



Considerations for migrating from DB2 for z/OS Version 7

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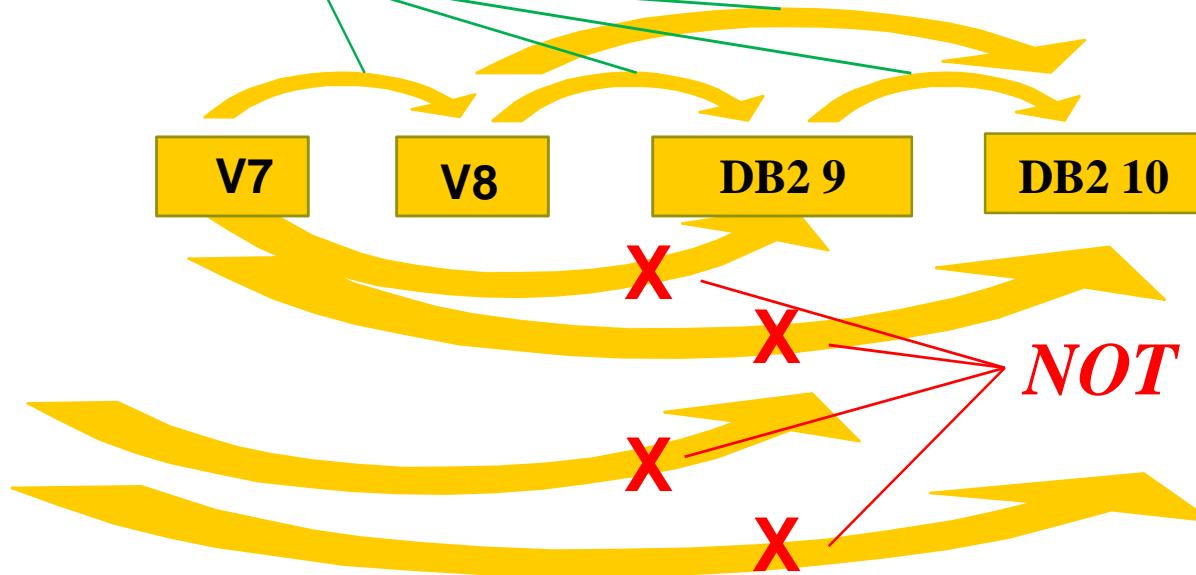
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Migration Approaches – Post DB2 V7

SUPPORTED



NOT SUPPORTED



What does “Not Supported” Mean?

- Not recognized by IBM as a valid V2V migration path
- **DB2 for z/OS tests ONLY...**
 - Supported migration paths
 - Supported fallback paths
 - Supported coexistence scenarios
- There are no “Product” defined V2V processes for migration scenarios other than those officially “supported” by IBM
- DB2 for z/OS Technical Support deliver does NOT cover support for “alternative” V2V migration scenarios.
- **Customer who choose to pursue V2V scenarios, other than those supported by IBM, do so at their own risk.**



Post DB2 7 Migration Approaches

- **V7 to V8**
- **V7 to V8 (pass thru) to V9**
- **V7 to V9 (cold install)**



Common Tasks

- **Define well thought out workplans**
- **Testing Strategy is key and the most important**
- **Establish performance baselines**
- **Historical data**
 - Explain
 - Accounting detail
 - Query detail
 - Fenced reproducible Application portfolio
- **There will be some query regression**
- **Plan for memory, CPU, and DASD increases, but also learn about several features that will reduce / eliminate increases in all three categories**
- **Test all backout strategies even when there are none**
- **What amount of RISK are you willing to take**



Migration Decisions

- **What type of query workload does the customer have?**
- **What type of zIIP exploitation is expected?**
- **How does function of each release map to the customer workload?**
- **What development effort is required or expected to exploit the DB2 release?**
- **V8 may require application changes to gain back CPU (i.e. multirow operations)**
- **V9 can be a net over a V8 like to like but queries may benefit more without rearchitecting**



Migration Decisions

- **V7 EOS June 2008**
- **V8 has been available since March 2004**
- **V8 EOS April 2012**
- **V9 has been available since March 2007**

- **The customer needs to assess**
 - How much new function is required
 - What function is attractive in V8 and V9
 - What CPU increase is tolerable
 - Virtual Storage issues
 - Are tool vendors ready for any strategy we choose
 - Is DB2 Connect environment ready
 - Catalog organization
 - Statistics
 - Overall cost of each strategy



More Migration Decisions

- **z9 exploitation**
 - zIIP
 - Compression improvements
 - Virtual Storage
 - DS8000 and Ficon
 - Midaws



V7 to V8 Standard migration

- **Requires zSeries hardware**
- **Requires at least z/OS 1.3**
- **DB2 Connect 8.1 is recommended**
- **New migration method**
 - Conversion Mode
 - Looks like V7 only 64bit
 - Has some new feature exploitation
 - New utilities are available
 - Enable New Function Mode
 - Convert first half of catalog to UNICODE
 - Time consuming step depends on size and organization of the catalog
 - Passthru with no testing as nothing changes only the catalog is converted
 - New Function Mode
 - Convert the rest of the catalog
 - Engage the rest of the optimization enhancements
 - New SQL functions available



V7 to V8 Standard migration (continued)

- **DSNTIPJ8**
 - Check for deprecated and migration issues
- **Unicode inconsistencies**
 - Need to resolve

- **IBM Support can assist**



DB2 9 for z/OS

- **DIST now 64-bit**
 - Shared Memory model

- **Base Pre-requisites:**
 - zSeries z800, z890, z900, z990, z9 or later
 - z/OS V1.7 or above
 - Data Sharing:CFLEVEL 12
 - Defined shared memory objects
 - Satisfy the V8 requirements

- **Catalog changes:**
 - Additions for new features
 - Including Real Time Statistics

- **DB2 Connect**
 - V8 FP13, V8.2 FP 6, V9 FP1



DB2 9 for z/OS

- **zIIP**
 - SQL Stored Procedures
 - z/OS XML Services
 - Executes on zAAP
 - When DB2 involved and eligible will utilize zIIP

- **Migration Process:**
 - From Version 8 NFM only
 - More flexibility switching between modes
 - CM, ENFM, NFM
 - DSNTIJP9 provided for V8 with PK23131



V7 to V8 (passthru) to V9 migration

- Step thru V8 quickly to V9 CM
- Avoid query regression testing to get to resolution in V9
- May do some quick checking in V8
- **TEST... TEST....TEST**
- Need a good fundamental workplan
- Net CPU increase with V8 plus CPU reduction or net of V9
- Gets you thru to currency of DBMS
- Risk involves query regression
- Need to check tooling from vendors
- Less risky method than the next one



V7 to V8 (passthru) to V9 migration

- **Investigate licensing issues**
- **DSNTIJP9**
 - Should be run on next approach as well

- **IBM Support can assist**



V7 to V9 Cold Install

- **Requires an outage to accomplish**
- **There is no fallback to a prior release of DB2 supported in a normal fashion**
- **Requires an UNLOAD/RELOAD process**
- **Both DB2's are in a quiesced state**
- **Has merit if ...**
 - You can tolerate the outage
 - You can complete the utility migration process in a timely fashion
 - YOU TEST more than you ever have before
- **A V9 subsystem is installed and utilized for test migrations**
- **All vendor tooling has to be ready, stable, and repeatable**
- **Will require additional DASD since it is a new environment and subsystem**



Assessment

- **Before you do anything you should go thru the DB2 checklists for functional requirements and determine the value for the customer in each release.**

- **This allows a functional decision point that is based on what actual benefit you can obtain compared against..**
 - Risk
 - Development effort
 - Cost
 - HW/SW resources



Project Plan Summarization

- **Treat the migration as a project. Don't shortcut the "Planning" part.**
- **Create a cross-discipline team**
- **Educate the team**
- **Allow for some of the unknown**
 - **PMRs**
 - **Testing problems**
- **Make sure that you don't plan yourself into a corner**
 - **Any close timeframes to holidays, major company events, etc. should be avoided**
- **Plan regular status meetings**
 - **Keep your IBM team informed**
- **Consider opening a proactive PMR when migrating in Production to inform support.**



Questions?





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