



Objectives

- Self help
- WDI support process
- Problem determination techniques
- Interpreting WDI messages
- Case studies



Self Help Support Sites

- **WebSphere Data Interchange website**
 - <http://www.ibm.com/websphere/datainterchange>
- **IBMLink and SupportLink for z/OS**
 - <http://www.ibm.com/ibmlink>
- **Electronic Service Request (ESR) for Multiplatform**
 - <http://www.ibm.com/software/support/help.html>
- **Downloading fixes:**
 - z/OS: <http://www.ibm.com/servers/eserver/support/zseries/fixes/>
 - MP: <http://www.ibm.com/software/integration/wdi/downloads/>
 - Client: <http://www.ibm.com/software/integration/wdi/downloads/>





Self Help Support Sites (Continued)

- <http://www.ibm.com/websphere/datainterchange>

The screenshot shows the IBM WebSphere Data Interchange product page. At the top, there is a navigation bar with the IBM logo and a search bar. Below the navigation bar, there are tabs for 'Home', 'Products', 'Services & solutions', 'Support & downloads', and 'My account'. The main content area is titled 'WebSphere Data Interchange' and includes a breadcrumb trail: 'Software > Business Integration > WebSphere Business Integration > WebSphere Data Interchange'. The page is divided into several sections: a left sidebar with links to 'WebSphere Data Interchange', 'Features and benefits', 'System requirements', 'Library', 'News', 'How to buy', 'Events', 'Training and certification', 'Services', and 'Support'; a main content area with an 'Overview' section describing the product's capabilities and an 'Editions' section listing 'Version 3.2 for z/OS' and 'Version 3.2 for Multipplatforms'; and a right sidebar with a 'Buy online' button, a 'We're here to help' section with contact options like 'Call me' and 'E-mail us', and a phone number '877-426-3774' with a priority code '104CBW63'.



Self Help Support Sites (Continued)

- WebSphere platform
 - Data management
- Related solutions**
- WebSphere Partner Gateway
- Related hardware**
- zSeries
- Related services**
- Application Connectivity services
 - IBM Global Services
- Warranty info
- Introduces advanced data validation and standards compliance function to provide industry-leading support for HIPAA, ANSI X12 embedded HL7, and other industry formats
 - Allows direct import of industry-standard or user-defined XML DTDs for mapping and translation
 - Provides a mapping tool to build EDI, XML, and application data format transformations in a graphical user interface (provided by the WebSphere Data Interchange Client)



- Highlights**
- [Education: WebSphere Data Interchange](#)
 - [2005 Customer Conference - Registration opens July 1](#)
 - [Business Integration Info kits](#)

- Upgrades/Migrations**
- [Migrate to WebSphere Data Interchange Version 3.2](#)
 - + [Standards, host, client & Fix Pack downloads](#)





Self Help Support Sites (Continued)

- **Key features of WDI website:**
 - Downloads: Click on, “Standards, host, client & Fix Pack downloads”
 - EDI Standards
 - Multiplatform fixes
 - WDI Client fixes
 - Library
 - WDI 3.2.1 Manuals and publications
 - DataInterchange 3.1 Manuals
 - Support
 - Search non-defect FAQ database, a.k.a. Technotes
 - Search defect APAR database
 - Product Requirement Form



Self Help Support Sites (Continued)

■ Search Capabilities

- By default, search includes Technotes (FAQ), APARs (defect), Redbooks, etc. for only WDI
- Check "Solve a problem" to limit search to only Technotes and APARs
 - Next page provides refined search by "Document type"
- Alternatively, when searching for defects, limit search by platform:
 - z/OS: Precede search string with 5655I4000
 - MP: Precede search string with 5724C5001





Self Help Support Sites (Continued)

- Other search features
 - 'Search all software support' to go beyond WDI
 - Advanced search offers
 - Boolean options
 - Limit results to Exclude/include APARs
 - Limit results within components
 - WDI 3.2 Client
 - WDI 3.2 for z/OS
 - WDI 3.2 MP
 - Limit results by modifying dates





Search Capabilities Example

The screenshot displays the IBM WebSphere Data Interchange search interface. At the top, there is a navigation bar with the IBM logo, a country/region selector, and a search button. Below this, a secondary navigation bar includes links for Home, Products, Services & solutions, Support & downloads, and My account. The main content area is titled 'WebSphere Data Interchange' and features a search bar with the text 'event log' entered. A red circle highlights the search bar. Below the search bar, there are options to 'Solve a problem', 'Download', and 'Learn'. The 'Solve a problem' option is checked. There are also links for 'Advanced search for this product' and 'Search all software support'. On the right side, there are sections for 'My support', 'System Availability', and 'Support essentials'.



Search Capabilities Example (Continued)

The screenshot shows the IBM WebSphere search interface. The page title is "WebSphere Data Interchange". The search results are filtered for "event log". The "Document type" dropdown menu is open, showing options: "All documents", "-Troubleshooting", "--APARs (Authorized Program Analysis Reports)", and "--Technotes (FAQs)". The "Rank order" dropdown is set to "Rank order". The "Product category" dropdown is set to "Select one". The search results show "1 - 10 of 45 items found*" and a "Next" button.





Search Capabilities Example (Continued)

The screenshot displays the IBM WebSphere Data Interchange search interface. At the top, there is a navigation bar with the IBM logo, a search box, and links for 'United States (change)' and 'Terms of use'. Below this is a main navigation menu with 'Home', 'Products', 'Services & solutions', 'Support & downloads', and 'My account'. The left sidebar contains a list of navigation options: 'All Software products', 'WebSphere Data Interchange', 'Features and benefits', 'System requirements', 'Library', 'News', 'How to buy', 'Events', 'Training and certification', 'Services', and 'Support'. The main content area shows the breadcrumb path: 'Software > Business Integration > WebSphere Business Integration >'. The title is 'WebSphere Data Interchange'. Below the title, there is a search filter section: 'Search within results for: event log. Optionally, limit results by choosing one or more of the items below.' The 'Additional search terms:' field contains 'SQL' (circled in red). The 'Document type:' dropdown is set to 'Technotes (FAQs)'. The 'Sort results by:' dropdown is set to 'Rank order'. There are links for 'New technical support search', 'Advanced search', and 'Downloads & drivers search'. At the bottom, there is a 'Product category:' dropdown set to 'Select one' and a 'Go' button. The results summary shows '1 - 10 of 45 items found*' and a 'Next >' link.



Search Capabilities Example (Continued)

United States (change) | Terms of use

Home | Products | Services & solutions | Support & downloads | My account

All Software products

WebSphere Data Interchange

Features and benefits

System requirements

Library

News

How to buy

Events

Training and certification

Services

Support

- My support
- Submit & track problems
- How to buy software support
- Help
- Site tours
- Feedback

Software > Business Integration > WebSphere Business Integration >

WebSphere Data Interchange

Search within results for: **event log SQL**
 Optionally, limit results by choosing one or more of the items below.

Additional search terms:

Document type:

Sort results by:

[New technical support search](#) [Advanced search](#) [Downloads & drivers search](#)

Product category:

1 - 1 of 1 items found*

		Modified date
[1]	SQL to delete rows from Event log Tablespace (EDIELOG) Event log table (EDIELOG) is too large to run PERFORM REMOVE LOG ENTRIES. There are over 3 million rows in the table causing REMOVE to run an exorbitant amount of time. How can this table be brought down to a more manageable size?	2004-08-30





WDI Support Process

- Begins by opening a Problem Management Record (PMR)
 - USA Hotline: 1-800-IBM-SERV (1-800-426-7378)
 - Voice support
 - Two hour call-back between 8am–5pm in your time-zone for all severities. Off-shift support for severity 1.
 - Service agreement required for how-to and usage questions
 - Worldwide directory: <http://www.ibm.com/planetwide/>
- Electronic problem submission
 - Electronic Technical Response (ETR) for z/OS customers
 - IBMLink, ServiceLink and SoftwareXcel - service agreement required
 - <http://www.ibm.com/services/us/its/pdf/swxcel.pdf>
 - Electronic Service Request (ESR) for multiplatform
 - Passport Advantage - service agreement required
 - <http://www.ibm.com/software/passportadvantage>





WDI Support Process (continued)

- Define the problem
- Gather background Information
 - Software levels of relevant products
 - What steps led to the failure?
 - Can the problem be recreated? Recreation steps?
 - Have any changes been made to the system?
 - Were any messages or other diagnostic information produced?
- Gather relevant diagnostic information
 - Print file, joblog, operating system messages, storage dumps, traces, etc.
- Determine the business impact, i.e. severity level





WDI Support Process (continued)

■ Severity Levels

- Severity 1 - Critical Impact/System Down: Business critical software component is inoperable or critical interface has failed. This indicates you are unable to use the program resulting in a critical impact on operations. This condition requires an immediate solution.
- Severity 2 - Significant business impact, this indicates the program is usable but is severely limited.
- Severity 3 - Some business impact, this indicates the program is usable with less significant features (not critical to operations) unavailable.
- Severity 4 - Minimal business impact, this indicates the problem causes little impact on operations or that a reasonable circumvention to the problem has been implemented.





WDI Support Process (continued)

- Have the following information ready when calling or submitting a problem:
 - IBM Customer Number
 - The machine type/model/serial number
 - Company name
 - Contact name
 - Preferred means of contact (voice or email)
 - Background and diagnostic information
- Support handbook
 - <http://techsupport.services.ibm.com/guides/webhndbk.pdf>
 - Fill out the “Problem Identification Worksheet” on page 23





WDI Support Process (continued)

- Defects managed via Authorized Program Analysis Reports (APAR) process
- APAR is routed to appropriate development team.
- If defect has high impact, a code fix is created for existing version/release and delivered via:
 - Program Temporary Fix (PTF) for z/OS customers
 - Corrective Service Delivery (CSD) for Multiplatform
- If the defect has low impact, which does not require an immediate, permanent fix, we may defer the fix for a future release.



WDI Support Process (continued)

Determine what files Support may need

- If problem is reproducible:
 - Isolate problem to specific input transaction or message
 - Gather input file, print file, joblog, and export of map in tagged format selecting all associated objects
 - Include incorrect output file and expected output, if applicable
- If not reproducible, as in a sporadic ABEND:
 - Gather input file, print file (joblog), and export of map in tagged format selecting all associated objects
 - Capture dump dataset:
 - z/OS add SYSUDUMP and CEEDUMP to JCL
 - AIX core dump
 - Windows application exception dump



WDI Support Process (continued)

- Post test files to Support Center's FTP server:
 - ECuRep: Enhanced Customer Data Repository:
<http://www.ibm.com/de/support/ecurep/mvs.html>
 - Replacement for testcase.software.ibm.com



Problem Determination Techniques

- New map development
- Incorrect output
- Abnormal end
- Runs on one system but not another
- Interpreting WDI messages



Problem Determination Techniques (Continued)

- **Incorrect output – existing map suddenly fails**
 - What changed?
 - Was map changed or recompiled?
 - Was anything recently upgraded?
 - WDI server, client, DB2, WMQ, operating system, etc.
 - Check input for anomalies
 - Isolate input to single failed transaction or message
 - DT map, run with TRACELEVEL(A1) on PERFORM
 - Z/OS: Add EDIDTTRC DD to JCL
 - AIX or Windows: Add EDIDTTRC 'Set file' to command file
 - Send/Receive map: &SET DIVARTRACE 1
 &SET DIEXPTRACE 1





Problem Determination Techniques (Continued)

- **Abnormal end**
 - Check System Server Platform under view menu
 - If Platform mismatch, recompile map and re-run translator
 - z/OS job completion = Sxxx or Uyyy
 - System ABEND lookup in documentation:
<http://www.ibm.com/servers/resourceink>
 - User ABEND pertains to DT and are likely from LE
 - Check steplib
 - Check memory usage
 - Check XML Toolkit
 - AIX or Windows -- Signal 11 or core dump
 - Check libpath or path settings
 - Check memory usage





Problem Determination Techniques (Continued)

- **Runs on one system but not another**
 - Compare maintenance levels
 - z/OS: Compare PTF listings from system programmer
 - Windows – check the registry
 - HKEY_LOCAL_MACHINE\SOFTWARE\IBM\WebSphere Data Interchange
 - key CurrentVersion=3.2.X, where X is the latest CSD number
 - AIX – issue command "lspp -L IBMWDIServer32"
 - Check map compile date
 - Check for differences in system capacity





Problem Determination Techniques (Continued)

- Interpreting WDI messages
 - Messages start with two character “service” designation, e.g. “TR” for Translator, “PS” for profile services
 - Check WDI Messages and codes for further information
 - Messages and Codes also lists return codes from each service
 - Messages and Codes Appendix A. provides a Translator Message (TRnnnn) example under, “Interpreting log entries”

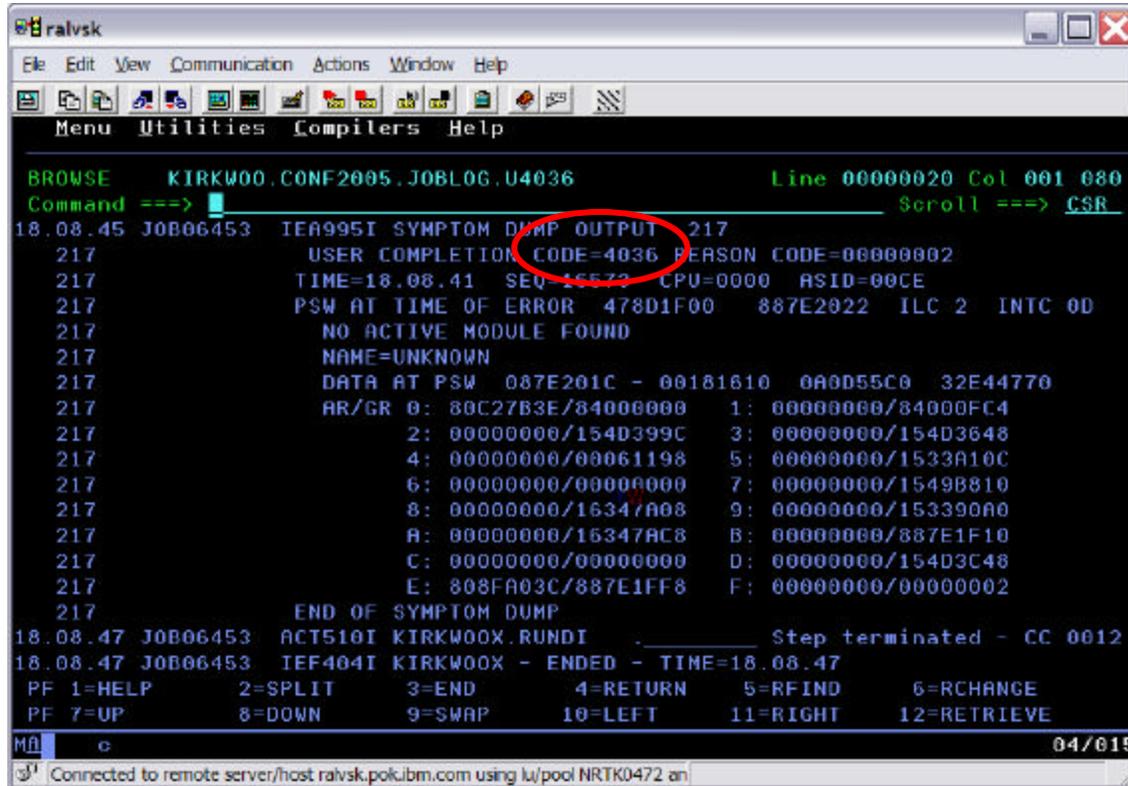


Case 1

- **ABEND U4036 – z/OS**
 - Similar to system abend S0C4
 - If using IEFBR14, job condition code = 12
 - Pertains to Data Transformation only
 - LE intercepted abend and writes dump to CEEDUMP
 - Likely cause, getmain failure
 - Check virtual storage in joblog
 - VIRT 728K SYS 360K **EXT 124100K** SYS 9800K
 - EXT is storage used above 16M line and is the key measure
 - Consider PAGE(Y) – maintenance required
 - Consider pageable AMM – maintenance required
 - REGION=0M only gives what happens to be available
 - REGION=nM assures that you get “n” megabytes



Case 1 (Continued)



```
ralvsk
File Edit View Communication Actions Window Help
Menu Utilities Compilers Help

BROWSE      KIRK000.CONF2005.JOBLOG.U4036      Line 00000020 Col 001 080
Command ==>

18.08.45 JOB06453 IEA995I SYMPTOM DUMP OUTPUT 217
217          USER COMPLETION CODE=4036 REASON CODE=00000002
217          TIME=18.08.41 SEQ=16572 CPU=0000 ASID=00CE
217          PSW AT TIME OF ERROR 478D1F00 887E2022 ILC 2 INTC 00
217          NO ACTIVE MODULE FOUND
217          NAME=UNKNOWN
217          DATA AT PSW 087E201C - 00181610 0A0D55C0 32E44770
217          AR/GR 0: 80C27B3E/84000000 1: 00000000/84000FC4
217          2: 00000000/154D399C 3: 00000000/154D3648
217          4: 00000000/00061198 5: 00000000/1533A10C
217          6: 00000000/0000A000 7: 00000000/1549B810
217          8: 00000000/16347A08 9: 00000000/153390A0
217          A: 00000000/16347AC8 B: 00000000/887E1F10
217          C: 00000000/00000000 D: 00000000/154D3C48
217          E: 808FA03C/887E1FF8 F: 00000000/00000002
217          END OF SYMPTOM DUMP
18.08.47 JOB06453 ACT510I KIRK000X.RUNDI      Step terminated - CC 0012
18.08.47 JOB06453 IEF404I KIRK000X - ENDED - TIME=18.08.47
PF 1=HELP      2=SPLIT      3=END          4=RETURN      5=RFIND      6=RCHANGE
PF 7=UP        8=DOWN       9=SWAP       10=LEFT      11=RIGHT     12=RETRIEVE

MA c 04/015
Connected to remote server/host ralvsk.pok.ibm.com using lu/pool NRTK0472 an
```





Case 2

- Initialization failure
 - Pertains to any WDI utility function
 - Check for DB2 messages
 - Lookup SQLCODE and REASON codes in DB2 Messages and Codes on Resource Link
- Z/OS job step Condition code = 120
 - DB2 message written to job log via WTO
 - Program failed attempting to initialize the Service Director

Case 2 (Continued)

```
ralvsk
File Edit View Communication Actions Window Help
Display Filter View Print Options Help
-----
SDSF OUTPUT DISPLAY KIRKWOOP JOB04419 DSID      2 LINE 7      COLUMNS 01- 80
COMMAND INPUT ==>
12.32.50 JOB04419 IEF403I KIRKWOOP - STARTED - TIME=12.32.50
12.32.51 JOB04419 + DSNT408I SQLCODE = -818, ERROR: THE PRECOMPILER-GENERATED
12.32.51 JOB04419 791896810048170 IN THE LOAD MODULE IS DIFFERENT FROM THE BI
12.32.51 JOB04419 +P 17153A09158C8E3C BUILT FROM THE DBRM EDIPSPD DSNT418I SQL
12.32.51 JOB04419 +03 SQLSTATE RETURN CODE DSNT415I SQLERRP = DSNXEPM SQL PROC
12.32.51 JOB04419 +TING ERROR DSNT416I SQLERRD = -200 0 0 -1 0 0 SQL DIAGNOSTI
12.32.51 JOB04419 +ON DSNT416I SQLERRD = X'FFFFFF38' X'00000000' X'00000000' X
12.32.51 JOB04419 +X'00000000' X'00000000' SQL DIAGNOSTIC INFORMATION
12.32.51 JOB04419 +Program failed attempting to initialize the Service Directo
code = 12.
12.32.51 JOB04419 +SQL code is -818
12.32.51 JOB04419 ACT510I KIRKWOOP.RUNDI      Step terminated - CC 0120
12.32.51 JOB04419 IEF404I KIRKWOOP - ENDED - TIME=12.32.51
12.32.51 JOB04419 SHASP395 KIRKWOOP ENDED
0----- JES2 JOB STATISTICS -----
- 08 SEP 2005 JOB EXECUTION DATE
- 60 CARDS READ
- 170 SYSOUT PRINT RECORDS
PF 1=HELP      2=SPLIT      3=END      4=RETURN      5=IFIND      6=BOOK
PF 7=UP        8=DOWN        9=SWAP     10=LEFT       11=RIGHT     12=RETRIEVE
MA c 04/021
Connected to remote server/host ralvsk.pok.ibm.com using lu/pool NRTK0441 an
```

Case 2 (Continued)

- MultiPlatform returns RC=8 ERC=32
 - PS00400 Profile Services database error
 - Command Line window from ediservr provides reason
 - WDI adapter command window or .trace file

Case 2 (Continued)

```
Command Prompt
C:\download\ediservr\POXML5SR-EDI>ediservr <sample.cmd
0: Profile Services database error.
MONOCASE
008 400 -0818
*****
Response: This error is reported during
initialization if the application fails to load
critical information from DB2.
If the sqlcode indicates a precompiler problem
(EG. -0818), please verify that the BIND step in
the installation process completed successfully.
If one of the configuration tables is missing (0100),
verify that the LOAD installation step was
successful, and check for the Profile or Code List.
*****
DI Translator Started, build date: Jun 3 2005
CE0010 RS0000x12xxxxx CE LOC = CE0042 SERU NAME = MESSAGESSERU FUNC = 0000001
6 CB RC = 00000012 CB ERC = 00000515
CE0010 RS0000x12xxxxx CE LOC = CE0042 SERU NAME = MESSAGESSERU FUNC = 0000001
6 CB RC = 00000012 CB ERC = 00000515
DI Translator Error. RC=8, ERC=32
DI Translator shutdown
C:\download\ediservr\POXML5SR-EDI>
```



Case 3 (Continued)

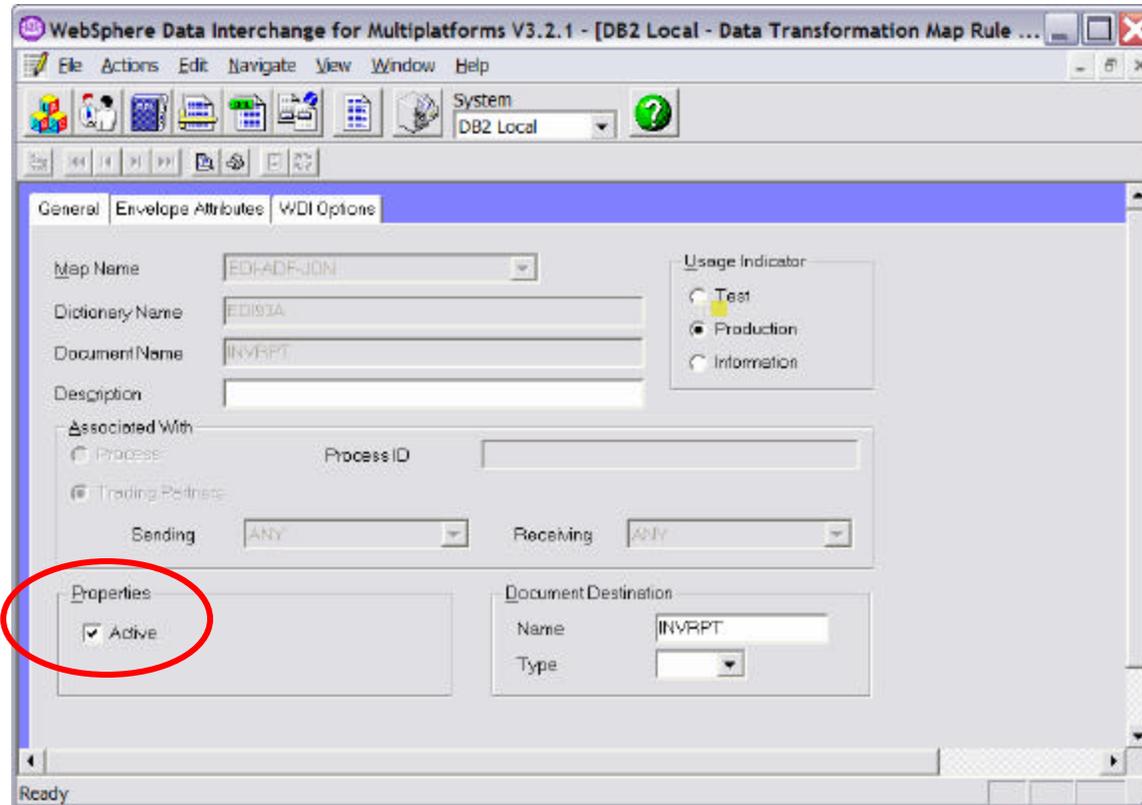
- Data Transformation rule not found – EDI to ADF
 - UT0016 – STD (Standard) type control string not found
 - RU0001 – no active rule found
 - MB0099 – data transformation failed



Case 3 (Continued)

```
prtfil.txt - Notepad
File Edit Format View Help
Audit Trail Report -DataInterchange Utility- Date: 05/09/09 Time: 13:48:31 Page: 00001
FF0588 Command: PERFORM TRANSFORM WHERE INFILE(RECVDATA) OUTFILE(APPL) SYNTAX(E)
Message: UT0016 Severity: 08
An attempt to select a row from the control string DB2 table (EDICSTX) failed. The SQL code was 100, the control
string name was INVRPT, the control string type was STD, and the sequence number was 1.
**** File: ediuPCS.sqc Line: 197 Func: n/a
Message: RU0001 Severity: 08
No active Rule record was found for the message. For document INVRPT, dictionary name , syntax edi, sender KIRKWOX,
receiver D53TSA2, usage indicator P and process , no matching Rule was found.
**** File: C:\NE32\src\edirusco.cpp Line: 639 Func: n/a
Message: UT0016 Severity: 08
An attempt to select a row from the control string DB2 table (EDICSTX) failed. The SQL code was 100, the control
string name was INVRPT, the control string type was STD, and the sequence number was 1.
**** File: ediuPCS.sqc Line: 197 Func: n/a
Message: MB0099 Severity: 08
Data transformation failed for the current message. See preceding messages for more details.
**** File: C:\NE32\src\edimbcni.cpp Line: 552 Func: n/a
FF0584 The PERFORM TRANSFORM command completed with a severity code of 08. See associated messages to determine the accept
of the transformation. Number of messages processed: 2.
```

Case 3 (Continued)





Case 3 (Continued)

- EDI input:

UNB+UNOA:2+D53T KIRKWOX:ZZ+D53T D53TSA2:ZZ+050513:0912+111'
UNH+11+INVRPT:D:93A:UN:EAN003'

:
:

UNT+14+11'
UNZ+1+111'



Version



Case 3 (Continued)

- Alternatively, add DICTONARY(EDI93A) to the PERFORM statement
 - All Input messages then must use the same standard dictionary
 - Not as flexible as using EDI2DICT forward translation table
- Optionally, sending and/or receiving trading partner can be used to be selective when finding a matching rule
 - Sending trading partner commonly used
 - Otherwise, use ANY for both sending and receiving trading partners





Summary

- Utilize self help websites
- New Technotes are being added
- Still need help? Call WDI support
- Review problem determination techniques to prepare for the call
- Someday you will encounter one of these case studies

I promise !



Acronyms

- ABEND Abnormal End
- AMM Abstract Message Model
- APAR Authorized Program Analysis Report
- CSD Corrective Service Delivery
- DB2 DataBase 2
- DT Data Transformation
- ECuRep Enhanced Customer Data Repository
- EDI Electronic Data Interchange
- ESR Electronic Service Request
- ETR Electronic Technical Response
- FAQ Frequently Asked Questions
- LE Language Environment
- MP MultiPlatform
- PTF Program Temporary Fix
- WMQ WebSphere MQ (MQSeries)
- WDI WebSphere Data Interchange
- WTO Write To Operator

