在ABAP中用事务更新数据

在ABAP的开发中，根据业务的需要，有时可能要对后台多个数据表进行更新，为了保证数据的完整性、一致性，需要把这些操作写在同一个事务中。对数据的操作，要么全部成功，要么全部失败回滚。结合在项目中的应用，下面阐述一下实现方法。

本例是在用BAPI创建物料凭证的同时，要更新自定义状态表，实现物料凭证的创建和更新自定义状态表在同一事务中。

一、首先用SE37创建一个Update Module类型的函数：

函数里面的代码如下：

```
FUNCTION ZMM_PULL_LIST_POST_AUFNR.
*"----------------------------------------------------------------------
*"*"Update function module:
*"
*"*"Local interface:
*"  IMPORTING
*"     VALUE(PLANT) TYPE BAPI2017_GM_ITEM_CREATE-PLANT OPTIONAL
*"     VALUE(STGE_LOC) TYPE BAPI2017_GM_ITEM_CREATE-STGE_LOC OPTIONAL
*"     VALUE(MOVE_TYPE) TYPE BAPI2017_GM_ITEM_CREATE-MOVE_TYPE
*"  OPTIONAL
*"     VALUE(MOVE_PLANT) TYPE BAPI2017_GM_ITEM_CREATE-MOVE_PLANT
*"  OPTIONAL
*"     VALUE(MOVE_STLOC) TYPE BAPI2017_GM_ITEM_CREATE-MOVE_STLOC
*"  OPTIONAL
*"     VALUE(ENTRY_QNT) TYPE BAPI2017_GM_ITEM_CREATE-ENTRY_QNT
*"  OPTIONAL
*"     VALUE(ISWBS) TYPE CHAR1 OPTIONAL
*"  TABLES
*"     INPUT STRUCTURE ZMM_PD_PULL_LIST OPTIONAL
*"----------------------------------------------------------------------
data:goodsmvt_header type bapi2017_gm_head_01.

data:goodsmvt_code type bapi2017_gm_code.

data:materialdocument type bapi2017_gm_head_ret-mat_doc.

data:matdocumentyear type bapi2017_gm_head_ret-doc_year.

data:goodsmvt_item type table of bapi2017_gm_item_create with header line.

data:return type table of bapiret2 WITH HEADER LINE.

DATA:ITRESULT TYPE TABLE OF zmm_311PD_result WITH HEADER LINE.

DATA:ITRESULTLOG TYPE TABLE OF ZMM03_PD_LOG WITH HEADER LINE.

DATA:IT_ERROR TYPE TABLE OF ZMM03_ERROR WITH HEADER LINE.

DATA:m_POSTMSG(200).

DATA:G_WBS_ELEM TYPE PRPS-POSKI,

G_PSPNR TYPE PRPS-PSPNR.

*使用之前先清空
REFRESH IT_ERROR.

CLEAR IT_ERROR.

LOOP AT INPUT.

CLEAR G_PSPNR.

CLEAR G_WBS_ELEM.

CLEAR GOODSMVT_HEADER.

CLEAR GOODSMVT_CODE.

CLEAR MATERIALDOCUMENT.

CLEAR MATDOCUMENTYEAR.

REFRESH GOODSMVT_ITEM.

CLEAR GOODSMVT_ITEM.

SELECT SINGLE
```

```abap
       GRPNR

FROM GRPGA

INTO G_PSPNR

WHERE PSPNR = INPUT-PSPEL.

IF G_PSPNR IS INITIAL.

G_PSPNR = INPUT-PSPEL.

ENDIF.

SELECT SINGLE

POSKI

FROM PRPS

INTO G_WBS_ELEM

WHERE PSPNR = G_PSPNR.

goodsmvt_header-pstng_date = sy-datum.

goodsmvt_header-doc_date = sy-datum.

goodsmvt_code-gm_code = '04'.
```

* 抬头文本填批次/WBS号,物料单填网络号

```abap
concatenate INPUT-PICI '/' g_wbs_elem into goodsmvt_header-header_txt.

condense goodsmvt_header-header_txt.

goodsmvt_header-REF_DOC_NO_LONG = INPUT-aufnr.

goodsmvt_item-material = INPUT-matnr.

goodsmvt_item-plant = PLANT.

goodsmvt_item-stge_loc = STGE_LOC.

goodsmvt_item-move_type = MOVE_TYPE.

IF ISWBS = '1'.

goodsmvt_item-spec_stock = INPUT-SOBKZ.

ENDIF.

goodsmvt_item-entry_qnt = ENTRY_QNT.

goodsmvt_item-entry_uom = INPUT-meins.

goodsmvt_item-move_plant = MOVE_PLANT.

goodsmvt_item-move_stloc = MOVE_STLOC.

IF ISWBS = '1'.

goodsmvt_item-wbs_elem = g_wbs_elem.

goodsmvt_item-VAL_WBS_ELEM = G_WBS_ELEM.

ENDIF.

append goodsmvt_item.

clear goodsmvt_item.

call function 'BAPI_GOODSMVT_CREATE'

exporting

goodsmvt_header = goodsmvt_header

goodsmvt_code = goodsmvt_code

importing

materialdocument = materialdocument

matdocumentyear = matdocumentyear

tables

goodsmvt_item = goodsmvt_item

return = return.

IF MATERIALDOCUMENT NE ''.
```

* 从数据库中获取当前的出库数量

```abap
SELECT SINGLE

MENGE_CK

INTO INPUT-MENGE_CK

FROM ZMM_PD_PULL_LIST

WHERE AUFNR = INPUT-AUFNR AND RSPOS = INPUT-RSPOS AND PICI = INPUT-PICI AND MATNR = INPUT-MATNR.
```

```
INPUT-MENGE_CK = INPUT-MENGE_CK + ENTRY_QNT.

INPUT-MENGE_QF = INPUT-MENGE_LL - INPUT-MENGE_CK.

IF INPUT-MENGE_QF <= 0.

INPUT-FLAG = 'X'.

ENDIF.

ITRESULT-MBLNR = MATERIALDOCUMENT.

ITRESULT-MJAHR = matdocumentyear.

ITRESULT-WERKS = INPUT-WERKS.

ITRESULT-MATNR = INPUT-MATNR.

ITRESULT-AUFNR = INPUT-AUFNR.

ITRESULT-RSPOS = INPUT-RSPOS.

ITRESULT-MENGE = ENTRY_QNT.

ITRESULT-MEINS = INPUT-MEINS.

APPEND ITRESULT.

CLEAR ITRESULT.

ITRESULTLOG-MBLNR = MATERIALDOCUMENT.

ITRESULTLOG-MJAHR = matdocumentyear.

ITRESULTLOG-UNAME = SY-UNAME.

ITRESULTLOG-WERKS = INPUT-WERKS.

ITRESULTLOG-MATNR = INPUT-MATNR.

ITRESULTLOG-AUFNR = INPUT-AUFNR.

ITRESULTLOG-RSPOS = INPUT-RSPOS.

ITRESULTLOG-MENGE = ENTRY_QNT.

ITRESULTLOG-MEINS = INPUT-MEINS.

APPEND ITRESULTLOG.

CLEAR ITRESULTLOG.

ELSE.

CLEAR m_POSTMSG.

m_POSTMSG = '创建凭证失败:'.

LOOP AT RETURN WHERE TYPE = 'E'.

CONCATENATE m_POSTMSG '/' RETURN-MESSAGE INTO m_POSTMSG.

ENDLOOP.

MOVE-CORRESPONDING INPUT TO IT_ERROR.

IT_ERROR-MESSAGE = m_POSTMSG.

IT_ERROR-UNAME = SY-UNAME.

APPEND IT_ERROR.

CLEAR IT_ERROR.

ENDIF.

MODIFY INPUT.

CLEAR INPUT.

ENDLOOP.

*以上代码过帐

IF MATERIALDOCUMENT NE ''.

MODIFY ZMM_PD_PULL_LIST FROM TABLE INPUT.

MODIFY zmm_311PD_result FROM TABLE ITRESULT.

MODIFY ZMM03_PD_LOG FROM TABLE ITRESULTLOG.

ELSE.

IF IT_ERROR[] IS NOT INITIAL.

MODIFY ZMM03_ERROR FROM TABLE IT_ERROR.

ENDIF.

ENDIF.

ENDFUNCTION.
```

二、外部调用：

SET UPDATE TASK LOCAL.

CALL FUNCTION 'ZMM_PULL_LIST_POST_AUFNR' IN UPDATE TASK

EXPORTING

PLANT = IT-WERKS

STGE_LOC = it_temp-lgort

MOVE_TYPE = '311'

MOVE_PLANT = IT-WERKS

MOVE_STLOC = IT-lgort

ENTRY_QNT = g_prlab

ISWBS = ''

TABLES

INPUT = it_li.

COMMIT WORK AND WAIT.