

WebSphere Data Interchange v3.2 Data Transformation SAP Implementation Guide

Data Transformation SAP CSD Overview

WebSphere Data Interchange(WDI) development has created this CSD in response to the immediate demand to support SAP status tracking functions with Data Transformation processing. This document is not a formal IBM publication. It is a technical document written by WDI development to help customers implement Data Transformation SAP functions using this CSD.

WDI Utility Interface Introduction

The WebSphere Data Interchange Utility provides command-level access to WebSphere Data Interchange services. The services categories discussed in this document are listed below:

- Performing general data translation. Data Transformation processing.
- Processing outbound EDI documents. Translating to EDI standard format using a send map, Enveloping, and Sending.
- Processing inbound EDI documents. Receiving, Deenveloping, and Translating to data format using a receive map.
- Managing data. Updating, removing, and status updates for transaction store records
- Reporting and extracting data. Formatting and printing reports. Extracting data.
- SAP status tracking

Data Transformation processing:

Translating data from any EDI, XML, or data format to any other EDI, XML, or data format using a data transformation map. Any-to-any translation is a WebSphere Data Interchange feature that allows you to translate data from any supported source document type to any supported target document type. Supported document types include data formats, EDI standards, and XML data. The Utility command `PERFORM TRANSFORM` is used for any-to-any translation. The SAP CSD addresses SAP status tracking and reporting with data transformation processing. **NOTE:** The new SAP functionality is described in this document.

Outbound and Inbound EDI processing:

The outbound and inbound EDI processing services were used prior to the data transformation processing services. SAP status tracking and reporting functions are included in all currently supported WDI releases. Documentation on SAP may be found in WebSphere Data Interchange Programmer's Reference under Interfacing to other networks and applications.

SAP status tracking and Reporting:

SAP is a client/server application which supports business processes that include sales, materials management, and distribution. SAP was developed in Germany and supports an interface to an EDI subsystem. SAP has both mainframe and UNIX solutions.

SAP generates application data in the SAP Intermittent Document (IDOC) layout. The file is sent to the EDI subsystem (or translator) via a file transfer product such as FTP, TCP/IP, etc. from UNIX to mainframe.

The mapping required to perform the translation of the inbound and outbound IDOCs is a user responsibility. To assist in mapping the IDOC, a mapping literal keyword &THANDLE for send/receive maps and the new source document property THANDLE is provided to enable mapping of the WDI archive key to the SAP IDOC for inbound processing. The special WDI variable name DISAPSEQ is not supported for data transformation processing. WDI provides the capability to capture the SAP status information during different phases of the EDI process by specifying the SAPUPDT keyword on the utility perform commands. SAP status tracking is only supported with the WDI utility with RAWDATA.

A utility perform command allows you to extract or remove the SAP status records from the database based on selection criteria and write them (in SAP EDI_DS record format) to a sequential file for transfer to the SAP system. WDI currently supports the SAP Status EDI_DS record at release 2, 3, and 4.

SAP Status Codes Supported by WDI

- 04 Error within control information of EDI subsystem
- 05 Error during translation process
- 06 Translation successful
- 09 Error during interchange handling
- 10 Interchange handling successful
- 11 Error during dispatch
- 12 Dispatch successful
- 16 Functional Acknowledgment positive
- 17 Functional Acknowledgment negative
- 22 Dispatch successful, acknowledgment still due

Data Transformation SAP status tracking Implementation

SAP status tracking and reporting for Data Transformation processing uses the existing SAP interfaces.

Outbound Processing

The capture of SAP status information is under user control via the SAPUPDT() keyword on the utility perform statements. If SAPUPDT(Y) is specified, the SAP status along with the WDI archive key is captured in the database table (EDIVSSTK). The status is then updated at various key points during EDI processing.

The SAPUPDT(Y) keyword is required on the following WDI Utility PERFORM commands for outbound processing when SAP Status tracking is desired:

```
PERFORM TRANSFORM (using SYNTAX(D))
PERFORM TRANSLATE TO STANDARD
PERFORM TRANSLATE AND ENVELOPE
PERFORM TRANSLATE AND SEND
PERFORM ENVELOPE
PERFORM REENVELOPE
PERFORM ENVELOPE AND SEND
PERFORM REENVELOPE AND SEND
PERFORM SEND
```

If the SAPFILE, SAPTYPE keywords are specified on the PERFORM TRANSFORM command, the system will write the SAP status data to the file specified by the SAPFILE/SAPTYPE keywords for CICS or to the file specified by the SAPFILE keyword for other platforms. The system will also write the data to the DB, each record will be marked as extracted. For all other PERFORM commands the OUTFILE and OUTTYPE keywords should be used.

Inbound Processing

The capture of SAP status information for functional acknowledgments is under user control via the "SAPUPDT()" keyword on the utility perform statements. If SAPUPDT(Y) is specified, the functional acknowledgment status is captured in the database. The SAP status can be captured only when the transaction store is active.

The SAPUPDT(Y) keyword is required on the following WDI Utility PERFORM commands for inbound processing when SAP status tracking for functional acknowledgments is desired:

```
PERFORM TRANSFORM (using SYNTAX(E))  
PERFORM DEENVELOPE  
PERFORM DEENVELOPE AND TRANSLATE
```

If the SAPFILE, SAPTYPE keywords are specified on the PERFORM TRANSFORM command, the system will write the SAP status data to the file specified by the SAPFILE/SAPTYPE keywords for CICS or to the file specified by the SAPFILE keyword for other platforms. The system will also write the data to the DB, each record will be marked as extracted. For all other PERFORM commands the OUTFILE and OUTTYPE keywords should be used.

EXTRACTING SAP STATUS

The following perform is used to extract SAP status records from the WDI database and write them to the file specified in keywords OUTFILE and OUTTYPE. The output file should be defined with a record length that is at least as large as the SAP Status EDI_DS record
The utility returns a completion code of 792 if no records meet the selection criteria or if the records are truncated in the output file, and it returns a code of 796 if an error occurred.

PERFORM SAP STATUS EXTRACT

WHERE OUTFILE() OUTTYPE() CLIENT() SAPSTAT() TO () DAYS() TO()

| Keyword | Description |
|-----------|--|
| OUTFILE | The file name to which the extracted SAP status records are written. Default is SAPOUT. |
| OUTTYPE | File type MQ. For CICS, file types (TD, TS, TM, VE). Default is TD. |
| CLIENT | Extract records by client ID. Default is all. |
| SAPSTAT | The SAP status value to extract or with TO() a range of values to extract. Acceptable values are 04 - 22. Default is all status. |
| DAYS | The date of the records to extract or with TO() a range of dates to extract. The range is inclusive. Default is all days. |
| Extracted | Default is N. (Y) - extract only records already marked as extract (N) - extract only records NOT marked as extracted (A) - extract ALL records |

REMOVING SAP STATUS FROM DATABASE

The following perform is used to remove SAP status from the WDI database. The utility returns a completion code of 796 if an error occurs.

```
PERFORM SAP STATUS REMOVE
WHERE CLIENT() PRIORTO() SAPSTAT() TO()
```

| Keyword | Description |
|-----------|---|
| CLIENT | Remove records by client ID. Default is all. |
| SAPSTAT | The SAP status value to remove or with TO() a range of values to remove. Acceptable values are 04 - 22. Default is all status. |
| PRIORTO | The date prior to which the records are to be removed. Default is all dates. |
| Extracted | Default is Y. (Y) - remove only records already marked as extract (N) - remove only records NOT marked as extracted (A) - remove ALL records |

WDI Utility Interface

New keywords for PERFORM TRANSFORM

The following keywords have been added to the PERFORM TRANSFORM command:

- **SAPUPDT(Y/N)**

Indicates whether SAP status tracking is desired. Valid values are:

Y Tracks SAP status and writes status records

N Does not track SAP status or write status records (default)

This keyword is used with the following commands:

TRANSFORM
DEENVELOPE
DEENVELOPE AND TRANSLATE
ENVELOPE
ENVELOPE AND SEND
RECEIVE AND SEND
RECVFILE AND SEND
REENVELOPE
REENVELOPE AND SEND
SEND
TRANSLATE AND ENVELOPE
TRANSLATE AND SEND
TRANSLATE TO STANDARD

- **SAPFILE()**

The ddname of an output file (or the name of a TS queue or TD queue). For CICS, when you specify this keyword, you must also specify the SAPTYPE keyword. For the TRANSFORM command the system will write the SAP status data to the file specified by the SAPFILE/SAPTYPE keywords for CICS or to the file specified by the SAPFILE keyword for other platforms. The system will also write the data to the DB, each record will be marked as extracted.

The maximum length is eight.

This keyword is used with the following commands:

TRANSFORM

- **SAPTYPE (Y/N)**

Indicates the file type of SAPFILE . Applies only for CICS and MQ (which is supported in both CICS and z/OS). For CICS, when you specify the SAPFILE keyword, you must specify this keyword. Valid values are:

MQ WebSphere Data Interchange MQSeries queue profile member name
TD Transient data queue
TM Temporary storage queue - main storage
TS Temporary storage queue - auxiliary storage (default for CICS)
VS VSAM data set

This keyword is used with the following commands:

TRANSFORM

Mapping Commands

New Mapping Command to get the WDI archive key for mapping

```
GetProperty("THANDLE", value)
```