Db2 Tools New Features Summary – Level Set PTF 20.0.07

Level Set PTF 20.0.07 (LU09222) for the Database Management Solutions for Db2 for z/OS is now available. *No features require activation of this Level Set.*

Db2 DevOps Capabilities Extended

 Embrace Open	**New Impact Report for the DBM for Db2 Plug-in for Zowe CLI.** The zowe dbm-db2 compare ddl command for the DBM for Db2 Plug-in for Zowe CLI now generates a parseable impact analysis report in JSON or YAML format. This report provides the total number and type of DDL operations for each object type, the list of DDL operations for each object instance, and the state of any pending changes. Use this report to determine the impact to your environment when performing these DDL operations before they are implemented. This report helps database administrators to identify the Db2 objects that will be dropped and recreated and to determine whether a production table is impacted by these changes.

Features Applied with Level Set PTF 20.0.07

This list summarizes the features that are delivered by applying Level Set PTF 20.0.07 (LU09222):

Note: For more information about these features, see New Features in the Release Notes in the Database Management Solutions for Db2 for z/OS documentation.

- **Additional DSNZPARM Support in Thread Termination/Dynamic DSNZPARM**

  Several additional Db2 12 DSNZPARMs are now supported in Thread Termination/Dynamic DSNZPARM. These parameters are read-only and are accessible from the Thread Terminator Main Menu by selecting the **View DSNZPARM Data** option.

- **Batch Processor Support for Multiline Comments in Views, MQTs, and Triggers**

  Multiline SQL comments are now supported in triggers, views, and materialized query tables (MQTs). An SQLFORMAT option is now available to process CREATE SQL or ALTER SQL statements. Database administrators can now execute SQL statements dynamically using the Batch Processor. The Interactive SQL facility (ISQL) also supports the SQLFORMAT option while executing a DDL.

  Depending on the value of the SQLFORMAT option, SQL statements are stored in the Db2 catalog with or without comments, or with comments that end with a line break character. Use these options to process SQL procedural language with minimal modifications or for improved diagnostics and debugging.

- **New Maximum Historical Interval Range Parameter for MTC-DBM User Interface**

  Use the new parameter to restrict the amount of data that can be fetched when retrieving historical interval data. Database administrators can use this new parameter to prevent CPU spikes for MTC-DBM.

- **TLS 1.3 and REST API Impact Analysis Report Enhancements**

  TLS 1.3 support for HTTPS connections is now provided in the DBM Data Service and MTC-DBM user interface. You can specify TLS 1.3 for these connections during post-install configuration.

  A new IMPACT input parameter is now provided in the compare endpoint of the DevOps REST API requests. This parameter generates a parseable impact analysis report that identifies the DDL operations to be performed on the Db2 objects in your target environment. Use this report to review changes before you implement them to determine the impact. You can also customize DevOps template settings to include the report.

- **Database Analyzer New Default for Maintaining CTV Statistics**

  The default number of months to maintain threshold value statistics was changed to provide greater flexibility in the amount of statistics that are maintained on your system. The default for the COLLECT_CTV parameter in the PDA parmlib member is now zero. Update the COLLECT_CTV parameter value to an integer greater than zero to continue to maintain these statistics.

- **Fast Load Enhancements**

  - **Parallel Processing Support for PBR Tablespaces.** Fast Load was enhanced to improve the elapsed time to process partition-by-range (PBR) tablespaces. PBR tablespaces are now processed in parallel when a single INDDN data set is used and RECLUSTER NO SORT-CLINDX, NO SORT-NONE, or YES SORT-CLINDX is specified.

  - **PBG Compression Optimization and Improved zIIP Offload Support.** Fast Load was enhanced to improve the elapsed time to process compressed partition-by-growth (PBG) tablespaces and increase the zIIP offload for all tablespace types. An approximate improvement of 5% was observed in elapsed time for compressed PBG tablespaces and up to an additional 40% improvement was observed in general CPU offloading to zIIP for all tablespaces.

    Note: These percentages are based on benchmarks that are run in our labs. Performance can vary depending on the z/OS environment and application workload.

- **Fast Unload Enhancement to Define Columns to Exclude from an Unload**

  You can now use the new EXCLUDE keyword to exclude columns from an unload when you specify SQL-ACCESS NONE or SQL-ACCESS EXTENSION using native access. Use the EXCLUDE keyword only to exclude a few columns from a table that has many columns. The EXCLUDE keyword can use less system resources than creating a view. You now have greater flexibility in specifying the columns for the unload.

- **Log Analyzer Enhancements for ALTER TABLESPACE Support for DDL Reports and Redo/Undo**

  Log Analyzer now supports the following ALTER TABLESPACE options for DDL activity reports and the generation of UNDO/REDO SQL: BUFFERPOOL, DSSIZE, INSERT ALGORITHM, MAXPARTITIONS, MEMBER CLUSTER, and SEGSIZE. You can now create a DDL Activity Report or generate Redo/Undo DDL statements for more types of tablespace changes.

- **RC/Compare Support for External Stored Procedures**

  RC/Compare now supports external stored procedures in comparison processing. Database administrators can now compare external stored procedures from Db2 subsystems or a DDL file and generate an update script to implement the comparison changes.

- **RC/Query Support for New Temporal Table Clauses**

  On subsystems running Db2 12 or higher, RC/Query now lets you generate the following clauses when applicable for temporal tables in CREATE and ALTER DDL:

  - FOR, INCLUSIVE, and EXCLUSIVE table period-definition clauses for PERIOD BUSINESS_TIME.

  - PERIOD BUSINESS_TIME in referential-constraint and references-clause.

  The generated DDL is executable through the Batch Processor interface. Database administrators can query temporal tables to retrieve data based on specified time criteria using all clauses that are supported by Db2.

- **SYSVIEW for Db2 Enhancements**

  - **Support for Index Splits.** Support was added for new IFCID 396: INDEX-SPLIT. The new fields provide detailed index split information when an abnormal index split process occurs. These fields are new with Db2 13. The BTRECTRC report was updated to include this record. New reports were added: IQLISPLT, HSTISPLT, and HSUISPLT.

  - **PACKAGE-COPYID Support in IFCID 239.** This new field specifies the copy ID of a package. Database administrators can use this information to find relevant package statistics. (239) ACCT-PACKAGES in the (003) Package Statistics trace record and the following reports were updated: BTACTTRL, HTPKGBP, HTPKGDTL, HTPKGLK, HTPKGS, and HTPKGSQL.

  - **Support for New Field in QBGB/QW0254 Group Buffer Pool Residency Times**

    New Db2 13 fields were added to the (230) GRP-BUFFER-STATS and (254) CF-STATISTICS trace records to monitor how long the group buffer pool data and directory entries reside in a coupling facility cache structure before they are reclaimed. Use this information for diagnostics and performance tuning, especially to improve structure sizing, appointment, and workload balancing between cache structures.

    The BTSYSPRM, DSQPRGBP, HSAGBFD, HSAGBFL, HSGBUFD, HSPRGBP, HSUGBUFD, SYSAGBFD, SYSAGBFL, SYSGBUFD, and SYSPRGBP reports were updated.

Day 1 Task Checklists

The Day 1 Task Checklist summarizes the key tasks to complete to start using the product. This checklist applies to any new user. However, even experienced users can benefit from reviewing this content. The checklist includes a brief description of the tasks, with links to appropriate content. The checklist also identifies the roles that are typically required to complete the task. You can download them as an Excel spreadsheet.

The following products added a new Day 1 Task Checklist since the last Level Set:

- Fast Load
- Fast Unload
- RC/Extract
- RC/Migrator (RC/Compare)

The following products also provide a Day 1 Task Checklist:

- Database Analyzer
- Detector
- Fast Recover
- Log Analyzer
- Merge/Modify
- Plan Analyzer
- Quick Copy
- RC/Query
- Recovery Analyzer
- SQL-Ease
- Subsystem Analyzer
- SYSVIEW for Db2

Chorus Software Manager (CSM) End of Life

CSM end of life (EOL) is effective June 30, 2023. CSM will no longer function as of this date. For full details, see the [End of Life Announcement](). To prepare for this change, we recommend that you install z/OSMF to manage your software. For installation and usage details, see the IBM documentation and review the z/OSMF training videos listed in the [installation best practices]().

We are available to help with the transition to z/OSMF. Check out the following links:

- [z/OSMF Migration]()
- [Migrate SMP/E Environments into z/OSMF]()

A z/OSMF Portable Software Instance (PSWI) is available to install the Database Management Solutions for Db2.

Db2 Tools 20.0 Validation Project