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BCV5™ FAST AND EFFICIENT DB2 DATA MIGRATIONS

Save 90% CPU & Run Time with each DB2 copy

Corporations maintain large amounts of data in DB2 databases, and it is normal to find several DB2 subsystems for production, test and development. Refreshing testbeds from production systems is a vital part of the development, testing and quality assurance life cycle. Obtaining relevant test data requires copying from one DB2 subsystem to another.

The window of opportunity for copying or migrating DB2 data is constantly decreasing as the demands from 24x7 operations are increasing. Limited resources and shrinking batch windows make data delivery to QA difficult.

BCV5 quickly and efficiently copies, refreshes and replicates DB2 objects.

BCV5 copies DB2 databases or tables within the same or different DB2 systems. When measured against conventional copying methods, **BCV5 saves around 90% on elapsed copy time and resources consumed (SSU,SRU)**. For one customer a ten-hour unload/load process was reduced to slightly over one hour. A BCV5 copy task integrates both the physical data movement and the DDL related requirements. It copies DB2 data, i.e. databases or tables with or without auxiliary objects - indexes, views, triggers, procs and runstats.

BCV5 automatically handles the OBID translation and the RBA adaptation. Copy jobs are completed in minutes rather than hours. DBAs are no longer forced to wait for weekend time slots and are able to run copying jobs on regular weekday shifts. Test data on demand is a dream come true for QA, development and test staff.

BCV5 offers relief where the need is greatest. It significantly cuts down runtime and cost. It reduces CPU consumption by 90%+ and shortens the preparation lead time required by the staff.

Automation Reduces Manual Effort

BCV5 is completely automated. The integrated ISPF interface allows you to define copy processes easily by specifying name patterns for the objects to be copied, and the appropriate processing options. It's powerful rule based renaming feature makes adhering to naming conventions in the target Db2 system simple and error free.

A BCV5 copy process can be executed either manually, or under the control of a job scheduler. Once the copy process is started there is nothing else to do.

BCV5 automatically generates the DDL for the selected objects using the specified target names. It checks existing target objects for compatibility. If any target objects are missing, it can create them for you. For each object in the process, BCV5 determines the fastest way to make a copy - usually a direct VSAM level copy.

If existing target objects have structural differences, BCV5 can either drop and recreate them, or it can trigger UNLOAD/LOAD as a fallback copy tool, allowing it to copy the data despite the differences.

One way or another, BCV5 makes it all work, and minimizes unwanted surprises.

Flexible Selection of Image Copies

BCV5 allows you to copy from either current tablespaces or image copies. You can use the most recent image copy, or an older image copy chosen by generation number, timestamp, or dataset name pattern. BCV5 automatically identifies the correct image copy datasets and uses them in the copy process. It also detects if your indexes have image copies or not, and only rebuilds the target indexes if it cannot copy them directly.

RUNSTATS Cost Time and Money

Db2 requires valid RUNSTATS information to find efficient access paths, and real time statistics (RTS) to calculate the sizes of sort work data sets.

BCV5 copies these statistics directly from the source environment into the target. There is no need for a separate RUNSTATS job or to do a REORG in order to collect an RTS baseline.

Why is BCV5 so fast?

BCV5 owes its unmatched performance to its proprietary Db2 copying tool. While the UNLOAD/LOAD utilities slowly extract single rows one at a time, BCV5 copies the complete VSAM linear data sets to the target and replaces the Db2-internal OBIDs with the correct target values.

BCV5 also uses parallel processing and automatic workload balancing to boost the overall copy speed. The built-in copy tool of BCV5 also copies LOB and XML data at the same rate as regular tablespaces. This all adds up to make BCV5 ten times faster than UNLOAD/LOAD.

How can BCV5 save 90% on CPU Time?

Row-wise processing consumes many more CPU cycles than VSAM copying. Clients report that BCV5 only uses about one-tenth of the service units that UNLOAD/LOAD based processes typically use. BCV5 copies data directly from the source pageset to the target pageset. This also works if the source and target are located on two different LPARs or even two different CECs since BCV5 gives you the option to copy data over a network connection. In addition, BCV5 also copies indexes directly, instead of rebuilding them each time, like the LOAD utility does.

Making the Copy Process Easy

A fast and efficient copy tool is only part of the solution, however. The BCV5 user interface is intuitive and makes it easy to set up copy processes, whether you are a seasoned DBA, an application developer, or a member of QA and testing. Those who prefer the PC environment can use BCV5's graphical user interface. And, of course, online help is always one click away.

Who needs BCV5?

Anyone involved in budgeting, surely appreciates cost savings.

BCV5 allows you to do more with your existing hardware, thus avoiding expensive machine upgrades and the associated increase in software cost. It can also help you lower your 4-hour rolling average, which often peaks during long running LOAD jobs.

Application development teams, QA groups, technical support staff, auditors and, of course, end users need the data in order to do their jobs. Being able to get current test data fast helps improve the quality of your QA processes. This is something that benefits your entire organization. On an operational level, BCV5 relieves the DBAs from the time-consuming burden of refreshing test and development environments since it provides an unmatched degree of automation. This allows them to focus on the mission critical tasks in your production environment instead.

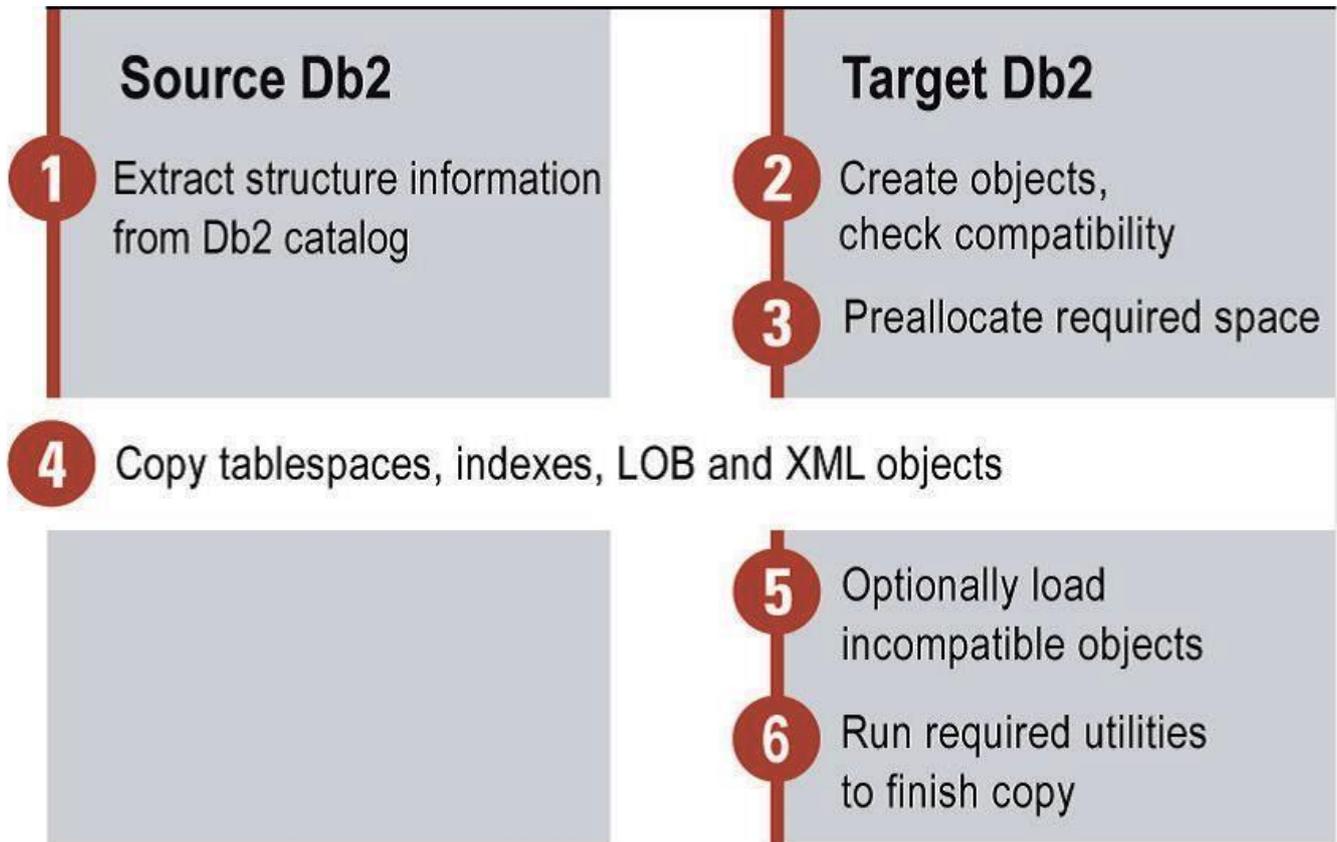
A Quick View of BCV5

BCV5 is a faster, more efficient and manageable way to copy Db2 data.

It automatically generates and executes jobs that will: Extract object definitions from the Db2 catalog of the source system; transfer the definitions to the target system, rename the objects as specified and apply them in the target Db2 system (CREATE, or DROP and CREATE); compare the source definitions with existing target objects for compatibility; copy page sets from source to target Db2; start the target objects for end user access.

BCV5 comes with two user interfaces, ISPF and workstation GUI, both provide identical functionality. To create a BCV5 copy task, select the source and target Db2 subsystems (which may also be identical), and the objects to be copied. Then define if you would like to copy from the current tablespaces or from image copies, and how to rename the objects during the copy process. You can also specify if RUNSTATS and RTS information should be transferred to the target Db2, and if you would like to copy auxiliary objects, such as views, aliases, synonyms, labels, comments, constraints, or GRANTs. Once a copy task is defined, it can be executed at any time, either manually or using a job scheduler for periodic execution.

BCV5 – Job Flow



BENEFITS

- Automates Db2 Copying/Migrating/Refreshing
- Saves 90% CPU resources and run time
- Dramatically reduces labor costs freeing up staff
- Integrates into IT environments seamlessly
- Eliminates RUNSTATS, Rebuild Index, etc.
- Copies directly, no need for temporary DASD space

FEATURES

- Flexible rule-based object selection and renaming
- Checks and/or generates JCL, DDL, and all required copy commands and utility statements
- Automatic space allocation
- ISPF interface and graphical interface
- Offers data reduction, data masking, network copies, backup and restore
- Makes consistent copies without stopping the source

Optional Components

IF – In-Flight Copy

Whenever data must come from tables that require 24x7 enterprise availability, it creates an issue for IT. Users need to query and update the tables without interruption - stopping the source objects is not an option. At the same time, testers require a consistent copy of the data.

BCV5's In-Flight component solves this problem. It uses information from the Db2 log to make consistent copies of tablespaces (regular, LOB and XML) and indexes.

And it does all this while keeping the source available for updates.

RM – Reduction and Masking

Data privacy regulations impact how test centers use production data. RM modifies sensitive data during the copy process according to user specifications.

It offers several options for data masking and also supports user-defined algorithms. At the same time, RM also allows for data reduction using filtering criteria to create subsets from the source data.

IB – Icebox

Need to provide Db2 data from last week, last month or last year? Want an automated and efficient method to recreate DDL and data in record time? IB takes snapshots on demand and allows you to restore the objects whenever you need them into any environment. You can use the original names or rename the objects.

BCV5's Icebox component compares structural information from the backup with current structures, and it can either restore old data into the current tables or drop and recreate the tables so that they look exactly like they did when the backup was created.

RC – Remote Copy

Some production systems are physically isolated to such an extent that it is extremely difficult to migrate data efficiently to test systems. They may be located on a separate LPAR or even on a separate CEC, and sometimes not even shared DASD is available. The RC component of BCV5 makes data transfer between isolated systems simple. RC uses TCP/IP to transfer structures and data from one system to another. The entire copy process is automated and just as easy to set up and execute as a local copy.

BI – Batch Interface

BI provides a powerful definition language for creating, modifying and deleting BCV5 copy tasks entirely through batch jobs. It allows you to easily integrate BCV5 with other processes. You can supply the processing options and rule sets of a copy task in a job rather than interactively. When you have multiple BCV5 installations on different systems, the batch interface is also a convenient way to transfer complete task definitions between the installations.

For information please visit www.dbasistemi.it or email info@dbasistemi.it

DBA Sistemi Srl - Software per i Sistemi Informatici

Head Office: Via della Casanova 3 - 50012 Bagno a Ripoli (Firenze); Tel.+39 055 600636

North Italy Branch: Via Baranzate 47A - 20026 Novate Milanese (Milano)

e-mail: info@dbasistemi.it; web: www.dbasistemi.it