How to…

Create and Delete InfoPackages with BAPI

Applicable Releases: BW 3.x

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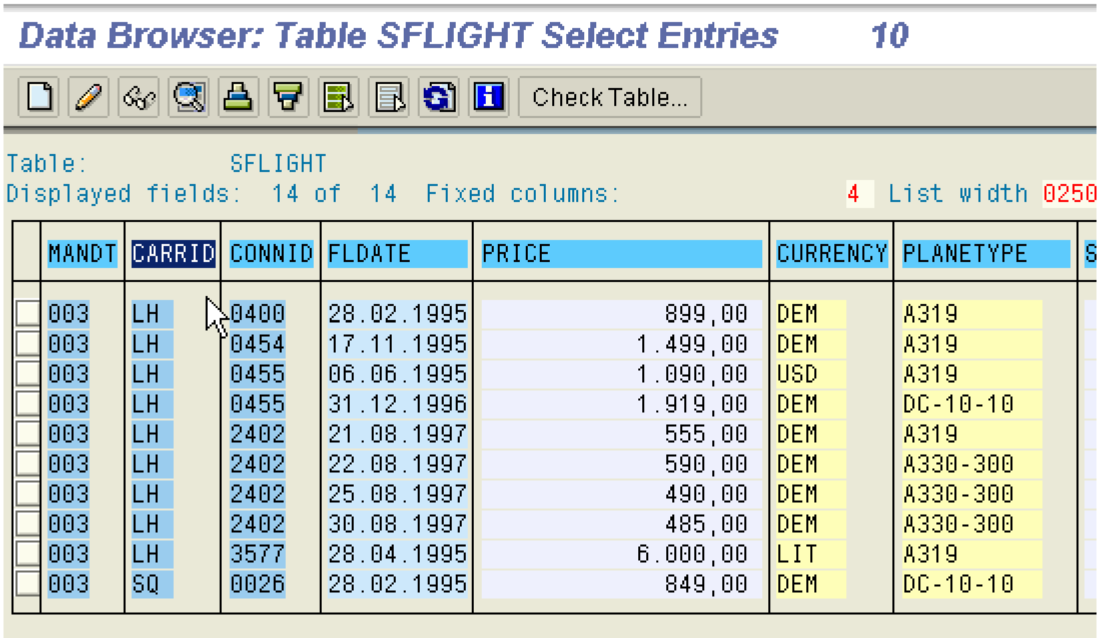
1 Business Scenario

With performance-critical extractions, several InfoPackages must be started in parallel. Parallel extraction must be enabled using disjointed selection criteria. An ABAP program is used to generate InfoPackages for a specific DataSource. The selection parameters are filled at runtime.

The selection parameters for the InfoPackages are filled from field CARRID of table SFLIGHT and have the following content:



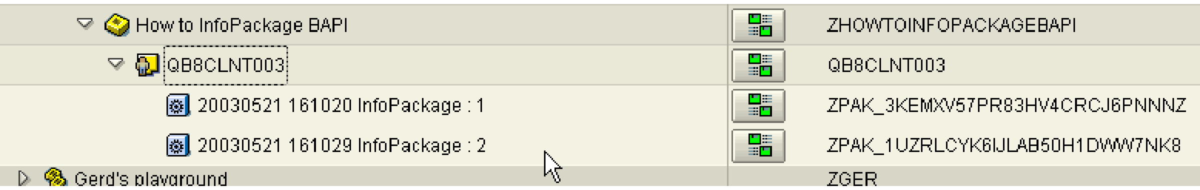
Data Browser: Table SFLIGHT Select Entries 10

```
Table:           SFLIGHT
Displayed fields:  14 of  14  Fixed columns:        4  List width 0250
```

	MANDT	CARRID	CONNID	FLDATE	PRICE	CURRENCY	PLANETYPE	S
□	003	LH	0400	28.02.1995	899,00	DEM	A319	
□	003	LH	0454	17.11.1995	1.499,00	DEM	A319	
□	003	LH	0455	06.06.1995	1.090,00	USD	A319	
□	003	LH	0455	31.12.1996	1.919,00	DEM	DC-10-10	
□	003	LH	2402	21.08.1997	555,00	DEM	A319	
□	003	LH	2402	22.08.1997	590,00	DEM	A330-300	
□	003	LH	2402	25.08.1997	490,00	DEM	A330-300	
□	003	LH	2402	30.08.1997	485,00	DEM	A330-300	
□	003	LH	3577	28.04.1995	6.000,00	LIT	A319	
□	003	SQ	0026	28.02.1995	849,00	DEM	DC-10-10	

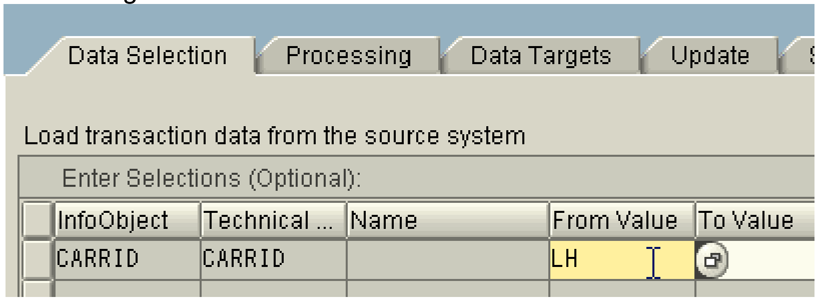
The result is two InfoPackages with the selection criteria “LH” and “SQ”.

Result



▽ How to InfoPackage BAPI	ZHOWTOINFOPACKAGEBAPI
▽ QB8CLNT003	QB8CLNT003
20030521 161020 InfoPackage : 1	ZPAK_3KEMXV57PR83HV4CRCJ6PNNNZ
20030521 161029 InfoPackage : 2	ZPAK_1UZRLCYK6IJLAB50H1DWW7NK8
▷ Gerd's playground	ZGER

InfoPackage 1:

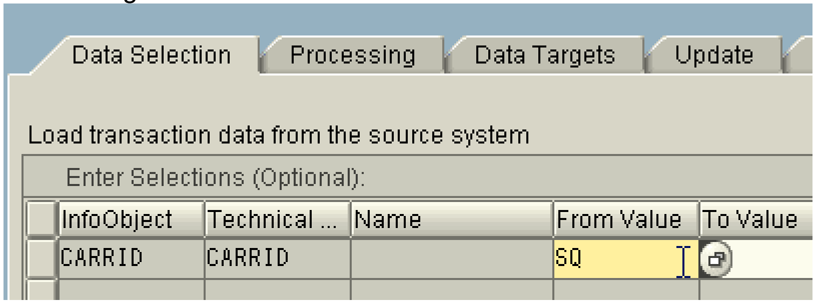


Load transaction data from the source system

Enter Selections (Optional):

InfoObject	Technical ...	Name	From Value	To Value
CARRID	CARRID		LH	

InfoPackage 2:



Load transaction data from the source system

Enter Selections (Optional):

InfoObject	Technical ...	Name	From Value	To Value
CARRID	CARRID		SQ	

2 Introduction

To manually create InfoPackages requires a high user workload. Incorrect selection criteria can cause data inconsistencies, whether it be the result of a material number being omitted, or different selection criteria overlapping.

By using BAPIs to delete, create and change InfoPackages, this process can be automated in an ABAP program.

3 The Step By Step Solution

The staging process must have already been created.

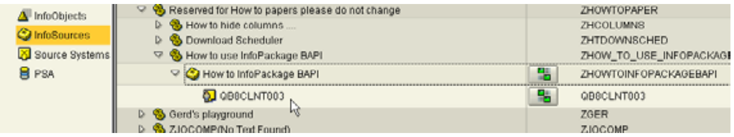
1. Requirements

1. Define the InfoSource & selection criteria for which the InfoPackages are to be created.

   A generic DataSource is used in this example.

   DataSource: ZHOWTOINFOPACKAGEBAPI

   InfoSource: ZHOWTOINFOPACKAGEBAPI



Reserved for How to papers please do not change	ZHOWTOPAPER
How to hide columns	ZHCOLUMNS
Download Scheduler	ZHTDOWNSCHED
How to use InfoPackage BAPI	ZHOW_TO_USE_INFOPACKAG
How to InfoPackage BAPI	ZHOWTOINFOPACKAGEBAPI
QB0CLNT003	QB0CLNT003
Gerd's playground	ZGER
ZJOCOMP(No Text Found)	ZJOCOMP

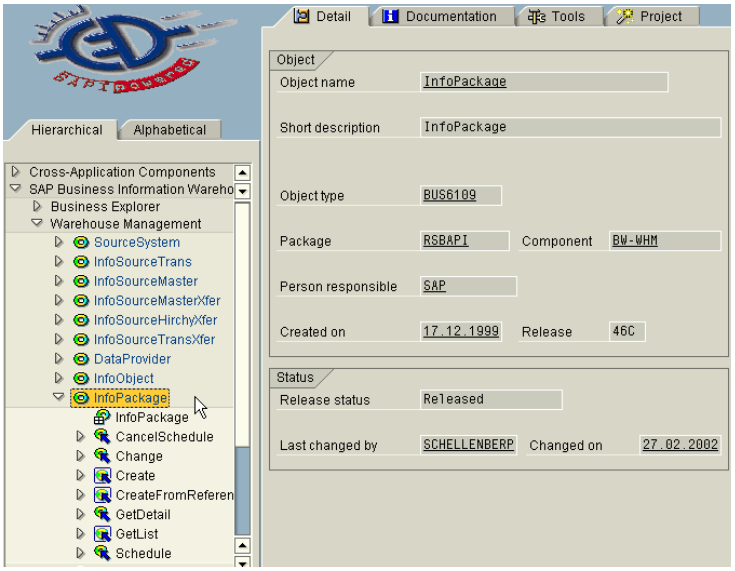
2. BAPI Used

1. You can find all BAPIs that exist in the system via transaction BAPI.

   In this example, the following BAPIs will be used:

   BAPI_IPAK_GETLIST
   BAPI_IPAK_CREATE
   BAPI_IPAK_DELETE

   These are also function modules at the same time.



Object

Object name: InfoPackage

Short description: InfoPackage

Object type: BUS6109

Package: RSBAPI Component: BW-WHM

Person responsible: SAP

Created on: 17.12.1999 Release: 46C

Status

Release status: Released

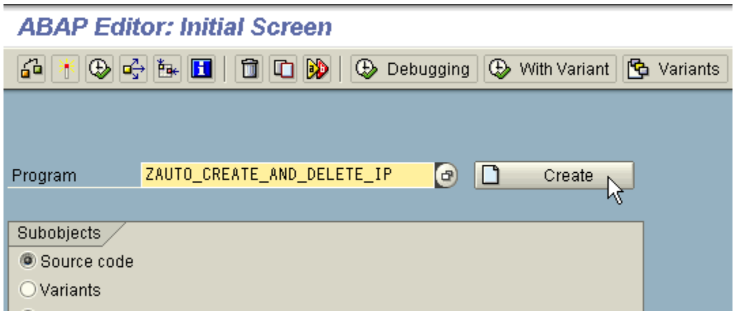
Last changed by: SCHELLENBERP Changed on: 27.02.2002

3. Program to Delete and Create InfoPackages

2. Via transaction SE38, create an executable program.

In this example, the program is called:

ZAUTO_CREATE_AND_DELETE_IP



ABAP Editor: Initial Screen

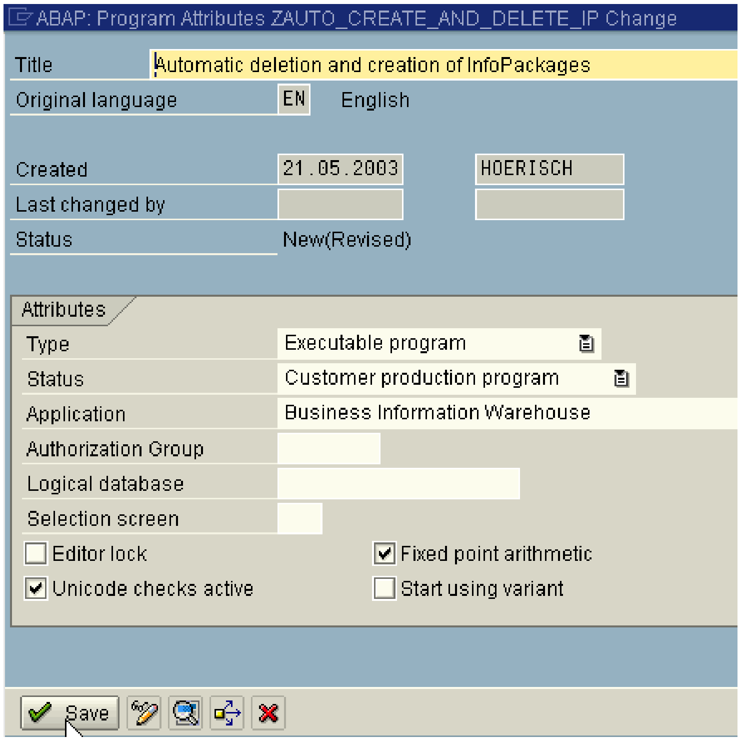
Program ZAUTO_CREATE_AND_DELETE_IP

Subobjects

● Source code

○ Variants

3. Specify the properties of the program and save.



ABAP: Program Attributes ZAUTO_CREATE_AND_DELETE_IP Change

Title	Automatic deletion and creation of InfoPackages	
Original language	EN	English
Created	21.05.2003	HOERISCH
Last changed by		
Status	New(Revised)	

Attributes

Type	Executable program
Status	Customer production program
Application	Business Information Warehouse
Authorization Group	
Logical database	
Selection screen	

□ Editor lock ☑ Fixed point arithmetic

☑ Unicode checks active □ Start using variant

In the following program section:

```
****************************************
create InfoPackages with SELECTION-CRITERIA
****************************************
```

the BAPI interface parameters are adjusted. The sample code from the example can be used to get the suitable parameters.

Code to generate InfoPackages:

```
*&---------------------------------------------------------------------*
*& Report  ZAUTO_CREATE_AND_DELETE_IP                                  *
*&                                                                     *
*&---------------------------------------------------------------------*
*&                                                                     *
*&                                                                     *
*&---------------------------------------------------------------------*

REPORT  ZAUTO_CREATE_AND_DELETE_IP              .
************************************************************************
* DATA Declaration
************************************************************************
* GET InfoPackage
DATA: SO_S_SELINFOSOURCE     type BAPI6102SL,
      SO_S_SELSOURCESYSTEM   type BAPI6101SL,
      SO_S_SELDATASOURCE     type BAPI6109DSSL,
       I_S_INFOPACKAGE_LIST  type BAPI6109L,
       I_S_RETURN            type BAPIRET2.

DATA: SO_T_SELINFOSOURCE     type BAPI6102SL   occurs 0,
      SO_T_SELSOURCESYSTEM   type BAPI6101SL   occurs 0,
      SO_T_SELDATASOURCE     type BAPI6109DSSL occurs 0,
       I_T_INFOPACKAGE_LIST  type BAPI6109L    occurs 0,
       I_T_RETURN            type BAPIRET2     occurs 0.

* CREATE InfoPackage
DATA: I_S_DETAILS            type BAPI6109,
      I_S_SCHEDULING_PARAMS  type BAPI6109BTCH,
      I_S_DESTINATIONS       type BAPI6109DEST,
      P_INFOPACKAGE          type BAPI6109-INFOPACKAGE,
      I_S_SELECTIONS         type BAPI6109SEL.

DATA: I_T_SELECTIONS         type BAPI6109SEL occurs 0.



************************************************************************
* get all avaiable InfoPackages for a special InfoSource
* Fill SELECT-OPTION's to get the InfoPackage List
************************************************************************
* InfoSource
move 'I'                     TO SO_S_SELINFOSOURCE-SIGN.
move 'EQ'                    TO SO_S_SELINFOSOURCE-OPTION.
move 'ZHOWTOINFOPACKAGEBAPI' TO SO_S_SELINFOSOURCE-INFOSOURCELOW.
move ''                      TO SO_S_SELINFOSOURCE-INFOSOURCEHIGH.
APPEND SO_S_SELINFOSOURCE    TO SO_T_SELINFOSOURCE.

* SourceSystem
```

```
move 'I'                     TO SO_S_SELSOURCESYSTEM-SIGN.
move 'EQ'                    TO SO_S_SELSOURCESYSTEM-OPTION.
move 'QB8CLNT003'            TO SO_S_SELSOURCESYSTEM-SOURCESYSTEMLOW.
move ''                      TO SO_S_SELSOURCESYSTEM-SOURCESYSTEMHIGH.

APPEND SO_S_SELSOURCESYSTEM  TO SO_T_SELSOURCESYSTEM.
* DataSource
move 'I'                     TO SO_S_SELDATASOURCE-SIGN.
move 'EQ'                    TO SO_S_SELDATASOURCE-OPTION.
move 'ZHOWTOINFOPACKAGEBAPI' TO SO_S_SELDATASOURCE-DATASOURCELOW.
move ''                      TO SO_S_SELDATASOURCE-DATASOURCEHIGH.
APPEND SO_S_SELDATASOURCE    TO SO_T_SELDATASOURCE.

* Call BAPI BAPI_IPAK_GETLIST and get the List
CALL FUNCTION 'BAPI_IPAK_GETLIST'
* EXPORTING
*   JOB_STATUS             = ' '
  TABLES
*   SELTEXTLONG            =
    SELINFOSOURCE          = SO_T_SELINFOSOURCE
    SELSOURCESYSTEM        = SO_T_SELSOURCESYSTEM
    SELDATASOURCE          = SO_T_SELDATASOURCE
    INFOPACKAGE_LIST       =  I_T_INFOPACKAGE_LIST
    RETURN                 =  I_T_RETURN.

if sy-subrc <> 0.
  "     error handling
endif.

************************************************************************
* delete all existing InfoPackages
************************************************************************
if I_T_INFOPACKAGE_LIST is not initial and I_T_RETURN is initial.

  loop at I_T_INFOPACKAGE_LIST into I_S_INFOPACKAGE_LIST.

*   call BAPI to DELETE InfoPackage
    CALL FUNCTION 'BAPI_IPAK_DELETE'
      EXPORTING
        INFOPACKAGE = I_S_INFOPACKAGE_LIST-INFOPACKAGE
      TABLES
        RETURN      = I_T_RETURN.

    if sy-subrc <> 0 or I_T_RETURN is not initial.
      "     error handling
    endif.

  endloop.
endif.


************************************************************************
* create InfoPackages with SELECTION-CRITERIA
************************************************************************

* get SELECTION-CRITERIA from table SFLIGHT and field CARRID
DATA: BEGIN OF I_S_SFLIGHT,
        CARRID TYPE SFLIGHT-CARRID,
      END OF I_S_SFLIGHT.

DATA: I_T_SFLIGHT LIKE I_S_SFLIGHT occurs 0.

clear   I_S_SFLIGHT.
refresh I_T_SFLIGHT.
```

```
select distinct carrid from sflight into table I_T_SFLIGHT.

* loop all CARRID enties from table SFLIGHT
loop at i_t_sflight into i_s_sflight.
  clear   I_S_SELECTIONS.
  refresh I_T_SELECTIONS.

  " structure I_S_DETAILS
  move 'ZHOWTOINFOPACKAGEBAPI' to I_S_DETAILS-INFOSOURCE.
  move 'I'                     to I_S_DETAILS-INFOSOURCETYPE.
  move 'QB8CLNT003'            to I_S_DETAILS-LOGSYS.
  move 'ZHOWTOINFOPACKAGEBAPI' to I_S_DETAILS-DATASOURCE.
  move 'D'                     to I_S_DETAILS-DATASOURCETYPE.
  move '0'                     to I_S_DETAILS-HIERACT.
  move ''                      to I_S_DETAILS-CHAVL_CHECK.
  move 'X'                     to I_S_DETAILS-UPDATEMASTERDATA.
  " generate short text of InfoPackage
  data: tabix type string.
  move sy-tabix to tabix.
  concatenate sy-datum sy-uzeit 'InfoPackage : ' tabix into
  I_S_DETAILS-TEXT separated by space.
  move ''                      to I_S_DETAILS-LOAD_STATUS.
  move 'F'                     to I_S_DETAILS-UPDMODE_READ.

  " structure I_S_SCHEDULING_PARAM
  move '' to I_S_SCHEDULING_PARAMS-STARTDTTYP.
  move '' to I_S_SCHEDULING_PARAMS-SDLSTRTDT.
  move '' to I_S_SCHEDULING_PARAMS-SDLSTRTTM.
  move '' to I_S_SCHEDULING_PARAMS-EVENTID.
  move '' to I_S_SCHEDULING_PARAMS-EVENTPARM.
  move '' to I_S_SCHEDULING_PARAMS-PERIODIC.
  move '' to I_S_SCHEDULING_PARAMS-CANCELPERIOD.
  move '' to I_S_SCHEDULING_PARAMS-EVENT_ID_OK.
  move '' to I_S_SCHEDULING_PARAMS-EVENT_PM_OK.
  move '' to I_S_SCHEDULING_PARAMS-EVENT_ID_ER.
  move '' to I_S_SCHEDULING_PARAMS-EVENT_PM_ER.
  move '' to I_S_SCHEDULING_PARAMS-FUNCTION_CALL.
  move '' to I_S_SCHEDULING_PARAMS-EXIT_CALL.
  move '' to I_S_SCHEDULING_PARAMS-BATCH_WAIT.
  move '' to I_S_SCHEDULING_PARAMS-JOBNAME.

  " structure I_S_DESTINATIONS
  move 'X' to I_S_DESTINATIONS-ONLYENTRANCE.
  move ''  to I_S_DESTINATIONS-ONLYCUBETAB.
  move ''  to I_S_DESTINATIONS-PARALLEL.
  move ''  to I_S_DESTINATIONS-CUBEAFTERODS.

  " table selections
  move 'CARRID'           to I_S_SELECTIONS-FIELDNAME.
  move 'CARRID'           to I_S_SELECTIONS-IOBJNM.
  move 'I'                to I_S_SELECTIONS-SIGN.
  move 'EQ'               to I_S_SELECTIONS-OPT.
  move I_S_SFLIGHT-CARRID to I_S_SELECTIONS-LOW.
  append I_S_SELECTIONS   to I_T_SELECTIONS.

* create InfoPackages with BAPI
  CALL FUNCTION 'BAPI_IPAK_CREATE'
    EXPORTING
      DETAILS                  = I_S_DETAILS
      SCHEDULING_PARAMS        = I_S_SCHEDULING_PARAMS
      DESTINATIONS             = I_S_DESTINATIONS
*     FILE_PARAMS              =
*     HIE_PARAMS               =
    IMPORTING
      INFOPACKAGE                 = P_INFOPACKAGE
    TABLES
      SELECTIONS                  = I_T_SELECTIONS
*     INFOCUBES                   =
*     THIRD_PARTY_PARAMS          =
      RETURN                      = I_T_RETURN.

  if sy-subrc <> 0 or I_T_RETURN is not initial.
*  error handling
  endif.

endloop.
```

4 Appendix (Sample ABAP Coding)

In order to fill interface BAPI_IPAK_CREATE correctly, it is advisable to read an existing InfoPackage with interface BAPI_IPAK_GETDETAIL and to analyze the returned parameters in the debugger.
The following coding:

```
***********************************************************************
*
* BEGIN APPENDIX
* get InfoPackage Details EXAMPLE
***********************************************************************


P_INFOPACKAGE = 'XXXXXXXXXXXXXXXX'." technical Name of InfoPackage

DATA: I_T_INFOCUBES          type BAPI6109IC occurs 0,
      I_T_THIRD_PARTY_PARAMS type BAPI6109TCP occurs 0,
      I_S_FILE_PARAMS        type BAPI6109FILE,
      I_S_HIE_PARAMS         type BAPI6109HIE.
DATA: I_S_DETAILS            type BAPI6109,
      I_S_SCHEDULING_PARAMS  type BAPI6109BTCH,
      I_S_DESTINATIONS       type BAPI6109DEST,
      P_INFOPACKAGE          type BAPI6109-INFOPACKAGE,
      I_S_SELECTIONS         type BAPI6109SEL.

DATA: I_T_SELECTIONS         type BAPI6109SEL occurs 0.


* fill BAPI Interface
CALL FUNCTION 'BAPI_IPAK_GETDETAIL'
  EXPORTING
    INFOPACKAGE        = P_INFOPACKAGE
  IMPORTING
    DETAILS            = I_S_DETAILS
    SCHEDULING_PARAMS  = I_S_SCHEDULING_PARAMS
    DESTINATIONS       = I_S_DESTINATIONS
    FILE_PARAMS        = I_S_FILE_PARAMS
    HIE_PARAMS         = I_S_HIE_PARAMS
  TABLES
    SELECTIONS         = I_T_SELECTIONS
    INFOCUBES          = I_T_INFOCUBES
    THIRD_PARTY_PARAMS = I_T_THIRD_PARTY_PARAMS
    RETURN             = I_T_RETURN.
```

```
break-point.

************************************************************************
* END APPENDIX
************************************************************************
```