Does SET ADDRESS OF X TO Y work?

Question:

I have some code that uses M\$ALLOC and then assigns the address of an array (in the linkage area) to the space just allocated. Code fragment below. There is a note in the migration section that "SET X TO ADDRESS OF Y" requires compiling with the -cp option to enable full POINTER support. But I am using only "SET ADDRESS OF X TO Y" and am not calling C functions.

000419CALL "M\$ALLOC" USING IMG-ROW-SIZE,000420IMG-ROW-PTR,000421SET ADDRESS OF IMG-ROW TO IMG-ROW-PTR,

Where IMG-ROW is an array in the linkage section.

Answer:

The answer is yes. SET ADDRESS OF X TO Y is supported. Use the -ca compiler option.

Note: If you plan to exchange pointers with C functions then enable full POINTER support by compiling with the -cp option.

If you are using a USAGE POINTER item internally, within COBOL (i.e. not to pass to C functions), SET X TO HANDLE OF Y works as desired and gives the same behavior as SET X TO ADDRESS OF Y in ACUCOBOL.

In addition, "SET ADDRESS OF X TO Y" works as expected.

Because of Java constraints, with isCOBOL, M\$ALLOC returns a handle, not an actual memory address. When you set the address of a linkage item to the handle value, the program behaves as desired because internally Java uses handles to identify objects, not pointers.

If you compile with -ca, then the program you described will compile and run as it did with ACUCOBOL. If you don't compile with -ca then you simply need to change USAGE POINTER to USAGE HANDLE wherever it occurs in the data division.

Here is an example program:

id division.	program-id. malloctest.	data division.	working-st
orage section.	77 img-row-ws pic x(50).	77 img-row-ptr usage handle.	

linkage section. 01 img-row. 03 filler pic x occurs 50. procedure d ivision. main-logic. set address of img-row to address of img-row-ws. move "Message 1" to img-row. display img-row. move "Message 2" to imgrow. display img-row-ws. move "Message 3" to img-row-ws. display i mg-row. move "Message 5" to img-row-ws. CALL "M\$ALLOC" USING length of im IMG-ROW-PTR, SET ADDRESS OF IMG-ROW TO IMG-ROW-PTR, g-row, mo ve "Message 4" to img-row. display img-row. display img-row-ws. mo ve "Message 6" to img-row-ws. move "Error" to img-row. display img-rowws.

The output of program is:

Message 1 Message 2 Message 3 Message 4 Message 5 Message 6

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