IBM Tivoli Decision Support for z/OS
Version 1.8.2

Messages and Problem Determination

SH19-6902-15

IBM Tivoli Decision Support for z/OS
Version 1.8.2

Messages and Problem Determination

SH19-6902-15

Before using this information and the product it supports, read the information in "Notices" on page 137.

Fourteenth Edition (March 2015)

This edition applies to version 1, release 8, modification level 2 of Tivoli Decision Support for z/OS (program number 5698-B06) and to all subsequent releases and modifications until otherwise indicated in new editions.

© COPYRIGHT INTERNATIONAL BUSINESS MACHINES CORPORATION. ALL RIGHTS RESERVED. Note to U.S. Government Users -- Documentation related to restricted rights -- Use, duplication or disclosure is subject to restrictions set forth in GSA ADP Schedule Contract with IBM Corp. 1994, 2015

Contents

Figures v

Preface vii
Who should read this book vii
What this book contains vii
Publications viii
Tivoli Decision Support for z/OS library . . . viii
Accessing terminology online ix
Accessing publications online ix
Accessibility x
Tivoli technical training. x
Support information x
Conventions used in this book x
Typeface conventions xi
Changes in this edition xi

Part 1. Messages 1

Chapter 1. Host Messages 3
Log Collector and Installation Preprocessing Messages 3
Examples of Output from COLLECT, PURGE and RECALCULATE 34
REXX-SQL Interface Messages 35
IMS Feature Messages 37
CICS Feature Messages 48
AS/400 Messages 50
DEFINE/DROP Report and Report Group Messages (REXX Utility) 51
Batch Reporting Messages (REXX Utility) 55
Migration Messages 59
Information/Management Record Creation (Exception Reporting) Messages 63
Log Data Manager Messages 64
Web Reporting Messages 68
Usage and Accounting Collector Messages 69

Chapter 2. AS/400 Messages Issued on AS/400 System 85

Part 2. Problem Determination . . . 87

Chapter 3. Host Problem Determination Procedure 89
Classifying a Problem 89
Using Keywords to Describe a Problem 89
Searching the Software Support Database . . . 90
Identifying Symptoms and Selecting Keywords 90
Collecting Information about Any Problem 91
Specifying Your Software Environment 91
Information Needed for All Problems. 92
Collecting Information about specific problems . . 92
System Diagnostics 92
Running the Systems Diagnostics extract . . 92
Abnormal Termination (ABEND) 93
Message (MSG) 93
Loop (LOOP) Procedure 94
Incorrect Output (INCORROUT) Procedure. . . 95
Performance (PERFM) Procedure 95
Documentation (DOC) procedure 95
Collecting Documentation about All Problems . . . 96
Reporting the Problem to IBM 97
Talking with a Level 1 Representative 97
Talking with a Level 2 Representative 98
Preparing Supporting Materials. 98
Completing a Tivoli Decision Support for z/OS Problem Description Worksheet. 98

Chapter 4. Workstation Problem Determination Procedure 99
Classifying a Problem 99
Information Needed for All Problems. 99
Specifying your Hardware and Software Environment 100
Collecting Documentation about All Problems . . 100
Collecting Information about Specific Problems . . 101
TRAP 101
Message (MSG). 101
Loop (LOOP) Procedure. 101
Incorrect Output (INCORROUT) Procedure . . 102
Performance (PERFM) Procedure. 102
Documentation (DOC) Procedure. 102
Reporting the Problem to IBM. 103
Completing the Tivoli Decision Support for z/OS Workstation Problem Description Worksheets. . . 103

Part 3. Appendixes 105

Appendix A. Dump File Content and Trace Options 107
Information in the Dump File 107
Abend Information 107
User Abend Codes 108
Trace Information 108
Record or Row Reject Information 109
Error Situations Recording 110
Dialog Trace 110

Appendix B. Using IBM-supplied Diagnostic and Service Aids 113
First Failure Support Technology 113
Implementation. 113
Data-dump Content 114
FFST Message 114
FFST Symptom String 114
Tivoli Decision Support for z/OS Data Areas 115
Data-dump Formatter 115

Operator Commands 116
Output Options. 117

Appendix C. Problem Description Worksheet for the Host 119

Appendix D. Problem Description Worksheet for the Workstation Performance Feature 123

Appendix E. Problem Description Worksheet for the AS/400 System Performance Feature 127

Appendix F. Support information . . . 131
Searching knowledge bases. 131
Searching the information center 131
Searching the Internet 131
Obtaining fixes 132
Receiving weekly support updates 132
Contacting IBM Software Support 133
Determining the business impact 134
Describing problems and gathering information 134
Submitting problems 134

Notices 137
Trademarks 139

Bibliography 141
TDS publications 141

Glossary 143

Index 145

Figures

1. An Example of Messages Generated by a COLLECT Statement 34
2. An Example of Messages Generated by a PURGE Statement 35
3. An Example of Messages Generated by a RECALCULATE Statement 35
4. Set/Reset Trace Options Window 111
5. Tivoli Decision Support for z/OS Problem Description Worksheet (Part 1 of 3) 119
6. Tivoli Decision Support for z/OS Problem Description Worksheet (Part 2 of 3) 120
7. Tivoli Decision Support for z/OS Problem Description Worksheet (Part 3 of 3) 120
8. Workstation Performance Feature Problem Description Worksheet 124
9. AS/400 Feature Problem Description Worksheet 128

Preface

This book helps you identify and correct problems that can occur when using IBM® Tivoli® Decision Support for z/OS® (hereafter also referred to as Tivoli Decision Support for z/OS).

The terms MVS™, OS/390®, and z/OS are used interchangeably throughout this book.

Who should read this book

This book is for users who:

- Need more information about a Tivoli Decision Support for z/OS message.
- Determine corrections to error conditions indicated by Tivoli Decision Support for z/OS messages.
- Identify and document a Tivoli Decision Support for z/OS problem.
- Determine whether the problem is an installation error, a usage error, or an error in the Tivoli Decision Support for z/OS product code.
- Report Tivoli Decision Support for z/OS problems to IBM.

These users can be system programmers, Tivoli Decision Support for z/OS administrators, or users of a Tivoli Decision Support for z/OS feature.

Note: To get immediate message help for messages that occur when you are using the Tivoli Decision Support for z/OS dialogs on the host and on the workstation, press F1.

What this book contains

This book contains the following parts:

Part 1, "Messages," on page 1

- Chapter 1, "Host Messages," on page 3 lists the Tivoli Decision Support for z/OS messages and their severity codes. It also explains each message, describes the system action, and recommends a user response.
- Chapter 2, "AS/400 Messages Issued on AS/400 System," on page 85 lists the AS/400 messages that are issued on the AS/400 system. It also explains each message, describes the system action, and recommends a user response.

Part 2, "Problem Determination," on page 87 contains information needed to diagnose and correct problems and addresses these tasks:

- Chapter 3, "Host Problem Determination Procedure," on page 89 explains how to determine whether Tivoli Decision Support for z/OS caused the problem, search a software-support database to determine if the problem has been reported previously, and how to isolate failing program code and find a solution.
- Chapter 4, "Workstation Problem Determination Procedure," on page 99 explains how to isolate failing program code and find a solution.

Part 3, "Appendixes" contains the following information:

- Appendix A, "Dump File Content and Trace Options," on page 107 describes the contents of the DRLDUMP data set and how to activate traces.
- Appendix B, "Using IBM-supplied Diagnostic and Service Aids," on page 113 describes the IBM licensed program that provides immediate problem notification and first-failure data capture.
- Appendix C, "Problem Description Worksheet for the Host," on page 119 contains a problem description worksheet for the host.
- Appendix D, "Problem Description Worksheet for the Workstation Performance Feature," on page 123 contains a problem description worksheet for the Workstation Performance featureWorkstation Performance feature.
- Appendix E, "Problem Description Worksheet for the AS/400 System Performance Feature," on page 127 contains a problem description worksheet for the AS/400 System Performance feature.
- Appendix F, "Support information," on page 131 describes how to obtain support for IBM software products.

Publications

This section lists publications in the Tivoli Decision Support for z/OS library and any other related documents. It also describes how to access Tivoli publications online, how to order Tivoli publications, and how to submit comments on Tivoli publications.

Tivoli Decision Support for z/OS library

The following documents are available in the Tivoli Decision Support for z/OS library:

- *Administration Guide and Reference*, SH19-6816

  Provides information about initializing the Tivoli Decision Support for z/OS database and customizing and administering Tivoli Decision Support for z/OS.
- *AS/400 System Performance Feature Guide and Reference*, SH19-4019

  Provides information for administrators and users about collecting and reporting performance data generated by AS/400 systems.
- *CICS Performance Feature Guide and Reference*, SH19-6820

  Provides information for administrators and users about collecting and reporting performance data generated by Customer Information and Control System (CICS®).
- *Distributed Systems Performance Feature Guide and Reference*, SH19-4018

  Provides information for administrators and users about collecting and reporting performance data generated by operating systems and applications running on a workstation.
- *Guide to Reporting*, SH19-6842

  Provides information for users who display existing reports, for users who create and modify reports, and for administrators who control reporting dialog default functions and capabilities.
- *IMS Performance Feature Guide and Reference*, SH19-6825

  Provides information for administrators and users about collecting and reporting performance data generated by Information Management System (IMS).
- *Language Guide and Reference*, SH19-6817

  Provides information for administrators, performance analysts, and programmers who are responsible for maintaining system log data and reports.

- *Messages and Problem Determination*, SH19-6902

  Provides information to help operators and system programmers understand, interpret, and respond to Tivoli Decision Support for z/OS messages and codes.
- *Network Performance Feature Installation and Administration*, SH19-6901

  Provides information for network analysts or programmers who are responsible for setting up the network reporting environment.
- *Network Performance Feature Reference*, SH19-6822

  Provides reference information for network analysts or programmers who use the Network Performance feature.
- *Network Performance Feature Reports*, SH19-6821

  Provides information for network analysts or programmers who use the Network Performance feature reports.
- *Resource Accounting for z/OS*, SH19-4495

  Provides information for users who want to use Tivoli Decision Support for z/OS to collect and report performance data generated by Resource Accounting for z/OS.
- *System Performance Feature Guide*, SH19-6818

  Provides information for performance analysts and system programmers who are responsible for meeting the service-level objectives established in your organization.
- *System Performance Feature Reference Volume I*, SH19-6819

  Provides information for administrators and users with a variety of backgrounds who want to use Tivoli Decision Support for z/OS to analyze z/OS, z/VM®, zLinux, and their subsystems, performance data.
- *System Performance Feature Reference Volume II*, SH19-4494

  Provides information for administrators and users with a variety of backgrounds who want to use Tivoli Decision Support for z/OS to analyze z/OS, z/VM, zLinux, and their subsystems, performance data.
- *Usage and Accounting Collector User Guide*, SC23-7966

  Provides information about the functions and features of the Usage and Accounting Collector.
- *IBM Online Library z/OS Software Products Collection Kit*, SK3T-4270

  CD containing all z/OS documentation.

Accessing terminology online

The IBM Terminology Web site consolidates the terminology from IBM product libraries in one convenient location. You can access the Terminology Web site at the following Web address:

http://www.ibm.com/ibm/terminology

Accessing publications online

IBM posts publications for this and all other Tivoli products, as they become available and whenever they are updated, to the Web site. Access the Tivoli software information center by first going to the Tivoli software library at the following Web address:

http://www.ibm.com/software/tivoli/library/

Accessing publications online

Scroll down and click the **Product manuals** link. In the Tivoli Technical Product Documents Alphabetical Listing window, click the Tivoli Decision Support for z/OS link to access the product library at the Tivoli software information center.

Note: If you print PDF documents on other than letter-sized paper, set the option in the **File ″ Print** window that allows Adobe Reader to print letter-sized pages on your local paper.

Accessibility

Accessibility features help users with a physical disability, such as restricted mobility or limited vision, to use software products successfully. With this product, you can use assistive technologies to hear and navigate the interface. You can also use the keyboard instead of the mouse to operate all features of the graphical user interface.

For additional information, see the Accessibility Appendix in the *Administration Guide and Reference*.

Tivoli technical training

For Tivoli technical training information, refer to the following IBM Tivoli Education Web site:

http://www.ibm.com/software/tivoli/education/

Support information

If you have a problem with your IBM software, you want to resolve it quickly. IBM provides the following ways for you to obtain the support you need:

- Searching knowledge bases: You can search across a large collection of known problems and workarounds, Technotes, and other information.
- Obtaining fixes: You can locate the latest fixes that are already available for your product.
- Contacting IBM Software Support: If you still cannot solve your problem, and you need to work with someone from IBM, you can use a variety of ways to contact IBM Software Support.

For more information about these three ways of resolving problems, see Appendix F, “Support information,” on page 131.

Conventions used in this book

This guide uses several conventions for special terms and actions, operating system-dependent commands and paths, and margin graphics.

The following terms are used interchangeably throughout this book:

- MVS, OS/390, and z/OS.
- VM and z/VM.

Except for editorial changes, updates to this edition are marked with a vertical bar to the left of the change.

Typeface conventions

This guide uses the following typeface conventions:

Bold

- Lowercase commands and mixed case commands that are otherwise difficult to distinguish from surrounding text
- Interface controls (check boxes, push buttons, radio buttons, spin buttons, fields, folders, icons, list boxes, items inside list boxes, multicolumn lists, containers, menu choices, menu names, tabs, property sheets), labels (such as **Tip**, and **Operating system considerations**)
- Column headings in a table
- Keywords and parameters in text

Italic

- Citations (titles of books, diskettes, and CDs)
- Words defined in text
- Emphasis of words (words as words)
- Letters as letters
- New terms in text (except in a definition list)
- Variables and values you must provide

Monospace

- Examples and code examples
- File names, programming keywords, and other elements that are difficult to distinguish from surrounding text
- Message text and prompts addressed to the user
- Text that the user must type
- Values for arguments or command options

Changes in this edition

This edition is an update of the previous edition of the same book. The changes relate to 1.8.2 GA APAR documentation, and subsequent APARs.

•

- New message are:
  - "DRL0471E" on page 32
  - "DRL0472E" on page 32

Except for editorial changes, updates to this edition are marked with a vertical bar [|] to the left of the change.

Changes in this edition

Part 1. Messages

Chapter 1. Host Messages

Tivoli Decision Support for z/OS is a reporting system that collects performance data logged by computer systems, summarizes the data, and presents it in a variety of forms for use in systems management. Tivoli Decision Support for z/OS consists of a base product and several optional features.

This chapter contains descriptions of messages generated during batch processing and when the log collector is invoked from the online dialog. The messages include any that are a result of log collector language use, report definition language use, abends, and any other Tivoli Decision Support for z/OS error conditions from batch processes. (Messages that occur when you are working with Tivoli Decision Support for z/OS dialogs are explained in the message help; they are not described in this book.)

Tivoli Decision Support for z/OS host messages use this format:
DRL*nnnnc* ***Message text.***

Where:

- **DRL** identifies the message as having been issued by Tivoli Decision Support for z/OS.
- ***nnnn*** is a unique four-digit number assigned to the message:
  - **0*nnn*** indicates a log-collector message.
  - **1*nnn*** indicates a REXX/SQL interface message.
  - **2*nnn*** indicates an exit (for example, CICS or IMS) message.
  - **3*nnn*** indicates a REXX utility (for example, DRLERDEF or DRLEBATR) message.
- ***c*** is the severity code:
  - **I** represents an informational message, with return code=**0**.
  - **W** represents a warning message, with return code=**4**.
  - **E** represents an error message, with return code=**8**.
  - **S** represents a severe message, with return code=**12**.
  - **T** represents a terminating error message, with an **Abend** return code. (See "User Abend Codes" on page 108.)
- ***Message text*** is descriptive text about Tivoli Decision Support for z/OS status or operation.

Log Collector and Installation Preprocessing Messages

As explained in the *Language Guide and Reference*, the log collector is a program that processes data from log data sets and stores the results in tables. It runs either online (invoked from the Tivoli Decision Support for z/OS dialogs) or in batch (executed using z/OS job control language). In each case, the log collector must have an output file DRLOUT allocated to it. This section describes the messages that the log collector writes to the DRLOUT file.

Note: The system action associated with a message is often described as this:

```
The log collector stops processing the current statement and
continues with the next.
```

It means that the statement has no effect; the exception is COLLECT, if the error occurs after a commit. In many cases, the log collector continues checking the statement, without executing it, so more messages about the same statement might appear.

The installation preprocessor is a program which is used during component installation. Since it shares error recovery routines with the log collector, the installation preprocessor can also issue some of the following messages.

DRL0000T The log collector run terminated abnormally. The DRLDUMP file contains detailed information.

Explanation: The program run terminated abnormally for one of these reasons:

- An operating system service invoked by the program requested an abnormal termination.
- The program detected an abnormal situation, such as an unexpected return code from SQL, an unexpected program check interrupt, or an invalid value of some variable.
- The dynamic storage stack was exceeded.

System action: Detailed information about the problem is written to the DRLDUMP file. The completion code (abend code) depends on what caused the termination:

- If the termination was requested by the operating system, the code is the one supplied by the system. It identifies the reason for the termination.
- If the termination is caused by a *should-not-occur* situation detected by the program, the code is user abend code 2 (U002).
- If the reason is dynamic stack overflow, the code is user abend code 1 (U001).

User response: Use the abend code and the information written to the DRLOUT and DRLDUMP files to establish the reason for termination. The termination may be caused by a program error in your exit procedure or in the program. If you suspect an error in the program, save the contents of the DRLDUMP file, and note as much detail as possible of what you were doing when the error occurred. Report the error to IBM as explained in "Reporting the Problem to IBM" on page 97.

DRL0001T The log collector run is terminated because the *ddname* file is not available.

Explanation: This message is preceded by a message identifying a problem with the *ddname* file (DRLOUT or DRLDUMP). Because of this problem, the file can no longer be used; however, the program needs the file for its operation.

System action: The program is abnormally terminated with abend code U016. No more information is provided about the problem.

User response: Ensure that a usable file is allocated.

DRL0003I

Explanation: This message is used to insert a blank line between other messages. (For an example, see Figure 1 on page 34.)

System action: None.

User response: None.

DRL0007S "*text*" is an invalid parameter.

Explanation: *text* appears as a keyword in the parameter string supplied to the program (typically as the PARM string of the JCL EXEC statement). However, *text* is not among the keywords recognized by the program.

System action: The program stops without processing any more statements.

User response: Correct the parameter string.

DRL0011E Information about update *update* in system table *system table* is damaged. Restore the update definition.

Explanation: The contents of the *system table* system table are damaged, perhaps because something other than the log collector was used to update the table. The damaged information is a part of the definition of the *update* update. The definition cannot be used.

System action: The log collector stops processing the current statement and continues with the next.

User response: Execute the DROP UPDATE and DEFINE UPDATE statements for the *update* update to restore the definition.

DRL0012E Information about record *record* in system table *system table* is damaged. Restore the record definition.

Explanation: The contents of the *system table* system table are damaged, perhaps because something other than the log collector was used to update the table. The damaged information is a part of the definition of the *record* record. The definition cannot be used.

System action: The log collector stops processing the current statement and continues with the next.

User response: Execute the DROP RECORD and DEFINE RECORD statements for the *record* record to restore the definition.

DRL0021E The file *ddname* could not be opened.

Explanation: The log collector cannot open the *ddname* file.

System action: The log collector stops processing the current statement and continues with the next.

User response: Ensure that the file exists and can be opened.

DRL0022E Abend *code* encountered accessing file *ddname*.

Explanation: The program encountered an abend when accessing the *ddname* file.

System action: The program stops processing the current statement and continues with the next.

User response: Check the output for more messages about the error. For example, if the file is an input file, processing is interrupted. If the file is an output file, an out-of-space condition might have occurred. Study the cause of the error and act accordingly.

DRL0023E Block count error encountered after *n* records on *ddname* file.

Explanation: The program encountered a block count error after *n* records in the *ddname* file.

System action: The program stops processing the current statement and continues with the next.

User response: Check the output for more messages about the error. Study the cause of the error and act accordingly.

DRL0024E Permanent I/O error encountered after *n* records on file *ddname*.

Explanation: The program encountered an I/O error after *n* records in the *ddname* file.

System action: The program stops processing the current statement and continues with the next.

User response: Check the output for more messages about the error. Study the cause of the error and act accordingly.

DRL0025E Block size error encountered after *n* records on file *ddname*.

Explanation: The program encountered a block size error after *n* records in the *ddname* file.

System action: The program stops processing the current statement and continues with the next.

User response: Check the output for more messages about the error. Study the cause of the error and act accordingly.

DRL0031E The statement "*text*" is not recognized.

Explanation: The *text* appears in a place where a statement name is expected. However, it is not the name of any statement of the log collector language.

System action: The log collector stops processing the current statement and continues with the next.

User response: Check the syntax diagram in *Language Guide and Reference* and correct the statement. Notice that the different clauses of the statement must be written in the order shown in the diagram. Notice also that the error might be located much earlier in the input than the token *text*. A large portion of input extending past the error might still conform to the syntax. The message identifies the point where the input no longer matches the syntax.

DRL0032E The variable *variable* does not exist.

Explanation: The input text contains a variable marker &*variable*, but the variable *variable* is not defined.

System action: The log collector stops processing the current statement and continues with the next.

User response: Specify a value for the variable using the SET statement or PARM string of the JCL EXEC statement. Notice that all variables are dropped at the end of the log collector run.

DRL0033E The expression or condition starting with *text* is too long or too complex.

Explanation: Either the expression or condition text, or its internal representation is longer than 2000 characters.

System action: The log collector stops processing the current statement and continues with the next.

User response: Try to simplify the expression or condition. Is it part of an update definition? Then you can break out parts of the expression and put them in the LET clause.

DRL0034E "*text*" is not a valid variable marker.

Explanation: The *text* begins with an ampersand, but is not a valid variable marker. A variable marker consists of an ampersand (&) followed by an identifier.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the variable marker.

DRL0035E An invalid field format "*text*" is specified for field *field*.

Explanation: *text* was specified as the field format for the *field* field, but it does not identify any field format known to the log collector.

System action: The log collector stops processing the current statement and continues with the next.

User response: Refer to *Language Guide and Reference* for a list of valid field formats.

DRL0036E The offset of the field *field* is undefined. Offset must be specified when the previous field format is CHAR(*).

Explanation: The offset of *field* has been omitted. The offset cannot be determined because the previous field has the format CHAR(*), and no field can follow a field with that format.

System action: The log collector stops processing the current statement and continues with the next.

User response: Add an offset specification for the field.

DRL0037E The format specified for the *field* field conflicts with the length of the field.

Explanation: A given format can only be specified for fields of certain lengths. For example:

- DATE(DDMMYY) can only be specified for a 6-byte field.
- BINARY can only be specified for a field of 1, 2, 3, 4, or 8 bytes.
- BIT(16) can only be specified for a 2-byte field.
- CHAR(*) can only be specified for a varying-length field (a field with LENGTH *).

System action: The log collector stops processing the current statement and continues with the next.

User response: Refer to *Language Guide and Reference* for information about the lengths allowed for different field formats. Ensure that the format agrees with the length specification.

DRL0038E "*text*" is not a valid integer constant.

Explanation: The token *text* looks like an integer constant, but is not a valid integer constant (for example, its value is outside the range of integers).

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the constant.

DRL0039E "*text*" is not a valid floating-point constant.

Explanation: The token *text* looks like a floating-point constant, but is not a valid floating-point constant (for example: the exponent is incomplete or is outside the allowed range).

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the constant.

DRL0040E Syntax error: unexpected text "" (two quotation marks) is found.

Explanation: Two consecutive quotation marks were found where they are not allowed by the syntax. Consecutive quotation marks are allowed only within a delimited identifier, string constant, or comment.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0041E Syntax error: unexpected text "*text*" is found.

Explanation: The token *text* was found where it is not allowed by the syntax.

System action: The log collector stops processing the current statement and continues with the next.

User response: Check the syntax diagram in *Language Guide and Reference* and correct the statement. Notice that different clauses of the statement must be written in the order shown in the diagram. Notice also that the error might be located much earlier in the input than the token *text*. A large portion of input extending past the error might still conform to the syntax. The message identifies the point where the input no longer matches the syntax.

DRL0042E Syntax error: unexpected text "*text1*" is found after "*text2*".

Explanation: The token *text2*, which conforms to the syntax, was followed by the token *text1*. The syntax does not allow this sequence.

System action: The log collector stops processing the current statement and continues with the next.

User response: Check the syntax diagram in *Language Guide and Reference* and correct the statement. Notice that different clauses of the statement must be written in the order shown in the diagram. Notice also that the error might be located much earlier in the input than the token *text1*. A large portion of input extending past the error might still conform to the syntax. The message identifies the point where the input no longer matches the syntax.

DRL0043E Syntax error: "*text1*" found where *text2* is expected.

Explanation: The token *text1* was found where it is not allowed by the syntax. The *text2* states what the syntax allows in place of *text1*.

System action: The log collector stops processing the current statement and continues with the next.

User response: Check the syntax diagram in *Language Guide and Reference* and correct the statement. Notice that different clauses of the statement must be written in the order shown in the diagram. Notice also that the error might be located much earlier in the input than the token *text1*. A large portion of input extending past the error might still conform to the syntax. The message identifies the point where the input no longer matches the syntax.

DRL0044E Syntax error: "*text1*" found after "*text2*", where *text3* is expected.

Explanation: The token *text1* was found following *text2*, where it is not allowed by the syntax. The *text3* states what the syntax allows in place of *text1*.

System action: The log collector stops processing the current statement and continues with the next.

User response: Check the syntax diagram in *Language Guide and Reference* and correct the statement. Notice that different clauses of the statement must be written in the order shown in the diagram. Notice also that the error might be located much earlier in the input than the token *text1*. A large portion of input extending past the error might still conform to the syntax. The message identifies the point where the input no longer matches the syntax.

DRL0045E The identifier starting with *text* is too long. The maximum length is 18 bytes.

Explanation: An identifier cannot exceed 18 bytes. The length of a delimited identifier ("identifier") does not include the enclosing quotation marks. The length includes any shift-out and shift-in characters that enclose sequences of double-byte characters.

System action: The log collector stops processing the current statement and continues with the next.

User response: Change the identifier.

DRL0046E The string starting with *text* is too long. The maximum length is 254 bytes.

Explanation: The string specified by a constant cannot exceed 254 bytes. The length of the string includes any shift-out and shift-in characters that enclose sequences of double-byte characters.

System action: The log collector stops processing the current statement and continues with the next.

User response: Change the string.

DRL0047E The delimited identifier starting with *text* is not terminated.

Explanation: A delimited identifier ("identifier") without an ending quotation mark (") was found.

System action: The log collector stops processing the current statement and continues with the next.

User response: Add the quotation mark (") at the end of the identifier.

DRL0048E The string starting with *text* is not terminated.

Explanation: A string constant without an ending apostrophe (') was found.

System action: The log collector stops processing the current statement and continues with the next.

User response: Add the apostrophe (') to the end of the string constant.

DRL0049E An invalid character "*c*" is found.

Explanation: The input text contains a character that is not valid.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the character. Refer to *Language Guide and Reference* for a description of valid characters.

DRL0050E An invalid character "*c*" is found after "*text*".

Explanation: The input text contains an invalid character *c* after the text *text*.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the character. Refer to *Language Guide and Reference* for a description of valid characters.

DRL0051E The preceding *n* message(s) refer to the expression for *name*.

Explanation: This message helps you locate the errors indicated by the messages issued before this message. If *name* is the name appearing to the left of an equal sign in a LET, GROUP BY, or SET clause, the messages apply to the expression appearing to the right of that equal sign. If *name* is a language keyword such as WHERE or OFFSET, the messages apply to the expression following that keyword.

System action: The log collector stops processing the current statement and continues with the next.

User response: None.

DRL0052E The expression is too complex.

Explanation: An expression contains a nested structure of a depth that exceeds the capacity of Tivoli Decision Support for z/OS. There are two kinds of nested structures: the parentheses and the constructs involving alternatives (the VALUE function and case expressions).

The nesting depth of parentheses at a given point is equal to the number of pairs of parentheses enclosing that point. The parentheses include those that are a part of function calls with more than one argument and the implicit parentheses inserted to enforce the precedence of operations. For example, A*B+C*D has these implicit parentheses: (A*B)+(C*D).

The nesting depth of alternative structures at a given point is the number of nested VALUE calls and case expressions containing that point, plus the number of preceding arguments within each VALUE call, plus the number of preceding THEN clauses within each case expression.

This message indicates that one or both of these nesting depths exceed the maximum that can be handled by Tivoli Decision Support for z/OS.

System action: The log collector stops processing the current statement and continues with the next.

User response: Use the subsequent message DRL0051E to identify the expression in error. If possible, define parts of the expression separately, using LET. Otherwise, try to restructure the expression to reduce the nesting depth. For example, change the sequence of operators and specify complex cases first, in case expressions.

DRL0053E The name *abc* is not defined.

Explanation: *abc* is not among the names recognized in the context where it is used.

Note that different names might be recognized in different parts of a statement. For example, the only names recognized to the right of an equal sign in a SET clause of a DEFINE UPDATE statement are the names of fields in the record (or columns in the table) that is the source of the update and the names defined by means of a LET clause.

System action: The log collector stops processing the current statement and continues with the next.

User response: Use the subsequent message DRL0051E to locate the expression that contains the name. Refer to *Language Guide and Reference* for information about the objects (such as fields or columns) that can be referenced at a specific part of the statement. Specify the name of one of these objects.

DRL0054E The field *field* belongs to a section that cannot be referenced in this context.

Explanation: The section containing the *field* field cannot be referenced for one (or both) of these reasons:

- The section is repeated, or is a subsection of a repeated section, and the present context does not identify a unique occurrence of that repeated section.
- In a DEFINE RECORD statement, the section is referenced before it is defined.

System action: The log collector stops processing the current statement and continues with the next.

User response: Use the subsequent message DRL0051E to identify the expression that contains the reference. Refer to *Language Guide and Reference* for exact rules. Restructure your definition so that the required information is accessible.

DRL0055E The name *abc* specified as the first argument of FIELD is not a field name.

Explanation: The first argument of FIELD must be a field name.

System action: The log collector stops processing the current statement and continues with the next.

User response: Use the subsequent message DRL0051E to identify the expression that contains the invocation of FIELD. Ensure that the argument is a field name.

DRL0056E The name *abc* specified as the argument of SECTNUM is not a section name.

Explanation: The argument of SECTNUM must be a section name.

System action: The log collector stops processing the current statement and continues with the next.

User response: Use the subsequent message DRL0051E to identify the expression that contains the invocation of SECTNUM. Ensure that the argument is a field name.

DRL0057E The section *section* cannot be referenced in this context.

Explanation: The section cannot be referenced for one (or both) of these reasons:

- The section is repeated, or is a subsection of a repeated section, and the present context does not identify a unique occurrence of that repeated section.
- In a DEFINE RECORD statement, the section is referenced before it is defined.

System action: The log collector stops processing the current statement and continues with the next.

User response: Use the subsequent message

DRL0051E to identify the expression that contains the reference. Refer to *Language Guide and Reference* for exact rules. Restructure your definition so that the required information is accessible.

DRL0060E The name *abc* is already defined.

Explanation: *abc* is specified as the name of:

- A LET expression
- The timestamp or interval column in a DISTRIBUTE clause
- The interval type, start time, end time, or status column in an APPLY SCHEDULE clause

However, the same name has been used earlier in the same update definition for a similar purpose.

System action: The log collector stops processing the current statement and continues with the next.

User response: Ensure that all names introduced in the same update definition are unique.

DRL0061E The name *identifier* conflicts with a source field name.

Explanation: The *identifier* is specified as the name of:

- A LET expression
- The timestamp or interval column in a DISTRIBUTE clause
- The interval type, start time, end time, or status column in an APPLY SCHEDULE clause

However, *identifier* is also the name of a field in the record that is the source of the update. You cannot use the name for the specified purpose because it causes ambiguity.

System action: The log collector stops processing the current statement and continues with the next.

User response: Ensure that all names introduced in an update definition are distinct from the names of fields in the source record.

DRL0062E The name *identifier* conflicts with a source column name.

Explanation: The *identifier* is specified as the name of:

- A LET expression
- The name of the timestamp or interval column in a DISTRIBUTE clause
- The interval type, start time, end time, or status column in an APPLY SCHEDULE clause.

However, *identifier* is also the name of a column in the table that is the source of the update. You cannot use the name for the specified purpose because it causes ambiguity.

System action: The log collector stops processing the current statement and continues with the next.

User response: Ensure that all names introduced in an update definition are distinct from the names of columns in the source table.

DRL0065E Argument number *n* of *function* is of incorrect type.

Explanation: In an invocation of *function*, the data type of the indicated argument is not allowed for this argument.

Note: If *function* is one of the arithmetic, string, or comparison operators such as +, | |, or =, argument number 1 means the left-hand operand, and argument number 2 means the right-hand operand. If *function* is prefix -, argument number 1 means the expression following the operator.

System action: The log collector stops processing the current statement and continues with the next.

User response: Use the subsequent message DRL0051E to identify the expression that contains the invocation of the function. Refer to *Language Guide and Reference* for information on the allowed types of arguments for *function* and for rules on the use of arithmetic, string, and comparison operators.

Ensure that the argument is of the required type. For example, use a constant of a different type, redefine a field to yield a correct data type, or apply a conversion function if suitable.

DRL0066E The arguments of *function* have an incorrect combination of types.

Explanation: In an invocation of *function*, each of the arguments by itself has a data type acceptable for that argument, but the actual combination of data types of the arguments is not allowed.

System action: The log collector stops processing the current statement and continues with the next.

User response: Use the subsequent message DRL0051E to identify the expression that contains the invocation of the function. Refer to *Language Guide and Reference* for information on the allowed types of arguments for *function* and for rules on the use of arithmetic, string, and comparison operators.

Ensure that the arguments have an allowed combination of types. For example, use a constant of a different type, redefine a field to yield a correct data type, or apply a conversion function if suitable.

DRL0067E The arguments of VALUE are of different types.

Explanation: All arguments in an invocation of VALUE must be of the same type.

System action: The log collector stops processing the current statement and continues with the next.

User response: Use the subsequent message DRL0051E to identify the expression that contains the invocation of the function. Ensure that all arguments are the same type. For example, use a different type of constant, redefine a field to yield a correct data type, or apply a conversion function if suitable.

DRL0068E The values specified for different cases are of different types.

Explanation: In a case expression, all expressions following the keywords THEN (and ELSE, if present) must specify the same type of values.

System action: The log collector stops processing the current statement and continues with the next.

User response: Use the subsequent message DRL0051E to identify the expression. Ensure that all expressions specify the same type of values. For example, use a different type of constant, redefine a field to yield a correct data type, or apply a conversion function if suitable.

DRL0069E The value specified for case *n* is of incorrect type.

Explanation: In a case expression, the expression that follows the THEN keyword number *n* is not of a type allowed for the result of a case expression (for example, a labeled duration or a truth value.)

Note: If the case expression contains nested case expressions, the keywords THEN and ELSE of these sub expressions are not included in the *n*. If the *n* is 1 greater than the number of THEN keywords in the expression, it refers to the expression following the ELSE keyword.

System action: The log collector stops processing the current statement and continues with the next.

User response: Use the subsequent message DRL0051E to locate the expression. Ensure that the expression is of an allowed type.

DRL0070E The keyword *keyword*, that identifies a labeled duration, follows a non-numeric expression.

Explanation: The keyword *keyword* is supposed to follow an expression that specifies the number of time units identified by the keyword. The expression must specify a numeric value (that is, a value of type integer or floating-point).

System action: The log collector stops processing the current statement and continues with the next.

User response: Use the subsequent message DRL0051E to locate the expression containing the keyword. Ensure that the expression preceding the keyword specifies a numeric value. For example, use a constant of a different type, redefine a field to yield a correct data type, or apply a conversion function if suitable.

DRL0071E The lookup table *table* or its column does not exist.

Explanation: A lookup expression is incorrect for one of these reasons:

- The lookup table (the table specified after the keyword IN) does not exist.
- The lookup table exists, but it does not contain one or more of the columns referenced in the expression.

System action: The log collector stops processing the current statement and continues with the next.

User response: Use the subsequent message DRL0051E to locate the expression. Ensure that the lookup table exists and has all the columns referenced in the expression.

DRL0072E An error occurred executing an SQL statement on *table*: sqlcode = *sqlcode*

Explanation: A DB2® error occurred when an SQL command was issued on the specified table. The sqlcode contains the return code from DB2.

System action: The action run ended.

User response: Refer to *DB2 messages and codes*, SC26-4379, for an explanation of the cause.

DRL0075E Argument number *n* of *function* has an incorrect value.

Explanation: In an invocation of *function*, the indicated argument is specified by means of a constant or a combination of constants. The value thus specified is not valid for this argument.

Note: If *function* is one of the arithmetic, string, or comparison operators such as +, | |, or =, argument number 1 means the left-hand operand, and argument number 2 means the right-hand operand. If *function* is prefix -, argument number 1 means the expression following the operator.

System action: The log collector stops processing the current statement and continues with the next.

User response: Use the subsequent message DRL0051E to identify the expression that contains the invocation of the function. Refer to *Language Guide and Reference* for information on the allowed values of arguments for *function* and for rules on the use of arithmetic, string, and comparison operators.

Ensure that the argument has a correct value.

DRL0076E The result of *function* is outside the range of values of type *type*.

Explanation: The *function* is applied to argument(s) specified as constants or combinations of constants. The result of *function* is supposed to be the type *type*, but *function* applied to the specified values yields a value outside that type (for example, a value larger than 2^{31}-1 when the result is supposed to be an integer).

System action: The log collector stops processing the current statement and continues with the next.

User response: Use the subsequent message DRL0051E to identify the expression that contains the invocation of the function. Ensure that you specify correct values.

DRL0077E An invalid character *c* is found after *text*, *c1* or *c2* are valid values.

Explanation: The input text contains the invalid character *c* after the *text* text. Only the *c1* or *c2* characters are allowed.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the character. Refer to the *Language Guide and Reference* for a description of the valid characters.

DRL0080E The value specified for *name* is not of type *type*.

Explanation: The *name* is a language keyword such as OFFSET or LENGTH. The expression following this keyword must specify the value type *type*, but the actual expression specifies a value of another type.

System action: The log collector stops processing the current statement and continues with the next.

User response: Ensure that the expression specifies a value of the required type. For example, use a constant of a different type, redefine a field to yield a correct data type, or apply a conversion function if suitable.

DRL0081E The value specified for column *column* is incompatible with the column type.

Explanation: An update definition specifies a value to be assigned to *column*. The value is of a type that cannot be assigned to the column. Note that an integer or a floating-point number can be assigned only to a column of the type integer, small integer, floating-point, or decimal. A character string can be assigned only to a column of the type character string, graphic string, date, time, or timestamp. A date/time value can be assigned only to a column of the same type or to a column of the character string type.

System action: The log collector stops processing the current statement and continues with the next.

User response: Ensure that the value to be assigned has a data type that is compatible with the type of the column.

DRL0082E The column *column* is too short for the date/time value.

Explanation: A date/time value (a date, a time, or a timestamp) is assigned to the *column* column which is of the character string type. Before assignment, the value is converted to a character string. A date value is converted to a string of 10 characters; a time value is converted to a string of 8 characters; a timestamp value is converted to a string of 26 characters. The *column* column is shorter than the resulting string, and the assignment cannot be performed. (The date/time strings are not truncated on assignment.)

System action: The log collector stops processing the current statement and continues with the next.

User response: Ensure that the column can accommodate the converted date/time value.

DRL0090E The function FIELD cannot be applied to field *field*.

Explanation: The FIELD function can only be applied to a field that might have multiple occurrences within a record. Its purpose is to select a specific occurrence of the field. The *field* field is not contained in a repeated section and cannot have multiple occurrences.

System action: The log collector stops processing the current statement and continues with the next.

User response: Check that you specify the correct field, and that the repeated sections in the record are properly defined.

DRL0091E Incorrect number of indices is specified for field *field*. The correct number is *n*.

Explanation: The *field* field, specified as the first argument of the FIELD function, is contained in *n* levels of repeated sections; *n* indices are thus required to identify a unique occurrence of the field. The invocation of FIELD specifies a different number of indices.

System action: The log collector stops processing the current statement and continues with the next.

User response: Specify the correct number of indices. Refer to *Language Guide and Reference* for more information on references to fields in repeated sections.

DRL0095E The lookup condition has too many terms. The maximum number is 15.

Explanation: A lookup expression specifies a condition that consists of more than 15 terms connected with AND operators.

System action: The log collector stops processing the current statement and continues with the next.

User response: Simplify the condition, or modify the lookup process, for example by restructuring the lookup table.

DRL0100E The log *log* already exists.

Explanation: The log name specified in the DEFINE LOG statement is the name of an existing log.

System action: The log collector stops processing the current statement and continues with the next.

User response: If you intend to define a new log, use another name. If you intend to replace the *log* log, drop the log before defining it again.

DRL0101E The log *log* does not exist.

Explanation: The log is specified in a statement, but it does not exist.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the statement or define the log.

DRL0102I The *log* log is defined.

Explanation: The log has been defined successfully.

System action: Processing continues.

User response: None.

DRL0103I The log is altered.

Explanation: The *log* log has been altered successfully.

System action: Processing continues.

User response: None.

DRL0104I The log *log* is dropped.

Explanation: The log has been dropped successfully.

System action: Processing continues.

User response: None.

DRL0105I The comment is stored for the *log* log.

Explanation: COMMENT ON LOG was successful for *log*.

System action: Processing continues.

User response: None.

DRL0106E The *name* condition for the log *log* is invalid.

Explanation: One of these conditions is not valid:

- The FIRST RECORD or LAST RECORD condition for *log*.
- The WHERE condition specified on the COLLECT statement for *log*

System action: The log collector stops processing the current statement and continues with the next.

User response: Refer to *Language Guide and Reference* for information about valid conditions for DEFINE LOG or COLLECT. Ensure that the correct condition is specified.

DRL0107E The name of the log must not exceed 16 bytes.

Explanation: The maximum length of a log name is 16 bytes. The length includes any shift-out and shift-in characters that enclose sequences of double-byte characters.

System action: The log collector stops processing the current statement and continues with the next.

User response: Specify a name that is not longer than 16 characters.

DRL0108W No records were processed from ddname .

Explanation: The log collector did not process any records from the input file specified.

System action: Normal processing continues.

User response: Check that the input file contains IMS records that are to be processed. If it does not contain these records, no records will be processed. If it does contain these records, check for other messages that may indicate that an error has occurred.

DRL0121E The record *record* already exists.

Explanation: The DEFINE RECORD statement specified a record that already exists.

System action: The log collector stops processing the current statement and continues with the next.

User response: Either specify a different record name or drop the existing record definition.

DRL0122E The record *record* does not exist.

Explanation: The *record* record is specified in a statement, but it does not exist.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0123E **The record *record* does not contain the field *field*.**

Explanation: The *field* field of the *record* record is specified in a statement, but it does not exist.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0124E **No records are defined for this log.**

Explanation: No records are defined for this log.

System action: The log collector stops processing the current statement and continues with the next.

User response: Either define the records or, if the incorrect log is specified, correct the log name.

DRL0125I **The record *record* is defined.**

Explanation: DEFINE RECORD was successful for *record*.

System action: Processing continues.

User response: None.

DRL0126I **The record *record* is altered.**

Explanation: ALTER RECORD was successful for *record*.

System action: Processing continues.

User response: None.

DRL0127I **The record *record* is dropped.**

Explanation: DROP was successful for *record*.

System action: Processing continues.

User response: None.

DRL0128E **All records in this log are defined without fields. The log cannot be processed.**

Explanation: No record definitions containing fields exist for this log.

System action: The log collector stops processing the current statement and continues with the next.

User response: Perform DEFINE RECORD for the required records.

DRL0129E **A record name must not both start and end with an asterisk (*).**

Explanation: A record name cannot both start and end with an asterisk (*).

System action: The log collector stops processing the current statement and continues with the next.

User response: Specify a name that does not start and end with an asterisk.

DRL0130I **The comment is stored for the record *record*.**

Explanation: COMMENT ON RECORD was successful for *record*.

System action: Processing continues.

User response: None.

DRL0131I **The comment is stored for the field *field* in record *record*.**

Explanation: COMMENT ON FIELD was successful on *field* in *record*.

System action: Processing continues.

User response: None.

DRL0132E **There is no update or record procedure defined for any record in this log. The log cannot be processed.**

Explanation: Records are defined for the log to be collected, but no processing is defined for them. The processing of a record might be defined in two ways:

- By specifying the record as the source of an update definition
- By specifying the record as input to a record procedure

No record in the log is used in this way.

System action: The log collector stops processing the current statement and continues with the next.

User response: Ensure that some processing is defined for at least one record in the log.

DRL0133E **An error is found in the definition of record *record*.**

Explanation: This message identifies a record in error. A previous message identifies the error.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0135E **The record *record* does not contain a section *section*.**

Explanation: The *section* section specified for *record* does not exist.

System action: The log collector stops processing the current statement and continues with the next.

User response: Redefine the record or correct the section name.

DRL0136W Split SMF type *type* record cannot be collected due to invalid record sequence.

Explanation: Split SMF records of type *type* must directly follow the initial record to be collected successfully.

System action: The log collector ignores the split SMF records and continues with the next record.

User response: None.

DRL0137E The section *section* in record *record* is not repeated.

Explanation: This message is issued in one of these situations:

- A DEFINE UPDATE or ALTER UPDATE statement specifies an update FROM *record* SECTION *section*.
- A COLLECT statement encountered an update FROM *record* SECTION *section*.
- A LIST RECORD statement specifies RECORD *record* SECTION *section*.

In each case, the SECTION clause indicates that the requested operation (update or listing) is to be repeated once for each occurrence of section *section*. This can be specified only for a repeated section *section*.

System action: The log collector stops processing the current statement and continues with the next.

User response: Refer to *Language Guide and Reference* for an explanation of how repeated sections are processed. Decide which repeated section you want to process (if any). Note that the choice of the section determines which fields you can access.

DRL0138E The section *section* is not previously defined in the record *record*.

Explanation: This message is issued in one of these situations:

- A DEFINE RECORD statement for the record *record* defines a section IN SECTION *section*. The section *section* must be defined earlier in the same statement.
- An ALTER RECORD statement for the record *record* defines fields IN SECTION *section* or a section IN SECTION *section*. The record must already have the section *section*.

System action: The log collector stops processing the current statement and continues with the next.

User response: For DEFINE RECORD, ensure that the section is defined earlier in the same statement. For ALTER RECORD, ensure that the record already has the section.

DRL0139E The section *section* is already defined.

Explanation: The message is issued in one of these situations:

- A DEFINE RECORD statement specifies *section* as the name of two different sections.
- An ALTER RECORD statement attempts to add a section *section* to a record that already has a section with that name.

System action: The log collector stops processing the current statement and continues with the next.

User response: Ensure that all sections within a record have different names.

DRL0140E Too many fields are specified for the record or the log header.

Explanation: A maximum of 2000 fields can be specified in a record or a log header.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0141E Too many sections are specified for the record.

Explanation: A maximum of 300 sections can be specified in a record.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0142E The field *field* is already defined.

Explanation: The message is issued in one of these situations:

- A DEFINE RECORD statement specifies *field* as the name of two different fields in the record.
- A DEFINE LOG statement specifies *field* as the name of two different fields in the log header.
- An ALTER RECORD statement attempts to add the *field* field to a record that already has a field with that name.
- An ALTER LOG statement attempts to add the *field* field to a log header that already has a field with that name.

System action: The log collector stops processing the current statement and continues with the next.

User response: Ensure that all fields within a record or a log header have different names.

DRL0143E **The precision or scale for the field *field* is invalid.**

Explanation: The format of the *field* field is specified as DECIMAL(*p*,*s*) or ZONED(*p*,*s*), where *p* is the precision and *s* is the scale. The allowed values for precision are 1 through 31, and the allowed values for scale are 0 through *p*.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the field format specification.

DRL0145E **The number of bits in a BIT format must be a multiple of 8.**

Explanation: The number of bits is not a multiple of 8.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0147E **The record *record* is the source of the update *update*.**

Explanation: The definition of the *record* record contains an error that has been identified by one or more error messages. This message follows the error message(s) for *record* and explains why an error in the record prevents the execution of a COLLECT statement: The *record* record is the source of the *update* update, and the target of the update is one of the tables specified in the INCLUDE clause of the statement.

System action: Processing of the statement is terminated and the log collector continues with the next.

User response: Correct the definition of the record *record*, or remove the table from the INCLUDE clause.

DRL0148E **The record *record* is used as input to record procedure *procedure*.**

Explanation: The definition of the *record* record contains an error that has been identified by one or more error messages. This message follows the error message(s) for the record *record* and explains why an error in the record prevents execution of the current statement: The *record* record is used as input to the *record* record procedure, which is required for the execution of the statement.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the definition of the *record* record.

DRL0150E **The IDENTIFIED BY condition for the record *record* is invalid.**

Explanation: The condition specified as the IDENTIFIED BY condition is not valid. This error message is preceded by one or more error messages identifying the error(s).

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0151E **An invalid condition or expression is specified for section *section* of record *record*.**

Explanation: One of these items is not valid:

- The condition specified as the PRESENT IF condition for the section
- The expression specified as the offset, length, or number of occurrences of the section

This message is preceded by one of more messages identifying the error(s) and the condition or expression in error.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0152E **The length of section *section* of record *record* is undefined: neither LENGTH nor any named fields are specified.**

Explanation: If the length of a section is not specified explicitly by means of a LENGTH clause, it is determined by the fields contained in that section. It is then defined to be the minimum length that accommodates all named fields. If no named fields are defined for the section, the length cannot be determined.

System action: The log collector stops processing the current statement and continues with the next.

User response: Ensure that the length is specified in one of the two ways. If you must define a section that extends to the end of the containing record or section, specify a large length by means of a LENGTH clause. Refer to *Language Guide and Reference* for exact rules about specifying length.

DRL0153I **The section *subsection* of record *record* is a section within section *section*, which has no LENGTH defined. The section *section* will have its length defined by the length of its fields.**

Explanation: This information message reminds the user that, in the absence of an explicit length specification for the *section* section, the length of the

section will be determined by the named fields of the *section* section, and not by the length of the *subsection* subsection. The length will be defined as the minimum length that accommodates all named fields of *section*, and might be insufficient to accommodate the subsection.

System action: Processing continues.

User response: Add a LENGTH clause for the *section* section, or ensure that the total length of the fields of the containing section is at least equal to the length of the subsection.

DRL0154I The section *section* of record *record* has no OFFSET specified. Offset 0 is assumed.

Explanation: If the offset of a section is not specified explicitly by means of an OFFSET clause, the section is assumed to start immediately after the end of a preceding section, identified according to the rules stated in *Language Guide and Reference*. If the preceding section does not exist, the section is assumed to start at offset 0. This information message tells the user that this last alternative was applied for the *section* section.

System action: Processing continues.

User response: Refer to *Language Guide and Reference* for exact rules about specifying length. Specify OFFSET if offset 0 is not what you intended.

DRL0155E The section *section* of record *record* is specified to be a subsection of itself.

Explanation: The *section* section specifies IN SECTION *section*, which means that *section* is a subsection of itself. This is not possible.

System action: The log collector stops processing the current statement and continues with the next.

User response: Change the SECTION name or the IN SECTION name.

DRL0161E The record procedure *procedure* does not exist.

Explanation: The *procedure* record procedure is specified in a statement, but it is not defined to the log collector.

System action: The log collector stops processing the current statement and continues with the next.

User response: Ensure that the procedure is defined.

DRL0162E The log procedure *procedure* could not be loaded.

Explanation: The log procedure *procedure* is required for the log to be processed, but it can not be loaded.

System action: The log collector stops processing the current statement and continues with the next.

User response: Ensure that the *name* load module containing the procedure is present in an accessible load library.

DRL0163I The comment is stored for record procedure *procedure*.

Explanation: COMMENT ON RECORDPROC was successful for the *name* procedure.

System action: Processing continues.

User response: None.

DRL0164E The record procedure *procedure* already exists.

Explanation: The *procedure* record procedure, specified in DEFINE RECORDPROC already exists.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0165I The record procedure *procedure* is defined.

Explanation: DEFINE RECORDPROC was successful for record procedure *procedure*.

System action: Processing continues.

User response: None.

DRL0166I The record procedure *procedure* is dropped.

Explanation: DROP RECORDPROC was successful for record procedure *procedure*.

System action: Processing continues.

User response: None.

DRL0167I The record procedure *procedure* is altered.

Explanation: ALTER RECORDPROC was successful for record procedure *procedure*.

System action: Processing continues.

User response: None.

DRL0168E The record procedure *procedure* is involved in a circular process.

Explanation: The *procedure* record procedure is defined so that its input is derived, directly or indirectly, from its own output. For example, *procedure* is a procedure for record REC1 built by a procedure PROC2 for a record REC2 built by the procedure *procedure*. Such a circular process is not allowed.

System action: The log collector stops processing the current statement and continues with the next.

User response: Check the definitions of the records built by the record procedure *procedure*, the record procedures for these records, and so on. Modify them so that the process is not circular.

DRL0171E The record procedure *procedure* could not be loaded.

Explanation: The record procedure *procedure* is required for the specified processing, but it can not be loaded.

System action: The log collector stops processing the current statement and continues with the next.

User response: Ensure that the load module *name* containing the procedure is present in an accessible load library.

DRL0172E The record *record* specified for record procedure *procedure* does not exist.

Explanation: The DEFINE RECORDPROC statement for record procedure *procedure* specifies the record *record* in its FOR clause, but the record is not defined.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0174I Record number *n* is the last log record processed.

Explanation: This message is issued after a record procedure is terminated by an error.

System action: Processing continues.

User response: None.

DRL0176E The CSTACK variable is invalid.

Explanation: The CSTACK variable specifies the size of the stack to be used for exit procedures written in C language. As described in *Language Guide and Reference*, the value of the variable must be a sequence of digits, optionally followed by the letter K.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the CSTACK variable.

DRL0181I Product registration for product-id successful.

Explanation: This message is issued at initialization when the customization for product registration was completed. See DRLJCCMA in SDRLCNTL for details.

System action: Processing continues.

User response: None.

DRL0182I Product de-registration successful.

Explanation: This message is issued at termination when the customization for product registration was completed. See message DRL0181I for more information.

System action: Processing continues.

User response: None.

DRL0183I Product registration failed rc=*nn*

Explanation: An attempt was made to perform product registration, but this was not successful. The return code gives an indication of the problem encountered. See *SA38-0698-00 MVS Programming: Product Registration, Register Service (IFAEDREG) Return* for more information.

System action: Processing continues.

User response: If the error can be corrected from the error description then correct the problem. Otherwise contact your IBM support for assistance.

DRL0184I Product de-registration failed rc=*nn*

Explanation: An attempt was made to perform product de-registration, but this was not successful. The return code gives an indication of the problem encountered. See *SA38-0698-00 MVS Programming: Product Registration, Register Service (IFAEDREG) Return* for more information.

System action: Processing continues.

User response: If the error can be corrected from the error description then correct the problem. Otherwise contact your IBM support for assistance.

DRL0185I No product registration performed.

Explanation: This message is issued at initialization when product registration is not attempted. Product registration is not attempted when the customization for product registration has not been completed.

System action: Processing continues.

User response: If you have installed Tivoli Decision Support for z/OS as part of the Capacity Management Analytics (CMA) bundle then you need to complete the product registration task for Tivoli Decision Support for z/OS. If your install is not part of a CMA bundle, then no action is required.

DRL0200E The update *update* already exists.

Explanation: The update can not be defined because an update with the same name already exists. Each update name must be unique.

System action: The log collector stops processing the current statement and continues with the next.

User response: Change the update name or drop the old update definition.

DRL0201I The update *update* is defined.

Explanation: The update is successfully defined.

System action: Processing continues.

User response: None.

DRL0202I The update *update* is dropped.

Explanation: The update is successfully dropped.

System action: Processing continues.

User response: None.

DRL0203I The update *update* is altered.

Explanation: The update is successfully altered.

System action: Processing continues.

User response: None.

DRL0204E The update *update* does not exist.

Explanation: The operation failed because the specified update does not exist.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0205I The comment is stored for update *update*.

Explanation: COMMENT ON UPDATE was successful on *update*.

System action: Processing continues.

User response: None.

DRL0206E The update *update* is not defined.

Explanation: DEFINE UPDATE failed. A previous message explains the reason.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0210E The update does not specify the value of any column.

Explanation: The update being defined does not have any of the clauses: GROUP BY, SET, or MERGE that define the contents of the target table.

System action: The log collector stops processing the current statement and continues with the next.

User response: Ensure that the update contains at least one of these clauses: GROUP BY, SET, MERGE.

DRL0211E The WHERE condition in update *update* is invalid.

Explanation: The condition specified in the WHERE clause of *update* is not valid. This message is preceded by one or more messages identifying the error(s).

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0212E The section *section* specified in update *update* does not exist.

Explanation: The update is specified to be FROM SECTION *section* of a record. The section existed when the update was defined. However, the record must have been redefined afterwards, because it no longer contains the section *section*.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the update definition or add the section to the record definition.

DRL0213E The column *column*, specified as argument number 2 of AVG or PERCENTILE, is not defined by means of COUNT or SUM.

Explanation: Argument number 2 of the accumulation functions AVG and PERCENTILE must be a column with a value defined in the same update by means of the accumulation function COUNT or SUM.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the AVG or PERCENTILE to specify another column or change the accumulation function for *column*.

DRL0214E The column *column* is defined by MERGE and cannot be changed to SET or GROUP BY.

Explanation: Columns specified in the MERGE clause of a DEFINE UPDATE statement cannot be changed to

a SET or GROUP BY column in an ALTER UPDATE statement.

System action: The log collector stops processing the current statement and continues with the next.

User response: If the column must be changed, drop and redefine the update.

DRL0215E The value of column *column* is specified more than once.

Explanation: A column can be specified only once in an update definition.

System action: The log collector stops processing the current statement and continues with the next.

User response: Ensure that you specified the correct column name.

DRL0216E Argument number 3 of PERCENTILE is not in the range 1–99.

Explanation: Argument number 3 of the accumulation function PERCENTILE must be an integer constant in the range 1–99.

System action: The log collector stops processing the current statement and continues with the next.

User response: Change the integer value.

DRL0217E The field *field* in DISTRIBUTE is not numeric.

Explanation: All fields or columns to be distributed must be numeric.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the DISTRIBUTE clause.

DRL0218E In the expression for column *column*, the argument number 1 of *function* is not numeric.

Explanation: Argument number 1 of *function* (SUM, AVG, or PERCENTILE) must be numeric (that is, of the integer or floating-point type). The error was found in the clause specifying the value of column *column*.

System action: The log collector stops processing the current statement and continues with the next.

User response: Change the expression used in the specification of column *column*.

DRL0219E Different update definitions for the table *table* specify the value of column *column* in different ways.

Explanation: If different update definitions specify the value of the same column, the value must be specified in the same way by all definitions: Either the column must be a GROUP BY column in all definitions, or all definitions must specify the value of the column using the same accumulation function. A subsequent message (DRL0331E) identifies an update that does not follow this rule.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the accumulation function for *column*.

DRL0220E Different update definitions for the table *table* have different GROUP BY columns.

Explanation: If different update definitions specify the contents of the same table, their GROUP BY columns must be the same. A subsequent message (DRL0331E) identifies an update that does not follow this rule.

System action: The log collector stops processing the current statement and continues with the next.

User response: Make the GROUP BY clauses of all updates TO the table *table* identical.

DRL0221W The GROUP BY columns cannot be checked against primary key because table *table* is not found in the *view* view.

Explanation: If a primary key is defined for the target table of an update, the columns specified in the GROUP BY clause of the update must be identical to the primary key columns. (Otherwise, a COLLECT using the update will probably result in an SQL error.) To verify that the above condition is met, the log collector uses the information contained in the view *view*. However, the view did not contain information about the *table* table, so the check can not be made.

System action: Processing continues.

User response: Consider redefining the view so that it will contain information about the table *table*. Alternatively, perform the check yourself: If the table *table* has primary key columns, verify that the GROUP BY clause specifies exactly these columns.

DRL0222W The GROUP BY columns cannot be checked against primary key because the view *view* cannot be read.

Explanation: If a primary key is defined for the target table of an update, the columns specified in the GROUP BY clause of the update must be identical to the primary key columns. (Otherwise, a COLLECT using the update will probably result in an SQL error.) To verify that the above condition is met, the log collector uses the information contained in the view *view*. However, the view can not be read.

System action: Processing continues.

User response: Ensure that the view is defined and contains information about the table. Alternatively, perform the check yourself: If the table has primary key columns, verify that the GROUP BY clause specifies exactly these columns.

DRL0223W The GROUP BY columns do not match primary key columns.

Explanation: The columns specified in the GROUP BY clause of the update definition are not identical to the primary key columns of the target table. A COLLECT will probably result in an SQL error.

System action: Processing continues.

User response: Correct the GROUP BY clause or redefine the target table.

DRL0224E The MERGE and SET clauses of an update definition are mutually exclusive.

Explanation: An ALTER UPDATE statement attempts to add a MERGE clause to an update definition that has a SET clause, or a SET clause to an update definition that has a MERGE clause. However, an update definition cannot have both.

System action: The log collector stops processing the current statement and continues with the next.

User response: Remove the SET or the MERGE clause from the update definition before adding the other clause.

DRL0225E The name *abc* specified by *keyword* is already used as the name of a field or column of *source*.

Explanation: The name *abc* introduced by *keyword* clause is identical to the name of a field (or column) of the record (or table) *source*, which is the source of the update. You cannot use the name for the specified purpose because it causes ambiguity.

System action: The log collector stops processing the current statement and continues with the next.

User response: Change the parameter.

DRL0226E The name *identifier* specified in *keyword* clause is not a field or column of *source*.

Explanation: The name *identifier* specified in the *keyword* clause is expected to be the name of a field (or column) in the record (or table) *source name*, which is the source of the update. The record (or table) does not contain a field (or column) with this name.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the parameter to specify source fields or columns.

DRL0227E The value of *column* has an incorrect length.

Explanation: The value of the expression assigned to *column* is of an incorrect length. For example, in an update definition's MERGE clause, the value of the expression specified for the interval type column must have a length of 3.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the expression assigned to the *column* column.

DRL0228E The column *column* is not of type *type*.

Explanation: The assignment to *column* requires it to be of type *type*, which it is not. For example, columns assigned AVG values must be of the floating-point type.

System action: The log collector stops processing the current statement and continues with the next.

User response: Change the column name, column type, or accumulation function.

DRL0229E The field *field* in DISTRIBUTE is specified more than once.

Explanation: Specify each field to be distributed only once.

System action: The log collector stops processing the current statement and continues with the next.

User response: Change the definition so the field is defined only once.

DRL0230E The SECTION parameter cannot be used when the source of the update is a table.

Explanation: The SECTION parameter can be used only to identify a section of a record definition.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0231E The value of the column *column* of table *table* is specified by more than one update using the accumulation function PERCENTILE.

Explanation: If the value of a column is specified by means of the accumulation function PERCENTILE, the value can be specified in only one update definition.

System action: The log collector stops processing the

current statement and continues with the next.

User response: Remove the assignment to the column from all update definitions but one.

DRL0232E The accumulation function PERCENTILE cannot be used when the source of the update is a table.

Explanation: The accumulation function PERCENTILE can only be used in an update where the source is a record.

System action: The log collector stops processing the current statement and continues with the next.

User response: Consider an alternative way of computing the information you need, for example, counting values that exceed a certain threshold.

DRL0233E The argument number *n* of APPLY SCHEDULE is of incorrect type.

Explanation: The correct type for argument 1 (interval type) is character string. The correct type for argument 2 (interval start) and argument 3 (interval end) is timestamp.

System action: The log collector stops processing the current statement and continues with the next.

User response: Ensure that the argument is of the required type. For example, use a different type of constant, redefine a field to yield a correct data type, or apply a conversion function if suitable.

DRL0234E The column *column* cannot be used as a grouping column.

Explanation: A GROUP BY clause of an update definition specifies that the *column* column must hold a grouping value. The column is either a decimal column, or a long string column.

System action: The log collector stops processing the current statement and continues with the next.

User response: Redefine the column or specify another column.

DRL0235E There is a circular update involving tables *table list*.

Explanation: Each table in the *table list* is updated from itself via a cascaded update involving other tables in the *table list*. A table cannot be updated from itself.

System action: The log collector stops processing the current statement and continues with the next.

User response: Check update definitions involving the tables listed in the *table list*. You may have an old update definition that was not dropped. Correct the error.

DRL0241E The table *table* does not exist.

Explanation: The operation failed because the specified table *table* does not exist.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0242E The table *table1* does not contain the column *column2*.

Explanation: The column *column2* of table *table1* is specified in a statement, but it does not exist.

System action: The log collector stops processing the current statement and continues with the next.

User response: Change the update definition or change and recreate the table.

DRL0243E The control table *table* does not exist.

Explanation: The functions DAYTYPE, PERIOD, or APPLY SCHEDULE can not be performed because the control table *table* is missing.

System action: The log collector stops processing the current statement and continues with the next.

User response: Contact the Tivoli Decision Support for z/OS administrator. Refer to *Language Guide and Reference* for an explanation.

DRL0244E The column *column* of control table *table* is missing or has an incorrect type.

Explanation: The functions DAYTYPE, PERIOD, or APPLY SCHEDULE can not be performed because the column *column* in control table *table* either is not present or has an incorrect type.

System action: The log collector stops processing the current statement and continues with the next.

User response: Contact the Tivoli Decision Support for z/OS administrator. Refer to *Language Guide and Reference* for an explanation.

DRL0245W The length of string column *column* in the table *table* exceeds the length supported by the log collector.

Explanation: The maximum length of a CHARACTER or VARCHAR column supported by the log collector is 254 bytes. The maximum length of a GRAPHIC or VARGRAPHIC column supported by the log collector is 126 double-byte characters.

System action: The processing continues, but the following will happen if the log collector reads data from the table:

- When the log collector reads a string of more than 254 bytes from a CHARACTER or VARCHAR

column, it truncates the string to 254 bytes. This might result in damaging a sequence of double-byte characters contained in the string.

- When the log collector reads a string of more than 126 double-byte characters from a GRAPHIC or VARGRAPHIC column, it truncates the string to 126 (double-byte) characters. It then adds the shift-out and shift-in characters at the ends of the string, as for all graphic strings.

User response: Ensure that this warning message does not indicate a problem that must be corrected.

DRL0246E The table *table* is specified more than once in an INCLUDE or EXCLUDE clause.

Explanation: A table name can only appear once in the same INCLUDE or EXCLUDE clause.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0247E The EXCLUDE clause did not exclude any tables.

Explanation: None of the tables specified by the EXCLUDE clause is among the tables that would otherwise be selected for processing.

System action: The log collector stops processing the current statement and continues with the next.

User response: Check the EXCLUDE clause. If the clause does not specify the tables you want to exclude, correct it. If there are no tables to be excluded, remove the clause.

DRL0251E The SQL statement or condition is too long.

Explanation: An SQL statement in the log collector cannot be longer than 10000 characters.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0300I *operation* started at *timestamp*.

Explanation: The *operation* (COLLECT, LIST RECORD, LOGSTAT, or PURGE) began processing at *timestamp*.

System action: Processing continues.

User response: None.

DRL0301I *operation* ended at *timestamp*.

Explanation: The *operation* (COLLECT, LIST RECORD, LOGSTAT, or PURGE) completed processing at *timestamp*.

System action: Processing continues.

User response: None.

DRL0302I Processing *data set name* on *volume*.

Explanation: This message identifies the log data set being processed and the volume where it is located.

System action: Processing continues.

User response: None.

DRL0303W The log data set has already been processed.

Explanation: The log data set has already been collected. Tivoli Decision Support for z/OS uses the first 80 bytes of the first selected record to identify the data set. The data set name is not used for identification.

System action: COLLECT continues if other input log data sets are specified in the collect job. Debug information will be displayed in DRLDUMP. The log record number being processed will be displayed as well as the first 80 bytes of the record which caused the message.

User response: Ensure that this warning message does not indicate any problem that needs to be corrected.

DRL0304W The log data set is being reprocessed.

Explanation: The log data set has already been collected but, because the REPROCESS parameter is specified on the COLLECT statement, the log is processed again.

System action: COLLECT starts from the beginning of the log.

User response: Ensure that the warning message does not indicate a problem that must be corrected.

DRL0305I The log data set has been partly processed.

Explanation: The log data set has been partly collected; the previous COLLECT for this data set was terminated before the entire log was processed.

System action: The first *n* records (as identified by message DRL0306I) are skipped, and COLLECT continues processing the remaining records in the log data set.

User response: None.

DRL0306I The first *n* records are skipped.

Explanation: This is a continuation of message DRL0305I. Please see that message.

System action: Processing continues.

User response: None.

DRL0307E The value specified by the COMMIT AFTER clause is not valid.

Explanation: The COMMIT AFTER *n* RECORDS parameter specified an invalid value. For example, a zero (0) is not allowed.

System action: COLLECT terminates.

User response: Correct the error.

DRL0308I A database update started after *n* records due to a buffer-full condition, at timestamp.

Explanation: The collect buffer was full and a database update was started, *at timestamp*.

System action: Processing continues.

User response: None.

DRL0309I A database update started after *n* records, at timestamp.

Explanation: COMMIT AFTER *n* RECORDS was specified on the COLLECT statement, and a multiple of *n* records have been read, *at timestamp*.

System action: Processing continues.

User response: None.

DRL0310I A database update started after *n* records due to end of log, at timestamp.

Explanation: The end of the log data set has been reached, *at timestamp*.

System action: Processing continues.

User response: None.

DRL0311I A database update started after *n* records due to data set switch, at timestamp.

Explanation: This message is issued when DRLLOG consists of several concatenated data sets. The end of a data set was reached, *at timestamp*, and the log collector started a database update before processing the next concatenated data set. After the database update completes, the statistics for the data set will be presented, *at timestamp*.

System action: Processing continues.

User response: None.

DRL0312I A database update started after *n* records due to volume switch.

Explanation: This message is issued when DRLLOG is a multi-volume data set. The end of a volume was reached, and the log collector started a database update before processing the next volume.

System action: Processing continues.

User response: None.

DRL0313I The collect buffer was filled *n* times. Consider increasing the collect buffer size.

Explanation: This message shows the number of times the collect buffer was filled during processing of the log data set.

System action: Processing continues with degraded performance.

User response: Increase the value specified for the BUFFER SIZE parameter in the COLLECT statement. The elapsed time for the collect increases significantly each time the collect buffer is filled. A larger buffer size will reduce the number of times the collect buffer is filled and decrease the total elapsed time for the collect run.

DRL0314I Data set name: data-set-name.

Explanation: This message provides the data set name for an object referred to by the preceding message.

System action: Processing continues.

User response: Refer to the explanation for the preceding message.

DRL0315I Records read from the log or built by log procedure:

Explanation:

This message is followed by a table showing the record types in the log being processed, or, if the log procedure was used, the record types built by the log procedure. For each record type, the table shows the number of records of that type that were actually found and processed. The table also shows the number of unrecognized records, and the total number of records. If ON TIMESTAMP OVERLAP SKIP was specified on the collect statement and records were skipped then a count of skipped records is also shown in the table. The table is built from messages DRL0317I through DRL0322I. For an example of such a table, see Figure 1 on page 34.

System action: Processing continues.

User response: None.

DRL0316I Records built by record procedures:

Explanation: This message is followed by a table showing the record types built by record procedures. For each record type, the table shows the number of records of that type that were found and processed. The table also shows the number of unrecognized records, and the total number of records. The table is built from messages DRL0317I through DRL0321I. For an example of such a table, see Figure 1 on page 34.

System action: Processing continues.

User response: None.

DRL0317I DRL0318I DRL0319I DRL0320I DRL0321I DRL0322I

Explanation: Messages DRL0317I through DRL0322I are used to build the table that follows the messages DRL0315I and DRL0316I. See the explanation for these messages. For an example, see Figure 1 on page 34.

System action: Processing continues.

User response: None.

DRL0323I DRL0324I DRL0325I DRL0326I DRL0327I

Explanation: Messages DRL0323I through DRL0327I are used to build a table that shows the number of rows inserted and updated in the collect buffer and in the database tables. For an example, see Figure 1 on page 34.

For more information on how to interpret collect messages, refer to the *Administration Guide* and *Language Guide and Reference*.

System action: Processing continues.

User response: None.

DRL0328W The log data set is being skip processed.

Explanation: ON TIMESTAMP OVERLAP SKIP was specified on the COLLECT statement and the log collector has found that the data set name of the log being processed matches a previously collected log and the first identified record in the log has a timestamp that is prior to the DRLLOGDATASETS.LAST_TIMESTAMP value for the previously collected log.

System action: Skip processing is activated. The log collector skips records within the the range indicated by the FIRST_TIMESTAMP and LAST_TIMESTAMP entries for the log in the DRLLOGDATASETS system table.

User response: Determine why the duplicate log was produced. Even if skip processing has allowed valid data to be collected reprocessing the data in this way impacts on system resource.

DRL0329E ON TIMESTAMP OVERLAP SKIP/STOP invalid. Log *log-name* does not contain a TIMESTAMP expression parameter.

Explanation: ON TIMESTAMP OVERLAP SKIP and ON TIMESTAMP OVERLAP STOP can only be specified on the COLLECT statement if the log being collected was defined with a TIMESTAMP expression.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the COLLECT statement or add a TIMESTAMP expression to the log being collected.

DRL0330E The collect initialization failed.

Explanation: This message follows other message(s) explaining the cause of the failure.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0331E An error was found in update *update*.

Explanation: This message identifies an update in error. A previous message identifies the cause of the error.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0333I The record *record* has no fields and is not used.

Explanation: The record is excluded.

System action: Processing continues; COLLECT and LOGSTAT operations continue their execution.

User response: ALTER the record or DROP and redefine it.

DRL0334E ON TIMESTAMP OVERLAP STOP was specified and log contains records with timestamp data overlapping a previously collected log.

Explanation: ON TIMESTAMP OVERLAP STOP was specified on the COLLECT statement and the log collector has found that the data set name of the log being processed matches a previously collected log and the first identified record in the log has a timestamp that is prior to the DRLLOGDATASETS.LAST_TIMESTAMP value for the previously collected log.

System action: The log collector stops processing the current statement and continues with the next.

User response: Determine why the duplicate log was produced and take appropriate actions to resume normal processing. it.

DRL0335E The processing terminated due to an error found by log or record procedure *procedure***.**

Explanation: The log or record procedure *procedure* returned with a request for termination of the processing of the log.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0336W *n* **records or rows were skipped in update** *update* **of table** *table* **due to a null GROUP BY value.**

Explanation: A source record or row is skipped if any of the grouping values for that row is null. A grouping value is that specified by the expression to the right of an equal sign in the GROUP BY clause. It might be null because the data in the source record or row that are used to compute the value are missing, or invalid, or result in a computation error.

System action: Processing continues.

User response: The DRLDUMP file contains information that identifies the skipped records or rows. Examine these records or rows to see if the content was indeed invalid, and if not, what information was lost. Consider redefining the update to prevent this kind of problem. (The source records can be examined using the DISPLAY function of the administration dialog. The source rows can be examined using QMF™.)

DRL0337W For *n* **records or rows in an update of table** *table***, one or more values were set to null because of error.**

Explanation: The following has happened for *n* source records or rows: A value (one or more) obtained from the row was to be used in the update, for example as the argument of an accumulation function (but **not** as a grouping value). The value can not be evaluated because the data in the record or row is invalid or resulted in a computation error; a null value was used instead in the update.

(Notice that the message does not signal the null values that result from missing data. Such a null value is not considered an error.)

System action: Processing continues.

User response: The DRLDUMP file contains information that identifies the first source record of each type (or the first row of each source table) included in the count. Examine these records or rows to see if the content was indeed invalid, and if not, what information was lost. Consider redefining the update to prevent this kind of problem. (The source records can be examined using the DISPLAY function of the administration dialog. The source rows can be examined using QMF.)

DRL0338W The section *section* **of record** *record* **was skipped** *n* **time(s) due to error in offset, length, or number.**

Explanation: One or more occurrences of section *section* of *record* cannot be located because the offset, length, or number attribute of the section cannot be evaluated. The number *n* is the number of unsuccessful attempts to locate an occurrence of the section, and might be larger than the actual number of skipped occurrences (for example, when several updates tried to locate the same occurrence).

System action: Processing continues.

User response: None.

DRL0339E Processing terminated due to invalid return code *return code* **returned by log or record procedure** *procedure***.**

Explanation: The log or record procedure *procedure* returned with an invalid return code, which caused the processing of the log to stop.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0340W The *name* **condition for the log is not satisfied.**

Explanation: The *name* condition (FIRST RECORD or LAST RECORD), as coded in the DEFINE LOG statement, was not met when applied to the first or last record read from the log.

System action: Processing continues.

User response: Ensure that the warning message does not indicate a problem that must be corrected.

DRL0341I The first-record timestamp is *timestamp***.**

Explanation: A TIMESTAMP clause is specified in the log definition. The timestamp for the first record from the log data set is *timestamp*.

System action: Processing continues.

User response: None.

DRL0342I The last-record timestamp is *timestamp*.

Explanation: A TIMESTAMP clause is specified in the log definition. The timestamp for the last record from the log data set is *timestamp*.

System action: Processing continues.

User response: None.

DRL0343I The first-record timestamp is invalid.

Explanation: A TIMESTAMP clause is specified in the log definition. The timestamp for the first record selected from the log data set cannot be evaluated because of absent or invalid data, or because of a calculation error.

System action: Processing continues.

User response: Check the data in the log data set and make sure it is valid. Check the TIMESTAMP expression in the log definition, and correct it if necessary.

DRL0344I The last-record timestamp is invalid.

Explanation: A TIMESTAMP clause is specified in the log definition. The timestamp for the last record selected from the log data set cannot be evaluated because of absent or invalid data, or because of a calculation error.

System action: Processing continues.

User response: Check the data in the log data set and make sure it is valid. Check the TIMESTAMP expression in the log definition, and correct it if necessary.

DRL0345E The specified buffer size is *n*. The minimum allowed value is *nmin*.

Explanation: The minimum allowed buffer size on COLLECT and LIST RECORD is *nmin*.

System action: The log collector stops processing the current statement and continues with the next.

User response: Specify a larger buffer size.

DRL0346W *n* records or rows were skipped in update *update*, table *table* due to invalid arguments of DISTRIBUTE.

Explanation: A source record or row is skipped if one or more arguments of DISTRIBUTE are invalid, for example:

- The START, END, or BY expression cannot be evaluated because of missing data, invalid data, or computation errors.
- The START time is later than the END time.
- The BY value is not a multiple of 60.

System action: Processing continues.

User response: The DRLDUMP data set contains information that identifies the record or row that caused the error. Check the DISTRIBUTE clause against the contents of the record or row and correct the cause of the error. (The source records can be examined using the DISPLAY function of the administration dialog. The source rows can be examined using QMF.)

DRL0347W *n* records or rows were skipped in update *update*, table *table* due to invalid arguments of MERGE.

Explanation: A source record or a row of a source table is skipped if one or more arguments of MERGE are invalid, for example:

- The argument cannot be evaluated because of missing data, invalid data, or computation errors.
- The interval type code (argument 1) is not one of the allowed interval type codes.
- The interval start time (argument 2) is later than the interval end time (argument 3).
- The quiet interval (argument 4) is negative.

System action: Processing continues.

User response: The DRLDUMP data set contains information that identifies the record or row that caused the error. Check the MERGE clause against the contents of the record or row and correct the cause of the error. (The source records can be examined using the DISPLAY function of the administration dialog. The source rows can be examined using QMF.)

DRL0348W COLLECT initialization resulted in no tables selected for processing.

Explanation: No tables were selected for COLLECT processing.

System action: The log collector stops processing the current statement and continues with the next.

User response: Investigate the reason for failure of the COLLECT statement to select tables for processing. Is the EXCLUDE parameter present? If so, check its content. Correct the error.

DRL0349W Data values in table *table* were changed to null in *n* columns due to overflow.

Explanation: An overflow is a situation during the execution of a COLLECT, LIST RECORD, or RECALCULATE statement when the result of an accumulation function exceeds the capacity of the column supposed to receive it. In the case of COLLECT and RECALCULATE, the column is a column in the target table, and its capacity is determined by the SQL data type of the column. In the case of LIST RECORD, the column is a part of the output list, and its capacity is determined by the type of expression defining it.

According to the options defined for the statement, the processing was to continue in case of an overflow. Every time an overflow occurred, the current value of the accumulation function was discarded, the column was reset to null, and the accumulation continued starting from null. If the column appeared as argument number 2 of an AVG or PERCENTILE function in the same update, the current value of that AVG or PERCENTILE was similarly discarded and reinitialized. All discarded values were written to the DRLDUMP file, together with the identification of the column and the currently processed record or row.

The columns of the table *table* were reinitialized in this way *n* times during the execution of the statement.

System action: Processing continues.

User response: Refer to the DRLDUMP file for exact information on what has happened. Check if the overflow was caused by an incorrectly defined argument of the accumulation function. Examine the source record or row to see if the overflow was caused by invalid data. If the statement is COLLECT, consider redefining the target table to give the column a higher capacity (integer instead of small integer, floating-point instead of integer, and a higher precision for a decimal column). If the statement is LIST RECORD, consider modifying the argument of the accumulation function to change the type of result from integer to floating-point. (The RECALCULATE statement is always terminated by an overflow, so that this message can never be issued for it.)

DRL0350E Overflow occurred in column *column* of table *table*.

Explanation: The value of column *column* was to be computed by a COLLECT, LIST RECORD, or RECALCULATE statement. The value of column *column* is specified by means of an accumulation function with a numeric result. The result exceeds the capacity of the column. This situation is called an overflow.

In the case of COLLECT and RECALCULATE, the column is a column in the target table, and its capacity is determined by the SQL data type of the column. In the case of LIST RECORD, the column is a part of the output list, and its capacity is determined by the type of expression defining it.

System action: The log collector stops processing the current statement and continues with the next.

User response: Check if the overflow was caused by an incorrectly defined argument of the accumulation function. Examine the source record or row to see if the overflow was caused by invalid data. Examine the data specified by RECALCULATE. If the statement is COLLECT or RECALCULATE, consider redefining the target table to give the column a higher capacity (integer instead of small integer, floating-point instead of integer, and a higher precision for a decimal column). If the statement is LIST RECORD, consider modifying the argument of the accumulation function to change the type of the result from integer to floating-point (if it is not already floating-point). If the statement is COLLECT or LIST RECORD, consider specifying ON OVERFLOW CONTINUE.

DRL0351E The COLLECT processing is terminated by an overflow.

Explanation: An overflow is the situation when the result of an accumulation function becomes too large to be stored in the specified column.

The COLLECT statement specified (explicitly or by default) that the processing is to stop in case of overflow. This message is preceded by message DRL0350E that provides further details.

System action: The processing is stopped and the database updates are rolled back to the most recent commit point. The log collector continues with the next.

User response: See explanation and user response for message DRL0350E.

DRL0353E *n* records or rows were skipped in update *update*, table *table* due to invalid arguments of APPLY SCHEDULE.

Explanation: A source record or row is skipped if one or more arguments of APPLY SCHEDULE are invalid, for example, the interval start time is later than the interval end time.

System action: Processing continues.

User response: The DRLDUMP data set contains information that identifies the record or row that caused the error. Check the APPLY SCHEDULE clause against the contents of the record or row and correct the cause of the error. (The source records can be examined using the DISPLAY function of the administration dialog. The source rows can be examined using QMF.)

DRL0355E No updates or valid records are defined for the tables in the INCLUDE list.

Explanation: The COLLECT statement was not executed because no valid updates exist for the tables specified in the INCLUDE clause, or the updates exist, but their source records do not exist or are invalid.

System action: The log collector stops processing the current statement and continues with the next.

User response: Ensure that the included tables have valid update and record definitions.

DRL0356I To update the database, the algorithm *algorithm* was most used.

Explanation: The algorithm *algorithm* was most used to update the database.

System action: Processing continues.

User response: If the COLLECT process uses the DIRECT or SCAN algorithm to update the DB2 database, you may want to manually specify that algorithm in the COLLECT statement. This will prevent Tivoli Decision Support for z/OS from running the SQL query that determines which algorithm to use, with the result that the process performance is improved. For details about the COLLECT parameters, refer to the *Language Guide and Reference*.

DRL0358E REPROCESS and ON TIMESTAMP OVERLAP are mutually exclusive.

Explanation: REPROCESS and ON TIMESTAMP OVERLAP STOP were both specified on the COLLECT statement. These options are mutually exclusive and cannot be specified on the same COLLECT statement.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the COLLECT statement and rerun the collect job.

DRL0361E To column number *n*, specified in ORDER BY clause, does not exist.

Explanation: *n* is higher than the number of columns to be listed.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0362E The column *column*, specified in ORDER BY clause, does not exist.

Explanation: *column* does not appear as the specification of a column to be listed.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error. Specify the column number if the column specification is not a single field name.

DRL0363E The record *record* does not belong to the same log as the record in the previous list specification.

Explanation: If several record types are listed in the same processing of the log, all record types must belong to the same log.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0364E The list file *ddname* is used in a previous list specification.

Explanation: Two list specifications specified the same output file. Each listed record type must be written to its own output file; they cannot be mixed.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0365E The number of columns to be listed exceeds the allowed maximum.

Explanation: No more than 120 columns can be listed at the same time. This maximum is decreased by 1 for each AVG and PERCENTILE column.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error. You can list the same record type to another output file in the same processing of the log.

DRL0366E The LIST RECORD statement requires a GROUP BY clause.

Explanation: If the columns to be listed are specified both with and without accumulation functions, a GROUP BY clause is required. The GROUP BY clause must then contain exactly those columns that have no accumulation function.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0367E The GROUP BY item number *n* is not a column specification.

Explanation: The item number *n* of the GROUP BY clause is not present among the column specifications in the FIELDS clause. Thus, no grouping can be done on that column.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0368E The column specification number *n* is not present in GROUP BY clause.

Explanation: The GROUP BY clause specifies that grouping may be done. Column number *n* is not specified to be a grouping column (it is not present in the GROUP BY clause). The column has no

accumulation function specified and cannot be accumulated.

System action: The log collector stops processing the current statement and continues with the next.

User response: Add the column expression to the GROUP BY arguments or specify an accumulation function for the column.

DRL0369I The column number *n* is specified more than once in ORDER BY.

Explanation: The ORDER BY clause contains the same expression twice. This duplication has no effect on the list processing.

System action: Processing continues.

User response: None.

DRL0370E An error was found in the WHERE clause of the list specification of record *record*.

Explanation: Either the WHERE condition is not a condition, or a previous message explains the cause of the error.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0371E An error was found during initialization of LIST RECORD *record*.

Explanation: This message indicates that an error was found in the list specification for *record*. A previous error message explains the cause of the error.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0372E Argument number *n* of the FIELDS clause is not a valid expression.

Explanation: The argument might be a condition. Or a previous message identifies the cause.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0375E FIELDS definition is not allowed.

Explanation: The FIELDS clause is not allowed in the section part of an ALTER RECORD statement.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0376E The record length exceeds the maximum record length for the file *file*.

Explanation: The record length exceeds the maximum record length for *file*.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0377W The LIST RECORD processing is interrupted due to a buffer-full condition.

Explanation: The list output was buffered due to a GROUP BY or ORDER BY clause in the list specification. The buffer filled up before the input log processing was finished. The buffered rows were written to the output file(s), and the processing was ended.

System action: Processing continues for the rows read before the buffer-full condition.

User response: Rerun LIST RECORD with a larger buffer.

DRL0378E The LIST RECORD processing is terminated by an overflow.

Explanation: An overflow is the situation when the result of an accumulation function becomes too large to be stored in the specified column.

The LIST RECORD statement specified (explicitly or by default) that the processing is to stop in case of overflow. This message is preceded by message DRL0350E that provides further details.

System action: The log collector stops processing the current statement and continues with the next.

User response: See explanation and user response for message DRL0350E.

DRL0380I *n* records read from the input log.

Explanation: This message, issued at the end of a LIST RECORD operation, indicates the quantity of records read from the input log.

System action: Processing continues.

User response: None.

DRL0381I *n* records written to the *file* file.

Explanation: This message, issued at the end of a LIST RECORD operation, indicates the quantity of records written to the named file.

System action: Processing continues.

User response: None.

DRL0401E An invalid SQL condition is specified for *table*.

Explanation: The SQL condition specified in the WHERE clause of DEFINE PURGE or RECALCULATE for the *table* table is not valid.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0402E The SQL condition exceeds 254 characters.

Explanation: The SQL condition specified in the WHERE clause of DEFINE PURGE or RECALCULATE for the *table* cannot exceed 254 characters.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0403I The purge condition for *table* is added.

Explanation: The purge condition for *table* was successfully added.

System action: Processing continues.

User response: None.

DRL0404I DRL0405I DRL0406I

Explanation: Messages DRL0404I through DRL0406I are used to build a table that shows the number of rows deleted from different tables during a purge process. For an example of such a table, see Figure 2 on page 35.

System action: Processing continues.

User response: None.

DRL0407W Purging data from *table* with the purge condition *condition* was not successful.

Explanation: Check the output for an SQL message that explains the reason.

System action: Processing continues.

User response: Ensure that the warning message does not indicate a problem that must be corrected.

DRL0408I No purge condition exists for the table *table*.

Explanation: DROP PURGE FROM was not performed on *table* because no purge condition existed.

System action: Processing continues.

User response: None.

DRL0409I The purge condition for *table* is dropped.

Explanation: DROP PURGE FROM was successful for *table*.

System action: Processing continues.

User response: None.

DRL0410I The purge condition for *table* is altered.

Explanation: DEFINE PURGE was successful for *table*.

System action: Processing continues.

User response: None.

DRL0411E Purging data from table with the purge condition condition failed.

Explanation: Check the output for an SQL message that explains the reason.

System action: Processing continues.

User response: The error message indicates a problem that must be corrected.

DRL0415E There are no tables to be purged.

Explanation: The PURGE statement failed because there were no included tables that had a purge condition defined.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0431E The ISPF operation *operation* failed with return code *n*.

Explanation: ISPF operations do not work in this context.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0432W There is no record to be displayed.

Explanation: The log was processed but contained no records of the requested type. No record was displayed.

System action: Processing continues.

User response: Ensure that the warning message does not indicate a problem that must be corrected.

DRL0433W No record is displayed. The first record to be displayed is *n1*, but the log contains only *n2* records.

Explanation: The sequence number of the first record

to be displayed is higher than the number of records in the log.

System action: No record is displayed.

User response: Specify a record number that is not higher than the number of records in the log.

DRL0434E An error was found during initialization of DISPLAY of record *record*.

Explanation: The log collector was invoked to assist in the dialog function DISPLAY RECORD. The definition of the specified record cannot be used. The reason is explained by preceding messages.

System action: The record is not displayed.

User response: Ensure that the record definition is correct.

DRL0435W No record is displayed. Records of the requested type exist in the log, but none after record number *n*.

Explanation: At least one record of the specified type exists in the log, but the sequence number of the first record to be displayed was specified to be higher than the last record of the specified type.

System action: No record is displayed.

User response: Do not specify a record number, or specify a lower record number.

DRL0441E An incorrect number of values is specified in the INSERT clause.

Explanation: If the INSERT clause of the RECALCULATE statement does not specify any column names, the number of values specified by the clause must be equal to the number of columns in the table. If the INSERT clause specifies one or more column names, the number of values must be the same as the number of column names.

System action: The log collector stops processing the current statement and continues with the next.

User response: Ensure that the number of values is equal to the number of columns in the table, or to the number of specified column names.

DRL0442E An error occurred during initialization of RECALCULATE.

Explanation: An error occurred during initialization of RECALCULATE. Message DRL0442E might be issued in conjunction with other messages that describe the cause of the error and explain why processing was interrupted.

System action: The log collector stops processing the current statement and continues with the next.

User response: Check the output for messages issued before this message for more information on why the processing was interrupted. Correct the error.

DRL0443E The INSERT clause specifies only the values of GROUP BY columns. The table already contains a row with these values.

Explanation: The RECALCULATE statement is applied to a table that is the target of one or more update definitions. The INSERT clause of the statement specifies values for only those columns that are used as GROUP BY columns in these updates. The table already contains a row with these values.

System action: The table is not updated. The log collector stops processing the current statement and continues with the next.

User response: Depending on what you intend to achieve, alter the clause to specify values of non-key columns, or specify a combination of key values that is not present in the table.

DRL0444E The INSERT clause does not specify values of all GROUP BY columns.

Explanation: The RECALCULATE statement is applied to a table that is the target of one or more update definitions. The INSERT clause of the statement does not specify values for all columns that are used as GROUP BY columns in these updates.

System action: The table is not updated. The log collector stops processing the current statement and continues with the next.

User response: Specify values of all GROUP BY columns.

DRL0445I DRL0446I DRL0447I

Explanation: Messages DRL0445I through DRL0447I are used to build a table that shows the number of rows updated, deleted from, and inserted by a RECALCULATE statement. For an example of such a table, see Figure 3 on page 35.

System action: Processing continues.

User response: None.

DRL0448E The RECALCULATE statement is terminated by an overflow.

Explanation: An overflow is the situation when the result of an accumulation function becomes too large to be stored in the specified column. This message is preceded by message DRL0350E that provides further details.

System action: The log collector stops processing the current statement and continues with the next.

User response: See explanation and user response for message DRL0350E.

DRL0449E The INSERT clause specifies null value for one or more GROUP BY columns.

Explanation: The RECALCULATE statement is applied to a table that is the target of one or more update definitions. The INSERT clause of the statement specifies a null value for a column that is used as a GROUP BY column in these updates.

System action: The table is not updated. The log collector stops processing the current statement and continues with the next.

User response: Check the INSERT clause. Ensure that all values specified for GROUP BY columns are non-null.

DRL0450E The table *table* is specified more than once.

Explanation: The table *table* appears more than once in the list of tables to be recalculated.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the statement and rerun RECALCULATE.

DRL0451E The table *table* is not based on any of the specified tables.

Explanation: The table *table* appears in the list of tables to be recalculated. It requires an update definition from another table in the list, or from the table specified in the clause that follows the list. No such update definition exists.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the statement and rerun RECALCULATE.

DRL0452E The UPDATE clause specifies null value for one or more GROUP BY columns.

Explanation: The RECALCULATE statement is applied to a table that is the target of one or more update definitions. The UPDATE clause of the statement specifies a null value for a column that is used as a GROUP BY column in these updates.

System action: The table is not updated. The log collector stops processing the current statement and continues with the next.

User response: Check the UPDATE clause. Ensure that all values specified for GROUP BY columns are non-null.

DRL0461E The ALTER statement was not processed.

Explanation: A previous message explains why the processing stopped.

System action: The log collector stops processing the current statement and continues with the next.

User response: Correct the error.

DRL0471E *module-name* **: Error in query before** *service* **service . Routine failed RC=***return code*

Explanation: An unexpected error occurred attempting a Query service using CSRCESRV (MVS Expand and Compress services) prior to Expanding or Compressing a *record*. The *return code* is the return code from the CSRCESRV macro. See MVS Programming Assembler Services Reference Vol 1 for possible return codes

System action: The log collector stops processing and has probably abended with a message similar to `ABEND=S000 U0002 REASON=00000000`.

User response: This is an internal error. Save the input log and job output, then contact IBM support.

DRL0472E *module-name***: Error in** *service* **service. Routine failed RC=***return code***.**

Explanation: An unexpected error occurred attempting an Expand or Compress service using CSRCESRV (MVS Expand and Compress services). The *return code* is the return code from the CSRCESRV macro. See MVS Programming Assembler Services Reference Vol 1 for possible return codes.

System action: The log collector stops processing and has probably abended with a message similar to `ABEND=S000 U0002 REASON=00000000`.

User response: This is an internal error. Save the input log and job output, then contact IBM support.

DRL0980E FFST Initialization failed with return code *return code***.**

Explanation: This message is issued in connection with an abnormal termination of program processing. If the abnormal termination is of the kind that might indicate a program error, the program attempts to register it with FFST™/MVS (First Failure Support Technology™ for Multiple Virtual Storage). FFST/MVS is an IBM licensed program that improves availability for IBM and vendor software applications by providing immediate problem notification and first-failure data capture for software problems.

The most likely reason for the message is that FFST/MVS is not installed. You might then also receive

message CSV003I stating that one of the FFST modules cannot be loaded.

If FFST is installed, the message indicates that the communication with FFST cannot be established, and the termination will not be registered.

System action: Abnormal termination is not registered with FFST/MVS. Processing continues.

User response: If FFST is not installed, you can ignore this message. If message CSV003I is issued, it can also be ignored. The information about the abnormal termination can be found in the DRLDUMP file (the information is the same as that registered in FFST).

If FFST is installed, you can still ignore the message if the DRLDUMP file is sufficient. If you need the FFST/MVS support, refer to the FFST/MVS documentation, and look up the return code and the message(s) that were issued. Remove the cause of the failure.

DRL0981E An FFST software probe failed with return code *return code***.**

Explanation: Processing of the FFST software probe failed.

System action: No FFST dump is produced. Information about the error is written to the DRLDUMP file. Processing continues.

User response: If you need the FFST dumps, refer to the FFST documentation, and look up the return code and the message(s) that were issued. Remove the cause of the failure.

DRL0982E FFST Termination failed with return code *return code***.**

Explanation: Termination of FFST failed.

System action: Processing continues.

User response: Refer to the FFST/MVS documentation, and look up the return code and the message(s) that were issued. Remove the cause of the failure.

DRL0990S The DB2 Call Attachment Facility cannot be loaded.

Explanation: You tried to run the log collector or the installation preprocessor, but one or more of the modules DSNALI, DSNHLI2, and DSNTIAR cannot be loaded.

System action: The program is not run.

User response: Ensure that the library containing the modules is specified as STEPLIB or LOADLIB.

DRL0991S The DB2 subsystem *name* **is not active.**

Explanation: You tried to run the log collector or the installation preprocessor, specifying *name* as the name of the DB2 subsystem. The subsystem is not active.

System action: The program is not run.

User response: Try again when the subsystem is active.

DRL0992S Release level mismatch between the DB2 subsystem *name* **and Call Attachment Facility.**

Explanation: You tried to run the log collector or the installation preprocessor, specifying *name* as the name of the DB2 subsystem. The DB2 Call Attachment Facility failed when trying to connect to the subsystem. The likely reason for the failure is that the Call Attachment Facility you are using has a different release level than the DB2 subsystem.

System action: The program is not run.

User response: Ensure that the STEPLIB or LOADLIB you are using contains the correct version of the modules DSNALI, DSNHLI2, and DSNTIAR.

DRL0993S The DB2 subsystem *name* **is unknown, or you are not authorized to use it.**

Explanation: You tried to run the log collector or the installation preprocessor, specifying *name* as the name of the DB2 subsystem. Either a subsystem with this name does not exist, or you are not authorized to use it.

System action: The program is not run.

User response: Ensure that you specify a correct subsystem and that you have the necessary authorization.

DRL0994S The plan *name* **does not exist, or you are not authorized to use it.**

Explanation: You tried to run the log collector or the installation preprocessor. These programs need the plan *name* for their execution. Either the plan does not exist, or you are not authorized to use it.

System action: The program is not run.

User response: Ensure that the plan exists and you have the necessary authorization.

Examples of Output from COLLECT, PURGE and RECALCULATE

```
DRL0300I Collect started at 1992-12-04-10.04.15
DRL0302I Processing SMF.DATA.SET on VOL001.
DRL0341I The first-record timestamp is 1992-06-03.00.01.730000.
DRL0308I A database update started after 2608 records due to a
         buffer-full condition.
DRL0342I The last-record timestamp is 1992-06-03.11.52.40.220000.
DRL0310I A database update started after 4582 records due to end of log.
DRL0313I The collect buffer was filled 1 times. Consider increasing the collect buffer size.
DRL0003I
DRL0315I Records read from the log or built by log procedure:
DRL0317I Record name         |    Number
DRL0318I --------------------|----------
DRL0319I SMF_000             |       0
DRL0319I SMF_006             |       6
DRL0319I SMF_007             |       0
   .        .               .       .
   .        .               .       .
   .        .               .       .
DRL0319I SMF_090             |       0
DRL0320I Unrecognized        |       3
DRL0318I --------------------|----------
DRL0321I Total               |    4582
DRL0003I
DRL0316I Records built by record procedures:
DRL0317I Record name         |    Number
DRL0318I --------------------|----------
DRL0319I SMF_030_X           |    2012
DRL0319I SMF_070_X           |     200
DRL0318I --------------------|----------
DRL0321I Total               |    2212
DRL0003I
DRL0323I                                -------Buffer------ ------Database-----
DRL0324I Table name                    |   Inserts   Updates   Inserts   Updates
DRL0325I -------------------------------------------------------------------------
DRL0326I DRL     .AVAILABILITY_D       |         3        23         2         1
DRL0326I DRL     .AVAILABILITY_M       |         3         1         2         1
DRL0326I DRL     .AVAILABILITY_T       |         9        76         9         0
   .                 .                .        .         .         .         .
   .                 .                .        .         .         .         .
   .                 .                .        .         .         .         .
DRL0326I DRL     .MVS_WORKLOAD_H       |       144       366       132        12
DRL0326I DRL     .MVS_WORKLOAD_M       |        60        12        48        12
DRL0325I -------------------------------------------------------------------------
DRL0327I Total                         |      2643     99019      2148       495
DRL0003I
DRL0301I Collect ended at 1992-12-04-10.09.43.
```

Figure 1. An Example of Messages Generated by a COLLECT Statement. It Illustrates the Use of Messages DRL0404I through DRL0406I.

```
DRL0300I Purge started at 1993-01-23-19.27.34
DRL0404I Table name                  |   Deletes
DRL0405I ---------------------------|----------
DRL0406I SLR     .VM_ACCOUNTING_D    |       642
DRL0406I SLR     .VM_ACCOUNTING_M    |         0
DRL0301I Purge ended at 1993-01-23-19.28.01
```

Figure 2. An Example of Messages Generated by a PURGE Statement. It Illustrates the Use of Messages DRL0317I through DRL0327I.

```
DRL0445I Table name                  |   Updates   Deletes   Inserts
DRL0446I ---------------------------|-----------------------------
DRL0447I DRL     .NW_RTM_RESPONSE_D  |         5         0         8
DRL0447I DRL     .NW_RTM_RESPONSE_W  |         0         0         4
DRL0447I DRL     .NW_RTM_RESPONSE_M  |        11         0        19
   .                   .             .         .         .         .
   .                   .             .         .         .         .
   .                   .             .         .         .         .
DRL0447I DRL     .AVAILABILITY_M     |        25         0         2
DRL0447I DRL     .AVAILABILITY_T     |         7         0         1
```

Figure 3. An Example of Messages Generated by a RECALCULATE Statement. It Illustrates the Use of Messages DRL0445I through DRL0447I.

REXX-SQL Interface Messages

This section describes REXX-SQL interface messages generated during batch processing. Tivoli Decision Support for z/OS implements the REXX-SQL interface in the DRL1SQLX module. As described in the *Administration Guide*, the module retrieves its input data from arguments on CALL instructions and from predefined REXX variables. The output from the execution of a SELECT statement is returned in an array of REXX variables the module creates. The module supports all DB2 data types except graphic strings. The return code from the module is set in the REXX variable RESULT. For information about invocation, refer to the *Administration Guide*.

DRL1000E SQL could not be initialized. SQLCODE contains the return code from the DB2 CAF connection.

Explanation: Tivoli Decision Support for z/OS cannot connect to DB2.

System action: Tivoli Decision Support for z/OS does not process the SQL statement.

User response: Refer to *DB2 Messages and Codes*, SC26-4379, for an explanation of the cause.

DRL1001E The variable DB2SUBS, specifying the DB2 subsystem name, was not set.

Explanation: The calling REXX EXEC did not specify the name of the DB2 subsystem.

System action: Tivoli Decision Support for z/OS does not process the SQL statement.

User response: Set the subsystem name and perform the operation again.

DRL1002E The variable DB2SUBS, specifying the DB2 subsystem name, cannot exceed 4 characters.

Explanation: The calling REXX EXEC has specified a DB2 subsystem name that is longer than four characters.

System action: Tivoli Decision Support for z/OS does not process the SQL statement.

User response: Correct the subsystem name and perform the operation again.

DRL1003E No SQL statement was passed as argument.

Explanation: The SQL statement parameter was missing from the call to the SQL interface module.

System action: Tivoli Decision Support for z/OS does not process the SQL statement.

User response: Add the SQL statement and perform the operation again.

DRL1004E SQLSTEM cannot exceed 240 characters.

Explanation: The maximum length of the SQLSTEM variable is 240 characters.

System action: Tivoli Decision Support for z/OS does not process the SQL statement.

User response: Specify a value shorter than 240 characters and perform the operation again.

DRL1005E The REXX variable *variable* could not be set.

Explanation: Tivoli Decision Support for z/OS cannot set the REXX variable *variable*.

System action: Tivoli Decision Support for z/OS does not process the SQL statement.

User response: Contact your system programmer.

DRL1006E Column number *n* has the SQL data type *type*, which is not supported.

Explanation: Column *n* has a data type that is not supported by the REXX-SQL interface. The SQL code for the data type is *type*.

System action: Tivoli Decision Support for z/OS does not process the SQL statement.

User response: Do not include this column in the SELECT statement.

DRL1007W Not all rows were returned when SQLMAX was reached.

Explanation: The REXX variable SQLMAX limits the number of rows returned on a SELECT statement. If you do not specify SQLMAX, Tivoli Decision Support for z/OS uses a default value of 5000 rows.

System action: Processing ends. The remaining rows are not read.

User response: If the number of rows returned is not sufficient, increase the MAXROWS value.

DRL1008E REXX variables could not be accessed. IRXEXCOM return code is -1.

Explanation: Tivoli Decision Support for z/OS loaded, but cannot access the REXX routine IRXEXCOM, which communicates REXX variables between the REXX EXEC and the SQL interface routine.

System action: Tivoli Decision Support for z/OS does not process the SQL statement.

User response: Contact your system programmer.

DRL1009E A REXX variable could not be set due to insufficient storage.

Explanation: REXX storage is full.

System action: Tivoli Decision Support for z/OS halts processing of the SQL statement.

User response: Increase the storage available to the REXX EXEC.

DRL1010W SQLMAX is not a valid number. The default was used.

Explanation: The SQLMAX variable does not contain a valid numeric value. Tivoli Decision Support for z/OS used the default SQLMAX value 5000 instead.

System action: Processing continues.

User response: Ensure that the warning message does not indicate a problem that must be corrected.

DRL1011E The SQLHANDLE value is invalid on INIT. INIT may have been issued twice.

Explanation: The SQLHANDLE variable is reserved and is not to be changed. It must have no value on the first INIT call, and the value 0 on subsequent INIT calls. The INIT call sets it to a value and a TERM call resets it to zero (0).

System action: This INIT was not processed.

User response: Change the REXX EXEC to remove the cause of this error.

DRL1012E The SQLHANDLE value is invalid on TERM. INIT may be missing.

Explanation: The SQLHANDLE variable does not contain the kind of value that an INIT call stores in it. The SQLHANDLE variable is reserved and must not be changed by the REXX EXEC.

System action: This TERM was not processed. However, Tivoli Decision Support for z/OS performs an SQL COMMIT at the end of the task.

User response: Change the REXX EXEC to remove the cause of this error.

DRL1013W SQLMAX exceeds maximum value (m).

Explanation: The SQLMAX value is greater than the maximum value m supported by the REXX-SQL interface. Tivoli Decision Support for z/OS used the maximum SQLMAX value instead.

System action: Processing continues.

User response: Set SQLMAX to a value less than or equal to the supported value.

IMS Feature Messages

These messages are issued by the IMS collect feature.

DRL2001E *csect procedure* **at** *label*. **GETMAIN failed for** *node* **allocation.**

Explanation: A GETMAIN failed while trying to acquire additional storage for the internal node name, indicating a lack of virtual storage. This message can be issued by procedure DRL2IFAL or DRL2IMSH with labels NOFREESP or ALBINER.

System action: Processing stops.

User response: See any accompanying messages. Rerun the job from the last successful checkpoint and database commit, specifying a suitable TABLEFLUSH parameter to let the program invoke recovery.

DRL2002E *csect procedure* **at** *label*. **Duplicate key found.**

Explanation: An attempt to update an internal table failed. All keys must be unique, and old entries must be cleared before new entries can be inserted. This message can be issued by procedures DRL2FCOW with label DUPKEYOU or DUPKEYPU, respectively.

System action: Processing stops.

System programmer response: Contact your IBM representative.

User response: See any accompanying messages. Ensure that you have not tried to process across a gap in your input IMS log. Ensure that you have not mistakenly processed logs from different IMS systems. Ensure that the necessary IMS log records are available, if an IMS archive exit has been used. Sequence number, date, and time indicators in accompanying messages may help indicate such a problem.

If you find that incorrect data has been passed to the log procedure, separate the data into parts and try again to process it.

If the error persists, contact your system programmer.

DRL2004E *csect procedure* **at** *label*. **An error occurred when writing the** *ddname* **file.**

Explanation: An error occurred when Tivoli Decision Support for z/OS tried to write to the data set allocated—either to the output log-procedure checkpoint file (ddname DRLICHKO) or to the output composite record (ddname DRLICOMP). Causes might include I/O errors or insufficient storage. This message can be issued by procedures DRL2IMSK and DRL2LOGP with labels OUTCKER, WRITERR2, and WRITERR3.

System action: Processing stops.

User response: See any accompanying messages. You must decide the potential impact of the failure. Decide whether to return to the beginning and reprocess all data, or whether you can restart from the point where the failure occurred with no appreciable loss of data.

DRL2005E *csect procedure* **at** *label*. **An error occurred when resolving pointers.**

Explanation: An error occurred while Tivoli Decision Support for z/OS was trying to rebuild internal tables from the input checkpoint file. This message can be issued by procedure DRL2IMSH with label RESLERR.

System action: If the pointer is not an SPA pointer, processing terminates. If the pointer is an SPA pointer, this message is accompanied by message DRL2069W and processing continues.

System programmer response: Collect relevant information about the sequence of events leading to this error. Save the input checkpoint file and previously processed log data. Contact your IBM representative.

User response: See any accompanying messages. If processing terminates, inform your system programmer of all symptoms.

DRL2006E *csect procedure* **at** *label*. **The input file allocated to DRLICHKI is empty.**

Explanation: An empty data set was allocated to the input checkpoint file (ddname DRLICHKI). This message can be issued by procedure DRL2IMSH with label INFILERR.

System action: Processing stops.

User response: Do not allocate an empty data set to the input checkpoint file (ddname DRLICHKI). Rerun the job.

DRL2007E *csect procedure* **at** *label*. **Checkpoint ID in checkpoint file is invalid.**

Explanation: Tivoli Decision Support for z/OS is processing an incorrect data set as an input checkpoint file. This message can be issued by procedure DRL2IMSH with label CPIDERR.

System action: Processing stops.

User response: Check the allocation for the job. If the input checkpoint file (ddname DRLICHKI) is present, ensure either that it is DUMMY, or that only a valid checkpoint file is allocated.

DRL2008I **A checkpoint is taken at IMS log sequence number** *hexadecimal value* **at approximately** *Julian date time***.**

Explanation: The log procedure is taking a checkpoint. The last processed IMS record had logical log sequence number *hexadecimal value* and the data was taken on *Julian date* at *time*.

Note: The date and time is provided as found in the processed IMS records and is reported in printable packed-decimal IMS Julian date and time format.

System action: Processing continues.

User response: None.

DRL2009E *csect procedure* **at** *label***. Total records read from checkpoint file is not the same as the number of records expected.**

Explanation: The log procedure tried to process an input checkpoint file that was not written correctly, and thus unusable. The first record in the checkpoint file contains the number of records expected to be written to the file. This message can be issued by procedure DRL2IMSH with label CPFILER.

System action: Processing stops.

System programmer response: Contact your IBM representative.

User response: See any accompanying messages. Check for error messages in the output from the job that created the checkpoint file you are now trying to read.

Try to recreate the checkpoint file by reprocessing the appropriate data from the last run. Then try to read the newly created checkpoint file.

If the problem persists and no error messages are issued, and no abends are encountered that might cause such a problem, save all output, log data, and checkpoint files and contact your system programmer.

DRL2010E *csect procedure* **at** *label***. Null or invalid pointer.**

Explanation: An internal error occurred. This message can be issued by many procedures with many possible labels.

System action: Processing stops.

System programmer response: Contact your IBM representative.

User response: See any accompanying messages. In all cases, save all output, all checkpoint files, and all log data, and contact your system programmer.

DRL2011E *csect procedure* **at** *label***.** *parameter* **parameter error.**

Explanation: This message indicates that an error was detected in *parameter*, being processed from ddname DRLIPARM. It can be issued by many procedures with many possible labels.

System action: Processing stops.

User response: See any accompanying messages. Ensure that you have not coded any comment in the first eight fields just after the equals (=) sign of the numeric parameters in the DRLIPARM. Correct any syntax errors in the parameters and rerun.

DRL2013I *n* **duplicate keys were found while creating SPA entries.**

Explanation: While processing IMS conversational records, Tivoli Decision Support for z/OS tried to create a new conversational control block entry in internal tables and found that the entry already existed and had not been freed.

System action: Tivoli Decision Support for z/OS overwrites and establishes new pointers. Processing continues.

User response: None.

DRL2014E *csect procedure* **at** *label***. Cannot create the** *node* **entry.**

Explanation: An internal error occurred. This message can be issued by procedures DRL2IFCL and DRL2InnE with labels NTCRUR01, CPERFAIL, CPEIFAIL, CRRTFAIL, and LKURFAIL.

System action: Processing stops.

System programmer response: Contact your IBM representative.

User response: See any accompanying messages. In all cases, save all output, all checkpoint files, and all log data, and contact your system programmer.

DRL2017W **Checkpoint statistics data not found. Composite record not created from the IMS type X'47' log record.**

Explanation: Tivoli Decision Support for z/OS found type X'47' region checkpoint records before finding any IMS checkpoint start X'4001' record. You are probably processing an incomplete log.

System action: Processing continues.

User response: None.

DRL2018E *csect procedure* **at** *label*. **The node** *name* **is not found in table.**

Explanation: An internal error occurred. This message can be issued by procedure *DRL2IPNF* with label *FREENDNF*.

System action: Processing stops.

System programmer response: Contact your IBM representative.

User response: See any accompanying messages. In all cases, save all output, all checkpoint files, and all log data and contact your system programmer.

DRL2019I **The stop time as specified in the parameter has been reached.**

Explanation: The program terminates, because the date and time specified in the STOP parameter are found in the IMS records being processed.

System action: Processing stops.

User response: None.

DRL2020E *csect procedure* **at** *label*. **Cannot load the module** *name*.

Explanation: The program cannot load the specified module because of a problem with virtual storage, or because the module either cannot be found or was not valid. This message can be issued by procedure DRL2LOGP with label IMSLERR.

System action: If the module is DRL2InnL, processing terminates. If the module is a DRL3Innx report module, processing continues.

System programmer response: Contact your IBM representative.

User response: See any accompanying messages. Ensure that you specified a valid IMSVER or REPORTS parameter.

If the module is valid, save all output, including the product installation procedures, and contact your system programmer.

DRL2021W **No available entry in the array for the allocated pointer. All the** *maximum number of array entries* **entries have been used.**

Explanation: All entries in the pointer arrays have been used.

System action: Processing stops.

User response: Ensure that you were processing valid IMS data correctly, then restart from the previous usable checkpoint. Increase the MAXFREE parameter specification or specify the TABLEFLUSH parameter to reduce the amount of data pending in storage.

DRL2022I **IMS log processing started at** *date and time*.

Explanation: Processing started for the input data at the IMS date and time indicated. The message appears only if the user specifies a START date and time parameter.

System action: Processing continues.

User response: None.

DRL2023E *csect procedure* **at** *label*. **The START parameter is greater than or equal to the STOP parameter.**

Explanation: The START parameter for the log procedure specifies a time later than that specified in the STOP parameter. This message can be issued by the procedure DRL2IMSJ with the label TIMEERR.

System action: Processing stops.

User response: Correct the START and STOP parameters and rerun the job.

DRL2024E *csect procedure* **at** *label*. **The binary node array limit is exceeded.**

Explanation: An internal error occurred. This message can be issued by procedure DRL2IMSH with label ALARYER.

System action: Processing stops.

System programmer response: Contact your IBM representative.

User response: Try to process the next log without the input checkpoint file. In all cases, save all output, all checkpoint files, and all log data and contact your system programmer.

DRL2025E *csect procedure* **at** *label*. **IMS log sequence number** *second hex number* **is not greater than the previous log sequence number** *first hex number*.

Explanation: The log procedure detected an out-of-sequence condition while processing the input log data. This message can be issued by procedure DRL2IMSL with label *IMS_log_record_seq*.

System action: Processing stops.

User response: Ensure that:

- The IMS log data you passed to the log procedure is not out of order
- You used the correct log-procedure input checkpoint file (ddname DRLICHKI).

Correct the sequence and reprocess.

Note: You might need to purge some data from the database before reprocessing.

DRL2026I *csect procedure* **at** *label*. **An error occurred when linking** *D1* **to** *UOR*.

Explanation: An internal error occurred. This message can be issued by procedure DRL2IMSQ with label ERLKD1UR.

System action: Processing stops.

User response: See any accompanying messages. In all cases, save all output, all checkpoint files, and all log data, and contact your system programmer.

DRL2027E *csect procedure* **at** *label*. *node* **has already been written.**

Explanation: An internal error occurred. This message can be issued by procedure DRL2IFK1 with label WRGINP12.

System action: Processing stops.

User response: See any accompanying messages. In all cases, save all output, all checkpoint files, and all log data, and contact your system programmer.

DRL2028E *csect procedure* **at** *label*. **WFIScannot yet completed.**

Explanation: An internal error occurred. This message can be issued by procedure DRL2IFK1 with label WRGINP15.

System action: Processing stops.

User response: See any accompanying messages. In all cases, save all output, all checkpoint files, and all log data, and contact your system programmer.

DRL2029I TABLEFLUSH is invoked.

Explanation: Tivoli Decision Support for z/OS scans and flushes storage tables according to the IMS measured age of the various transaction entries, as specified by TABLEFLUSH.

System action: Processing continues.

User response: None.

DRL2030W Output count *n* **exceeds** *maximum output limit*.

Explanation: Only *maximum output limit* of program outputs are being matched to a transaction or batch message program which actually issued *n* outputs.

All excess outputs are written as unconnected subtype X'FB' records for later processing and analysis, if needed.

System action: Processing continues.

User response: None.

DRL2031W The composite record length has exceeded *maximum value*. **The record is truncated.**

Explanation: In trying to write a composite record to DRLICOMP, Tivoli Decision Support for z/OS tried to include too much data in the record. To prevent any processing errors, the record truncates at the nearest practical limit to the maximum (30 000 bytes).

System action: Processing continues.

User response:

Contact your IBM customer service representative.

DRL2032W The parameter *n* **value is too big. The default is used.**

Explanation: The value *n* that was specified for the MAXOUTPUT or MAXUOR parameter is greater than the maximum allowed, so Tivoli Decision Support for z/OS used the default instead.

System action: Processing continues.

User response: Correct the specification of the parameter that is in error.

DRL2033W The UOR count *n* **exceeds** *maximum UOR limit*.

Explanation: Only *maximum UOR limit* of records related to a unit-of-recovery (UOR) commit are being matched to a batch message program that actually committed *n* times.

System action: Processing continues.

User response: None.

DRL2034W The stray UOR count *n* **exceeds** *maximum UOR limit*.

Explanation: Only *maximum UOR limit* number of records related to a unit-of-recovery (UOR) commit are being matched to a batch message program that actually committed *n* times.

System action: Processing continues.

User response: None.

DRL2035E *csect procedure* **at** *label*. **TABLEFLUSH is required but not requested.**

Explanation: Tivoli Decision Support for z/OS reached storage limits and the log procedure was unable to recover because no TABLEFLUSH limit was set to allow the flushing of old entries.

System action: Processing stops.

User response: Ensure that an appropriate restart is possible and rerun the job. Specify a suitable TABLEFLUSH parameter.

DRL2036E *csect procedure* **at** *label*. **An error is encountered when opening the file** *ddname*.

Explanation: An error occurred when Tivoli Decision Support for z/OS tried to open the input (ddname DRLLOG) or output composite record (ddname DRLICOMP). This message can be issued by procedure DRL2LOGP with label OPERR1 or OPERR2.

System action: Processing stops.

User response: Check for errors in the specified data set names and retry the job.

DRL2038E *csect procedure* **at** *label*. **An error is encountered while writing the file** *ddname*.

Explanation: An error occurred when Tivoli Decision Support for z/OS tried to close the input (ddname DRLLOG) or output composite record (ddname DRLICOMP). This message can be issued by procedure DRL2LOGP with label CLOERR1 or CLOERR2.

System action: Processing stops.

User response: See accompanying messages for other possible errors.

Ensure that data set names were specified correctly and retry the job.

DRL2039I *n* **composites are generated by input DRRN entries.**

Explanation: Due to *n* specified in TABLEFLUSH, Tivoli Decision Support for z/OS forced incomplete transactions from storage tables.

System action: Processing continues.

User response: Check to see whether you must specify the TABLEFLUSH parameter. Ensure that the TABLEFLUSH parameter is really necessary.

DRL2040I *n* **composites generated by output DRRN entries.**

Explanation: Due to *n* specified in TABLEFLUSH, Tivoli Decision Support for z/OS forced incomplete transactions from storage tables.

System action: Processing continues.

User response: Check to see whether you must specify the TABLEFLUSH parameter. Ensure that the TABLEFLUSH parameter is really necessary.

DRL2043I *csect procedure* **at** *label*. **Default IMSVER is assumed to be** *version*.

Explanation: The default version of IMS/ESA® (Version 3, Release 1) is assumed, because no IMSVER parameter is specified.

System action: Processing continues.

User response: None.

DRL2044E *csect procedure* **at** *label*. *parameter* **parameter error.**

Explanation: This message indicates that an error was detected in the parameter *parameter* processed from ddname DRLIPARM. This message can be issued by many procedures with many possible labels.

System action: Processing stops.

User response: See any accompanying messages. Correct any syntax errors in the parameters and rerun the job.

DRL2045W An error is encountered while writing the *report module* **report file. The report module is deleted.**

Explanation: A problem, such as an I/O error or insufficient storage, was encountered when Tivoli Decision Support for z/OS tried to write output to the file for *report module*.

System action: Processing continues for all routines except the report module, which is terminated.

User response: Ensure that the warning message does not indicate a problem that must be corrected.

DRL2046W An error is encountered when opening the *report module* **report file. The report module is deleted.**

Explanation: A problem, such as an I/O error or insufficient storage, was encountered when Tivoli Decision Support for z/OS tried to open the file for the *report module*.

System action: Processing continues for all routines except the report module, which is terminated.

User response: Ensure that the warning message does not indicate a problem that must be corrected.

DRL2047W A severe error occurred in the program.

Explanation: An unrecoverable error was detected in another routine.

System action: Processing stops.

User response: See any accompanying messages for more information about the error.

DRL2048W An error is encountered while closing the *report module* **file.**

Explanation: Tivoli Decision Support for z/OS encountered a problem, such as an I/O error or insufficient storage, when trying to close the file for the *report module*.

System action: Processing continues for all routines except the report module, which is terminated.

User response: Ensure that the warning message does not indicate a problem that must be corrected.

DRL2049W The report module *name* is not found.

Explanation: The program cannot load the specified module because it cannot find the module.

System action: Processing continues for all routines except the report module, which is terminated.

System programmer response: Contact your IBM representative.

User response: See any accompanying messages. Ensure that you are not trying to call a module that does not exist, by including an incorrect specification in the IMSVER or REPORTS parameters.

If the parameters are correct save all output, including the product installation procedures, and contact your system programmer.

DRL2050W An error is encountered in report module *name*. The report module is deleted.

Explanation: Tivoli Decision Support for z/OS encountered a problem within the report module *name*.

System action: Processing continues for all routines except the report module, which is terminated.

User response: If the report module is an IBM-supplied module, save all output, all checkpoint files, and all log data, and contact your system programmer.

DRL2051W The restart location is not found in the input IMS log.

Explanation: Tivoli Decision Support for z/OS processed an input checkpoint file, and the restart position cannot be found in the input log data sets processed.

System action: Processing stops.

User response: Ensure that the correct input checkpoint file and the correct input log data sets are specified, and rerun the job.

DRL2052I IMS log processing stopped at *date and time*.

Explanation: This message indicates the last date and time encountered on the IMS log processed, and reports in printable packed decimal Julian date and time format.

System action: Processing continues.

User response: None.

DRL2053I *number* records were read from DRLLOG.

Explanation: *n* records are read from the input data sets allocated to ddname DRLLOG.

System action: Processing continues.

User response: None.

DRL2054I Processing log *data set name* on volume *volume*.

Explanation: This message indicates the first data set name, on the first volume being processed, as the input IMS log allocated to ddname DRLLOG.

System action: Processing continues.

User response: None.

DRL2055E *csect procedure* at *label*. An error is encountered while reading the file *ddname*.

Explanation: Tivoli Decision Support for z/OS encountered a read error in the *ddname* file.

System action: Processing stops.

User response: Check for errors in the specified data set and retry the job.

DRL2056W The input file allocated to *ddname* is empty.

Explanation: The file allocated to DRLLOG is empty.

System action: Processing continues.

User response: Ensure that the warning message does not indicate a problem that must be corrected.

DRL2057W An error is encountered when opening the file DRLIPARM. The defaults are assumed.

Explanation: An error occurred when Tivoli Decision Support for z/OS tried to open the input parameter file.

System action: Processing continues.

User response: Ensure that the warning message does not indicate a problem that must be corrected.

DRL2058W Cannot load the module *name*. The default parameters are assumed.

Explanation: Module *name* cannot be loaded. Because input parameters cannot be read, default parameters are assumed.

System action: Processing continues.

User response: Ensure that the warning message does

not indicate a problem that must be corrected.

DRL2059W **The output checkpoint file is allocated. The WRITEPENDING parameter only applies to COLD starts.**

Explanation: You allocated an output checkpoint file requesting that all pending transactions be written. The presence of the output checkpoint file means the **WRITEPENDING** parameter will be ignored at end-of-job to avoid the possibility of duplication. The **WRITEPENDING** parameter will still be used if COLD starts are found during the run as those entries will not be written to the output checkpoint file.

System action: Processing continues.

User response: Ensure that the warning message does not indicate a problem that must be corrected.

DRL2060W **IMS data on the checkpoint file record has exceeded *n*. The data is truncated.**

Explanation: In writing records to the output checkpoint file, an IMS record truncated when it reached the maximum allowable length of 30 000 bytes.

System action: Processing continues.

User response:

Contact your IBM customer service representative.

DRL2061W ***n* output nodes not matched to any input node using the "input node + time" matching criterion.**

Explanation: While processing the input log, the log procedure was unable to match apparent transaction output messages to any input messages and transactions, using either the primary RTKN key or the secondary LTERM and date and time search key.

System action: Processing continues.

User response: Ensure that the warning message does not indicate a problem that must be corrected.

DRL2062W **The output node at *n* is not matched to any input node as it does not have valid fields to match on.**

Explanation: While processing the input log, the log procedure cannot match an apparent transaction output message at a relative record number to any input, due to invalid data in the expected LTERM and the date and time fields.

System action: Processing continues.

User response: Ensure that the warning message does not indicate a problem that must be corrected.

DRL2063E ***csect procedure* at *label*. This call type is not supported.**

Explanation: The log procedure was called with an invalid call type. This message can be issued by procedure DRL2IMSL with label *Invalid_Call_Type*.

System action: Processing stops.

System programmer response: Contact your IBM representative.

User response: See any accompanying messages. In all cases, save all output, all checkpoint files, and all log data and contact your system programmer.

DRL2064I ***IMSID* started at *date and time* has switched OLDS at *date and time* as indicated by IMS type X'42' log record at *hexadecimal value*.**

Explanation: Tivoli Decision Support for z/OS encountered a type X'42' record that contained a different OLDS switch date and time from the previously encountered OLDS switch date and time.

System action: Processing continues.

User response: None.

DRL2065I **The processing has been restarted from the IMS log sequence number *hexadecimal value* at approximately *date and time*.**

Explanation: Tivoli Decision Support for z/OS read an input checkpoint file, and the log procedure restarted processing on the corresponding input IMS log.

System action: Processing continues.

User response: None.

DRL2068W **The processing has been stopped because of an error at the IMS log sequence number *hexadecimal value* at approximately *date and time*.**

Explanation: The routine was informed that an error occurred elsewhere. The last known date and time of the IMS data being processed was *date and time*. The sequence number of the last processed record was *hexadecimal value*.

System action: Processing stops.

User response: See any accompanying messages.

DRL2069W **Cannot resolve the pointer from an input DRRN entry to a SPA entry. The pointer has been made null.**

Explanation: On restart, using an input checkpoint file, SPA pointers cannot be resolved. Processing is allowed to continue after the pointers are set to null.

This message is accompanied by message DRL2005E.

System action: Processing continues.

User response: Ensure that the warning message does not indicate a problem that must be corrected.

DRL2070I Batch driver parameters:

Explanation: This message is followed by a list of the parameters specific to the batch driver, their values and how they were determined, default or specified in DRLIPARM.

System action: None.

User response: None.

DRL2071I Parameters used in this run:

Explanation: This message is followed by a list of the parameters, their values and how they were determined, default or specified in DRLIPARM.

System action: None.

User response: None.

DRL2072I Statistics for NODEs created this run:

Explanation: This message is followed by a list of the NODE types with length, initially allocated, finally allocated and the number pending at end-of-run.

System action: None.

User response: None.

DRL2073I Statistics for composite records created this run:

Explanation: This message is followed by a list of the composite record types with description, count, minimum and maximum length and total bytes.

System action: None.

User response: None.

DRL2074W D1D1 node on the checkpoint file record has exceeded n.

Explanation: In writing records to the output checkpoint file, a D1D1 node chain has been truncated when it reached the maximum allowable length of 32700 bytes.

System action: The collect terminates normally but the checkpoint produced is incomplete and must not be used as input checkpoint processing for the next IMS log data set. This problem might be caused by an IMS error.

User response: Save all output, all checkpoint files, and all log data, and contact your system programmer.

DRL2075E SET07BUF is out of space after xx records. Log collector run terminated.

Explanation: The buffer used to hold IMS type X'07' log records for transaction processing was not large enough to hold all the type X'07' records contained in the log.

System action: Processing stops after counting the total number of type X'07' records in the log.

User response: Refer to message "DRL2076I" for a count of the total number of type X'07' records found in the log data set. Increase the SET07BUF parameter setting to at least this value before attempting to collect the log again. Increasing the SET07BUF value may require additional virtual storage.

DRL2076I SET07BUF buffer usage statistics. Max number of Set07Buf entries searched = u Min number of Set07Buf entries searched = v Avg number of Set07Buf entries searched = w Number of times Set07Buf Searched = x No. of times 07 record not found = y No. of Set07Buf entries = z

Explanation: This message provides usage statistics for the SET07BUF buffer that buffers IMS type x'07' records. These statistics are: u - maximum number of SET07BUF records searched for an IMS type x'07' record v - minimum number of SET07BUF records searched for an IMS type x'07' record w - average number of SET07BUF records searched for an IMS type x'07' record x - number of times the SET07BUF buffer was searched for an IMS type x'07' record y - number of times the required IMS type x'07' record was not found in the SET07BUF buffer. z - number of IMS type x'07' records buffered in SET07BUF buffer.

System action: Processing continues.

User response: If log processing completed successfully, compare the number of type X'07' records buffered (z) with the value specified or defaulted for the DRLIPARM SET07BUF value. If the number of records read is significantly lower than the SET07BUF parameter value and this log represented a typical run, consider reducing the SET07BUF value to reduce virtual storage requirements for the collect. If message DRL2075I was also issued increase the SET07BUF value to at least the number of type X'07' records read.

DRL2077I SET07BUF buffer using DD DRLIMS07 for input.

Explanation: The collector job has run with a DRLIMS07 DD. IMS type X'07' log records will be buffered from this DD, and not from the IMS logs.

System action: Processing continues.

User response: The DRLIMS07 DD must hold only

type X'07' records. If this is the case, no action is required.

DRL2078E SET07BUF Active IMS type X'07' log records found without corresponding SET07BUF entry. Log collector run terminated.

Explanation: The collector job has detected a type X'07' record in the IMS logs being processed that does not exist in the SET07BUF buffer.

System action: Processing terminates.

User response: This is typically caused when DRLIMS07 is used, but does not hold all type X'07' records. Check that DRLIMS07 holds all type X'07' records for all logs being processed, and rerun the job.

DRL2079E DRLTMP07 file opened for input but no records in the file. Log collector run terminated.

Explanation: The collector job has opened the DRLTMP07 for input and has detected that there are no records in the file. This is an indication that the DRLTMP07 file has been corrupted.

System action: Processing terminates.

System programmer response: Contact your IBM representative.

User response: Try to determine the cause of the corruption of the DRLTMP07 file. If the error persists, contact your system programmer.

DRL2080W DRLTMP07 file found allocated to DUMMY or SYSOUT has been closed and will not be used. Processing continues.

Explanation:

System action: Processing continues.

System programmer response: Contact your IBM representative.

User response: Try to determine the cause of the corruption of the DRLTMP07 file. If the error persists, contact your system programmer.

DRL2081I TABLEFLUSH *type* processing started after *n* records.

Explanation: Table flush processing was requested by the TABLEFLUSH or FLUSHTYPE parameters, FLUSHMSGS=YES was specified, and the conditions defined by the specified or defaulted FLUSHTYPE conditions were met. The flush *type* can be SOS for a short-on-storage condition, CHKPT for a checkpoint condition or COUNT if flushing based on the number of records processed was requested.

System action: Processing continues.

User response: If a short-on-storage table flush occurred you should consider increasing the REGION size used by the collect step. If excessive table flush processing messages are issued consider specifying FLUSHMSGS=NO to suppress the messages produced for each invocation of table flush processing.

DRL2082I TABLEFLUSH complete: *ouow count* **OUOWs written as composite records.** *puow count* **input PUOWs flushed (***n* **completed).**

Explanation: This message indicates the completion of the table flush process started when the preceding DRL2081I message was issued. Each flushed OUOW table entry is written as one or more composite records to the Tivoli Decision Support for z/OS collector record stream, or to the DRLICOMP DDname if the log procedure is being run by DRLSLOGP. The second line indicates how many IMS transactions (represented by input PUOWs) are included in the composite record data, and how many of those transactions had complete data when they were flushed. Sums of the three values given in this message are reported in the table flush processing statistics (message DRL2084I) at the end of the collect step.

System action: Processing continues.

User response: If the proportion of completed input PUOWs is too low you could consider reducing the frequency of table flush processing (FLUSHTYPE=COUNT=nnnnnnnn parameter) or increasing the age limit for flushed entries (TABLEFLUSH=nnnn parameter).

DRL2083I TABLEFLUSH freed *n* bytes of node storage.

Explanation: This message is issued immediately after message DRL2082I following the completion of a table flush process. It shows the number of bytes of table entry storage that were freed.

System action: Processing continues.

User response: You can use this message to help tune your TABLEFLUSH and FLUSHTYPE settings. The largest value reported in a DRL2083I message in a collect step is indicative of the maximum amount of virtual storage that could be saved by flushing more frequently (using a smaller value of FLUSHTYPE=COUNT=nnnnnnn). An average of these values is reported in the table flush processing statistics (message DRL2084I) at the end of the collect step.

DRL2084I TABLEFLUSH processing statistics.

Explanation: This message is followed by sums and averages for table flush values recorded during the collect step.

System action: Processing continues.

User response: Review the table flush statistics and consider whether they reflect processing that is appropriate for your environment. Refer to the topic "Log procedure DRLOUT reports" in Chapter 2 "How the IMS CSQ feature uses log and record procedures within the IMS Shared Queue" of the *IMS Performance Feature Guide and Reference*..

DRL2085I WRITEPENDING processing started after *n* records.

Explanation: Write pending processing was requested by the WRITEPENDING=YES parameter and the log procedure has started writing composite records for incomplete data held in internal tables.

System action: Processing continues.

User response: None.

DRL2086I WRITEPENDING complete: *ouow count* OUOWs written as composite records. *puow count* input PUOWs flushed (*n* completed).

Explanation: This message indicates the completion of the write pending process started when the preceding DRL2085I or DRL2301I message was issued. Each flushed OUOW table entry is written as one or more composite records to the Tivoli Decision Support for z/OS collector record stream, or to the DRLICOMP DDname if the log procedure is being run by DRLSLOGP. The second line indicates how many IMS transactions (represented by input PUOWs) are included in the composite record data, and how many of those transactions had complete data when they were flushed.

System action: Processing continues.

User response: If the proportion of completed input PUOWs is too low you could consider using checkpoint processing to write the pending records to the DRLICHKO DDname for input to a subsequent collect where the IMS log records required to complete the PUOW information may be available.

DRL2087I Buffer usage statistics for IMS 07 record buffer Set07Buf.

Explanation: This message is followed by statistics for SET07BUF processing recorded during the collect step.

System action: Processing continues.

User response: Review the SET07BUF statistics and consider whether they reflect processing that is appropriate for your environment. Refer to the topic "Log Procedure DRLOUT reports" in Chapter 2 "How the IMS CSQ feature uses log and record procedures" of the *IMS CSQ Feature Guide and Reference*.

DRL2088I *n* R2 records written by record procedure DRLSI*xx*2.

Explanation: This message reports the number of transaction data (R2) records written by the IMS shared queue feature record procedure DRLSI*xx*2 (where *xx* indicates the IMS version of the log being processed: 81 for IMS V810; 91 for IMS V910 and A1 for IMS V10). If the log is being processed stand-alone then the records are written to the DRLIRPT2 file, otherwise the records enter the Tivoli Decision Support for z/OS record stream for further processing.

System action: Processing continues.

User response: None. This message is intended only as an indication of the transaction volume in the log.

DRL2089I *csect* Obsolete parameter specified. *parameter*

Explanation: This message indicates that a parameter that is no longer used was detected, being processed from ddname DRLIPARM. It can be issued by many procedures with many possible labels.

System action: Processing continues.

User response: Remove the obsolete parameter from DRLIPARM.

DRL2090E More than one statistic record read X'4500'. Record number *rn*, log number *ln*, IMS Release *release* not matching record number *rn*, log number *ln*, IMS Release *release*, run terminated.

Explanation: The collector job has detected more than one statistic record X'4500' and the IMS versions do not match. TDSz does not support IMS shared queues across different versions of IMS.

System action: Processing terminates.

User response: Ensure all logs input to the IMS log collector in a single run are for the same release of IMS. If you change the VERIFY parameter to WARN and rerun the job, messages will still be written and processing continues. No check is done if VERIFY is defaulted or set to NONE.

This is typically caused when logs have been input for the wrong IMS release. Ensure the log is for a single IMS release.

DRL2091W **More than one statistic record read X'4500'. Record number** *rn*, **log number** *ln*, **IMS Release** *release* **not matching record number** *rn*, **log number** *ln*, **IMS Release** *release*.

Explanation: The collector job has detected more than one statistic record X'4500' and the IMS versions do not match. TDSz does not support IMS shared queues across different versions of IMS.

System action: Processing continues.

User response: Ensure all logs input to the IMS log collector in a single run are for the same release of IMS. If you change the VERIFY parameter to FAIL and rerun the job, messages will be written but processing terminates. No check is done if VERIFY is defaulted or set to NONE.

DRL2092E *drliparm/collect* **IMS version** *version* **does not match statistic X'4500' IMS Release** *release*, **record number** *rn*, **log number** *ln*, **run terminated.**

Explanation: The default or specified IMS version does not correspond to the IMS release found in the IMS statistic record X'4500'. This is typically caused when logs have been input for the wrong IMS release.

System action: Processing terminates.

User response: Ensure that you wish to use the IMS version specified, or defaulted as a key value. If not, change the DRLSLOGP IMSVER parameter, or change the IMS log Collect component. If you change the VERIFY parameter to WARN and rerun the job, messages will still be written and processing continues. No check is done if VERIFY is defaulted or set to NONE.

DRL2093W *drliparm/collect* **IMS version** *version* **does not match statistic X'4500' IMS Release** *release*, **record number** *rn*, **log number** *ln*.

Explanation: The default or specified IMS version does not correspond to the IMS release found in the IMS statistic record X'4500'. This is typically caused when logs have been input for the wrong IMS release.

System action: Processing continues.

User response: Ensure that you wish to use the IMS version specified, or defaulted as a key value. If not, change the DRLSLOGP IMSVER parameter, or change the IMS log Collect component. If you change the VERIFY parameter to FAIL and rerun the job, messages will be written but processing terminates. No check is done if VERIFY is defaulted or set to NONE.

DRL2094E **invalid IMS version** *version* **encountered in procedure** *procedure*, **run terminated.**

Explanation: The default or specified IMS version is not supported.

System action: Processing terminates.

User response: Change the DRLSLOGP IMSVER parameter, or change the IMS log Collect component. If you change the VERIFY parameter to WARN and rerun the job, messages will be written but processing terminates. No check is done if VERIFY is defaulted or set to NONE.

DRL2095E **Shared and non-shared queue records found.**

Explanation: The collector job has detected transactions for more than one active IMS system. However, there are non-shared queue records found. This implies that there should only be transactions from and about one system.

System action: Processing terminates.

User response: This is typically caused when logs have not been merged from all systems. Check that logs have been merged from all systems, and rerun the job. If you change the VERIFY parameter to WARN and rerun the job, messages will still be written and processing continues. No check is done if VERIFY is defaulted or set to NONE.

DRL2096W **Shared and non-shared queue records found.**

Explanation: The collector job has detected transactions for more than one active IMS system. However, there are non-shared queue records found. This implies that there should only be transactions from and about one system.

System action: Processing continues.

User response: This is typically caused when logs have not been merged from all systems. Check that logs have been merged from all systems, and rerun the job. If you change the VERIFY parameter to FAIL and rerun the job, messages will be written but processing terminates. No check is done if VERIFY is defaulted or set to NONE.

DRL2097E **There is an active system** *imsid* **but no log records found for this system, run terminated.**

Explanation: The collector job has detected transactions for an active IMS system, but has not found log records for the system. This is typically caused when logs have not been merged from all systems.

System action: Processing terminates.

User response: Check that logs have been merged from all systems, and rerun the job. If you change the VERIFY parameter to WARN and rerun the job, messages will still be written and processing continues. No check is done if VERIFY is defaulted or set to NONE.

DRL2098W There is an active system *imsid* but no log records found for this system.

Explanation: The collector job has detected transactions for an active IMS system, but has not found log records for the system. This is typically caused when logs have not been merged from all systems.

System action: Processing continues.

User response: Check that logs have been merged from all systems, and rerun the job. If you change the VERIFY parameter to FAIL and rerun the job, messages will be written but processing terminates. No check is done if VERIFY is defaulted or set to NONE.

DRL2099I A duplicate PSB loaded from the checkpoint data set has been deleted.

Explanation: While processing the IMS log a PSB with a key that matched a PSB key loaded from the checkpoint data set was found. This results in a duplicate PSB condition. This is caused by the Origin Application Sequence Number (OASN) value in the IMS system wrapping. The PSB in the checkpoint data set represents a transaction that was never complete due to the IMS 08 record never being located in any logs processed.

System action: The PSB loaded from the checkpoint data set and all associated data are removed from the TDS internal tables to enable the new PSB and data to be processed. Processing continues.

User response: None.

DRL2300E The time stamp in the IMS log record is less than the time stamp in the previous record. Log records are out of sequence.

Explanation: The log procedure found the input log records to be out of order.

System action: Processing stops.

System programmer response: Contact your IBM representative.

User response: See any accompanying messages. Check if any jobs manipulating the IMS log records might have gotten them out of order.

If the problem persists and no error messages are issued, and no abends are encountered that might cause such a problem, save all output, log data, and checkpoint files and contact your system programmer.

DRL2301I WRITEPENDING processing started due to COLD start.

Explanation: Write pending processing was requested by the **WRITEPENDING=YES** parameter and the log procedure has started writing composite records for incomplete data held in internal tables.

System action: Processing continues.

User response: None.

DRL2302I &1 pending OUOWs purged.

Explanation: This message indicates that incomplete OUOW table entries were purged because a `X'4001'` record found on the input log file indicated an IMS COLD start.

System action: Processing continues.

User response: If you want incomplete entries to be written out as composite records, you might want to consider using the **WRITEPENDING** parameter.

CICS Feature Messages

These messages are issued by the CICS record procedure.

DRL2101E Dictionary not found for CICS class=*class* monitoring record. CICS applid=*applid* and MVS system ID=*system*.

Explanation: The CICS record procedure (DRL2CICS) did not find a matching dictionary block. The procedure searches existing dictionary blocks for a block matching the input record values for *system*, *applid*, and *class*. The procedure also checks that the highest field connector value in the input record does not exceed the number of dictionary entries (fields) for any matching dictionary block found.

System action: Processing stops.

User response: Ensure that a valid dictionary record precedes the identified records. You can achieve this by following these steps:

1. Create a dictionary record using either the CICS utility program DFHMNDUP (for CICS Version 3 or higher) or (for CICS Version 2 only) the Tivoli Decision Support for z/OS DRL1CIEX utility.
2. COLLECT this dictionary record. DRL2CICS stores it in the CICS_DICTIONARY table. The first time DRL2CICS is called (at COLLECT initialization), all dictionaries are read from CICS_DICTIONARY.
3. COLLECT again the log that failed with this message. Records are processed from the last COMMIT point that occurred before this message.

DRL2102I CICS monitoring field *field* not defined in CICS_FIELD table.

Explanation: The CICS monitoring field *field* in the currently processed dictionary record is not present in the CICS_FIELD table.

System action: Processing continues. Any data for the *field* field is lost.

User response: Define the *field* field in the CICS_FIELD table and the corresponding record definition: either SMF_CICS_T (for all CICS Versions), or (for CICS Version 2 only) SMF_CICS_A. Ensure that the field offsets are the same in both the CICS_FIELD table and the record definition.

DRL2109E The DRLNDICT file record length is too short. The current record needs a record length of *n* bytes.

Explanation: The CICS record procedure (DRL2CICS) cannot write to the ddname DRLNDICT, because the record length is too short.

System action: Tivoli Decision Support for z/OS halts collect execution.

User response: Check that the logical record length is no less than the length in the error message. Change your collect JCL to allocate a sequential data set with LRECL = 32754, BLOCKSIZE = 32760, and RECFM = VB. Rerun collect.

DRL2110W The file DRLNDICT could not be opened.

Explanation: The CICS record procedure (DRL2CICS) needs an output data set allocated to the ddname DRLNDICT.

System action: Tivoli Decision Support for z/OS halts collect execution.

User response: Change your collect JCL to allocate a sequential data set with LRECL = 32754, BLOCKSIZE = 32760, and RECFM = VB. Rerun collect.

DRL2111W *n* CICS monitoring records written to dataset *data set name* because matching dictionaries could not initially be found:

Explanation: The CICS record procedure (DRL2CICS) had no matching dictionary block when it processed a record in the log. The messages that follow this message (DRL2112I–2115I) list the CICS systems affected, how many records without dictionaries were encountered, and whether a dictionary was eventually found.

System action: Tivoli Decision Support for z/OS does not process the affected records—it passes them unaltered to the DRLNDICT data set.

User response: To successfully collect the records for the CICS systems listed in the DRL2114I messages that have Found = Yes, rerun collect with the DRLNDICT data set as the new input log (and an empty data set as the new DRLNDICT output data set).

If any CICS systems listed in the DRL2114I messages have Found = No, you must first generate a dictionary for the CICS system. If the CICS system is CICS/MVS, stop and start CMF. If the system is CICS/ESA, you can stop and start CMF, or you can use the DFHMNDUP utility to generate a dictionary record. You must run a collect job with the data set containing the generated dictionary record as input, and then rerun collect with the data sets containing the uncollected records (the DRLNDICT data sets).

DRL2112I, DRL2113I, DRL2114I, DRL2115I

Explanation: Messages DRL2112I through DRL2115I are used to build up a table of CICS systems that had missing dictionary records. See message DRL2111W for an explanation.

DRL2116W *n* other CICS records without dictionaries were written, but only the first 20 systems are shown using message DRL2114I.

Explanation: There were missing CICS dictionaries for more than 20 CICS systems.

System action: The remaining CICS systems are not listed, but their records are written to the DRLNDICT data set.

User response: Take the action described for message DRL2111W for the listed systems. Recollect using the DRLNDICT data set as input (and a new data set allocated as DRLNDICT). If there are more systems without dictionaries, up to 20 of them will be listed in the rerun.

DRL2117E Write failed to the DRLNDICT file. Return code=*return code***.**

Explanation: The CICS record procedure (DRL2CICS) cannot write records to the ddname DRLNDICT.

System action: Tivoli Decision Support for z/OS halts collect execution.

User response: Check that your DRLNDICT data set is correctly allocated. Change your collect JCL to allocate a sequential data set with LRECL = 32754, BLOCKSIZE = 32760, and RECFM = VB. Rerun collect.

DRL2118I Inconsistency in CICS statistics record. Processing continues with valid data sections. Record in error = *n*.

Explanation: The CICS record procedure (DRL2CIST) has encountered a record where the total record length and the end of the data sections are inconsistent. The (valid) data sections in the record are processed, and the data that follows these valid data sections is ignored.

System action: Processing continues. No valid data in record *n* is lost.

User response: Examine record *n* to determine the reason for the inconsistency. If required, contact your system programmer.

AS/400 Messages

These messages are issued by the AS/400 System Performance feature.

DRL2201E Parameter *parameter* does not match any expected parameter.

Explanation: The value specified for the PARM parameter on the DEFINE LOG statement, for the log specified on the COLLECT statement, does not match any of the expected values. Expected values are: QHST, QJRNL, QSYS, QPOOL, QDISK, and QCONF. These values are specified on the DEFINE LOG statement shipped with the AS/400 System Performance feature. This error might occur if the DEFINE LOG statement was created or modified by the user.

System action: Collect run is terminated.

User response: Check the log name on the COLLECT statement and the PARM parameter on the corresponding DEFINE LOG statement. Correct the PARM parameter to contain any of the values above depending on log type.

DRL2202E Identifier record on log file does not identify the same log as the COLLECT statement. Log identifier *log identifier1* found on the record. *log identifier2* was expected.

Explanation: The log type entry on the SOURCE record is not equal to the expected log type entry.

System action: Collect run is terminated.

User response: Read the OS/400® log files description in Chapter 2 in the *AS/400 System Performance Feature Guide and Reference*. Change the DSNAME parameter on the DRLLOG DD statement, or the log name on the COLLECT statement. The log file specified on the DRLLOG DD statement must be of the same type as the log specified on the COLLECT statement.

DRL2203E Identifier record on log file is missing or invalid. It contains *string* where SOURCE is expected.

Explanation: The SOURCE record on the OS/400 log file was not found.

System action: Collect run is terminated.

User response: Read OS/400 log files description in Chapter 2 in the *AS/400 System Performance feature Guide and Reference*. Change the DSNAME parameter on the DRLLOG DD statement to point to a valid OS/400 log file specified or investigate why the SOURCE record is missing or invalid.

DRL2204W Unexpected line number *n1* found on history record. *n2* was expected.

Explanation: The log procedure DRL2O400 detected that line numbers on message lines are not consecutive when building an OS400_HISTORY_MSG record.

System action: The OS400_HISTORY_MSG record that is being built is bypassed. Collect continues.

User response: Investigate why line numbers are not consecutive.

DRL2205E OS/400 version in identifier record of log file is missing.

Explanation: The OS/400 version in the identifier record of the log file being processed was not found.

System action: Collect run is terminated.

User response: Update the SP400 file with the one shipped with the current version. Files captured using SP400 before the current release can no longer be

processed, unless they are updated with the OS/400 version. To collect the actual failing log, run the DRLJ4VRS job that writes the OS/400 version into the record identifier.

DRL2206E **OS/400 version in identifier record of log file is invalid or out of maintenance.**

Explanation: The value found for the OS/400 version in the identifier record of the log file is invalid or it is a version that is out of maintenance.

System action: Collect run is terminated.

User response: Check whether your current AS/400 version is a supported one.

DRL8003 **Elapsed time(s): *Q*1 CPU use(d): *Q*2 Tot AUX stg(MB): *Q*3 Avail AUX stg(MB): *Q*4 pages: *Q*5 I/O reqs: *Q*6 Jobs *Q*7 Nbr of ASP:s: *Q*8**

Explanation: This message is produced by the SP400 monitoring job, which is activated by the STRSPSRV SP400 command. It contains average values, computed for a selected time interval, of performance data. It is written into the system history log, every number of minutes previously selected.

System action: None.

User response: None.

DEFINE/DROP Report and Report Group Messages (REXX Utility)

This section describes messages generated by Tivoli Decision Support for z/OS's report definition language during batch processing. Refer to the *Language Guide and ReferenceLanguage Guide and Reference* for information about the report definition language.

DRL3001I **The *report/group*, *report ID/group ID*, is defined.**

Explanation: The definition of the report or group executed successfully.

System action: None.

User response: None.

DRL3002I **The *report/group*, *report ID/group ID*, is dropped.**

Explanation: The report or group is dropped successfully.

System action: None.

User response: None.

DRL3003W **The length of the *description text, table name, or default value* exceeds *n* characters. The *description text, table name, or default value* is truncated.**

Explanation: The definition for the description text, table name, or default value is incorrect. The length exceeds the maximum number of characters allowed (*number*).

System action: Tivoli Decision Support for z/OS truncates the value and processes the statement.

User response: Correct the definition.

DRL3004W **No WHERE statement is found in the query *query*.**

Explanation: Before importing the query to QMF, Tivoli Decision Support for z/OS searches for variable definitions. Tivoli Decision Support for z/OS cannot find the SQL statement WHERE. This error also occurs if the table name (defined by the SQL statement FROM) is blank.

System action: Tivoli Decision Support for z/OS ignores the missing WHERE statement and processes the statement.

User response: Add or correct the WHERE statement in the query.

DRL3006W **No end quote is found in *string*.**

Explanation: The string is missing an end-quote delimiter. (Quoted strings cannot span more than one line.)

System action: Tivoli Decision Support for z/OS inserts an end-quote delimiter at the end of the string and processes the statement.

User response: Insert an end-quote delimiter in the string. Valid end-quote delimiters are the single quote (') or the double quote (").

DRL3007W **No shift-in is found in *string*.**

Explanation: A string containing double-byte characters is missing a shift-in (X'0F').

A string containing double-byte characters must be delimited using identifiers (*identifiers*). This string must also be delimited using a shift-out (X'0E') and a shift-in (X'0F').

System action: Tivoli Decision Support for z/OS ends the string at the end of the character row and processes the statement.

User response: Incorporate a shift-in delimiter to end the string containing double-byte characters.

DRL3008E **The** *report/group*, *report ID/group ID*, **is already defined.**

Explanation: You are trying to define a report or group that is already defined.

System action: Processing stops.

User response: Use a different ID, or delete the existing report or group before defining a new one with the same ID.

DRL3009E **If an input parameter is given, it must be set to a value. SYSTEM=***value* **SYSPREFIX=***value* **PREFIX=***value* **SHOWINPUT=***value* **SHOWSQL=***value* **MODE=***value*

Explanation: The call to the DRLERDEF EXEC is incorrect. An input parameter is defined but is not assigned a value.

System action: Processing stops.

User response: Assign a value to the input parameter. To use defaults, remove the input parameter.

DRL3010E **The call to the DRLERDEF EXEC contains an invalid input parameter:** *parameter*.

Explanation: The call to the DRLERDEF EXEC contains an invalid input parameter.

System action: Processing stops.

User response: Correct the input parameter.

DRL3011E **The call to the EXEC DRLERDEF contains one or more invalid input parameters.**

Explanation: The call to the EXEC DRLERDEF contains one or more invalid input parameters.

System action: Processing stops.

User response: Correct the input parameter(s). See previous messages.

DRL3012I **invalid value** *value* **for** *SHOWINPUT, SHOWSQL* **or** *MODE*. **Valid values are** *valid values*.

Explanation: In the call to the EXEC DRLERDEF, the SHOWINPUT, SHOWSQL or MODE input parameter contained an invalid value.

System action: Processing stops.

User response: Correct the input parameter using one of the valid values listed in the message.

DRL3013E **The DRLIN file** *file* **could not be found.**

Explanation: The file *file* was defined in the list of concatenated DRLIN files, but cannot be found.

System action: Processing terminates

User response: Ensure that all files identified by the ddname DRLIN exist.

DRL3014E **The input file DRLIN is empty, or contains only comments.**

Explanation: The input file DRLIN requires one or more commands to be executed, but it is empty, or contains only comments.

System action: None.

User response: Ensure that the correct file was allocated to DRLIN.

DRL3015E *object/statement/option*, *value*, **is not recognized.**

Explanation: An object, statement, or option is invalid.

System action: Processing stops.

User response: Check for syntax errors in the DEFINE or DROP statements. Valid objects are REPORT or GROUP. Valid statements are DEFINE or DROP. For information on valid options, refer to descriptions of the DEFINE and DROP commands in *Language Guide and ReferenceLanguage Guide and Reference*.

DRL3016E **Error** *defining/droppingreport/group*, *report ID/group ID*.

Explanation: An error occurred during execution of the DEFINE or DROP statements.

System action: Processing stops.

User response: Check for syntax errors in the DEFINE or DROP statements. Valid objects are: REPORT or GROUP. Valid statements are: DEFINE or DROP. For information on valid options, refer to descriptions of DEFINE and DROP in *Language Guide and ReferenceLanguage Guide and Reference*.

DRL3017E **START failed due to a parameter error:** *dsq_start_parm_error*.

Explanation: QMF cannot be started.

System action: Processing stops.

User response: See previous messages issued by QMF.

DRL3018E **A QMF error occurred when defining the report** *report ID***.**

Explanation: A QMF error occurred.

System action: Processing stops.

User response: See previous messages issued by QMF.

DRL3019E **No start quote found for** *description text* **or** *default value***.**

Explanation: The DESCRIPTION and DEFAULT options for the DEFINE REPORT statement must use quotation marks as delimiters. The start-quote delimiter—a single quote (') or a double quote (")—is missing.

System action: Processing stops.

User response: Delimit the option using quotes.

DRL3020E **The** *report ID/group ID* **is not specified.**

Explanation: The DEFINE statement is missing the report or group ID.

System action: Processing stops.

User response: Specify the ID.

DRL3021E **The** *file* **file is not allocated or file type cannot be processed.**

Explanation: The *file* file is not allocated.

- QMF queries and forms are imported from DRLDEFS1, DRLDEFS2, or DRLDEFS3 (searched in that order). DRLDEFS1 must be defined.
- The input file DRLIN must be allocated. It contains the statement(s) to be executed.
- The output file DRLOUT must be allocated. All output messages are written to DRLOUT.

System action: Processing stops.

User response: Allocate the file.

DRL3022E **Unable to allocate data set** *data set name***. Command: ALLOCATE Return code:** *return code*

Explanation: Allocation of the requested data set did not complete correctly. An ALLOCATE return code and accompanying error message are returned.

System action: Processing stops.

User response: Use the text of the TSO/E error message that accompanies the return code to determine the cause of the error. Refer to *TSO/E Messages*, GC28-1885, for an explanation of the cause. Correct the error.

DRL3023E **Conflicting values,** *values***, for the BATCH option.**

Explanation: The DEFINE REPORT statement contains an invalid definition for the BATCH option. (Only one value is allowed for the run cycle.)

System action: Processing stops.

User response: Correct the definition of the BATCH option.

DRL3024E **Syntax error or missing semicolon at the end of the statement.**

Explanation: The DEFINE or DROP statement either contains a syntax error or is missing a semicolon.

System action: Processing stops.

User response: Correct the statement, remembering to end each statement with a semicolon.

DRL3025E **invalid report type:** *type***. Valid types are QUERY, TABDATA, and GRAPHDATA.**

Explanation: The DEFINE REPORT statement contained an invalid definition for the TYPE option.

System action: Processing stops.

User response: Correct the definition of the TYPE option. Valid values are QUERY, TABDATA, or GRAPHDATA. The default value is QUERY.

DRL3026E **The** *QUERY* **or** *FILE* **option must be specified if the report type is** *QUERY, TABDATA,* **or** *GRAPHDATA***.**

Explanation: The DEFINE REPORT statement must be
- QUERY for QUERY type reports
- FILE for TABDATA/GRAPHDATA type reports

System action: Processing stops.

User response: Define the QUERY or FILE option.

DRL3027E **The FILE option must be specified if the BATCH SAVE option is specified.**

Explanation: If you define the BATCH SAVE option, you must also define the FILE option in the DEFINE REPORT statement.

System action: Processing stops.

User response: Define the FILE option.

DRL3028E **If the report type is** *type***, do not specify the QUERY option.**

Explanation: The DEFINE REPORT statement contains conflicting options. The QUERY option cannot be used if the report type is TABDATA or GRAPHDATA.

System action: Processing stops.

User response: Correct the conflicting options.

DRL3029E If BATCH is specified, the report type must be QUERY.

Explanation: The DEFINE REPORT statement contains conflicting options. If you specify the BATCH option, the report type must be QUERY.

System action: Processing stops.

User response: Correct the conflicting options.

DRL3030E The *optionvariable* is too long. The maximum length is *n* characters.

Explanation: The DEFINE REPORT statement contains an incorrect definition for the QUERY, FORM, CHART, FILE, or MACRO option. The length exceeds the allowed maximum.

System action: Processing stops.

User response: Correct the option.

DRL3032E *Object QUERY or FORMobject name* **is not found. The following data set(s) were searched:** *data set name(s)*.

Explanation: QMF queries and forms are imported from DRLDEFS1, DRLDEFS2, or DRLDEFS3 (searched in that order). At least one of the files must be allocated. Tivoli Decision Support for z/OS cannot find the QUERY or FORM in any of the data sets listed in the message.

System action: Processing stops.

User response: Ensure that the correct files are allocated. Ensure the QUERY or FORM name is spelled correctly.

DRL3033E The group *group ID* **does not exist.**

Explanation: Tivoli Decision Support for z/OS cannot find the named group. Before you define the report, you must define one or more groups to which the report belongs.

System action: Processing stops.

User response: Define the group before you define the report.

DRL3034E The report/group *report ID/group ID*, **owner** *owner*, **does not exist.**

Explanation: You are trying to drop a report or group that is not defined.

System action: Processing stops.

User response: Ensure that the OWNER option is defined correctly. If it is omitted, Tivoli Decision Support for z/OS assumes that the report or group is public.

DRL3035E No table name is found in QUERY *query*.

Explanation: The query to be imported to QMF does not contain a table name. The SQL statement FROM cannot be found.

System action: Processing stops.

User response: Check for errors in the QUERY *query*.

DRL3036E QMF command: START *qmf_command*.

Explanation: QMF cannot be started.

System action: Processing stops.

User response: See previous messages issued by QMF.

DRL3038S A severe DB2 error occurred in EXEC *DRLERDEF*.

Explanation: A severe DB2 error occurred.

System action: Processing stops.

System programmer response: Determine the cause of the error. The SQL interface in REXX is implemented in the DRL1SQLX module. A call to the interface resulted in a severe error. See messages generated by the interface.

User response: Record all listed messages and contact your system administrator.

DRL3039S An error occurred when trying to perform ROLLBACK.

Explanation: An error has occurred, and all changes that were made to tables before the error occurred must be rolled back. Tivoli Decision Support for z/OS processed the SQL command ROLLBACK, but it did not complete correctly. (The tables might contain corrupt data.)

System action: Processing stops.

System programmer response: Determine why ROLLBACK did not complete correctly. Correct the data in the tables. Check to see if the original command issued by the user was DEFINE. If so, you might be able to correct the tables by executing a DROP command.

User response: Record all listed messages and contact your system administrator.

DRL3040S An error occurred when trying to perform COMMIT.

Explanation: After each DEFINE REPORT command, the SQL command COMMIT is executed to commit the database changes made. The SQL command COMMIT did not complete correctly.

System action: Processing stops.

System programmer response: Determine why COMMIT did not complete correctly. Correct the data in the tables, if necessary.

User response: Record all listed messages and contact your system administrator.

Batch Reporting Messages (REXX Utility)

These messages are issued during batch reporting.

DRL3100I The *tabular/graphic* report *report ID* is *printed to/saved as name*.

Explanation: One of the following:

- The tabular report *report ID* has been successfully printed to DSQPRINT.
- The graphic report *report ID* has been successfully printed to the graphic printer *printer name*.
- The tabular report *report ID* has been successfully saved as member name *name* in the data set defined by the ddname DRLREP.
- The graphic report *report ID* has been successfully saved as member name *name* in the data set defined by the ddname ADMGDF.

System action: The command was processed.

User response: None.

DRL3101I The printer for graphic reports is *printer name*.

Explanation: The printer to be used for graphic reports is *printer name*.

System action: None.

User response: None.

DRL3102I No printer was specified; graphic reports cannot be printed.

Explanation: You did not specify a printer. Graphic reports are written to the printer specified in the PRINTER parameter. The default printer for graphic reports is the printer defined in the QMF profile.

System action: None; graphic reports are not printed.

User response: For graphic reports, identify a printer in the PRINTER input parameter, or define a printer in the QMF profile.

DRL3103I The *file* file was allocated to *data set name*.

Explanation: Tivoli Decision Support for z/OS writes tabular reports to the DSQPRINT data set. Tivoli Decision Support for z/OS saves tabular reports in the DRLREP data set, and graphic reports in the ADMGDF data set.

System action: None.

User response: None.

DRL3104I The *DSQPRINT, DRLREP,* or *ADMGDF* file is not allocated; *tabular/graphic* reports cannot be *printed/saved*.

Explanation: Tivoli Decision Support for z/OS writes tabular reports to the DSQPRINT data set. Tivoli Decision Support for z/OS saves tabular reports in the DRLREP data set, and graphic reports in the ADMGDF data set.

System action: None; tabular reports cannot be printed/saved (DSQPRINT/DRLREP), or graphic reports cannot be saved (ADMGDF).

User response: Allocate a data set to the appropriate file (DSQPRINT, DRLREP, or ADMGDF).

DRL3105I The *tabular/graphic* report *report ID* cannot be *printed/saved*.

Explanation: See previously given messages.

System action: Processing terminates for *report ID*, but continues with the next report (if there is one).

User response: See previously given messages.

DRL3106E No report(s) found.

Explanation: Either no batch report was found or no report matches the selected subset.

System action: Processing stops.

User response: Ensure that the input parameters are correct. If no input parameters are given, all batch reports are printed.

DRL3107E Unable to print or save reports.

Explanation: The necessary file is not allocated, and no printer is defined.

- The default printer for graphic reports is the printer defined in the QMF profile.
- Tabular reports are saved to the DRLREP file.
- Graphic reports are saved to the ADMGDF file.
- Tabular reports are written to the DSQPRINT file.
- Graphic reports are written to the printer given as input parameter.

System action: Reports cannot be printed or saved. Processing stops.

User response: Allocate the file necessary to perform the requested action.

DRL3108E **An invalid value** *value* **is specified for the variable** *variable***.**

Explanation: The variable's input parameter contains an invalid value.

System action: Processing stops.

User response: Correct the input parameter.

DRL3109E **The** *start or end* **quote is missing.**

Explanation: The variable value is missing either a start-quote delimiter or an end-quote delimiter.

System action: Processing stops.

User response: Insert the missing start quote or end quote for the variable listed in the previous message.

DRL3110E **invalid input parameter:** *parameter***, for EXEC DRLEBATR.**

Explanation: A call issued to the DRLEBATR EXEC contained an incorrect input parameter.

System action: Processing stops.

User response: Valid input parameters are: CYCLE, GROUP, REPORT, PRINTER, &variable, SYSTEM, SYSPREFIX, and PREFIX.

DRL3111E **If the input parameter** *parameter* **is given, it must be set to a value.**

Explanation: A call issued to the DRLEBATR EXEC contains an input parameter without an assigned value.

System action: Processing stops.

User response: Assign a value to the input parameter. If you want to use defaults, remove the input parameter.

DRL3112E **invalid value** *value* **specified for input parameter CYCLE. Valid values are: DAILY, WEEKLY, or MONTHLY.**

Explanation: A call issued to the DRLEBATR EXEC contains an invalid value in the CYCLE input parameter.

System action: Processing stops.

User response: Correct the input parameter using one of the valid values listed in the message.

DRL3113E **An error occurred in the QMF command SET GLOBAL (***variable***=***variable value***).**

Explanation: A QMF error occurred; input parameters cannot be defined as global variables in QMF.

System action: Processing stops.

User response: See previous messages issued by QMF.

DRL3114E **An error occurred while running the QUERY** *query* **in the report** *report ID***.**

Explanation: An error occurred when the QMF command RUN QUERY was executed.

System action: Processing stops.

User response: See previous messages issued by QMF.

DRL3115E **START failed due to a parameter error:** *dsq_start_parm_error***.**

Explanation: A parameter error prevented the START command from being completed.

System action: QMF cannot be started. Processing stops.

User response: See previous messages issued by QMF.

DRL3116E **QMF START MODE=B DSQSSUBS=***DB2 subsystem*

Explanation: A parameter error prevented the START command from being completed.

System action: QMF cannot be started. Processing stops.

User response: See previous messages issued by QMF.

DRL3117E **Unable to allocate data set** *data set name***. Command: ALLOCATE Return code:** *return code*

Explanation: DRLEBATR attempted to allocate the data set identified by the ddname DRLREP to save a tabular report. However, the requested data set cannot be correctly allocated. An ALLOCATE return code and accompanying error message are returned.

System action: Processing terminates for the tabular

report currently being processed. DRLEBATR continues with the next report if any.

User response: Use the text of the TSO/E error message that accompanies the return code to determine the cause of the error. Refer to *TSO/E Messages*, GC28-1885, for an explanation of the cause. Correct the error.

DRL3118I There is no data for report *report ID***.**

Explanation: The query for the report *report ID* did not return any rows that matched the selection criteria.

System action: This message is always followed by DRL3105I.

User response: If the report contains prompt variables, by changing the values of one or more prompt variables you might obtain result rows.

DRL3119E Substitution value missing for variable(s) in the query *query***.**

Explanation: One (or more) variable(s) that was (were) present in the query cannot be substituted when the query is run.

System action: This message is always followed by DRL3105I.

User response: The variable 'variable name' is present in the query, but was not detected and stored in a system table when the report was installed (predefined reports are stored during component installation). If the cause is that a variable is missing from a system table, drop the report and reinstall the component. Although the component status is already 'Installed', the dropped report will be reinstalled. If this does not solve the problem, report the problem to IBM.

DRL3120I

Explanation: This message is used to insert information headings in the list of messages issued by DRLEBATR.

System action: Processing continues.

User response: None.

DRL3121E No query found for report *report ID***.**

Explanation: The query for report *report ID* was not found in the system tables.

System action: This message is always followed by DRL3105I.

User response: If this is a user-defined report, open the report definition and correct the problem. If this is a predefined report, drop the report and install the component again. Even though the component status is already 'Installed', the dropped report will be reinstalled. If this does not solve the problem, report the problem to IBM.

DRL3122E Query and column information do not match for report *report ID***.**

Explanation: Information about the columns in the query is stored in the system table DRLREPORT_COLUMNS when the component is installed (predefined report), or when the report is created (user-defined report). The number of columns stored in the system table does not match the number of columns received when the query is executed.

System action: This message is always followed by DRL3105I.

User response: If this is a user-defined report, open the report definition and correct the problem. If this is a predefined report, drop the report and install the component again. Even though the component status is already 'Installed', the dropped report will be reinstalled. If this does not solve the problem, report the problem to IBM.

DRL3123E Chart could not be produced. GDDMREXX is not available.

Explanation: The call to GDDM through GDDMREXX failed. The reason might be that GDDM is not installed, or the data set containing GDDMREXX is not allocated.

System action: This message is always followed by DRL3105I.

User response: If GDDM is not used, the variable GDDMUSE in the customization module DRLEINI1 must be changed to 'NO'.

DRL3124W Your SQLMAX limit was reached for report *report ID***.**

Explanation: The read of the DB2 table stopped when the SQLMAX number of rows was reached. SQLMAX is specified with the DRLMAX parameter.

System action: The report was processed.

User response: Increase the DRLMAX value in the parameter to the DRLEBATR exec, if you want to see all data in the report.

DRL3125E An SQL error occurred in DRLERDIR for report *report ID***.**

Explanation: Refer to previously given messages.

System action: This message is always followed by DRL3105I.

User response: If you cannot find the cause of the error, report the problem to IBM.

DRL3126W Report width exceeded the output record length. Data is truncated.

Explanation: When the report was generated, the length of one or more result rows exceeded the record length for the output data set. The report was truncated.

System action: The report was processed.

User response: Ensure that the target for the report has a record length which is sufficient for the report. You might need to re-allocate the output data set.

DRL3127E A form text variable does not have a matching column.

Explanation: A form text variable of the type &n appears in the column information (where 'n' refers to the column number of the form). However, this column does not exist.

System action: This message is always followed by DRL3105I.

User response: If this is a user-defined report, open the report definition and correct the problem. Form text variables can be defined in either report headings and footings or column headings. If this is a predefined report, drop the report and install the component again. Even though the component status is already 'Installed', the dropped report will be reinstalled. If this does not solve the problem, report the problem to IBM.

DRL3128E A variable assigned to limit the number of result rows was not numeric.

Explanation: The variable assigned to limit the number of result rows in the report, was not numeric.

System action: This message is always followed by DRL3105I.

User response: Specify a numeric value for the variable.

DRL3130E A column in report *report ID* **has an invalid usage code.**

Explanation: A column in report *report ID* has a usage code which is not supported.

System action: This message is always followed by DRL3105I.

User response: If this is a user-defined report, open the report definition and correct the problem. If this is a predefined report, drop the report and install the component again. Even though the component status is already 'Installed', the dropped report will be reinstalled. If this does not solve the problem, report the problem to IBM.

DRL3131E GROUP column missing in report *report ID***.**

Explanation: The report *report ID* contains a column with usage code ACROSS. Such reports must also have at least one column with usage code GROUP.

System action: This message is always followed by DRL3105I.

User response: The ACROSS data must be 'grouped' with one (or more) column(s) in the report. Add usage code GROUP to the appropriate column(s).

DRL3132E More than one ACROSS usage code in report *report ID***.**

Explanation: The selected report contains more than one column with the ACROSS usage code. However, only data from *one query column* can be aggregated ACROSS.

System action: This message is always followed by DRL3105I.

User response: Correct the definitions so that only one query column contains the ACROSS usage code.

Migration Messages

DRL3150I Migration of SLR V3R3 table *table* to Tivoli Decision Support for z/OS DB2 table *table* performed successfully.

Explanation: The data from the SLR V3R3 table *table* has been successfully inserted into the corresponding Tivoli Decision Support for z/OS DB2 table.

System action: Processing continues.

User response: None.

DRL3151I SLR DB2 table *table* not migrated.

Explanation: Migration of the SLR table *table* failed when data was to be inserted into the corresponding Tivoli Decision Support for z/OS DB2 table.

System action: Processing continues.

User response: The migration process failed during execution of a QMF RUN command to insert SLR table data into an Tivoli Decision Support for z/OS DB2 table. Check the output for QMF message preceding this one for the cause and an explanation of why the QMF command failed.

DRL3152E Missing input parameter(s) for EXEC DRLEMIGR.

Explanation: One or more input parameters are missing in the generated JCL.

System action: Processing stops.

User response: Supply the missing parameters for DRLEMIGR in the generated JCL.

DRL3153E The DRLOUT file is not allocated.

Explanation: The DRLOUT file must be allocated. All Tivoli Decision Support for z/OS output messages are written to DRLOUT.

System action: Processing stops.

User response: Allocate the file.

DRL3154E No definition dataset was found.

Explanation: No file DRLDEFS1 or DRLDEFS2 was allocated. QMF queries and forms are imported from DRLDEFS1 and DRLDEFS2. At least one of the files must be allocated.

System action: Processing stops.

User response: Allocate the file(s).

DRL3155E The *variable variable value* not found. The following dataset(s) were searched: *dataset name(s)*

Explanation: QMF queries and forms are imported from DRLDEFS1 and DRLDEFS2. The *variable variable value* was not found in the data set(s) listed in the message.

System action: Processing stops.

User response: Check that the correct files are allocated.

DRL3156E START failed due to a parameter error: *parameter*

Explanation: A parameter error prevented the successful completion of START.

System action: QMF cannot be started. The processing is terminated.

User response: See previous messages issued by QMF.

DRL3157E QMF command: START *qmf_command*

Explanation: QMF cannot be started.

System action: Processing stops.

User response: See previous messages issued by QMF.

DRL3158E An error occurred in the QMF command SET GLOBAL (*variable*=*variable value*).

Explanation: A QMF error occurred; input parameters cannot be defined as global variables in QMF.

System action: Processing stops.

User response: See previous messages issued by QMF.

DRL3159E An error occurred running the query *query*.

Explanation: An error occurred when the QMF command RUN QUERY was executed.

System action: Processing stops.

User response: See previous messages issued by QMF.

DRL3160W Unable to erase temporary table DRLTEMP.

Explanation: Temporary table DRLTEMP cannot be erased.

System action: Processing continues.

User response: None.

DRL3161E Unable to import the unloaded SLR table *table* to QMF.

Explanation: An error occurred when the QMF command IMPORT was executed.

System action: Processing stops.

User response: See previous messages issued by QMF.

DRL3162I No data available in SLR V3R3 table *table name* for migration.

Explanation: The SLR table 'tablename' did not contain any data, and was not migrated.

System action: The processing continues with the next table to be migrated.

User response: Verify that the correct SLR table was selected.

DRL3170E Unable to allocate data set *Data set name*. Command: ALLOCATE Return code: *return code*.

Explanation: Either the IXF file generated by a previous job step, or the data set containing predefined queries cannot be allocated.

System action: The migration process is terminated.

User response: If you cannot determine why the data set cannot be allocated, contact your IBM representative.

DRL3171E invalid header record in the IXF file.

Explanation: The IXF file created in a previous job step contained an invalid header record.

System action: The migration process is terminated.

User response: Try to migrate the failing table again. If the error remains, contact your IBM representative.

DRL3172E invalid table record in the IXF file.

Explanation: The IXF file created in a previous job step contained an invalid table record.

System action: The migration process is terminated.

User response: Try to migrate the failing table again. If the error remains, contact your IBM representative.

DRL3173E invalid column record in the IXF file.

Explanation: The IXF file created in a previous job step contained an invalid column record.

System action: The migration process is terminated.

User response: Try to migrate the failing table again. If the error remains, contact your IBM representative.

DRL3174E An error occurred when trying to perform *function*.

Explanation: A COMMIT or ROLLBACK operation failed.

System action: The migration process is terminated.

User response: Try to migrate the failing table again. If the error remains, contact your IBM representative.

DRL3175E invalid data record in the IXF file.

Explanation: The IXF file created in a previous job step contained an invalid data record.

System action: The migration process is terminated.

User response: Try to migrate the failing table again. If the error remains, contact your IBM representative.

DRL3176E Input IXF file is empty.

Explanation: The IXF file created in a previous job was empty.

System action: The migration process is terminated.

User response: Verify that the SLR table is not empty. Try to migrate the failing table again. If the error remains, contact your IBM representative.

DRL3177E Input query file *file name* is empty.

Explanation: The file that contains predefined queries used in the migration process is empty. The file was created when Tivoli Decision Support for z/OS was installed.

System action: The migration process is terminated.

User response: Verify that the data set is empty and contact your IBM representative for advice.

DRL3178E Unsupported SQL data type in column record *column number*.

Explanation: An SLR table cannot be migrated because it has a column with a data type that is not supported in Tivoli Decision Support for z/OS. *Column number* is the number of the failing column.

System action: The migration process is terminated.

User response: Do not attempt to migrate the failing SLR table.

DRL3179E No table record found in the IXF file.

Explanation: The IXF file created in a previous job step does not contain any table records.

System action: The migration process is terminated.

User response: Try to migrate the failing table again. If the error remains, contact your IBM representative.

DRL3180E **No column records found in the IXF file.**

Explanation: The IXF file created in a previous job step does not contain any column records.

System action: The migration process is terminated.

User response: Try to migrate the failing table again. If the error remains, contact your IBM representative.

DRL3181E **No data records found in the IXF file.**

Explanation: The IXF file created in a previous job step does not contain any data records.

System action: The migration process is terminated.

User response: Try to migrate the failing table again. If the error remains, contact your IBM representative.

DRL3250I **Data set** *data set name*(*member name*) **contains the following reports:**

Explanation: Data set name and member name where the source for the SLR report command, is located. The report ID is given in the next message DRL3251I.

System action: Processing continues.

User response: None.

DRL3251I **- report id:** *report ID*

Explanation: Report-id assigned to the report command.

System action: Processing continues.

User response: None.

DRL3252I **Start processing ISPF table** *member name*

Explanation: Processing starts for SLR ISPF table member *member name*.

System action: Processing continues.

User response: None.

DRL3253I **Data set** *data set name* **with** *number* **members used for view source**

Explanation: Data set *data set name* is used as source for SLR view definitions.

System action: Processing continues.

User response: None.

DRL3254I **Data set** *data set name* **with** *number* **members used for table source**

Explanation: Data set *data set name* is used as source for SLR table definitions.

System action: Processing continues.

User response: None.

DRL3255I **Table** *table name* **Module** *module name* **Type** *type* **has** *number* **virtual columns**

Explanation: This message gives the number of virtual columns for table *table name*.

System action: Processing continues.

User response: None.

DRL3256I **Duplicate report, report name =** *report name*

Explanation: A duplicate SLR report *report name* was found, and the duplicate report was not processed.

System action: Processing continues.

User response: None.

DRL3260W **No SLR reports found in data set** *data set name*(*member name*)**.**

Explanation: No SLR report commands were found in *data set name* (*member name*).

System action: Processing continues.

User response: Check why there were no report commands in *data set name* (*member name*).

DRL3261W **Error opening ISPF table** *member name*, **RC =** *return code*

Explanation: The SLR ISPF table member *member name* cannot be opened.

System action: Processing continues.

User response: Check if the member *member name* is required for migrating the report.

DRL3262W **Table source member** *member name* **not found for SLR table** *table name*

Explanation: SLR table source member *member name* not found for table *table name*.

System action: Processing continues.

User response: Check that the correct SLR table source data set is specified.

DRL3263W **View source for** *table name* **not processed,** *view source*

Explanation: SLR view source for table *table name* was not processed.

System action: Processing continues.

User response: Check that the SLR view source for table *table name* is correct.

DRL3264W Table *table name* not found in file ERMTF2

Explanation: Table *table name* was not found in the file ERMTF2.

System action: Processing continues.

User response: Check that the SLR table name *table name* is correct.

DRL3265W Unable to split SELECT row for report *report ID*, row = *row*

Explanation: A long SQL SELECT row *row* for report *report ID* cannot be split into two or more rows.

System action: Processing continues.

User response: Check the SQL query for report *report ID* and perform a manual split of row *row*.

DRL3270E DD-name *DD name* not found.

Explanation: The *DD name* file was not allocated in the JCL.

System action: Processing stops.

User response: Check if file name *DD name* is correct. If correct, allocate the file. If incorrect, re-generate the JCL using the Tivoli Decision Support for z/OS dialog.

DRL3271E No SLR reports found.

Explanation: No SLR report commands were found in the SLR report command source data set.

System action: Processing stops.

User response: Rerun with a SLR report command source data set containing the report commands.

DRL3272E SLR report group *group name* not found in ISPF table *member name*

Explanation: SLR report group *group name* was not found in SLR ISPF table member *member name*.

System action: Processing stops.

User response: Check that the specified SLR report group name exists, then rerun.

DRL3273E Table function *table function* for table *table name* failed, RC=*return code*

Explanation: ISPF table function *table function* failed for table *table name*, return code is *return code*.

System action: Processing stops.

User response: Refer to *ISPF Dialog Management Guide and Reference*, SC34-4266, for an explanation of the table function *table function* and return code *return code*. Correct the problem and rerun.

DRL3274E SLR master table contains *number* rows for TABNAME=*table name*

Explanation: Zero or more than one row was found for table *table name* in SLR master table, when the expected number of rows is one.

System action: Processing stops.

User response: Check that the SLR reports specify SLR tables that exist.

DRL3275E No rows in SLR COLUMNTABLE for TABNAME=*table name*

Explanation: Table *table name* was not found in the SLR column table.

System action: Processing stops.

User response: Check that the SLR reports specify SLR tables that contain columns.

DRL3276E SLR LIST of MASTERTABLE - Table *table name*- RC = *return code*

Explanation: Listing of the SLR master table ended with a non-zero return code.

System action: Processing stops.

User response: Look in the job log output to obtain information about the error.

DRL3277E SLR LIST of COLUMNTABLE - Table *table name*- RC = *return code*

Explanation: Listing of SLR column table ended with a non-zero return code.

System action: Processing stops.

User response: Look in the job log output to obtain information about the error.

DRL3278E Sequence error in array sec02 detected

Explanation: A sequence error was detected in array sec02.

System action: Processing stops.

User response: Delete the work files and rerun the job.

DRL3279E Start of SLR failed, - RC = *return code*

Explanation: SLR failed to start, the return code is *return code*.

System action: Processing stops.

User response: Refer to *Service Level Reporter Version 3: Diagnosis*, LY19-6253, for an explanation of the return code. Correct the problem and rerun the job.

Information/Management Record Creation (Exception Reporting) Messages

DRL3200I **An Info/Mgmt problem record** *record ID*, **generated for exception:** *datetime description*.

Explanation: An Information/Management problem record has been successfully generated.

System action: Processing continues.

User response: None.

DRL3201I **Information/Management session terminated.**

Explanation: The session with Information/Management has been terminated.

System action: Processing stops.

User response: See previous messages issued during processing.

DRL3202S **More than one record is returned from search. Search argument: RNID_SYMBOL=***record ID*

Explanation: More than one problem record returned from Information/Management SEARCH for *record ID*. The search was done in response to a current date change during execution of Information/Management. The purpose was to retrieve the date assigned by Information/Management to the problem record. The date of the problem record and the correspondent exception row in the Tivoli Decision Support for z/OS EXCEPTION_T table need be the same.

System action: The generated Information/Management problem record is deleted. Processing stops.

User response: Investigate why the Information/Management SEARCH returned more than one record. Remove the cause of the problem and rerun.

DRL3203W **Either no exception row(s) are found in the** *table* **table, or all exception rows are already updated in Information/Management.**

Explanation: No exception rows in the *table* table were eligible for Information/Management processing.

System action: Processing stops.

User response: None.

DRL3204E **If an input parameter is given, it must be set to a value. SYSTEM=***value* **PREFIX=***value* **MODE=***value* **SHOWSQL=***value* **APPLID=***value* **SESSMBR=***value* **PRIVCLASS=***value*

Explanation: The call to the DRLEREGE EXEC is incorrect. An input parameter is defined but is not assigned a value.

System action: Processing stops.

User response: Assign a value to the input parameter. To use defaults, remove the input parameter.

DRL3205E **invalid input parameter** *parameter* **for the EXEC DRLEREGE.**

Explanation: The call to the DRLEREGE EXEC contains an invalid input parameter.

System action: Processing stops.

User response: Correct the input parameter.

DRL3206E **invalid value** *value* **for MODE or SHOWSQL. Valid values are** *valid values*.

Explanation: In the call to the DRLEREGE EXEC, the MODE or SHOWSQL input parameter contained an invalid value.

System action: Processing stops.

User response: Correct the input parameter using one of the valid values listed in the message.

DRL3207E **The DRLOUT file is not allocated.**

Explanation: The DRLOUT file must be allocated. All Tivoli Decision Support for z/OS output messages are written to DRLOUT.

System action: Processing stops.

User response: Allocate the file.

DRL3208S **The problem record ID (RNID) is not returned from Information/Management.**

Explanation: Information/Management failed to return a problem record ID for the CREATE RECORD function.

System action: Processing stops.

User response: Investigate why Information/

Management failed to return a problem record ID. Remove the cause of the problem and rerun.

DRL3209E The input field *field* is flagged with error *code*.

Explanation: The message(s) are written in response to a Information/Management processing failure. The message(s) contain Information/Management error information.

System action: Processing stops.

User response: Use the information in the above message(s) along with the additional error information written from the point of failure to determine the cause of the Information/Management processing failure. Correct the error and rerun.

DRL3210E API timeout occurred - Information/Management session terminated.

Explanation: The Information/Management session was terminated by a timeout. No Information/Management TERM function is executed.

System action: Processing stops.

User response: See previous message(s).

DRL3211E Unable to terminate Information/Management session.

Explanation: The Information/Management session cannot be terminated.

System action: Processing stops.

User response: See previous message(s).

DRL3212I An Information/Management problem record is not generated.

Explanation: This is a processing failure follow up message informing that no Information/Management problem records were generated.

System action: Processing stops.

User response: See previous message(s).

DRL3213E Unable to initialize Information/Management.

Explanation: The Information/Management environment cannot be initialized. A possible reason might be that the application ID was not found as an eligible user in the privilege class.

System action: This message is followed by message DRL3214E for easier problem determination. Processing is then terminated.

User response: See following message(s).

DRL3214E Information/Management error codes follow:

Explanation: When an Information/Management transaction does not complete successfully, some reserved REXX variables are listed after this message. These variables have been set by Information/Management, and are listed here for easier problem determination.

System action: Processing stops.

User response: Use the Information/Management error codes listed under this message and determine the cause of the error. Refer to *Information/Management API Guide and Reference*, SC34-4335, for an explanation.

Log Data Manager Messages

These messages are issued by the log data manager.

DRL3301I The data set *data set name* was created for the file *file*.

Explanation: The data set *data set name* was created for the log collector output file DRLOUT or DRLDUMP.

System action: Processing continues.

User response: None.

DRL3302I The log collector was called to process these log data sets: *log data sets*.

Explanation: This message lists which log data sets will be processed in this call to the log collector. Log data sets with the same log type and log ID are concatenated by the log data manager.

System action: The log collector is being called.

User response: None.

DRL3303I The log collector processed the log data set *data set name* with return code *return code*.

Explanation: The log data set was successfully collected. The return code is 0 or 4.

System action: The log data set was collected.

User response: If the return code is 4, check DRLOUT to find out why.

DRL3304I **The file ddname *file* should not be allocated by the JCL for the DRLELDMC EXEC. It will be ignored.**

Explanation: The files DRLIN and DRLLOG are dynamically allocated by the DRLELDMC exec. They must not be specified in the JCL.

System action: Processing continues using internally generated DRLIN and DRLLOG files.

User response: Remove the file definition from the JCL.

DRL3305I **No data sets are ready for collect.**

Explanation: No log data set on the Log Data Sets To Be Collected list corresponds to the LOGTYPE and LOGID parameters specified.

System action: No data sets are collected.

User response: Check the Log Data Sets To Be Collected window and the LOGTYPE and LOGID parameters on the DRLELDMC call. If the parameters are incorrect, change them. If they are correct, there are no log data sets to be collected.

DRL3306I **The entry for the log data set *data set name* for log type *log type*, that was collected on *timestamp*, was purged.**

Explanation: The log data manager information about a successfully collected data set is deleted, together with the DRLOUT and DRLDUMP files, because the specified retention period has passed and the parameter PURGE=YES was specified on the DRLELDMC job. The collected data is not affected.

System action: Processing continues.

User response: None.

DRL3307E **There is no collect statement defined for LOGTYPE *logtype*, LOGID *logID*.**

Explanation: An attempt was made to collect a log data set that was recorded by the log data manager as belonging to LOGTYPE=*logtype* and LOGID=*logID*. However, there is no log data manager collect statement specified for this combination of LOGTYPE and LOGID.

System action: Log data sets with this combination of LOGTYPE and LOGID were not collected.

User response: Use the log data manager dialog to specify a collect statement or change the LOGID on the Data Set To Be Collected list.

DRL3308E **The value *value* is invalid for the parameter *parameter*.**

Explanation: An invalid value was specified for the parameter to DRLELDMC.

System action: No log data sets were collected.

User response: Correct the parameter value.

DRL3309E **The file *file* containing log collector statements could not be read or is empty.**

Explanation: The file *file* that is specified to contain the log collector statement for the collect of a log data set does not exist or is empty. If the file is a partitioned data set (PDS), the member you specified might not exist.

System action: The log data set was not collected.

User response: Use the log data manager dialog to specify the required collect statement.

DRL3310E **The input parameter *parameter* is invalid for EXEC DRLELDMC.**

Explanation: The specified variable is not one of the valid input parameters to DRLELDMC.

System action: No log data sets were collected.

User response: Remove the parameter.

DRL3311E **If the input parameter *parameter* is specified, it must be set to a value.**

Explanation: All specified parameters must have a value. No value was specified for the parameter *parameter*. Blank is not allowed after the equal sign.

System action: No log data set was collected.

User response: Correct the error and run the job again.

DRL3312E **The allocation of the *filename* data set *data set name* failed. The return code is *return code*.**

Explanation: The TSO ALLOCATE instruction failed with return code *return code* when the data sets *data set names* were allocated to the file DRLLOG, DRLOUT, or DRLDUMP. If the allocation of the DRLLOG file failed, note that several log data sets can be concatenated into one file. If the allocation of the DRLOUT or DRLDUMP file failed, note that the name of the DRLOUT and DRLDUMP data set is generated from a combination of:

- The DSPREFIX high level qualifier
- A date and a time qualifier
- The string 'DRLOUT' or 'DRLDUMP'.

This is an example of a DRLDUMP data set name:
`DRL.D95136.T162403.DRLDUMP`

System action: No log data sets were collected.

User response: If DRLLOG cannot be allocated, check the listed log data sets. If DRLOUT or DRLDUMP cannot be allocated, check the correctness of the DSPREFIX parameter. Its default value is DRL.

DRL3314E **The collect statement for LOGTYPE** *logtype***, LOGID** *logID***, contains the option COMMIT AFTER BUFFER FULL ONLY, which is not allowed.**

Explanation: When the COMMIT AFTER BUFFER FULL ONLY option is specified on the collect statement, the log collector will not report statistics on individual concatenated log data sets. The log data manager cannot handle the result from a collect when this option is specified.

System action: The log data set was not collected.

User response: Remove the option from the collect statement.

DRL3315E **The log collector processed the log data set** *data set name* **with return code** *return code***.**

Explanation: The collect of the log data set failed.

System action: The log data set was placed on the list of Log Data Sets Collected With Failure.

User response: To find out why the collect failed, look for messages about the failing log data set in the DRLOUT and DRLDUMP files using the Log Data Sets Collected With Failure window.

DRL3316I **The log collector did not process the log data set** *data set name***.**

Explanation: The log collector failed to collect a log data set that was concatenated before this log data set. As a consequence, the log collector did not process any logs concatenated after the log in error.

System action: This log data set is left on the Log Data Sets To Be Collected list and will be collected the next time DRLELDMC is run.

User response: Investigate the reason why the collect of the previous log data set failed before DRLELDMC is run again. You will find the failing log data set on the Log Data Sets Collected With Failure window.

DRL3317I **The log collector processed the log data set** *data set name* **with return code** *return code***, but no data was collected.**

Explanation: The log data set was successfully collected (with return code 0 or 4), but no record in the log was recognized.

System action: The log data set was placed on the Log Data Sets Collected Successfully list.

User response: Check why no record was recognized. It may be due to some error, even if the log data manager registered the collect as successful. The log data set may be of the wrong type, or it may be empty. If you want to collect the log data set again, use the **add** function in the dialog, or run the DRLELDML exec.

DRL3320I **The log data set** *data set name* **is now ready for collect by the log data manager.**

Explanation: This log data set was added to the Log Data Sets Ready For Collect list. It will be collected when the DRLELDMC batch exec is run, depending on the value of the LOGTYPE and LOGID parameters.

System action: This log data set was added to the Log Data Sets Ready For Collect list.

User response: None.

DRL3321E **A log data set with the name** *data set name* **and the log type** *log type* **already exists on the To Be Collected list.**

Explanation: A log data set with the same name as the log data set you attempted to add is already present on the Log Data Sets To Be Collected list for the specified log type. Only one data set with the same name can exist at the same time. However, it is possible to record the same data set under different log type names.

System action: No information was added.

User response: If the content of this data set is different from the already recorded data set, copy the data set to a new data set with a different name.

DRL3322E **The value** *value* **is invalid for the parameter** *parameter***.**

Explanation: The specified value is invalid for the parameter to DRLELDML.

System action: The log data set was not recorded in the Log Data Sets To Be Collected list.

User response: Specify a valid value. Check the *Administration Guide* to find out what values are valid.

DRL3323E **Catalog information about the DRLLOG file could not be retrieved.**

Explanation: The data set specified in the DRLLOG DD statement is not properly catalogued.

System action: The log data set was not recorded in the Log Data Sets To Be Collected list.

User response: Catalogue the data set.

DRL3324E **The input parameter** *parameter* **is invalid for EXEC DRLELDML.**

Explanation: The specified parameter is not one of the valid input parameters to DRLELDML.

System action: The log data set was not recorded in the Log Data Sets To Be Collected list.

User response: Remove the parameter.

DRL3325E **If the input parameter** *parameter* **is specified, it must be set to a value.**

Explanation: All specified parameters must have a value. No value was specified for the parameter *parameter*. Blank is not allowed after the equal sign.

System action: The log data set was not recorded in the Log Data Sets To Be Collected list.

User response: Give the parameter a value. Valid values are listed in the *Administration Guide*.

DRL3326E **The LOGTYPE parameter is missing. It is required.**

Explanation: The LOGTYPE parameter is the only parameter that does not have a default value. Thus, this parameter must always be specified.

System action: The log data set was not recorded in the Log Data Sets To Be Collected list.

User response: Specify a value.

DRL3327E **The value of the input parameter** *parameter* **starts with an apostrophe (') which is not allowed.**

Explanation: Do not enclose character strings in apostrophes.

System action: No log data sets were collected.

User response: Remove the apostrophe.

DRL3328E **The LOGTYPE** *log type* **must be defined before any log data sets can be recorded with that log type.**

Explanation: The component that defines the log type must be installed, or a DEFINE LOG statement must be run, before any log data sets can be recorded for the log type.

System action: The log data set wad not recorded in the Log Data Sets To Be Collected list.

User response: Install the component that defines the log type.

DRL3329I **The parameter** *parameter* **is defined more than once. The last definition is used.**

Explanation: You have specified the parameter more than once.

System action: Processing continues. The last definition of the parameter was used by the log data manager.

User response: Remove the parameter you do not want to use the next time this job is run.

DRL3330I **No data sets are ready for cleanup.**

Explanation: No log data sets on the Log Data Sets To Be Collected list with status SELECT corresponds to the LOGTYPE and LOGID parameters specified.

System action: No log data manager information about log data sets was changed.

User response: Check if there is any log data set in the Log Data Sets To Be Collected window that has SELECT in the Status column. If so, check that the LOGTYPE and LOGID parameters you have specified are correct.

Web Reporting Messages

These messages are issued by the Web Reporting application. They are found in the Websphere Application Server error logs.

DRL5000S *function* **got null response writer.**

Explanation: The function failed to get a response writer for transmitting information back to the client.

System action: Web transaction terminates.

User response: Forward WAS logs to IBM for investigation.

DRL5100E *function filename* **is invalid:** *reason*

Explanation: Filename is invalid.

System action: Web transaction terminates.

User response: Correct the filename then retry.

DRL5101E *function* **no environment variable for** *variable*

Explanation: The specified environment variable is not set.

System action: Web transaction terminates.

User response: Configure the environment variable as per installation instructions then retry.

DRL5102E *function* **error opening report design** *filename*

Explanation: Cannot open the specified report design file.

System action: Web transaction terminates.

User response: Check whether the report design file exists. it is located under the tdszweb_designdir area.

DRL5103E *function* **exception sending graphic** *filename*

Explanation: Cannot send the specified graphic file.

System action: Web transaction terminates.

User response: Check whether the report design graphic file exists.

DRL5104E *function* **exception injecting file** *filename*

Explanation: There was an exception injecting the published file.

System action: Web transaction terminates.

User response: Examine the exception stack trace for obvious problems, or submit logs to IBM for investigation.

DRL5198E *function text*

Explanation: An unexpected exception occurred. This is a catch-all for unexpected problems.

System action: Web transaction terminates.

User response: Forward WAS logs to IBM for investigation.

DRL5199E *function* **debug:** *text*

Explanation: Reserved for internal use.

System action: Web transaction terminates.

User response: Report to IBM.

DRL5200W *function* **no environment variable for** *variable*

Explanation: The specified environment variable is not set.

System action: Web transaction continues, default value of variable is used.

User response: No response necessary unless default value is incorrect.

DRL5300I *text*

Explanation: All DRL5300I messages are for debugging purposes.

System action: Web transaction continues.

User response: If debugging is not required, set tdszweb_loglevel to INFO or below.

Usage and Accounting Collector Messages

These messages are issued by the Usage and Accounting Collector application. They are found in the Usage and Accounting Collector error logs.

DRL4001S pgmname ddname DD Cannot Be Opened - Run Terminated, status=nn.

Explanation: The DD ddname cannot be opened.

System action: Processing stops.

User response: Check the file associated with DD ddname. Make sure that the DD has been properly specified in the JCL and that it matches the description in the TDSz Information Center for program pgmname.

DRL4002S pgmname ddname DD Bad operation - Run Terminated, status=nn.

Explanation: An I/O operation for a file at DD ddname failed.

System action: Processing stops.

User response: Check for errors in the specified data set and retry the job.

DRL4003S pgmname ddname DD Bad I/O - Run Terminated, status=nn.

Explanation: The file at DD ddname received an I/O error.

System action: Processing stops.

User response: Check for errors in the specified data set and retry the job.

DRL4004E pgmname ddname DD Bad operation, status=nn.

Explanation: An I/O operation for file at DD ddname failed.

System action: Processing continues.

User response: Check for errors in the specified data set and make appropriate changes to the JCL parameters.

DRL4005W pgmname ddname DD, Unable to open VSAM file for I/O, status=nn.

Explanation: The DD ddname cannot be opened.

System action: Processing continues. Additional message(s) will be issued to relay the final status of open processing.

User response: Look for the additional messages and proceed as they direct.

DRL4006W pgmname ddname DD, VSAM file not available(wait), status=nn.

Explanation: The DD ddname cannot be opened because the file is not available. The file associated with DD ddname is in use by another task.

System action: A 5 second wait is issued. Then the open will be attempted again. The wait will be issued a maximum on 10 times. If, after 10 attempts, the file is still unavailable, processing stops.

User response: If this task does not free the file within the specified time limit, processing will be terminated. Rerun this job when the file is no longer in use by another task.

DRL4007E pgmname ddname DD, invalid operation, status=nn, Key=keydata .

Explanation: An I/O operation for a file at DD ddname failed. This message can result from a delete request for data not in the file or changes to a record that is not found

System action: Processing continues.

User response: Check that the operation requested is valid for the information in the keydata..

DRL4008S pgmname Process failed during sort phase, return code n.

Explanation: Internally invoked sort failed.

System action: Processing stops.

User response: Check the sort or look for other error messages.

DRL4009I pgmname ddname DD, operation successful, Key=keydata .

Explanation: The requested operation was successful for data with the matching key=keydata.

System action: Processing continues.

User response: None.

DRL4010I pgmname No match in account table for Job=jobname, Account field=data.

Explanation: Account code conversion did not find a match for the specified job and account data. An informational message is issued for the first 100 no-match conditions.

System action: Processing continues.

User response: Use the information in these messages and the exception file to improve the account code conversion match rate.

DRL4011I pgmname n Unmatched records in the Account Code Conversion process.

Explanation: Account code conversion did not find a match for the specified number of records. This is an Informational message issued at the end of processing.

System action: Processing continues.

User response: Use the number of unmatched records to determine the success rate of account code conversion.

DRL4012S pgmname No input records were selected for processing.

Explanation: The processing requested contained no data to process. The problem may be caused by using a date selection range for dates not found in the input data.

System action: Processing stops.

User response: Check for other messages and record counts to determine why no records were processed.

DRL4013E pgmname invalid Version = Version.

Explanation: The VERSION control statement requested an invalid version number.

System action: Processing continues.

User response: Correct the VERSION control statement and rerun the job.

DRL4014W pgmname command is obsolete.

Explanation: The command is an obsolete control statement.

System action: Processing continues.

User response: Remove the command control statement and use the SHIFT control statements. Then rerun the job.

DRL4015W pgmname Obsolete control statement: statement.

Explanation: The statement is an obsolete control statement.

System action: Processing continues.

User response: Remove the statement control statement and replace it with the command contained in the DRL4016W message.

DRL4016W pgmname Specify the following control cards for equivalent processing: statement.

Explanation: An obsolete control statement has been specified, see DRL4015W for the obsolete statement.

System action: Processing continues.

User response: Remove the obsolete control statement and use the replacement. Then rerun the job.

DRL4017S pgmname invalid date selection: fromdate todate.

Explanation: An invalid date selection range was specified.

System action: Processing stops.

User response: Check for errors in the specified date range.

DRL4018S pgmname Only 10 ACCOUNT FIELDn control statements allowed.

Explanation: Where n is a value from 0 to 9, the ACCOUNT FIELDn control statement can be specified only 10 times.

System action: Processing stops.

User response: Correct the ACCOUNT FIELDn control statements and make sure that only ten statements are entered.

DRL4019S pgmname Start and length of ACCOUNT FIELDn control statements must be numeric: statement

Explanation: The ACCOUNT FIELDn control statement must contain numeric values for the starting position and length of field.

System action: Processing stops.

User response: Correct the ACCOUNT FIELDn control statements and rerun job.

DRL4020S pgmname Total length of ACCOUNT FIELDn cannot exceed 80

Explanation: The ACCOUNT FIELDn control statements limit fields to an overall total length of 80 bytes.

System action: Processing stops.

User response: Correct the ACCOUNT FIELDn control statements so that the overall total length does not exceed the limit.

DRL4021S pgmname invalid order for ACCOUNT FIELDn control statement: statement

Explanation: The ACCOUNT FIELDn control statements must be specified in order.

System action: Processing stops.

User response: Correct the ACCOUNT FIELDn control statement order. Start with n=0, followed by the next higher value for n.

DRL4022E pgmname invalid control statement: statement.

Explanation: The control statement was not valid and was not included in this execution.

System action: Processing continues.

User response: See the TDSz Information Center for specification of the control statement. Correct the control statement and rerun the job.

DRL4023I pgmname Invoking control statement: statement.

Explanation: The above control statement will be used during this execution. Processing will be altered by invoking the above control statement.

System action: Processing continues.

User response: If this is not the desired result, the trigger to this message must be removed or changed.

DRL4024E pgmname Call to DRLCDCTN failed, status=nn, Key=Dictionarykey.

Explanation: The dictionary processing routine failed. Processing continues without the dictionary file.

System action: Processing continues.

User response: Check for errors related to the dictionary file.

DRL4025I pgmname Compile Date: yyyy/mm/dd Compile Time: hh:mm:ss

Explanation: This is an informational message that shows the date and time of compile. This information may be requested when working with IBM support.

System action: Processing continues.

User response: None

DRL4026S pgmname Logic Error, debug info

Explanation: The program encountered a problem and cannot recover.

System action: Processing stops.

User response: Contact IBM support and have the debug info available.

DRL4027S pgmname invalid parameter in control statement: parameter

Explanation: The control statement was not valid.

System action: Processing stops.

User response: See the TDSz Information Center for specification of the control statement. Correct the listed parameter in the control statement and rerun the job.

DRL4028I pgmname No match in account code table for: data.

Explanation: Account code conversion did not find a matching entry for data.

System action: Processing continues. An informational message issued for the first 100 no-match conditions.

User response: Use the information in these messages and the exception file to improve the account code conversion match rate.

DRL4029I pgmname Selection dates: fromdate todate.

Explanation: The dates in the message will be used for date selection.

System action: Processing continues.

User response: None.

DRL4030W pgmname Box ID error, cannot process: ident

Explanation: The BoxID processing was not able to locate the dictionary information for ident. The default dictionary definition will be used.

System action: Processing continues.

User response: None.

DRL4031E pgmname Call to DRLCDCTN failed, status=nn

Explanation: The BoxID processing call to DRLCDCTN failed with a non-zero status code. Additional messages for program DRLCDCTN may be displayed.

System action: Processing continues.

User response: Look for other error messages for program DRLCDCTN and proceed as they direct.

DRL4032S pgmname Error in account code conversion module DRLCTBLE.

Explanation: The program encountered a problem in the account code conversion process.

System action: Processing stops.

User response: Look for other error messages from the DRLCTBLE module and proceed as they direct.

DRL4033S pgmname No Define Fields specified.

Explanation: Account code conversion requires at least one Define Field.

System action: Processing stops.

User response: Add a Define Field control statement and rerun the job.

DRL4034W pgmname type Bypassed, Offset=n Length=n Ident=identdata

Explanation: The Define User Field or Box Identifier cannot be built.

System action: Processing continues. The dictionary entry contains offset and length values that are not valid for the data. These warning messages can occur as the result of normal processing and may not indicate a problem.

User response: The identdata information can be used to identify the dictionary definitions. Use the LIMIT DRL4034W MSG control statement to limit the number of warning messages such as this one.

DRL4035W pgmname invalid function request: function

Explanation: The program was asked to perform a function that it does not support.

System action: Processing continues.

User response: Verify that the execution library contains Usage and Accounting Collector programs from the same release. Then rerun the job.

DRL4036I pgmname Maximum number of input records has been processed, MAX INPUT n

Explanation: The maximum number of input records has been processed as specified by the MAX INPUT control statement.

System action: Processing continues using the input read already read.

User response: Remove the MAX INPUT control statement if you want all the input processed.

DRL4037E pgmname tablename table size exceeded, maximum size = n

Explanation: An internal table has exceeded the maximum number of entries.

System action: Processing continues using the full table.

User response: Contact IBM support to request an increase in the table size.

DRL4038W pgmname invalid DEFINE value for location: location, statement.

Explanation: The DEFINE control statement contains an invalid argument for location. Location must be a numeric value between 1 and 128, inclusive.

System action: Processing continues without this control statement.

User response: Correct the invalid location argument and rerun the job.

DRL4039W pgmname invalid DEFINE value for length: length, statement.

Explanation: The Define control statement contains an invalid argument for length. Length must be a numeric value between 1 and 128, inclusive.

System action: Processing continues without this control statement.

User response: Correct the invalid length argument and rerun the job..

DRL4040W pgmname invalid DEFINE value location+length>128: location, length, statement.

Explanation: The DEFINE control statement contains an invalid combination of location and length. When added together these values cannot not exceed 128.

System action: Processing continues without this control statement.

User response: Correct the invalid location/length argument and rerun the job.

DRL4041W pgmname invalid CPU normalization factor: statement.

Explanation: The CPU normalization statement contains and invalid factor. The factor must be numeric and can contain one decimal place.

System action: Processing continues without this statement.

User response: Correct the factor in the CPU normalization statement and rerun the job.

DRL4042W pgmname invalid Priority Surcharge. Priority must be numeric: statement.

Explanation: The Priority Surcharge statement contains a non-numeric priority.

System action: Processing continues without this statement.

User response: Correct the priority value in the Priority Surcharge statement and rerun the job.

DRL4043W pgmname invalid DOUBLE QUOTE parameter, quote, double quote will be used.

Explanation: The double quote replacement was not specified correctly. The default, double quote, will be used to separate identifiers in the CSR+ record.

System action: Processing continues using a double quote for a separator.

User response: See the TDSz Information Center for specification of the DOUBLE QUOTE control statement. Correct the DOUBLE QUOTE parameter and rerun the job.

DRL4044W pgmname Non-numeric value found in percent charge: statement.

Explanation: A proration table statement contains a non-numeric percent charge. The percentage must be a numeric value.

System action: The percent charge is set to zero and processing continues.

User response: Use the statement to locate the entry with the bad value. Correct the percent charge so that it contains a numeric value. Then rerun the job.

DRL4045S pgmname The summary file input appears to be a TUAM summary file.

Explanation: This process is expecting the summary file created by DRLCMONY. The data looks like a TUAM summary file.

System action: Processing stops.

User response: If the input file is a DRLCMONY summary file, re-run the job with a control statement: BYPASS SERVER SUMMARY CHECK.

DRL4046W pgmname invalid record type, record # n, recordtype.

Explanation: The input record is not a known type. The record will not be processed. This message is issued for the first 25 records that have an invalid record type.

System action: The record is dropped and processing continues.

User response: Dump the input record and determine if the data is valid. If the record is not valid, correct it and rerun the job.

DRL4047S pgmname No control statements.

Explanation: Process requires at least one control statement.

System action: Processing stops.

User response: Re-run the job with at least one control statement.

DRL4048S pgmname First input card not CC1, statement.

Explanation: Process requires the first control statement to be a CC1.

System action: Processing stops.

User response: See the TDSz Information Center for specification of the CC1 control statement. Rerun the job with a CC1 as the first input control statement.

DRL4049S pgmname No CC2 cards input.

Explanation: Process requires a CC2 control statement.

System action: Processing stops.

User response: See the TDSz Information Center for specification of the CC2 control statement. Re-run the job with a CC2 control statement.

DRL4050S pgmname Found non-CC2 when processing CC2 control statements.

Explanation: Control statements are in the wrong order. A non-CC2 control statement was encountered while processing CC2 control statements.

System action: Processing stops.

User response: Re-run the job with the CC2 control statement in the proper order.

DRL4051W pgmname Device address not defined on CC2 input control statements.

Explanation: The CC2 control statements define a table of device addresses attached to the computer system. A device was found that has not been defined.

System action: Processing stops.

User response: Re-run the job with a complete set of CC2 control statements that define all the devices.

DRL4052W pgmname Time error, CPU > Elapsed: cputime, elapsedtime, record#.

Explanation: The CPU time is greater than the elapsed time. The record is dropped from processing.

System action: Processing continues without this record.

User response: Perform research to see if the data source produced invalid data.

DRL4053I pgmname Generic processing I/O counts

Explanation: The generic I/O routine uses this message to show the number of records processed.

System action: Processing continues.

User response: None.

DRL4054S pgmname invalid position value on Rate Record: statement.

Explanation: The Rate record position value was not numeric.

System action: Processing stops.

User response: See the TDSz Information Center for DRLCMONY and rate table record layout. Correct the Rate record parameter and rerun the job.

DRL4055I pgmname Calendar processing information

Explanation: This is an informational message showing the calendar data used for this execution.

System action: Processing continues.

User response: None.

DRL4056S pgmname Less than two records read from Calendar file.

Explanation: Insufficient data in the calendar file. Rebuild the calendar file.

System action: Processing stops.

User response: Rebuild the calendar file using appropriate input to reflect the time periods to be processed. See the TDSz Information Center for information about DRLCMONY and the Calendar file.

DRL4057S pgmname Accounting period date not found in Calendar file.

Explanation: The accounting date was not found in the Calendar file.

System action: Processing stops.

User response: Rebuild the calendar file using appropriate input to reflect the time periods to be processed. See the TDSz Information Center for information about DRLCMONY and the Calendar file.

DRL4058W pgmname Duplicate rate found in rate file: ratetable ratecode rateindex.

Explanation: A duplicate rate was found in the rate file.

System action: Processing continues.

User response: Use the DRLCRTLD program to delete the duplicate entry using the DELETE command. See the TDSz Information Center for information about DRLCMONY and deleting rate records.

DRL4059W pgmname Update request failed. Record not found: recordkey.

Explanation: A record update failed for the specified key because the record cannot be found.

System action: Processing continues.

User response: Look for additional messages that explain the problem and indicate the action to take. Take appropriate action to resolve the failure and then rerun the job.

DRL4060W pgmname Add request failed. Record already exists: recordkey.

Explanation: A record add failed for the specified key because the record was already in the file.

System action: Processing continues.

User response: Look for additional messages that explain the problem and indicate the action to take. Take appropriate action to resolve the failure and then rerun the job.

DRL4061S pgmname Too many colons in account code table entry: entry#.

Explanation: The account code table contains an entry with too many colons.

System action: Processing stops.

User response: Find the entry in the account code table and correct the number of colons. Rerun the job.

DRL4062S pgmname Missing comma in account code table entry: entry#.

Explanation: The account code table contains an entry with a missing comma.

System action: Processing stops.

User response: Find the entry in the account code table and add a comma at the appropriate position. Rerun the job.

DRL4063I pgmname Number of passes through account code logic: n.

Explanation: This is an informational message that is issued at the end of processing.

System action: Processing continues.

User response: None.

DRL4064I pgmname Number of passes through account table: n.

Explanation: This is an informational message that is issued at the end of processing.

System action: Processing continues.

User response: None.

DRL4065S pgmname Account code table and input file are out of sequence.

Explanation: The account code table and the input file are not in the same sort sequence.

System action: Processing stops.

User response: Correct the sort sequence for the account code table and input file. Rerun the job.

DRL4066S pgmname Only 10 DEFINE FIELDn control statements allowed.

Explanation: The DEFINE FIELDn control statement can be specified only 10 times, where n is the value from 1 to 10.

System action: Processing stops.

User response: Correct the DEFINE FIELDn control statements and make sure that only ten statements are entered. Then rerun the job.

DRL4067S pgmname Start and length of DEFINE FIELDn control statements must be numeric: statement.

Explanation: The DEFINE FIELDn control statement must contain numeric values for the starting position and length of field.

System action: Processing stops.

User response: Correct the DEFINE FIELDn control statement and rerun job.

DRL4068S pgmname DEFINE FIELDn start location + length exceeds n: statement.

Explanation: The DEFINE FIELDn control statement contains a sum of start location and length that exceeds the limit.

System action: Processing stops.

User response: Correct the DEFINE FIELDn control statements so the limit is not exceeded and rerun the job.

DRL4069S pgmname Total length of DEFINE FIELDSn cannot exceed n.

Explanation: The DEFINE FIELDn control statements limit fields to an overall total length of n bytes.

System action: Processing stops.

User response: Correct the DEFINE FIELDn control statements so the overall total length does not exceed the limit. Then rerun the job.

DRL4070S pgmname Only 10 DEFINE MOVEFLDn control statements allowed.

Explanation: Whenever n is a value from 1 to 10, the DEFINE MOVEFLDn control statement can be specified only 10 times.

System action: Processing stops.

User response: Correct the DEFINE MOVEFLDn control statements and make sure that no more than ten statements are entered. Then rerun the job.

DRL4071S pgmname DEFINE MOVEFLDn control statement does not contain literal: statement.

Explanation: The DEFINE MOVEFLDn control statement requested a literal replacement, but did not include text for the replacement.

System action: Processing stops.

User response: See the TDSz Information Center for DEFINE MOVEFLDn control statement. Correct the control statement and rerun job.

DRL4072S pgmname Start and length of DEFINE MOVEFLDn control statement must be numeric: statement.

Explanation: The DEFINE MOVEFLDn control statement must contain numeric values for the starting position and the length of the field.

System action: Processing stops.

User response: Correct the DEFINE MOVEFLDn control statement and rerun job.

DRL4073S pgmname DEFINE MOVEFLDn start location + length exceeds n: statement

Explanation: The DEFINE MOVEFLDn control statement contains a sum of start location and length that exceeds the limit.

System action: Processing stops.

User response: Correct the DEFINE MOVEFLDn control statement so the limit is not exceeded and rerun the job.

DRL4074S pgmname Total length of DEFINE MOVEFLDn cannot exceed n.

Explanation: The DEFINE MOVEFLDn control statements limit fields to an overall total length of n bytes.

System action: Processing stops.

User response: Correct the DEFINE MOVEFLDn control statements so the overall total length does not exceed the limit. Then rerun the job.

DRL4075I pgmname DEFINE MOVEFLDn control statement literal, does not start with a single quotation mark: statement.

Explanation: The DEFINE MOVEFLDn control statement must start the text literal with a single quotation mark.

System action: Processing continues.

User response: Correct the DEFINE MOVEFLDn control statements and rerun job.

DRL4076S pgmname invalid order for DEFINE FIELDn control statement: statement

Explanation: The DEFINE FIELDn control statements must be specified in order.

System action: Processing stops.

User response: Correct the order of DEFINE FIELDn control statements. Start with n=0, followed by the next higher value for n. Then rerun the job.

DRL4077S pgmname DEFINE FIELDn numeric values must be integers: statement.

Explanation: The DEFINE FIELDn control statement numeric values must be whole integers with no decimal places.

System action: Processing stops.

User response: Correct the DEFINE FIELDn control statement and rerun job.

DRL4078S pgmname No entries in the account code table.

Explanation: The account code table contained no entries.

System action: Processing stops.

User response: Add entries to the account code table or turn off account code conversion (see the TDSz Information Center for Account Code Conversion). Then rerun the job.

DRL4079W pgmname Only one SELECT or RECORD = control statement allowed: statement.

Explanation: Only one SELECT or RECORD = control statement is allowed per execution.

System action: Processing continues without this control statement.

User response: Remove the control statement that is not needed. Then rerun the job.

DRL4080W pgmname Non-numeric record specified in subsystem RECORD control statement: statement.

Explanation: The subsystem RECORD control statement must specify a numeric record number.

System action: Processing continues without this statement.

User response: Correct the subsystem RECORD control statement and rerun the job.

DRL4081W pgmname Unsupported subsystem, release: releaseID.

Explanation: A subsystem record with an unknown release was encountered. Contact IBM support to see if support is available for the subsystem release.

System action: Record is dropped and processing continues.

User response: Contact IBM support to see if support is available for the subsystem release.

DRL4100W pgmname SMF Type 30 record has no subsystem section. , record skipped: data.

Explanation: The SMF 30 record did not contain valid triplet information for the Subsystem Section. The record was dropped.

The SMF 30 record was not formed correctly. If this error message occurs more than once, there may be a problem with the SMF data.

System action: Processing continues.

User response: Look for other indications of SMF problems in the system log.

DRL4101W pgmname invalid Job Log date (SMF30RSD) record dropped: record#.

Explanation: The SMF record did not contain a valid Job Log date. The record was dropped.

The SMF 30 record was not formed correctly. The SMF30RSD contains an invalid value. If this error message occurs more than once, there may be a problem with the SMF data.

System action: Processing continues.

User response: Look for other indications of SMF problems in the system log.

DRL4102W pgmname The value in fieldname exceeds internal limits: job=jobname step=stepname program=pgmname .

Explanation: The resource field has exceeded the internal limit of a binary full word. Data was truncated to a value of 4,294,967,295. It is possible that the resource value is not accurate.

System action: Processing continues.

User response: Perform additional research to determine if the SMF 30 record for the reported job is valid. If the data is valid, report the information to IBM support.

DRL4103W pgmname Record has negative CPU Time or SIO Count: job=jobname step=stepname start date=sdate start time=stime.

Explanation: A negative value was found in the CPU time or SIO count field, for the specified job. This warning message is issued for the first 100 occurrences when requested by the PRINT REJECTS control statement. The record is marked with an 'X' in the delete code; this causes the record to be bypassed.

System action: Processing continues.

User response: Perform research to see if the SMF data contains invalid data.

DRL4104W pgmname type record has No CPU time & No SIOs: Job=jobname step=stepname start date=sdate start time=stime.

Explanation: A zero value was found in the CPU time or SIO count field for the specified STC, TSO or Step record. A warning message is issued for the first 100 occurrences when requested by the PRINT REJECTS control statement. The record is marked with an 'X' in the delete code; this causes the record to be bypassed.

System action: Processing continues.

User response: Perform research to see if the SMF data contains invalid data.

DRL4105W pgmname type record error, CPU time > Elapsed time: job=jobname step=stepname start date=sdate start time=stime.

Explanation: The CPU time is greater than the elapsed time for the specified JES, STC, TSO or Step record. This warning message is issued only when requested by the PRINT REJECTS control statement. The record is marked with a 'Y' in the delete code; this causes the record to be bypassed.

System action: Processing continues.

User response: Perform research to see if the SMF data contains invalid data..

DRL4106W pgmname No record conversion for record type = n.

Explanation: The input record was not a known record type. The record was written to the Unsupported file.

System action: Processing continues.

User response: The record is written to the CIMSUNSP DD. Review the CIMSUNSP DD to determine the type of record that was bypassed.

DRL4107E pgmname External transaction record error: transaction.

Explanation: The external transaction failed validation.

System action: This error message is issued for the first 10 transactions that fail validation. Transaction is discarded and processing continues.

User response: Ensure that numeric fields are correct and dates are valid. Correct problems and then process the discarded transactions. See the TDSz Information Center for Processing External Transactions for details.

DRL4108S pgmname Only PARSE ACCOUNT FIELD0-9 are accepted: statement

Explanation: The PARSE ACCOUNT FIELDn control statement can be specified only 10 times, where n is values 0 through 9.

System action: Processing stops.

User response: Correct the PARSE ACCOUNT FIELDn control statements and make sure that only ten statements are entered. Then rerun the job.

DRL4109S pgmname Start and Length of PARSE ACCOUNT FIELDn control statements must be numeric: statement

Explanation: The PARSE ACCOUNT FIELDn control statement must contain numeric values for the starting position and length of field.

System action: Processing stops.

User response: Correct the PARSE ACCOUNT FIELDn control statement and rerun job.

DRL4110S pgmname Total length of PARSE ACCOUNT FIELDn cannot exceed 59.

Explanation: The PARSE ACCOUNT FIELDn control statements can define fields with an overall total length of 59 bytes.

System action: Processing stops.

User response: Correct the PARSE ACCOUNT FIELDn control statements so the overall total length does not exceed the limit. Then rerun the job.

DRL4111S pgmname Total length of PARSE ACCOUNT FIELDn output fields cannot exceed 128

Explanation: The PARSE ACCOUNT FIELDn control statements can define output fields with an overall total length of 128 bytes.

System action: Processing stops.

User response: Correct the PARSE ACCOUNT FIELDn control statements so the overall total length of the output fields does not exceed the limit. Then rerun the job.

DRL4112W pgmname recordID Contains an invalid CPUField CPU time.

Explanation: The SMF30TFL field indicated that a CPU field was invalid. This message is issued for the first 250 occurrences.

The SMF30TFL flag was properly interpreted and the CPU field was set to zero. The SMF 30 record was flagged as having an invalid CPU time so it was reset to prevent corruption of data.

System action: Processing continues.

User response: Monitor the frequency of this warning message, and if needed, research the SMF30TFL flag in the SMF 30. See the TDSz Information Center for the SMF30TFL control statement.

DRL4113W pgmname Record output Location Error: statement.

Explanation: The control statement specified a location plus length that was greater than 32.

System action: Processing continues.

User response: Correct the control statement and rerun the job.

DRL4114W pgmname Account not found: statement.

Explanation: The account code was not found in the client file.

System action: Processing continues.

User response: Correct the control statement to specify a valid account code or add the account code to the client file. Then rerun the job.

DRL4115I pgmname Current Year: year Current Month: month

Explanation: Date information was not available in the client file so the specified date information was used as a default.

System action: Processing continues.

User response: None.

DRL4116S pgmname YEAR-END processing was already performed.

Explanation: The YEAR-END processing has already occurred for this Client file.

System action: Processing stops.

User response: If Year-End processing is still required, use the YEAR-END PURGE control statement to override this check.

DRL4117W pgmname Update of configuration information not allowed.

Explanation: The request to update the configuration information in the Client file is denied.

System action: Processing continues.

User response: The requested update is not supported. Remove the update request and rerun the job.

DRL4118W pgmname Exceeded maximum size of Alternate Account Code table: Max=n.

Explanation: The maximum number of Alternate Account Codes has been loaded. No more will be loaded for this execution.

System action: Processing continues.

User response: Split the Alternate Account Code file into smaller pieces that will not exceed the maximum. Rerun the job using 2 steps to process the input. Include one of the smaller versions of the file with each step.

DRL4119I pgmname Local time differs from GMT by n hours

Explanation: The difference in time between local and GMT has been received from the CEEGMTO callable service. This value will be used to convert GMT times to local times. This message is issued as a result of the 'SET GMT OFFSET TO SYSTEM' control statement.

System action: Processing continues.

User response: Perform one of the following tasks:

- If the value produced is not correct, use a 'SET GMT OFFSET TO n' control statement to set a different offset.
- Use default processing, and the GMT offset will be gotten from the CICS input record.

DRL4120E pgmname CEEGMTO failed - GMT offset set to 0: ReturnCode

Explanation: The difference in time between local and GMT cannot be obtained from the CEEGMTO callable service. The GMT times will be used.

This message is issued as a result of the 'SET GMT OFFSET TO SYSTEM' control statement and a failed call to CEEGMTO.

System action: Processing continues.

User response: If the value produced is not correct, perform one of the following tasks:

- Either Correct the CEEGMTO callable service or use the 'SET GMT OFFSET TO n' control statement.

  OR
- Accept default processing, and the CICS input record will be used to determine the GMT offset.

DRL4121W pgmname CPU Time > (Dispatch Time + 80): CPU Dispatch record#

Explanation: The CPU time is greater than the dispatch time plus .00128 seconds. This warning message issued for the first 100 occurrences.

System action: Processing continues.

User response: Perform research to see if the data source contains invalid data.

DRL4122E pgmname DB2 Product Section is too long: length=n

Explanation: The DB2 Product Section has exceeded the maximum supported length of 500 bytes.

System action: The record is dropped and processing continues.

User response: Check for maintenance that will address the product section size limit.

DRL4123W pgmname Time error, CPU > Elapsed: CPU Elapsed.

Explanation: The CPU time is greater than the elapsed time. The elapsed time is reset to the CPU time. This warning message is issued the first 10 times that the conditions occurs. This message is then followed by two 4999 messages that contain a short display of the QWHC and QWAC sections.

System action: Processing continues.

User response: Perform research to see if the data source produced invalid data.

DRL4124W pgmname Triplet error: type record# offset length n

Explanation: The SMF record being processed contained an invalid triplet. The record cannot be processed.

System action: The record is dropped and processing continues.

User response: Perform research to see if the data source produced invalid data.

DRL4125W pgmname Record has negative CPU time.

Explanation: A negative value was found for the CPU time. Value was reset to zero. This warning message is issued for the first 100 occurrences.

System action: Processing continues.

User response: Perform research to see if the data source is producing invalid data.

DRL4126W pgmname ZERO CPU control statements exceeded limit of n entries.

Explanation: Only n ZERO CPU control statements are supported.

System action: Entry is ignored and processing continues.

User response: Contact IBM and request additional support for ZERO CPU control statements.

DRL4127W pgmname DUPLICATE CPU, CICS Attach cannot be used with ZERO CPU

Explanation: The DUPLICATE CPU control statement included the CICS Attach type, but the ZERO CPU control statement was also specified. This combination is not allowed.

System action: This execution was allowed, but without the CICS Attach type in the DUPLICATE CPU control statement.The CICS Attach is automatically removed from the DUPLICATE CPU request and processing continues.

User response: Either remove the CICS Attach option from the DUPLICATE CPU control statement or stop using the ZERO CPU control statement.

DRL4128W pgmname Only 4 Define Fields are used when Account Code Conversion is turned off.

Explanation: No Account Code Conversion was requested for this execution so only the first 4 Define Fields will be used.

System action: Processing continues, but only 4 Define Fields will be used.

User response: Remove the Define Fields control statements that are not used.

DRL4129E pgmname Dictionary file is not available

Explanation: The dictionary file cannot be loaded to perform the required processing.

System action: The requested dictionary processing is bypassed, but processing continues.

User response: Look for additional error messages about the dictionary file.

DRL4130E pgmname BOXID not found, DEFAULT EXCEPTION: BoxID

Explanation: The BoxID definition was not found in the dictionary file and DEFAULT EXCEPTION has been specified.

System action: The record written to the exception file does not have a matching dictionary definition. Processing continues.

User response: Build a dictionary definition using the BoxID criteria for this record. Then process the exception file.

DRL4131E pgmname Dictionary file error: error

Explanation: The dictionary file does not contain the required information.

System action: The dictionary processing cannot take place because of the reported error. Processing continues.

User response: Restore or rebuild the dictionary file. Then rerun the job.

DRL4132E pgmname functioncall failed: returncode

Explanation: The function call failed during dictionary processing.

System action: The dictionary processing cannot take place. Processing continues.

User response: Look for additional messages s to determine how to resolve the problem.

DRL4133E pgmname Dictionary file is missing information: key

Explanation: The dictionary processing cannot locate information for the dictionary key.

System action: Processing continues. Additional messages show the type of information that was not available with the dictionary key.

User response: Look at the additional messages to determine the missing information and add it to the dictionary. Then rerun the job.

DRL4134W pgmname Duplicate field requested: fieldname outputname

Explanation: The field name has already been requested.

System action: Processing continues.

User response: Review the control statements and remove any duplicate requests. Then rerun the job.

DRL4135S pgmname No RESOURCE fields have been requested.

Explanation: The results of this processing produced a request with no resources.

System action: Processing stops.

User response: Review the control statements and make sure that at least one resource will be in the output file. Look for RESOURCE control statements and dictionary resource flag settings.

DRL4136S pgmname Storage was not available: storagesize returncode

Explanation: The program cannot obtain the storage.

System action: Processing stops.

User response: Increase the region size. Then rerun the job.

DRL4137S pgmname Storage was not freed: storagesize returncode

Explanation: The program cannot free storage.

System action: Processing stops.

User response: Rerun the job.

DRL4138E pgmname Maximum number of command were processed: Max=n

Explanation: The command limit for the command has been reached. No more command will be processed.

System action: Processing continues.

User response: Contact IBM support to see if the limit can be increased. After the increase, rerun the job.

DRL4139I pgmname Sort failed after processing n records

Explanation: An internal sort failed after n records were processed.

System action: Processing stops.

User response: If the sort failed because of insufficient resources, use the value n to set PROCESS INPUT. Decrease the value n by 10% and supply in the PROCESS INPUT n control statement. Then rerun the job.

Multiple passes of the input will be made until the entire file is processed. No additional resources will be needed.

DRL4140I pgmname Sort has processed n input records: sorttype

Explanation: Informational sort progress message that displays number of records that have been processed.

System action: Processing continues.

User response: None.

DRL4141I pgmname PROCESS INPUT number of records has been reached: n

Explanation: The number of input records specified in the PROCESS INPUT control statement has been reached. Processing will be completed for these input records and than the next n number of records from the input file will processed.

System action: Processing continues.

User response: None.

DRL4142I pgmname Initial Sort processed n input records

Explanation: Informational message that displays number of records written by the initial sort.

System action: Processing continues.

User response: None.

DRL4143W pgmname Exceptiontype

Explanation: An input record cannot be processed and was written to the exception file. The type of exception is contained in the text of the message.

System action: Input record is written to exception file and processing continues.

User response: Research the exception and determine if appropriate action was taken.

DRL4144I pgmname The largest Account Code encounter during this run was n characters

Explanation: The largest Account Code encounter during this run was n characters.

Use the value in n for any sort steps that are needed to sort the data by account code. Any default sort steps will use a value of 128 characters for the account code length. This message is issued so that these sorts can be changed to use a more efficient account code length that reflects the actual data.

System action: Processing continues.

User response: None.

DRL4145W pgmname The Status and Statistics file is not available. All Restart/Check-point processing will be bypassed.

Explanation: An attempt to open the status file failed. All Restart/Check-point processing will be bypassed.

System action: Processing continues.

User response: If Restart/Check-point and statistical information are to be maintained, use DRLNSTC in DRL.SDRLCNTL to allocate the file for the next run.

DRL4146S pgmname Restart allocation failed DSN=dsnname S99ERROR=n S99INFO=n

Explanation: An attempt to restart the Extract processing failed because of an allocation error on a required file.

System action: Processing stops. Restart processing cannot be used because a file is not available.

User response: Rerun the job using a RESTART NO control statement.

DRL4147W pgmname Restart allocation failed DSN=dsnname S99ERROR=n S99INFO=n

Explanation: An attempt to restart the Extract processing failed because of an allocation error on a required file. Restart processing cannot be used because another file is not available. Job will continue running

as if the RESTART NO control statement was specified.

System action: Processing continues without Restart.

User response: None.

DRL4148S pgmname Restart I/O error DSN=dsnname copying to ddname status=nn

Explanation: An attempt to restart the Extract processing failed because of an I/O error on a required file.

System action: Restart processing cannot be used because of the I/O error on the file. Processing stops.

User response: Either restore the file and rerun the job or rerun the job using a RESTART NO control statement to bypass the restart and start from the beginning.

DRL4149W pgmname Restart I/O error DSN=dsnname copying to ddname status=nn

Explanation: An attempt to restart the Extract processing failed because of an I/O error on a required file.

System action: Processing continues without Restart. Restart processing cannot be used because a file access received and I/O error. Job continues running as if the RESTART NO control statement had been specified

User response: None

DRL4150W pgmname Restart failed

Explanation: An attempt to restart the Extract processing failed.

System action: Processing continues without Restart.

User response: None.

DRL4151S pgmname Restart failed, status=nn

Explanation: An attempt to restart the Extract processing failed.

System action: Processing stops.

User response: Correct the files needed for the restart and rerun the job.

Or

Rerun the job using a RESTART NO control statement to bypass the restart and start from the beginning.

DRL4152S pgmname Restart could not position DSN=dsnname, ddname status=nn

Explanation: An attempt to restart the Extract processing failed.

System action: Processing stops.

User response: Correct the files needed for the restart and rerun the job.

Or

Rerun the job using a RESTART NO control statement to bypass the restart and start from the beginning..

DRL4153I pgmname Restart on DSN=dsnname ddname skipped n records

Explanation: Restart processing has repositioned the starting point of the file.

System action: Processing continues.

User response: None.

DRL4154W pgmname Alias aliasname was not found

Explanation: The requested alias member that was mapped by the DRLMALS file in DRL.SDRLCNTL cannot be found. Default processing will be used.

System action: Processing continues.

User response: Check the JCL for the proper allocation of the alias PDS. Check the DRLMALS member in the alias PDS and make sure the proper member was specified. Add the alias to the PDS if required and rerun the job

---

DRL4155W pgmname No input to process for controlling dictionary key: key

Explanation: No input to process for the dictionary key. The initial sort contained data for the dictionary key; but record validation, date selection and other processing resulted in no records being selected for additional processing.

System action: Processing continues.

User response: Check control statements, messages and reports to see why the data was not selected..

DRL4156S pgmname Unknown IMS Type 7 record length: length record# .

Explanation: An IMS type 7 record contained an invalid length. The record may not have been formed properly.

System action: Processing stops.

User response: Dump the input record and determine

if the data is valid. Remove the bad record from the input file and rerun the job.

DRL4157W pgmname invalid date in input: record#.

Explanation: The input record contained an invalid date. The record will not be processed.

System action: The record with the bad date is dropped and processing continues.

User response: Dump the input record and determine if the data is valid.

DRL4158W pgmname Negative resource field: fieldname record#.

Explanation: The input record contained a negative value in the resource field. The record will not be processed.

System action: The record is dropped and processing continues.

User response: Dump the input record and determine if the data is valid..

DRL4159W pgmname Rate code not defined in rate table: ratecode value ratetable.

Explanation: The rate code cannot be found in the rate table. Processing for the rate code was not performed. The number in value represents the total resources for the rate code.

System action: Processing continues.

User response: Define the rate code in the rate table. See the TDSz Information Center for DRLCMONY and loading the rate table.

DRL4160W pgmname Client not on master file: clientkey

Explanation: The client was not found on the master file and was not updated.

System action: Processing continues.

User response: Define the client to the master file. See the TDSz Information Center for program DRLCCLNT.

DRL4161S pgmname Rate table not defined in Rate file: ratetable.

Explanation: The rate table cannot be found in the rate file.

System action: Processing stops.

User response: Define the rate table in the rate file. See the TDSz Information Center for DRLCMONY and loading the rate table.

DRL4162S pgmname Duplicate rate record: ratetable ratecode rateindex ratevalue.

Explanation: The rate file contains a duplicate entry.

System action: Processing stops.

User response: Process program DRLCRTRP to review rate file. Correct the duplicate rate entry and rerun job. See the TDSz Information Center for DRLCMONY and loading the rate table.

DRL4163S pgmname invalid rate file Release ID: releaseID.

Explanation: The rate file release ID does not match the supported values.

System action: Processing stops.

User response: Re-load the rate file using program DRLCRTLD.

DRL4164W pgmname Rate value not defined for Table/Rate/Shift, using shift 1: ratetable ratecode rateshift.

Explanation: The above combination of Table/Rate/Shift does not have a rate value. The Shift will be changed to a 1 and the value associated with this new combination will be used.

System action: The shift is changed to 1 and processing continues.

User response: If the shift 1 value is OK, no other action is required. Otherwise, define a value for the combination of ratetable/ratecode/rateshift.

DRL4165W pgmname No client configuration record found, default to Load tracking ID = 1000000000.

Explanation: The load tracking ID cannot be obtained from the client configuration record. The Client file may be damaged.

System action: Processing continues. The default load tracking ID will be used.

User response: Use the DRLCBDGT program to verify that the client information is OK. Either restore the Client file or, if necessary, rebuild the Client file. Then rerun the job. User does not need to rerun, unless the default load tracking ID cannot be used.

DRL4166S pgmname Error in input: record# errortype.

Explanation: The input record contains invalid data and cannot be properly parsed.

System action: Processing stops.

User response: Dump the input record and determine

if the data can be corrected and the file reprocessed. Use the information in the error type to determine the type of data problem.

DRL4167W pgmname REPORT DATE control statement will use report dates instead of actual usage dates.

Explanation: The accounting date fields will contain the report date instead of the actual usage dates. Use this option with care because it modifies the actual usage date information with a date based on execution of the Usage and Accounting Collector process. IBM does not recommend using the REPORT DATE control statement.

System action: Processing continues.

User response: Avoid using the REPORT DATE option.

DRL4168W pgmname Client update turned off because Server Mode was specified.

Explanation: When processing in Server Mode the Client file cannot be updated. The CLIENT FILE UPDATE and PROCESS SERVER MODE control statements were requested for this execution.

System action: The CLIENT FILE NOUPDATE control statement is used and processing continues.

User response: Remove the CLIENT FILE UPDATE control statement for the next run.

DRL4169W pgmname CurrentCloseDate option not found in Client file, no DEFAULT CLOSE DAY, Backload turned on.

Explanation: The process to determine the close date did not find the CurrentCloseDate option in the Client file and there was no DEFAULT CLOSE DAY specified. The close date processing will use the BACKLOAD DATA control statement.

System action: The BACKLOAD DATA control statement is used and processing continues.

User response: If the BACKLOAD DATA control statement was not the proper option, either set the CurrentCloseDate in the client file or include a DEFAULT CLOSE DAY control statement. Then rerun the job.

DRL4170W pgmname invalid date/time in input: record#.

Explanation: The input record contained an invalid date/time. The record will not be processed.

System action: The record with the bad date/time is dropped and processing continues.

User response: Dump the input record and determine if the date/time is valid. If they are not valid, correct them and rerun the job.

DRL4171W pgmname invalid date in input: record.

Explanation: The input record contained an invalid date. The record will not be processed. The message contains a limited display of the input record.

System action: The record with the bad date is dropped and processing continues.

User response: Dump the input record ,correct the date. Then rerun the job.

DRL4172W pgmname Non-numeric value in resource: record.

Explanation: The input record contained a non-numeric value in the resource field. The record will not be processed. The message contains a limited display of the input record.

System action: The record with the bad resource is dropped and processing continues.

User response: Dump the input record, correct the resource, and rerun the job.

DRL4173S pgmname Missing or invalid SELECT control statement. Correct or add the SELECT control statement and rerun the job.

Explanation: There was no SELECT control statement to identify the subsystem.

System action: Processing stops.

User response: Correct or add the SELECT control statement and rerun the job.

DRL4999I pgmname trace-data

Explanation: Message was issued as the result of a trace request.

System action: Processing continues.

User response: None.

Chapter 2. AS/400 Messages Issued on AS/400 System

This chapter contains descriptions of AS/400 messages that are issued on the AS/400 system during batch processing and when the log collector is invoked from the online dialog.

DRL000A Unable to read the requested QHST file.

Explanation: An error occurred during the reading of the QHST file. An fread function returned a number of successfully read full items that was less than the number of records in the file.

System action: Processing stops.

User response: Rerun the job. If you still get the error, contact AS/400 system support.

DRL000B Unable to open the requested QHST file.

Explanation: An error occurred during the opening of the QHST file. An fopen function returned a NULL pointer value.

System action: Processing stops.

User response: Rerun the job. If you still get the error, contact AS/400 system support.

DRL000C Unable to write header record to file.

Explanation: An error occurred during the attempt to write data into the FILE file. An fwrite function failed.

System action: Processing stops.

User response: Check to see whether the FILE file exists. Rerun the job. If you still get the error, contact AS/400 system support.

DRL000D Maximum number of history files exceeded.

Explanation: The number of history files on the system exceeds 273. The Tivoli Decision Support for z/OS SP400 feature can process a maximum of 273 history files.

System action: Processing stops.

User response: Save and delete the old history files (WRKF QSYS/QHST*) until there are fewer than 274 of them. Rerun the job.

DRL0001 Tivoli Decision Support for z/OS SP400 capturing of TYPE data has completed normally.

Explanation: The TYPE data has been correctly captured.

System action: The command was processed.

User response: None.

DRL0002 Tivoli Decision Support for z/OS SP400 capturing of TYPE data in progress.

Explanation: The TYPE data capturing is in progress.

System action: Processing continues.

User response: None.

DRL0003 Tivoli Decision Support for z/OS SP400 server job already active.

Explanation: The SP400 server has already been started and now it is active. No actions are taken if you try to start it again.

System action: None.

User response: None.

DRL0004 Tivoli Decision Support for z/OS SP400 server job already in job queue.

Explanation: The SP400 server has already been started and now it is in the job queue. No actions are taken if you try to start it again.

System action: None.

User response: None.

DRL0008 OS/400 job accounting is not active. No accounting data can be captured.

Explanation: The OS/400 job accounting is not active.

System action: Processing stops.

User response: Create a journal and its receiver and try the command again.

DRL0009 Tivoli Decision Support for z/OS SP400 data capturing of TYPE has ended in error.

Explanation: The Tivoli Decision Support for z/OS

SP400 data capturing of TYPE data has ended in error.

System action: Processing stops.

User response: Check the previous error messages and try the command again.

DRL0010 **Errors occurred during running of TYPE API.**

Explanation: The TYPE API invoked returned in error.

System action: Processing stops.

User response: System error.

DRL0011 **No active collection.**

Explanation: The STRSP400(DRLQPFR) is running on *ACTIVE collection but there is not a collection active.

System action: Processing stops.

User response: Start Collection Services.

DRL0012 **Data not within range of collection.**

Explanation: The STRSP400(DRLQPFR) is running on *ACTIVE collection with date and/or time out of range of collection.

System action: Processing stops.

User response: Change the date and time for data capturing or run STRSP400(DRLQPFR) to capture data from *ALL collections present on the system.

DRL8003 **Elapsed time(s): *Q*1 CPU use(d): *Q*2 Tot AUX stg(MB): *Q*3 Avail AUX stg(MB): *Q*4 pages: *Q*5 I/O reqs: *Q*6 Jobs *Q*7 Nbr of ASP:s: *Q*8**

Explanation: This message is produced by the SP400 monitoring job, which is activated by the STRSPSRV SP400 command. It contains average values, computed for a selected time interval, of performance data. It is written into the system history log, every number of minutes previously selected.

System action: None.

User response: None.

Part 2. Problem Determination

Chapter 3. Host Problem Determination Procedure

This chapter helps you classify and describe problems you encounter while using Tivoli Decision Support for z/OS. The discussions that follow can help you:

- Classify the type of problem you are having
- Collect information about a problem
- Complete the Tivoli Decision Support for z/OS problem description worksheet
- Report a problem to IBM

The procedures in this chapter describe how you select keywords and build a symptom string to obtain documentation about the problem. The symptom string and related documentation will help you discover whether the problem has occurred before, or help you accurately describe the problem if you must contact IBM service personnel.

Note: Use the information in this chapter to record all applicable facts about the problem on the worksheet provided (Appendix C, "Problem Description Worksheet for the Host," on page 119).

Classifying a Problem

The first step in diagnosis is classifying the type of problem. Symptoms that indicate the presence of a problem can be valuable clues in diagnosing and solving the problem.

Using Keywords to Describe a Problem

Keyword string

A keyword is a word, acronym, or abbreviation used to describe one aspect of a program failure. Use keywords to describe all aspects of a problem, from identifying the Tivoli Decision Support for z/OS program number to identifying the area of failure. Use the appropriate procedures to document the problem and build a keyword string.

For example, if your Tivoli Decision Support for z/OS program terminates with a system abend code, the keyword is ABEND. Other keywords are also formed to describe particular aspects of the abnormal termination, such as the name of the module where the abend occurred. You then combine these keywords to form a keyword string like this:

```
569510100 R101 ABEND0C4 DRLPLOPR
```

In this example, 569510100 is the component ID (5695-101 is the Tivoli Decision Support for z/OS program number), R101 identifies the release number, ABEND is the type of problem, and 0C4 is the abend code. DRLPLOPR is the module where the abend occurred.

The component ID is the first keyword in the string. It identifies the IBM licensed program that failed.

The name of the module that abended can be found in the DRLDUMP data set (described in Appendix A, "Dump File Content and Trace Options," on page 107).

The last three digits of the FMID show the release numbers for the Tivoli Decision Support for z/OS features. They are:

Table 1. Tivoli Decision Support for z/OS Features

Component name	Common	English	German	Japanese
Base	201	2B2	2B0	2B1
System Performance	2A0	2C2	2C0	2C1
IMS Performance	2A1	2D2	2D0	2D1
CICS Performance	2A2	2E2	2E0	2E1
Network Performance	2A3	2F2	2F0	2F1
Workstation Performance	2A4	2G2	2G0	2G1
SP400	2A5	2H2	2H0	2H1
Resource Accounting for z/OS	2A8	2L2	2L0	2L1

Searching the Software Support Database

Use the keyword string you create to search the software support database. This helps you find out if the problem has been noted before. If a problem described in the database is similar to yours, a solution is probably available. You can vary your keyword string to widen or narrow the database search.

If you have the Information/Access IBM licensed program, you can use your keyword string to search the RETAIN database for solutions to problems similar to yours. IBM level 1 service personnel can help you develop the keyword string and search the database for a similar problem. If the RETAIN database is not available to you, the IBM support center will help you solve your problem.

Identifying Symptoms and Selecting Keywords

Look in Table 2 to find the symptoms that most closely match the symptoms you are experiencing. Make a note of all the keywords that describe those symptoms.

Note: If your symptoms do not appear in Table 2, collect the information needed for all problems as described in "Collecting Documentation about All Problems" on page 96.

Table 2. Identifying Symptoms

Symptom	Problem-type Keyword
• Abend message. • Dump file contains a formatted dump. • Application program reports an unexpected return code.	ABEND
• Unexpected output results. • Tivoli Decision Support for z/OS does not work as specified in a book. • DRL message is wrong or is formatted improperly.	INCORROUT
• Heavy processor consumption without any output on output file DRLOUT. • A message repeats continuously.	LOOP

Table 2. Identifying Symptoms (continued)

Symptom	Problem-type Keyword
• DRL error message. • DRL message is wrong or is formatted improperly. • Message text does not explain the problem condition.	MSG
• Performance does not meet explicitly stated expectations. • Response time is slow.	PERFM
• Tivoli Decision Support for z/OS publication library does not match actual Tivoli Decision Support for z/OS operation. • Missing, incorrect or ambiguous information in the documentation.	DOC

Collecting Information about Any Problem

This section contains procedures for collecting specific types of information, and for collecting information about an unidentified problem.

Make a copy of the worksheet in Appendix C, "Problem Description Worksheet for the Host," on page 119 and use it to document information related to the problem you are having.

It is very important to completely document a problem before calling IBM for assistance.

Specifying Your Software Environment

About this task

Specify the software in use when the problem occurred:

MVS Indicates the version, release, and modification level of MVS.

TSO Indicates the version, release, and modification level of TSO/E.

ISPF Indicates the version, release, and modification level of ISPF.

DB2 Indicates the version, release, and modification level of DB2.

QMF Indicates the version, release, and modification level of QMF.

GDDM
Indicates the version, release, and modification level of GDDM.

C Indicates the version, release, and modification level of C compiler (applicable only if exit procedures written in C have been added)

Specify the systems that created the logs in the last collect run (IMS, CICS, RMF™, or some other system). Indicate the version, release, and modification level of each system.

If you need more information, an IBM support center representative can help you gather it.

Information Needed for All Problems

The information needed by IBM support personnel depends on whether the problem is with batch or with the dialog.

For problems with batch, be prepared to provide:
- JCL messages
- The DRLOUT file
- The DRLDUMP file
- The log data set, if applicable

For problems with the dialog, be prepared to provide:
- Dialog messages
- A description of steps performed
- The *tsoprefix*.DRLOUT data set
- The *tsoprefix*.DRLDUMP data set

Collecting Information about specific problems

The sections that follow outline procedures for gathering information about specific types of problems. If you cannot classify your problem, use the procedure in "Collecting Documentation about All Problems" on page 96.

The DRLOUT data set contains the DRLIN statements (if default SHOWINPUT=YES is kept) and messages generated by the log collector.

The DRLDUMP data set contains abend dumps, additional information about records skipped and data columns set to null in a collect or list operation. It also contains output from any traces activated. For more information about the contents of the DRLDUMP data set and how log collector traces are activated, see Appendix A, "Dump File Content and Trace Options," on page 107.

System Diagnostics

The System Diagnostics function is used to take a snapshot of various system tables. This is achieved by extracting data from the Tivoli Decision Support system tables. The data is written to a sequential file called *tsoprefix*.DRLDIAG. If the file has not been allocated, the Systems Diagnostic feature will allocate it when it is executed.

The main purpose of this function is to provide IBM support personnel with an overview of the components and subcomponents that have been installed. This information can be useful when working on faults. Information about the log data sets that have been collected is also extracted.

Running the Systems Diagnostics extract
About this task

The System Diagnostics feature can be executed by selecting option 4 from the Utilities drop-down menu from the Administration panel. This executes in online mode and the extracted data is written to the *tsoprefix*.DRLDIAG data set. This data set is sent to IBM support personnel, on their request.

Abnormal Termination (ABEND)

If Tivoli Decision Support for z/OS comes to an abnormal end, use the ABEND keyword to document the problem—regardless of whether it is a user abend or a system abend. (If the program issues a message, you can also use the MSG keyword.)

Tivoli Decision Support for z/OS typically produces a system dump for an abend; however, if no dump is produced, the dump file may be full, in which case the abend must be recreated with a larger dump file. Check for a message that an error occurred while Tivoli Decision Support for z/OS was trying to produce a dump. A symptom string in the dump provides information on what was happening at the time of the abend.

Follow this procedure to produce a system dump:

1. Allocate the SYSMDUMP ddname to a data set with the following DCB parameters:
   - The dump data must be stored on a data set with sequential (PS) organization.
   - The logical record length (LRECL) must be 4160 bytes.
   - The data set must have one of the following combinations of record format (RECFM) and block size (BLKSIZE):
     - RECFM=F,BLKSIZE=4160
     - RECFM=FB,BLKSIZE=4160
     - RECFM=FBS,BLKSIZE=n*4160 where n=1,2,...

   If the data set meets these criteria, IPCS provides special purpose processing. In special purpose processing, IPCS simulates system services, such as dynamic address translation and control block formatting, when processing the information source.

   Note: The DCB for SYSMDUMP can be different for different MVS versions.
2. If the abend occurred in an ISPF dialog, you must also do this:
   a. Allocate the SYSMDUMP data set with DISP=MOD. (If Tivoli Decision Support for z/OS abends first, and then ISPF, both will write to the SYSMDUMP data set. If you use DISP=SHR, only the ISPF dump will be seen.)
   b. Set the ISPF options in ISPF 0.7 to ENBLDUMP=ON.
3. Recreate the abend.

   When you see TSO `READY` after ISPF has terminated, press Enter. A dump will be produced.

   Note: It is important that you do not press any other key than Enter.

Collect the information listed in "Information Needed for All Problems" on page 92 and read "Collecting Documentation about All Problems" on page 96 to complete your documentation of the problem. Also, if FFST is installed and used, produce an FFST data dump. For more information, see "First Failure Support Technology" on page 113.

Message (MSG)

Use the MSG keyword to specify a message failure. Do this when:

- A message describes conditions that do not apply to actual Tivoli Decision Support for z/OS operation.
- The text of a message is incorrect.
- Tivoli Decision Support for z/OS issues an Tivoli Decision Support for z/OS message (a message with the DRL prefix), but the message is not documented or is not documented correctly in Chapter 1, "Host Messages," on page 3.
- The message precedes an abend.

If the message associated with the problem does not have the DRL prefix, it is probably not a Tivoli Decision Support for z/OS message failure, so do not use the MSG keyword. In some cases, you might want to use the INCORROUT keyword in addition to the MSG keyword. For example:
- When a message describes conditions that do not apply to the actual program operation
- When no message text appears
- When message text appears to contain incorrect data
- When the program issues a message under inapplicable conditions

For more information about the INCORROUT keyword, see "Incorrect Output (INCORROUT) Procedure" on page 95.

To describe a message problem:

1. Look up the message in Part Part 1, "Messages," on page 1 for an explanation. The message description includes information on what action Tivoli Decision Support for z/OS takes and what action you must take in response to the message.

   If you plan to report the problem, gather and record the appropriate information before you take recovery action.
2. Write down the message identifier and the exact message text. If you contact IBM for assistance, the support center representative will require the exact message text.
3. Supplement the MSG keyword with the message identifier. You will use the supplemented keyword when searching the software support database.

   In this sample, DRL is the message prefix, identifying a Tivoli Decision Support for z/OS message, 0992 is the message number, and S is the severity code.

Read "Collecting Documentation about All Problems" on page 96 to complete your documentation of the problem.

Loop (LOOP) Procedure

Use the LOOP keyword to document any of these symptoms:
- Part of a program repeats itself.
- An Tivoli Decision Support for z/OS command does not complete after the expected time.
- Processor usage is at much higher than typical levels.

Note: If new output is being produced on the DRLOUT file, Tivoli Decision Support for z/OS is not in a loop.

Loop problems can involve many modules or a single module. Determine whether any messages are associated with the loop, such as a particular message always preceding the problem.

If the problem type is a loop, collect a dump of the Tivoli Decision Support for z/OS address space that is looping in addition to what is listed in "Information Needed for All Problems" on page 92.

Read "Collecting Documentation about All Problems" on page 96 to complete your documentation of the problem.

Incorrect Output (INCORROUT) Procedure

Use the INCORROUT keyword to document a problem when any of these symptoms appear:

- Unexpected output results.
- Output appears to be incorrect or incomplete.
- Output formats incorrectly.

Most incorrect output problems are due to improperly formatted user data, or other types of missing or incorrect data.

If the problem type is incorrect output:

1. Specify the type of output that is incorrect.
2. Specify how the output differs from what was expected.
   - Is all or part of the output missing?
   - Is all or part of the output incorrect?
   - Is the output duplicated?
   - Is there more output than expected?

   Note: Sometimes problems with other licensed programs or exit procedures can generate incorrect output.
3. Specify if any tables, reports, or update definitions have been modified. Consider objects that might have a connection with the incorrect output.
4. Read "Collecting Documentation about All Problems" on page 96 to complete your documentation of the problem.

Performance (PERFM) Procedure

Use the PERFM keyword to document any of these symptoms:

- Processing of Tivoli Decision Support for z/OS events or commands (including commands entered from a terminal in session with Tivoli Decision Support for z/OS) takes an excessive amount of time to complete.
- Tivoli Decision Support for z/OS performance characteristics do not meet explicitly stated expectations.

Note: Before reporting a performance problem with collect, consult the section about collect performance in the *Administration Guide*. It describes factors that affect performance and ways to improve collect performance.

If the problem type is performance, document the actual performance, the expected performance, and the source of information about the expected performance. If a document is the source, note the order number and page number of the document.

Read "Collecting Documentation about All Problems" on page 96 to complete your documentation of the problem.

Documentation (DOC) procedure

Use the DOC keyword when either of these symptoms appears:

- The Tivoli Decision Support for z/OS product library contains incomplete or inaccurate information about Tivoli Decision Support for z/OS installation, operation, customization, messages, or service.
- Published descriptions of Tivoli Decision Support for z/OS disagree with operational experience.

Note: Report a documentation problem only when it meets one or more of the criteria listed. For suggestions or comments about the documentation, use the reader's comment form at the back of the applicable book.

If the problem type is documentation:

1. Identify the order number of the book that contains the inaccurate information. The order number appears on the back cover of the book in the form *xxxx-xxxx-yy*, where *yy* is a two-digit revision code. (Include the revision code if it appears.)

   If you are reporting inaccurate information contained in a technical newsletter (TNL), identify the TNL number. The TNL number appears at the top of any page in the TNL in the form *xxxx-xxxx*.

   If you are reading a book online with BookManager®, you can find information about the book number by selecting Describe from the BookManager menu bar. When reporting a problem, include the topic number and heading.
2. Indicate all pages in the document that contain incorrect or incomplete information.
3. Prepare a description of the problem that was caused by the incorrect or incomplete information.
4. Read "Collecting Documentation about All Problems" to complete your documentation of the problem.

To describe a problem with online help:

1. Type `panelid on` on the command line to display panel IDs.
2. Indicate the panel ID of the panel that contains the incorrect or incomplete information.
3. Prepare a description of the problem that was caused by the incorrect or incomplete information.
4. See "Collecting Documentation about All Problems" to complete the required documentation.

Collecting Documentation about All Problems

About this task

Gather as much relevant information for any problem you encounter, even when you cannot identify the type of problem. Record the information on a copy of the checklist in "Completing a Tivoli Decision Support for z/OS Problem Description Worksheet" on page 98.

1. Record the Tivoli Decision Support for z/OS component ID—569510100. The component ID is the *first* keyword in the string, preceding the problem type and other modifier keywords.
2. Record the release number for the feature (see Table 1 on page 90).
3. Record the maintenance level—the program update tape (PUT) level or, if applicable, the custom-built program delivery offering (CBPDO) level.

4. Document any additional program temporary fixes (PTFs) or authorized program analysis reports (APARs) that have been applied to your level of Tivoli Decision Support for z/OS.
5. Reconstruct the sequence of events leading to the problem. Include any commands entered just before the problem occurred. Write down the exact scenario that led to the problem. Answer these questions:
   - What were you trying to do?
   - What did you expect to happen?
   - What did happen?
   - Can you recreate the problem?
6. Select the problem area that best fits the symptoms of your problem from those listed under "Identifying Symptoms and Selecting Keywords" on page 90 and write down the supplementary information required.
7. Specify your software environment according to "Specifying Your Software Environment" on page 91.
8. Specify any unique information about the problem or about your system. For example:
   - Indicate any other applications that were running when the problem occurred.
   - Describe all user modifications to any active Tivoli Decision Support for z/OS programs.

Reporting the Problem to IBM

About this task

To resolve some problems, you may need assistance from IBM support personnel. When you contact IBM for help, the support representative will ask for your account name and other customer identification, then a brief description of the problem.

You can increase the effectiveness of your call by preparing a string of keywords that describe the problem. Collecting the relevant documentation, such as message logs and checkpoint files, as well as noting software and hardware levels, also helps the representative to identify how the problem occurred. The support representative can then find out more quickly whether the problem has been reported before and locate a solution, or refer your problem to a higher level of support personnel.

Talking with a Level 1 Representative

About this task

The IBM Level 1 representative asks you to describe your problem. The problem description worksheet (see Appendix C, "Problem Description Worksheet for the Host," on page 119)contains most of the required information. The representative uses the information to form a symptom string and search the RETAIN database. The representative might ask you for more information to produce other keywords to aid in the search.

If the search does not produce a solution to the problem, the representative ensures that you have the necessary information to discuss the problem with a program specialist. At this point, your call is placed on a queue for a program specialist, also known as a level 2 support center representative.

Talking with a Level 2 Representative

About this task

To refine the keywords, the IBM Level 2 representative asks you for more information. Using the refined keyword, the representative performs additional searches of the database. If these searches do not produce a solution and the problem is new, the representative may enter an authorized program analysis report (APAR) into the support center database.

The level 2 representative assigns a number to your APAR. If you send IBM documentation about your problem, write this APAR number in the upper-right corner of each piece of documentation, and on the external label of each tape.

The APAR and any helpful documentation you send to IBM allow a program specialist to examine the problem in greater detail. If the solution requires a coding change, it is put into a temporary fix (PTF) and then sent to you. All information about the solution is entered into the RETAIN database. This procedure keeps the database current with problem descriptions and solutions. The information is then available for future RETAIN searches.

Preparing Supporting Materials

About this task

Keep all materials that show that the program does not work properly and present them on request.

The material required is listed in “Collecting Information about Any Problem” on page 91, in “Collecting Information about specific problems” on page 92, and in “Collecting Documentation about All Problems” on page 96.

To speed up the handling of your problem, keep as much information as possible in machine-readable form.

Completing a Tivoli Decision Support for z/OS Problem Description Worksheet

About this task

The Tivoli Decision Support for z/OS problem description worksheet shown in Appendix C, “Problem Description Worksheet for the Host,” on page 119 summarizes the information discussed in this chapter and serves as a checklist for recording all applicable facts about a problem. The combination of the information in this checklist and a symptom string helps you describe the problem accurately to IBM service personnel.

Chapter 4. Workstation Problem Determination Procedure

This chapter helps you classify and describe problems you encounter when using these features of Tivoli Decision Support for z/OS:

- Workstation Performance feature
- AS/400 System Performance feature (AS/400 featureAS/400 feature)

The discussions that follow can help you:

- Classify the type of problem you are having
- Collect information about a problem
- Complete the appropriate problem description worksheet, which you can find on pages Appendix D, "Problem Description Worksheet for the Workstation Performance Feature," on page 123 through Appendix E, "Problem Description Worksheet for the AS/400 System Performance Feature," on page 127.
- Report a problem to IBM

To some extent, the problem determination and reporting procedure is similar or identical with the procedure used on the host. When this is the case, there will be a reference to the corresponding section in Chapter 3, "Host Problem Determination Procedure," on page 89.

For more information, refer to

- *Distributed Systems Performance Feature Guide and Reference*, SH19-4018
- *AS/400 System Performance Feature Guide and Reference*, SH19-4019
- *Problem Determination Guide for the Service Coordinator*, S04G-1006

Classifying a Problem

See the information under "Classifying a Problem" on page 89.

Information Needed for All Problems

This section contains procedures for collecting specific types of information, and for collecting information about an unidentified problem.

Make a copy of the relevant worksheet (on pages Appendix D, "Problem Description Worksheet for the Workstation Performance Feature," on page 123 through Appendix E, "Problem Description Worksheet for the AS/400 System Performance Feature," on page 127) and use it to document information related to the problem you are having.

It is very important to completely document a problem before calling IBM for assistance.

Be prepared to provide:

- Information about what you were doing
- Any dialog messages

Specifying your Hardware and Software Environment

About this task

Be prepared to provide information on the hardware configuration:
- Machine type and model
- Screen type and resolution used
- Processor
- Memory

Specify the software in use when the problem occurred, including information about version, release and modification level. This information can typically be found on the help pull-down, under the **Product Information** or **About** options.

For the Workstation Performance featureWorkstation Performance feature:
- AIX
- TCP/IP
- Host Support File Transfer Program
- AIX SNA Services/6000
- AIX Host Connection Program/6000

For AS/400 System PerformanceAS/400 System Performance:
- Operating System/400® (OS/400)
- NetView® FTP
- NetView FTP/400

If you need more information, an IBM support center representative can help you gather it.

Collecting Documentation about All Problems

About this task

Gather as much relevant information for any problem you encounter, even when you cannot identify the type of problem. Record the information on a copy of one of the checklists on pages Appendix D, "Problem Description Worksheet for the Workstation Performance Feature," on page 123 through Appendix E, "Problem Description Worksheet for the AS/400 System Performance Feature," on page 127.

1. Record the Tivoli Decision Support for z/OS component ID—569510100—and release number.
2. Record the version, release, and modification levels.
3. Reconstruct the sequence of events leading to the problem. Include any commands entered just before the problem occurred. Write down the exact scenario that led to the problem. Answer these questions:
   - What were you trying to do?
   - What did you expect to happen?
   - What did happen?
   - Can you recreate the problem?
4. Select the problem area that best fits the symptoms of your problem from those listed under "Identifying Symptoms and Selecting Keywords" on page 90 and write down the supplementary information required.
5. Note the information described in "Specifying your Hardware and Software Environment."
6. Specify any unique information about the problem or about your system. For example:

- Indicate any other applications that were running when the problem occurred.
- Describe all user modifications to any active Tivoli Decision Support for z/OS programs.

Collecting Information about Specific Problems

About this task

The sections that follow outline procedures for gathering information about specific types of problems. If you cannot classify your problem, use the procedure in "Collecting Documentation about All Problems" on page 100.

TRAP

If your feature comes to an abnormal end, a TRAP screen will appear. Report what you were doing, and that this action resulted in a TRAP condition.

Message (MSG)

Use the MSG keyword to specify a message problem. Do this when:

- A message describes conditions that do not apply to actual Tivoli Decision Support for z/OS operation.
- The text of a message is incorrect.
- Tivoli Decision Support for z/OS issues an Tivoli Decision Support for z/OS message but the message is not documented or is not documented correctly.
- The message precedes an abend.

In some cases, you may want to use the INCORROUT keyword in addition to the MSG keyword. For example:

- When a message describes conditions that do not apply to the actual program operation
- When no message text appears
- When message text appears to contain incorrect data
- When the program issues a message under inapplicable conditions

For more information about the INCORROUT keyword, see "Incorrect Output (INCORROUT) Procedure" on page 102.

To describe a message problem:

1. Look up the message in the help. The message description includes information on what action the feature takes and what action you must take in response to the message. If you plan to report the problem, gather and record the appropriate information before you take recovery action.
2. Write down the message identifier and the exact message text. If you contact IBM for assistance, the support center representative will require the exact message text.

Read "Collecting Documentation about All Problems" on page 100 to complete your documentation of the problem.

Loop (LOOP) Procedure

Use the LOOP keyword to document any of these symptoms:

- Part of a program repeats itself.

- A Tivoli Decision Support for z/OS command does not complete after the expected time.
- Processor usage is at much higher than typical levels.

Loop problems can involve many modules or a single module. Find out whether any messages are associated with the loop, such as a particular message always preceding the problem.

Read "Collecting Documentation about All Problems" on page 100 to complete your documentation of the problem.

Incorrect Output (INCORROUT) Procedure

Use the INCORROUT keyword to document a problem when any of these symptoms appear:
- Unexpected output results.
- Output appears to be incorrect or incomplete.
- Output formats incorrectly.

Most incorrect output problems are due to improperly formatted user data, or other types of missing or incorrect data.

If the problem type is incorrect output:

1. Specify the type of output that is incorrect.
2. Specify how the output differs from what was expected.
   - Is all or part of the output missing?
   - Is all or part of the output incorrect?
   - Is the output duplicated?
   - Is there more output than expected?

   Note: Sometimes problems with other licensed programs can generate incorrect output.
3. Specify if any tables, reports, or update definitions have been modified. Consider objects that might have a connection with the incorrect output.
4. Read "Collecting Documentation about All Problems" on page 100 to complete your documentation of the problem.

Performance (PERFM) Procedure

Use the PERFM keyword to document any of these symptoms:
- Processing of Tivoli Decision Support for z/OS events or commands (including commands entered from a terminal in session with Tivoli Decision Support for z/OS) takes a lot of time to complete.
- Tivoli Decision Support for z/OS performance characteristics do not meet explicitly stated expectations.

If the problem type is performance, document the actual performance, the expected performance, and the source of information about the expected performance. If a document is the source, note the order number and page number of the document.

Read "Collecting Documentation about All Problems" on page 100 to complete your documentation of the problem.

Documentation (DOC) Procedure

Use the DOC keyword when either of these symptoms appears:

- The Tivoli Decision Support for z/OS product library contains incomplete or inaccurate information about Tivoli Decision Support for z/OS installation, operation, customization, messages, or service.
- Published descriptions of Tivoli Decision Support for z/OS disagree with operational experience.

Note: Report a documentation problem only when it meets one or more of the criteria listed. For suggestions or comments about the documentation, use the reader's comment form at the back of the applicable book.

If the problem type is documentation:

1. Identify the order number of the book that contains the inaccurate information. The order number appears on the back cover of the book in the form *xxxx-xxxx-yy*, where *yy* is a two-digit revision code. (Include the revision code if it appears.)

   If you are reporting inaccurate information in a technical newsletter (TNL), identify the TNL number. The TNL number appears at the top of any page in the TNL in the form *xxxx-xxxx*.

   If you are reading a book online with BookManager, you can find information about the book by selecting Describe from the BookManager menu bar. When reporting a problem, include the topic number and heading.
2. Indicate all pages in the document that contain incorrect or incomplete information.
3. Prepare a description of the problem that was caused by the incorrect or incomplete information.
4. Read "Collecting Documentation about All Problems" on page 100 to complete your documentation of the problem.

See "Collecting Documentation about All Problems" on page 100 to complete the required documentation.

Reporting the Problem to IBM

About this task

See the information under "Reporting the Problem to IBM" on page 97.

Completing the Tivoli Decision Support for z/OS Workstation Problem Description Worksheets

About this task

The problem description worksheets on pages Appendix D, "Problem Description Worksheet for the Workstation Performance Feature," on page 123 through Appendix E, "Problem Description Worksheet for the AS/400 System Performance Feature," on page 127 summarize the information discussed in this chapter and serve as checklists for recording all applicable facts about a problem.

Part 3. Appendixes

Appendix A. Dump File Content and Trace Options

This section contains diagnosis, modification, or tuning information for the log collector.

This appendix describes
- The contents of the DRLDUMP data set
- How to activate traces

Information in the Dump File

The dump file contains information gathered during abend or error situations processing. The dump file is allocated to the DRLDUMP data set. The dump file output is mainly of these types:
- Abend information
- Trace information
- Record or row reject information
- Error situations recording

Abend Information

The abend information is produced when an abend, system or user, occurs. The abend information contains these parts:
- Termination cause
- Module stack
- Register content
- Error data items

Termination Cause

The termination cause gives information on the abend type. Tivoli Decision Support for z/OS differs between:

- Abnormal termination

  Abnormal termination is used when the abend is not of the program check or program error type (see below). The abend code is given. If the abend is due to internal stack memory limitation the text is replaced by `Dynamic storage limit exceeded`. If the abend is due to a missing or invalid Tivoli Decision Support for z/OS service function the text is replaced by `Server absent or not initialized`. If the abend is due to an error in the program check service routine the text is replaced by `Program check in program check handler`.
- Program check

  Program check is used when an 0Cx abend is encountered. The program check type is given in plain text.
- Program error

  Program error is used when the abend is triggered as a result of a program failure. The program error supplies an identifier showing the point where the abend was invoked.

This part also gives information on
- Abending module name
- Abending module address
- Abend instruction offset in the abending module

Optionally, for program checks, 16 bytes of instruction code from the abend instruction offset are given.

Module Stack

The module stack shows the path of modules, from the one executed (normally DRLPLC), leading up to the abend module. For each module, the address of the module and the call offset to the next module in the path, is shown.

Register Content

The register content part shows the content of the general and float registers at the point of abend. This part also shows the latest call (in the form of a R14 offset) in the abending module, if applicable.

Error Data Items

If the abend type is program error, the error data items part might be included.

User Abend Codes

The Tivoli Decision Support for z/OS log collector issues these user abend codes:

U0001 Dynamic storage exceeded
U0002 Program error or system abend
U0003 Program error in basic service routines
U0004 Program check in the program check handler
U0005 A GETMAIN for virtual storage failed
U0016 Non-program error termination:
- DRLOUT or DRLDUMP not available
- SQL timeout (lock contention)
- SQL duplicate keys (GROUP BY columns different from key columns)

Note: Diagnostics for codes U0001 and U0002 are written to DRLDUMP. Diagnostics for codes U0003 and U0004 might be written. No diagnostics are written to DRLDUMP for code 0016; instead, a message tells you what occurred. When code 0005 occurs detailed information is written to the DRLDUMP data set. Specify a larger REGION and/or a smaller COLLECT buffer size.

Trace Information

Trace capabilities are implemented in the Tivoli Decision Support for z/OS dialog and in the log collector. You can also trace SQL statements. It is possible to trace only certain parts of the processing.

The descriptions that follow show how to set up the different traces, and what kind of output can be expected from each trace.

The dialog trace, started from the Tivoli Decision Support for z/OS dialogs, is described in “Dialog Trace” on page 110.

SQL Trace

Trace of SQL statements is requested by setting the trace variable '&ZZSQLSHOW', either in the PARM field of an EXEC or in the CALL statement. In the dialog, this is done by setting the Trace SQL calls option to 1 on the Process Tivoli Decision Support for z/OS Statements window (DRLDACML).

Two types of SQL trace are:

- Trace of SQL statements

  This trace is set by &ZZSQLSHOW=STMT. The trace shows executed SQL statements.

- Trace of SQL operations

  This trace is set by &ZZSQLSHOW=OPER. The trace shows the SQL operations executed (toward the internal SQL interface).

Both traces may be set by setting &ZZSQLSHOW=ALL. In fact, this is what is set if the SQL trace is set through the dialog.

Trace of Compiled Programs

Trace of compiled programs is requested by setting the trace variables &ZZCOMPSHOW, &ZZCOMPPROG and &ZZCOMPSNAP. The trace variables may be set either in the PARM field (for example, &ZZCOMPSNAP=PROGNAME), or by SET statements in the DRLIN file (for example, SET ZZCOMPSNAP='PROGNAME').

If a variable content, for example &ZZCOMPSHOW='PROGNAME', is identical with the first part of a program name or the whole name, the trace is produced.

&ZZCOMPSHOW
: Produces diagnostics snapshots of the compile process.

&ZZCOMPPROG
: Produces an image of a compiled module.

&ZZCOMPSNAP
: Produces diagnostics snapshots of data obtained by executing specific functions of the compiled module.

Use caution when using trace indicators. A lot of output may be produced and the DRLDUMP file might need reallocation.

Record or Row Reject Information

Record or row reject information is produced under normal processing when the processing of the record or row is interrupted.

There is a distinction between rejection of a record and rejection of a table row. When a record is rejected, both the input (record) and the output row (if applicable) are skipped. When a table row is rejected, only the output row is skipped.

Note: If a record or row is rejected when a table row is built, only one specific update definition will be affected. The record or row might still be valid for another definition having the same record or row as a base.

When a record or row is rejected, you will get a job termination return code (`warning`), and warning message(s) will be written to the output file allocated to DRLOUT.

The reasons for rejecting a record are:
- A record returned from a log procedure is bad.
- A record returned from a record procedure is bad.
- A record results in null in key (GROUP BY) columns in a (generated) table row.
- A record results in error in the DISTRIBUTE interval.
- A record results in error in the MERGE interval.

This information is written for a rejected record:
- Rejection text specifying one of the above reasons.
- Input record name (not for reason 1).

- The name of the output table (only for reasons 3, 4, and 5).
- The sequence number of the record in the input log.
- The names of any output columns set to null (only for reason 3).

The reasons for rejecting a row are:
- A table row results in null in key (GROUP BY) columns in a (generated) table row.
- A table row results in error in the DISTRIBUTE interval.
- A table row results in error in the MERGE interval.

This information is written for a rejected table row:
- Rejection text specifying one of the above reasons.
- The name of the input table.
- The name of the output table.
- The data of the input row (up to 4096 bytes).
- The names of any output columns set to null (only for reason 1).

Error Situations Recording

Several error situations occur for which information is logged. Whenever unexpected messages are shown, or an error has occurred, DRLDUMP will normally contain more information. Many of these situations are described here:

- Record results in null in data columns

  DRLDUMP will contain a text line identifying the record name and the sequence number of the record in the log plus a text line for each null column with the name of the column. In order not to fill DRLDUMP with these lines, they will be written only the first time they occur for each record type.
- SQL error

  DRLDUMP will contain the SQL return code plus the SQL descriptor with the sqltype, data, data indicator, and data length for each column in the call causing the error.
- DB2/CAF error

  DRLDUMP will contain the CAF return and reason codes. DB2/CAF errors will normally cause an abend of type `Program error` or `SQL error`. When this abend is due to CAF operations, the return and reason codes are part of the abend output. But if an error occurs during disconnect of CAF, no abend will be issued and the return and reason codes will be written as text to DRLDUMP.

Dialog Trace

IBM Service personnel might ask you to enable EXECs in the dialog for trace. To do this, type DRLESTRA on the command line in an Tivoli Decision Support for z/OS dialog.

The Set/Reset trace options window (Figure 4 on page 111) appears. For EXECs that are already enabled for trace, the word `Trace` is shown in the Option column.

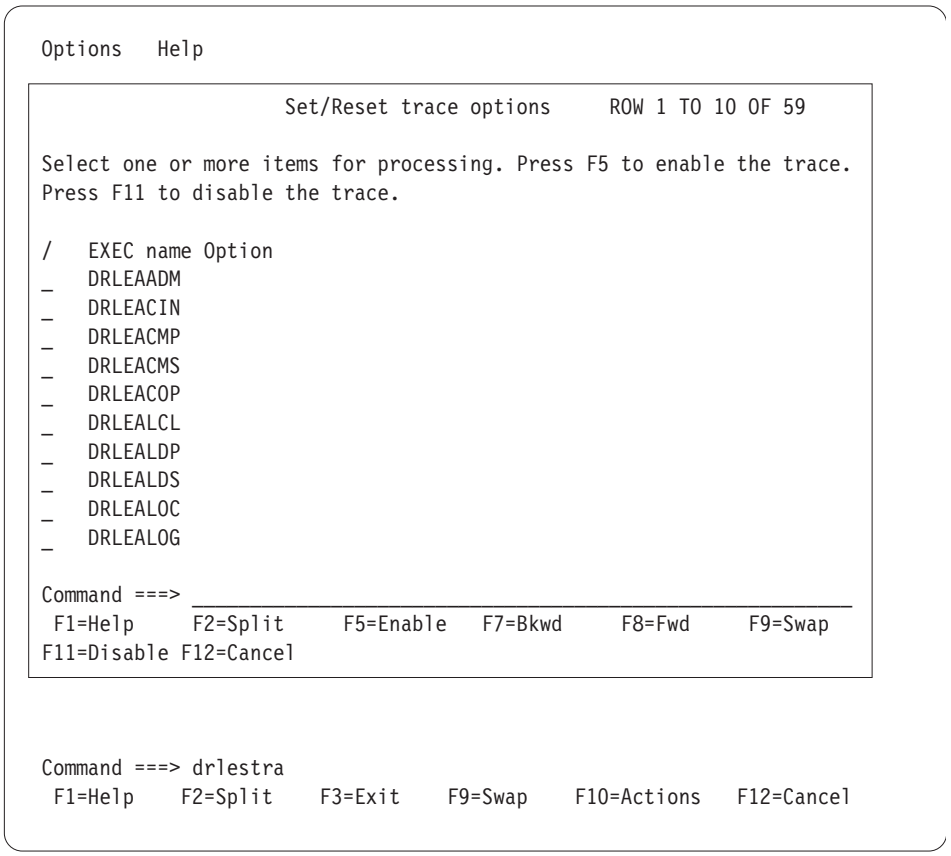

Figure 4. Set/Reset Trace Options Window

To enable an EXEC for trace, type any non-blank character in the select row and press F5. `Trace` appears in the Option column. To disable the trace for an EXEC, press F11. Alternatively, you can disable a trace quickly for all EXECs by typing DRLESTRA OFF on the command line on any Tivoli Decision Support for z/OS or ISPF command line.

When a trace is in effect, the dialog prompts you for a *trace directive*—a piece of information controlling what will be displayed. Refer to *TSO/E Version 2 REXX Reference* for information about what these directives look like and what data may be expected through their use.

To trace a complete session, type TSO EXECUTIL TS on the command line. This will trace all EXECs that are called during the session until it ends or until you type TSO EXECUTIL TE on the command line.

Note: Use caution when using this option; it produces a lot of output.

Appendix B. Using IBM-supplied Diagnostic and Service Aids

This section describes how to use IBM-supplied diagnostic and service aids.

First Failure Support Technology

First Failure Support Technology (FFST) is an IBM licensed program that improves availability for IBM and vendor software applications by providing immediate problem notification and first failure data capture. FFST incorporates several failure analysis and service support functions to simplify the problem determination process. The problem symptom strings and data areas that FFST collects are the keys to a fast and correct problem resolution.

This appendix describes how Tivoli Decision Support for z/OS uses FFST. For information on FFST operation (beyond what is provided here), refer to the FFST documentation.

Implementation

As described in "Operator Commands" on page 116, FFST works within its own address space as a started task. Messages about application-event (problem) detection are written to the MVS console and to one of the FFST message logs. They are ***not*** written to the detecting program's JES2 job log.

When an application module detects an error, the module triggers an FFST software probe—an FFST failure-capture macro. This macro gathers failure information about the error and calls FFST (through an FFST component executing as a separate task in the caller's address space). After recording the error, control returns to the Tivoli Decision Support for z/OS application, which ends with abend code U002. (See "User Abend Codes" on page 108.)

Tivoli Decision Support for z/OS distinguishes between these types of errors:

Programmed abends
Programmed abends trigger on *should-not-occur* points in the code. A literal that uniquely identifies the point in question follows the abend code. (See "Data-dump Content" on page 114 for information about PRCS/ST abends.)

System abends
An ESTAE routine set up during initialization of the Tivoli Decision Support for z/OS application captures system abends.

Program-exception abends
An ESPIE routine set up during initialization captures program-exception abends.

Note: Refer to the *Administration Guide* for information about initialization of Tivoli Decision Support for z/OS applications.

Because FFST generalizes information capture to support both programmed-exit errors and system errors, Tivoli Decision Support for z/OS uses only one FFST type-of-failure code—ABEND—regardless of the type of error.

Two of the three modules containing FFST code form separate load modules:

- The DRLPXCFF load module contains the FFST Tivoli Decision Support for z/OS configuration module, which is called when FFST is initialized. If this fails, no dump is generated, but the DRL0980E message (described in "Log Collector and Installation Preprocessing Messages" on page 3) is written to the DRLPDUMP data set.
- The DRLPXTFF load module contains the FFST data-structure table, which defines the data areas that are to be part of the data dump. The module is referenced when the software probe is executed.

The third module, DRLPXAFF, contains the software probe. It is linked to the Tivoli Decision Support for z/OS load modules requesting the dump service.

Note: Information passed to FFST is also written to the DRLDUMP data set.

Data-dump Content

This section describes these elements of an FFST data dump:
- Message
- Symptom string
- Tivoli Decision Support for z/OS data areas

FFST Message

The message part of an FFST data dump contains:
- The name of the detecting operation
- The identifier of the triggered software probe
- The name of the data set and volume that contain the raw customized dump
- The primary symptom string
- Optionally, other messages as a result of the processing

  For example, if a generic alert is requested and the NetView receiver is not active, messages EPW0403E and EPW0412I appear.

  Note: Messages beginning with EPW are issued by FFST. Refer to the FFST documentation.

The message part of the FFST data dump is written to the MVS console and to one of the FFST message logs.

FFST Symptom String

The FFST dump contains two types of symptom strings:

- Primary symptom string

  The primary symptom string contains a set of keywords and values that summarize the failure. The string might look like this:

  ```
  PIDS/569510100 LVLS/120 PCSS/DRLCOL01 AB/U002 PRCS/ST RIDS/DRLPCOIT
  ADRS/000000A0 FLDS/INVCALL
  ```

  The first three parameters do not vary. The remaining parameters vary, depending on the error.

  PIDS Product identification
  LVLS Level identification (version, release and modification ID)
  PCSS The software probe ID
  AB Abend code
  PRCS Abend type (AB/PC/ST/ER)
  RIDS Name of module in error
  ADRS Offset within the module in error
  FLDS Error literal

- Secondary symptom string

  The secondary symptom string, which contains register information about the error, is only partly valid. Information on a register's content begins where the FFST macro is first executed (not the point of failure). You can find complete register information in one of the data areas—the abend register (as described in "Tivoli Decision Support for z/OS Data Areas"). Registers 2 through 10 are restored to the state they were in before the abend, so these may be valid. Check this before using the information displayed from "Areas around registers" (a part of the data-dump output described in "Data-dump Formatter").

Tivoli Decision Support for z/OS Data Areas

An FFST data dump contains these Tivoli Decision Support for z/OS data areas:

- Abends

  The abend data area contains information about the module in error:
  - Module name
  - Storage address of the error
  - Corresponding offset in the module
  - Optionally, for program checks, 16 bytes of instruction code, beginning at the error address, are given

  The first line is abend-type dependent. The PRCS keyword contains the abend type:

  AB Abnormal termination *abend code*; Dynamic storage limit exceeded; Server absent or not initialized

  PC Program check *check code* or *code description*

  ST Program error *error reason*

  ER Program error *undefined*

- Stacks

  The stack data area shows the stack of modules preceding the one in error (their names and the offset from which control was passed).

- Abend registers

  The abend-register data area contains the true content of the registers at the point of error. As explained in "FFST Symptom String" on page 114, **check this data area**, because the content of the secondary symptom string is not completely valid.

- Last calls

  The last-call data area contains the most recent R14 (return address) information preceding the error.

- Dump-items header

  The dump-items header data area is provided only (and optionally) when an abend of the ST type occurs; this abend type provides a reason for the error. If the area used to display dump items is too small, you will see `Abend items area shortage.`

- Dump items (optional)

  Up to 16 dump items are listed for ST-type abends.

Data-dump Formatter

You invoke the FFST data-dump formatter with the FFSTDF command. Because the command accesses ISPF panels from an FFST panel library, the panels must be

allocated to ISPPLIB before issuing the command. (Refer to *ISPF Dialog Management Guide and Reference*, SC32-4266 for more information about panel allocation.)

When you invoke the formatter, you are prompted for the name of the data-dump data set (created when the error occurs). The name of a data-dump data set contains four qualifiers:

hlq.systemname.dumpqual*.DMP*xxxxx

where:

hlq the high-level qualifier, is FFST

systemname
is the name of the MVS system specified in SYS1.PARMLIB, member IEASYS00, operand SYSNAME

dumpqual
is a name specified by the DUMPQUAL macro operand of the FFST EPWCONFG macro For Tivoli Decision Support for z/OS, the macro specifies PRFMVS.

xxxxx is a sequence number from 00001 to 99999

Besides the data set name, specify whether the formatted data dump is to go to the printer (P), the terminal (T), or both (B).

Then specify which output is to be included in the dump:

- Symptom string data: Y
- FFST work area: N
- Data structure table(s): N
- Aread around registers: Y
- Data structures: Y

YNNYY is the default. *Area around registers* is optional, but, depending on the error type, the information might be useful.

The next panel (EPWFDFOD) prompts you for information about the output data set (if output destination is not T), including disposition and size information. Set the figures for primary and secondary blocks to 2 and 5, respectively.

A third panel (EPWFDFDD) appears the first time you request a formatted data dump. This panel prompts you for a data set name to be used by Interactive Problem Control System (IPCS) during data-dump formatting. (The allocated data set will be a VSAM data set.) Use this panel to set the control-interval size (CI size) to 4096.

Operator Commands

This MVS START command starts FFST:

START *procname*

For *procname*, use the name of the FFST procedure. For ease of use, follow *procname* with *shortname* (to be used in MODIFY commands)—for example, FFSTPROC.FFST.

The MVS STOP command stops FFST.

Tivoli Decision Support for z/OS application-specific information can be preset in FFST, through the FFST START-command list allocated to the FFST procedure, *ddname* FFSTPARM. Alternatively, you can use the MVS MODIFY command to introduce Tivoli Decision Support for z/OS application-specific information. The identifiers are:

PRFMVS
Application identification of Tivoli Decision Support for z/OS, referenced through the FFST operand APPLID.

DRLCOL01
Software probe identification of Tivoli Decision Support for z/OS, referenced through the FFST operand PROBEID.

PRFMDUMP
Data-dump qualifier of Tivoli Decision Support for z/OS. The qualifier is not preset by Tivoli Decision Support for z/OS. Set it using either parameter input or a MODIFY command, like this:

```
MVS MODIFY FFST,ACTION=CHANGE,APPLID=PRFMVS,
VENDOR=IBM,DUMPQUAL=PRFMDUMP
```

Output Options

FFST includes output options that control data dump generation and registration:
- DUMP generates data dumps.
- SYMRC generates symptom records.
- GENAL generates alerts to NetView.
- SYMST generates symptom strings.
- SUPDP suppresses duplicate dumps.

The FFST configuration module uses the default values for DUMP, NOSYMRC, GENAL, SYMST, and NOSUPDP. All these values can be changed.

Symptom records are written to the SYS1.LOGREC data set and are viewed using the Environmental Record Editing and Printing (EREP) feature of the MVS operating system.

Note: Only authorized programs can produce symptom records. Tivoli Decision Support for z/OS, when run on releases prior to MVS/ESA Version 4 is not authorized to produce symptom records.

Appendix C. Problem Description Worksheet for the Host

Customer number: _____ Date: _____

Problem number: _____ APAR number: _____

Program specification—program number 5695-101
Tivoli Decision Support for z/OS
component IDs and release levels: _____

PUT levels or CBPDO levels: _____

Additional PTF and APAR fixes applied: _____

Problem description

First indication of the problem: _____

_____

What were you trying to do? _____

_____

What did you expect would happen? _____

_____

What did happen? _____

_____

Has the function worked before? _____

_____

Can you recreate the problem? _____

_____

Figure 5. Tivoli Decision Support for z/OS Problem Description Worksheet (Part 1 of 3)

Type of failure

Choose one or more of the following problem-type keywords:

__ ABEND code: _____

Occurred in module: _____ Date of the module's compilation: _____

Offset into the module: _____

__ MSG. Identifier: _____ Text: _____

Identifier: _____ Text: _____

__ LOOP. Description: _____

_____

__ INCORROUT. Type of incorrect output generated:_____

_____

__ PERFM. Operating environment:

Own or modified update definitions? _____

Own exit procedures used? _____

Other licensed programs active? _____

User modifications to the program? _____

__ DOC. Order or TNL number:_____ Page(s):_____ Description:_____

Figure 6. Tivoli Decision Support for z/OS Problem Description Worksheet (Part 2 of 3)

Software used

Specify the software (version, release, modif. level) used at the time the problem occurred:

MVS _____

__ TSO/E _____ __ ISPF _____

__ QMF _____ __ DB2 _____

__ GDDM _____ __ C _____

Specify the version, release, and modification level of the systems for which data was collected (for example, IMS/ESA 3.3 or RMF 4.2):

_____

_____

_____

Are you using your own definitions or have you modified IBM supplied definitions? _____

Can you remove or bypass these definitions and recreate the problem? _____

Are you running any exits of your own with Tivoli Decision Support for z/OS? _____

If so, which ones? _____

Can you remove or bypass your own exits and recreate the problem? _____

Is there any other user-written code (EXECs, programs, panel changes) executing in theTivoli Decision Support for z/OS environment?

_____

Can these be bypassed and the function you were attempting then be successfully executed?

_____

Note: You can use information marked with an asterisk(*) to supplement your keyword string.

Figure 7. Tivoli Decision Support for z/OS Problem Description Worksheet (Part 3 of 3)

Note: You may copy this problem description sheet without payment or royalty, provided that each reproduction is done without alteration.

Appendix D. Problem Description Worksheet for the Workstation Performance Feature

Customer number: _____ Date: _____

Problem number: _____ APAR number: _____

Program specification—program number 5695-101
Tivoli Decision Support for z/OS
Workstation Performance feature release level: _____

Problem description

First indication of the problem: _____

_____

What were you trying to do? _____

_____

What did you expect would happen? _____

_____

What did happen? _____

_____

Has the function worked before? _____

_____

Can you recreate the problem? _____

_____

Type of failure

Choose one or more of the following problem-type keywords:

__ MSG. Identifier: _____ Text: _____

Identifier: _____ Text: _____

__ LOOP. Description: _____

_____

_____

__ INCORROUT. Type of incorrect output generated:_____

_____

_____

__ PERFM. Operating environment:

Other licensed programs active? _____

__ DOC. Order or TNL number:_____ Page(s):_____ Description:_____

Hardware used

Specify the hardware used at the time the problem occurred:

Model _____

Processor _____ Screen _____

Memory _____

Software used

Specify the software (version, release, modification level) used at the time the problem occurred:

AIX _____

__ TCP/IP _____

__ Host Support File Transfer Program _____

__ AIX SNA Services/6000 _____

__ AIX Host Connection Program/6000 _____

Figure 8. Workstation Performance Feature Problem Description Worksheet

Note: You may copy this problem description sheet without payment or royalty, provided that each reproduction is done without alteration.

Appendix E. Problem Description Worksheet for the AS/400 System Performance Feature

Customer number: _____ Date: _____

Problem number: _____ APAR number: _____

Program specification—program number 5695-101
Tivoli Decision Support for z/OS
AS/400 feature release level: _____

Problem description

First indication of the problem: _____

_____

What were you trying to do? _____

_____

What did you expect would happen? _____

_____

What did happen? _____

_____

Has the function worked before? _____

_____

Can you recreate the problem? _____

_____

Type of failure

Choose one or more of the following problem-type keywords:

__ MSG. Identifier: _____ Text: _____

Identifier: _____ Text: _____

__ LOOP. Description: _____

_____

_____

__ INCORROUT. Type of incorrect output generated:_____

_____

_____

__ PERFM. Operating environment:

Other licensed programs active? _____

__ DOC. Order or TNL number:_____ Page(s):_____ Description:_____

Hardware used

Specify the hardware used at the time the problem occurred:

Model _____

Processor _____ Screen _____

Memory _____

Software used

Specify the software (version, release, modification level) used at the time the problem occurred:

OS/400 _____

__ NetView FTP _____

__ NetView FTP/400 _____

Figure 9. AS/400 Feature Problem Description Worksheet

Note: You may copy this problem description sheet without payment or royalty, provided that each reproduction is done without alteration.

Appendix F. Support information

If you have a problem with your IBM software, you want to resolve it quickly. This section describes the following options for obtaining support for IBM software products:

- "Searching knowledge bases"
- "Obtaining fixes" on page 132
- "Receiving weekly support updates" on page 132
- "Contacting IBM Software Support" on page 133

Searching knowledge bases

You can search the available knowledge bases to determine whether your problem was already encountered and is already documented.

The following tools are available to help you search IBM knowledge bases:

- **IBM Software Support Toolbar** is a browser plug-in that provides you with a mechanism to easily search IBM support sites. You can download the toolbar at: www.ibm.com/software/support/toolbar/.

The following resources describe how to optimize your search results:

- Searching the IBM Support website
- Using the Google search engine

When searching for information, use keywords such as the product name or specific plug-in names to narrow down your search results.

Searching the information center

IBM provides extensive documentation that can be installed on your local computer or on an intranet server. You can use the search function of this information center to query conceptual information, instructions for completing tasks, and reference information.

Searching the Internet

If you cannot find an answer to your question in the information center, search the Internet for the latest, most complete information that might help you resolve your problem.

To search multiple Internet resources for your product, use the **Web search** topic in your information center. In the navigation frame, click **Troubleshooting and support ▸ Searching knowledge bases** and select **Web search**. From this topic, you can search a variety of resources, including the following:

- IBM technotes
- IBM downloads
- IBM developerWorks®
- Forums and newsgroups
- Google

Obtaining fixes

A product fix might be available to resolve your problem. To determine what fixes are available for your IBM software product, follow these steps:

1. Go to the IBM Software Support Web site at http://www.ibm.com/software/support/.
2. Click **Downloads and drivers** in the **Support topics** section.
3. Select the **Software** category.
4. Select a product in the **Sub-category** list.
5. In the **Find downloads and drivers by product** section, select one software category from the **Category** list.
6. Select one product from the **Sub-category** list.
7. Type more search terms in the **Search within results** if you want to refine your search.
8. Click **Search**.
9. From the list of downloads returned by your search, click the name of a fix to read the description of the fix and to optionally download the fix.

For more information about the types of fixes that are available, see the *IBM Software Support Handbook* at http://www-304.ibm.com/support/customercare/sas/f/handbook/home.html.

Receiving weekly support updates

To receive weekly e-mail notifications about fixes and other software support news, follow these steps:

1. Go to the IBM Software Support Web site at http://www.ibm.com/support/us/.
2. Click **My support** in the upper right corner of the page.
3. If you have already registered for **My support**, sign in and skip to the next step. If you have not registered, click **register now**. Complete the registration form using your e-mail address as your IBM ID and click **Submit**.
4. Click **Edit profile**.
5. In the **Products** list, select **Software**. A second list is displayed.
6. In the second list, select a product segment, for example, **Application servers**. A third list is displayed.
7. In the third list, select a product sub-segment, for example, **Distributed Application & Web Servers**. A list of applicable products is displayed.
8. Select the products for which you want to receive updates, for example, **IBM HTTP Server** and **WebSphere® Application Server**.
9. Click **Add products**.
10. After selecting all products that are of interest to you, click **Subscribe to email** on the **Edit profile** tab.
11. Select **Please send these documents by weekly email**.
12. Update your e-mail address as needed.
13. In the **Documents** list, select **Software**.
14. Select the types of documents that you want to receive information about.
15. Click **Update**.

If you experience problems with the **My support** feature, you can obtain help in one of the following ways:

Online
Send an e-mail message to erchelp@ca.ibm.com, describing your problem.

By phone
Call 1-800-IBM-4You (1-800-426-4968).

Contacting IBM Software Support

IBM Software Support provides assistance with product defects.

Before contacting IBM Software Support, your company must have an active IBM software maintenance contract, and you must be authorized to submit problems to IBM. The type of software maintenance contract that you need depends on the type of product you have:

- For IBM distributed software products (including, but not limited to, Tivoli, Lotus®, and Rational® products, as well as DB2 and WebSphere products that run on Windows, or UNIX operating systems), enroll in Passport Advantage® in one of the following ways:

  Online
  Go to the Passport Advantage Web site at http://www.lotus.com/services/passport.nsf/ WebDocs/Passport_Advantage_Home and click **How to Enroll**.

  By phone
  For the phone number to call in your country, go to the IBM Software Support Web site at http://techsupport.services.ibm.com/guides/contacts.html and click the name of your geographic region.
- For customers with Subscription and Support (S & S) contracts, go to the Software Service Request Web site at https://techsupport.services.ibm.com/ssr/login.
- For customers with IBMLink, CATIA, Linux, S/390®, iSeries, pSeries, zSeries, and other support agreements, go to the IBM Support Line Web site at http://www.ibm.com/services/us/index.wss/so/its/a1000030/dt006.
- For IBM eServer™ software products (including, but not limited to, DB2 and WebSphere products that run in zSeries, pSeries, and iSeries environments), you can purchase a software maintenance agreement by working directly with an IBM sales representative or an IBM Business Partner. For more information about support for eServer software products, go to the IBM Technical Support Advantage Web site at http://www.ibm.com/servers/eserver/techsupport.html.

If you are not sure what type of software maintenance contract you need, call 1-800-IBMSERV (1-800-426-7378) in the United States. From other countries, go to the contacts page of the *IBM Software Support Handbook* on the Web at http://techsupport.services.ibm.com/guides/contacts.html and click the name of your geographic region for phone numbers of people who provide support for your location.

To contact IBM Software support, follow these steps:

1. "Determining the business impact" on page 134
2. "Describing problems and gathering information" on page 134
3. "Submitting problems" on page 134

Determining the business impact

When you report a problem to IBM, you are asked to supply a severity level. Therefore, you need to understand and assess the business impact of the problem that you are reporting. Use the following criteria:

Severity 1
The problem has a *critical* business impact. You are unable to use the program, resulting in a critical impact on operations. This condition requires an immediate solution.

Severity 2
The problem has a *significant* business impact. The program is usable, but it is severely limited.

Severity 3
The problem has *some* business impact. The program is usable, but less significant features (not critical to operations) are unavailable.

Severity 4
The problem has *minimal* business impact. The problem causes little impact on operations, or a reasonable circumvention to the problem was implemented.

Describing problems and gathering information

When describing a problem to IBM, be as specific as possible. Include all relevant background information so that IBM Software Support specialists can help you solve the problem efficiently. To save time, know the answers to these questions:

- What software versions were you running when the problem occurred?
- Do you have logs, traces, and messages that are related to the problem symptoms? IBM Software Support is likely to ask for this information.
- Can you re-create the problem? If so, what steps were performed to re-create the problem?
- Did you make any changes to the system? For example, did you make changes to the hardware, operating system, networking software, and so on.
- Are you currently using a workaround for the problem? If so, be prepared to explain the workaround when you report the problem.

Submitting problems

You can submit your problem to IBM Software Support in one of two ways:

Online
Click **Submit and track problems** on the IBM Software Support site at https://www-947.ibm.com/support/entry/portal/support?lnk=msdTS-supo-usen. Type your information into the appropriate problem submission form.

By phone
For the phone number to call in your country, go to the contacts page of the *IBM Software Support Handbook* at http://www-304.ibm.com/support/customercare/sas/f/handbook/home.html and click the name of your geographic region.

If the problem you submit is for a software defect or for missing or inaccurate documentation, IBM Software Support creates an Authorized Program Analysis Report (APAR). The APAR describes the problem in detail. Whenever possible, IBM Software Support provides a workaround that you can implement until the

APAR is resolved and a fix is delivered. IBM publishes resolved APARs on the Software Support Web site daily, so that other users who experience the same problem can benefit from the same resolution.

Notices

This information was developed for products and services offered in the U.S.A. IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing
IBM Corporation
North Castle Drive
Armonk, NY 10504-1785 U.S.A.

For license inquiries regarding double-byte (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

IBM World Trade Asia Corporation
Licensing
2-31 Roppongi 3-chome, Minato-ku
Tokyo 106, Japan

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law:

INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement might not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this IBM product and use of those Web sites is at your own risk.

IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

IBM Corporation
2Z4A/101
11400 Burnet Road
Austin, TX 78758 U.S.A.

Such information may be available, subject to appropriate terms and conditions, including in some cases payment of a fee.

The licensed program described in this document and all licensed material available for it are provided by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement or any equivalent agreement between us.

Any performance data contained herein was determined in a controlled environment. Therefore, the results obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurement may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

All statements regarding IBM's future direction or intent are subject to change or withdrawal without notice, and represent goals and objectives only.

All IBM prices shown are IBM's suggested retail prices, are current and are subject to change without notice. Dealer prices may vary.

This information is for planning purposes only. The information herein is subject to change before the products described become available.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to the names and addresses used by an actual business enterprise is entirely coincidental.

COPYRIGHT LICENSE:

This information contains sample application programs in source language, which illustrate programming techniques on various operating platforms. You may copy, modify, and distribute these sample programs in any form without payment to

IBM, for the purposes of developing, using, marketing or distributing application programs conforming to the application programming interface for the operating platform for which the sample programs are written. These examples have not been thoroughly tested under all conditions. IBM, therefore, cannot guarantee or imply reliability, serviceability, or function of these programs. You may copy, modify, and distribute these sample programs in any form without payment to IBM for the purposes of developing, using, marketing, or distributing application programs conforming to IBM's application programming interfaces.

If you are viewing this information in softcopy form, the photographs and color illustrations might not display.

Trademarks

IBM, the IBM logo, and ibm.com are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the Web at "Copyright and trademark information" at www.ibm.com/legal/copytrade.shtml.

Bibliography

TDS publications

Administration Guide and Reference, SH19-6816
Resource Accounting for z/OS, SH19-4495
AS/400 System Performance Feature Guide and Reference, SH19-4019
CICS Performance Feature Guide and Reference, SH19-6820
Distributed Systems Performance Feature Guide and Reference, SH19-4018
Guide to Reporting, SH19-6842
IMS Performance Feature Guide and Reference, SH19-6825
Language Guide and Reference, SH19-6817
Messages and Problem Determination, SH19-6902
Network Performance Feature Installation and Administration, SH19-6901
Network Performance Feature Reference, SH19-6822
Network Performance Feature Reports, SH19-6821
System Performance Feature Guide, SH19-6818
System Performance Feature Reference Volume I, SH19-6819
System Performance Feature Reference Volume II, SH19-4494
Usage and Accounting Collector User Guide, SC23-7966

Glossary

A

administration
A Tivoli Decision Support for z/OS task that includes maintaining the database, updating environment information, and ensuring the accuracy of data collected.

administration dialog
A set of host windows used to administer Tivoli Decision Support for z/OS.

C

collect A process used by Tivoli Decision Support for z/OS to read data from input log data sets, interpret records in the data set, and store the data in DB2 tables in the Tivoli Decision Support for z/OS database.

component
An optionally installable part of a Tivoli Decision Support for z/OS feature. Specifically in Tivoli Decision Support for z/OS, a component refers to a logical group of objects used to collect log data from a specific source, to update the Tivoli Decision Support for z/OS database using that data, and to create reports from data in the database.

control table
A predefined Tivoli Decision Support for z/OS table that controls results returned by some log collector functions.

D

data table
A Tivoli Decision Support for z/OS table that contains performance data used to create reports.

E

environment information
All of the information that is added to the log data to create reports. This information can include data such as performance groups, shift periods, installation definitions, and so on.

exit A log or record procedure.

I

internal data type
A data type used within Tivoli Decision Support for z/OS during the processing of data.

K

key columns
The columns of a DB2 table that together constitute the key.

key value
Value that is used to sort records into groups.

L

log collector
A Tivoli Decision Support for z/OS program that processes log data sets and provides other Tivoli Decision Support for z/OS services.

log collector language
Tivoli Decision Support for z/OS statements used to supply definitions to and invoke services of the log collector.

log data set
Any sequential data set that is used as input to Tivoli Decision Support for z/OS.

log definition
The description of a log data set processed by the log collector.

log procedure
A program module that is used to process all record types in certain log data sets.

lookup expression
An expression that specifies how a value is obtained from a lookup table.

lookup table
A Tivoli Decision Support for z/OS DB2 table that contains grouping, translation, or substitution information.

P

Tivoli Decision Support for z/OS database
A set of DB2 tables that includes data tables, lookup tables, system tables, and control tables.

purge condition
Instruction for purging old data from the Tivoli Decision Support for z/OS database.

R

record definition
The description of a record type contained in the log data sets used by Tivoli Decision Support for z/OS, including detailed record layout and data formats.

record procedure
A program module that is called to process some types of log records.

record type
The classification of records in a log data set.

repeated section
A section of a record that occurs more than once, with each occurrence adjacent to the previous one.

report definition language
Tivoli Decision Support for z/OS statements used to define reports and report groups.

report group
A collection of Tivoli Decision Support for z/OS reports that can be referred to by a single name.

reporting dialog
A set of host or workstation windows used to request reports.

resource group
A collection of network resources that are identified as belonging to a particular department or division. Resources are organized into groups to reflect the structure of an organization.

resource information
Environment information that describes the elements in a network.

S

section
A structure within a record that contains one or more fields and may contain other sections.

source In an update definition, the record or DB2 table that contains the data used to update a Tivoli Decision Support for z/OS DB2 table.

system table
A DB2 table that stores information that controls log collector processing, Tivoli Decision Support for z/OS dialogs, and reporting.

T

target In an update definition, the DB2 table in which Tivoli Decision Support for z/OS stores data from the source record or table.

threshold
The maximum or minimum acceptable level of usage. Usage measurements are compared with threshold levels.

U

update definition
Instructions for entering data into DB2 tables from records of different types or from other DB2 tables.

V

view An alternative representation of data from one or more tables. A view can include all or some of the columns contained in the table on which it is defined.

Index

A

abend code U002 113
abend codes
  user 108
abend information 107
ABEND keyword 93
abend registers (in FFST data dump) 115
abends (in FFST data dump) 115
abends, types of 113
accessibility x
analysis using FFST, failure 113
APAR (authorized program analysis report) 98
areas, Tivoli Decision Support for z/OS data (in FFST dump) 115
AS/400 feature messages 50
AS/400 featureAS/400 feature
  problem description worksheet 127
  problem determination 99
AS/400 System Performance featureAS/400 System Performance feature
  problem description worksheet 127
  problem determination 99
audience for this book, intended vii
authorized program analysis report (APAR) 98

B

batch reporting messages 55
books viii, ix

C

calls, last (in FFST data dump) 115
capture, first failure data 113
checklist, Tivoli Decision Support for z/OS problem description 119, 123, 127
CICS feature messages 48
classifying problems 99
code U002, abend 113
collecting information
  about specific problems 92
collector messages, log 3
commands, FFST operator 116
component ID 96, 100
conventions
  typeface xi
customer support 133

D

data areas, Tivoli Decision Support for z/OS (in FFST dump) 115
data capture, first failure 113
data-dump content, FFST 114
data-dump formatter, FFST 115
DEFINE/DROP report and report group messages 51
description worksheet, Tivoli Decision Support for z/OS problem 119
  AS/400 System Performance featureAS/400 System Performance feature 127
  Workstation Performance featureWorkstation Performance feature 123
dialog messages, help vii
dialog trace 110
DOC (documentation) keyword 95, 102
documentation
  TDS 141
DRL0317I DRL0318I DRL0319I DRL0320I DRL0321I DRL0322I 24
DRL0323I DRL0324I DRL0325I DRL0326I DRL0327I 24
DRL0404I DRL0405I DRL0406I 30
DRL0445I DRL0446I DRL0447I 31
DRL3120I 57
DRLDUMP 107
DROP/DEFINE report and report group messages 51
dump content, FFST data- 114
dump file 107
dump formatter, FFST data- 115
dump items (in FFST data dump) 115

E

education x
environment
  host
    software 91
  workstation
    hardware 100
    software 100
error data items 108
error situations recording 110
exception abends, program- 113
exit messages
  CICS 48
  IMS 37

F

failure analysis using FFST 113
FFST (First Failure Support Technology) 113
first failure data capture 113
First Failure Support Technology (FFST)
  data-dump content 114
    message 114
    symptom string 114
    Tivoli Decision Support for z/OS data areas 115
  data-dump formatter 115
First Failure Support Technology (FFST) *(continued)*
  implementation 113
  load modules 113
  operator commands 116
  output options 117
fixes, obtaining 132
formatter, FFST data-dump 115

H

hardware 100
help for dialog messages vii
host messages
  from the AS/400 feature 50
  from the CICS feature 48
  from the IMS feature 37
  generated by REXX utilities
    batch reporting 55
    DEFINE/DROP report and report group 51
  generated by the log collector 3
  generated by the log data manager 64
  generated by the REXX-SQL interface 35
  Information/Management 63
  installation preprocessing 3
  migration 59
host problem determination 89
how to use this book vii

I

implementation, FFST 113
IMS feature messages 37
INCORROUT (incorrect output) keyword 95, 102
information centers, searching for problem resolution 131
Information/Management messages 63
interface messages, REXX-SQL 35
Internet
  searching for problem resolution 131
invoking the FFST data-dump formatter 115

K

keyword
  ABEND 93
  DOC (documentation) 95, 102
  INCORROUT (incorrect output) 95, 102
  LOOP 94, 101
  MSG (message) 93, 101
  PERFM (performance) 95, 102
  string 89
keywords 90
keywords for problems 89

knowledge bases, searching for problem resolution 131

L

last calls (in FFST data dump) 115
load modules for FFST 113
log collector messages 3
log data manager messages 64
LOOP keyword 94, 101

M

manuals viii, ix
  TDS 141
message failure 93, 101
message, FFST 114
messages, host
  from the AS/400 feature 50
  from the CICS feature 48
  from the IMS feature 37
  generated by REXX utilities
    batch reporting 55
    DEFINE/DROP report and report group 51
  generated by the log collector 3
  generated by the log data manager 64
  generated by the REXX-SQL interface 35
  Information/Management 63
  migration 59
messages, issued on AS/400 system
  generated by the log collector 85
messages, Usage and Accounting Collector
  generated by Usage and Accounting Collector 69
messages, Web Reporting
  generated by Web Reporting 68
messages, workstation vii
migration messages 59
module stack 108
modules for FFST, load 113
MSG (message) keyword 93, 101

O

online publications
  accessing ix
operator commands, FFST 116
options, FFST output 117
output options, FFST 117

P

PARM field 109
PERFM (performance) keyword 95, 102
primary symptom string, FFST 114
problem
  collecting information about 91
  documentation about 96, 100
  information about 92, 101
  keywords 90
  reporting to IBM 97, 103
problem description worksheet 123, 127
  host 119
  workstation
    AS/400 System Performance featureAS/400 System Performance feature 127
    Workstation Performance featureWorkstation Performance feature 123
problem determination
  describing problems 134
  determining business impact 134
  host 89
  submitting problems 134
  workstation 99
problem keywords 89
problems
  information about 99
program temporary fix (PTF) 98
program-exception abends 113
programmed abends 113
PTF (program temporary fix) 98
publications viii
  accessing online ix
  TDS 141

R

register content 108
registers, abend (in FFST data dump) 115
reject information
  record or row 109
release numbers 90
report and report group messages, DEFINE/DROP 51
reporting messages, batch 55
RETAIN database 90
REXX utility messages
  batch reporting 55
  DEFINE/DROP report and report group 51
REXX-SQL interface messages 35

S

secondary symptom string, FFST 115
service support functions of FFST 113
software 91, 100
Software Support
  contacting 133
  describing problems 134
  determining business impact 134
  receiving weekly updates 132
  submitting problems 134
SQL trace 108
stacks (in FFST data dump) 115
string, FFST symptom 114
support, service 113
supporting materials 98
symptom string 89
symptom string, FFST 114
System
  Diagnostics 92
system abend 93
system abends 113
System Diagnostics 92

T

termination cause 107
Tivoli Decision Support for z/OS data areas (in FFST dump) 115
Tivoli Decision Support for z/OS problem description worksheet 119, 123, 127
Tivoli software information center ix
Tivoli technical training x
trace
  compiled programs 109
  dialog 110
  SQL 108
trace information 108
training, Tivoli technical x
typeface conventions xi

U

U002, abend code 113
Usage and Accounting Collector
  generated by Usage and Accounting Collector 69
Usage and Accounting Collector messages 69
user abend codes 108
users of this book, intended vii

W

Web Reporting messages 68
Web Reporting Messages
  generated by Web Reporting 68
who should use this book vii
worksheet
  problem description
    AS/400 System Performance featureAS/400 System Performance feature 127
    host 119
    Workstation Performance featureWorkstation Performance feature 123
workstation messages, help vii
Workstation Performance featureWorkstation Performance feature
  problem description worksheet 123
  problem determination 99
workstation problem determination 99

Printed in USA

SH19-6902-15