Applies to:
SAP BW 3.x and 7.x. For more information, visit the Business Intelligence homepage.

Summary
This article explains the step by step approach to delete and recreate primary and secondary indexes of InfoObjects in BW.

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Created on: 20 October 2011

Author Bio
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Introduction:
Indexes help in improving performance by retrieving data faster from the tables. Indexes are considered to be copy of the database table with reduced fields and data in a sorted order.

The Primary Index contains the key fields of the table and a pointer to the non key fields of the table. This Primary Index gets created whenever we create any table in SE11 or when we create InfoProvider in BW. One can create further indexes and are called Secondary Indexes. This is necessary if the table is frequently accessed in a way that does not take advantage of the primary index.

In our project, we faced a peculiar scenario, where primary index was getting deleted when we were doing the selective deletion (using custom program) in the InfoProvider.

Scenario:
Name of the primary index: '0'.

Example:
Cube Name: Z_SL_IC
Table name: /BIC/FZ_SL_IC
Primary index name will be: "/BIC/FZ_SL_IC~0"

The below example is with the secondary index but the procedure is exactly the same for primary index.

Cube Name: Z_SL_IC
Check Primary and Secondary Indexes:

In Transaction SE14, we can see indexes for a particular table.

### ABAP Dictionary: Utility for Database Tables

<table>
<thead>
<tr>
<th>Name</th>
<th>/BIC/FZ_SL_IC</th>
<th>Transparent table</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short text</td>
<td>Sales Info Cube</td>
<td></td>
</tr>
<tr>
<td>Last changed</td>
<td>INF122405, 29.06.2010</td>
<td></td>
</tr>
<tr>
<td>Status</td>
<td>Active, Saved</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Exists in the database</td>
<td></td>
</tr>
</tbody>
</table>

### Execute database operation

- **Direct**
- **Background**
- **Enter for mass processing**

**Create database table**

**Delete database table**

**Activate and adjust database**

**Save data**

**Delete data**

Click on the Indexes highlighted in the above screenshot.

### Indexes of table /BIC/FZ_SL_IC

<table>
<thead>
<tr>
<th>Index name</th>
<th>Unique</th>
<th>Short description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>X</td>
<td>Primary index</td>
</tr>
<tr>
<td>010</td>
<td></td>
<td>Index using Dimension Z_SL_ICP</td>
</tr>
<tr>
<td>020</td>
<td></td>
<td>Index using Dimension Z_SL_ICT</td>
</tr>
<tr>
<td>030</td>
<td></td>
<td>Index using Dimension Z_SL_ICU</td>
</tr>
<tr>
<td>040</td>
<td></td>
<td>Index using Dimension Z_SL_ICI</td>
</tr>
<tr>
<td>050</td>
<td></td>
<td>Index using Dimension Z_SL_IC2</td>
</tr>
<tr>
<td>060</td>
<td></td>
<td>Index using Dimension Z_SL_IC3</td>
</tr>
<tr>
<td>P</td>
<td></td>
<td>Non-Unique Index (Key Fields) for Table /BIC/FZ_SL_IC</td>
</tr>
</tbody>
</table>
We will be deleting index 010 in this example.

The below screenshot shows the status of Index in the database:

**ABAP Dictionary: Utility for Database Indexes**

<table>
<thead>
<tr>
<th>Index ID</th>
<th>/BIC/FZ_SL_IC - 010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short text</td>
<td>Index using Dimension Z_SL_ICP</td>
</tr>
<tr>
<td>Last changed</td>
<td>INF122405 29.06.2010</td>
</tr>
<tr>
<td>Status</td>
<td>Active Saved</td>
</tr>
</tbody>
</table>

Exists in the database

DB index name /BIC/FZ_SL_IC~010

**Execute database operation**

- Direct
- Background
- Enter for mass processing
Step by Step Approach

Step 1:
Go to Tcode SE38.

Step 2:
Enter the name of the program “ZPRIMARY_INDEX_DROP”
Step 3:
Click on Create and specify the attributes as shown below and Click on Save
Below screen appears

Step 4:
Index name and Table name has to be changed if you are executing the below program for your requirements.

Write the program as mentioned below:
REPORT ZPRIMARY_INDEX_DROP.

CALL FUNCTION 'DD_DROP_INDEX'
   EXPORTING
      DBSYS = SY-DBSYS
      NO_EXEC = ' '
      PRID = 0
      PROGNAME = ' '
      TABNAME = '/BIC/FZ_SL_IC'
      DB_CHECK_FLAG = 'X'
      INDEXNAME = '010'
   * IMPORTING
   * GENPROG =
   * SUBRC =
   EXCEPTIONS
      INDEX_NOT_DROPPED = 1
      PROGRAM_NOT_GENERATED = 2
      PROGRAM_NOT_WRITTEN = 3
      OTHERS = 4
   .
   IF SY-SUBRC <> 0.
      MESSAGE ID SY-MSGID TYPE SY-MSGTY NUMBER SY-MSGNO
      WITH SY-MSGV1 SY-MSGV2 SY-MSGV3 SY-MSGV4.
   ENDIF.
Step 5

After executing the above ABAP program, the index for the table gets deleted and the status for the same is show in the below screenshot.

### ABAP Dictionary: Utility for Database Indexes

- **Index ID**: /BIC/FZ_SL_IC 010
- **Short text**: Index using Dimension Z_SL_IC
- **Last changed**: INFI22405 29.06.2010
- **Status**: Active Saved

DB index name

- **Processing type**
  - Direct
  - Background
  - Enter for mass processing

- **Create database index**
- **Delete database index**
Creating the Primary or Secondary Index:

The below ABAP program is used for creating both the primary index and the secondary indexes.

```abap
CALL FUNCTION 'DD_CREATE_INDEX'
  EXPORTING
    DBSYS = SY-DBSYS
    INDEXNAME = '010'
    NO_EXEC = ' ' 
    PRID = 0
    PROGNAME = '
    TABNAME = '/BIC/FZ_SL_IC'
  *
  IMPORTING
  *
  GENPROG = 
  *
  EXCEPTIONS
  *
  BASETAB_ERROR = 1
  *
  DB_ERROR = 2
  *
  DD_ERROR = 3
  *
  INDEX_EXISTS = 4
  *
  OTHERS = 5

  IF SY-SUBRC <> 0.
    MESSAGE ID SY-MSGID TYPE SY-MSGTY NUMBER SY-MSGNO
      WITH SY-MSGV1 SY-MSGV2 SY-MSGV3 SY-MSGV4.
  ENDIF.
```

After executing the above ABAP program, the Index gets generated in the database. Below screenshot shows the status of Index in the database.

<table>
<thead>
<tr>
<th>Storage Parameters</th>
<th>Object Log</th>
</tr>
</thead>
<tbody>
<tr>
<td>Index ID</td>
<td>/BIC/FZ_SL_IC</td>
</tr>
<tr>
<td>Short text</td>
<td>Index using Dimension Z_SL_ICP</td>
</tr>
<tr>
<td>Last changed</td>
<td>INF122405</td>
</tr>
<tr>
<td>Status</td>
<td>Active</td>
</tr>
<tr>
<td>DB index name</td>
<td>/BIC/FZ_SL_IC~010</td>
</tr>
</tbody>
</table>

![Index Status Screenshot](image-url)
Step by Step Procedure to Create Primary and Secondary Indexes in BW

Related Content

help.sap.com


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