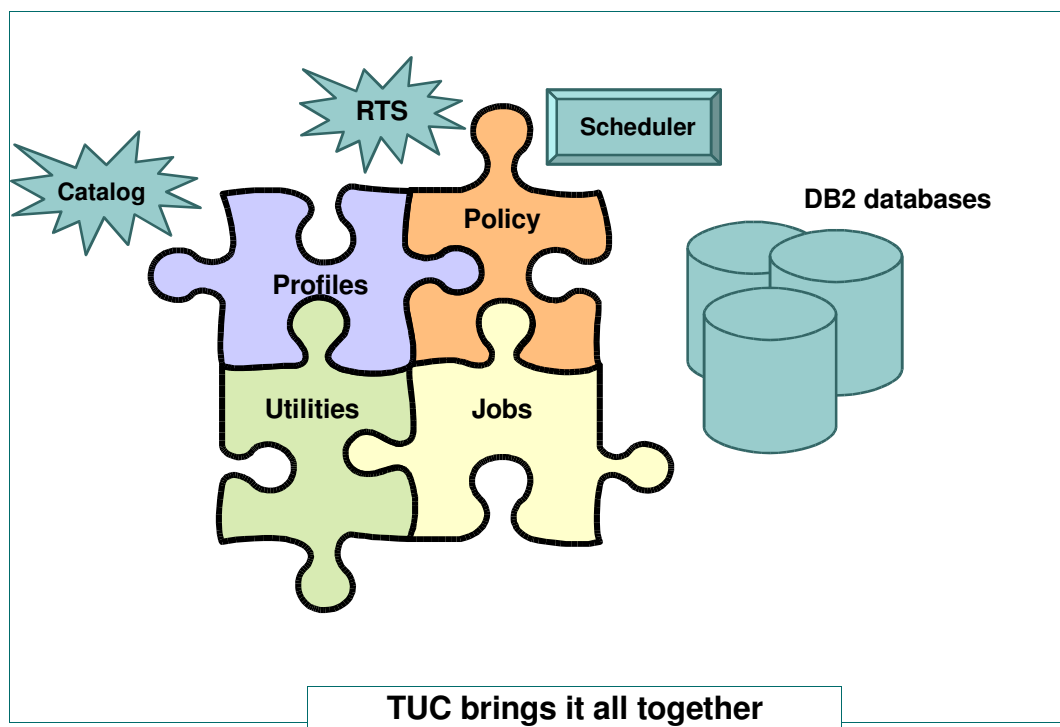


TUC - TOTAL Utility Control

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                           UTLQVI  QUIESCE  TUCQVI    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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