

Report Descriptions

This chapter describes the possible reports produced by the ADAWRK utility.

All reports are affected by the settings of the filter parameters CMID, ETID, FILES, and USERID. When these parameters are specified in an ADAWRK run, ADAWRK will only process records and produce reports from Work part 1 autorestart area records that meet the criteria specified by the filter parameters.

- Environment Report
 - Summary Report
 - File Report
 - Transaction Report
 - Checkpoint Record Reporting
 - Replication-Related Reporting
-

Environment Report

Here is a sample of the Environment report. This page is always printed -- regardless of the ADAWRK parameters specified. This report identifies the ADAWRK parameters used to produce the report as well as the Work data sets used for the report.

```
A D A W R K   V8.2   SM8   DBID = 15650   Started           2009-07-30   14:39:46
```

```
Parameters:
```

```
-----
```

```
ADAWRK NOPPT
ADAWRK FORCE=NO
ADAWRK TRANSACTIONS=FULL
ADAWRK REPORTFILE=YES
ADAWRK REPLICATION=FULL
```

```
Work datasets provided in JCL.
Database ID on Work is 15650.
```

```
The following Work datasets were used:
```

```
-   ADABAS.ADAWRK1.WORKR1
```

The Environment report is the first page of the ADAWRK report. Usually, this report looks the same, whether or not replication-related records were processed by ADAWRK. However, if the replication restart point (RRP) could not be determined on the Work data sets (when the RRP has been overwritten), the following message appears in the Environment report:

The Replication Restart Point was not found on the Work data set(s) provided. Replication information may have been lost.

The RRP can be overwritten on the Work data set when Adabas has not received replication confirmations from the Event Replicator Server for a long time. In this case, Adabas continues to write new protection records to the Work data sets and eventually it may overwrite records that are needed for resending replication data. If the replication data associated with the overwritten protection records has not yet been processed by the Event Replicator Server and if the data is no longer available on the Event Replicator Server, it is lost and the source and target replication data are out of sync. The Adabas files that may be affected by this loss of replication data are identified in the new "REPL Data" column of the Summary report.

Summary Report

The Summary report is triggered by the ADAWRK SUMMARY parameter. When SUMMARY=YES (the default) is specified, a Summary report is produced that provides an overview of the data in the autorestart area of Work part 1. This report consists of a number of sections, as follows:

- An overview of what was processed and any environmental information that can be gleaned from the provided input
- An overview of the files that will be modified as part of an autorestart and some details about what parts of the file may be affected
- The total number of system checkpoint records in the autorestart area of Work part 1 (checkpoints with a name starting with the letters "SYN")
- The total number of user checkpoint records in the autorestart area of Work part 1
- The total number of ET transactions that may need to be redone (including a subtotal of those that were backed out)
- For ET transactions that may need to be redone, the number of insert, update, and delete operations that were performed on the file
- For ET transactions that may need to be redone, the total number of data modifications to the file (total of inserts, updates, and deletes), the total number of data record updates, the total number of update commands with associated descriptor value table (inverted list) records, and the total number of descriptor value table (inverted list) updates
- The total number of incomplete transactions for the file
- For incomplete transactions, the number of insert, update, and delete operations that were performed on the file
- For incomplete transactions, the total number of data modifications to the file (total of inserts, updates, and deletes), the total number of data record updates, the total number of update commands with associated descriptor value table (inverted list) records, and the total number of descriptor value table (inverted list) updates

The following is a sample of a Summary report produced by ADAWRK:

```
*****
*                               A D A W R K Summary Report                               *
*****
```

Work Dataset: ADABAS.ADAWRK1.WORKR1

I Item	I Work RABN	I Blocks	I Date/Time
I LP value	I	I 200	I
I Last written block	I 3	I	I 2009-07-30 14:39:37
I First block of interest	I 1	I 3	I 2009-07-30 14:39:34
I Autobackout endpoint	I 3	I 1	I 2009-07-30 14:39:37
I Backward repair endpoint	I 3	I 1	I 2009-07-30 14:39:37
I Replication restart point	I 1	I 3	I 2009-07-30 14:39:35

Summary of potential inconsistencies:

```
-----
"Index Structure"....: Index structures may be inconsistent.
"Index Values".....: Index values may be incorrect.
"Address Converter"..: Address converter may be incorrect.
"Data Contents".....: Data contents may be incorrect according to application.
"REPL Data".....: Replication data may have been lost for the file.
```

I File Number	I Index Structure	I Index Values	I Address Converter	I Data Contents	I REPL Data
I 4	I	I	I	I	I
I 5	I	I	I	I	I
I 13	I	I	I	I	I
I 19	I	I	I	I *	I
I 414	I	I	I	I	I

The following checkpoints were encountered in the area of interest:

Total number of system checkpoints: 4

Completed transactions that will be re-done during autorestart processing:

```
Total transactions.....: 1
  Backed out.....: 0
Total modification commands.....: 1
  Inserts (N1).....: 1
  Updates (A1).....: 0
  Deletes (E1).....: 0
Total data records modified.....: 1
Total modifications with descriptor updates..: 0
Total descriptor updates.....: 0
```

Incomplete transactions that must be backed out during autorestart processing:

```
Total transactions.....: 0
Total modification commands.....: 0
  Inserts (N1).....: 0
  Updates (A1).....: 0
```

```

Deletes (E1).....:          0
Total data records modified.....:      0
Total modifications with descriptor updates..:      0
Total descriptor updates.....:          0
    
```

Note:

If no replication data is found, but you specified REPLICATION as YES, DETAIL, or FULL, the replication restart point (RRP) Work RABN, blocks, and date and time are blank. Finally, if the RRP cannot be determined, but you specified REPLICATION as YES, DETAIL, or FULL, the RRP Work RABN, blocks are listed as asterisks.

File Report

The File report is triggered by the ADAWRK REPORTFILE parameter. When REPORTFILE=YES is specified, a File report is produced that breaks down the data in the autorestart area of Work part 1 by file. For each file, the following information can be provided in a File report:

- Information similar to that provided in the Summary report
- The total number of ET transactions that may need to be redone (including a subtotal of those that were backed out)
- For ET transactions that may need to be redone, the number of insert, update, and delete operations that were performed on the file
- For ET transactions that may need to be redone, the total number of data modifications to the file (total of inserts, updates, and deletes), the total number of data record updates, the total number of update commands with associated descriptor value table (inverted list) records, and the total number of descriptor value table (inverted list) updates
- The total number of incomplete transactions for the file
- For incomplete transactions, the number of insert, update, and delete operations that were performed on the file
- For incomplete transactions, the total number of data modifications to the file (total of inserts, updates, and deletes), the total number of data record updates, the total number of update commands with associated descriptor value table (inverted list) records, and the total number of descriptor value table (inverted list) updates

The following is a sample of a File report:

```

*****
*                               A D A W R K   File Report                               *
*****

I-----I
I                               File           4                               I
I-----I

Oldest activity in Work RABN           0 at
Latest activity in Work RABN           0 at
    
```

I File	I Index	I Index	I Address	I Data	I REPL
I Number	I Structure	I Values	I Converter	I Contents	I Data
I-----I-----I-----I-----I-----I-----I					
I 4	I	I	I	I	I
I-----I-----I-----I-----I-----I-----I					

Completed transactions that will be re-done during autorestart processing:

```

Total transactions.....: 0
  Backed out.....: 0
Total modification commands.....: 0
  Inserts (N1).....: 0
  Updates (A1).....: 0
  Deletes (E1).....: 0
Total data records modified.....: 0
Total modifications with descriptor updates..: 0
Total descriptor updates.....: 0

```

Incomplete transactions that must be backed out during autorestart processing:

```

Total transactions.....: 0
Total modification commands.....: 0
  Inserts (N1).....: 0
  Updates (A1).....: 0
  Deletes (E1).....: 0
Total data records modified.....: 0
Total modifications with descriptor updates..: 0
Total descriptor updates.....: 0

```

I-----I-----I-----I-----I-----I-----I
I File 5 I
I-----I-----I-----I-----I-----I-----I

```

Oldest activity in Work RABN      0 at
Latest activity in Work RABN     0 at

```

I File	I Index	I Index	I Address	I Data	I REPL
I Number	I Structure	I Values	I Converter	I Contents	I Data
I-----I-----I-----I-----I-----I-----I					
I 5	I	I	I	I	I
I-----I-----I-----I-----I-----I-----I					

Completed transactions that will be re-done during autorestart processing:

```

Total transactions.....: 0
  Backed out.....: 0
Total modification commands.....: 0
  Inserts (N1).....: 0
  Updates (A1).....: 0
  Deletes (E1).....: 0
Total data records modified.....: 0
Total modifications with descriptor updates..: 0
Total descriptor updates.....: 0

```

Incomplete transactions that must be backed out during autorestart processing:

```

Total transactions.....: 0
Total modification commands.....: 0
  Inserts (N1).....: 0
  Updates (A1).....: 0
  Deletes (E1).....: 0
Total data records modified.....: 0

```

Total modifications with descriptor updates..: 0
Total descriptor updates.....: 0

I-----I
I File 13 I
I-----I

Oldest activity in Work RABN 0 at
Latest activity in Work RABN 0 at

I File I Index I Index I Address I Data I REPL I
I Number I Structure I Values I Converter I Contents I Data I
I-----I-----I-----I-----I-----I-----I
I 13 I I I I I I I
I-----I-----I-----I-----I-----I-----I

Completed transactions that will be re-done during autorestart processing:

Total transactions.....: 0
Backed out.....: 0
Total modification commands.....: 0
Inserts (N1).....: 0
Updates (A1).....: 0
Deletes (E1).....: 0
Total data records modified.....: 0
Total modifications with descriptor updates..: 0
Total descriptor updates.....: 0

Incomplete transactions that must be backed out during autorestart processing:

Total transactions.....: 0
Total modification commands.....: 0
Inserts (N1).....: 0
Updates (A1).....: 0
Deletes (E1).....: 0
Total data records modified.....: 0
Total modifications with descriptor updates..: 0
Total descriptor updates.....: 0

I-----I
I File 19 I
I-----I

Oldest activity in Work RABN 3 at 2009-07-30 14:39:37
Latest activity in Work RABN 3 at 2009-07-30 14:39:37

I File I Index I Index I Address I Data I REPL I
I Number I Structure I Values I Converter I Contents I Data I
I-----I-----I-----I-----I-----I-----I
I 19 I I I I I * I I
I-----I-----I-----I-----I-----I-----I

Completed transactions that will be re-done during autorestart processing:

Total transactions.....: 1
Backed out.....: 0
Total modification commands.....: 1
Inserts (N1).....: 1
Updates (A1).....: 0

```

      Deletes (E1).....:          0
Total data records modified.....:          1
Total modifications with descriptor updates..:          0
Total descriptor updates.....:          0

```

Incomplete transactions that must be backed out during autorestart processing:

```

Total transactions.....:          0
Total modification commands.....:          0
  Inserts (N1).....:          0
  Updates (A1).....:          0
  Deletes (E1).....:          0
Total data records modified.....:          0
Total modifications with descriptor updates..:          0
Total descriptor updates.....:          0

```

```

I-----I
I               File    414               I
I-----I

```

```

Oldest activity in Work RABN          0 at
Latest activity in Work RABN          0 at

```

```

I File I   Index I   Index I Address I Data I REPL I
I Number I Structure I Values I Converter I Contents I Data I
I-----I-----I-----I-----I-----I-----I
I    414 I         I         I         I         I         I
I-----I-----I-----I-----I-----I-----I

```

Completed transactions that will be re-done during autorestart processing:

```

Total transactions.....:          0
  Backed out.....:          0
Total modification commands.....:          0
  Inserts (N1).....:          0
  Updates (A1).....:          0
  Deletes (E1).....:          0
Total data records modified.....:          0
Total modifications with descriptor updates..:          0
Total descriptor updates.....:          0

```

Incomplete transactions that must be backed out during autorestart processing:

```

Total transactions.....:          0
Total modification commands.....:          0
  Inserts (N1).....:          0
  Updates (A1).....:          0
  Deletes (E1).....:          0
Total data records modified.....:          0
Total modifications with descriptor updates..:          0
Total descriptor updates.....:          0

```

Transaction Report

The Transaction report is triggered by the ADAWRK TRANSACTIONS parameter. When TRANSACTIONS=YES, TRANSACTIONS=DETAIL, or TRANSACTIONS=FULL are specified, a Transaction report is produced that breaks down the data in the autorestart area of Work part 1 by transaction. For each transaction, the following information can be provided in a Transaction report:

- The communication ID for the transaction
- Whether the transaction was still open, committed, or backed out
- The number of inserts, updates, and deletes performed by the transaction
- The total number of modifications performed by the transaction (total of inserts, updates, and deletes)
- The total number of update commands with associated descriptor value table (inverted list) records
- Whether the ET data is associated with the transaction and any ETID is associated with the transaction
- If TRANSACTIONS=DETAIL is specified, each file updated by the transaction and the ISN on each file that was updated by the transaction
- If TRANSACTIONS=FULL is specified, the Data Storage image(s) associated with each update for the transaction and the descriptor value table (inverted list) data associated with each update for the transaction
- If a transaction was replicated, a message is printed as part of the report indicating this event.

The following is a sample of a Transaction report:

```
*****
*                               A D A W R K   Transaction Report                               *
*****
```

```
I-----I
I                               New Communication ID (seq nr 14)                               I
I-----I
```

```
Communication ID: '   hhhhD  ..?..   BBBB   '
                  x'7777777788888888C48FBF18094A360700000000C2C2C2C200000000'
```

This transaction was committed (ET).

ETID: None

ET data was not provided.

First transaction data in Work RABN 3 written at 2009-07-30 14:39:37

Last transaction data in Work RABN 3 written at 2009-07-30 14:39:37

```

Total modification commands.....:          1
  Inserts (N1).....:          1
  Updates (A1).....:          0
  Deletes (E1).....:          0
Total data records modified.....:          1
Total modifications with descriptor updates..:          0
Total descriptor updates.....:          0
```

--- File 19 ISN 1,967 (internal) Inserted

#1: After Image Data Storage in Work RABN 3 written <14:39:37

```
0000 002C0000 07AFC802 CA05C48F D8EA05C2 ' . . H. .D Q .B'
0010 E4C6C6C1 02050207 09C4E4C1 D3404000 'UFFA....DUAL '
0020 00024009 E2E2E6C1 E3C1F2F1 ' . .SSWATA21'
```

Transaction was committed (ET).

Summary of communication IDs with recovery data:

Communication ID: ' hhhhD ..?.. BBBB '
x'7777777788888888C48FBE18094A360700000000C2C2C2C200000000'

The following sample of a Transaction Report shows how the report appears for an EXU user (U002 in the report).

* A D A W R K Transaction Report *

I-----I
I New Communication ID (seq nr nn1) I
I-----I

Communication ID: '????hhhhA.Qb2.?? U001 '
x'7777777788888888C11FD882F238574600000000E4F0F0F100000000'

This transaction was committed (ET).

ETID: None

ET data was not provided.

First protection data in Work RABN 2 written at 2007-08-30 12:32:13

Last protection data in Work RABN 2 written at 2007-08-30 12:32:13

Total modification commands.....: 1
Inserts (N1).....: 1
Updates (A1).....: 0
Deletes (E1).....: 0
Total data records modified.....: 1
Total modifications with descriptor updates..: 0
Total descriptor updates.....: 0

--- File 19 ISN 1,067 (internal) Inserted

#1: After Image Data Storage in Work RABN 2 written <12:32:13

0000 00280000 042BC802 C905C11F A2DE05C2 ' . .H.I.A.s?.B'
0010 E4C6C6C3 09404040 40404000 00024009 'UFFC. . .'
0020 E4E2C1D1 C8E3E7C7 'USAJHTXG'

Transaction was committed (ET).

I-----I
I New Communication ID (seq nr nn2) I
I-----I

Communication ID: ' .~.o 9??U001 '
x'0005A10E2096000040404040404000F9B880E4F0F0F100000000'

This transaction was committed (ET).

ETID: 'U001 '

ET data was not provided.

First protection data in Work RABN 2 written at 2007-08-30 12:32:13

Last protection data in Work RABN 2 written at 2007-08-30 12:32:13

Total modification commands.....: 10
Inserts (N1).....: 10
Updates (A1).....: 0

```

        Deletes (E1).....:          0
    Total data records modified.....:    10
    Total modifications with descriptor updates..:    10
    Total descriptor updates.....:    10

--- File      4  ISN                11 (internal) Inserted

#2: After Image Data Storage in Work RABN          2 written <12:32:13
0000 000F0000 000B09E4 D3F0F100 000000      ' .  ..UL01      '

#3: Descriptor value updates in Work RABN          2 written <12:32:13
    Value for descriptor A8 inserted:
0000 E4D3F0F1 00000000                      'UL01      '

--- File      4  ISN                12 (internal) Inserted

#4: After Image Data Storage in Work RABN          2 written <12:32:13
0000 000F0000 000C09E4 D3F0F100 000001      ' .  ..UL01      .'

#5: Descriptor value updates in Work RABN          2 written <12:32:13
    Value for descriptor A8 inserted:
0000 E4D3F0F1 00000001                      'UL01      .'

--- File      4  ISN                13 (internal) Inserted

#6: After Image Data Storage in Work RABN          2 written <12:32:13
0000 000F0000 000D09E4 D3F0F100 000002      ' .  ..UL01      .'

#7: Descriptor value updates in Work RABN          2 written <12:32:13
    Value for descriptor A8 inserted:
0000 E4D3F0F1 00000002                      'UL01      .'

--- File      4  ISN                14 (internal) Inserted

#8: After Image Data Storage in Work RABN          2 written <12:32:13
0000 000F0000 000E09E4 D3F0F100 000003      ' .  ..UL01      .'

#9: Descriptor value updates in Work RABN          2 written <12:32:13
    Value for descriptor A8 inserted:
0000 E4D3F0F1 00000003                      'UL01      .'

--- File      4  ISN                15 (internal) Inserted

#10: After Image Data Storage in Work RABN         2 written <12:32:13
0000 000F0000 000F09E4 D3F0F100 000004      ' .  ..UL01      .'

#11: Descriptor value updates in Work RABN         2 written <12:32:13
    Value for descriptor A8 inserted:
0000 E4D3F0F1 00000004                      'UL01      .'

--- File      4  ISN                16 (internal) Inserted

#12: After Image Data Storage in Work RABN         2 written <12:32:13
0000 000F0000 001009E4 D3F0F100 000005      ' .  ..UL01      .'

#13: Descriptor value updates in Work RABN         2 written <12:32:13
    Value for descriptor A8 inserted:
0000 E4D3F0F1 00000005                      'UL01      .'

--- File      4  ISN                17 (internal) Inserted

#14: After Image Data Storage in Work RABN         2 written <12:32:13

```

0000 000F0000 001109E4 D3F0F100 000006 ' . ..UL01 .'

#15: Descriptor value updates in Work RABN 2 written <12:32:13

Value for descriptor A8 inserted:

0000 E4D3F0F1 00000006 'UL01 .'

--- File 4 ISN 18 (internal) Inserted

#16: After Image Data Storage in Work RABN 2 written <12:32:13

0000 000F0000 001209E4 D3F0F100 000007 ' . ..UL01 .'

#17: Descriptor value updates in Work RABN 2 written <12:32:13

Value for descriptor A8 inserted:

0000 E4D3F0F1 00000007 'UL01 .'

--- File 4 ISN 19 (internal) Inserted

#18: After Image Data Storage in Work RABN 2 written <12:32:13

0000 000F0000 001309E4 D3F0F100 000008 ' . ..UL01 .'

#19: Descriptor value updates in Work RABN 2 written <12:32:13

Value for descriptor A8 inserted:

0000 E4D3F0F1 00000008 'UL01 .'

--- File 4 ISN 20 (internal) Inserted

#20: After Image Data Storage in Work RABN 2 written <12:32:13

0000 000F0000 001409E4 D3F0F100 000009 ' . ..UL01 .'

#21: Descriptor value updates in Work RABN 2 written <12:32:13

Value for descriptor A8 inserted:

0000 E4D3F0F1 00000009 'UL01 .'

Transaction was committed (ET).

I-----I
I New Communication ID (seq nr nn3) I
I-----I

Communication ID: ' .~..o 9??U002 '
x'0005A10E2096000040404040404000F9B880E4F0F0F200000000'

These updates were performed by an EXU user.

First protection data in Work RABN 1 written at 2007-08-30 12:32:08

Last protection data in Work RABN 1 written at 2007-08-30 12:32:08

Total modification commands.....: 10
Inserts (N1).....: 10
Updates (A1).....: 0
Deletes (E1).....: 0
Total data records modified.....: 10
Total modifications with descriptor updates..: 10
Total descriptor updates.....: 10

--- File 5 ISN 1 (internal) Inserted

#22: After Image Data Storage in Work RABN 1 written <12:32:08

0000 000F0000 000109E4 F0F0F200 000000 ' . ..U002 '

#23: Descriptor value updates in Work RABN 1 written <12:32:08

Value for descriptor A8 inserted:

```
0000 E4F0F0F2 00000000          'U002  '

--- File      5  ISN                2 (internal) Inserted

#24: After Image Data Storage in Work RABN          1 written <12:32:08
0000 000F0000 000209E4 F0F0F200 000001  ' .  ..U002  .'

#25: Descriptor value updates in Work RABN          1 written <12:32:08
Value for descriptor A8 inserted:
0000 E4F0F0F2 00000001          'U002  .'

--- File      5  ISN                3 (internal) Inserted

#26: After Image Data Storage in Work RABN          1 written <12:32:08
0000 000F0000 000309E4 F0F0F200 000002  ' .  ..U002  .'

#27: Descriptor value updates in Work RABN          1 written <12:32:08
Value for descriptor A8 inserted:
0000 E4F0F0F2 00000002          'U002  .'

--- File      5  ISN                4 (internal) Inserted

#28: After Image Data Storage in Work RABN          1 written <12:32:08
0000 000F0000 000409E4 F0F0F200 000003  ' .  ..U002  .'

#29: Descriptor value updates in Work RABN          1 written <12:32:08
Value for descriptor A8 inserted:
0000 E4F0F0F2 00000003          'U002  .'

--- File      5  ISN                5 (internal) Inserted

#30: After Image Data Storage in Work RABN          1 written <12:32:08
0000 000F0000 000509E4 F0F0F200 000004  ' .  ..U002  .'

#31: Descriptor value updates in Work RABN          1 written <12:32:08
Value for descriptor A8 inserted:
0000 E4F0F0F2 00000004          'U002  .'

--- File      5  ISN                6 (internal) Inserted

#32: After Image Data Storage in Work RABN          1 written <12:32:08
0000 000F0000 000609E4 F0F0F200 000005  ' .  ..U002  .'

#33: Descriptor value updates in Work RABN          1 written <12:32:08
Value for descriptor A8 inserted:
0000 E4F0F0F2 00000005          'U002  .'

--- File      5  ISN                7 (internal) Inserted

#34: After Image Data Storage in Work RABN          1 written <12:32:08
0000 000F0000 000709E4 F0F0F200 000006  ' .  ..U002  .'

#35: Descriptor value updates in Work RABN          1 written <12:32:08
Value for descriptor A8 inserted:
0000 E4F0F0F2 00000006          'U002  .'

--- File      5  ISN                8 (internal) Inserted

#36: After Image Data Storage in Work RABN          1 written <12:32:08
0000 000F0000 000809E4 F0F0F200 000007  ' .  ..U002  .'

#37: Descriptor value updates in Work RABN          1 written <12:32:08
```

```

Value for descriptor A8 inserted:
0000 E4F0F0F2 00000007          'U002  .'

--- File      5  ISN                9 (internal) Inserted

#38: After Image Data Storage in Work RABN          1 written <12:32:08
0000 000F0000 000909E4 F0F0F200 000008          ' .  ..U002  .'

#39: Descriptor value updates in Work RABN          1 written <12:32:08
Value for descriptor A8 inserted:
0000 E4F0F0F2 00000008          'U002  .'

--- File      5  ISN                10 (internal) Inserted

#40: After Image Data Storage in Work RABN          1 written <12:32:08
0000 000F0000 000A09E4 F0F0F200 000009          ' .  ..U002  .'

#41: Descriptor value updates in Work RABN          1 written <12:32:08
Value for descriptor A8 inserted:
0000 E4F0F0F2 00000009          'U002  .'

1
Summary of communication IDs with recovery data:
-----

Communication ID:  '????hA.Qb2.??  U001  '
                   x'7777777788888888C11FD882F238574600000000E4F0F0F100000000'

Communication ID:  ' .~.~.~  9??U002  '
                   x'0005A10E209600004040404040404000F9B880E4F0F0F200000000'

Communication ID:  ' .~.~.~  9??U001  '
                   x'0005A10E209600004040404040404000F9B880E4F0F0F100000000'

```

Checkpoint Record Reporting

Checkpoint records and associated data found within the autostart area of Work part 1 can be printed by the ADAWRK utility and are triggered by the CHECKPOINT parameter. If CHECKPOINT=YES is specified, checkpoint records such as the following are printed in the output. If a Transaction report is also requested, these checkpoint records are interspersed within the Transaction report.

```
A D A W R K  V8.1  SM8  DBID = 15003  Started          2007-01-10  18:34:01
```

```
Work RABN          1 written at hh:mm:ss  System Checkpoint
written by jobname='cccccccc'
Checkpoint Name=nnnn Type=tt xxxxxxxxxx
```

```
Work RABN          1 written at hh:mm:ss  System Checkpoint
written by jobname='cccccccc'
Checkpoint Name=nnnn Type=tt xxxxxxxxxx
```

```
Work RABN          1 written at hh:mm:ss  System Checkpoint
written by jobname='cccccccc'
Checkpoint Name=nnnn Type=tt xxxxxxxxxx
```

Replication-Related Reporting

Replication-related reports are described in this section. In addition, replication-related information is provided on the Environment, Summary, and Transaction reports. For more information on the replication-related data appearing on those reports, read the descriptions of them.

- Replication Report
- Replication Summary Report

Replication Report

The Replication report is printed when the ADAWRK REPLICATION parameter is set to any value except NO.

If no replication data is available on the Work data set, the following Replication report is printed:

```
*****
*                               A D A W R K  Replication Report                               *
*****
  There were no transactions involving replicated files.
```

If replication data is available on the Work data set, and replication confirmation records exist for all of them (there are none outstanding), the following Replication report is printed:

```
*****
*                               A D A W R K  Replication Report                               *
*****
  All transactions involving replicated files were confirmed by the Reptor.
```

However, if unconfirmed replicated transactions are found on the Work data set and the REPLICATION parameter is set to YES, a basic Replication report is printed. This is a sample of the basic Replication report.

```
*****
*                               A D A W R K  Replication Report                               *
*****
```

These transactions involving replicated files were not confirmed by the Reptor:

```
I-----I
I                               Next transaction (seq nr 2)                               I
I-----I
```

```
Communication ID: ' .~..q          8> XXXX          '
                  x'0004A10E209800004040404040404000F86E80E7E7E7E700000000'
```

```
First transaction data in Work RABN          2 written at 2009-07-30 14:39:35
Last  transaction data in Work RABN          2 written at 2009-07-30 14:39:35
```

```

Total modification commands.....:          5
  Inserts (N1).....:          5
  Updates (A1).....:          0
  Deletes (E1).....:          0
Total data records modified.....:          5
Total modifications with descriptor updates..:          5
Total descriptor updates.....:          5
```

Note the transaction sequence number listed in the report (in green). If a Transaction report is also requested in the ADAWRK run, information on the transaction is provided in that report as well, identified by the same transaction sequence number. You can use then use the transaction sequence numbers to accurately match transactions in the Transaction report with transactions in the Replication report. If the transaction was executed by an EXU user, alternate text will appear on this report that reads "These updates by an EXU user were also printed in the Transaction Report".

If REPLICATION=DETAIL is selected, a detailed Replication report is printed. Here is a sample:

```
I-----I
I           Next transaction (seq nr 5)           I
I-----I
```

```
Communication ID:  ' .~..o           9t A007A007'
                   x'0004A10E209600004040404040404000F9A380C1F0F0F7C1F0F0F7'
```

```
First transaction data in Work RABN           4 written at 2007-11-29 20:30:09
Last  transaction data in Work RABN           4 written at 2007-11-29 20:30:09
```

```
Transaction started at 2007-11-29 20:26:58
Transaction ended at 2007-11-29 20:26:59
```

This transaction was executed by NUCID 15102.

```

Total modification commands.....:          5
  Inserts (N1).....:          5
  Updates (A1).....:          0
  Deletes (E1).....:          0
Total data records modified.....:          5
Total modifications with descriptor updates..:          0
Total descriptor updates.....:          0
```

```
--- File  222  ISN           3 (internal) Inserted
--- File  222  ISN          20 (internal) Inserted
--- File  222  ISN          22 (internal) Inserted
--- File  222  ISN          24 (internal) Inserted
--- File  222  ISN          26 (internal) Inserted
```

Transaction was committed (ET).

If REPLICATION=FULL is selected, a complete Replication report is printed. Here is a sample of part of such a report:

```
*****
*                               A D A W R K Replication Report                               *
*****
```

These transactions involving replicated files were not confirmed by the Reptor:

```
I-----I
I           Next transaction (seq nr 2)           I
I-----I
```

```
Communication ID:  ' .~..q           8> XXXX           '
                   x'0004A10E209800004040404040404000F86E80E7E7E7E7E700000000'
```

```
First transaction data in Work RABN           2 written at 2009-07-30 14:39:35
Last  transaction data in Work RABN           2 written at 2009-07-30 14:39:35
```

```

Total modification commands.....:      5
  Inserts (N1).....:                    5
  Updates (A1).....:                     0
  Deletes (E1).....:                     0
Total data records modified.....:      5
Total modifications with descriptor updates..: 5
Total descriptor updates.....:          5

```

--- File 4 ISN 1 (internal) Inserted

```

#2: After Image Data Storage in Work RABN          2 written <14:39:35
0000 000F0000 000109D9 C3D9C400 000000   ' .  ..RCRD   '

```

```

#3: Descriptor value updates in Work RABN          2 written <14:39:35
  Value for descriptor A8 inserted:
0000 D9C3D9C4 00000000                       'RCRD   '

```

--- File 4 ISN 2 (internal) Inserted

```

#4: After Image Data Storage in Work RABN          2 written <14:39:35
0000 000F0000 000209D9 C3D9C400 000001   ' .  ..RCRD   .'

```

```

#5: Descriptor value updates in Work RABN          2 written <14:39:35
  Value for descriptor A8 inserted:
0000 D9C3D9C4 00000001                       'RCRD   .'

```

--- File 4 ISN 3 (internal) Inserted

```

#6: After Image Data Storage in Work RABN          2 written <14:39:35
0000 000F0000 000309D9 C3D9C400 000002   ' .  ..RCRD   .'

```

```

#7: Descriptor value updates in Work RABN          2 written <14:39:35
  Value for descriptor A8 inserted:
0000 D9C3D9C4 00000002                       'RCRD   .'

```

--- File 4 ISN 4 (internal) Inserted

```

#8: After Image Data Storage in Work RABN          2 written <14:39:35
0000 000F0000 000409D9 C3D9C400 000003   ' .  ..RCRD   .'

```

```

#9: Descriptor value updates in Work RABN          2 written <14:39:35
  Value for descriptor A8 inserted:
0000 D9C3D9C4 00000003                       'RCRD   .'

```

--- File 4 ISN 5 (internal) Inserted

```

#10: After Image Data Storage in Work RABN         2 written <14:39:35
0000 000F0000 000509D9 C3D9C400 000004   ' .  ..RCRD   .'

```

```

#11: Descriptor value updates in Work RABN         2 written <14:39:35
  Value for descriptor A8 inserted:
0000 D9C3D9C4 00000004                       'RCRD   .'

```

Transaction was committed (ET).

```

I-----I
I                Next transaction (seq nr 5)                I
I-----I

```

```

Communication ID: ' .~..q                8> YYYY   '
                  x'0004A10E2098000040404040404000F86E80E8E8E8E800000000'

```


These updates were performed by an EXU user.

First transaction data in Work RABN 2 written at 2009-07-30 14:39:35
 Last transaction data in Work RABN 2 written at 2009-07-30 14:39:35

```

    Total modification commands.....:      5
        Inserts (N1).....:      5
        Updates (A1).....:      0
        Deletes (E1).....:      0
    Total data records modified.....:      5
    Total modifications with descriptor updates..:      5
    Total descriptor updates.....:      5
    
```

--- File 5 ISN 1 (internal) Inserted

#12: After Image Data Storage in Work RABN 2 written <14:39:35
 0000 000F0000 000109D9 C3D9C400 000000 ' . ..RCRD '

#13: Descriptor value updates in Work RABN 2 written <14:39:35
 Value for descriptor A8 inserted:
 0000 D9C3D9C4 00000000 'RCRD '

--- File 5 ISN 2 (internal) Inserted

#14: After Image Data Storage in Work RABN 2 written <14:39:35
 0000 000F0000 000209D9 C3D9C400 000001 ' . ..RCRD .'

#15: Descriptor value updates in Work RABN 2 written <14:39:35
 Value for descriptor A8 inserted:
 0000 D9C3D9C4 00000001 'RCRD .'

--- File 5 ISN 3 (internal) Inserted

#16: After Image Data Storage in Work RABN 2 written <14:39:35
 0000 000F0000 000309D9 C3D9C400 000002 ' . ..RCRD .'

#17: Descriptor value updates in Work RABN 2 written <14:39:35
 Value for descriptor A8 inserted:
 0000 D9C3D9C4 00000002 'RCRD .'

--- File 5 ISN 4 (internal) Inserted

#18: After Image Data Storage in Work RABN 2 written <14:39:35
 0000 000F0000 000409D9 C3D9C400 000003 ' . ..RCRD .'

#19: Descriptor value updates in Work RABN 2 written <14:39:35
 Value for descriptor A8 inserted:
 0000 D9C3D9C4 00000003 'RCRD .'

--- File 5 ISN 5 (internal) Inserted

#20: After Image Data Storage in Work RABN 2 written <14:39:35
 0000 000F0000 000509D9 C3D9C400 000004 ' . ..RCRD .'

#21: Descriptor value updates in Work RABN 2 written <14:39:35
 Value for descriptor A8 inserted:
 0000 D9C3D9C4 00000004 'RCRD .'

Transaction was committed (ET).

Replication Summary Report

The Replication Summary report is printed when the ADAWRK REPLICATION parameter is set to any value except NO. This report lists all of the communication IDs for which there are one or more transactions to be replicated on the Work data set, but for which Event Replicator Server replication confirmation has not yet been received. The following is a sample Replication Summary report:

```
*****
*                               A D A W R K Replication Summary Report                               *
*****
```

Communication IDs for which no Reptor confirmation was received:

```
-----
Communication ID: ' .~..q           8> XXXX           '
                  x'0004A10E209800004040404040404000F86E80E7E7E7E700000000'
```

```
Communication ID: ' .~..q           8> YYYY           '
                  x'0004A10E209800004040404040404000F86E80E8E8E8E800000000'
```

```
Communication ID: ' .~..q           8> ZZZZ           '
                  x'0004A10E209800004040404040404000F86E80E9E9E9E900000000'
```

```
Communication ID: ' .~..q           8> ZZZZ           '
                  x'0004A10E209800004040404040404000F86E80E9E9E9E900000000'
```

```
Communication ID: ' .~..q           8> ZZZZ           '
                  x'0004A10E209800004040404040404000F86E80E9E9E9E900000000'
```

```
Communication ID: ' .~..q           8> AAAA           '
                  x'0004A10E209800004040404040404000F86E80C1C1C1C100000000'
```