



This is the tutorial for IBM Debug Tool for z/OS[®], one of the IBM zSeries[®] problem determination tools.

Using Debug Tool's terminal interface (continued)



- Loading program debug files
 - Loading sysdebug, listings, dwarf, and source files
 - Loading LANGX files
- Retaining settings and breakpoints between sessions

In this section, you will see how the debugger uses debug files, and how you can specify debug files for your programs.

Providing program information for the debugger



- Debug Tool reads a debug file for a program to display information about that program
- The type of file needed depends on the compiler
 - A SYSDEBUG file
 - Used with Enterprise COBOL and Enterprise PL/I
 - The compiler creates it when a TEST(...,SEP) compiler option is specified
 - A LANGX file
 - Used with assembler, OS/VS COBOL, and COBOL II compiled with NOTEST
 - It is produced by a utility program (EQALANGX) that runs after a compile or assembly
 - A compiler listing
 - Used with older PL/I compilers, and COBOL II compiled with TEST
 - A dwarf or .mdbg file
 - Used with XL C/C++ when certain compiler options are specified
 - The program source file
 - Used with XL C/C++, and older versions of Enterprise PL/I

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To show you program source statements and variables while you are working with programs, the debugger reads a debug file for each program. The type of file that it uses depends on the compiler used. Different compilers produce different kinds of debug files.

Sysdebug files are used with programs compiled with the Enterprise COBOL and Enterprise PL/I compilers.

LANGX files are used with assembler programs, and programs compiled with the OS/VS COBOL compiler, and can optionally be used with programs compiled with the VS COBOL II compiler.

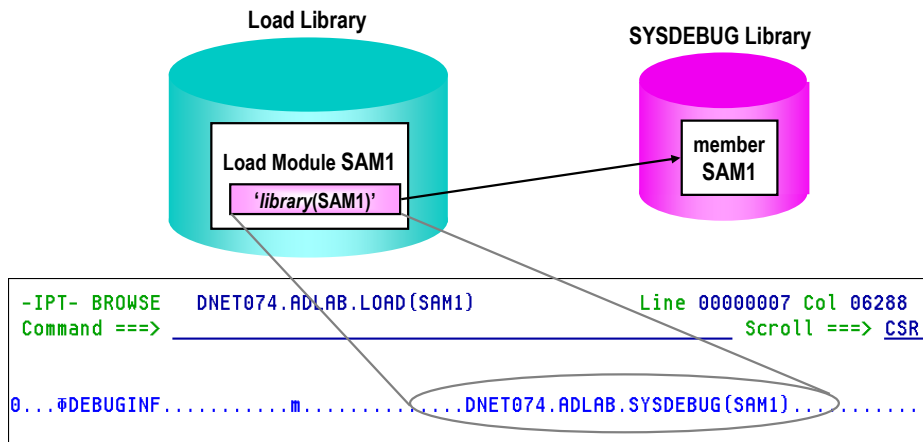
The debugger can read compiler listings with programs compiled with older PL/I compilers, and optionally with VS COBOL II programs.

A dwarf or .mdbg file can be used with programs compiled with the XL C/C++ compiler, and the actual program source file itself can optionally be used with XL C/C++ programs and programs compiled with older versions of Enterprise PL/I.

Compile processes should be updated so that the appropriate file is generated automatically when you compile or assemble a program.

The debugger can automatically locate the file for some compilers

- Enterprise COBOL and Enterprise PL/I compilers can embed the name of the SYSDEBUG file in the load module
 - The debugger can automatically load it if it exists



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Enterprise COBOL and Enterprise PL/I compilers can embed the name of the sysdebug file directly in the load module. This is a helpful feature, because the debugger can automatically find and load the file when the debugger starts or when a new program is entered.

If you browse a load module generated with one of these compilers, you will be able to see the name of the sysdebug file in the module.

How the debugger locates debug files



- The debugger searches for debug files in this order:
(For COBOL, PL/I, assembler, and C/C++ other than .mdbg files)
 - For Enterprise COBOL and Enterprise PL/I programs, it will attempt to load the sysdebug file name that is embedded in the load module
 - Then, if these commands were entered, the files and libraries that they specify are searched:
 - SET SOURCE ...
 - SET DEFAULT LISTINGS ...
 - Then, if an EQADEBUG DD statement was coded in the JCL, the libraries in it's concatenation are searched
- If a matching file is not found automatically, you can enter a command to specify the correct file or library
- For LANGX files, also specify an LDD command to load the file

When the debugger starts, or when it detects that a new program has been entered, it can attempt to automatically load the file containing the needed source information.

For Enterprise COBOL and Enterprise PL/I programs, it will attempt to load the sysdebug file based on the name embedded in the load module. If the file is found, the debugger performs a check to validate that the timestamp in the sysdebug file matches the timestamp of the module. If it matches, the file is used.

If a match is not found, the debugger will look other places. The user can specify a "SET SOURCE ..." setting to specify the name of the debug file for the program. If a "SET SOURCE" setting has been specified for the program, the debugger opens the specified file and validates the timestamp.

If a match is still not found, the debugger checks for a "SET DEFAULT LISTINGS" setting. This setting provides a list of libraries to be searched. Each library in the list is searched for a member with a matching name and timestamp.

Finally, the debugger checks to see if an EQADEBUG DD statement exists, which is another way to specify a list of libraries to be searched. These libraries are all checked for a matching member name and timestamp.

Only after exhausting all of these possibilities will the debugger display a message indicating that source information could not be found.

If that happens, you can then enter commands to specify a file or libraries to search for the correct file. In many cases, the debugger will then find and load the file automatically. For LANGX files, an "LDD" command must also be specified to explicitly load the file.

Using Debug Tool's terminal interface (continued)

- Loading program debug files
 - Loading sysdebug, listings, dwarf, and source files
 - Loading LANGX files
- Retaining settings and breakpoints between sessions

Next, you will see how to load a sysdebug file, a compiler listing, a dwarf file, or a program source file.

Example of loading sysdebug, listings, dwarf, and source files

- Use this example for programs compiled with:
 - Enterprise COBOL
 - Enterprise PL/I
 - COBOL II (compiled with a TEST compiler option)
 - PL/I for MVS and VM
 - OS PL/I
 - XL C/C++ (when not using a .mdbg file)

This example shows the process for manually loading a debug file when you are working with a program compiled with Enterprise COBOL, Enterprise PL/I, COBOL II (when a TEST compiler option is used), PL/I for MVS and VM, OS PL/I, and XL C/C++ (when not using a .mdbg file). The process and commands will be the same, even though the debugger will use some different types of debug files for different compilers.

A program was entered, but no debug file was found



```
COBOL LOCATION: SAM1 initialization
Command ==> Scroll ==> PAGE
MONITOR --+---1---+---2---+---3---+---4---+---5---+---6- LINE: 0 OF 0
***** TOP OF MONITOR *****
***** BOTTOM OF MONITOR *****

SOURCE: SAM1 +---1---+---2---+---3---+---4---+---5---+--- LINE: 0 OF 0
***** TOP OF SOURCE *****
***** BOTTOM OF SOURCE *****

LOG 0---+---1---+---2---+---3---+---4---+---5-
0032 5655-V50: Copyright IBM Corp. 1992, 2009
0033 *** User preferences file commands end ***
0034 The Debug File for SAM1 could not be opened or read.
PF 1: ? 2:STEP 3:QUIT 4:LIST 5:FIND 6:AT/CLEAR
PF 7:UP 8:DOWN 9:GO 10:ZOOM 11:ZOOM LOG 12:RETRIEVE
```

The source window is empty

A message is displayed in the log

In this example, the debugger started, but did not find a debug file for the program. Notice that the source window is empty, and a message is displayed in the log describing the problem.

Use a SET DEFAULT LISTINGS ... command to specify debug file libraries



```
COBOL LOCATION: SAM1 Initialization
Command ==> SET DEF LIST DNET074.ADLAB.SYSDEBUG
MONITOR +-----1-----2-----3-----4-----5-----6- LINE: 0 OF 0
***** TOP OF MONITOR *****
***** BOTTOM OF MONITOR *****

SOURCE: SAM1 +-----1-----2-----3-----4-----5----- LINE: 0 OF 0
***** TOP OF SOURCE *****
***** BOTTOM OF SOURCE *****

LOG 0-----1-----2-----3-----4-----5----- LINE: 32 OF 34
0032 5655-V50: Copyright IBM Corp. 1992, 2009
0033 *** User preferences file commands end ***
0034 The Debug File for SAM1 could not be opened or read.
PF 1:?      2:STEP    3:QUIT     4:LIST     5:FIND     6:
PF 7:UP     8:DOWN    9:GO      10:ZOOM    11:ZOOM LOG 12:
```

Enter one library, or a list of libraries in parentheses

When entering library names, do not specify member names or use quotation marks



A "SET DEFAULT LISTINGS ..." command is entered. In this example, a sysdebug library is specified. Enter only the name of the library or PDS, not the member name. The debugger will automatically look for a matching member name.

The debug file was loaded from the library



```
COBOL LOCATION: SAM1 initialization
Command ==>
MONITOR +-----1-----2-----3-----+
***** TOP OF MON
***** BOTTOM OF M

SOURCE: SAM1 +-----1-----2-----3-----4-----5-----+ LINE: 1 OF 467
***** TOP OF SOURCE *****
1 *****
2 * PROGRAM: SAM1
3 * Sample program for the ENTERPRISE COBOL Compiler
4 *
5 * AUTHOR : Doug Stout
LOG 0-----1-----2-----3-----4-----5-----+ LINE: 33 OF 35
0033 *** User preferences file commands end ***
0034 The Debug File for SAM1 could not be opened or read.
0035 SET DEFAULT LISTINGS DNET074.ADLAB.SYSDEBUG ;
PF 1:? 2:STEP 3:QUIT 4:LIST 5:FIND 6:AT/CLEAR
PF 7:UP 8:DOWN 9:GO 10:ZOOM 11:ZOOM LOG 12:RETRIEVE
```

The library was searched for a member name that matched the program name

The SET DEFAULT LISTINGS setting remains in effect for other programs that will be entered

When the SET DEFAULT LISTINGS command was entered, the debugger searched the library and loaded the debug file. Notice that program source is displayed in the source window now.

The "SET DEFAULT LISTINGS ..." setting is a good way to specify the location of debug files. A list of libraries can be specified, if needed. The setting remains in effect, and when each subprogram is entered, the same libraries will be searched again to find the right file. So this setting automates the search.

The SOURCE command is another way to specify debug files. Here is another example where no debug file was found



```
COBOL LOCATION: SAM2
Command ==> Scroll ==> CSR
MONITOR --+---1---+---2---+---3---+---4---+---5---+---6- LINE: 0 OF 0
***** TOP OF MONITOR *****
***** BOTTOM OF MONITOR *****

SOURCE: SAM2 +---1---+---2---+---3---+---4---+---5---+--- LINE: 0 OF 0
***** TOP OF SOURCE *****
***** BOTTOM OF SOURCE *****

LOG 0--++1--++2--++3--++4--++5-
0035 CU appears.
0036 GO ;
0037 The Debug File for SAM2 could not be opened or read.
PF 1: ? 2:STEP 3:QUIT 4:LIST 5:FIND 6:AT/CLEAR
PF 7:UP 8:DOWN 9:GO 10:ZOOM 11:ZOOM LOG 12:RETRIEVE
```

The source window is empty

A message is displayed in the log

Another way to specify the location of a debug file is with the "SOURCE" command. Here is another example where the debugger started, but did not find a debug file for the program. As in the last example, the source window is empty, and a message is displayed in the log.

A SOURCE command shows a list of programs and their debug files



```
COBOL LOCATION: SAM2
Command ==> SOURCE
Scroll ==> CSR
MONITOR --+-----1-----2-----3-----4-----5-----6- LINE: 0 OF 0
***** TOP OF MONITOR *****
***** BOTTOM OF MONITOR *****

SOURCE: SAM2 +---1---+---2---+---3---+---4---+---5---+-- LINE: 0 OF 0
***** TOP OF SOURCE *****
***** BOTTOM OF SOURCE *****

LOG 0-----1-----2-----3-----4-----5----- LINE: 35 OF 37
0035 CU appears.
0036 GO ;
0037 The Debug File for SAM2 could not be opened or read.
PF 1:?          2:STEP      3:QUIT       4:LIST       5:FIND       6:
PF 7:UP         8:DOWN       9:GO        10:ZOOM      11:ZOOM LOG 12:
Enter
```

"SOURCE" is typed on the command line, and Enter is pressed.

The source identification panel displays programs and their debug files



```
Source Identification Panel
Command ==> █

Compile Unit          Listing/Source File          Display
-----
SAM1                  DNET074.TEMP.SYSDEBUG (SAM1)  Y
SAM2                  DNET074.TEMP.SYSDEBUG (SAM2)  Y

Enter  END/QUIT      to return with current settings saved.
       CANCEL        to return without current settings saved.

PF 1: ?           2: STEP           3: QUIT           4: LIST           5: FIND           6: AT/CLEAR
PF 7: UP          8: DOWN           9: GO            10: ZOOM          11: ZOOM LOG      12: RETRIEVE
```

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The source identification panel is displayed. It shows a list of programs that have appeared, and their corresponding debug files. In this example, the debug files were renamed after the programs were compiled, which is why the debugger could not find them automatically.

The debug file can be specified for each program



Source Identification Panel

Command ==>

Compile Unit	Listing/Source File	Display
SAM1	DNET074.ADLAB.SYSDEBUG (SAM1)	Y
SAM2	DNET074.ADLAB.SYSDEBUG (SAM2)	Y

Enter END/QUIT to return with current settings saved.
CANCEL to return without current settings saved.

Specify debug files for individual programs by overtyping the file names

F3

PF 1: ? 2: STEP 3: QUIT 4: LIST 5: FIND 6: AT/CLEAR
PF 7: UP 8: DOWN 9: GO 10: ZOOM 11: ZOOM LOG 12: RETRIEVE

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You can specify the name of a debug file next to each program, to control the side file name on a program by program basis. Here the correct file names are entered. Press F3 to return to the debugger screen.

The debug file was loaded from the library



```
COBOL LOCATION: SAM2
Command ==>
MONITOR +---1---+---2---+---3---
***** TOP OF SOURCE *****
***** BOTTOM OF MONITOR *****

SOURCE: SAM2 +---1---+---2---+---3---+---4---+---5---+ LINE: 1 OF 118
***** TOP OF SOURCE *****
1 *****
2 * PROGRAM: SAM2
3 * Sample program for the ENTERPRISE COBOL Compiler
4 *
5 * AUTHOR : Doug Stout
LOG 0 +---1---+---2---+---3---+---4---+---5---+ LINE: 41 OF 43
0041 The Debug File for SAM2 is not available or was not found.
0042 SET SOURCE ON ( "SAM1" ) DNET074.ADLAB.SYSDEBUG(SAM1) ;
0043 SET SOURCE ON ( "SAM2" ) DNET074.ADLAB.SYSDEBUG(SAM2) ;
PF 1: ? 2: STEP 3: QUIT 4: LIST 5: FIND 6: AT/CLEAR
PF 7: UP 8: DOWN 9: GO 10: ZOOM 11: ZOOM LOG 12: RETRIEVE
```

The debug file specified on the SOURCE panel is used

The SOURCE panel can be displayed again to specify debug files for other programs after they are entered

The debugger loaded the debug files specified. Notice that program source is displayed in the source window now. The SOURCE command can be used to specify debug file names individually for each program. As other subprograms are entered, the SOURCE command can be entered again to specify the debug files for the additional programs.

- **SET DEFAULT LISTINGS** *library-name* , or
- **SET DEF LIST** *library-name* , or
- **SET DEF LIST** (*library-1, library-2, library-3, ...*)
 - Defines a library or libraries whose members are searched for program debug files
 - Tip: to enter a long library concatenation, use the POPUP command first to make room to enter a multi-line command
 - You can concatenate sysdebug files, langx files, compiler listings, and expanded source files all in the same list
- **SOURCE** or **LISTING**
 - Displays a panel that shows programs and their corresponding debug files
 - The names of individual debug files can be specified on the panel

A "SET DEFAULT LISTINGS ..." command is used to specify a library, or a list of libraries that the debugger will search for debug files. In the same list, you can specify a combination of the different types of libraries as needed, including sysdebug, LANGX, compiler listings, and expanded source files.

You can enter a "SOURCE" command to display the "Source identification panel", where you can manually specify the name of the debug file to be loaded for each program individually.

Using Debug Tool's terminal interface (continued)

- Loading program debug files
 - Loading sysdebug, listings, dwarf, and source files
 - Loading LANGX files
- Retaining settings and breakpoints between sessions



Next, you will see how to load a LANGX file.

Example of loading LANGX debug files



- Use this example to load LANGX debug files
- LANGX files are used with programs compiled with:
 - Assembler
 - VS COBOL II (compiled with the NOTEST compiler option)
 - OS/VS COBOL

This example shows the process for manually loading a LANGX file. These are used with assembler programs, and programs compiled with the OS/VS COBOL compiler, or optionally with VS COBOL II when compiled with the NOTEST compiler option.

A program was entered, but no LANGX file was found



```
Disassem LOCATION: SAMI11 initialization
Command ==>                               Scroll ==> PAGE
MONITOR --+---1---+---2---+---3---+---4---+---5---+---6- LINE: 0 OF 0
***** TOP OF MONITOR *****
***** BOTTOM OF MONITOR *****

SOURCE: SAMI11 --+---1---+---2---+---3---+---4---+---5---+--- LINE: 0 OF 0
***** TOP OF SOURCE *****
***** BOTTOM OF SOURCE *****

LOG 0--+---1---+---2---+---3---+---4---+---5---+--- LINE: 30 OF 35
0030 IBM Debug Tool Version 10 Release 1 Mod 0
0031 12/29/2009 02:07:55 AM
0032 5655-V50: Copyright IBM Corp. 1992, 2009
0033 *** User preferences file commands end ***
0034 Source or Listing data is not available, or the CU was not compiled with
0035 the correct compile options.
PF 1: ?      2: STEP    3: QUIT    4: LIST    5: FIND    6: AT/CLEAR
PF 7: UP     8: DOWN    9: GO     10: ZOOM   11: ZOOM LOG 12: RETRIEVE
```

The source window is empty

A message is displayed in the log

In this example, the debugger started, but did not find a debug file for the program. Notice that the source window is empty, and a message is displayed in the log describing the problem.

Use a **SET DEFAULT LISTINGS ...** command to specify LANGX file libraries



```
Disassem LOCATION: SAM111 Initialization
Command ==> SET DEF LIST DNET074.ADLAB.EQALANGX          Scroll ==> PAGE
MONITOR --+---1---+---2---+---3---+---4---+---5---+---6- LINE: 0 OF 0
***** TOP OF MONITOR *****
***** BOTTOM OF MONITOR *****

SOURCE: S:***** TOP OF SOURCE *****
***** BOTTOM OF SOURCE *****

LOG 0--+---1---+---2---+---3---+---4---+---5---+---6- LINE: 30 OF 35
0030 IBM Debug Tool Version 10 Release 1 Mod 0
0031 12/29/2009 02:07:55 AM
0032 5655-V50: Copyright IBM Corp. 1992, 2009
0033 *** User preferences file commands end ***
0034 Source or Listing data is not available, or the CU was not compiled with
0035 the correct compile options.
PF 1:?          2:STEP      3:QUIT        4:LIST        5:FIND        6:
PF 7:UP         8:DOWN       9:GO          10:ZOOM       11:ZOOM LOG  12:
```

Enter one library, or a list of libraries in parentheses

When entering library names, do not specify member names or use quotation marks

Enter

A SET DEFAULT LISTINGS command is entered. In this example, a library containing LANGX files is specified. Enter only the name of the PDS, not the member name.

Load the LANGX file with an LDD (load debug data) command

```

Disassem LOCATION: SAMI11 initialization
Command == LDD SAMI11
MONITOR --1-----2-----3-----
***** TOP OF MONITOR *****
***** BOTTOM OF MONITOR *****

SOURCE: SAMI11 --1-----2-----3-----
***** TOP OF SOURCE *****
***** BOTTOM OF SOURCE *****

LOG 0--1-----2-----3-----4-----5----- LINE: 33 OF 38
0033 *** User preferences file commands end ***
0034 Source or Listing data is not available, or the CU was not compiled with
0035 the correct compile options.
0036 SET DEFAULT LISTINGS DNET074.ADLAB.EQALANGX ;
0037 Source or Listing data is not available, or the CU was not compiled with
0038 the correct compile options.
PF 1:?      2:STEP    3:QUIT     4:LIST     5:FIND     6:
PF 7:UP     8:DOWN    9:GO      10:ZOOM    11:ZOOM LOG 12
    
```

The LDD command loads a LANGX file into the debugger

It will search the SET DEFAULT LISTINGS library or libraries for the specified member name

Enter

With LANGX files, an additional command, LDD (for load debug data) is needed to load the program. The LDD command is typed on the command line, specifying the member name to be loaded, and Enter is pressed.

The LANGX file was loaded from the library



```
NL COBOL LOCATION: SAMI11 initialization
Command ==>
MONITOR --1--2--3--4--5--6- LINE: 0 OF 0
***** TOP OF MONITOR *****
***** BOTTOM OF MONITOR *****
SOURCE: SAMI11 --1--2--3--4--5-- LINE: 1 OF 439
1 *****
2 * PROGRAM: SAMI11
3 * Sample program for the VS COBOL II Compiler
4 *
5 * AUTHOR : Doug Stout
6 * IBM PD TOOLS
LOG 0--1--2--3--4--5-- LINE: 34 OF 39
0034 Source or Listing data is not available, or the CU was not compiled with
0035 the correct compile options.
0036 SET DEFAULT LISTINGS DNET074.ADLAB.EQALANGX ;
0037 Source or Listing data is not available, or the CU was not compiled with
0038 the correct compile options.
0039 LDD SAMI11 ;
PF 1:? 2:STEP 3:QUIT 4:LIST 5:FIND 6:AT/CLEAR
PF 7:UP 8:DOWN 9:GO 10:ZOOM 11:ZOOM LOG 12:RETRIEVE
```

The SET DEFAULT LISTINGS setting remains in effect for other programs that will be entered

Because of the LDD command, the member was found in the library search concatenation, and was loaded. The program source code is now displayed in the source window.

The SOURCE command is another way to specify debug files.
Here is another example where the Langx file was not found



```
Disassem LOCATION: SAMI11 initialization
Command ==>
Scroll ==> CSR
MONITOR --+---1---+---2---+---3---+---4---+---5---+---6- LINE: 0 OF 0
***** TOP OF MONITOR *****
***** BOTTOM OF MONITOR *****

SOURCE: SAMI11 --+---1---+---2---+---3---+---4---+---5---+--- LINE: 0 OF 0
***** TOP OF SOURCE *****
***** BOTTOM OF SOURCE *****

LOG 0--1--2--3--4--5-
0031 *** User preferences file commands end ***
0032 Source or Listing data is not available, or the CU was not compiled with
0033 the correct compile options.
PF 1:? 2:STEP 3:QUIT 4:LIST 5:FIND 6:HT/CLEAR
PF 7:UP 8:DOWN 9:GO 10:ZOOM 11:ZOOM LOG 12:RETRIEVE
```

The source window is empty

A message is displayed in the log

Another way to specify the location of a debug file is with the "SOURCE" command. Here is another example where the debugger started, but did not find a debug file for the program. Like in the last example, the source window is empty, and a message is displayed in the log.

Request the LANGX file to be loaded with an LDD (load debug data) command



```
Disassem LOCATION: SAMI11 initialization
Command == LDD SAMI11
MONITOR ---1-----2-----3-----
***** TOP OF MONITOR *****
***** BOTTOM OF MONITOR *****

SOURCE: SAMI11 ---1-----2-----3-----4-----5----- LINE: 0 OF 0
***** TOP OF SOURCE *****
***** BOTTOM OF SOURCE *****

LOG 0-----1-----2-----3-----4-----5----- LINE: 31 OF 33
0031 *** User preferences file commands end ***
0032 Source or Listing data is not available, or the CU was not compiled with
0033 the correct compile options.
PF 1:?      2:STEP    3:QUIT     4:LIST     5:FIND     6:
PF 7:UP     8:DOWN    9:GO      10:ZOOM    11:ZOOM LOG 12
```

The LDD command loads a LANGX file into the debugger

Enter

Use an LDD (load debug data) command to load the Langx file. The LDD command is typed on the command line, specifying the member name to be loaded, and Enter is pressed.

LDD did not find the Langx file. Use a SOURCE command to specify individual LANGX files

```

LX COBOL LOCATION: SAMI11 initialization
Command ==> SOURCE
MONITOR --1--2--3--4--5--6- LINE: 0 OF 0
***** TOP OF MONITOR *****
***** BOTTOM OF MONITOR *****

SOURCE: SAMI11 --1--2--3--4--5-- LINE: 0 OF 0
***** TOP OF SOURCE *****
***** BOTTOM OF SOURCE *****

LOG 0--1--2--3--4--5-- LINE: 35 OF 37
0035 An error occurred while attempting to load the debug (EQALANGX) file for
0036 a specified CU.
0037 The Debug File for SAMI11 could not be opened or read.
PF 1: ?      2: STEP    3: QUIT    4: LIST    5: FIND    6: AT/CLEAR
PF 7: UP     8: DOWN    9: GO     10: ZOOM   11: ZOOM LOG 12: RETRIEVE
    
```

LDD automatically searches the library concatenations in the SET DEFAULT LISTINGS command and the EQADEBUG DD if they were specified. They were not specified in this example.

"SOURCE" is typed on the command line, and Enter is pressed.

The source identification panel displays programs and their debug files



```
Source Identification Panel
Command ==>
Compile Unit      Listing/Source File      Display
-----
SAMI11           DNET074.ADLAB.EQALANGX(SAMI11)  Y
Enter  END/QUIT  to return with current settings saved.
       CANCEL    to return without current settings saved.
```

F3

```
PF 1: ?          2: STEP        3: QUIT        4: LIST        5: FIND        6: AT/CLEAR
PF 7: UP         8: DOWN        9: GO          10: ZOOM       11: ZOOM LOG   12: RETRIEVE
```

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The source identification panel is displayed. It shows a list of programs that have appeared, and their corresponding debug files. You can specify the name of a Langx file next to each program. Press F3 to return to the debugger screen.

The debug file was loaded from the library



```
LX COBOL LOCATION: SAMI11 initialization
Command ==>
MONITOR --+---1---+---2---+---3---+
***** TOP OF SOURCE *****
***** BOTTOM OF MONITOR *****

SOURCE: SAMI11 --+---1---+---2---+---3---+---4---+---5---+ LINE: 1 OF 439
***** TOP OF SOURCE *****
1 *****
2 * PROGRAM: SAMI11
3 * Sample program for the VS COBOL II Compiler
4 *
5 * AUTHOR : Doug Stout
LOG 0--+---1---+---2---+---3---+---4---+---5---+ LINE: 36 OF 38
0036 a specified CU.
0037 The Debug File for SAMI11 could not be opened or read.
0038 SET SOURCE ON ( "SAMI11" ) DNET074.ADLAB.EQALANGX(SAMI11) ;
PF 1:?      2:STEP    3:QUIT    4:LIST    5:FIND    6:AT/CLEAR
PF 7:UP     8:DOWN    9:GO     10:ZOOM   11:ZOOM LOG 12:RETRIEVE
```

The debug file specified on the SOURCE panel is used

The SOURCE panel can be displayed again to specify debug files for other programs after they are entered

The debugger loaded the Langx file. Notice that program source is displayed in the source window. The SOURCE command can be used to specify debug file names individually for each program. As other subprograms are entered, the SOURCE command can be entered again to specify the debug files for the additional programs.

- **SET DEFAULT LISTINGS** *library-name* , or
- **SET DEF LIST** *library-name* , or
- **SET DEF LIST (library-1, library-2, library-3, ...)**
 - Defines a library or libraries whose members are searched for program debug files
 - Tip: to enter a long library concatenation, use the POPUP command first to have room to enter a multi-line command
 - You can concatenate sysdebug files, langx files, compiler listings, and expanded source files all in the same list
- **LDD member-name**
 - Loads the LANGX file in *member-name* from the library or libraries specified by the SET DEF LISTINGS ... setting or an EQADEBUG DD
- **SOURCE** or **LISTING**
 - Displays a panel that shows programs and their corresponding debug files
 - The names of individual debug files can be specified on the panel

A "SET DEFAULT LISTINGS ..." command is used to specify a library, or a list of libraries that the debugger will search for debug files.

Use an "LDD member-name" command to explicitly load the LANGX file. The libraries specified by the "SET DEFAULT LISTINGS ..." command and the EQADEBUG DD statement are searched for the member.

You can enter a "SOURCE" command to display the "Source identification panel", where you can manually specify the name of the debug file to be loaded for each program individually.

Feedback



Your feedback is valuable

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