

Utility TEMPLATE Switching in DB2 9 for z/OS

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This article discusses a helpful new DB2 9 feature that impacts multiple utilities: TEMPLATE switching. But let's back up a minute for those readers who aren't familiar with templating and lists.

As of DB2 V7, IBM utilities can be run on a list of database objects. This list is created using the LISTDEF command. With the LISTDEF statement, the DBA can create a list of database objects that can be submitted to a single utility invocation for execution. For example, the following statement creates a list named CUSTALL that includes all the database objects in the CUSTOMER database:

```
LISTDEF CUSTALL INCLUDE TABLESPACES DATABASE CUSTOMER
          INCLUDE INDEXSPACES DATABASE CUSTOMER
```

LISTDEF isn't a utility; it's a control statement that can be used within other DB2 utilities. Once the list is defined using LISTDEF, it can be used when executing other utilities. To run a DB2 utility against a list, you have the option of putting the LISTDEF statements in a separate library data set or coding it directly before the DB2 utility control statement that refers to the list.

To adequately support database object lists, the TEMPLATE statement was added. Using a TEMPLATE you can allocate data sets to support utility processing on a large number of unknown database objects. The purpose of the TEMPLATE statement is to provide DB2 utilities with the basic allocation information necessary to automatically generate and allocate valid data sets that are required for use as DB2 utilities are executed. With the TEMPLATE statement you essentially specify data set naming conventions and allocation information without using explicit JCL DD statements.

OK, so what's TEMPLATE switching? It enables you to specify different characteristics for image copies of varying sizes. So, for example, you can create a different template for low- and high-volume image copies. Here's an example:

```
//SYSIN DD *
TEMPLATE low DSN &DB..&TS..IC.D&DA..T&TI.
          UNIT=DASD LIMIT(50 CYL,high)
TEMPLATE high DSN &DB..&TS..IC.D&DA..T&TI.
          UNIT=TAPE

COPY TABLESPACE MY.SMALLTS COPYDDN(low)
COPY TABLESPACE MY.LARGETS COPYDDN(low)
```

Note the new parameter named LIMIT. This controls when the TEMPLATE is switched. In this example, we set the LIMIT for low volume to be 50 cylinders. When this is reached, the TEMPLATE will be switched to the high-volume template. Of course, you have the flexibility to

control the limit by specifying whatever number is appropriate for your site, as well as specifying it in CYL, GB, or MB.

It's important to understand that DB2 can switch the TEMPLATE only once, so you can't have more than two templates. Template switching is available for image copies produced by COPY, COPYTOCOPY, MERGECOPY, LOAD, and REORG. Additionally, you can set up template switching for both the COPYDDN and RECOVERYDDN.

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