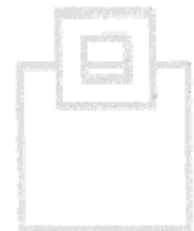
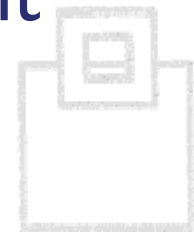


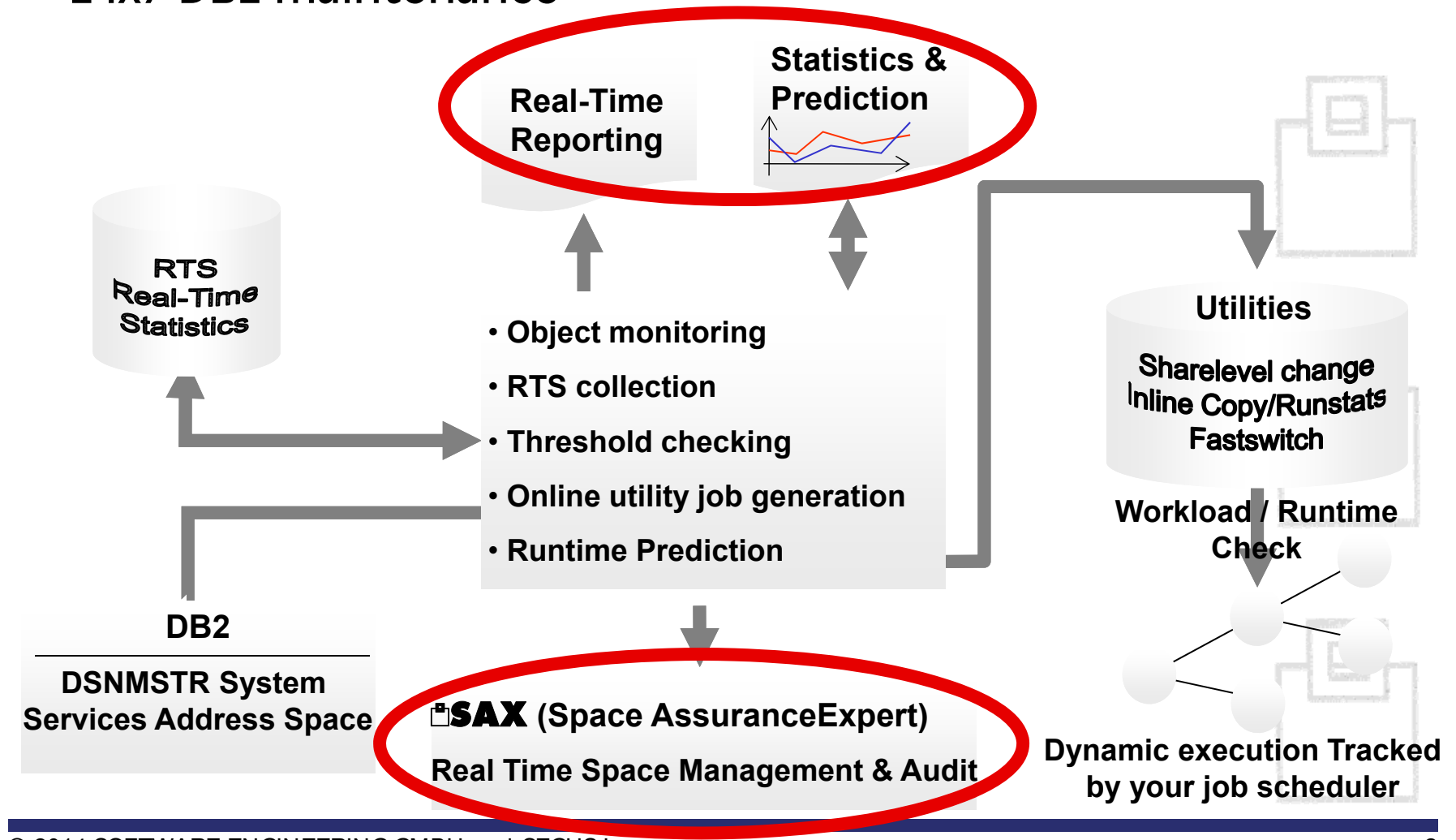
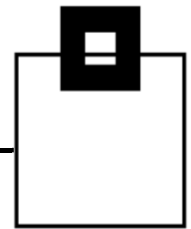
Space AssuranceExpert for DB2 z/OS

a RealTime DBAExpert component

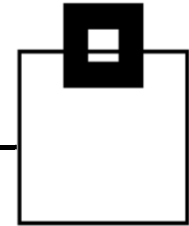


DB2 for z/OS Maintenance

- 24x7 DB2 maintenance



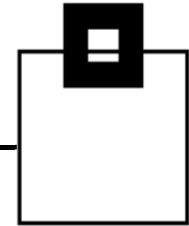
Space Audit and Management by RTDX - SAX



- „Monitors“ the database in real time (IFCID)
- Acts and/or reports in real time
 - Alter secondary quantity
 - Trigger a WTO
- Transparent Extent Monitoring/Management
- Proactive space monitoring
 - LPS (including User Defined objects)
 - Storage groups (linear page Set Audit)
 - Partition Control
 - Empty partitions
 - Full partitions
 - Unused partitions



SAX – Storage Group Audit



- Monitors SMS storage groups
 - Allows to trigger messages, or WTOs in case of
 - Max. % of utilization exceeded
 - Max. total freespace exceeded
 - Supports DB2 and non-DB2 related Storage Groups



E.g.

- DB2 Catalog and Directory TS & IS Storage Groups
- User TS & IS Storage Groups
- LOG Storage Groups
- Copy Storage Groups



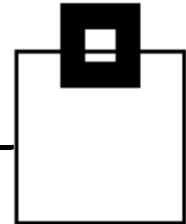
LPS Audit by RTDX - SAX

Object type:	Maximum # of data sets:
LOB TS	254
Non partitioned TS	32
Non partitioned IX on TS with: <ul style="list-style-type: none"> ▪ LARGE or DSSIZE ▪ No more than 254 partitions 	254
Non partitioned IX on TS with: <ul style="list-style-type: none"> ▪ LARGE or DSSIZE ▪ More than 64 partitions 	MIN (4096, 2 power 32/ (DSSIZE / TS PGSIZE)) Eg: 128 GB DSSIZE with 8 KB TS Page gives 256 Pieces (datasets) Or 4 GB DSSIZE with 4 KB TS Page gives 4096 Pieces (datasets)
Non partitioned IX	32
Partitioned By Growth TS	MAXPARTITIONS. LPS check if more than one. If on last partition then percent used.
Partitioned TS	1 (percent used checked)

Extent Management by RTDX -SAX

```
Space AssuranceExpert ----- Extent Summary ----- Row 1 of 1
Command ==> _____ Scroll ==> CSR
DB2: QA1B
Primary cmd: L(ocate DATABASE), S(ort), F(ilter), P(rint)
Line cmd: E(xpand), F(irst details), L(ast details), R(eporting)

  DATABASE  DBID SPACE      PSID/ PART I  DS  NUM  NUM | ..... CURRENT .....
              ISOBID      X  NUM ALTR WARN | EXTS SQTY KB ALLOC KB
-----
_ BIGINS      329 BIGINS      2    0    1    1    0 | 4    2880    3024
-----
```



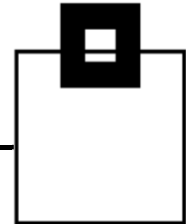
Extent Management by RTDX -SAX

```
Space AssuranceExpert ----- Extent Expand Tablespace ----- Row 1 of 2
Command ==> _____ Scroll ==> CSR
                                     DB2: QA1B
Primary cmd: L(ocate TIMESTAMP), S(ort), T(able list), Z(oom table), F(orecast)
Line      cmd: D(etails), O(ptions), R(eporting)

  DATABASE . : BIGINS      DBID . . : 329      MAX ALLOC . : 2097152 KB
  TABLESPACE : BIGINS     PSID . . : 2        MAX EXTENTS : 251
  PARTITION . : 0          DSNUM . . : 1        MAX VOLUMES : 59
  1stCREATOR  :            1stNAME  :

      ALTER
TIMESTAMP          EXTS  SQTY KB  SQTY KB  E  | . AUDIT SQTY . | ALLOC KB  VOLS
-----|-----|-----|-----|-----|-----|-----|-----|
_ 2014-04-09-07.29.02  3    48    2880  | 100    48    | 144    1
_ 2014-04-09-07.29.04  4   2880  | 100   2880  | 3024    1
-----|-----|-----|-----|-----|-----|-----|
```

Partition Control by RTDX - SAX



```
RealTimeMaintain ----- Partition Control Thresholds -----
Command ==> _____ DB2: QA1B

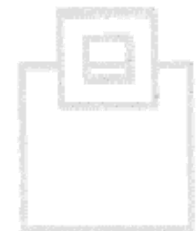
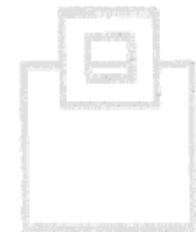
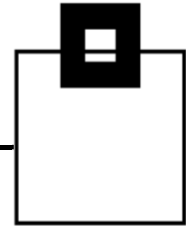
DATABASE . . . . : *          TABLESPACE . . . . : *

          BATCH          ON-DEMAND
          . . . . .      REGULAR CRITICAL
MIN NBR EMPTY PARTS . . 5    5      3 - Minimum number of empty
                                     partitions
          ACTION . . . . . M      - W(to)/M(sg)/B(oth)
          EMPTY AT END . . . Y      - Y(es)/N(o)
                                     Count only empty parts at end

PERCENTAGE MAX PARTS . . 90    90    95 - Percentage of allocated
                                     partitions
          ACTION . . . . . M      - W(to)/M(sg)/B(oth)
```


Summary

- RealTime DBAExpert – Space AssuranceExpert
 - Dynamic space assurance and alerting
 - Monitors physical data set limits (linear page set audit)
 - Monitors SMS storage groups
 - Avoids running out of extents
 - Monitors partitions



Space Assurance Expert for DB2 z/OS

