



| IBM Software Group

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## ZDMOD command

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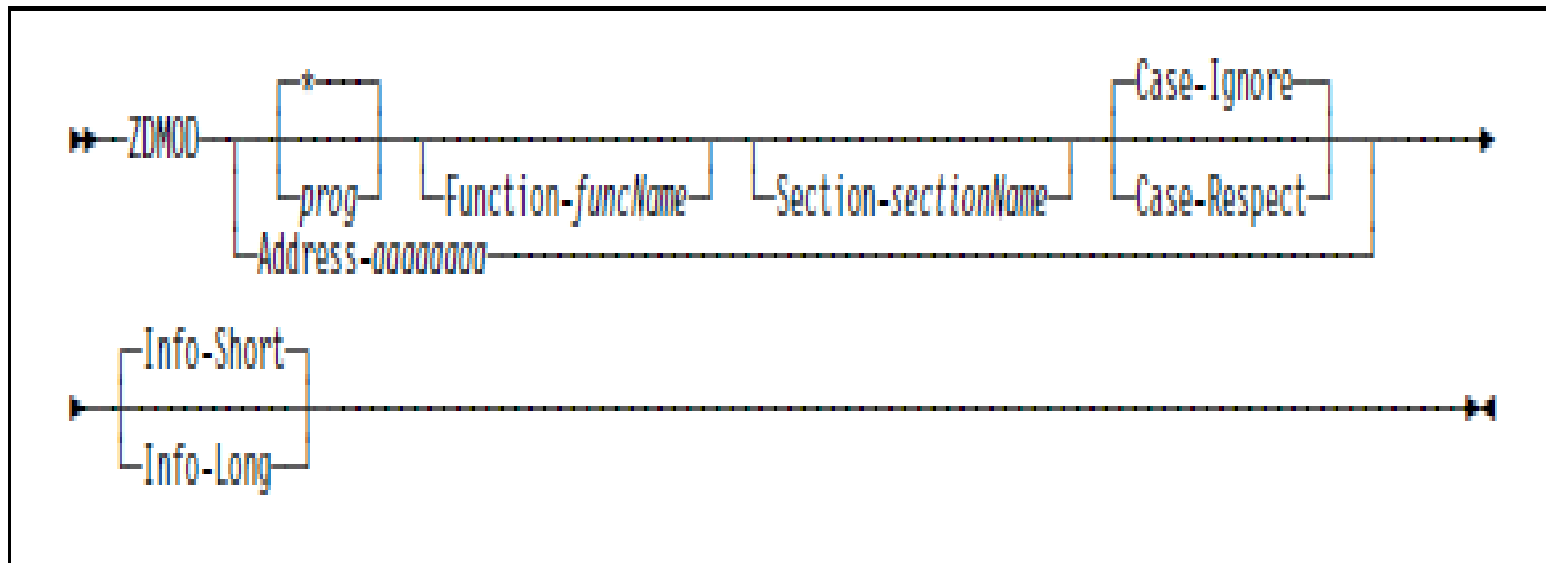
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# Overview

- ZDMOD -> Display Module Information
  - ▶ Module storage addresses, offsets and size
  - ▶ Segments (CSECT) names
  - ▶ Function names
  - ▶ Binder/Compiler information and timestamps
  - ▶ Address- operand
  - ▶ Wildcard support

# ZDMOD command syntax



## Implementation Notes

- Written in C/C++
- Majority of code was ported from z/TPF ZDMAP command
- New Binder Subtask issues IEWBIND macros
- May require changes to number off and size of type 2 storage units
- Default (Info-Short) output 'hides' IBM sections/functions
- Supports mixed case names. Default is to ignore case
- Output will vary depending upon source of mapping data

Program = Load Module

Section = CSECT

Function = ENTRY

## Module Mapping Information sources

ZDMOD attempts to use them in this order, fastest to slowest:

1. BMMP records loaded with module

Binder PARM='MODMAP=LOAD' & include DXCBBMMP

DXCBBMMP creates weak-external ref to BMMP data

2. BMMP records stored with module

Binder PARM='MODMAP=LOAD'

ZDMOD reads BMMP records at run time

3. Binder records (B\_TEXT, C\_CODE, B\_ESD, B\_IDRx)

reconstructs link map at run time

ALCS - [24 x 80]



Lines 1 to 17 of 21 Columns 1 to 79 of 79  
Active: 5 4 3 2 \*1\* More: down

DXC5500I Mapping Data obtained by reading BMMP records

JBZDMOD

Program Address 7CB24000

Program Size 5C5E8

Binder Info: 5695PMB01 Ver 01 Mod 10

Bound On: 2011.139 = 18 May 2011 at 15:45:33

cdmain.c - Section Size: 15CC0 Offset: 4680 Address: 7CB28680

Compiled On: 2011.138 = 17 May 2011

cdmdsp.c - Section Size: 17E0 Offset: 1A340 Address: 7CB3E340

Compiled On: 2011.138 = 17 May 2011

\$PRIV000016 - Section Size: B88 Offset: 1BB20 Address: 7CB3FB20

Compiled On: 2011.139 = 18 May 2011

\$PRIV00001A - Section Size: 21B8 Offset: 1C6A8 Address: 7CB406A8

Compiled On: 2011.139 = 18 May 2011

cdmprs.c - Section Size: AE0 Offset: 1E860 Address: 7CB42860

Compiled On: 2011.138 = 17 May 2011

czdmod.c - Section Size: 10C00 Offset: 15340 Address: 7CB43340

More...

ZDMOD JBZDMOD

ALCS V24 SYS TEST

16/09/89

MA

B

22/002

ALCS - [24 x 80]



Lines 1 to 17 of 664 Columns 1 to 79 of 79  
 Active: 2 \*1\* More: down

DXC5500I Mapping Data obtained by reading BMMP records

JBZDMOD

Program Address 7CB24000

Program Size 5C638

Binder Info: 5695PMB01 Ver 01 Mod 10

Bound On: 2011.138 = 17 May 2011 at 19:48:29

cdmain.c - Section Size: 15CC0 Offset: 4680 Address: 7CB28680

Compiled On: 2011.138 = 17 May 2011

Offset	Address	Function Name
--------	---------	---------------

0	7CB28680	cdmain.c
A0	7CB28720	levtest__F5t_lvl
1C0	7CB28840	strcpy__FPcPCc
250	7CB288D0	process_single_program__FP17dmod_retrieve_outP10DmodProc InP11DmodProcOut
538	7CB28BB8	memcpy__FPvPCvUi
5E0	7CB28C60	memset__FPviUi
6C8	7CB28D48	display_program_list__FP17dmod_program_list

More...

-ZDMOD JBZDMOD F-\* INFO-L

ALCS V24 SYS TEST

16/09/89

MA

B

22/002

ALCS - [24 x 80]

Lines 1 to 17 of 1 091 Columns 1 to 79 of 79  
 Active: 3 2 \*1\* More: down

DXC5500I Mapping Data obtained by reading BMMP records

JBZDMOD

Program Address 7CB24000

Program Size 5C638

Binder Info: 5695PMB01 Ver 01 Mod 10

Bound On: 2011.138 = 17 May 2011 at 19:48:29

\$IS\$CMOD - Section Size: 58 Offset: 0 Address: 7CB24000

Compiled On: 2011.138 = 17 May 2011

Original File Name: SYS11137.T194825.RA000.IALJBLNK.HDROUT.H01

Offset	Address	Function Name
0	7CB24000	\$IS\$CMOD

DXCBBMMP - Section Size: 30 Offset: 58 Address: 7CB24058

Compiled On: 2011.027 = 26 Jan 2011

Original File Name: IALJB.PM22459.DXC0BJ3 (DXCBBMMP)

Offset	Address	Function Name
0	7CB24058	DXCBBMMP

More...

**ZDMOD JBZDMOD F-\* INFO-L**

ALCS V24 SYS TEST

16/09/89

MA

B

22/002

ALCS - [24 x 80]



Lines 1 to 17 of 1 673 Columns 1 to 79 of 79  
Active: 4 3 2 \*1\* More: down

DXC5500I Mapping Data obtained by reading Binder records

JBNOBMMP

Program Address

7CA1C000

Program Size

A73A8

Binder Info: 5695PMB01 Ver 01 Mod 10

Bound On: 2011.132 = 11 May 2011 at 17:36:22

\$IS\$TST3 - Section Size: 58 Offset: 0 Address: 7CA1C000

Compiler Info: 569623400 Ver 01 Mod 06

Compiled On: 2011.132 = 11 May 2011

Offset	Address	Function Name
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0	7CA1C000	\$IS\$TST3
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# ZDMOD jbnobmmp f-\* I-L

ALCS - [24 x 80]



Lines 1 to 3 of 3 Columns 1 to 47 of 47

Active: 5 4 3 2 \*1\*

DXC5514I The following programs contain matches

JBNOBMMP JBZDMOD

**ZDMOD f-dxcbprse\***

ALCS - [24 x 80]



Lines 1 to 10 of 10 Columns 1 to 79 of 79

Active: 5 4 3 2 \*1\*

DXC5500I Mapping Data obtained by reading Binder records

JBCHL7

Program Address

7D019000

Program Size

2B20

Binder Info: 5695PMB01 Ver 01 Mod 10

Bound On: 2011.133 = 12 May 2011 at 18:28:16

\$IS\$CHL7 - Section Size: 2B20 Offset: 0 Address: 7D019000

Compiler Info: 569623400 Ver 01 Mod 06

Compiled On: 2011.133 = 12 May 2011

END OF DISPLAY

ZDMOD JBCHL7 I-L

## APAR Numbers

- We're going to ship ZDMOD in two APARS:
  1. PM22459 which will contain BAL segments and C/C++ header files
  2. PM33370 will contain C/C++ code in new dataset DXCSRC4  
recfm=vb lrecl=255

# Questions ?