

Exploring Best Practices for Db2 for z/OS Database Migrations

Efficiently execute migrations, accommodate database alterations and automate repetitive tasks when using the CA RC/Merger feature.

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The following new videos are provided that help explain the advantages of using the RC/Merger feature move analysis processing to migrate Db2 data and perform a data only copy:

- Click to view: [Advantages of Using RC/Merger Move Analysis Processing to Migrate Db2 Data](#)
- Click to view: [Performing a Data Only Copy Using RC/Merger Move Analysis Process](#)

Practitioner Challenges

As an experienced practitioner, you know it's not easy managing the growing complexity of today's Db2 enormous database environment infrastructure size and distributed across multiple subsystems and locations. In such environments, retrieving and analyzing information are significant challenges for DBAs, as is the need to automate routine tasks to maintain these systems and reduce the risk of database outages.

One of these routine tasks is the need to test new database code logic with 'live data'. The challenge is to be able to test with this data in a non-production environment to ensure that the actual 'live' or production data is not at risk or impacted by the testing.

The traditional solution is to Unload from Source Objects and Load into the Target Objects. While this is a tested and valid approach, it is resource intensive in terms of user effort, clock time, and storage space used. Fortunately, there is a better way.

Solution overview

CA RC/Migrator™ for Db2 for z/OS (Migrator) – a member of the CA Database Management for Db2 for z/OS solution portfolio - provides automation that increases database availability and helps you to reduce the time and human-error involved with complex database administration tasks.

RC/Merger a key feature of Migrator that performs *data cloning*. Data cloning is the ability to clone (i.e. migrate) Db2 data *without the need to Unload and Load the data* as described above but significantly easier, faster and at less cost.

RC/Merger accepts the migration from a variety of input sources (LDS VSAM, Snapshot or FlashCopy) and creates the target objects. All that is required is to create a migration strategy and add the list of objects to be migrated.

Migration tasks can be streamlined when compared to traditional Unload/Load because RC/Merger:

- Migrates data page by page rather than record by record (Unload/Load)
- Copies data page by page for Indexes so that REBUILD is not required
- Populates statistics of target objects by copying them from source, so that RUNSTATS is not required.
- Does not require any extra storage as migration is happening directly from Source datasets to Target datasets.

With this faster migration approach, DBAs can perform application code changes with production data without having to invest many hours preparing the target region.

Step by Step Guidance: Exploiting the RC/Merger feature

Implementing this solution involves just a few steps:

- Create a Migrate strategy (of type M) using RC/Migrator and add all the required Db2 objects into the strategy.
- Generate RC/Merger Analysis (by typing M as the line command) against the Migrate strategy (sample screenshot is below).

```

O STRATEGY DESCRIPTION          CREATOR  P O SSID  USER      DATE      TIME
M RMM002A  D11A TO DH3G        ADUSR01  M Y D11A ADUSR01  17/07/21  03:52
    
```

- In the next panel, select “RC/Merger options” in “Update Options”. This will take you to the “RC/M Strategy Move Analysis Options” panel shown below. Note that you should set “DATA ONLY COPY” to “Y” if you do not want the DDL’s to be generated.

```

RMP11R 20.0  ----- RC/M Strategy Move Analysis Options ----- 19/01/11 01:41
COMMAND ==> |
Enter SAVE to save settings. END to return. "?" in field for field level help.

RC/Merger Options

(M)OVE/(C)OPY      ==> C      SOURCE          ==> D      (D)b2/(S)napshot/(F)lashcopy
MAXTASKS          ==> 3      SHARE LEVEL    ==> RN     (N,NS,R,RN)
RESET PAGE RBA    ==> N      QUIESCE        ==> N      REORG TS          ==> N
DATA ONLY COPY    ==> N      RESERVE OBIDS  ==> N      REBUILD IX ALL   ==> N
VERIFY ONLY       ==> N      COLLISION RPT  ==> N      ALLMSG           ==> Y
SQL ONLY          ==> N      AUTOREPAIR     ==> Y      STATS BEFORE COPY ==> N
SNAPSHOT HLQ      ==> _____
SOURCE DBCREATOR  ==> _____
TARGET DBCREATOR  ==> _____

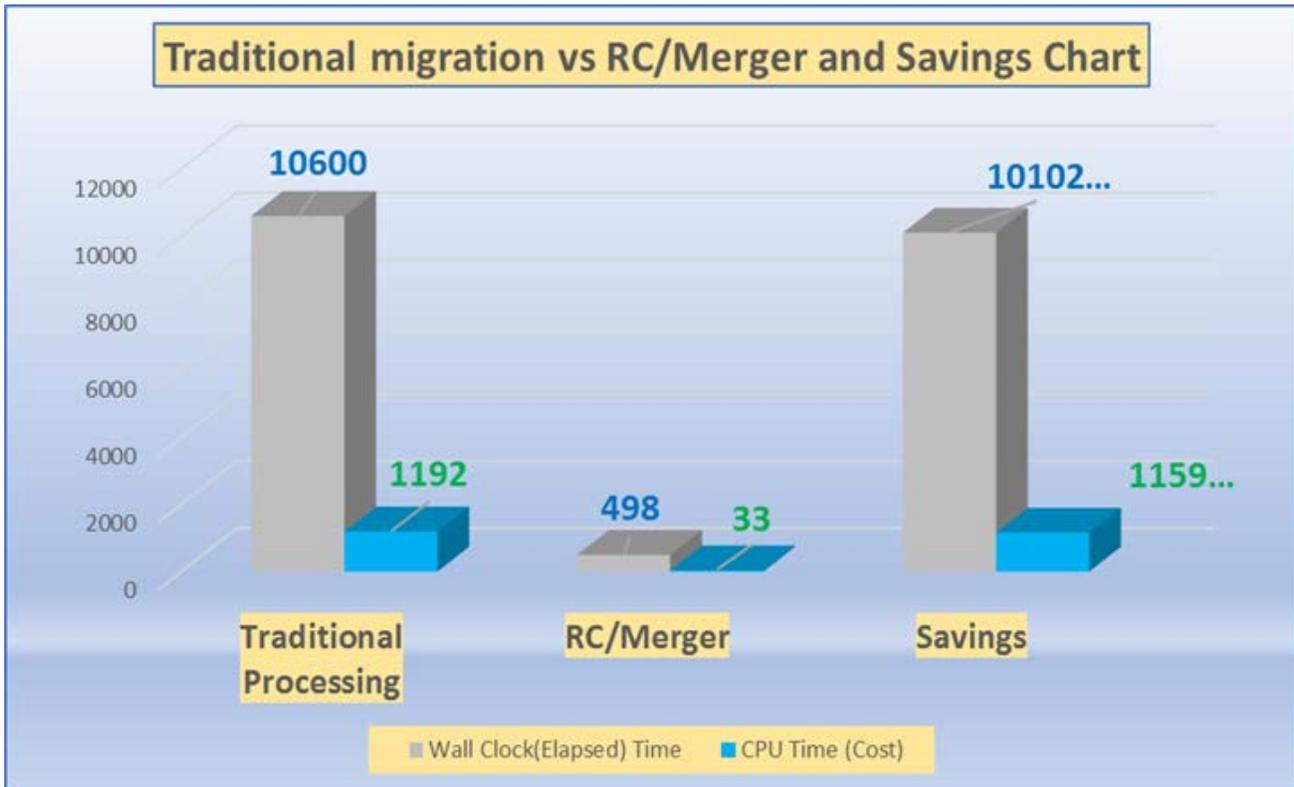
TS/IX Status Options

MERGE CONSISTENCY ==> I      (Y)es,(N)o,(I)gnore
SOURCE EXECUTION  ==> SP     (RO,RW,UT,SP)
SOURCE FINAL      ==> RW     (RO,RW,UT,SP)
TARGET FINAL      ==> SP     (RO,RW,UT,SP)
    
```

- Exit from this panel and generate Analysis in Batch mode to complete the process.

Summary

Exploiting RC/Merger help you to streamline complex tasks to efficiently execute migrations, accommodate database alterations and automate repetitive tasks as a way to test new database code logic with 'live data' in a non-production environment. As outlined above all that is required is to add the required object to Strategy and generate Analysis. Once implemented, the results speak for themselves as shown in the graphic below:



Source: CA, Inc. Lab Results 2019

- **Clock(Elapsed) time savings – Over 95%** of clock time savings compared to traditional Unload/Load.
- **Cost (CPU) time savings - Over 97%** of cost savings compared to traditional Unload/Load.

For More Information

So how can you meet CA Technologies *Subject Experts For All Things DB2*, and how can you tap into their knowledge? Well, you'll certainly see several at [IDUG Conferences](#). But too they are conveniently just a mouse click away: all you need to do is join our [Community for Database Management for DB2 and IMS!](#)

You can learn new money saving tips, optimization techniques or just bounce ideas for consideration. Collaborate with peers and colleagues, and communicate directly with CA's subject experts. Best of all, it's at a price we can all agree on: **NO COST**. And, we invite YOU to become active and contribute your ideas and techniques – we're ALWAYS looking for more content from Champions and Unsung Heroes like YOURSELF! See you soon in the Community!

And of course, to learn more about our DB2 management portfolio, visit: ca.com/db2

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