# ADAREP Utility

If a Delta Save logging (DLOG) area is defined in the database, the database report utility ADAREP additionally reports the Delta Save status. After the section about alternate RABNs, a Delta Save section is displayed with the following information:

- Delta Save status (disabled or enabled);

- percentage of the DLOG area used;

- number of full save operations since installation of the DLOG area;

- date and time of the last full save;

- number of Delta Save operations since the last full save;

- date and time of the last delta save;

- estimate of the number of database blocks that would be saved in a current Delta Save operation. The estimate may be higher or lower than the actual number of blocks.

- location, device type, block size, and number of unused blocks of the DLOG area.

If no DLOG area is defined, the Delta Save section is omitted.

This chapter covers the following topics:

- Delta Save Report Format

- Delta Save Checkpoints

- JCL/JCS Requirements and Examples

# Delta Save Report Format

The following is an example of the Delta Save section in an ADAREP database report:

```
    ***********************

    * DELTA SAVE FACILITY *                                  yyyy-mm-dd  hh:mm:ss

    ***********************




    DELTA SAVE STATUS = ENABLED

    DLOG AREA USAGE   = 2%



    LAST FULL SAVE NUMBER       = 2

    DATE/TIME OF LAST FULL SAVE  = 1997-01-19 04:03:36

    LAST DELTA SAVE NUMBER      = 5

    DATE/TIME OF LAST DELTA SAVE = 1997-01-24 22:39:45



    ESTIMATED NUMBER OF CHANGED BLOCKS = CA. 1,700 BLOCKS



    D S F   L O G G I N G   A R E A



    LIST I DEV  BLOCK I  SPACE ALLOC.  I  FROM      TO   I  UNUSED SPACE  I

    TYPE I TYPE LNGTH I BLOCKS     CYL I  RABN     RABN  I BLOCKS     CYL I

         I           I             I              I               I

    -----I-----------I---------------I---------------I---------------I

         I           I             I              I               I

    DSF  I 3380  2004 I   100       0 I  1340     1439 I    74       0 I

         I           I             I              I               I

    -------------------------------------------------------------------
```

# Delta Save Checkpoints

The following additional checkpoints can be written by the Adabas nucleus or utilities and included in the ADAREP output when running with the Delta Save Facility:

| Checkpoint | | Originated | |
|---|---|---|---|
| Type | Name | By | Description |
| 0B | SYNP | ADASAV | End of SAVE DELTA operation |
| 0C | SYNP | ADASAV | End of RESTORE DELTA operation |
| 0D | SYNP | ADASAV | End of MERGE operation |
| 0E | SYNV | ADASAV | VOLSER entry for SAVE DELTA operation |
| 0F | SYNV | ADASAV | VOLSER entry for MERGE operation (output volumes) |
| 6A | SYNS | SYSAOS | DSF logging (DLOG) area installed |
| 6B | SYNS | SYSAOS | DLOG area changed |
| 6C | SYNS | SYSAOS | DLOG area removed |

# JCL/JCS Requirements and Examples

This section describes the job control information required to run the ADAREP utility with BS2000, OS/390, z/OS, z/VM, and VSE/ESA systems, and shows examples of each of the job streams.

This section covers the following topics:

- BS2000

- OS/390 or z/OS

- z/VM

- VSE/ESA

## BS2000

| Dataset | Link Name | Storage | More Information |
|---|---|---|---|
| Associator | DDASSORn | disk | |
| Data Storage | DDDATARn | disk | |
| ADAREP parameters | SYSDTA/DDKARTE | | |
| ADARUN parameters | SYSDTA/DDCARD | | *Adabas Operations* |
| ADAREP messages | SYSLST/DDDRUCK | | *Adabas Messages and Codes* |
| ADARUN messages | SYSOUT/DDPRINT | | *Adabas Messages and Codes* |

### Example

```
/.ADAREP LOGON

/OPTION MSG=FH,DUMP=YES

/REMARK *
```

```
/REMARK *  A D A R E P    ALL FUNCTIONS

/REMARK *

/SYSFILE SYSLST=L.REP

/FILE    ADA.MOD,LINK=DDLIB

/FILE    ADA99.ASSO  ,LINK=DDASSOR1,SHARUPD=YES

/FILE    ADA99.DATA  ,LINK=DDDATAR1,SHARUPD=YES

/EXEC (ADARUN,ADA.MOD)

ADARUN PROG=ADAREP,DB=99

ADAREP CPLIST

/LOGOFF NOSPOOL
```

## OS/390 or z/OS

| Dataset | DD Name | Storage | More Information |
|---------|---------|---------|------------------|
| Associator | DDASSORn | disk | |
| Data Storage | DDDATARn | disk | |
| ADAREP parameters | DDKARTE | | |
| ADARUN parameters | DDCARD | | *Adabas Operations* |
| ADAREP messages | DDDRUCK | | *Adabas Messages and Codes* |
| ADARUN messages | DDPRINT | | *Adabas Messages and Codes* |

### Example

```
//REP       EXEC PGM=ADARUN

//STEPLIB   DD   DISP=SHR,DSN=ADABAS.Vvrs.LOADLIB

//*

//DDASSOR1  DD   DISP=SHR,DSN=EXAMPLE.ADA99.ASSOR1

//DDDATAR1  DD   DISP=SHR,DSN=EXAMPLE.ADA99.DATAR1

//SYSUDUMP  DD   SYSOUT=A

//DDDRUCK   DD   SYSOUT=A

//DDPRINT   DD   SYSOUT=A

//DDCARD    DD   *

ADARUN PROG=ADAREP,SVC=249,DEVICE=3380,DB=99
```

```
//DDKARTE   DD    *
```

```
ADAREP   CPLIST
```

## z/VM

| Dataset | DD Name | Storage Type | More Information |
|---------|---------|--------------|------------------|
| Associator | DDASSORn | disk | |
| Data Storage | DDDATARn | disk | |
| ADAREP parameters | DDKARTE | disk/ terminal/ reader | |
| ADARUN parameters | DDCARD | disk/ terminal/ reader | *Adabas Operations* |
| ADAREP messages | DDDRUCK | disk/ terminal/ printer | *Adabas Messages and Codes* |
| ADARUN messages | DDPRINT | disk/ terminal/ printer | *Adabas Messages and Codes* |

### Example

```
DATADEF DDASSOR1,DSN=ADABASVv.ASSO,VOL=ASSOV1
```

```
DATADEF DDDATAR1,DSN=ADABASVv.DATA,VOL=DATAV1
```

```
DATADEF DDPRINT,DSN=ADAREP.DDPRINT,MODE=A
```

```
DATADEF DUMP,DUMMY
```

```
DATADEF DDDRUCK,DSN=ADAREP.DDDRUCK,MODE=A
```

```
DATADEF DDCARD,DSN=RUNREP.CONTROL,MODE=A
```

```
DATADEF DDKARTE,DSN=ADAREP.CONTROL,MODE=A
```

```
ADARUN
```

Contents of RUNREP CONTROL A1:

```
ADARUN PROG=ADAREP,DEVICE=3380,DB=99
```

Contents of ADAREP CONTROL A1:

```
ADAREP CPLIST
```

## VSE/ESA

| Dataset | Symbolic | Storage | Logical Unit | More Information |
|---------|----------|---------|--------------|-----------------|
| Associator | ASSORn | disk | | |
| Data Storage | DATARn | disk | | |
| ADAREP parameters | | reader | SYSIPT | |
| ADARUN parameters | SYSRDR CARD CARD | reader tape disk | SYSRDR SYS000 * | *Adabas Operations* |
| ADAREP messages | | printer | SYS009 | *Adabas Messages and Codes* |
| ADARUN messages | | printer | SYSLST | *Adabas Messages and Codes* |

*\* Any programmer logical unit can be used.*

See the VSE/ESA-related job information in section Adabas Utility Functions for Delta Save.

### Example

```
// EXEC PROC=ADAVvFIL

// EXEC PROC=ADAVvLIB

// EXEC ADARUN,SIZE=ADARUN

ADARUN PROG=ADAREP,SVC=xxx,DEVICE=dddd,DB=yyyy

/*

ADAREP CPLIST

/*
```