4  OFFDTL   2 segments
  ___ 3  OFFUSE   Key=20030302
  ___ 4  OFFDTL   1 segment
  ___ 3  OFFUSE   Key=20030303
  ___ 4  OFFDTL   1 segment
  ___ 3  OFFUSE   Key=20030304
  ___ 4  OFFDTL   1 segment
  ___ 3  OFFUSE   Key=20030305
F1=Help  F2=Format  F3=Exit
F7=Up    F8=Down    F9=Swap
```

**SHOW SUP ON** will show keys for suppressed segments and set them in scope

**Enter**

F6=RChange  
F12=Retrieve

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Notice that the PRMUSE segments are not all displayed. Twin PRMUSE segments are collapsed on the display, and only segment counts are shown. Now the SHOW SUP ON command is entered.





## Result of the SHOW SUP ON command

```
Process  Options  Help
-----  -
FM/IMS                               Edit : IMS Database USRSCN
Command ==> _____ SHOW SUP ON _____ Scroll CSR
                CHKPID FM000001 Autosave ON SHOW SUP ON Scope DB Format TABL
                SEGA-CUSTOMER-ADDRESS
Cmd Level Segment #5
                AN 51:40
                <---+---1---+---2---+---3---+--->
                **** Top of window ****
 1  CUSTADDR 666 PRARIERD, WY 323423-123456
 2  TOTUSE  Key=200303
 3  PRMUSE  Key=20030301
 3  PRMUSE  Key=20030302
 3  PRMUSE  Key=20030303
 3  PRMUSE  Key=20030305
 3  PRMUSE  Key=20030306
 3  PRMUSE  Key=20030307
 3  PRMUSE  Key=20030308
 3  PRMUSE  Key=20030309
 3  PRMUSE  Key=20030310
 3  PRMUSE  Key=20030311
F1=Help   F2=Format  F3=Exit   F4=CRetriev F5=RFind   F6=RChange
F7=Up     F8=Down    F9=Swap   F10=Left   F11=Right  F12=Retrieve
```

Key value for each suppressed segment is displayed

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Notice that the SHOW SUP ON setting is active now. Instead of collapsing twin segments, key values are shown for suppressed segments, and they are also in scope

Find command with SHOW SUP ON setting

Command ==> **f main** **Enter**

```

FM/IMS                               Edit : IMS Database USRSCN
Command ==>                           Scroll CSR
                                CHKPID FM000003 Autosave ON SHOW SUP ON Scope DB Format TABL
                                SEGY-PAST-PERIOD SEGY-TYPE-IND2 SEGY-CURR-DUE
Cmd Level Segment #2 #3 #4
AN 1:6 AN 7:4 BI 11:8
<---+> <--> <-----1-----2>
  4 OFFDTL Key=18:32:05
  2 BALDUE Key=200303
  3 BALHIST 200302 10.00
  3 BALHIST Key=200303
  1 CUSTADDR Key=2111111111
  2 TOTUSE Key=200303
  3 PRMUSE Key=20030301
  3 PRMUSE Key=20030302
  3 PRMUSE Key=20030303
  3 PRMUSE Key=20030304
  3 PRMUSE Key=20030305
  3 PRMUSE Key=20030306
  3 PRMUSE Key=20030307
F1=Help F2=Format F3=Exit F4=CRetriev F5=RFind F6=RChange
F7=Up F8=Down F9=Swap F10=Left F11=Right F12=Retrieve
  
```

With **SHOW SUP ON**, all segments are searched.

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Now the same FIND command as before is entered, and it found the data in a segment type that was not the current segment type. With the SHOW SUP ON setting, all segment types are searched.



## The Scope command

- The Scope command controls the scope
  - It works in conjunction with the SHOW setting
- With the setting: **Scope DB**
  - The entire database is in scope
- With the setting: **Scope REC**
  - Only the current database record is in scope
- Definition: “Database record”:
  - A single root segment and all of its dependents

There is another setting you can use to control the scope. The SCOPE command. It can be used by itself, or in conjunction with the SHOW command. The setting SCOPE DB makes the entire data base in scope. This is the default. The setting SCOPE REC makes only the current data base record in scope. A database record is a single root segment and all of it's dependent segments.

## The Scope Rec command

Command ==> scope rec Enter

---

FM/IMS Edit : IMS Database USRSCN  
 Command ==> \_\_\_\_\_ Scroll CSR  
 CHKPID FM000003 Autosave ON SHOW SUP ON Scope REC Format TABL  
 SEGA-CUSTOMER-ADDRESS

Cmd	Level	Segment	
			#5
			AN 51:40
			<---+----1-----2-----+
___	1	CUSTADDR	555 MAIN ST. ANYWHERE, KS
___	2	TOTUSE	Key=200303
___	3	PRMUSE	Key=20030301
___	3	OFFUSE	Key=20030301
___	4	OFFDTL	Key=00:00:00
___	4	OFFDTL	Key=18:32:05
___	2	BALDUE	Key=200303
___	3	BALHIST	Key=200302
___	3	BALHIST	Key=200303
			**** End of datab

Notice the Scope setting is always displayed

**Scope Rec** changes the scope to only the current database record.

Only **one root segment** is displayed. Find and Change commands are limited to the single root segment and the dependent segments.

F1=Help    F2=Format    F3=Exit    F4=CRetriev    F5=RFind    F6=RChange  
 F7=Up      F8=Down      F9=Swap    F10=Left     F11=Right   F12=Retrieve

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Here is an example of using the SCOPE command. In this example, the SCOPE REC command is entered. Notice that the SCOPE setting is displayed under the command line. Only the current root segment and its dependents will be displayed. Find and change commands will only search the current data base record.



## Find all with SHOW SUP ON and SCOPE REC

Command ==> **f main all**

FM/IMS Edit : IMS Database USRSCN 2 string(s) found  
 Command ==> Scroll CSK  
 CHKPID FM000003 Autosave ON SHOW SUP ON Scope REC Format TABL  
 SEGA-CUSTOMER-ADDRESS

Cmd	Level	Segment	Key
		#5	
		AN 51:40	
		<---+---1---+---2---+---3---+--->	
1		CUSTADDR 555 <b>MAIN</b> ST. ANYWHERE, KS 123456	
2		TOTUSE Key=200303	
3		PRMUSE Key=20030301	
3		OFFUSE Key=20030301	
4		OFFDTL Key=00:00:00	
4		OFFDTL Key=18:32:05	
2		BALDUE Key=200303	
3		BALHIST Key=200302	
3		BALHIST Key=200303	

\*\*\*\* End of database record \*\*\*\*

Enter

F1=Help F2=Format F3=Exit F4=CRetriev F5=RFind F6=RChange  
 F7=Up F8=Down F9=Swap F10=Left F11=Right F12=Retrieve

Only two strings found. With SCOPE REC, "main" was found five times.

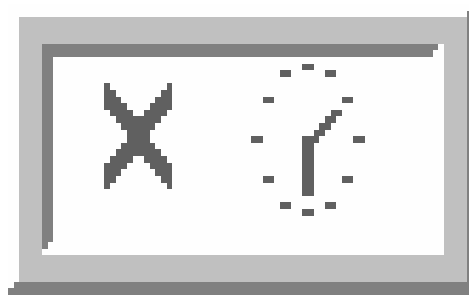
Here is a FIND ALL command. Only the current database record was searched.



## Tip for Find and Change commands

### **Avoid the Clock!**

- Limit your File Manager IMS Find and Change command Scope
  - Scope DB/REC
  - Find/Change REC
  - Find/Change GET(n)
  - Search on fields with SSAs



When you are working with very large data bases, find and change commands can take a long time. Avoid run away searches by limiting the scope. You have seen a lot of ways to do that. You can use the SCOPE REC command or the REC parameter on Find and Change commands to search only segments in the current database record. Use the GET parameter on Find and Change commands to stop the search after the specified number of segments have been read. Finally, if you limit your search specifically only to fields that are defined in the data base with SSAs, File Manager will use IMS keys and indexes to make the search more efficient.



## File Manager IMS training: sections

- Using templates and views
  - About templates and views
  - Create and save a new template
- Browsing or editing an IMS database with a template
  - Starting the editor
  - The display formats and zoom
  - Display different segment types
  - Find, change, scope, and locate data
  - Insert, repeat, repeat all, and delete segments
  - End, quit, save, undo, and cancel



In the next topic, you will see how you can insert, repeat, and delete segments.



## I (insert) line command

```
Process  Options  Help
-----  -
FM/IMS                               Edit : IMS Database USRSCN
Command ==>                          Scroll CSR
                                     Format IABL
                                     CHKPID FM000003 Autosave ON SHOW SUP ON Scope DB
Cmd Level Segment                    SEGA-ACCOUNT-NUM SEGA-CUSTOMER-PHONE-NB SEGA-CUSTOMER-NAME
#2                                     #3                                     #4
AN 1:10                               AN 11:10                               AN 21:30
<---+---->                             <---+---->                             <---+----1----->
**** Top of window ****
1  CUSTADDR 0003874923                    3273325564                    BILL B. UFFALO
2  TOTUSE   Key=200303
1  CUSTADDR 1111111111                    7233439938                    JOHN SMITH
2  TOTUSE   Key=200303
1  CUSTADDR 2111111111                    8133249846                    JOAN SMITH
2  TOTUSE   Key=200303
1  CUSTADDR 2121111111                    3445556666                    MATTY MONROE
2  TOTUSE   Key=200303
1  CUSTADDR 2121111112                    3445556666                    HUMPHRY BOGART
2  TOTUSE   Key=200303
1  CUSTADDR 3333333333                    7233439938                    JOAN SMITH
2  TOTUSE   Key=200303
1  CUSTADDR 4444444444                    6123439966                    BOB JONES
2  TOTUSE   Key=
2  TOTUSE   Key=200303
2  TOTUSE   Key=200703
1  CUSTADDR 5555555555                    9578888888                    TOM JONES
2  TOTUSE
1  CUSTADDR
2  TOTUSE
1  CUSTADDR
2  TOTUSE

F1=Help  F2=Command  F3=Command  F4=Command  F5=RFind  F6=RChange
F7=Up    F8=Down    F9=Swap    F10=Left   F11=Right F12=Retrieve

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```

In the editor, you can use an I (for Insert) line command. Here, I is typed into the prefix area next to a segment. Notice that the I command was entered next to a TOTUSE segment. Enter is pressed





## Enter data for the new segment

Process		Options		Help		
FM/IMS		Insert Segment				
Command ==>				Scroll CSR		
Database USRSCN		Segment TOTUSE		Insert Format SNGL		
-----						
Parent Keys				Line 1 of 2		
Lvl	Segment	Key field name	Type	Key value	Occur	
1	CUSTADDR					
	#2	2 SEGA-ACCOUNT-NUM	AN	0003874923		
-----						
Data						
Ref	Field	Typ	Start	Len	Data	Top F
1	1 SEGB-TOTAL-USAGE	AN	1	80		
2	2 USAGE-PERIOD	AN	1	6	K	
3	3 USAGE-YEAR	AN	1	4	K 2003	
4	3 USAGE-MONTH	AN	5	2	K 05	
5	2 ACCOUNT-INV-SEQ	AN	7	1	1	
6	2 ACCOUNT-TOTAL-USAGE	PD	8	6	0.00	
7	2 CURRENT-PERIOD-AMT-DUE	PD	14	5	0.00	
8	2 COMPLAINTS	AN	19	62	Happy Customer_	
F1=Help F3=Exit F4=CRetriev F5=RFind F6=RChange F7=Up						
F8=Down F9=Swap F12=Cancel						

Data defaults:  
 numeric: zero  
 char: blanks

0.00

**PF3**

The Insert Segment panel is displayed. Since the I command was entered next to a TOTUSE segment, a new TOTUSE segment will be inserted. Modify the data values as required, and when you are ready, press PF3 to continue.



# The Insert command

Process Options Help

FM/IMS Edit : IMS Database USRSCN **INSERT completed**  
 Command ==> **insert** Scroll CSR

Cmd	Level	Segment	SEGA-ACCOUNT-NUM	SEGA-CUSTOMER-PHONE-NB	SEGA-CUSTOMER-NAME
			AN 1:10	AN 11:10	AN 21:30
			<---+----->	<---+----->	<---+-----1----->
---	1	CUSTADDR	0003874923	3273325564	BILL B. UFFALO
---	2	TOTUSE	Key=200303		
---	2	TOTUSE	Key=200305		
---	1	CUSTADDR	1111111111	7233439938	JOHN SMITH
---	2	TOTUSE	Key=200303		
---	1	CUSTADDR	2111111111	8133249846	JOAN SMITH
---	2	TOTUSE	Key=200303		
---	1	CUSTADDR	2121111111	3445556666	MATTY MONROE
---	2	TOTUSE	Key=200303		
---	1	CUSTADDR	2121111112	34455566	
---	2	TOTUSE	Key=200303		
---	1	CUSTADDR	3333333333	7233439938	JOAN SMITH
---	2	TOTUSE	Key=200303		
---	1	CUSTADDR	4444444444	6123439966	BOB JONES
---	2	TOTUSE	Key=		
---	2	TOTUSE	Key=200303		
---	2	TOTUSE	Key=200703		
---	1	CUSTADDR	6666666666	8578883233	TOM JONES
---	2	TOTUSE	Key=200303		
---	1	CUSTADDR	9983874923	3273325564	Joan B.
---	2	TOTUSE	Key=200303		


F1=Help F2=Format F3=Exit F4=CRetriev F5=RFind F6=RChange  
 F7=Up F8=Down F9=Swap F10=Left F11=Right F12=Retrieve

**Enter**

You can also use the **Insert** command to insert a segment

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That inserted the new segment. You can also use an INSERT primary command. INSERT is typed on the command line, and Enter.



## Select the segment type


Process Options Help

---

FM/IMS Insert : Segment Selection

Command ==> \_\_\_\_\_ Scroll CSR

Cmd	Level	Segment	Description
<u>S</u>	1	CUSTADDR	
-	2	TOTUSE	
-	3	PRMUSE	
-	3	OFFUSE	
-	4	OFFDTL	
-	2	BALDUE	
-	3	BALHIST	
**** End of data ****			



F1=Help    F2=Split    F3=Exit    F4=CRetriev    F7=Backward    F8=Forward  
 F9=Swap    F10=Actions    F12=Cancel

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When you use an INSERT primary command, you can select any segment type to be inserted. Here, the CUSTADDR segment type is selected.



## Enter data for the new segment

Process		Options		Help	
FM/IMS		Insert Root Segment			
Command ==>				Scroll CSR	
Database USRSCN		Segment CUSTADDR		Insert Format SNGL	
-----					
Data					
Top Field is 1 of 10					
Ref	Field	Typ	Start	Len	Data
1	1	SEGA-CUSTOMER-ACCOUNT			
		AN	1	90	
2	2	SEGA-ACCOUNT-NUM			
		AN	1	10	K 0342323422
3	2	SEGA-CUSTOMER-PHONE-NB			
		AN	11	10	8133234466
4	2	SEGA-CUSTOMER-NAME			
		AN	21	30	Mr. Bigfoot
5	2	SEGA-CUSTOMER-ADDRESS			
		AN	51	40	Yosemite National Park
*** End of record ***					

**PF3**

F1=Help    F3=Exit    F4=CRetrieve    F5=RFind    F6=RChange    F7=Up  
F8=Down    F9=Swap    F12=Cancel

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On this panel, you can type in key and data values as required. Then press PF3 to continue.



## The R (repeat) line command

```
Process  Options  Help
-----  -
FM/IMS                               Edit : IMS Database USRSCN
Command ==> repeat                    Scroll CSR
CHKPID FM000002 Autosave ON SHOW SUP ON Scope DB Format TABL
SEGA-ACCOUNT-NUM SEGA-CUSTOMER-PHONE-NB SEGA-CUSTOMER-NAME
Cmd Level Segment #2 #3 #4 +
AN 1:10 AN 11:10 AN 21:30
<---+---> <---+---> <---+---1---+--->
r_ 4 OFFDTL Key=00:00:00
  3 OFFUSE Key=20030304
  4 OFFDTL Key=00:00:00
  3 OFFUSE Key=20030305
  4 OFFDTL Key=00:00:00
  3 OFFUSE Key=20030306
  4 OFFDTL Key=00:00:00
  3 OFFUSE Key=20030307
  4 OFFDTL Key=00:00:00
  3 OFFUSE Key=20030308
  4 OFFDTL Key=00:00:00
  3 OFFUSE Key=20030309
  4 OFFDTL Key=00:00:00
F1=Help F2=Format F3=Exit F4=CRetriev F5=RFind F6=RChange
F7=Up F8=Down F9=Swap F10=Left F11=Right F12=Retrieve
```

You can also use the **Repeat** primary command

Enter

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To repeat an existing segment, you can either use a REPEAT primary command or an R line command. Here, an R line command is typed next to an OFFDTL segment.



## The segment data was copied to this panel

Process		Options		Help	
FM/IMS					
Insert Segment					
Command ==>				Scroll CSR	
Database USRSCN		Segment OFFDTL		Insert Format SNGL	
-----					
Parent Keys					
Lvl	Segment	Key field name	Type	Key value	Line 1 of 9
1	CUSTADDR				Occur
#2	2	SEGA-ACCOUNT-NUM	AN	0003874923	
2	TOTUSE				
#2	2	USAGE-PERIOD	AN		
#3	3	USAGE-YEAR	AN	2003	
#4	3	USAGE-MONTH	AN	03	
-----					
Data					
Ref	Field	Typ	Start	Len	Data
1	1	SEGE-OFF-PRIME-DETAIL			
		AN	1	80	
2	2	SEGE-TIME-START			
		AN	1	8 K	02:30:30
3	2	SEGE-TIME-END			
Top Field is 1 of 14					
F1=Help F3=Exit F4=CRetriev F5=RFind F6=RChange F7=Up					
F8=Down F9=Swap F12=Cancel					

Change the data

PF3

The Insert segment panel is displayed, pre-populated with data from the segment that is to be repeated. Modify the key and data values as required, and press PF3 to continue.



## The new segment was inserted

```
Process  Options  Help
-----
FM/IMS                      Edit : IMS Database USRSCN  REPEAT completed
Command ==>                 Scroll CSR
                             CHKPID FM000003 Autosave ON  SHOW SUP ON  Scope DB  Format TABL
                             SEGA-ACCOUNT-NUM SEGA-CUSTOMER-PHONE-NB SEGA-CUSTOMER-NAME
Cmd Level Segment          #2          #3          #4          +
                             AN 1:10          AN 11:10          AN 21:30
Ref Field      Typ Start  Len  Data
-----
  4  OFFDTL      Key=00:00:00
  4  OFFDTL      Key=02:30:30
  3  OFFUSE      Key=20030304
  4  OFFDTL      Key=00:00:00
  3  OFFUSE      Key=20030305
  4  OFFDTL      Key=00:00:00
  3  OFFUSE      Key=20030306
  4  OFFDTL      Key=00:00:00
  3  OFFUSE      Key=20030307
  4  OFFDTL      Key=00:00:00
  3  OFFUSE      Key=20030308
  4  OFFDTL      Key=00:00:00
  3  OFFUSE      Key=20030309
F1=Help      F2=Format  F3=Exit      F4=CRetriev  F5=RFind     F6=RChange
F7=Up        F8=Down    F9=Swap      F10=Left     F11=Right    F12=Retrieve
```

REPEAT completed

Scroll CSR

Key=02:30:30

New segment

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And the segment was repeated.



## The RA (repeat all) line command

Process	Options	Help
FM/IMS	Edit : IMS Database USRSCN	Scroll CSR
Command ==>	CHKPID FM000003 Autosave ON SHOW SUP ON Scope DB Format TABL	
	SEGA-ACCOUNT-NUM SEGA-CUSTOMER-PHONE-NB SEGA-CUSTOMER-NAME	
Cmd Level Segment	#2 #3 #4	+
	AN 1:10 AN 11:10 AN 21:30	
	<---+---> <---+---> <---+---1---+---	
	**** Top of window ****	
<b>ra</b> 1	CUSTADDR 0003874923 3273325564	BILL B. UFFALO
2	TOTUSE Key=200303	
3	PRMUSE Key=20030301	
3	PRMUSE Key=20030302	
3	PRMUSE Key=20030303	
3	PRMUSE Key=20030305	
3	PRMUSE	
3	P	
3	P	
3	P	
3	P	
3	P	
	F1=Help F2=Format F3=Exit F4=CRetriev F5=RFind F6=RChange	
	F7=Up F8=Down F9=Swap F10=Left F11=Right F12=Retrieve	

An **RA** (repeat all) line command will repeat a segment and all of its dependents


Enter

Instead of repeating just a single segment, you can optionally repeat an entire segment structure with a single command. The RA (for repeat all) command repeats not only the selected segment, but also makes copies of all of it's dependent segments. Here, RA is typed next to a CUSTADDR root segment, and Enter.





## Make changes to the data

Process		Options		Help	
FM/IMS	Insert Root Segment			NEXT not active	
Command	===>			Scroll CSR	
Database	USRSCN	Segment	CUSTADDR	Insert Format SNGL	
-----					
Data				Top Field is 1 of 10	
Ref	Field	Typ	Start	Len	Data
1	1	SEGA-CUSTOMER-ACCOUNT			
		AN	1	90	
2	2	SEGA-ACCOUNT-NUM			
		AN	1	10	K 0003875000
3	2	SEGA-CUSTOMER-PHONE-NB			
		AN	11	10	3273325564
4	2	SEGA-CUSTOMER-NAME			
		AN	21	30	BILL B. UFFALO
5	2	SEGA-CUSTOMER-ADDRESS			
		AN	51	40	666 PRARIERD, WY 323423-123456
*** End of record ***					
					
F1=Help	F3=Exit	F4=CRetriev	F5=RFind	F6=RChange	F7=Up
F8=Down	F9=Swap	F12=Cancel			

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The Insert segment panel is displayed, where you can make changes to the key and data values. PF3 to continue.



## New segment and all dependents were inserted

```
Process  Options  Help
-----  -
FM/IMS          Edit : IMS Database USR  Repeat All completed
Command ==>      Scroll CSR
CHKPID FM000004 Autosave ON  SHOW SUP ON  Scope DB  Format TABL
SEGA-ACCOUNT-NUM SEGA-CUSTOMER-PHONE-NB SEGA-CUSTOMER-NAME
Cmd Level Segment #2 #3 #4 +
AN 1:10 AN 11:10 AN 21:30
<---+----> <---+----> <---+----1---->
___ 1  CUSTADDR 0003874923 3273325564 BILL B. UFFALO
___ 2  TOTUSE Key=200303
___ 3  PRMUSE Key=20030301
___ 3  PRMUSE Key=20030302
___ 3  PRMUSE Key=20030303
___ 3  PRMUSE Key=20030305
___ 3  PRMUSE Key=20030306
___ 3  PRMUSE Key=20030307
___ 3  PRMUSE Key=20030308
___ 3  PRMUSE Key=20030309
___ 3  PRMUSE Key=20030310
___ 3  PRMUSE Key=20030311
___ 3  PRMUSE Key=20030312
F1=Help F2=Format F3=Exit F4=CRetriev F5=RFind F6=RChange
F7=Up F8=Down F9=Swap F10=Left F11=Right F12=Retrieve

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```

The Repeat All completed. The root, with your changes, and all of it's dependents were copied.



## The D (delete) line command

```
Process  Options  Help
-----  -
FM/IMS          Edit : IMS Database USRSCN
Command ==> delete                               Scroll CSR
CHKPID FM000004 Autosave ON SHOW SUP ON Scope DB Format TABL
SEGA-ACCOUNT-NUM SEGA-CUSTOMER-PHONE-NB SEGA-CUSTOMER-NAME
Cmd Level Segment #2 #3 #4 +
AN 1:10 AN 11:10 AN 21:30
<---+---> <---+---> <---+---1---+--->
d_ 1 CUSTADDR 0003875000 3273325564 BILL B. UFFALO
  2 TOTUSE Key=200303
  3 PRMUSE Key=20030301
  3 PRMUSE Key=20030302
  3 PRMUSE Key=20030303
  3 PRMUSE Key=20030305
  3 PRMUSE Key=20030306
  3 PRMUSE Key=20030307
  3 PRMUSE Key=20030308
  3 PRMUSE Key=20030309
  3 PRMUSE Key=20030310
  3 PRMUSE Key=20030311
  3 PRMUSE Key=20030312
F1=Help F2=Format F3=Exit F4=CRetriev F5=RFind F6=RChange
F7=Up F8=Down F9=Swap F10=Left F11=Right F12=Retrieve
```

You can also use the **Delete** primary command.

The CUSTADDR and all root segments are deleted.

Enter

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You can delete segments with a DELETE primary command or with a D line command. A D line command is typed next to a CUSTADDR segment. When Enter is pressed, the selected segment and all of its dependents are deleted.



## File Manager IMS training: sections

- Using templates and views
  - About templates and views
  - Create and save a new template
- Browsing or editing an IMS database with a template
  - Starting the editor
  - The display formats and zoom
  - Display different segment types
  - Find, change, scope, and locate data
  - Insert, repeat, repeat all, and delete segments
  - End, quit, save, undo, and cancel



In this topic, you will see how to exit from an editor session. If you have made changes to data, you can choose to either save or cancel the changes.



## Saving changes to your data

```
Process  Options  Help
-----
FM/IMS          Edit : View Specification  Chkpt FM000010 taken
Command ==> _____

Subsystem IMSB Database USRSCN

Template:
  Data set name . . . PDV8.TEMPLATE
View:
  Data set name . . . PDV8.VIEW
  Member . . . . . USRSCN

Processing Options:
  View usage          Enter "/" to select option
  2 1. New            / Save view on return
  2. Existing
  3. None

-

F1=Help    F2=Split    F3=Exit    F4=CRetriev  F7=Backward  F8=Forward
F9=Swap    F10=Action  F12=Cancel
```

In IMS, database updates are committed when a checkpoint is taken, as indicated above.

Checkpoint frequency is determined by your options.

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When you edit an IMS database, your changes are committed when a checkpoint is taken. There are File Manager IMS options that control how frequently the editor takes checkpoints. When you exit normally from the editor, changes are saved automatically and a checkpoint is taken, as shown in this message.



## Edit commands to control checkpoints

- Checkpoint frequencies are updated in the Options
  - A Checkpoint setting of **one** with **Autosave On** minimizes IMS locks. Since the update occurs immediately, the **Undo** and **Cancel** commands will have no updates to process.
- **Exit** or **PF3** from the positioning panel
  - A checkpoint is taken automatically
- **Save** from the editor will take an immediate checkpoint
  - You remain in the editor
- You can roll back changes to the last checkpoint with:
  - **Undo** from the editor or positioning panel
  - **Cancel** from the positioning panel
    - You are running in BMP mode
    - Or you are in DLI mode and:
      - You are using an IMS log
      - You have specified dynamic backout
      - If you are using a static PSB it must have an IO PCB

In your options settings panels, you can set the checkpoint frequency. In this option, you specify a number. As you are editing the data base, when the number of changes you have made reaches this number, a checkpoint will be taken automatically, but only if the AUTOSAVE ON setting is also on. If you want to minimize data base locks, have a checkpoint frequency of one and turn autosave on.

When you exit or press PF3 from the editor, a checkpoint is taken automatically. The SAVE command will also take an immediate checkpoint. If you want to roll back changes you have made, either use the UNDO or the CANCEL command to back out changes to the most recent checkpoint. However, be aware that undo and cancel will not roll back changes that occurred before the last checkpoint.



## Autosave On

```
Process  Options  Help
-----
FM/IMS                               Edit : IMS Database USRSCN
Command ==>                          Scroll CSR
CHKPID FM000003 Autosave ON SHOW SUP ON Scope DB Format TABL
SEGA-ACCOUNT-NUM SEGA-CUSTOMER-PHONE-NB SEGA-CUSTOMER-NAME
Cmd Level Segment #2 #3 #4 +
AN 1:10 AN 11:10 AN 21:30
<---+---> <---+---> <---+---1---+--->
___ 1 CUSTADDR 0003874923 3273325564 BILL BUFFALO JR
___ 2 TOTUSE Key=200303
___ 3 PRMUSE Key=20030301
___ 3 PRMUSE Key=20030302
___ 3 PRMUSE Key=20030303
___ 3 PRMUSE
___ 3 PRMUSE
___ 3 PRMUSE
___ 3 PRMUSE
___ 3 PRMUSE
___ 3 PRMUSE
___ 3 PRMUSE
___ 3 PRMUSE
F1=Help F2=Format F3=Exit F4=Retrieve F5=Refresh F6=Change
F7=Up F8=Down F9=Swap F10=Left F11=Right F12=Retrieve
```

The Autosave setting is displayed in the editor

With the **Autosave On** setting, a checkpoint is taken when the number of updates you have made exceeds the Checkpoint Frequency.

If Autosave is set to Off, you must exit the editor or use the **Save** command to take a checkpoint.

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With the Autosave On setting, a checkpoint is taken when the number of updates you have made exceeds the Checkpoint Frequency.

If Autosave is set to Off, you must exit the editor or use a Save command to take a checkpoint.

## Autosave Off

Pr **Command ==> autosave off** Enter

---

FM/IMS Edit : IMS Database USRSCN Scroll CSR

Command ==> Autosave OFF SHOW SUP ON Scope DB Format TABL

Cmd	Level	Segment	#2	#3	#4	
			SEGA-ACCOUNT-NUM	SEGA-CUSTOMER-PHONE-NB	SEGA-CUSTOMER-NAME	
			AN 1:10	AN 11:10	AN 21:30	+
			<---+---	<---+---	<---+---1---	
1		CUSTADDR	0003874923	3273325504	BILL BUFFALO JR	
2		TOTUSE	Key=2003030			
3		PRMUSE	Key=20030301			
3		PRMUSE	Key=20030302			
3		PRMUSE	Key=20030303			
3		PRMUSE	Key=20030305			
3		PRMUSE	Key=20030306			
3		PRMUSE	Key=20030307			
3		PRMUSE	Key=20030308			
3		PRMUSE	Key=20030309			
3		PRMUSE	Key=20030310			
3		PRMUSE	Key=20030311			
3		PRMUSE	Key=20030312			

F1=Help F2=Format F3=Exit F4=CRetriev F5=RFind F6=RChange  
 F7=Up F8=Down F9=Swap F10=Left F11=Right F12=Retrieve

You can change the **Autosave** values with the Autosave On/Off, or using the Options panel, shown on the next slide.

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You can change the Auto save setting with an Autosave On or Autosave Off command.



## Navigate to Options, DLI or BMP

Process
Options
Help

FM/IMS
DLI Mode Options

Command ==> \_\_\_\_\_

Subsystem IMSB

Options:  
Enter "/" to select option  
/ Autosave

Checkpoint Frequencies:  
Edit . . . . . 1  
Change All/Repeat All 100  
Load . . . . . 100  
Batch Edit . . . . . 100

PSB Processing Options:  

<span style="color: green;">Browse</span>	<span style="color: green;">Extract</span>	<span style="color: green;">Print</span>	<span style="color: green;">Batch Browse</span>
<u>1</u> 1. G 2. GO	<u>1</u> 1. G 2. GO	<u>1</u> 1. G 2. GO	<u>1</u> 1. G 2. GO

F1=Help    F2=Split    F3=Exit    F4=CRetriev    F7=Backward    F8=Forward  
F9=Swap    F10=Actions    F12=Cancel

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**Autosave On** issues saves after updates. It can be used to minimize locking IMS segments. Recommended for IMS production environments.

Use Autosave On and Checkpoint Frequency of one to minimize locking in production IMS environments.

These settings can also be updated in the DLI mode options settings. Notice the setting for Autosave and the setting for the Edit checkpoint frequency.

That is the end of this section, using browse or edit with a template.



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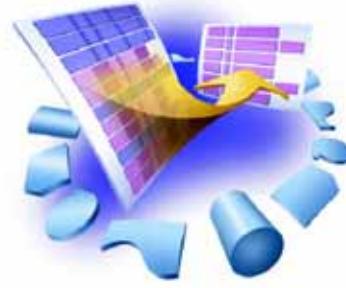


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## IBM File Manager for z/OS IMS Feature

Program Number 5655-S14

### Tutorial



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