

BCV5 2.5



This document provides an overview of new functions that have been introduced in BCV5 version 2.5.

Support for New DB2 V10 Features

BCV5 provides support for the following new features of DB2 version 10:

Improved Handling of Partition-by-Growth Universal Table Spaces

Partition-by-growth table spaces can now be copied with BCV5's internal copy facility, even if the source table space has more partitions than the target table space. BCV5 will automatically add new partitions to the target in order to ensure that the source data will fit into the target object.

Partition-by-growth table spaces were introduced with DB2 version 9. However, DB2 version 9 did not provide an interface to enlarge an existing partition-by-growth table space without adding data to it. A new partition would only be added following an INSERT statement or a LOAD operation. Therefore, in many cases it was not possible to copy a partition-by-growth table space with the built-in copy facility of BCV5, which works by copying VSAM clusters. BCV5 had to fall back to an UNLOAD/LOAD based process for such a table space, which is very time-consuming. This limitation no longer exists.

Timestamps with Scale and Time Zone

DB2 version 10 adds two new SQL timestamp types, which extend the original timestamp data type. It is now possible to specify a precision and to add a time zone to a timestamp. BCV5 is able to handle these new data types when generating DDL and when checking an existing target table for compatibility. The BCV5 copy facility copies data of these new types and is able to build a table from scratch if timestamps with time zone or precision are involved in a reduction or masking query.



Inline LOBs

DB2 optimizes the performance of smaller LOB objects. It is possible to specify a threshold for the length of a LOB value. If an inserted LOB value is smaller than this threshold, it will be stored in the base table space instead of the LOB table space. This eliminates the necessity for DB2 to access the auxiliary table for small LOB objects and saves I/O and CPU time. BCV5 is able to fully handle these inline LOBs.

Hash Organization

DB2 V10 introduces a new type of table space organization called hash organization. This new type of table space allows an efficient access to the data without the necessity to access an index first. DB2 calculates a hash value for each row of a hash table space based on the columns of the hash key. The columns in the hash key are specified at creation time of the table. The hash key directly translates into the location of the row inside the hash-organized table space, thus eliminating the need to consult an index when a SELECT statement is executed. If the statement uses equal predicates to fetch only a single row from that table, DB2 is able to retrieve the row with a single I/O operation. BCV5 can handle this new table space type both when generating the DDL, checking the compatibility of an existing target table space, and copying the data to the target.

Flash Copy Support for Image Copies

DB2 V10 can use flash copy hardware facilities to create consistent image copies without affecting the availability of the table/table space objects. The table spaces and indexes will be copied using hardware-assisted facilities like flash copy into a regular VSAM dataset. The COPY utility will then back out all open transactions in order to bring the set of copied VSAM clusters to a consistent state. BCV5 can use such image copies as input for its copy process.

Support for History Tables

In DB2 V10 you can create system-period temporal tables that contain information about the periods of time in which a given record is considered valid. Each time a record is modified, DB2 automatically archives the old rows into a history table.

BCV5 considers this new type of table during its DDL generation process. It generates the CREATE statements for the system-period temporal table, creates the history table and automatically connects the history table to the system-period table. In addition, both the system-period table and the history table are copied by the internal BCV5 copy utility.



Support for **SYSTEM_TIME** and **BUSINESS_TIME**

Temporal tables have been introduced in DB2 version 10 to store a period of time in which a row was valid. DB2 differentiates between two types of temporal tables: system-period temporal tables and application-period temporal tables. For system-period tables, DB2 maintains a pair of columns that store information about the period of time when a row was valid. For application-period tables, the respective application program itself must maintain the column pair that indicates the period of time in which the row was valid. BCV5 is able to generate the DDL for this new feature.

Data Masking Enforcement Repository

The masking capabilities of BCV5 have been enhanced to enforce data masking (anonymization) for specific tables. The user interface of BCV5 allows defining data masking methods to modify SQL data. These rules control how the SQL data is modified.

Beside the definition of masking rules, a data protection official can also define masking rules that will be enforced by BCV5 whenever data is copied from a given DB2 subsystem. These rules are generic specifications that define how a column of a table should be masked. These masking enforcement rules guarantee that a table that contains sensitive data is never copied by BCV5 without masking. It avoids that unmasked data will be used for test or development purposes.

Categorize Tasks by Folders

The graphical user interface of BCV5 allows combining tasks into categories, or folders. This makes it easier to keep track of the list of tasks, especially if many tasks are defined in the BCV5 user interface.

Improved Update Procedure

The update procedure of BCV5 has been improved. Each time an update is installed, it automatically checks the consistency of the BCV5 administration database. It checks if all required BCV5 tasks and subsystem options are installed, and if each database table has the correct structure. Additionally the update procedure checks if the skeletons of the BCV5 installation are up to date, or if you need to make changes to the skeletons in your ISPSLIB.USER library.

Export Commands in Batch Interface

The Batch Interface component has been enhanced to export all defined subsystems and task definitions. The export files can be used for migration between different BCV5 releases and to transfer the subsystem and task definitions into a different BCV5 installation.



Generation of FIELDPROC, EDITPROC and VALIDPROC

The integrated DDL generator of BCV5 now supports the generation of FIELDPROC, EDITPROC and VALIDPROC clauses for CREATE TABLE statements. These clauses were not generated in earlier releases of BCV5, which may have lead to corrupted data if the FIELDPROC, EDITPROC or VALIDPROC specification was missing in the target environment.

Contact us:

BCV5's release 2.5 will be general available on August 1st, 2011. If you are interested in this release, please contact us at support@ubs-hainer.com. You can also find us online at www.ubs-hainer.com

UBS Hainer is dedicated to delivering quality software and services to IBM's z/OS mainframe customers running mission critical DB2 based applications. Cost and performance are not the only concern for DB2 shops. Staffing and processing time constraints are quickly becoming major issues. The value proposition for UBS's products and services include: Cost reduction, performance enhancement, job wall clock time reduction and expert system automation to free up experienced technical staff.

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