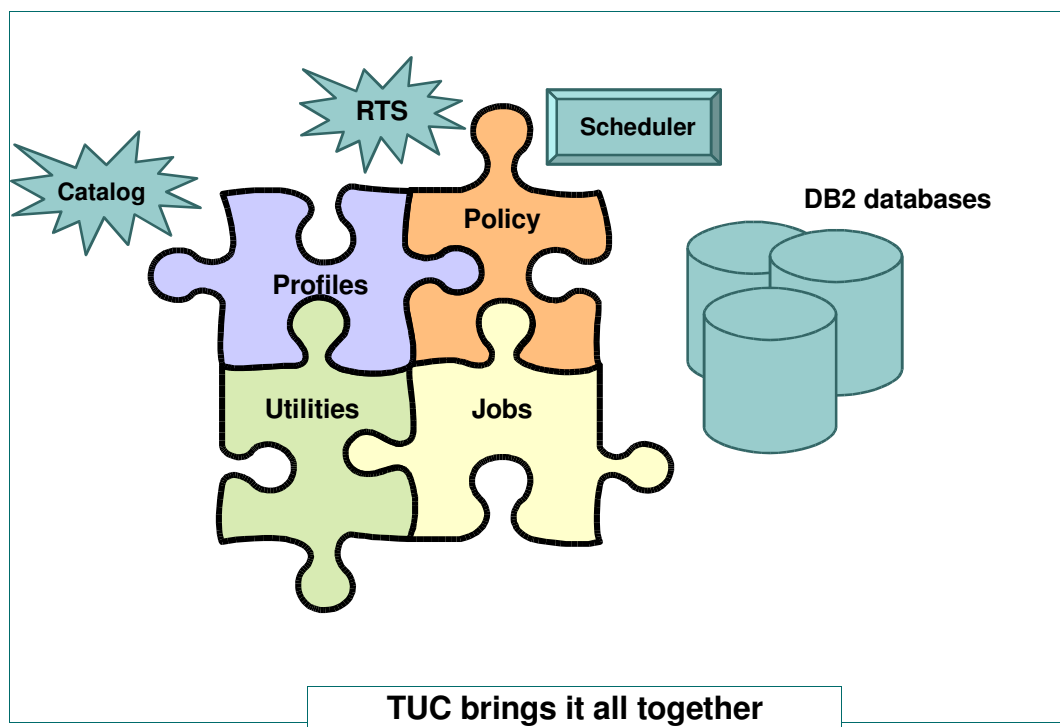


TUC - TOTAL Utility Control

Total Utility Control for DB2 z/OS is the ultimate solution to automate your database maintenance. The challenge is to set up your maintenance procedures in an ever growing environment under going constant changes while providing availability around the clock. **Total Utility Control** meets that challenge by providing features and services that allow you to create your set of maintenance procedures and define the rules needed to follow your maintenance policy. Real Time Statistics is monitored and compared to predefined thresholds to trigger utility execution and provide near real-time utility maintenance on an as needed basis. **Total Utility Control** saves resources and minimizes costs by assuring that only the utilities that really need to be done are triggered for execution. **Total Utility Control** provides workload balancing options to allow you to split the work into multiple jobs running at the same time and exploit utilities parallelism and partitions independence.



Generate Utility Statements with Total Utility Control Utility Skeletons

Database maintenance tasks might include backing up your data, collecting statistics, reorganizing or restoring your data when needed. Setting up your maintenance procedures is easy with **Total Utility Control** because you can:

- Group DB2 objects in profiles using scope rules to allow grouped objects to be processed by DB2 utilities at the same time and create a common sync point for all objects in a profile. Automatic profiles can be created for all your databases.
- Set up your environment options and utility skeletons once and then have your utility statements generated automatically for all your DB2 objects grouped in Profiles. Statements are automatically refreshed whenever an object in profile scope is dropped or created.



- Set up job skeletons for your batch maintenance jobs processes and have these jobs generated automatically whenever a new profile is created.

```

DSN1 ----- Utility Skeletons ----- Row 1 of 19
COMMAND ==>>>                                SCROLL ==>>> PAGE
I - INSERT, U - UPDATE, D - DELETE, S - EDIT SKEL, P - EDIT PROC, E - EDIT UTIL
R - REFRESH UTIL LIBRARY,          A - ALLOCATE UTIL LIBRARY,    X - EXEC PROC
  LIBRARY                          SKELETON UTILITY  PROCNAME GENERATE LISTDEF IPREFIX
-----
_ CHECK                            UTLCHK  CHECK    TUCCKD    Y      N      N
_ COPY                             UTLCPY  COPY     TUCCPY    Y      Y      N
_ COPY.JCL                         UTLJCL  COPY     TUCCPY    Y      N      N
_ DSN1COPY                         UTLSNP  DSN1COPY _____ Y      N      Y
_ FULLCOPY                         UTLCPY  COPY     TUCCPY    Y      Y      N
_ LEVELID                          UTLLEVI REPAIR    _____ N      N      N
_ LISTDEF                          UTLDEF  LISTDEF  _____ Y      Y      N
_ LOAD                             UTLLEDS LOAD     TUCLOD    N      N      N
_ LOAD.JCL                         UTLLEDJ LOAD     TUCLOD    N      N      N
_ MERGE                            UTLMRG  MERGE    TUCMRG    N      Y      N
_ QUIESCE                          UTLQUI  QUIESCE  TUCQUI    Y      Y      N
_ RECOVER                          UTLRCV  RECOVER  TUCRCV    Y      N      N
_ REORG                            UTLREO  REORG    TUCREO    Y      N      N
_ REORG.JCL                        UTLJCL  REORG    TUCREO    Y      N      N
_ REPAIR                           UTLNCP  REPAIR    _____ Y      N      N
_ REPORT                          UTLREP  REPORT   TUCQUI    Y      N      N
_ RUNSTATS                        UTLSTT  RUNSTATS TUCSTT    N      Y      N
_ UNLOAD                          UTLUNL  UNLOAD   TUCUNL    Y      Y      N
_ UNLOAD.JCL                      UTLUNJ  UNLOAD   TUCUNL    N      N      N
***** Bottom of data *****
  
```

Ensure recoverability with Total Utility Control Copy and Recover Services

Make sure that all your objects are recoverable by letting **Total Utility Control** manage your backups intelligently and take full image copies only when you need to. When using incremental copies you need to make sure that you have your last full copy always available. **Total Utility Control** identifies when exactly you need to take a full image copy and helps you save space and resources. To ensure that every sync point taken is recoverable, **Total Utility Control** checks for non recoverable events and if an event such as LOAD REPLACE took place after the last backup, then a new backup is taken automatically. Sync points are also recorded with a meaningful name assigned by your application to allow you to easily identify the sync point you wish to recover to in case of a data corruption related to application fault. **Total Utility Control** recovery services dialog allow you to easily generate your recovery statements for any group of objects to recover an entire database, specific tablespaces, specific tables or an entire volume. You can also use DSN1COPY to recover data using image copies that are not recorded in the DB2 catalog.

Improve Performance with Total Utility Control Reorg Options

To better manage your allocated space, you can estimate the maximum number of rows for each of your tables. You can collect statistics to determine the number of rows high water mark for each table so that the allocated space will accommodate the expected volume of data. **Total Utility Control** alters the objects prior to reorg using the provided estimations. The reorg preparation steps also include automatic creation of your online reorg mapping tables. **Total Utility Control** manages the purging of old data from your DB2 tables to allow you to improve performance by keeping only the data you need in your tables. You can define the discard conditions for each table and have the appropriate reorg discard statements generated for each tablespace. CHECK DELETE can also be used to remove dependent rows from discarded tables. Exception tables for all dependent tables are created automatically in a special exceptions database. Exception tables can also be dropped automatically when empty or when expired. **Total Utility Control** also rebinds all dependent packages following reorg to allow the DB2 optimizer to select the best access path for your applications.



Save Resources with Total Utility Control Policy

Your utility jobs can be scheduled as needed by defining maintenance policy rules for each utility to compare real time statistics to your predefined thresholds and have the triggered utility jobs handed over to the scheduler for immediate execution. You can define which objects are to be excluded from the policy automatic handling coverage in case you have objects that require special care. You can also define thresholds for specific objects otherwise a default threshold is used for each policy rule.

```

DSN1 ----- Policy Rules ----- Row 1 of 25
COMMAND ==>                                SCROLL ==> PAGE
I - INSERT U - UPDATE D - DELETE A - ENABLE/DISABLE V - VERIFY T - THRESHOLDS
      STATUS  UTILITY  RULE                                DEFAULT THRESHOLD  OBJECT  INCLUDE
-----
_ ENABLED  COPY      DAYS SINCE LAST COPY                2              ALL     Y
_ ENABLED  COPY      DAYS SINCE LAST FULL COPY          7              ALL     Y
_ ENABLED  COPY      INDEXSPACE WITH NO COPY            1              INDEXSPACE Y
_ ENABLED  COPY      PERCENT CHANGED ROWS               10             TABLESPACE Y
_ ENABLED  COPY      PERCENT UPDATED PAGES              10             TABLESPACE Y
_ ENABLED  COPY      TABLESPACE WITH NO COPY           1              TABLESPACE Y
_ ENABLED  COPY      UPDATES NOT IN LOGS                1              ALL     Y
_ ENABLED  REORG     DAYS SINCE LAST REORG              5              ALL     N
_ ENABLED  REORG     MASS DELETES                        5              ALL     Y
_ ENABLED  REORG     MAXIMUM ADDED LEVELS               2              INDEXSPACE Y
_ ENABLED  REORG     MAXIMUM EXTENTS                    2              ALL     Y
_ ENABLED  REORG     MAXIMUM SPACE                      7200000        ALL     N
_ ENABLED  REORG     PERCENT APPENDED INSERTS           20             INDEXSPACE Y
_ ENABLED  REORG     PERCENT CHANGED ROWS              20             TABLESPACE Y
_ ENABLED  REORG     PERCENT DISORG LOB                 5              TABLESPACE Y
_ ENABLED  REORG     PERCENT OVERFLOW ROWS              10             TABLESPACE Y
_ ENABLED  REORG     PERCENT PSEUDO DELETES             10             INDEXSPACE Y
_ ENABLED  REORG     PERCENT SPLITS                     10             INDEXSPACE Y
_ ENABLED  REORG     PERCENT UNCLUSTERED ROWS          5              TABLESPACE Y
_ ENABLED  RUNSTATS EMPTY INDEXSPACES         1              INDEXSPACE N
_ ENABLED  RUNSTATS EMPTY TABLESPACES       1              TABLESPACE N
_ ENABLED  RUNSTATS MASS DELETES              5              ALL     Y
_ ENABLED  RUNSTATS NO STATS                  1              ALL     Y
_ ENABLED  RUNSTATS PERCENT CHANGED ENTRIES  20             INDEXSPACE Y
_ ENABLED  RUNSTATS PERCENT CHANGED ROWS   20             TABLESPACE Y
***** Bottom of data *****
    
```

Take total control of your DB2 maintenance utilities; Use Total Utility Control.



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