

Adabas Statistics Facility

Examples Documentation

Version 8.1.1

May 2011

This document applies to Adabas Statistics Facility Version 8.1.1.

Specifications contained herein are subject to change and these changes will be reported in subsequent release notes or new editions.

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1 Adabas Statistics Facility (ASF) Version 8.1.1 Examples

The ASF Examples Documentation is a guide to the practical use of ASF. It describes the standard features of ASF, and how to use these standard features as a basis for designing new ASF applications. It compares the formats of Evaluation Reports on the available output media. It informs about the ASF groups and fields and provides an overview of the supplied sample data, Store Profiles, Store Types, Evaluation Profiles and Predefined Evaluations.

The following topics are covered:

• Examples of Evaluations	This presents examples of the evaluations which can be performed using the standard Evaluation Profiles delivered by Software AG as part of the ASF product.
• Planning Guide	This summarizes the steps involved in the ASF planning process.
• SAG-IO-2	This describes in detail the Evaluation Profile SAG-IO-2, which is one of the standard profiles delivered with the ASF software. The section includes a description of how the profile was created and describes how you can modify copies of this profile to match your own requirements.
• SAG-CRIT-9	This follows the style of section SAG-IO-2 to describe the Evaluation Profile SAG-CRIT-9.
• ASF Groups and Fields	This contains the list of the ASF group and field names which are available for inclusion in Evaluation Profiles. It summarizes the units available for each ASF field.
• Evaluation Report Formats	This shows the general layout of Evaluation Reports for each of the Evaluation Types 1-10.
• Supplied Sample Data	This gives information about the sample data delivered with the ASF software.
• Supplied Store Profiles	This lists the sample Store Profiles used to store the sample data.
• Supplied Store Types	This provides information about the Store Types delivered with the ASF software and the intended usage of each Store Type.

•	Supplied Evaluation Profiles	This lists the Evaluation Profiles delivered with the ASF software, and gives a summary of the intended usage of each profile.
•	Supplied Predefined Evaluations	This lists the Predefined Evaluations delivered with the ASF software, and gives a summary of the intended usage of each evaluation.

2 Examples of Evaluations

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This section presents examples of the evaluations which can be performed using the standard Evaluation Profiles delivered by Software AG as part of the ASF product.

For each of the available Evaluation Types 1-10, a summary is provided showing the following information:

- The purpose of the Evaluation Type,
- the name of all standard Evaluation Profiles which use the Evaluation Type,
- a symbolic representation of the output produced, and
- an example of the output of the evaluation as it appears on a terminal screen.

The examples of screen output which are presented on the following pages in this section are summarized in the following table. When the output of the evaluation is routed to a printer or downloaded to a PC-File with the "Full" (F) format, the layout is the same as the screen output. In this case, the third dimension is added page by page to the bottom of the printout or download.

Evaluation Type	Purpose
1	Development of a database over a period of time.
2	Overview of several databases accumulated within a time frame.
3	Overview of several databases at a point in time.
4	Overview of an ASF data field in several databases over a period of time.
5	Development of a file over a period of time.
6	Overview of several files accumulated within a time frame.
7	Overview of several files at a point in time.
8	Overview of an ASF data field in several files over a period of time.
9	Shows the current critical fields.
10	Shows the fields predicted to become critical.

When the output of the evaluation is downloaded to a PC-File with the standard (X) or CSV (C) format, the layout is a two-dimensional table which looks the same for all evaluations of type 1 to 8. Examples of downloads are presented at the end of this section.

Evaluation Type	Purpose
1 - 4	Download database related data.
5 - 8	Download file related data.
9	Download current critical fields.
10	Download fields predicted to become critical.

This chapter covers the following topics:

Example of Evaluation Type 1

Purpose:

This shows the development of a database over a period of time.

Standard Evaluation Profiles with Evaluation Type 1:

IO-ONE-DB, NEW-DB-IO-1, NEW-DB-PARA, NEW-DB-SPACE-1, RESOURCES-ONE-DB, SAG-ALL-1, SAG-CMDS-1, SAG-DATABASE-1, SAG-HWM-1, SAG-IO-1, SAG-RESSOURCE-1, SAG-SESSION-1, SPACE-ONE-DB

Standard Predefined Evaluations using Evaluation Type 1:

6, 10, 12, 25, 26, 27, 28, 29, 30, 31

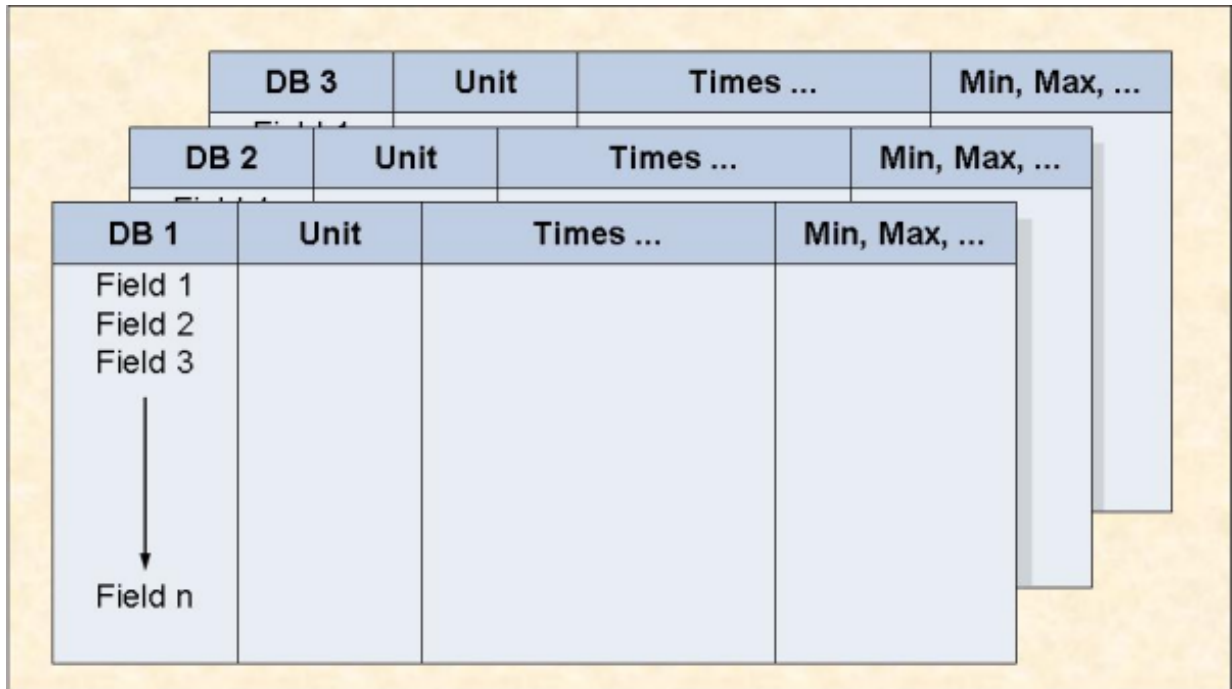


Figure 1-1: Symbolic Representation of Output for Evaluation Type 1

```

14:08:58      *** A D A B A S Statistics Facility ***                2008-02-04
USERID        DBID:   16      DB-NAME:  DB016-ALSBACH  1/1                MEV15001

STORE-DATE    ! UNIT!  1992-03-09 !  1992-03-16 !  1992-03-23 !  1992-03-30
STORE-TIME    !      !      17:34 !      23:00 !      23:00 !      22:00
-----+-----+-----+-----+-----+-----+-----
DB-NAME       !      !  DB016-ALSBA !  DB016-ALSBA !  DB016-ALSBA !  DB016-ALSBA
DATE NUC-START !      !  1992-03-09 !  1992-03-16 !  1992-03-23 !  1992-03-30
TIME NUC-START !      !      02:32 !      02:41 !      02:43 !      02:38
ASSO DEFINED  ! CYL !      530 !      530 !      530 !      530
ASSO USED     ! CYL !      268 !      227 !      215 !      225
DATA DEFINED  ! CYL !     1,164 !     1,164 !     1,164 !     1,164
DATA USED     ! CYL !     1,138 !     1,073 !     1,068 !     1,070
WORK DEFINED  ! CYL !       75 !       75 !       75 !       75
!            !      !      !      !      !      !
!            !      !      !      !      !      !
!            !      !      !      !      !      !
!            !      !      !      !      !      !
!            !      !      !      !      !      !
!            !      !      !      !      !      !
Direct command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
Help More Term Prof prev next - + Cumul < > Menu
    
```

Figure 1-2: Sample screen output using Evaluation Type 1

The sample screen output was generated by running the Predefined Evaluation 6.

Example of Evaluation Type 2

Purpose:

This gives an overview of several databases (accumulated values only) within a time frame.

Standard Evaluation Profiles with Evaluation Type 2:

NEW-SPACE-DB, SAG-DATABASE-2, SAG-IO-2

Standard Predefined Evaluations using Evaluation Type 2:

16

	Unit	Min, Max, ...	DB 1 Count 1	DB 2 Count 2	...
Field 1 Field 2 Field 3 ↓ Field n					

Figure 1-3: Evaluation Report Format for Evaluation Type 2

```

14:09:39      *** A D A B A S Statistics Facility ***      2008-02-04
USERID      < from 1992-04-01 00:00 to 1993-04-30 23:59 > 1/1 MEV26001

DBID          !UNIT ACC !          16 !          17 !          26 !          27
DB-NAME       !          !DB016-ALSBA !DB017-ANWEN ! SPL-MIRROR !DB027-ALSBA
#COUNTER      !          !          15 !          15 !          15 !          15
-----+-----+-----+-----+-----+-----+-----
ASSO DEFINED  ! CYL MIN !          530 !          884 !          400 !          530
ASSO DEFINED  ! CYL MAX !          530 !          884 !          400 !          530
ASSO USED     ! CYL MIN !          231 !          449 !          225 !          45
ASSO USED     ! CYL MAX !          236 !          458 !          311 !          45
DATA DEFINED  ! CYL MIN !         1,164 !         3,538 !          884 !         1,164
DATA DEFINED  ! CYL MAX !         1,164 !         3,538 !          884 !         1,164
DATA USED     ! CYL MIN !         1,073 !         3,498 !          732 !          266
DATA USED     ! CYL MAX !         1,118 !         3,535 !          861 !          266
WORK DEFINED  ! CYL MIN !           75 !           75 !           75 !           75
WORK DEFINED  ! CYL MAX !           75 !           75 !           75 !           75
              !          !          !          !          !          !
              !          !          !          !          !          !
              !          !          !          !          !          !

Direct command ==> _____
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help More Term          -      +          <      >      Menu

```

Figure 1-4: Sample screen output using Evaluation Type 2

The sample screen output was generated by running the Predefined Evaluation 16.

Example of Evaluation Type 3

Purpose:

This gives an overview of several databases at a point in time.

Standard Evaluation Profiles with Evaluation Type 3:

IO-ALL-DB, NEW-AMOUNT-IO, RESOURCES-ALL-DB, SAG-ALL-3, SAG-CMDS-3, SAG-DATABASE-3, SAG-HWM-3, SAG-IO-3, SAG-RESSOURCE-3, SAG-SESSION-3, SPACE-ALL-DB

Standard Predefined Evaluations using Evaluation Type 3:

7, 11, 13, 32

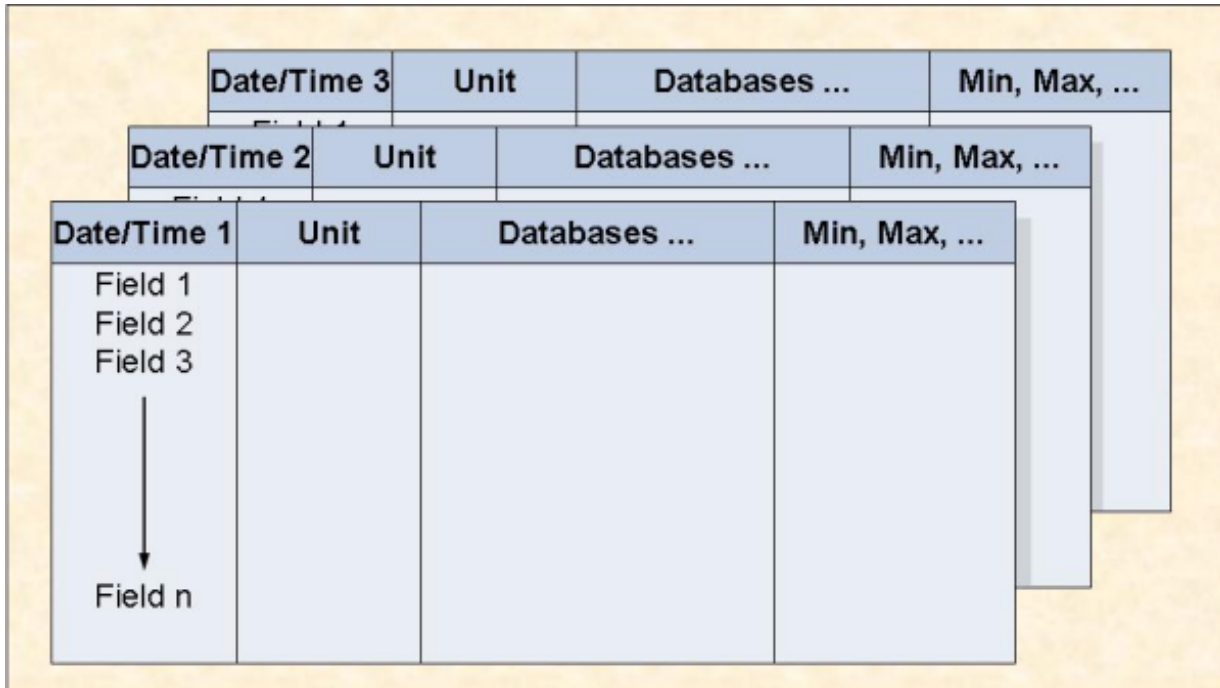


Figure 1-5: Evaluation Report Format for Evaluation Type 3

```
14:11:24      *** A D A B A S Statistics Facility ***      2008-02-04
USERID      Evaluation point of time: 1992-03-09 , 17:34      1/1      MEV37001

DBID          ! UNIT!           16 !           17 !           26 !           27
DB-NAME       !           ! DB016-ALSBA ! DB017-ANWEN ! SPL-MIRROR ! DB027-ALSBA
-----+-----+-----+-----+-----+-----+-----+
DB-NAME       !           ! DB016-ALSBA ! DB017-ANWEN ! SPL-MIRROR ! DB027-ALSBA
DATE NUC-START !           ! 1992-03-09 ! 1992-03-09 ! 1992-03-09 ! 1992-03-09
TIME NUC-START !           !      02:32 !      07:06 !      07:07 !      02:32
ASSO DEFINED  ! CYL !           530 !           884 !           400 !           530
ASSO USED     ! CYL !           268 !           450 !           150 !             5
DATA DEFINED  ! CYL !           1,164 !           3,538 !           884 !           1,164
DATA USED     ! CYL !           1,138 !           3,439 !           538 !             2
WORK DEFINED  ! CYL !           75 !            75 !           75 !            75
             !           !           !           !           !
             !           !           !           !           !
             !           !           !           !           !
             !           !           !           !           !
             !           !           !           !           !
             !           !           !           !           !

Direct command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help More Term Times prev next - + Cumul < > Menu
```

Figure 1-6: Sample screen output using Evaluation Type 3

The sample screen output was generated by running the Predefined Evaluation 7.

Example of Evaluation Type 4

Purpose:

This shows how a data field in several databases behaves within a time frame.

Standard Evaluation Profiles with Evaluation Type 4:

BUFF. EFFICIENCY

Standard Predefined Evaluations using Evaluation Type 4:

14, 33

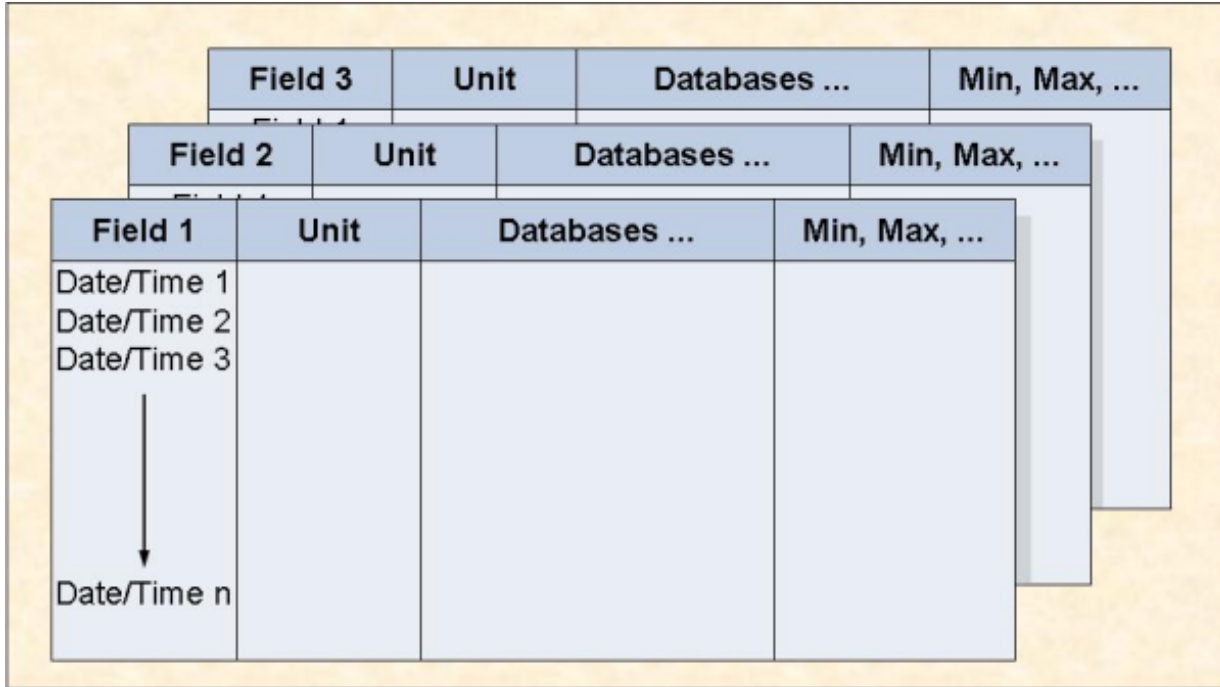


Figure 1-7: Evaluation Report Format for Evaluation Type 4

```

14:12:01      *** A D A B A S  Statistics Facility  ***      2008-02-04
USERID      Evaluation for field: BUFF. EFFICIENCY      1/1      MEV48001

DBID          ! UNIT!              16 !              17 !              26 !              27
-----+-----+-----+-----+-----+-----+-----
1992-03-26/23:00 !      !              29.7 !              13.5 !              14.0 !              0.0
1992-03-27/23:00 !      !              81.1 !              16.3 !              19.5 !              0.2
1992-03-30/22:00 !      !              34.1 !              13.3 !              14.3 !              0.2
1992-03-31/22:00 !      !              37.1 !              18.1 !              8.4 !              0.0
1992-04-01/22:05 !      !              18.9 !              19.8 !              80.4 !              0.9
1992-04-02/22:05 !      !              44.8 !              19.6 !              29.3 !              0.5
1992-04-03/22:05 !      !              117.3 !              14.4 !              53.5 !              0.5
1992-04-06/22:05 !      !              26.2 !              13.4 !              26.5 !              0.7
1992-04-07/22:05 !      !              20.5 !              14.7 !              51.5 !              1.0
1992-04-08/23:05 !      !              23.4 !              15.9 !              17.9 !              0.8
1992-04-09/23:05 !      !              27.8 !              13.6 !              38.5 !              1.0
1992-04-10/23:05 !      !              46.5 !              15.8 !              460.2 !              0.5
1992-04-13/23:05 !      !              37.8 !              15.5 !              124.5 !              0.5
1992-04-14/23:05 !      !              32.0 !              14.4 !              36.8 !              0.5
                !      !              !              !              !              !

Direct command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
Help More Term Field prev next - + Cumul < > Menu
    
```

Figure 1-8: Sample screen output using Evaluation Type 4

The sample screen output was generated by running the Predefined Evaluation 14.

Example of Evaluation Type 5

Purpose:

This gives an overview of the growth of a particular file.

Standard Evaluation Profiles with Evaluation Type 5:

FILE-OVERVIEW-A, SAG-FILE-5

Standard Predefined Evaluations using Evaluation Type 5:

8

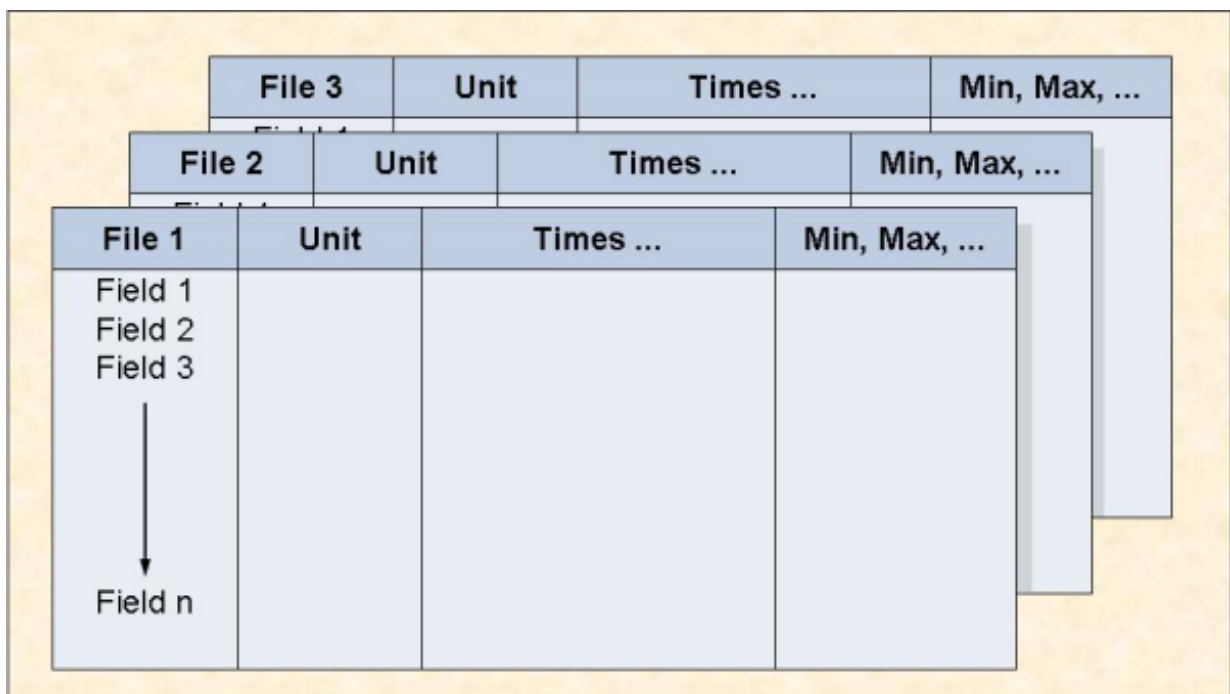


Figure 1-9: Evaluation Report Format for Evaluation Type 5

```

14:12:28      *** A D A B A S Statistics Facility ***                2008-02-04
USERID  DB:   16  DB016-ALSBACH  FILE:   221  PRO_LOGBAT_U1  1/ MEV15001

STORE-DATE      ! UNIT!  1992-03-09 !  1992-03-16 !  1992-03-23 !  1992-03-30
STORE-TIME      !      !      17:34 !      23:00 !      23:00 !      22:00
-----+-----+-----+-----+-----+-----+-----+-----+
NI DEFINED      ! BL  !      20 !      20 !      20 !      20
NI USED         ! BL  !      9 !      9 !      9 !      10
NI USED         ! PC  !     45.0 !     45.0 !     45.0 !     50.0
NI EXTENTS      !      !      1 !      1 !      1 !      1
UI DEFINED      ! BL  !     10 !     10 !     10 !     10
UI USED         ! BL  !     10 !     10 !     10 !     10
UI USED         ! PC  !    100.0 !    100.0 !    100.0 !    100.0
UI EXTENTS      !      !      1 !      1 !      1 !      1
DS DEFINED      ! BL  !    100 !    100 !    100 !    100
DS USED         ! BL  !      3 !      7 !      8 !      9
DS USED         ! PC  !      3.0 !      7.0 !      8.0 !      9.0
DS EXTENTS      !      !      1 !      1 !      1 !      1
AC DEFINED      ! BL  !      2 !      2 !      2 !      2
AC EXTENTS      !      !      1 !      1 !      1 !      1
  Direct command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help More Term Prof prev next - + Cumul < > Menu
  
```

Figure 1-10: Sample screen output using Evaluation Type 5

The sample screen output was generated by running the Predefined Evaluation 8

Example of Evaluation Type 6

Purpose:

This gives an overview of several files (accumulated values only) within a time frame.

Standard Evaluation Profiles with Evaluation Type 6:

NEW-SPACE-FILE, SAG-FILE-6

Standard Predefined Evaluations using Evaluation Type 6:

17

	Unit	Min, Max, ...	File 1 Count 1	File 2 Count 2	...
Field 1					
Field 2					
Field 3					
↓					
Field n					

Figure 1-11: Evaluation Report Format for Evaluation Type 6

```

14:13:03      *** A D A B A S Statistics Facility ***      2008-02-04
USERID      < from 1992-04-01 00:00 to 1992-04-30 23:59 > 1/1 MEV26001

DBID          !UNIT ACC !          26 !          26 !          26 !          26
FILE-ID       !          !          44 !          45 !          185 !          193
FILE-NAME     !          !  AST1-DATA !AST1-PROFIL !  ASF-DATA !ASF-PROFILE
#COUNTER      !          !          15 !          15 !          15 !          15
-----+-----+-----+-----+-----+-----+-----+-----
NI USED       ! BL MIN !          2,500 !          18 !          3,398 !          20
NI USED       ! BL MAX !          3,064 !          18 !          5,295 !          28
UI USED       ! BL MIN !          40 !          9 !          47 !          11
UI USED       ! BL MAX !          49 !          9 !          94 !          11
DS USED       ! BL MIN !          2,457 !          29 !          2,644 !          36
DS USED       ! BL MAX !          2,457 !          29 !          3,942 !          48
AC DEFINED    ! BL MIN !          96 !          2 !          94 !          6
AC DEFINED    ! BL MAX !          120 !          2 !          118 !          6
!            !            !            !            !            !
!            !            !            !            !            !
!            !            !            !            !            !
!            !            !            !            !            !
Direct command ==> _____
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
Help More Term          -      +          <      >      Menu
  
```

Figure 1-12: Sample screen output using Evaluation Type 6

The sample screen output was generated by running the Predefined Evaluation 17.

Example of Evaluation Type 7

Purpose:

This gives an overview of several files at a point in time.

Standard Evaluation Profiles with Evaluation Type 7:

FILE-OVERVIEW-B, SAG-FILE-7

Standard Predefined Evaluations using Evaluation Type 7:

9

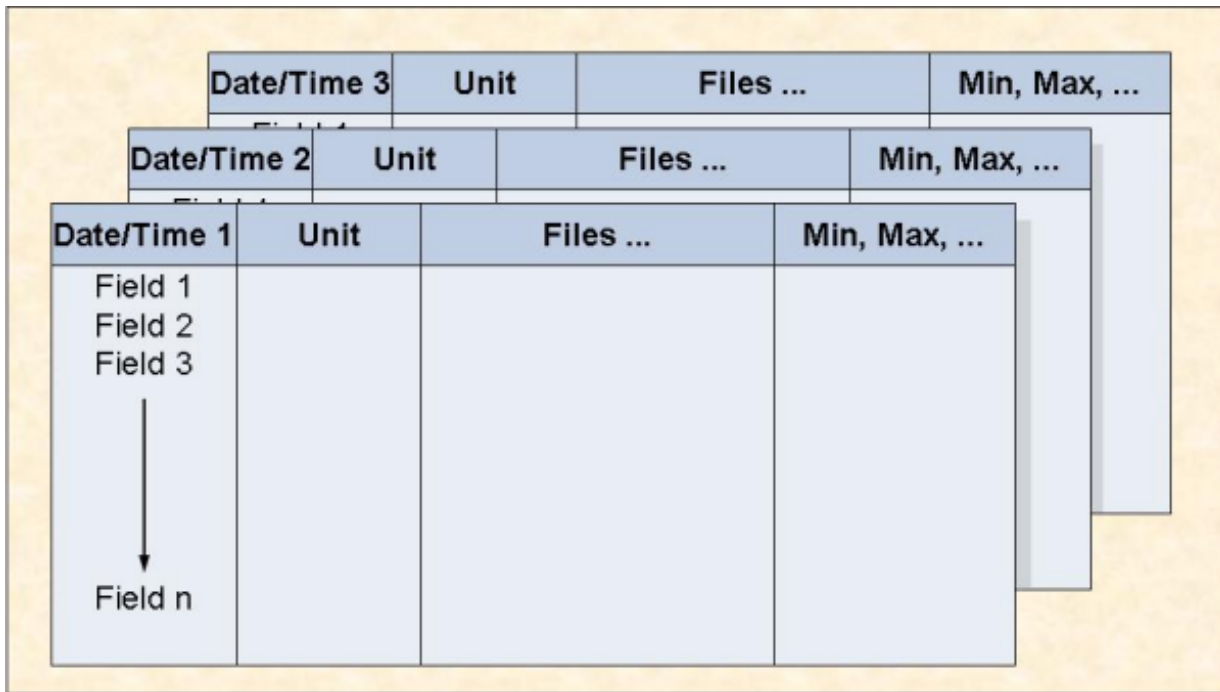


Figure 1-13: Evaluation Report Format for Evaluation Type 7

```

14:13:56      *** A D A B A S Statistics Facility ***      2008-02-04
USERID      Evaluation point of time: 1992-04-06 , 22:12      1/1      MEV37001

DBID          ! UNIT!          16 !          16 !          16 !          16
FILE-ID       !          !          221 !          235 !          227 !          118
FILE-NAME     !          ! PRO_LOGBAT_ ! PRO_WORK1_A ! PRO_ORDER_U ! PRO_LOGBAT_
-----+-----+-----+-----+-----+-----+-----+
NI DEFINED   ! BL !          20 !          60 !          317 !          36
NI USED      ! BL !          11 !          45 !          210 !          9
NI USED      ! PC !          55.0 !          75.0 !          66.2 !          25.0
NI EXTENTS   !          !          1 !          2 !          2 !          1
UI DEFINED   ! BL !          10 !          28 !          17 !          16
UI USED      ! BL !          10 !          19 !          14 !          10
UI USED      ! PC !          100.0 !          67.8 !          82.3 !          62.5
UI EXTENTS   !          !          1 !          2 !          1 !          1
DS DEFINED   ! BL !          100 !          100 !          200 !          100
DS USED      ! BL !          10 !          21 !          48 !          3
DS USED      ! PC !          10.0 !          21.0 !          24.0 !          3.0
DS EXTENTS   !          !          1 !          1 !          1 !          1
AC DEFINED   ! BL !          2 !          2 !          8 !          2
Direct command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
Help More Term Times prev next - + Cumul < > Menu

```

Figure 1-14: Sample screen output using Evaluation Type 7

The sample screen output was generated by running the Predefined Evaluation 9.

Example of Evaluation Type 8

Purpose:

This gives how a data field in several files behaves within a time frame.

Standard Evaluation Profiles with Evaluation Type 8:

NEW-FILE-FIELDS, NEW-FILE-FLDS

Standard Predefined Evaluations using Evaluation Type 8:

15, 35

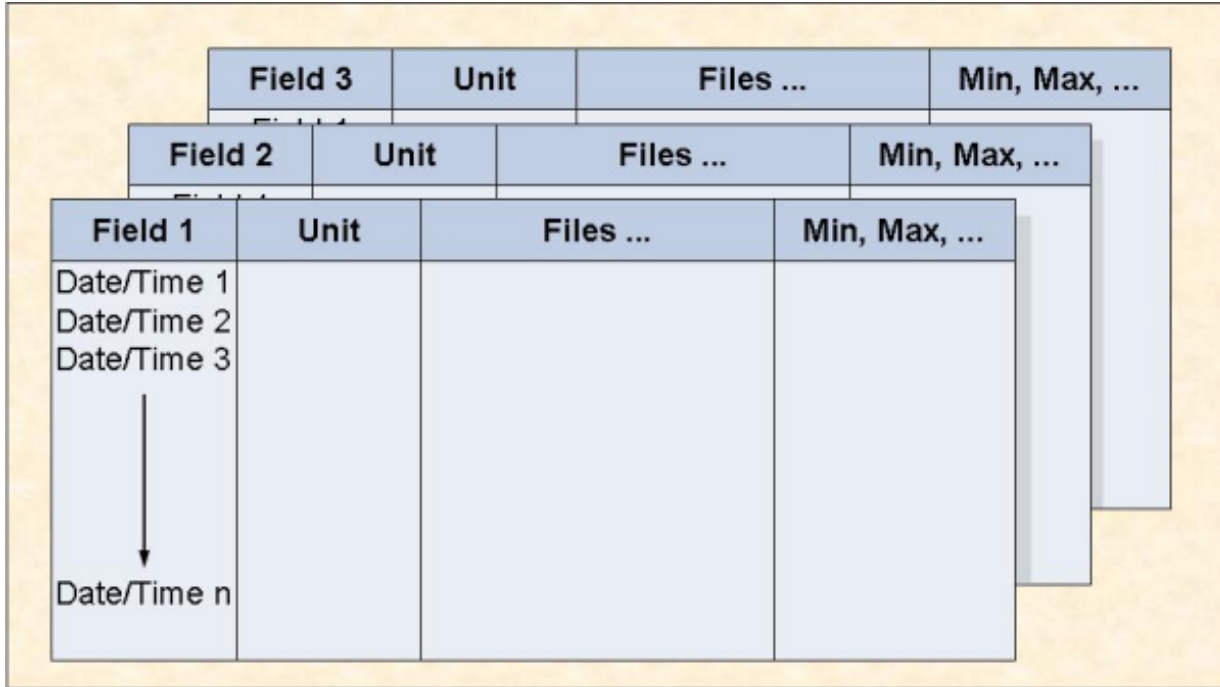


Figure 1-15: Evaluation Report Format for Evaluation Type 8

```

14:19:04      *** A D A B A S  Statistics Facility  ***      2008-02-04
USERID      Evaluation for field: NR OF COMMANDS      1/1      MEV48001

DBID          ! UNIT!          16 !          16 !          16 !          16
FILE-ID       !      !          118 !          122 !          125 !          221
-----+-----+-----+-----+-----+-----+-----
1992-04-01/22:05 !      !          2,342 !          175 !          1,005 !          19,721
1992-04-02/22:05 !      !          5,601 !          33,327 !          5,522 !          11,565
1992-04-03/22:05 !      !          2,896 !          18,611 !           0 !          7,643
1992-04-06/22:05 !      !          3,385 !          21,951 !          191 !          1,227
1992-04-07/22:05 !      !          1,393 !           803 !          17 !          1,445
1992-04-08/23:05 !      !          1,847 !          1,883 !           0 !          1,717
1992-04-09/23:05 !      !           269 !          4,184 !           0 !          1,717
1992-04-10/23:05 !      !            28 !             0 !           0 !          9,978
1992-04-13/23:05 !      !           177 !          1,654 !           0 !          16,532
1992-04-14/23:05 !      !            10 !            360 !          238 !          8,710
1992-04-15/23:05 !      !             0 !             0 !           0 !          3,091
1992-04-16/23:05 !      !            19 !             0 !           0 !          2,844
1992-04-17/23:05 !      !             0 !             0 !           0 !             0
1992-04-20/23:05 !      !             0 !             0 !           0 !             0
Direct command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
Help More Term Field prev next - + Cumul < > Menu
    
```

Figure 1-16: Sample screen output using Evaluation Type 8

The sample screen output was generated by running the Predefined Evaluation 15 (press PF6 until this screen is reached).

Example of Evaluation Type 9**Purpose:**

This gives the current critical fields.

Standard Evaluation Profiles with Evaluation Type 9:

AC2-IN-USE, ADABAS-VERSION, CLUSTER, FREE-EXTENTS, ISNSIZE3, MINISN-SET, NEW-AVER-CRIT, NEW-LIST-FILES, PROD-LIMIT-BLUE, PROD-LIMIT-RED, PROD-LIMIT-YELL, PROD-LIMIT-YELL1, SAG-CRIT-9, SAG-FREE-09

Standard Predefined Evaluations using Evaluation Type 9:

1, 2, 3, 4, 5, 18, 19, 34

DBID	File ID	Field Name	Current Value	Limit Value
↓	↓	↓	↓	↓

Figure 1-17: Evaluation Report Format for Evaluation Type 9

```

14:21:26          ***  A D A B A S  STATISTICS FACILITY  ***          2008-02-04
USERID          Critical report based on: 1992-04-13 23:12          MACR0001
  Evaluation profile: PROD-LIMIT-RED Store profile: TEST-DB-ALL Type: WE
                                     < ALL >
  DB !   File ! Field          !          Value !Unit!Parm!          Limit !Unit
  ---+-----+-----+-----+-----+-----+-----+-----+-----+
  17 !           ! DATA USED    !          99.7 ! PC ! GE !          95 ! PC
  26 !           ! DATA USED    !          97.3 ! PC ! GE !          95 ! PC
     !    185 ! NI EXTENTS     !           5 !   ! GE !           4 !
     !           ! DS EXTENTS   !           4 !   ! GE !           4 !
     !           !                !           !   !   !           !
     !           !                !           !   !   !           !
     !           !                !           !   !   !           !
     !           !                !           !   !   !           !
     !           !                !           !   !   !           !
     !           !                !           !   !   !           !
     !           !                !           !   !   !           !
     !           !                !           !   !   !           !
     !           !                !           !   !   !           !
     !           !                !           !   !   !           !
     !           !                !           !   !   !           !
  Direct command ==> _____
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
  Help           Term Time          -   +                               Menu
  
```

Figure 1-18: Sample screen output using Evaluation Type 9

The sample screen output was generated by running the Predefined Evaluation 1.

Example of Evaluation Type 10

Purpose:

This predicts fields which will become critical within a given time frame.

Standard Evaluation Profiles with Evaluation Type 10:

PROD-LIMIT-TREND, SAG-CRIT-10

Standard Predefined Evaluations using Evaluation Type 10:

none

DBID	File ID	Field Name	Limit Value	Limit Date	Accuracy
↓	↓	↓	↓	↓	↓

Figure 1-19: Evaluation Report Format for Evaluation Type 10

```

14:24:11      *** A D A B A S  STATISTICS FACILITY ***           2008-02-04
USERID  Crit-trend-base: 1992-03-01 - 1992-04-15 limit: 1992-09-30 MACT0001
  Evaluation profil: PROD-LIMIT-TREND Store profil: TEST-DB-ALL Type: WE wee
                                           < ALL >
   DB !  File ! Field          !          Limit !Unit!Parm! Date      ! Accur.
---+-----+-----+-----+-----+-----+-----+-----+-----+
  16 !   122 ! NI EXTENTS      !             5 !   !  GE ! 1992-04-14 ! n/a
    !        ! AC EXTENTS      !             5 !   !  GE ! 1992-04-15 ! n/a
  17 !        ! DATA USED       !            99 ! PC !  GE ! 1992-04-13 ! reache
  26 !        ! ASSO USED        !            99 ! PC !  GE ! 1992-04-29 ! 91
    !        ! DATA USED       !            99 ! PC !  GE ! 1992-04-12 ! 87
  27 !        ! DATA USED       !            99 ! PC !  GE ! 1992-09-16 ! 43
    !        !                 !             !   !   !             !
    !        !                 !             !   !   !             !
    !        !                 !             !   !   !             !
    !        !                 !             !   !   !             !
    !        !                 !             !   !   !             !
    !        !                 !             !   !   !             !
    !        !                 !             !   !   !             !
    !        !                 !             !   !   !             !
    !        !                 !             !   !   !             !
    !        !                 !             !   !   !             !
    !        !                 !             !   !   !             !
    !        !                 !             !   !   !             !
    !        !                 !             !   !   !             !
    !        !                 !             !   !   !             !

Direct command ==> _____
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
     Help      Term             -     +                               Graph Menu
  
```

Figure 1-20: Sample screen output using Evaluation Type 10

The sample screen output was generated by using the Evaluation PROD-LIMIT-TREND.

Example Download for Evaluation Type 1 - 4

Purpose:

This downloads database related data when using the standard or CSV format.

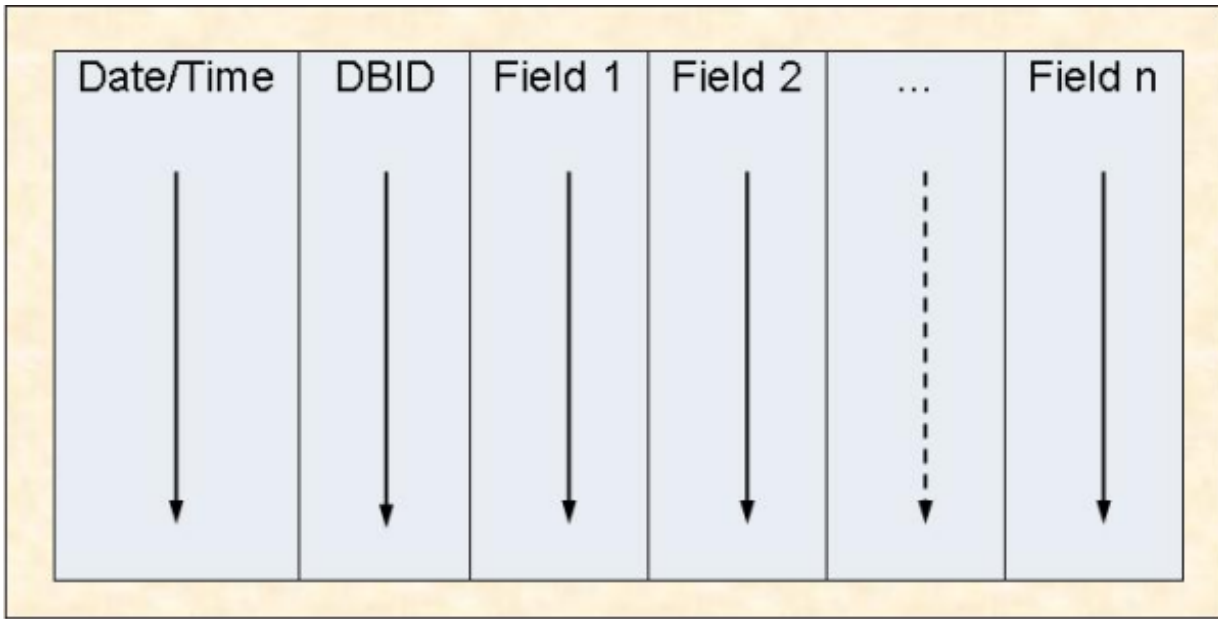


Figure 1-21: Standard and CSV Download Format for Evaluation Type 1-4

Time	DBID	DB-NAME	DATE NUC-START	TIME NUC-START	ASSO DEFINED (CYL)	ASSO USED (CYL)
1992-03-09/17:34	16	DB016-ALSBA	1992-03-09	02:32	530	268
1992-03-09/17:34	17	DB017-ANWEN	1992-03-09	07:06	884	450
1992-03-09/17:34	26	SPL-MIRROR	1992-03-09	07:07	400	150
1992-03-09/17:34	27	DB027-ALSBA	1992-03-09	02:32	530	5
1992-03-09/17:34	36	DB036-ALSBA	1992-03-09	02:32	560	401
1992-03-09/17:34	37	ENTIRE-ALSB	1992-03-09	02:49	635	504
1992-03-16/23:00	16	DB016-ALSBA	1992-03-16	02:41	530	227
1992-03-16/23:00	17	DB017-ANWEN	1992-03-16	02:47	884	452
1992-03-16/23:00	26	SPL-MIRROR	1992-03-16	09:08	400	150
1992-03-16/23:00	27	DB027-ALSBA	1992-03-16	02:30	530	46
1992-03-16/23:00	36	DB036-ALSBA	1992-03-16	02:41	560	401
1992-03-16/23:00	37	ENTIRE-ALSB	1992-03-16	02:48	635	507

Figure 1-22: Sample Download using Standard or CSV Format for Evaluation Type 1-4

For the sample download, the Predefined Evaluation 6 was modified to download the data in CSV format (PC-File marked with "C"). The data shown here is only a part of the downloaded data. More fields follow on the right and more points in time at the bottom.

The downloaded data can be edited and represented graphically. For the graphic below it was sorted by DBID/Time.

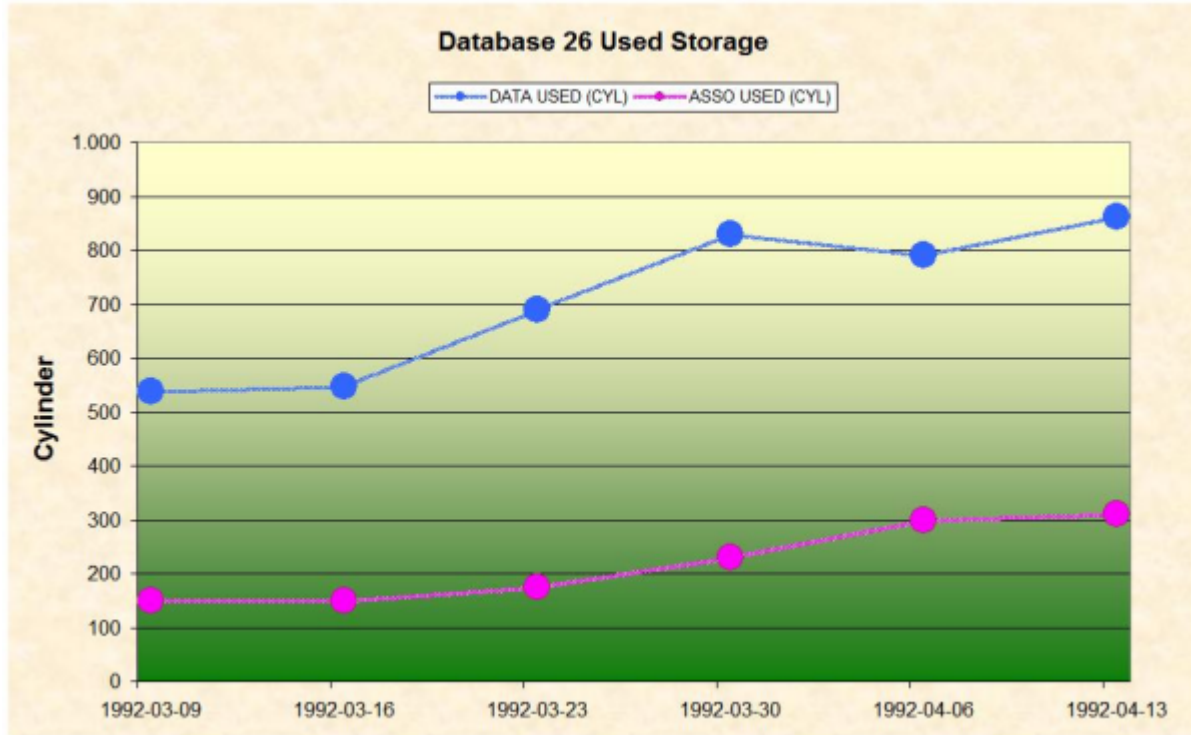


Figure 1-23: Graphical representation of downloaded data for Evaluation Type 1-4

Example Download for Evaluation Type 5 - 8

Purpose:

This downloads file related data when using the standard or CSV format.

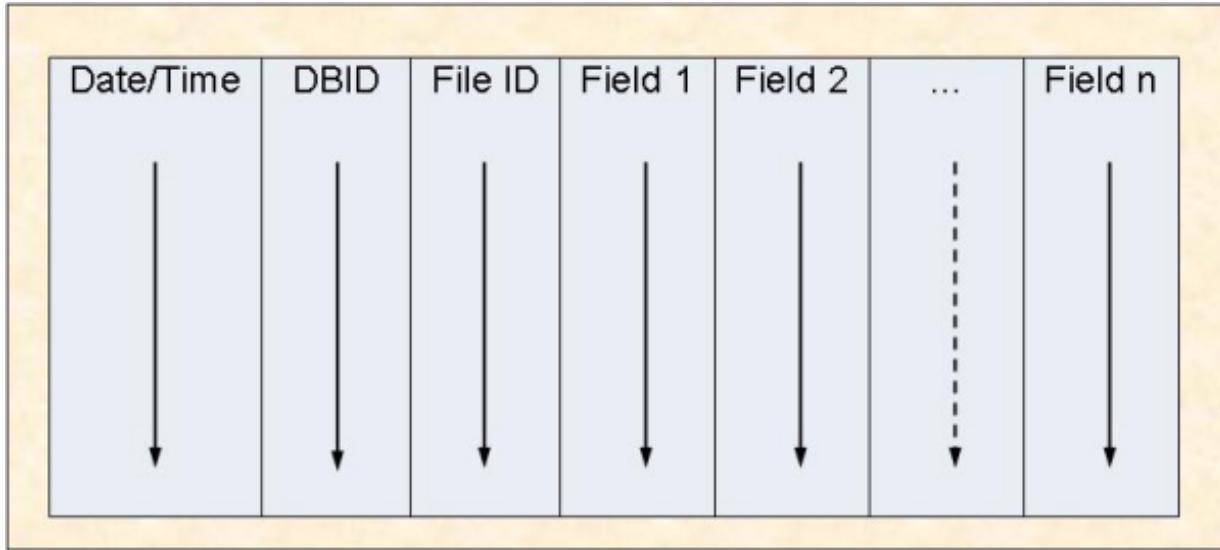


Figure 1-24: Standard and CSV Download Format for Evaluation Type 5-8

Time	DBID	FILE-ID	NI DEFINED (BL)	NI USED(BL)	NI USED (PC)	NI EXTENTS
1992-03-09/17:34	16	221	20	9	45.0	1
1992-03-09/17:34	16	235	36	21	58.3	1
1992-03-09/17:34	16	227	231	228	98.7	4
1992-03-09/17:34	16	118	36	10	27.7	1
1992-03-09/17:34	16	125	36	6	16.6	1
1992-03-09/17:34	16	122	36	15	41.6	1
1992-03-09/17:34	17	39	4363	4283	98.1	1
1992-03-09/17:34	17	71	1653	1527	92.3	1
1992-03-09/17:34	17	55	2112	1774	83.9	1
1992-03-09/17:34	36	22	2565	1012	39.4	1
1992-03-09/17:34	36	58	1992	730	36.6	1
1992-03-09/17:34	37	14	37852	13784	36.4	1
1992-03-09/17:34	37	15	3643	1452	39.8	1
1992-03-09/17:34	37	104	4700	3293	70.0	1
1992-03-09/17:34	37	105	1000	343	34.3	1
1992-03-16/23:00	16	221	20	9	45.0	1
1992-03-16/23:00	16	235	59	49	83.0	2
1992-03-16/23:00	16	227	150	114	76.0	1

Figure 1-25: Sample Download using Standard or CSV Format for Evaluation Type 5-8

For the sample download, the Predefined Evaluation 8 was modified to download the data in CSV format (PC-File marked with "C"). The data shown here is only a part of the downloaded data. More fields follow on the right and more points in time at the bottom.

The downloaded data can be edited and represented graphically.

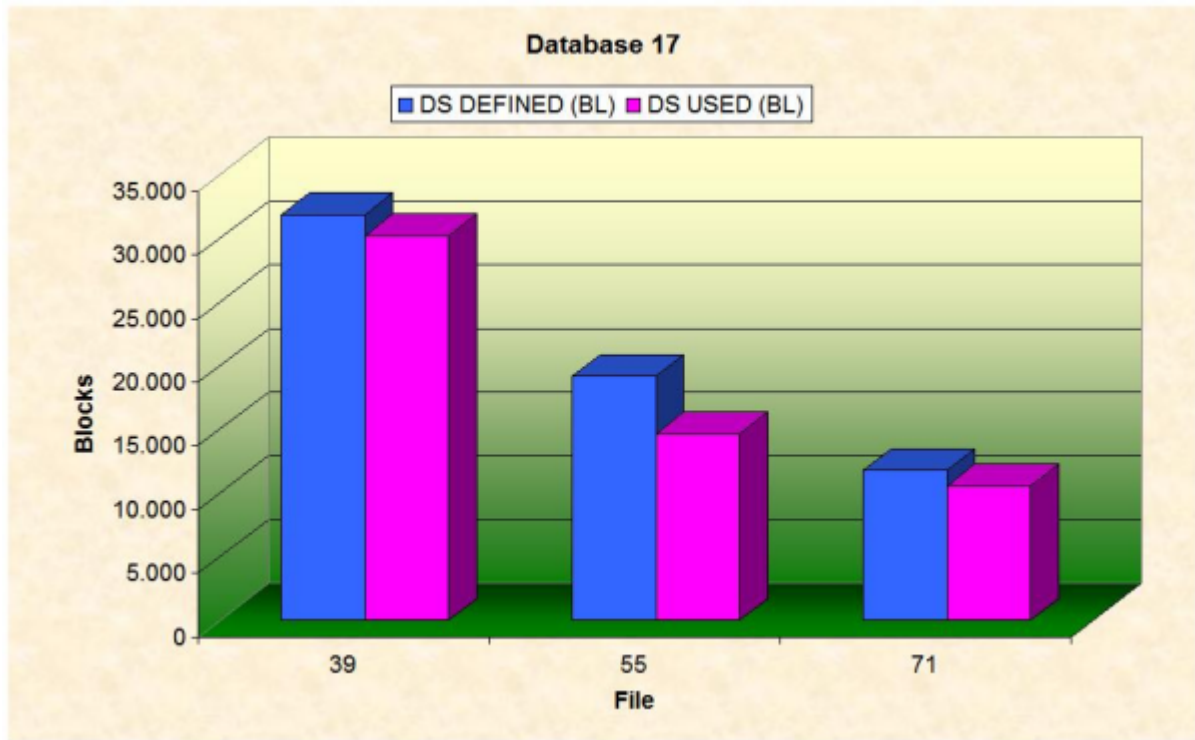


Figure 1-26: Graphical representation of downloaded data for Evaluation Type 5-8

Example Download for Evaluation Type 9

Purpose:

This downloads the current critical fields.

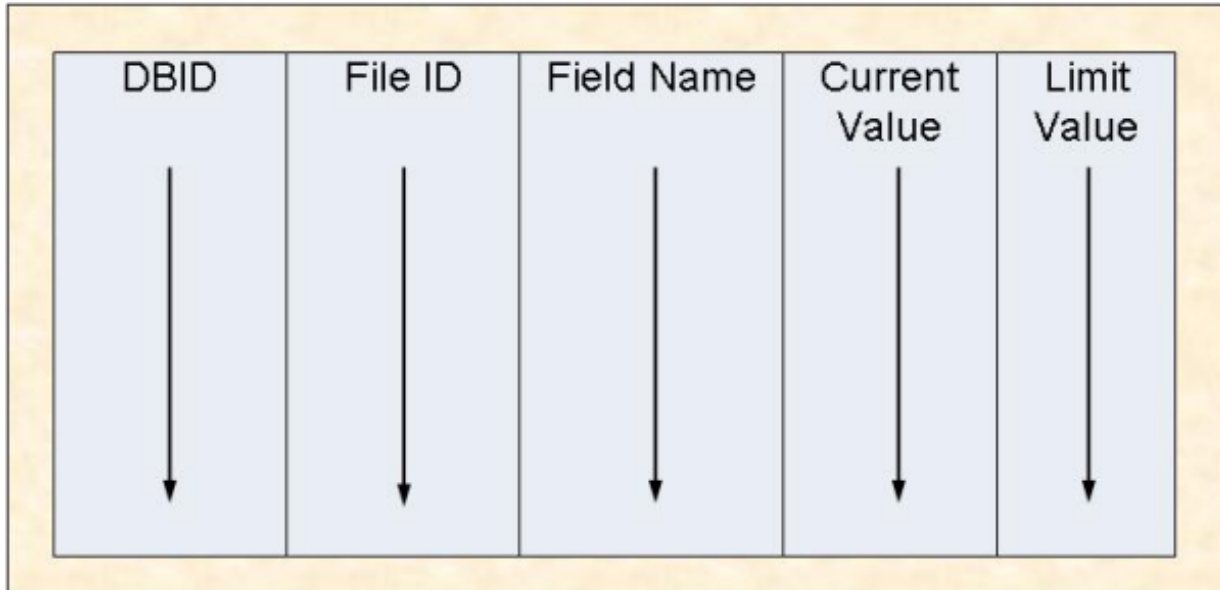


Figure 1-27: Download Format for Evaluation Type 9

DB	File	Field	Value	Unit	Parm	Limit	L-Unit
17	0	DATA USED	99.7	PC	GE	95	PC
26	0	DATA USED	97.3	PC	GE	95	PC
26	185	NI EXTENTS	5		GE	4	
26	185	DS EXTENTS	4		GE	4	

Figure 1-28: Sample Download using Standard or CSV Format for Evaluation Type 9

For the sample download, the Predefined Evaluation 1 was modified to download the data in CSV format (PC-File marked with "C").

Example Download for Evaluation Type 10

Purpose:

This downloads fields which will become critical within a given time frame.

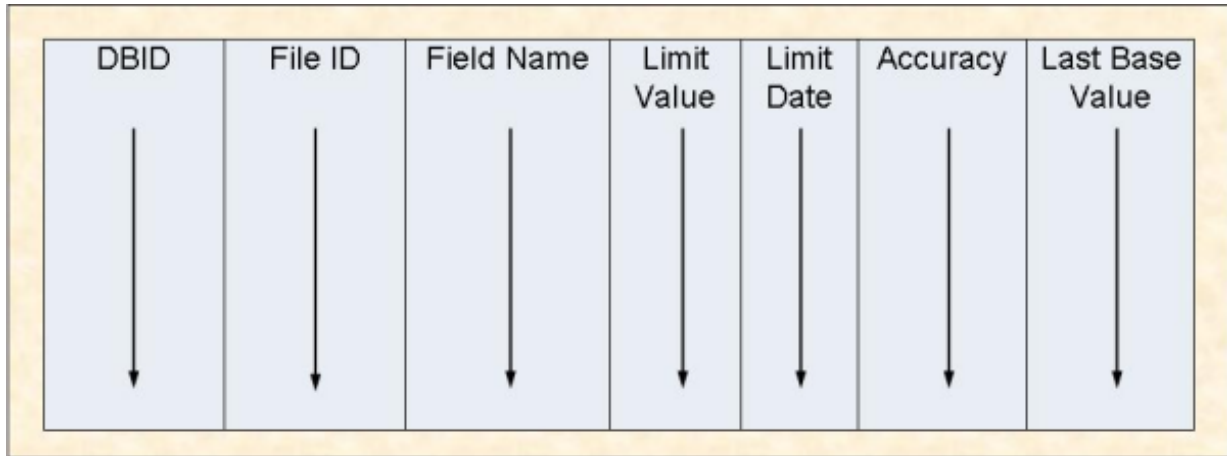


Figure 1-29: Download Format for Evaluation Type 10

DB	File	Field	Limit	Unit	Parm	Date	Accuracy	Last Base
16	122	NI EXTENTS	5		GE	1992-04-14	n/a	3
16	122	AC EXTENTS	5		GE	1992-04-15	n/a	2
17	0	DATA USED	99	PC	GE	1992-04-13	reached	99
26	0	ASSO USED	99	PC	GE	1992-04-29	91	77
26	0	DATA USED	99	PC	GE	1992-04-12	87	97
27	0	DATA USED	99	PC	GE	1992-09-16	43	22

Figure 1-30: Sample Download using Standard or CSV Format for Evaluation Type 10

For the sample download, the Critical Trend report described below downloaded the data in CSV format (PC-File marked with "C"). Additionally to the information presented on the screen, the column "Last Base" shows the value of the last record in the trend base time period.

Trend based on:	1992-03-01 , 00:00
to:	1992-04-15 , 23:59
limited to:	1992-09-30 , 23:59
Eval. profile:	PROD-LIMIT-TREND
Store profile:	TEST-DB-ALL
Store type:	WE weekly storage

3 Planning Guide

- General Guidelines for Planning ASF 28
- Practical Guidelines for Using ASF 31
- Miscellaneous Questions and Answers 36

This chapter covers the following topics:

General Guidelines for Planning ASF

The use of ASF requires thorough planning. With ASF you will be storing statistical database information over a period of weeks or months, and then analyzing the stored data. Therefore it is of great importance to plan which data to store and which types of Evaluation Report are required.

The material presented in this section describes the stages of the planning process for using ASF.

Checklist for using ASF

The main procedures involved in using ASF are presented in the following list, and subsequently described in detail:

- Plan which databases and files are to be stored.
- Plan which Store Type should be used (and create if necessary).
- Create the Store Profile.
- Start the Store Program (Screen/batch).
- Plan which ASF fields are to be evaluated.
- Decide which type of Evaluation Report you wish to generate.
- Create the Evaluation Profile, specifying units and accumulation.
- Run the Evaluation.
- Make a Workplan entry (if required).

Plan which databases and files are to be stored

When an Evaluation Report is generated, it presents an analysis of ASF data which has been stored for particular databases and files over a period of days, weeks or months. It is therefore essential to plan thoroughly the databases and files for which ASF data is to be stored. Storing data for many databases and files has the advantage of providing a greater amount of stored ASF information for later analysis, but has the disadvantage of using larger quantities of disk space to store the data. The ASF Installation Notes show examples of the amount of disk space required in several typical instances. For this reason, the selection of databases and files for storing is normally limited to those which are directly required to produce an Evaluation Report.

Plan which Store Type should be used

When storing ASF data with the Store Program, the data is stored with an associated Store Type. The Store Type is an indication of the circumstances under which the data is stored. ASF has several predefined Store Types, e.g. AH (ad hoc), EN (when the Nucleus is terminated), ST (when the TP monitor is started), ET (when the TP monitor is terminated), CY (cyclic, i.e. based on time of day), DA (daily). You can define additional Store Types if required. The full list of all Store Types supplied is presented in the section [Supplied Store Types](#).

When stored ASF data is retrieved for an Evaluation Report, the Store Type is used as a selection criterion. Thus in an Evaluation Report, it is not possible to combine ASF data records which were stored with different Store Types.

Create the Store Profile

Once you have planned the databases and files for which you wish to store ASF data, and the Store Type to be used, you can create the Store Profile using the "Store Profile Administration" function of the ASF Online Menu System.

Start the Store Program (Online/Batch)

If ASF data is to be stored cyclically, e.g. with Store Type CY (cyclic) or a user-defined Store Type, then the Job Scheduler will have to be updated accordingly to run the Store Program cyclically in batch mode at the appropriate time intervals. Alternatively, the batch job can be started online from the TP monitor (for example, using the COM-LETE "UTIMER" command). In either case, the job which has to run is a Batch Natural job which uses the ASF direct command STORE, specifying the name of a Store Profile and Store Type (see the section Batch Operations in the *ASF User's Guide* documentation for details).

The Store Program can also be started online using the "Store Nucleus Records" feature of the ASF Online Menu System. If the program is started in this manner, the appropriate Store Types are AH (ad hoc) or a user-defined Store Type.

Plan which ASF fields are to be evaluated

The statistical data which the ASF Store Program stores, are the values of ASF data fields. The full list of the ASF data fields is given in the section [ASF Group and Field Names](#). The ASF data fields are subdivided into several groups, each related to some aspect of the database such as physical disk usage, number of Adabas commands issued for the database/file or session parameters (memory usage).

Decide which type of Evaluation Report you wish to generate

When using ASF, you must know which result you are trying to achieve (see the section **Examples of Evaluations**). The aim of ASF is to produce Evaluation Reports for monitoring databases. An Evaluation Report summarizes database performance data which has been stored over a period of days, weeks or months using the ASF Store Program. There are 10 different types of Evaluation Reports, each representing the stored data in a different manner. The Evaluation types 1-8 summarize stored data in the form of two dimensional or three dimensional tables. Reports generated using these Evaluation Types differ in the units displayed in the various dimensions.

The following table summarizes the combinations of databases, files, times and ASF fields which are used in Evaluation Types 1-8. This is valid when the report is displayed on the screen, printed or downloaded to the PC in Full format.

Screen, Printer, Download "Full"				Accumulation	
Type	Vertical	Horizontal	Third axis	Internal	External
1	Fields	Times	Databases		x
2	Accumulated Fields	Databases	-	x	
3	Fields	Databases	Points in time		x
4	Times	Databases	Fields		x
5	Fields	Times	Files		x
6	Accumulated Fields	Files	-	x	
7	Fields	Files	Points in time		x
8	Fields	Files	Fields		x

When the data is downloaded in standard or CSV format, the result is a two dimensional table. It looks the same for all Evaluation Types. Accumulation values are never calculated, not even for Type 2 or 6.

Download "Standard" or "CSV"				Accumulation	
Type	Vertical	Horizontal	Third axis	Internal	External
1-4	Times, Databases	Fields	-		
5-8	Times, Files	Fields	-		

Evaluation Type 9 displays a list of ASF fields whose last measured values exceeded some user-defined bounds, and Evaluation Type 10 is a list of ASF fields whose values will reach or exceed user-defined limits if current growth rates continue.

A summary of the Evaluation Types is presented in the *ASF User's Guide* in the section Evaluation Reports.

Create the Evaluation Profile, specifying units and accumulation

An Evaluation Profile contains a definition of databases, files and ASF data fields which are to be evaluated. An Evaluation Profile is normally designed to access either the same databases and files as an existing Store Profile, or a subset of the databases and files. In addition, an Evaluation Profile contains the names of ASF data fields which are to be evaluated. See the section Evaluation Profile Administration in the *ASF User's Guide* for details of how to create an Evaluation Profile.

Run the Evaluation.

When the Store Program has run at least once, ASF data is available for analysis and output in an Evaluation Report. The more often the Store Program runs, the more data is available for determining trends in databases and comparison between databases.

Make a Workplan Entry

If you plan to run any given evaluation often, you can save all of the required information for running the evaluation in a Workplan entry. In this way, a frequently used evaluation can be started simply by selecting the appropriate entry from the list of predefined evaluations in the Workplan. See the section Workplan: Predefined Evaluations and Reports in the *ASF User's Guide* for details of how to use the Workplan.

Practical Guidelines for Using ASF

The information presented in this section is based on experience gained in using ASF in production environments.

Data Storage

The most important aspect is to collect data at timed intervals in batch. This guarantees the availability of current and historical data for Evaluations as required.

Storing data once daily is sufficient as a basis for long-term monitoring. The daily storage should be scheduled to take place towards the end of the typical online system usage (for example, about 18:00), and should include all databases and files. For this purpose, ONE Store Profile with dynamic file selection in all databases should be used.

The advantage of this dynamic Store Profile is the automatic detection of active files; you do not have to modify Store Profiles explicitly when new files are created or when existing files are deleted.

The Store Type of this daily store should be "DA" (daily). The Store Type DA is included in the ASF distribution kit.

As described above, the creation of a sufficiently detailed database is catered for by a daily run of the Store Program. Data can, however, also be stored for the purposes of documentation or gap-free database history, or as a basis for certain special evaluations:

- A timer-controlled weekly storage (Friday evening) with its own Store Type “WE” (weekly). The Store Type WE is included in the ASF distribution kit. This data can be used for evaluations on a weekly basis, and can also serve as a basis for evaluations for periods of time for which the daily records have been deleted or transferred to a backup medium.
- A storage at the nucleus termination (Store Type “EN”). This is the basis of gap-free nucleus documentation, and is used for Evaluations of the nucleus termination data of a database (history evaluations 1 and 5). The availability of nucleus termination data is important if you plan to work with delta values. Delta values can be obtained with the ASF User Exit or with ASF Utilities.

For collecting nucleus termination data, you should use the same Store Profile as for the daily runs. The parameter “Reduced on DB-ID” must be set to the ID of the database to be monitored at nucleus termination.

Alternatively, if you are only interested in database information (i.e. no file parameters) at nucleus termination, you should create a new Store Profile which contains databases but no files. This has the advantage that at nucleus termination, only 1 record per database is created. However, on systems offering round-the-clock operation with only a few shutdowns per year, the file information should be stored also.

Summary of guidelines for data storage:

The Store Program should run daily as a timer-controlled batch job. It should be started towards the end of the peak period (e.g. about 18:00) with the Store Type “DA” (daily). In the Store Profile, the “dynamic” feature should be selected for all databases. In some cases it can be advantageous to store data at other times (e.g. at nucleus termination).

Critical Reports

The most important data output by ASF are the Critical Reports. These represent, in compact form, values which are important because their values are “critical”. The distribution kit for the ASF product contains predefined Critical Reports called “RED”, “YELLOW” and “BLUE” as part of the Workplan. When the Critical Report “RED” displays values, e.g. Extents ≥ 4 (for an Adabas version 7 database) or DATA USED $\geq 95\%$, your immediate intervention is required. Experience has shown that this Critical Report should run immediately after the Store Program runs, so that the any critical values displayed refer to the current database status.

The output can either be sent directly to the printer or be queued by the Operating System. You can send the report as e-mail or to Con-nect cabinets as described in the section [Critical Report](#). In this way you can reduce your daily database monitoring effort to the viewing of a single compact list.

The Critical Report “YELLOW” shows situations which do not require your immediate intervention, e.g. buffer efficiency less than 10, or DATA USED greater than 80 percent.

The Critical Report “BLUE” shows unused resources, e.g. number of Normal Index blocks unused greater than 20000 blocks, or high water marks less than 10 percent.

According to the database setup or to the safety requirements, you can choose to run these reports immediately after running the Critical Report “RED”.

Critical Trend Reports

You should plan Trend Evaluations carefully. There is always an element of uncertainty involved, and events which are predicted do not necessarily have to become reality. The value “accuracy”, which appears in the Trend Evaluation, acts as an indicator of how reliable the trend values are. Accuracy values of greater than 90% indicate that the trend values are fairly reliable from a statistical point of view.

It is good practice to run a Critical Trend “RED” as part of the “Friday evening” job. The trend should be based on data stored weekly during the last three months (i.e. the relative dates “-90” to “+0”), or data stored daily in the last month (relative dates “-30” to “+0”). The trend limit, i.e. the amount of time for which data should be predicted, should be set to two months, i.e. the relative date “+60”. The interval between successive predictions within this period should be set to 7 days.

You must generate trend records if you subsequently want to display the projected development of databases and files as a General Evaluation (e.g. type 1 or 5). You generate trend records using the “Store Trend Records” menu. In the input field “DBs and FIs from” of this menu, you should enter the name of the Evaluation Profile which will later be used to evaluate the trend records. This ensures that trend records are generated for only those databases and files which will appear in a subsequent evaluation. If the Evaluation Profile does not specify databases, use the Store Profile.

General Evaluations

A useful General Evaluation is a database history (Evaluation type 1) every Friday evening, listing the database development over the past few weeks, or the database development over the last 4 weeks with Store Type “WE”. For this evaluation, it is best to use the relative dates “-5” to “+0”. The evaluations with Evaluation Type 4 and 8 are also very useful. They show for example the development of a parameter over the past 50 days.

You as the DBA should plan which General Evaluations you require and when you require them. You should avoid generating printouts of evaluations which include all databases and files over a long period of time.

Download and Graphical Presentation

If you plan to present the data graphically, choose or create an evaluation which contains all the fields and databases/files to be presented. If you want to download database related data, choose a type 1 – 4, for file related data choose type 5 – 8. Download the data in CSV format (PC-File = “C”), which has the highest download performance. Edit the downloaded data with a spreadsheet tool like MS Excel. If you want to compare various databases or files for one point in time, sort the data by Time/DBID/FILE-ID. If you want to present the history of a specific database/file value, sort the data by DBID/FILE-ID/Time.

Summary of guidelines for Evaluations:

Generate the Critical Report “RED” daily, if possible as part of the job which does the daily run of the Store Program. If required, run the Critical Reports “YELLOW” and “BLUE” also. On a weekly basis (Friday evening), do an evaluation of database development. Download the data in CSV format for graphical presentation.

Maintenance of the ASF Records

ASF records can be moved to an external medium (refer to the EXPORT option in the “Maintain Nucleus Records” menu). Using this feature, all records older than, say, 3 months can be copied to a work file and subsequently deleted from ASF-DATA. To do this, you should create a job with two steps:

1. Copy the records to a work file, using the dates “2000-01-01” to “-90”.
2. Delete the records in this period of time, using the Delete function of the “Maintain Nucleus Records” screen.

Summary of guidelines for maintaining ASF Records:

The number of ASF records should be regulated by exporting and deleting records regularly. Exported records can be imported again if required.

Workload and Performance

The following general rules apply:

- Evaluations of type 1, 3, 5 and 7 are relatively fast.
- Evaluations of type 4 and 8 require more time than those of type 1, 3, 5 and 7.
- Evaluations of type 2 and 6 can be lengthy, depending on the number of stored records for the given period of time.
- A Critical Report (Evaluation Type 9) can be lengthy, depending on the number of databases and files in the Evaluation Profile.

- A Critical Trend Report (Evaluation Type 10) can be very lengthy. It is dependent on the number of databases and files in the Evaluation Profile and on the number of stored records for the given period of time.
- Downloading the ASF data in the Standard format is in general faster than in the Full format. Moreover if your target is an Excel file, the CSV format is considerably faster than the Standard format. Therefore it is recommended to use the CSV format if possible. See also the Download Performance test below.

When using ASF, the following points should be noted:

- Use external accumulation only when necessary. If an evaluation which uses external accumulation produces a table of results which is wider than the screen, then when you page to the rightmost screen, ASF must re-evaluate the data from ALL of the horizontal pages in order to calculate the external accumulation values. Thus, external accumulation can cause a lot of database accesses.
- The mathematical quantities DET (coefficient of determination) and DISP (coefficient of dispersion) should only be specified in an Evaluation Profile if they are really required, since ASF needs to read all the relevant data twice to calculate them. Under normal circumstances these two values are not of interest!
- Organize Evaluation Profiles and Evaluations to present information clearly. You could, for example, design "Application Reports" to evaluate files and databases which are required by certain applications.
- Avoid using dynamic Evaluation Profiles in General Evaluations, otherwise the generated reports can be enormous. A database containing 100 files can generate a report 10 or 20 pages wide and thus be completely impractical.

Dynamic Evaluation Profiles can, however, be useful for creating Critical Reports in batch. In this case, all stored databases and files are checked for critical values.

- When generating a set of trend records, you should specify the same Evaluation Profile in the "DBs and FIs from" field as you will later use to evaluate the trend records (provided the Evaluation Profiles specifies databases and files at all). The number of databases and files in this profile should be kept small.
- If the number of records stored in a file is not of interest, the parameter "Get Num.rec.loaded" in the User Profile should be set to "NO". This can speed up the storing of data quite significantly.
- Running ASF Evaluations regularly is an integral part of database management. You should therefore schedule your Evaluations to run automatically as batch jobs.

Download Performance Test

The test processes example data stored with NEW-TEST-DB-ALL. The "Full" and "Standard" download use as target an Excel spreadsheet.

Property	Value
Evaluation profile	SAG-CMDS-3
Evaluation type	3
From time	1992-09-01 , 00:00
To time	1992-09-30 , 23:59
Store profile	NEW-TEST-DB-ALL
Store type	DA
Origin	NU

Download Format	Time
Full (F)	671 sec
Standard (X)	44 sec
CSV (C)	1 sec

A similar run with the ASF 7.1 “Header” (H) format required more than 50 minutes.

Summary of guidelines for Workload and Performance:

- The Evaluations of type 2, 5, 9 and 10 depend on the number of stored records in the period of time which is being evaluated, and also on the number of databases and files in the Evaluation Profile.
- Regularly used Evaluations should run in batch. External accumulation (min, max, sum, avr and especially dis and det) can be time consuming, depending on the volume of data to be processed.
- Consider setting the parameter “Get Num.rec.loaded” in the User Profile to “NO”.
- Use the CSV download format.

Miscellaneous Questions and Answers

This section contains hints concerning the usage of ASF. The problems listed in this section are based on customer experience gained in using previous ASF versions.

Question:

How does ASF work in batch?

Answer:**With Natural Security**

Firstly, create a user called BATCH in Natural Security, and link the group ASFGROUP to it. Using the ASF User Maintenance, allocate all privileges to this user. You can also assign a user to a job - in this case, the user name must be the same as the job.

Without Natural Security

The user must have the same name as the job. Batch users should set the "Keep Environment" parameter to "NO" in their profile; otherwise fields can be filled unexpectedly. Forced I/Os are not catered for in batch, but nevertheless the parameters "Limit CPU units" and "Limit ADA-calls" should be set to 9999999.

The printer name specified in the user profile is not used for batch output, but the output medium for batch should be the hardcopy printer. This means that the second dataset contains the printer output. If you select the screen as the output medium, the output is written directly into the job output stream.

If the output medium for batch is the printer, the printer name specified in the user profile is not used for the batch output. The second dataset contains the printer output. If you select the screen as the output medium, the output is written to the printer output as well. If the PC-File has been selected as output medium, the output is written into the Workfile 7 in the same format as it is downloaded online.

Question:

How does the syntax of an ASF batch evaluation looks like?

Answer:

Use as input for CMSYNIN:

```
LOGON SYSASF
MENU
,SELECT nn
.
,FIN
```

where *nn* is the number of the Predefined Evaluation to be performed.

Question:

Why can "Origin" not always be specified as "ALL" ?

Answer:

If tabular evaluations are generated using “TR” (trend records) or “ALL” (trend records as well as nucleus records), there is only a limited selection of ASF fields available in the Evaluations. Normally therefore, only “NU” should be specified for Origin, except in cases where trend records are to be displayed.

Question:

Under which circumstances does ASF use artificial I/Os, and can this lead to problems on some systems?

Answer:

Certain Evaluations (e.g. Evaluations of type 2, 6, 9 and 10) can require a lot of CPU time and thus exceed various TP monitor time limits. To solve this problem without increasing the TP monitor time limits, ASF generates “artificial” I/Os. These are I/Os which cause no change to the screen, but cause the TP monitor to reset its timers.

With IMS DC, however, this leads to problems, since screen updates are managed in a queue and sent asynchronously to the terminals. A bypass for IMS DC is to set the “Limit ADA-calls” and “Limit CPU-units” parameters in the User Profile to 9999999 and run the Store Program in batch only.

Question:

Under which circumstances does the User Maintenance work with Natural Security?

Answer:

User Maintenance works under Natural Security in each of the following circumstances:

1. If the SYSASF library is “people protected” in Natural Security, or
2. If the SYSSEC modules listed in the section Step 5: Setting up User Security in the *ASF Installation* documentation are present, or
3. SYSSEC is defined as a Steplib, or
4. If Adabas Online Services has been installed with INPL and Natural Security has been installed again with INPL, or
5. If your user ID is included in the group ASFGROUP. If the user ID is included in the group, the user ID must not also be linked directly to ASF (the Natural Security command “LINK ... TO ...” links a user to an application). Access to SYSASF may only occur via the ASFGROUP group.

Question:

Why is the cursor position not recognized in BS2000/OSD (e.g. when linking files by positioning the cursor on the database then pressing PF4) ?

Answer:

Before the cursor position can be recognized in BS2000/OSD, you must issue both of the following terminal commands:

```
%T=9756 (activate the terminal driver), and  
%KN (activate the Siemens function key logic)
```

What to do next ...

The steps outlined in this section serve as a checklist for planning and implementing ASF applications. The next section looks in detail at one of the standard Evaluation Profiles, namely SAG-IO-2. This is one of several standard profiles which are distributed with the ASF product. The section examines how SAG-IO-2 was created and shows the format of an Evaluation Report which was generated using this profile. You can copy SAG-IO-2 and modify your copy to fit your requirements, or simply follow the techniques which are described in the section.

The complete list of standard Evaluation Profiles is presented in the section [Supplied Evaluation Profiles](#). If the profile SAG-IO-2 is not directly suitable for your purposes, you might find that one of the profiles listed in this section is more suitable as a starting point. You should not modify any of the standard profiles - instead, you should always make a copy of the profile and modify the copy.

You might also wish to refer to the diagrams shown in the section [Evaluation Report Formats](#). These summarize the formats of the Evaluation Reports which are generated by using different Evaluation Types.

4 SAG-IO-2

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The Evaluation Profile SAG-IO-2 is one of a set of profiles provided with the ASF software. This section describes how the profile SAG-IO-2 was created, and analyses an Evaluation Report which was generated using SAG-IO-2.

This chapter covers the following topics:

Purpose of Profile SAG-IO-2

The Profile SAG-IO-2 can be used for comparing the I/O behavior of several databases over a period of time. The profile uses Evaluation Type 2, which produces the most compact of the available display formats. The vertical axis of an Evaluation Report using this profile shows accumulated ASF fields, and the horizontal axis is a list of databases for which these ASF fields apply.

Description of Profile SAG-IO-2

- Accumulation
- Units

Accumulation

Figure 3-1 shows the ASF fields which SAG-IO-2 uses, and the types of accumulation for each field. The field READ ASSO, for example, is included in the profile, and its minimum, maximum and average values will be displayed in an Evaluation Report generated using SAG-IO-2.

Field Name	Seq	Min	Max	Sum	Avr	Val	Disp	Det
DATE NUC-START__	1							
TIME NUC-START__	2							
READ ASSO_____	3	X	X		X			
READ DATA_____	4	X	X		X			
READ WORK_____	5	X	X		X			
WRITE ASSO_____	6	X	X		X			
WRITE DATA_____	7	X	X		X			
WRITE WORK_____	8	X	X		X			
WRITE PLOG_____	9	X	X		X			
LOG. READS_____	10	X	X		X			
BUFF. EFFICIENCY	11	X	X		X			

Figure 3-1: Accumulation for SAG-IO-2

Units

Figure 3-2 shows the units of measurement defined for the ASF fields in SAG-IO-2. Many of the ASF fields in SAG-IO-2 are marked for output as “1/min”, i.e. as a number of occurrences per minute since the Adabas Nucleus was started. This is a useful way of displaying the ASF fields which represent I/O activity (READ ASSO, WRITE ASSO etc.).

Field Name	! Seq	! Default	! B1	! Da	! Hr	! Se	! %	! Nom	! 1/call	! 1/min
DATE NUC-START__	! __1	!	!	!	!	!	!	!	!	!
TIME NUC-START__	! __2	!	!	!	!	!	!	!	!	!
READ ASSO_____	! __3	!	!	!	!	!	!	!	!	X_
READ DATA_____	! __4	!	!	!	!	!	!	!	!	X_
READ WORK_____	! __5	!	!	!	!	!	!	!	!	X_
WRITE ASSO_____	! __6	!	!	!	!	!	!	!	!	X_
WRITE DATA_____	! __7	!	!	!	!	!	!	!	!	X_
WRITE WORK_____	! __8	!	!	!	!	!	!	!	!	X_
WRITE PLOG_____	! __9	!	!	!	!	!	!	!	!	!
LOG. READS_____	! _10	!	!	!	!	!	!	!	!	X_
BUFF. EFFICIENCY	! _11	!	!	!	!	!	!	!	!	!

Figure 3-2: Units for SAG-IO-2

Creating the Profile SAG-IO-2



Note: The following paragraphs describe how the Evaluation Profile SAG-IO-2 was created. The method shown here can be used as a reference when creating new Evaluation Profiles.

The profile SAG-IO-2 is one of the standard Evaluation Profiles provided with ASF. When originally creating this profile, the function E in the ASF Main Menu was selected, which caused the menu “Evaluation profile administration” to appear. In this menu, the function A (to add an evaluation profile) was selected. In reply to the prompt “Profile” the name SAG-IO-2 was typed in. The Evaluation Type 2 was chosen. After pressing ENTER a window appeared into which the alias name “SI2” was typed. Subsequently the menu “Profile Element: Accumulation” appeared.

Entering ASF field names

When the menu “Profile Element: Accumulation” was selected, the cursor was positioned automatically on the first input field of the menu. At this stage, the field names could have been entered directly into the mask (DATE-NUC-START, TIME NUC-START etc.), but the quicker method of using active help was used. Typing an asterisk in the first input field as shown in Figure 3-3, then pressing ENTER caused the first active help screen to be displayed. You can also press PF5 to access the active help screen.

```

Field Name      ! Seq ! Min ! Max ! Sum ! Avr ! Val ! Disp ! Det
-----+-----+-----+-----+-----+-----+-----+-----+-----
*_____ ! ___ ! ___ ! ___ ! ___ ! ___ ! ___ ! ___ ! ___
_____ ! ___ ! ___ ! ___ ! ___ ! ___ ! ___ ! ___ ! ___
    
```

Figure 3-3: Selecting Active Help for ASF Fields

Active help

The first help screen displays the ASF groups. We mark the “IO-Data” group with “A”, because we want to use all fields of this group. The “Session Information” group is marked with “X” for further selection.

```

18:41:19          **** A D A B A S Statistics Facility ****          2008-02-07
                   - Profile element : Accumulation -                MPXK0001

+-----< Select groups      page 1 >-----< ALL >--+
!
!  Mk Nr. Group Name          Sel Max ! Mk Nr. Group name          Sel Max !
!  -----+-----+-----+-----+-----+-----+-----+-----+
!  ___  1 ADARUN-Parameter      0 25 !  ___  11 High water marks    0  8 ! >
!  X_  2 Session Informatio    0 16 !  ___  13 Tech. ASF fields    0 17 !
!  ___  3 Physical DB-Layout    0  9 !  ___  14 User defined field  0 20 !
!  A_  4 IO-Data                0  9 !
!  ___  5 Cmd distr. source     0  4 !
!  ___  6 Cmd distr. thread     0 251 !
!  ___  7 Cmd distr. type       0 22 !
!  ___  8 User calls            0  6 !
!  ___  9 Run time info         0  7 !
!  ___ 10 Call duration (mil    0 21 !
!
!                                     Total ..... 415 !
+-----+-----+-----+-----+-----+-----+-----+-----+

Direct command ==> _____
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help More Term          All Selct                               Menu
    
```

Figure 3-4: Active help - Group selection

Because the “Session Information” group in the group selection was marked with an “X”, the screen “Select fields of group” is displayed. Here we see the fields of this group in detail. We place a mark beside the fields required, as shown in Figure 3-5.

```

18:41:19          **** A D A B A S Statistics Facility ****          2008-02-07
                  - Profile element : Accumulation -                MPXK0001

+---< Select fields of group 2: 'Session Information' page 1 >--< ALL >--+
!
!  Mk Nr. Field name          State  !  Mk Nr. Field name          State  !
!  -----+-----          +-----+-----          !
!  __  29 DBID                !  __  39 DURATION            !  >
!  __  30 DB-NAME              !  __  40 WAIT-TIME           !
!  __  31 SVC                  !  __  41 CPU-TIME            !
!  __  32 NUCID                !  X_  42 DATE NUC-START      !
!  __  33 VERSION              !  X_  43 TIME NUC-START      !
!  __  34 DATE LOADED          !  __  44 NUC-RUN-TIME        !
!  __  35 TIME LOADED          !                               !
!  __  36 MAXNR OF FILES       !                               !
!  __  37 NR FILES LOADED      !                               !
!  __  38 CURR. LOG TAPE       !                               !
!                               !                               !
+-----+-----          +-----+-----          +

Direct command ==> _____
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help More Term                Selct -   +                Prev Next Menu

```

Figure 3-5: Active help - Field selection

Subsequently we press PF6 in order to select the marked fields. The screen “Select groups” is displayed again and it now indicates the number of selected fields. We leave this screen again with PF6.

Scrolling

If the names of the ASF fields had been typed in manually instead of using the active help feature, all available input fields would have been used after typing the 10th ASF field name. Since the Evaluation Profile SAG-IO-2 contains more than 10 ASF fields, it would have been necessary to use the PF8 key to page forward by one screen. When paging forward in this manner, the last ASF field on the previous screen is displayed as the first field on the new screen. The PF7 key is used to scroll backwards.

Customizing SAG-IO-2

You might wish to use the profile SAG-IO-2 as a starting point in defining a new Evaluation Profile. Do not modify SAG-IO-2 but create a new Evaluation Profile which is a copy of SAG-IO-2 and modify the copy. To create a copy of SAG-IO-2, select the function "Evaluation-profile administration" in the ASF main menu, then use the function "Copy an Evaluation profile".

Adding ASF Fields

If you wish to add ASF fields to those which are already defined in your new Evaluation Profile, the simplest way to do this is to select the active help feature by typing an asterisk ("*") in any input field (even if the field already contains an ASF field name) and pressing ENTER. Alternatively you can press the PF5 key to add new fields to the end of the list. In both cases, the active help screen "Select groups" is displayed. The number of fields already selected is outlined in the column "Sel" for each group. Mark one or more groups with "X" to enter the active help screen "Select fields of group". This time, the already selected fields are marked with "X" in the State column. Mark a field with "X" to include it into the profile, or mark it with "D" to deselect it. When you have marked all the new fields, press PF6 to save the changes.

Deleting ASF Fields

If you wish to delete fields from your newly created profile, move the cursor to the name of the field in any of the "Profile Element" screens, then overwrite the field name with blanks or press the DELETE FIELD key, then press ENTER. Alternatively, you can select the active help screen and deselect an entire group or a single field by marking it with "D". Subsequently pressing PF6 will store the change.

Changing field order using Seq field

If you wish to change the order in which the ASF fields appear, the simplest way is to overwrite the values in the "Seq" column of the "Profile Element" screens accordingly. If, for example, you want the field "TIME NUC-START" to appear before the field "DATE NUC-START" in your copy of SAG-IO-2, then overwrite the "2" in the "Seq" column beside "TIME NUC-START" with the value "1". After you press ENTER, "TIME NUC-START" will appear in the first position, and "DATE NUC-START" will have been moved down one row.

Database selection

Like most delivered Evaluation Profiles, SAG-IO-2 does not specify databases. Thus, when you make a copy of this profile and you want to restrict the databases to specific ones, you must modify the copy to contain the numbers of the databases which you wish to evaluate. When you press PF4 in any of the "Profile Element" screens, the screen "Link databases to profile" is selected. Type in the numbers of the databases which are to be evaluated, and press PF6 to save the changes to the profile.

As SAG-IO-2 is evaluation type 2, no files are included in the profile.



Note: If your ASF Profile file was loaded with ASF version 7.1 or before, the profile SAG-IO-2 specifies databases for which test data exists in the sample database provided as part of the ASF product. Thus, when you make a copy of this profile, you must modify the copy to reflect the databases which you wish to evaluate.

Preparing to Start an Evaluation

When an Evaluation Report is generated, the data it contains is based on ASF data which was stored by the Store Program. If you wish to test a new Evaluation Profile, but do not yet have suitable stored data, you can generate a set of data as follows. Run the Store Program online from the ASF main menu, specifying the Store Type AH (ad hoc) and a Store Profile containing the databases which are required for the Evaluation Report.

Starting the Evaluation

The screen for running the evaluation is accessed from the main menu using the function G (General Evaluation). The test ASF data which will be evaluated is supplied as part of the ASF product. The evaluation will access all ASF records which have the Store Type WE and were stored using the Store Profile TEST-DB-ALL, and which were created in 1992 or later. Figure 3-6 shows the input required to start the evaluation.

```

19:00:46      *** A D A B A S Statistics Facility ***      2008-02-07
USERID      - General evaluation -      MSA00001

      Code      Service
-----
      S      Start general evaluation
      ?      Help
      .      Terminate
-----

Enter code : _

Eval. profile : SAG-IO-2_____
Evaluation type : 2_ DBases in time frame (DB) V:Fields H:Databases
Time frame from : 1992-01-01 , 00:00 to +0_____ , 19:00

Store profile : TEST-DB-ALL_____
Store type : WE weekly storage
Origin : NU_ Nucleus records
Screen : X Printer : _ PC-File : _

Direct command ==> _____
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help More Term      Capt      Menu

```

Figure 3-6: Example of Starting an Evaluation

Running the evaluation as shown in Figure 3-6 causes an Evaluation Report to be generated on the screen. The evaluation can also be output on a hardcopy printer, or downloaded to a PC. The following sections describe the format of the Evaluation Report.

Navigation through the Evaluation

- [Screen Output](#)
- [Printer Output](#)
- [Download to PC](#)

- Visualization

Screen Output

The Evaluation Report produced by the General Evaluation, as described in the previous sections, is too large to fit onto one screen, so the output is divided into screen-sized pages according to the scheme shown in Figure 3-7.

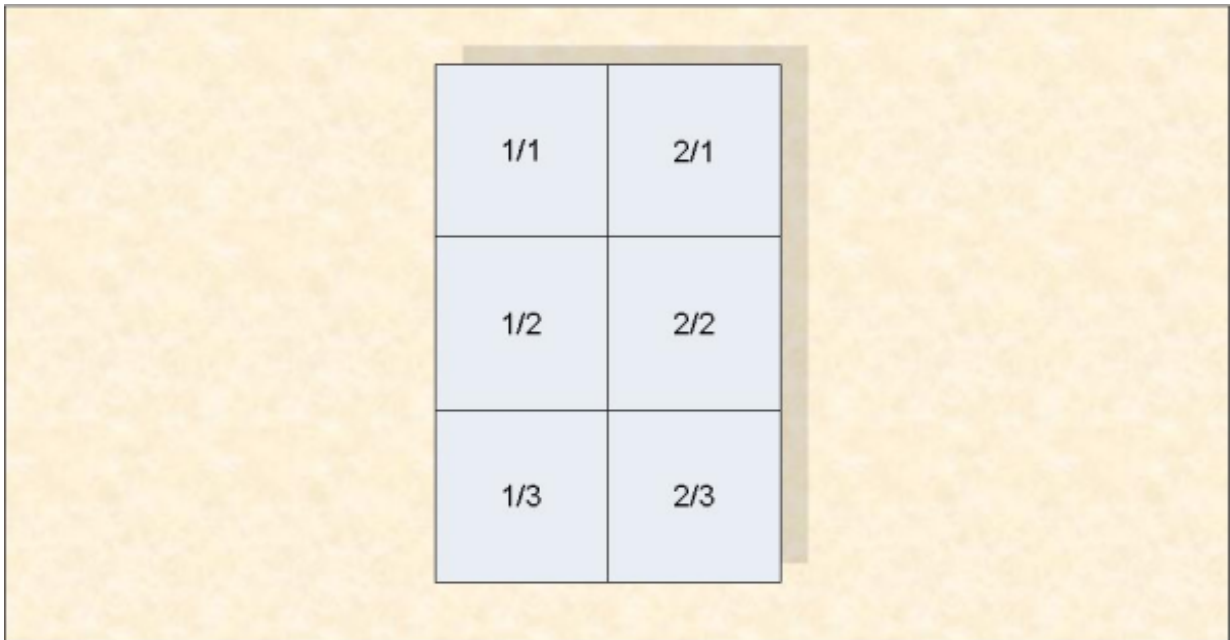


Figure 3-7: Output Pages of an Evaluation Report on screen

The six pages 1/1 to 2/3 of the Evaluation Report are shown in Figure 3-8 to Figure 3-13. To aid orientation, a small version of Figure 3-7 precedes each diagram, with the appropriate page shaded.



```

07:48:23      *** A D A B A S Statistics Facility ***                2008-02-08
USERID      < from 1992-01-01 00:00 to 2008-02-08 07:45 > 1/1 MEV26001

DBID          !UNIT ACC !          16 !          17 !          26 !          36
DB-NAME       !          !DB016-ALSBA !DB017-ANWEN ! SPL-MIRROR !DB036-ALSBA
#COUNTER      !          !          6 !          6 !          6 !          6
-----+-----+-----+-----+-----+-----+-----
DATE NUC-START !          ! 1992-04-13 ! 1992-04-13 ! 1992-04-13 ! 1992-04-13
TIME NUC-START !          !          02:40 !          02:45 !          02:42 !          02:37
READ ASSO     ! PM MIN !          18.0 !          104.1 !          25.7 !          32.8
READ ASSO     ! PM MAX !          49.0 !          240.0 !          271.1 !          45.8
READ ASSO     ! PM AVR !          30.6 !          140.3 !          83.0 !          39.8
READ DATA    ! PM MIN !          16.0 !          184.2 !          19.9 !          31.0
READ DATA    ! PM MAX !          70.1 !          490.8 !          125.1 !          76.5
READ DATA    ! PM AVR !          34.4 !          258.8 !          50.2 !          49.9
READ WORK     ! PM MIN !          0.0 !          0.4 !          0.0 !          0.0
READ WORK     ! PM MAX !          0.1 !          1.6 !          0.3 !          0.2
READ WORK     ! PM AVR !          0.0 !          0.7 !          0.1 !          0.1
WRITE ASSO    ! PM MIN !          1.7 !          26.0 !          9.3 !          4.1
WRITE ASSO    ! PM MAX !          17.7 !          74.2 !          97.2 !          8.4
Direct command ==> _____
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
Help More Term          -      +      <      >      Menu
    
```

Figure 3-8: First screen of Evaluation Report




```

07:49:08      *** A D A B A S Statistics Facility ***      2008-02-08
USERID      < from 1992-01-01 00:00 to 2008-02-08 07:45 > 2/1 MEV26001

DBID          !UNIT ACC !          37 !          !          !
DB-NAME       !          !ENTIRE-ALSB !          !          !
#COUNTER      !          !          6 !          !          !
-----+-----+-----+-----+-----+-----+
DATE NUC-START !          ! 1992-04-13 !          !          !
TIME NUC-START !          !          02:52 !          !          !
READ ASSO     ! PM  MIN !          103.7 !          !          !
READ ASSO     ! PM  MAX !          211.5 !          !          !
READ ASSO     ! PM  AVR !          147.2 !          !          !
READ DATA    ! PM  MIN !          56.4 !          !          !
READ DATA    ! PM  MAX !          176.0 !          !          !
READ DATA    ! PM  AVR !          107.4 !          !          !
READ WORK     ! PM  MIN !          0.2 !          !          !
READ WORK     ! PM  MAX !          4.5 !          !          !
READ WORK     ! PM  AVR !          1.1 !          !          !
WRITE ASSO    ! PM  MIN !          12.7 !          !          !
WRITE ASSO    ! PM  MAX !          77.0 !          !          !
  Direct command ==> _____
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
  Help More Term          -      +          <      >      Menu

```

Figure 3-9: Screen 2/1 of Evaluation Report



```

07:49:48      *** A D A B A S Statistics Facility ***      2008-02-08
USERID      < from 1992-01-01 00:00 to 2008-02-08 07:45 > 1/2 MEV26001

DBID          !UNIT ACC !          16 !          17 !          26 !          36
DB-NAME       !          !DB016-ALSBA !DB017-ANWEN ! SPL-MIRROR !DB036-ALSBA
#COUNTER      !          !          6 !          6 !          6 !          6
-----+-----+-----+-----+-----+-----+-----+-----+
WRITE ASSO    ! PM  AVR !          5.5 !          49.1 !          36.1 !          6.2
WRITE DATA   ! PM  MIN !          0.3 !          13.6 !          1.6 !          3.0
WRITE DATA   ! PM  MAX !          3.6 !          166.3 !          17.1 !          19.0
WRITE DATA   ! PM  AVR !          1.8 !          41.1 !          6.6 !          8.7
WRITE WORK    ! PM  MIN !          1.7 !          22.7 !          2.8 !          8.1
WRITE WORK    ! PM  MAX !          28.0 !          197.6 !          38.9 !          26.6
WRITE WORK    ! PM  AVR !          14.3 !          56.1 !          19.4 !          18.0
WRITE PLOG    !      MIN !          0 !          0 !          0 !          0
WRITE PLOG    !      MAX !          0 !          0 !          0 !          0
WRITE PLOG    !      AVR !          0 !          0 !          0 !          0
LOG. READS    ! PM  MIN !          679.9 !          4026.7 !          441.8 !          1023.1
LOG. READS    ! PM  MAX !          4075.6 !          11656.2 !          6312.3 !          5459.2
LOG. READS    ! PM  AVR !          2267.1 !          5984.1 !          2890.3 !          2241.3
Direct command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
Help More Term          -      +      <      >      Menu
    
```

Figure 3-10: Screen 1/2 of Evaluation Report



```

07:50:46      *** A D A B A S Statistics Facility ***      2008-02-08
USERID      < from 1992-01-01 00:00 to 2008-02-08 07:45 > 2/2 MEV26001

DBID          !UNIT ACC !          37 !          !          !
DB-NAME       !          !ENTIRE-ALSB !          !          !
#COUNTER      !          !          6 !          !          !
-----+-----+-----+-----+-----+-----+
WRITE ASSO    ! PM  AVR !          29.5 !          !          !
WRITE DATA   ! PM  MIN !          7.1 !          !          !
WRITE DATA   ! PM  MAX !          32.8 !          !          !
WRITE DATA   ! PM  AVR !          16.7 !          !          !
WRITE WORK    ! PM  MIN !          10.9 !          !          !
WRITE WORK    ! PM  MAX !          47.3 !          !          !
WRITE WORK    ! PM  AVR !          26.2 !          !          !
WRITE PLOG    !      MIN !          0 !          !          !
WRITE PLOG    !      MAX !          0 !          !          !
WRITE PLOG    !      AVR !          0 !          !          !
LOG. READS    ! PM  MIN !          3317.0 !          !          !
LOG. READS    ! PM  MAX !          9922.7 !          !          !
LOG. READS    ! PM  AVR !          6353.1 !          !          !
Direct command ==> _____
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help More Term          -      +          <      >      Menu

```

Figure 3-11: Screen 2/2 of Evaluation Report

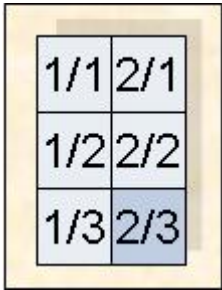


```

07:51:20      *** A D A B A S Statistics Facility ***           2008-02-08
USERID      < from 1992-01-01 00:00 to 2008-02-08 07:45 > 1/3 MEV26001

DBID          !UNIT ACC !           16 !           17 !           26 !           36
DB-NAME       !           !DB016-ALSBA !DB017-ANWEN ! SPL-MIRROR !DB036-ALSBA
#COUNTER      !           !           6 !           6 !           6 !           6
-----+-----+-----+-----+-----+-----+-----
BUFF. EFFICIENCY !      MIN !           19.6 !           13.2 !           8.9 !           15.8
BUFF. EFFICIENCY !      MAX !           44.8 !           15.9 !          119.5 !           63.7
BUFF. EFFICIENCY !      AVR !           33.4 !           14.8 !           32.1 !           25.1
!             !             !             !             !             !
!             !             !             !             !             !
!             !             !             !             !             !
!             !             !             !             !             !
!             !             !             !             !             !
!             !             !             !             !             !
!             !             !             !             !             !
!             !             !             !             !             !
!             !             !             !             !             !
Direct command ==> _____
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help More Term           -     +           <     >           Menu
    
```

Figure 3-12: Screen 1/3 of Evaluation Report



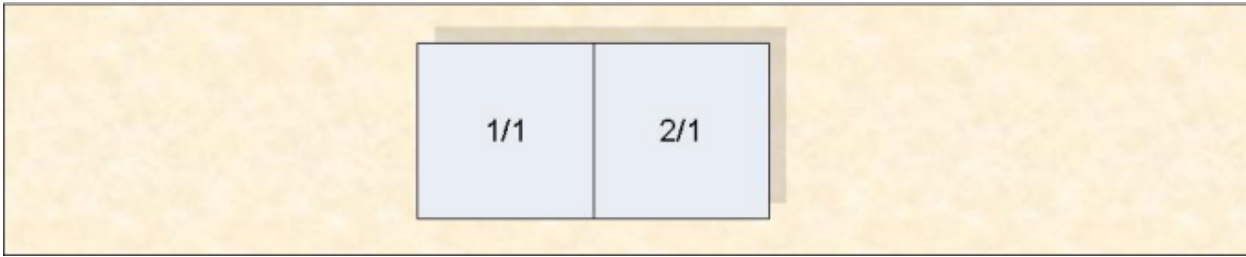
Printer: 80 Characters per Line

Figure 3-14: Page numbers (Printer with 80 characters per line)

If the evaluation is output on a printer with 80 characters per line, only two pages of output will be produced. Figure 3-15 shows the format of the first page, and Figure 3-16 shows the format of the second page.

```

15:47:25      *** A D A B A S Statistics Facility ***      2008-02-08
USERID < from 1992-01-01 00:00 to 2008-02-11 15:16> 1/1 page 1 PEV26001

Store-type : WE      Store-profile : TEST-DB-ALL
Profile: SAG-IO-2 Eval-Type: 2 DBases in time frame (DB) V:Fields H:Databases

DBID          !UNIT ACC !          16 !          17 !          26 !          36
DB-NAME       !          !DB016-ALSBA !DB017-ANWEN ! SPL-MIRROR !DB036-ALSBA
#COUNTER      !          !          6 !          6 !          6 !          6
-----+-----+-----+-----+-----+-----+-----
DATE NUC-START !          ! 1992-04-13 ! 1992-04-13 ! 1992-04-13 ! 1992-04-13
TIME NUC-START !          !          02:40 !          02:45 !          02:42 !          02:37
READ ASSO     ! PM MIN !          18.0 !          104.1 !          25.7 !          32.8
READ ASSO     ! PM MAX !          49.0 !          240.0 !          271.1 !          45.8
READ ASSO     ! PM AVR !          30.6 !          140.3 !          83.0 !          39.8
READ DATA    ! PM MIN !          16.0 !          184.2 !          19.9 !          31.0
READ DATA    ! PM MAX !          70.1 !          490.8 !          125.1 !          76.5
READ DATA    ! PM AVR !          34.4 !          258.8 !          50.2 !          49.9
READ WORK     ! PM MIN !          0.0 !          0.4 !          0.0 !          0.0
READ WORK     ! PM MAX !          0.1 !          1.6 !          0.3 !          0.2
READ WORK     ! PM AVR !          0.0 !          0.7 !          0.1 !          0.1
WRITE ASSO    ! PM MIN !          1.7 !          26.0 !          9.3 !          4.1
WRITE ASSO    ! PM MAX !          17.7 !          74.2 !          97.2 !          8.4
WRITE ASSO    ! PM AVR !          5.5 !          49.1 !          36.1 !          6.2
WRITE DATA   ! PM MIN !          0.3 !          13.6 !          1.6 !          3.0
WRITE DATA   ! PM MAX !          3.6 !          166.3 !          17.1 !          19.0
WRITE DATA   ! PM AVR !          1.8 !          41.1 !          6.6 !          8.7
WRITE WORK    ! PM MIN !          1.7 !          22.7 !          2.8 !          8.1
WRITE WORK    ! PM MAX !          28.0 !          197.6 !          38.9 !          26.6
WRITE WORK    ! PM AVR !          14.3 !          56.1 !          19.4 !          18.0
WRITE PLOG    !      MIN !          0 !          0 !          0 !          0
WRITE PLOG    !      MAX !          0 !          0 !          0 !          0
WRITE PLOG    !      AVR !          0 !          0 !          0 !          0
LOG. READS    ! PM MIN !          679.9 !          4026.7 !          441.8 !          1023.1
LOG. READS    ! PM MAX !          4075.6 !          11656.2 !          6312.3 !          5459.2
LOG. READS    ! PM AVR !          2267.1 !          5984.1 !          2890.3 !          2241.3
BUFF. EFFICIENCY !      MIN !          19.6 !          13.2 !          8.9 !          15.8
BUFF. EFFICIENCY !      MAX !          44.8 !          15.9 !          119.5 !          63.7
BUFF. EFFICIENCY !      AVR !          33.4 !          14.8 !          32.1 !          25.1

```

Figure 3-15: Evaluation report (page 1) on printer (80 characters per line)

```

15:48:28          *** A D A B A S Statistics Facility ***          2008-02-08
USERID < from 1992-01-01 00:00 to 2008-02-11 15:16> 2/1 page 1 PEV26001

Store-type : WE Ad hoc      Store-profile : TEST-DB-ALL
Profile: SAG-IO-2 Eval-Type: 2 DBases in time frame (DB) V:Fields H:Databases

DBID          ! UNIT ACC!          37 !          !          !
DB-NAME       !          !ENTIRE-ALSB !          !          !
#COUNTER      !          !          6 !          !          !
-----+-----+-----+-----+-----+-----+
DATE NUC-START !          ! 1992-04-13 !          !          !
TIME NUC-START !          !          02:52 !          !          !
READ ASSO     ! PM MIN !          103.7 !          !          !
READ ASSO     ! PM MAX !          211.5 !          !          !
READ ASSO     ! PM AVR !          147.2 !          !          !
READ DATA    ! PM MIN !          56.4 !          !          !
READ DATA    ! PM MAX !          176.0 !          !          !
READ DATA    ! PM AVR !          107.4 !          !          !
READ WORK     ! PM MIN !          0.2 !          !          !
READ WORK     ! PM MAX !          4.5 !          !          !
READ WORK     ! PM AVR !          1.1 !          !          !
WRITE ASSO    ! PM MIN !          12.7 !          !          !
WRITE ASSO    ! PM MAX !          77.0 !          !          !
WRITE ASSO    ! PM AVR !          29.5 !          !          !
WRITE DATA   ! PM MIN !          7.1 !          !          !
WRITE DATA   ! PM MAX !          32.8 !          !          !
WRITE DATA   ! PM AVR !          16.7 !          !          !
WRITE WORK    ! PM MIN !          10.9 !          !          !
WRITE WORK    ! PM MAX !          47.3 !          !          !
WRITE WORK    ! PM AVR !          26.2 !          !          !
WRITE PLOG    !     MIN !          0 !          !          !
WRITE PLOG    !     MAX !          0 !          !          !
WRITE PLOG    !     AVR !          0 !          !          !
LOG. READS    ! PM MIN !          3317.0 !          !          !
LOG. READS    ! PM MAX !          9922.7 !          !          !
LOG. READS    ! PM AVR !          6353.1 !          !          !
BUFF. EFFICIENCY !     MIN !          20.6 !          !          !
BUFF. EFFICIENCY !     MAX !          33.7 !          !          !
BUFF. EFFICIENCY !     AVR !          24.4 !          !          !

```

Figure 3-16: Evaluation report (page 2) on printer (80 characters per line)

Printer: 132 Characters per Line

On a printer with 132 characters per line, the Evaluation Report fits entirely onto one output page, as indicated in Figure 3-17. The format is the same as for a printer with 80 characters per line, except that the extra page width allows more columns to be displayed.

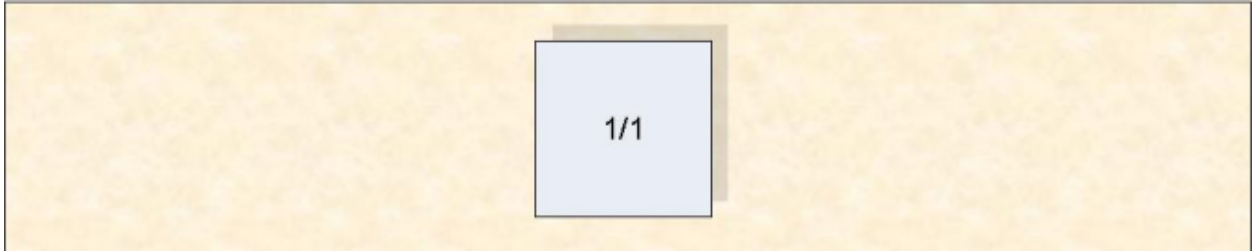


Figure 3-17: Page numbers (Printer with 132 characters per line)

Download to PC**Standard Download (PC-File=X)**

When the data is downloaded to the PC with PC-File = X (standard download), the first line indicates the ASF field name and the second line the corresponding unit. The first column contains the date and time, the second column the DBID. For file related evaluations (type 5-8) the third column would contain the file number. The other columns contain the evaluated data. Up to 201 columns can be downloaded. The downloaded data contains empty columns on the right because a fix number of columns must be downloaded (25, 51, 101 or 201). Each data field contains blanks which must be removed before the data can be processed in Excel or other tools.

The standard download does not perform any accumulation. The original values are downloaded.

Download elapsed time: 6 sec

Time	DBID	DATE NUC-START	TIME NUC-START	READ ASSO	READ DATA	READ WORK
Unit ->				PM	PM	PM
1992-03-09/17:34	16	1992-03-09	02:32	18.6	16.0	0.0
1992-03-09/17:34	17	1992-03-09	07:06	240.0	490.8	0.7
1992-03-09/17:34	26	1992-03-09	07:07	60.7	48.9	0.3
1992-03-09/17:34	36	1992-03-09	02:32	32.8	31.0	0.0
1992-03-09/17:34	37	1992-03-09	02:49	211.5	176.0	4.5
1992-03-16/23:00	16	1992-03-16	02:41	25.1	25.9	0.1

Figure 3-19: Evaluation report standard download (part)

CSV Download (PC-File=C)

When the data is downloaded to the PC with PC-File = C (CSV download), the first line indicates the ASF field name and the corresponding unit (in brackets). The first column contains the date and time, the second column the DBID. For file related evaluations (type 5-8) the third column would contain the file number. The other columns contain the evaluated data. Up to 201 columns can be downloaded. Only columns containing data are downloaded (no empty columns). The data fields do not contain blanks and can be processed as-is.

The CSV download does not perform any accumulation. The original values are downloaded.

Download elapsed time: < 1 sec

Time	DBID	DATE NUC-START	TIME NUC-START	READ ASSO (PM)	READ DATA (PM)	READ WORK (PM)
1992-03-09/17:34	16	1992-03-09	02:32	18.6	16.0	0.0
1992-03-09/17:34	17	1992-03-09	07:06	240.0	490.8	0.7
1992-03-09/17:34	26	1992-03-09	07:07	60.7	48.9	0.3
1992-03-09/17:34	36	1992-03-09	02:32	32.8	31.0	0.0
1992-03-09/17:34	37	1992-03-09	02:49	211.5	176.0	4.5
1992-03-16/23:00	16	1992-03-16	02:41	25.1	25.9	0.1

Figure 3-20: Evaluation report CSV download (part)

Full Download (PC-File=F)

When the data is downloaded to the PC with PC-File = F (full download), the result has the same layout as on the screen. The data is processed from top to bottom, left to right and finally through the third dimension until the end is reached.

Normally the first column of the downloaded data contains the value of the third dimension: for example, the DBID for an evaluation of Type 1. For Type 2 there is no third dimension, therefore this column is not used. The next column identifies the vertical axis: e.g. for an evaluation of Type 2, these are the ASF field names. The next column contains information like the unit or the type of the internal accumulation. Finally there are 100 columns containing the evaluated data.

If the report contains more than 100 data columns, the remaining columns are outlined in another row. Since it is difficult to process such an output further with another tool, you are recommended to restrict the output to at most 100 columns.

The first line of the downloaded data contains header information like the ASF field names or DBID and file numbers.

The downloaded data contains empty columns on the right because a fix number of columns must be downloaded (103). Each data field contains blanks which must be removed before the data can be processed in Excel or other tools.

The full download performs the accumulations as specified in the profile. For Type 2 this means that only accumulated values are downloaded.

Download elapsed time: 24 sec

ASF Field Name	Accu	Unit	16	17	26
			DB016-ALSBA	DB017-ANWEN	SPL-MIRROR
			6	6	6
*****	***	***	*****	*****	*****
DATE NUC-START			1992-04-13	1992-04-13	1992-04-13
ASF Field Name	Accu	Unit	16	17	26
TIME NUC-START			02:40	02:45	02:42
READ ASSO	MIN	PM	18.0	104.1	25.7
READ ASSO	MAX	PM	49.0	240.0	271.1
READ ASSO	AVR	PM	30.6	140.3	83.0

Figure 3-21: Evaluation report full download (part)

Visualization

For a presentation we are going to weight the DATA reads of the databases monitored. Additionally we would like to visualize the history of the DATA reads of the database with the most calls and compare this with the number of ASSO reads.

We edit the data downloaded in CSV format with Excel. The data is sorted by Time/DBID which is the sort sequence we need. For the first point in time (1992-03-09) we mark the cells in column "READ DATA (PM)". The marked cells are indicated in the following table by bold format."

Time	DBID	DATE NUC-START	TIME NUC-START	READ ASSO (PM)	READ DATA (PM)	READ WORK (PM)
1992-03-09/17:34	16	1992-03-09	02:32	18.6	16.0	0.0
1992-03-09/17:34	17	1992-03-09	07:06	240.0	490.8	0.7
1992-03-09/17:34	26	1992-03-09	07:07	60.7	48.9	0.3
1992-03-09/17:34	36	1992-03-09	02:32	32.8	31.0	0.0
1992-03-09/17:34	37	1992-03-09	02:49	211.5	176.0	4.5
1992-03-16/23:00	16	1992-03-16	02:41	25.1	25.9	0.1

Figure 3-22: CSV download - Cells marked for visualization (DB compare)

With the help of the Chart Wizard we generate a pie chart of the marked values. As Category Labels we select the values in column "DBID". We change the standard colors and background to make

it look smart. We set the options to display the values and percentages in the chart and adjust the title.

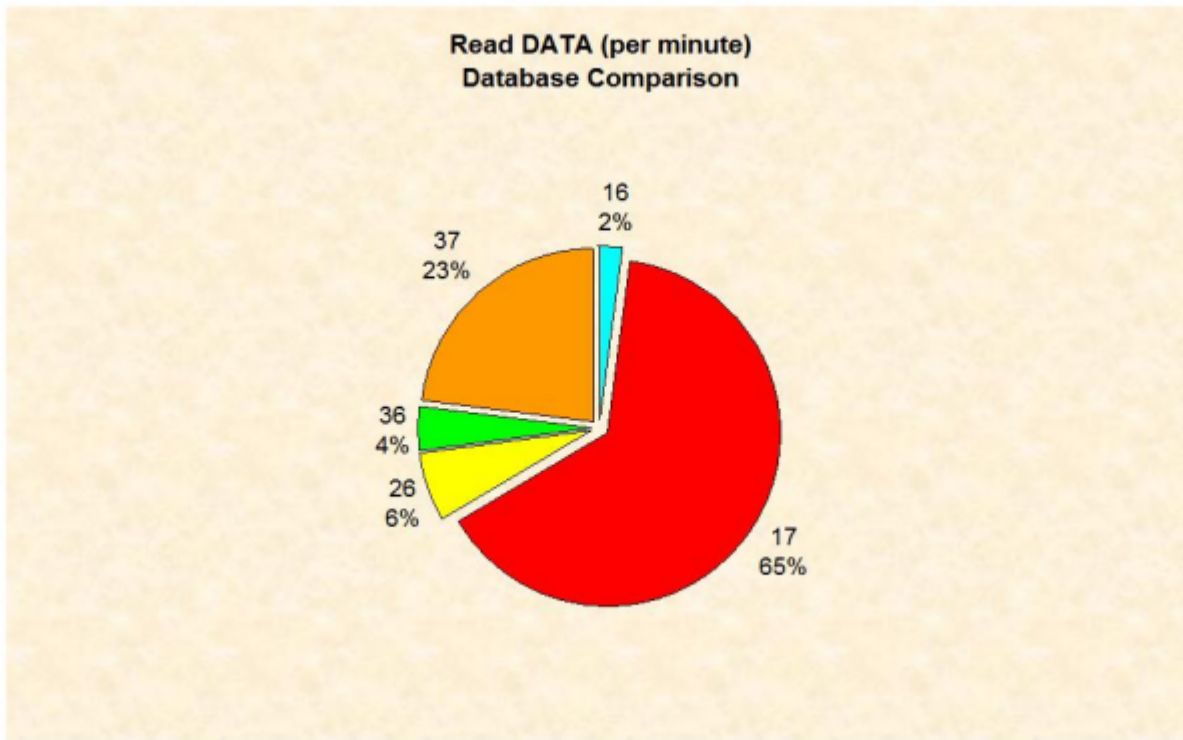


Figure 3-23: Visualization of DATA reads (database comparison)

Database 17 has issued the most DATA reads. For the history of DB 17, we copy the whole data sheet into a new sheet to avoid a mix-up with the first chart. We sort the data by DBID/Time so that the data belonging to one database is joined together. For DBID 17 we mark the cells in column “READ ASSO (PM)” and “READ DATA (PM)”.

Time	DBID	DATE NUC-START	TIME NUC-START	READ ASSO (PM)	READ DATA (PM)	READ WORK (PM)
1992-03-09/17:34	17	1992-03-09	07:06	240	490.8	0.7
1992-03-16/23:00	17	1992-03-16	02:47	129.9	225	0.6
1992-03-23/23:00	17	1992-03-23	02:46	107.3	198.8	0.7
1992-03-30/22:00	17	1992-03-30	02:45	145.6	265.5	1.6
1992-04-06/22:12	17	1992-04-06	01:44	115.1	188.8	0.4
1992-04-13/23:12	17	1992-04-13	02:45	104.1	184.2	0.6

Figure 3-24: CSV download - Cells marked for visualization (history)

With the help of the Chart Wizard we generate a line chart of the marked values. As Category Labels we select the values in column "DATE NUC-START". We change the standard colors and background to make it look smart. We set the options to display the legend and adjust the titles.

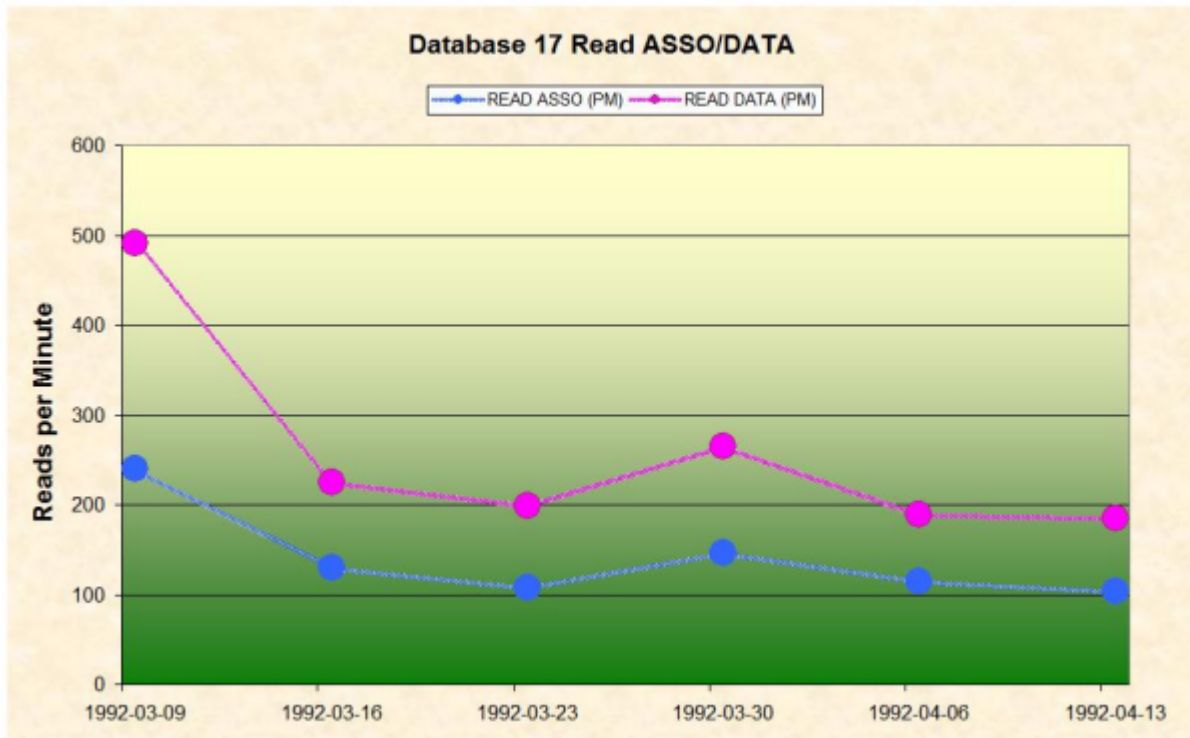


Figure 3-25: Visualization of ASSO/DATA reads (history of DB 17)

5 SAG-CRIT-9

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The Evaluation Profile SAG-CRIT-9 is one of a set of profiles provided with the ASF software. This section describes how the profile SAG-CRIT-9 was created, and analyses a Critical Report which was generated using SAG-CRIT-9.

This chapter covers the following topics:

Purpose of Profile SAG-CRIT-9

The Profile SAG-CRIT-9 lists disk-related database properties which have reached or exceeded their critical limits.

Description of Profile SAG-CRIT-9

- Critical Limits
- Units

Critical Limits

Figure 4-1 shows the ASF fields which SAG-CRIT-9 uses for the test, and the critical limits for each field. The field ASSO USED, for example, is included in the profile, and the field will be included in a Critical Report generated using SAG-CRIT-9 if its last recorded value is greater than or equal to 80 %. Note that some of the values used have been deliberately chosen to be too small (under normal circumstances), such as DS USED being “critical” at 10 %, so that many fields will be displayed when testing the Critical Report. In the original delivered profile these values are more reasonable (80%).

```
Prof.: SAG-CRIT-9          9 Critical report : List of fields, databases and f
Field Name      ! Seq ! Rel.!  Limit   Unit! Join! Rel.!  Limit
-----+-----+-----+-----+-----+-----+-----+-----< ALL >
ASSO USED_____ ! __1 !  GE !    80 !  PC !      ! __ ! _____
DATA USED_____ ! __2 !  GE !    80 !  PC !      ! __ ! _____
NI USED_____   ! __3 !  GE !    10 !  PC !      ! __ ! _____
NI EXTENTS_____ ! __4 !  GE !     4 !  __ !      ! __ ! _____
UI USED_____   ! __5 !  GE !    10 !  PC !      ! __ ! _____
UI EXTENTS_____ ! __6 !  GE !     4 !  __ !      ! __ ! _____
DS USED_____   ! __7 !  GE !    10 !  PC !      ! __ ! _____
DS EXTENTS_____ ! __8 !  GE !     4 !  __ !      ! __ ! _____
AC EXTENTS_____ ! __9 !  GE !     4 !  __ !      ! __ ! _____
```

Figure 4-1: Critical Limits for SAG-CRIT-9

Units

Figure 4-2 shows the units of measurement defined for the ASF fields in SAG-CRIT-9. The field ASSO USED, for example, will be output in Megabytes, whereas the field DS USED will be output as a percentage of the total available space.

```

Prof.: SAG-CRIT-9          9 Critical report : List of fields, databases and f
      !      !      !      ! Da ! Hr ! Se !      !      ! 1/call
Field Name      ! Seq ! Default ! Bl ! Cy ! MB ! BY ! % ! Nom ! 1/min
-----+-----+-----+-----+-----+-----+-----+-----+-----< ALL >
ASSO USED_____ ! __1 !   BL   ! __ ! __ ! X_ ! __ ! __ ! __
DATA USED_____ ! __2 !   BL   ! __ ! __ ! __ ! __ ! X_ ! __
NI USED_____   ! __3 !   BL   ! __ ! __ ! __ ! __ ! X_ ! __
NI EXTENTS_____ ! __4 !           ! __ ! __ ! __ ! __ ! __ ! __
UI USED_____   ! __5 !   BL   ! __ ! __ ! __ ! __ ! X_ ! __
UI EXTENTS_____ ! __6 !           ! __ ! __ ! __ ! __ ! __ ! __
DS USED_____   ! __7 !   BL   ! __ ! __ ! __ ! __ ! X_ ! __
DS EXTENTS_____ ! __8 !           ! __ ! __ ! __ ! __ ! __ ! __
AC EXTENTS_____ ! __9 !           ! __ ! __ ! __ ! __ ! __ ! __

```

Figure 4-2: Units for SAG-CRIT-9

Creating the Profile SAG-CRIT-9



Note: The following paragraphs describe how the Evaluation Profile SAG-CRIT-9 was created. The method shown here can be used as a reference when creating new Evaluation Profiles.

In the ASF Main Menu, the function E was selected in the menu “Evaluation-profile administration”. In this menu the function A (to add an evaluation profile) was selected. In reply to the prompt “Profile” the name SAG-CRIT-9 was typed in. The Evaluation Type 9 was chosen. After pressing a window appeared into which the alias name “S9” was typed. Subsequently the menu “Profile Element: Limits” appeared.

Entering ASF field names

When the menu “Profile element: Limits” was selected, the cursor was positioned automatically on the first input field of the menu. At this stage, the field names could have been entered directly into the mask (ASSO USED, DB DATA USED etc.), but the quicker method of using active help was used. Typing an asterisk in the first input field as shown in Figure 4-3, then pressing ENTER caused the first active help screen to be displayed.

```

Field Name      ! Seq ! Rel.! Limit      Unit! Join! Rel.! Limit
-----+-----+-----+-----+-----+-----+-----+-----< ALL >
*_____ ! ___ ! ___ ! _____ ! ___ !   ! ___ ! _____
_____ ! ___ ! ___ ! _____ ! ___ !   ! ___ ! _____
    
```

Figure 4-3: Selecting Active Help for ASF Fields

Active help

The first help screen displays the ASF groups. We mark the “Physical DB-Layout” and the “File description” groups with “X”, because we want to select fields of these groups.

```

11:58:34          **** A D A B A S Statistics Facility ****          2008-02-13
                   - Profile element : Limits -                       MPXL0001

+-----< Select groups      page 1 >-----< ALL >--+
!
!  Mk Nr. Group Name          Sel Max ! Mk Nr. Group name          Sel Max !
!  -----+-----+-----+-----+-----+-----+-----+-----!
!  ___  1 ADARUN-Parameter      0 22 ! ___  11 High water marks      0  8 ! >
!  ___  2 Session Informatio    0  9 ! X_  12 File description        0 34 !
!  X_   3 Physical DB-Layout    0  9 ! ___  14 User defined field    0 10 !
!  ___  4 IO-Data                0  9 !
!  ___  5 Cmd distr. source      0  4 !
!  ___  6 Cmd distr. thread      0 251 !
!  ___  7 Cmd distr. type        0 22 !
!  ___  8 User calls              0  3 !
!  ___  9 Run time info          0  7 !
!  ___ 10 Call duration (mil     0 21 !
!
!                                     Total ..... 409 !
+-----+-----+-----+-----+-----+-----+-----+-----+
Direct command ==> _____
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help More Term          All  Selct                               Menu
    
```

Figure 4-4: Active help group selection

After we have pressed ENTER in the group selection screen, the fields of the first selected group (“Physical DB-Layout”) are displayed. We place a mark beside the fields required, as shown in Figure 4-5.

```

11:58:34          **** A D A B A S Statistics Facility ****          2008-02-13
                    - Profile element : Limits -                      MPXL0001

+---< Select fields of group 3: 'Physical DB-Layout' page 1 >--< ALL >--+
!
!  Mk Nr. Field name          State  ! Mk Nr. Field name          State  !
!  -----+-----+-----+-----+-----+-----+-----+-----+
!  X_  45 ASSO USED           !           !           ! >
!  ___ 46 ASSO DEFINED        !           !           !
!  ___ 47 ASSO UNUSED         !           !           !
!  ___ 48 ASSO EXTENTS        !           !           !
!  X_  49 DATA USED          !           !           !
!  ___ 50 DATA DEFINED       !           !           !
!  ___ 51 DATA UNUSED        !           !           !
!  ___ 52 DATA EXTENTS       !           !           !
!  ___ 53 WORK DEFINED        !           !           !
!
!
+-----+-----+-----+-----+-----+-----+-----+-----+

Direct command ==> _____
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help More Term          Selct -   +           Prev Next Menu

```

Figure 4-5: Active help field selection

After we have marked the fields, we press PF6 or PF11, so that the fields of the next selected group (“File description”) are displayed. We mark the requested fields again. Subsequently we press in order to select the marked fields. The screen “Select groups” is displayed again and it now indicates the number of selected fields. We leave this screen again with PF6.

Specify limits and units

In the menu “Profile element: Limits” we have specified the relationships and units as listed in the section [Description of Profile SAG-CRIT-9](#). The Units defined in this menu correspond to the Limit values. E.g. the limit “80” for the ASSO USED field is a percentage (PC) value. With PF10 we switch to the “Profile element: Units” screen. The units selected here specify how the result will be displayed.

Finally we press PF6 to save the definitions.

Customizing SAG-CRIT-9

You might wish to use the profile SAG-CRIT-9 as a starting point in defining a new Evaluation Profile. Do not modify SAG-CRIT-9; instead, create a new Evaluation Profile which is a copy of SAG-CRIT-9 and modify the copy. To create a copy of SAG-CRIT-9, select the function "Evaluation-profile administration" in the ASF main menu, then use the function "Copy an Evaluation profile".

The operations of adding and deleting ASF fields from an Evaluation Profile are described in the section [SAG-IO-2](#). Also, changing the order of the ASF fields in the profile, and linking databases and files to the profile are discussed in that section.

Starting the Critical Report

The screen for running the Critical Report is accessed from the main menu using the function R. The test ASF data which will be evaluated is supplied as part of the ASF product. The evaluation will access ASF records which have the Store Type WE and were stored using the Store Profile TEST-DB-ALL. Figure 4-6 shows the input required to start the Critical Report.

```

15:11:39          *** A D A B A S Statistics Facility ***          2008-02-13
USERID          - Critical report -                               MCR00001

          Code          Service
-----
          S          Start critical report
          ?          Help
          .          Terminate
-----

Enter code : S

Eval. profile : SAG-CRIT-9_____

Store profile : TEST-DB-ALL_____
Store type : WE weekly storage
Screen : X Printer : _ PC-File : _

Direct command ==> _____
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
Help More Term          Capt          Menu

```

Figure 4-6: Starting the sample Critical Report

Navigation through the Evaluation

- [Screen Output](#)
- [Printer Output](#)
- [Download to PC](#)
- [Send the Critical Report as e-mail](#)

Screen Output

The Critical Report shows a list of the “critical” ASF fields. If the list is too long to fit onto the screen, it is divided into screen-sized pages for viewing, according to the scheme shown in Figure 4-7.

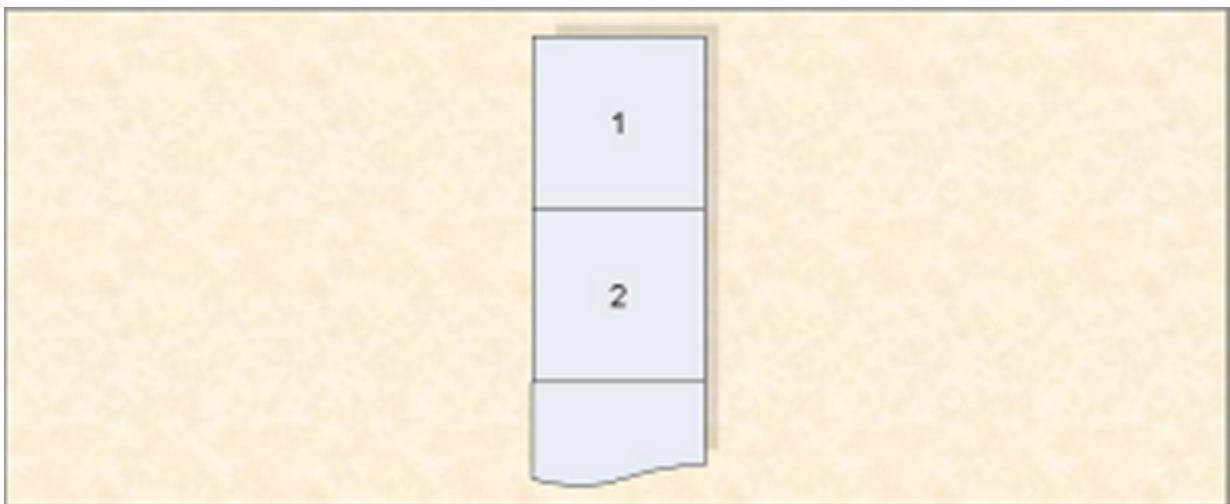


Figure 4-7: Output Pages of a Critical Report

The first page of the Critical Report produced using SAG-CRIT-9 on the test data supplied with the ASF product is displayed in Figure 4-8.

```

15:24:22          *** A D A B A S  STATISTICS FACILITY ***          2008-02-13
USERID           Critical report based on: 1992-04-13 23:12          MACR0001
  Evaluation profile: SAG-CRIT-9 Store profile: TEST-DB-ALL Type: WE
                                                                < TOP >
  DB !  File ! Field          !      Value !Unit!Parm!          Limit !Unit
  ---+-----+-----+-----+-----+-----+-----+-----+-----+
    16 !      ! DATA USED      !      92.8 ! PC ! GE !          80 ! PC
      !  221 ! NI USED          !      55.0 ! PC ! GE !          10 ! PC
      !      ! UI USED          !     100.0 ! PC ! GE !          10 ! PC
      !      ! DS USED          !      11.0 ! PC ! GE !          10 ! PC
      !  227 ! NI USED          !      78.2 ! PC ! GE !          10 ! PC
      !      ! UI USED          !      82.3 ! PC ! GE !          10 ! PC
      !      ! DS USED          !      25.5 ! PC ! GE !          10 ! PC
      !  125 ! NI USED          !      41.6 ! PC ! GE !          10 ! PC
      !      ! UI USED          !      81.2 ! PC ! GE !          10 ! PC
      !  235 ! NI USED          !      75.0 ! PC ! GE !          10 ! PC
      !      ! UI USED          !      67.8 ! PC ! GE !          10 ! PC
      !      ! DS USED          !      22.0 ! PC ! GE !          10 ! PC
      !  118 ! NI USED          !      25.0 ! PC ! GE !          10 ! PC
      !      ! UI USED          !      62.5 ! PC ! GE !          10 ! PC
  Direct command ==> _____
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help      Term Time          -      +          Menu
  
```

Figure 4-8: First page of the Critical Report on screen.

If you use PF8 to page forward, you will see the second page of the Critical Report, as shown in Figure 4-9:

```

16:11:05          *** A D A B A S  STATISTICS FACILITY ***          2008-02-13
USERID           Critical report based on: 1992-04-13 23:12      MACR0001
  Evaluation profile: SAG-CRIT-9 Store profile: TEST-DB-ALL Type: WE
                                                                 <  >
  DB !   File ! Field           !           Value !Unit!Parm!           Limit !Unit
  ---+-----+-----+-----+-----+-----+-----+-----+-----+
  16 !   122 ! NI USED           !           99.1 ! PC ! GE !           10 ! PC
      !           ! UI USED           !           93.7 ! PC ! GE !           10 ! PC
      !           ! DS USED           !           47.0 ! PC ! GE !           10 ! PC
  17 !           ! DATA USED          !           99.7 ! PC ! GE !           80 ! PC
      !   39 ! NI USED           !           89.6 ! PC ! GE !           10 ! PC
      !           ! UI USED           !           30.0 ! PC ! GE !           10 ! PC
      !           ! DS USED           !           98.4 ! PC ! GE !           10 ! PC
      !   55 ! NI USED           !           90.5 ! PC ! GE !           10 ! PC
      !           ! UI USED           !           72.3 ! PC ! GE !           10 ! PC
      !           ! DS USED           !           76.9 ! PC ! GE !           10 ! PC
      !   71 ! NI USED           !           99.3 ! PC ! GE !           10 ! PC
      !           ! UI USED           !           81.5 ! PC ! GE !           10 ! PC
      !           ! DS USED           !           96.9 ! PC ! GE !           10 ! PC
  26 !           ! DATA USED          !           97.3 ! PC ! GE !           80 ! PC
  Direct command ==> _____
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help      Term  Time          -      +                      Menu

```

Figure 4-9: Second page of the Critical Report on screen.

Printer Output

If the report is being output to a printer, it is possible to display many more lines of output per page than on a screen. However, the width of the Critical Report is the same as on the screen.

Download to PC

The data can be downloaded to the PC with PC-File = X (standard download) or with PC-File = C (CSV download). In both cases the same fields as displayed on the screen are downloaded. In contrary to the screen output, the DBID field is always filled and the file field contains the value "0" for database data. When sorting the data in another way (e.g. by field name), it can still be recognized to which database the data belongs.

With the standard download each data field contains blanks which must be removed before the data can be processed in Excel or other tools, whereas the CSV downloaded data does not contain blanks and can be processed as-is. In a test, the CSV download required 1 second, and the standard download 3 seconds.

Send the Critical Report as e-mail

In the Critical Report screen we mark the PC-File with E and capture the report with PF6. We fill the description screen of the predefined evaluation and keep the number (e.g. 56) displayed in the message.

```
ASF323 Evaluation 56 has been stored successfully.
```

We fill the e-mail profile as described in the section User Profile Maintenance in the *ASF User's Guide* documentation. Then we set up a Natural batch job calling the predefined evaluation. The input for CMSYNIN (with Natural Security) looks like

```
SYSASF,USERID,PSW  
MENU  
,SELECT 56  
.  
,FIN
```

This is followed by the SMTP step described in the section Sending a Critical Report as e-Mail in the *ASF User's Guide* documentation. When we submit the job, we receive an e-mail like the one in figure 4-10. The first lines of the e-mail "Hello, ..." are from the e-mail profile.

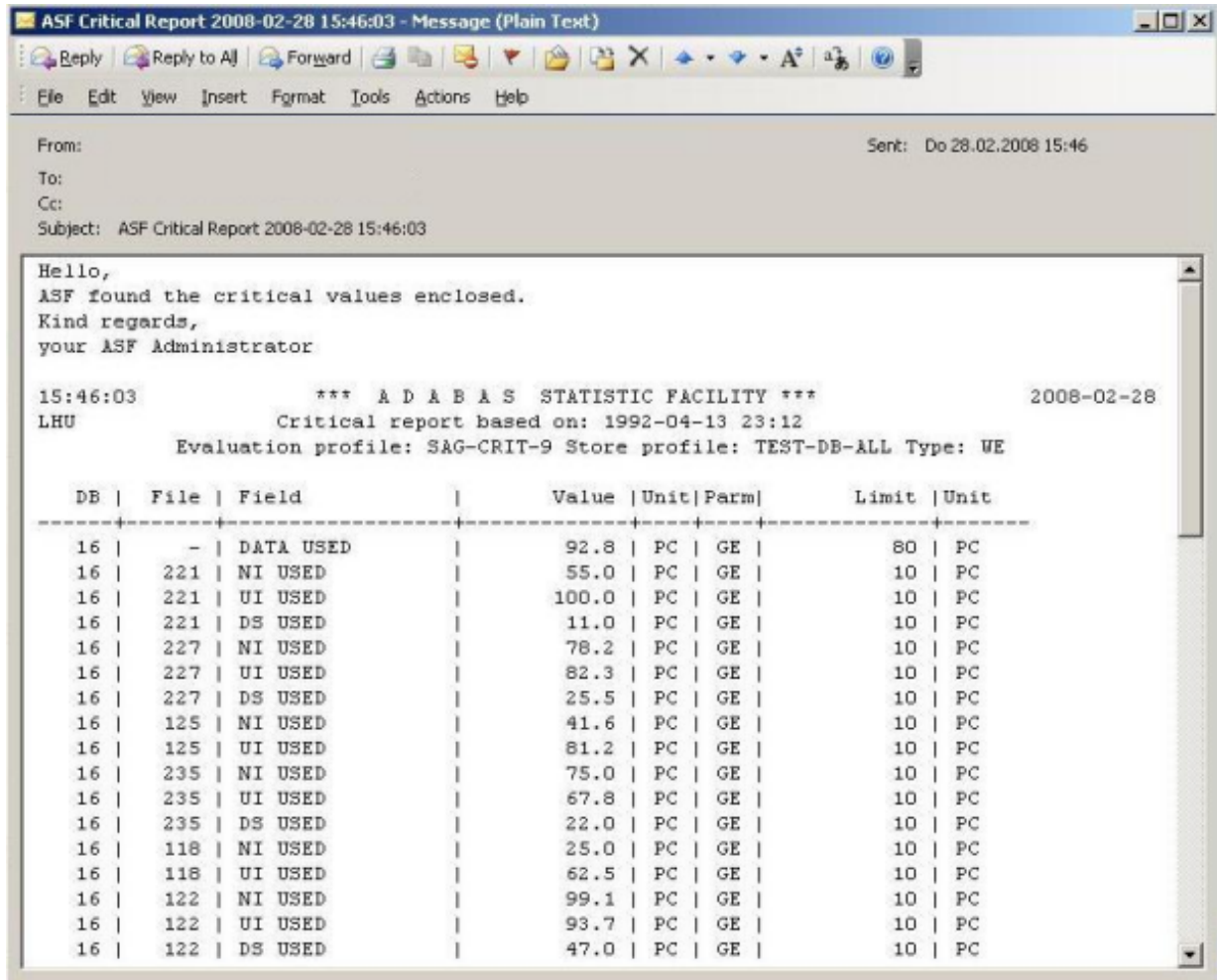


Figure 4-10: Critical Report e-mail.

6 ASF Groups and Fields

- Units of Measurement 78
- ASF Groups 78
- ASF Fields 79

This chapter covers the following topics:

Units of Measurement

The Adabas statistical data can be displayed in various units of measurement. The units available are listed in the following table. In the section [ASF Fields](#) it is listed which unit can be used for which field. The “API” column indicates the abbreviation to be used by the Application Programming Interface (API).

Unit	API	Meaning	Description
Bl	BL	Blocks	The size value is displayed in units of blocks.
Cy	CY	Cylinders	The size value is displayed in units of cylinders.
MB	MB	Megabytes	The size value is displayed in units of megabytes (millions of bytes).
By	BY	Bytes	The size value is displayed in units of bytes.
Se	SE	Seconds	The time value is displayed in total number of seconds.
Hr	HR	Hours	The time value is displayed as “hours:minutes:seconds”.
Da	DA	Days	The time value is displayed as “days:hours:minutes”.
%	PC	Percent	The value is displayed as percentage.
Nom	blank	Nominal value	The actual value of the field. This is also the default if no column is selected.
1/min	PM	Per Minute	The average number of occurrences per minute.
1/call	PM	Per Call	The average time spent per call. This unit is only available for the Call Duration fields.
MS	MS	msec	The time value is displayed in total number of milliseconds. This unit is only available for the Call Duration fields. It is used when the “Nom” or no unit has been selected.

ASF Groups

The statistical data which the ASF Store Program stores, are the values of the ASF data fields. The ASF data fields are subdivided into several groups: most of them are related to some aspect of the database, one group contains technical ASF fields (such as the store date), and one group is reserved for the user fields. The ASF groups are displayed when you use the active help function at the evaluation profile administration. In the evaluation itself only the field names are displayed.

Group	Group Name	Description
1	ADARUN-Parameter	Parameters specified with ADARUN.
2	Session Information	Nucleus session information (DBID, etc.)
3	Physical DB-Layout	Physical layout of the database (Associator, Data Storage).
4	IO-Data	I/O information.
5	Cmd distr. source	From where the calls are coming.
6	Cmd distr. thread	Number of calls per thread.
7	Cmd distr. type	Number of calls per type (like 'L9').
8	User calls	User related information.
9	Run time info	Run time information (like number of buffer flushes).
10	Call duration (milliseconds)	Duration of the different call types.
11	High water marks	Highest usage of various pools.
12	File description	File related information.
13	Tech. ASF fields	Technical ASF data (like store date/time).
14	User defined fields	Fields defined by the user in the ASF User-exit.

ASF Fields



Note: *If not mentioned otherwise, all cumulative values (like the number of commands) are accumulated since nucleus start.*

- Group 1: ADARUN-Parameter
- Group 2: Session Information
- Group 3: Physical DB-Layout
- Group 4: IO-Data
- Group 5: Cmd distr. source
- Group 6: Cmd distr. thread
- Group 7: Cmd distr. type
- Group 8: User calls
- Group 9: Run time info
- Group 10: Call duration
- Group 11: High water marks
- Group 12: File description
- Group 13: Tech. ASF fields

- Group 14: User defined fields

Group 1: ADARUN-Parameter

ASF Field Name	ADAREP/Session-Protocol	Description
LBP	LBP	Length of Buffer Pool.
LFP	LFP	Length of Internal Format Pool.
LU	LU	Length of Intermediate User Buffer.
LWP	LWP	Length of Adabas Work Pool.
LP	LP	Length of Data Protection Area.
LS	LS	Length of Sort Area.
NAB	NAB	Number of Attached Buffers.
NC	NC	Number of Command Queue Elements.
NH	NH	Number of Hold Queue Elements.
NISNHQ	NISNHQ	Number of ISNs in Hold Queue per user.
NSISN		Number of ISNs per TBI Element.
NT	NT	Number of Threads.
NU		Number of User Queue Elements.
TT	TT	Transaction Time Limit.
TNAA	TNAA	Non-Activity Time Limit (Access Only Users).
TNAE	TNAE	Non-Activity Time Limit (ET Logic Users).
TNAX	TNAX	Non-Activity Time Limit (Exclusive Update Users).
DUALPLS	DUALPLS	Dual Protection Log Size (blocks).
DUALPLD	DUALPLD	Dual Protection Log Device.
DUALCLS	DUALCLS	Dual Command Log Size (blocks).
DUALCLD	DUALCLD	Dual Command Log Device.
OPENRQ	OPENRQ	Open Command Required.
PLOGRQ	PLOGRQ	Protection Log Required.
NQCID	NQCID	Number of Active CIDs per User.
IGNDIB	IGNDIB	Ignore DIB Entry.

Available units

ASF Field Name	Default	Bl	Da	Cy	Hr	MB	Se	By	%	Nom	1/call	1/min	Remark
LBP	Bytes							By					
LFP	Bytes							By					
LU	Bytes							By					
LWP	Bytes							By					
LP	Blocks	Bl											
LS	Bytes							By					
NAB	Nominal									Nom			
NC	Nominal									Nom			
NH	Nominal									Nom			
NISNHQ	Nominal									Nom			
NSISN	Nominal									Nom			
NT	Nominal									Nom			
NU	Nominal									Nom			
TT	Seconds		Da		Hr		Se						
TNAA	Seconds		Da		Hr		Se						
TNAE	Seconds		Da		Hr		Se						
TNAX	Seconds		Da		Hr		Se						
DUALPLS	Blocks	Bl	Cy		MB								
DUALPLD	Nominal									Nom			
DUALCLS	Blocks	Bl	Cy		MB								
DUALCLD	Nominal									Nom			
OPENRQ	Nominal									Nom			
PLOGRQ	Nominal									Nom			
NQCID	Nominal									Nom			
IGNDIB	Nominal									Nom			

Group 2: Session Information


ASF Field Name	ADAREP/Session-Protocol	Description
DBID	DATA BASE NUMBER	Database ID (physical).
DB-NAME	DATA BASE NAME	Database Name.
SVC	SVC	Adabas SVC.
NUCID	NUCID	The Adabas nucleus Id used in a cluster environment. It is "0" for a non-cluster environment.
VERSION		Adabas Version / Release / SM level.

ASF Field Name	ADAREP/Session-Protocol	Description
DATE LOADED	DATE LOADED	Date of First Database Load.
TIME LOADED	TIME LOADED	Time of First Database Load.
MAXNR OF FILES	MAXIMUMNUMBER OF FILES	Maximum Nr of Files allowed.
NR FILES LOADED	NUMBER OF FILES LOADED	Nr of Files currently loaded.
CURR. LOG TAPE	CURRENT LOG TAPE NUMBER	Nr of Current Logtape.
DURATION	DURATION	Elapsed time since nucleus start in seconds (value returned by the nucleus). The field is available for all evaluation types. It is used for the per-minute calculation.
WAIT-TIME	WAIT-TIME	Non-activity time of the nucleus in seconds.
CPU-TIME	CPU-TIME	CPU-TIME used by the nucleus in seconds.
DATE NUC-START	START-DATE	Date the Nucleus was started.
TIME NUC-START	START-TIME	Time the Nucleus was started.
NUC-RUN-TIME		Elapsed time since nucleus start until 'STORE-TIME' time stamp.

Available units

ASF Field Name	Default	BI	Da	Cy	Hr	MB	Se	By	%	Nom	1/call	1/min	Remark
DBID	Nominal									Nom			
DB-NAME	Nominal									Nom			
SVC	Nominal									Nom			
NUCID	Nominal									Nom			
VERSION	Nominal	BI								Nom			Nom: <i>version.release.sm</i> BI: <i>vrrss</i>
DATE LOADED	Nominal									Nom			
TIME LOADED	Nominal									Nom			
MAXNR OF FILES	Nominal									Nom			
NR FILES LOADED	Nominal									Nom			
CURR. LOG TAPE	Nominal									Nom			
DURATION	Seconds		Da		Hr		Se						
WAIT-TIME	Seconds		Da		Hr		Se		%				1000 * Percentage of DURATION.
CPU-TIME	Seconds		Da		Hr		Se		%				1000 * Percentage of DURATION.

ASF Field Name	Default	Bl	Da Cy	Hr MB	Se By	%	Nom	1/call 1/min	Remark
DATE NUC-START	Nominal						Nom		
TIME NUC-START	Nominal						Nom		
NUC-RUN-TIME	Seconds		Da	Hr	Se				


 **Note:** The unit "Bl" for the VERSION field can be used in Critical Reports to perform queries depending on the Adabas version.

Group 3: Physical DB-Layout

ASF Field Name	ADAREP/Session-Protocol	Description
ASSO USED		Number of Units used for Associator.
ASSO DEFINED	PHYSICAL LAYOUT ASSO	Number of Units allocated for Associator.
ASSO UNUSED	UNUSED STORAGE ASSO	Number of free Units (ASSO DEFINED - ASSO USED).
ASSO EXTENTS		Number of Extents of Associator.
DATA USED		Number of Units used for Data Storage.
DATA DEFINED	PHYSICAL LAYOUT DATA	Number of Units allocated for Data Storage.
DATA UNUSED	UNUSED STORAGE DATA	Number of free Units (DATA DEFINED - DATA USED).
DATA EXTENTS		Number of Extents of Data Storage.
WORK DEFINED		Number of Units allocated for Work.

Available units

ASF Field Name	Default	Bl	Da Cy	Hr MB	Se By	%	Nom	1/call 1/min	Remark
ASSO USED	Blocks	Bl	Cy	MB		%			Percentage of ASSO DEFINED.
ASSO DEFINED	Blocks	Bl	Cy	MB					
ASSO UNUSED	Blocks	Bl	Cy	MB		%			Percentage of ASSO DEFINED.
ASSO EXTENTS	Nominal					%	Nom		Percentage: 100 * EXTENTS * USED / DEFINED.
DATA USED	Blocks	Bl	Cy	MB		%			Percentage of DATA DEFINED.
DATA DEFINED	Blocks	Bl	Cy	MB					
DATA UNUSED	Blocks	Bl	Cy	MB		%			Percentage of DATA DEFINED.
DATA EXTENTS	Nominal					%	Nom		Percentage: 100 * EXTENTS * USED / DEFINED.
WORK DEFINED	Blocks	Bl	Cy	MB					

 **Note:** See [Note 1](#) in the File Description group for more information on the percentage value of Extent fields.

Group 4: IO-Data

ASF Field Name	ADAREP/Session-Protocol	Description
READ ASSO	READS ASSO	Number of Reads on Associator.
READ DATA	READS DATA	Number of Reads on Data Storage.
READ WORK	READS WORK	Number of Reads on Work.
WRITE ASSO	WRITES ASSO	Number of Writes on Associator.
WRITE DATA	WRITES DATA	Number of Writes on Data Storage.
WRITE WORK	WRITES WORK	Number of Writes on Work.
WRITE PLOG	WRITES PLOG	Number of Writes on Protection Log.
LOG. READS	LOG. READS	Number of Calls to Adabas Buffer
BUFF. EFFICIENCY	BUFFER EFF	Buffer Efficiency.

Available units

ASF Field Name	Default	BI	Da	Cy	Hr	MB	Se	By	%	Nom	1/call	1/min	Remark
READ ASSO	Nominal									Nom		1/min	
READ DATA	Nominal									Nom		1/min	
READ WORK	Nominal									Nom		1/min	
WRITE ASSO	Nominal									Nom		1/min	
WRITE DATA	Nominal									Nom		1/min	
WRITE WORK	Nominal									Nom		1/min	
WRITE PLOG	Nominal									Nom		1/min	
LOG. READS	Nominal									Nom		1/min	
BUFF. EFFICIENCY	Nominal									Nom			

Group 5: Cmd distr. source

ASF Field Name	ADAREP/Session-Protocol	Description
REMOTE LOGICAL	REMOTE LOGICAL	Number of Calls via Network.
REMOTE PHYSICAL	REMOTE PHYSICAL	Number of Calls via Network by a utility (historical field).
LOCAL LOGICAL	LOCAL LOGICAL	Number of Calls.
LOCAL PHYSICAL	LOCAL PHYSICAL	Number of Calls by a utility (historical field).



Note: *Physical calls (REMOTE PHYSICAL and LOCAL PHYSICAL) are no longer counted by Adabas. ASF offers these fields only for historical reasons.*

Available units

ASF Field Name	Default	BI	Da Cy	Hr MB	Se By	%	Nom	1/call 1/min	Remark
REMOTE LOGICAL	Nominal						Nom	1/min	
REMOTE PHYSICAL	Nominal						Nom	1/min	
LOCAL LOGICAL	Nominal						Nom	1/min	
LOCAL PHYSICAL	Nominal						Nom	1/min	

Group 6: Cmd distr. thread

ASF Field Name	ADAREP/Session-Protocol	Description
NR THREADS USED		Number of threads used.
THREAD-001-CMDS	Command distribution by Thread	Number of Commands in Thread 1.
THREAD-002-CMDS	Command distribution by Thread	Number of Commands in Thread 2.
...
THREAD-250-CMDS	Command distribution by Thread	Number of Commands in Thread 250.

Available units

ASF Field Name	Default	BI	Da Cy	Hr MB	Se By	%	Nom	1/call 1/min	Remark
NR THREADS USED	Nominal						Nom		
THREAD- <i>nnn</i> -CMDS	Nominal						Nom	1/min	

Group 7: Cmd distr. type

ASF Field Name	ADAREP/Session-Protocol	Description
CMD A1/4	A1/4	Number of Record Updates Commands.
CMD BT	BT	Number of Backout Transaction Commands.
CMD CL	CL	Number of Close User Session Commands.
CMD ET	ET	Number of End Transaction Commands.
CMD E1/4	E1/4	Number of Delete Records Commands.
CMD L1/4	L1/4	Number of Read Record Commands.
CMD L2/5	L2/5	Number of Read Physical Sequential Commands.
CMD L3/6	L3/6	Number of Read Logical Sequential Commands.
CMD L9	L9	Number of Read Descriptor Values Commands.
CMD LF	LF	Number of Read Field Definitions Commands.
CMD N1/2	N1/2	Number of Add Record Commands.
CMD OP	OP	Number of Open User Session Commands.

ASF Field Name	ADAREP/Session-Protocol	Description
CMD UC		Number of Utility commands.
CMD RC	RC	Number of Release Command ID Commands.
CMD RE		Number of Read ET User Data Commands.
CMD S1/4	S1/4	Number of Find Records Commands.
CMD S2	S2	Number of Find Records with Sort Commands.
CMD S5	S5	Number of Find Coupled ISNs Commands.
CMD S8	S8	Number of Process ISN Lists Commands.
CMD S9	S9	Number of Sort ISN List Commands.
CMD REST	REST	Number of all commands not listed above.
NONE FILE CMDS		Number of commands not related to a file.

Available units

ASF Field Name	Default	BI	Da	Cy	Hr	MB	Se	By	%	Nom	1/call	1/min	Remark
CMD x	Nominal									Nom		1/min	

Group 8: User calls

ASF Field Name	ADAREP/Session-Protocol	Description
MOST CALLS	MOST CALLS	Number of Calls the Most Calls User issued.
MOST CALLS USER		User who issued the most Calls.
MOST IOS	MOST IOs	Number of I/Os the Most I/Os User issued.
MOST IOS USER		User who issued the most I/Os.
MOST CPU	MOST CPU	CPU needed by the Most CPU user in seconds.
MOST CPU USER		User who needed the most CPU.

Available units

ASF Field Name	Default	BI	Da	Cy	Hr	MB	Se	By	%	Nom	1/call	1/min	Remark
MOST CALLS	Nominal									Nom			
MOST CALLS USER	Nominal									Nom			
MOST IOS	Nominal									Nom			
MOST IOS USER	Nominal									Nom			
MOST CPU	Seconds		Da		Hr		Se		%				Percentage of CPU-TIME.
MOST CPU USER	Nominal									Nom			

Group 9: Run time info

ASF Field Name	ADAREP/Session-Protocol	Description
FORMAT TRANSL	FORMATS HAD TO BE TRANSLATED	Number of Format translations.
FORMAT OVERWR	FORMATS HAD TO BE OVERWRITTEN	Number of Format Overwrites.
AUTORESTARTS	AUTORESTARTS	Number of Autorestarts.
THROWBACK	COMMANDS HAD TO BE THROWN BACK	Number of Command Throwbacks (ISN-Throwbacks + Space-Throwbacks).
THREAD SWITCHES	THREAD SWITCHES	Number of Thread switches.
PLOG SWITCHES		Number of Protection Log Switches.
BUFFER FLUSHES	BUFFER FLUSHES	Number of Buffer Flushes.

Available units

ASF Field Name	Default	BI	Da Cy	Hr MB	Se By	%	Nom	1/call	1/min	Remark
FORMAT TRANSL.	Nominal						Nom	1/min		
FORMAT OVERWR.	Nominal						Nom	1/min		
AUTORESTARTS	Nominal						Nom	1/min		
THROWBACK	Nominal						Nom	1/min		
THREAD SWITCHES	Nominal						Nom	1/min		
PLOG SWITCHES	Nominal						Nom	1/min		
BUFFER FLUSHES	Nominal						Nom	1/min		

Group 10: Call duration

ASF Field Name	ADAREP/Session-Protocol	Description
DUR-A1/4		Total duration of A1/A4 calls.
DUR-BT		Total duration of BT calls.
DUR-CL		Total duration of CL calls.
DUR-ET		Total duration of ET calls.
DUR-E1/4		Total duration of E1/E4 calls.
DUR-L1/4		Total duration of L1/L4 calls.
DUR-L2/5		Total duration of L2/L5 calls.
DUR-L3/6		Total duration of L3/L6 calls.
DUR-L9		Total duration of L9 calls.
DUR-LF		Total duration of LF calls.
DUR-N1/2		Total duration of N1/N2 calls.

ASF Field Name	ADAREP/Session-Protocol	Description
DUR-OP		Total duration of OP calls.
DUR-UC		Total duration of UC calls.
DUR-RC		Total duration of RC calls.
DUR-RE		Total duration of RE calls.
DUR-S1/4		Total duration of S1/S4 calls.
DUR-S2		Total duration of S2 calls.
DUR-S5		Total duration of S5 calls.
DUR-S8		Total duration of S8 calls.
DUR-S9		Total duration of S9 calls.
DUR-REST		Total duration of rest of calls.

Available units

ASF Field Name	Default	BI	Da	Cy	Hr	MB	Se	By	%	Nom	1/call	1/min	Remark
DUR-x	msec		Da		Hr		Se			Nom	1/call		



Note: The default duration values (nothing or Nom selected) reflect the total CPU time in milliseconds spent by the Adabas nucleus for the specified command type since nucleus start. When the "1/call" unit is selected, the average time spent by the nucleus for a single command is outlined:

$$1/call (DUR-x) = DUR-x / CMD-x$$

Group 11: High water marks

ASF Field Name	ADAREP/Session-Protocol	Description
AB-POOL	AB-POOL	Highest Usage of Attached Buffers during this session.
CQ-POOL	CQ-POOL	Highest Usage, Command Queue.
FO-POOL	FO-POOL	Highest Usage of Format Buffer during this session.
HQ-POOL	HQ-POOL	Highest Usage of Hold Queue during this Session.
TBI-POOL	TBI-POOL	Highest Usage of TBI-Pool (Administration of ISN on Work).
TBS-POOL	TBS-POOL	Highest Usage of TBS-Pool (Administration of seq. Read Sequences).
UQ-POOL	UQ-POOL	Highest Usage of User Queue during this Session.
WORK-POOL	WORK-POOL	Highest usage of Work-Pool during this Session.

Available units

ASF Field Name	Default	BI	Da	Cy	Hr	MB	Se	By	%	Nom	1/call	1/min	Remark
AB-POOL	Percent								%				Percentage of usage.
CQ-POOL	Percent								%				Percentage of usage.
FO-POOL	Percent								%				Percentage of usage.
HQ-POOL	Percent								%				Percentage of usage.
TBI-POOL	Percent								%				Percentage of usage.
TBS-POOL	Percent								%				Percentage of usage.
UQ-POOL	Percent								%				Percentage of usage.
WORK-POOL	Percent								%				Percentage of usage.

Group 12: File description

ASF Field Name	ADAREP/Session-Protocol	Description
FILE-ID		File name (physical).
FILE-NAME		File name.
NI USED		Number of Units used for Normal Index.
NI DEFINED	NI ALLOCATED	Number of Units allocated for Normal Index.
NI UNUSED	NI UNUSED	Number of free Units (NI allocated - NI used).
NI EXTENTS		Number of Extents of Normal Index.
UI USED		Number of Units used for Upper Index.
UI DEFINED	UI ALLOCATED	Number of Units allocated for Upper Index.
UI UNUSED	UI UNUSED	Number of free units (UI allocated - UI used).
UI EXTENTS		Number of Extents of Upper Index.
DS USED		Number of Units used for File Data Storage.
DS DEFINED	DATA ALLOCATED	Number of Units allocated for File Data Storage.
DS UNUSED	DATA UNUSED	Number of free Units (DS defined - DS used).
DS EXTENTS		Number of Extents of File Data Storage.
AC DEFINED	AC ALLOCATED	Number of Units allocated for Address Converter.
AC EXTENTS		Number of extents allocated for Address Converter.
MIN ISN		Lowest ISN for the file.
MAX ISN	MAX-ISN EXPECTED	Maximum ISN expected.
TOP ISN	TOP-ISN	Highest ISN in this File.
AC2 DEFINED		Number of Units defined for secondary address converter.
AC2 EXTENTS		Number of extents allocated for secondary address converter.
AC2 MAX ISN		Maximum ISN expected for secondary address converter.

ASF Field Name	ADAREP/Session-Protocol	Description
AC2 TOP ISN		Highest ISN used in the secondary address converter.
EXTENTS		Number of used file extents (AC, AC2, DS, NI and UI).
TOTAL EXTENTS		Total number of file extents which are at least available.
FREE EXTENTS		Number of free file extents which are at least available.
ISNSIZE		Indicates whether ISNs are 3 or 4 bytes long.
TOP ISN (3 BYTE)		The TOP ISN for files with ISNSIZE=3, "0" otherwise. See Note 3 .
PADDING ASSO	PADDING FACTOR ASSO	Padding-Factor for Associator.
PADDING DATA	PADDING FACTOR DATA	Padding Factor for File Data Storage.
NR OF COMMANDS		Number of Commands issued to this file since nucleus start.
NR OF UPDATES	NUMBER OF UPDATES	Total number of updates issued to this file since file loaded or refreshed.
HIGH INDEX		Highest Index Level.
MAX RECL	MAX COMP REC LEN	Maximum Record Length if defined.
NUM. RECS LOADED	RECORDS LOADED	Number of Records loaded in this File.

Available units

ASF Field Name	Default	Bl	Da	Cy	Hr	MB	Se	By	%	Nom	1/call	1/min	Remark
FILE-ID	Nominal									Nom			
FILE-NAME	Nominal									Nom			
NI USED	Blocks	Bl	Cy	MB					%				Percentage of NI DEFINED.
NI DEFINED	Blocks	Bl	Cy	MB									
NI UNUSED	Blocks	Bl	Cy	MB					%				Percentage of NI DEFINED.
NI EXTENTS	Nominal								%	Nom			Percentage: 100 * EXTENTS * USED / DEFINED.
UI USED	Blocks	Bl	Cy	MB					%				Percentage of UI DEFINED.
UI DEFINED	Blocks	Bl	Cy	MB									
UI UNUSED	Blocks	Bl	Cy	MB					%				Percentage of UI DEFINED.
UI EXTENTS	Nominal								%	Nom			Percentage: 100 * EXTENTS * USED / DEFINED.
DS USED	Blocks	Bl	Cy	MB					%				Percentage of DS DEFINED.
DS DEFINED	Blocks	Bl	Cy	MB									
DS UNUSED	Blocks	Bl	Cy	MB					%				Percentage of DS DEFINED.

ASF Field Name	Default	Bl	Da	Cy	Hr	MB	Se	By	%	Nom	1/call	1/min	Remark
DS EXTENTS	Nominal								%	Nom			Percentage: $100 * EXTENTS * USED / DEFINED$.
AC DEFINED	Blocks	Bl		Cy		MB							
AC EXTENTS	Nominal								%	Nom			Percentage: $100 * EXTENTS * (TOP - MIN + 1) / (MAX - MIN + 1)$.
MIN ISN	Nominal									Nom			
MAX ISN	Nominal									Nom			
TOP ISN	Nominal								%	Nom			Percentage of ISN range ($MAXISN - MINISN + 1$).
AC2 DEFINED	Blocks	Bl		Cy		MB							
AC2 EXTENTS	Nominal								%	Nom			Percentage: $100 * EXTENTS * TOP / MAX$.
AC2 MAX ISN	Nominal									Nom			
AC2 TOP ISN	Nominal								%	Nom			Percentage of used AC2 ISN range (AC2 MAXISN).
EXTENTS	Nominal								%	Nom			Percentage of TOTAL EXTENTS.
TOTAL EXTENTS	Nominal									Nom			
FREE EXTENTS	Nominal								%	Nom			Percentage of TOTAL EXTENTS.
ISNSIZE	Nominal									Nom			
TOP ISN (3 BYTE)	Nominal									Nom			See Note 3.
PADDING ASSO	Percent								%				Percentage of Associator block.
PADDING DATA	Percent								%				Percentage of Data Storage block.
NR OF COMMANDS	Nominal									Nom	1/min		
NR OF UPDATES	Nominal								%	Nom	1/min		Percentage of NR OF COMMANDS. See Note 2.
HIGH INDEX	Nominal									Nom			
MAX RECL	Bytes							By					
NUM. RECS LOADED	Nominal								%	Nom			Percentage of ISN range ($MAXISN - MINISN + 1$).

Note 1:

The percentage value of the extents gives a more sophisticated approach to monitor the space usage because it combines the number of allocated extents with the filling level. Each full extent (of average size) counts as 100%. A value of 250% means: three extents allocated, two of them full and one half-full. In a Critical Report such a percentage value can be used to submit a query like "4th extent nearly full".

Example:

4 EXTENTS, 800 blocks defined, 760 blocks used.

```
Percent (USED) = 100 * 760 / 800 = 95%
Percent (EXTENTS) = 100 * 4 * 760 / 800 = 380%
```

The value of 380% can be interpreted as 3 (average) extents full and the forth extent filled up to 80%.

Note 2:

The number of file updates is counted since the file has been loaded or refreshed. The percentage calculation uses the number of commands, and the per-minute uses the nucleus duration time. Both values are counted since the nucleus has been started and reflect another time interval than the number of updates. Therefore for the number of updates, the units “%” and “1/min” are in general meaningless. Nevertheless, these units can be used when Delta Values (User Function 1) are used. In this case all values reflect the time interval of the delta value, e.g. one day for a daily store.

Note 3:

The field “TOP ISN (3 BYTE)” can be used to search all files which use an ISNSIZE 3 and the Top ISN is closed to the highest 3-byte value.

Example:

A Critical Report lists all files which you should be upgraded to ISNSIZE 4:

```
TOP ISN (3 BYTE) GE 16000000
```

Group 13: Tech. ASF fields

ASF Field Name	ADAREP/Session-Protocol	Description
STORE DATE		Date when the ASF Information was stored.
STORE TIME		Time when the ASF Information was stored.
SYNC-DATE		Synchronized date filled by ASF utility.
SYNC-TIME		Synchronized time filled by ASF utility.
REAL-STORE-DATE		Original store date filled by ASF utility.
REAL-STORE-TIME		Original store time filled by ASF utility .
TREND-GEN-DATE		Date when the trend data was generated.
TREND-GEN-TIME		Time when the trend data was generated.
#COUNTER		Number of Records accumulated
#LINE		Shows a line
STORE TYPE		Store type specified with the store program, e.g. ““DA”” for a daily store.

ASF Field Name	ADAREP/Session-Protocol	Description
RECORD TYPE		“NU” for nucleus records or “TR” for generated trend data.
STORE USER		ID of the user who stored the data.
CONDENSED FROM D		From-date of condensed data filled by ASF utility.
CONDENSED FROM T		From time of condensed data filled by ASF utility.
CONDENSED TO DAT		To-date of condensed data filled by ASF utility.
CONDENSED TO TIM		To-time of condensed data filled by ASF utility.

Available units

ASF Field Name	Default	BI	Da	Cy	Hr	MB	Se	By	%	Nom	1/call	1/min	Remark
STORE-DATE	Nominal									Nom			
STORE-TIME	Nominal									Nom			
SYNC-DATE	Nominal									Nom			
SYNC-TIME	Nominal									Nom			
REAL-STORE-DATE	Nominal									Nom			
REAL-STORE-TIME	Nominal									Nom			
GENERATING DATE	Nominal									Nom			
GENERATING TIME	Nominal									Nom			
#COUNTER	Nominal									Nom			
#LINE	Nominal									Nom			
STORE TYPE	Nominal									Nom			
RECORD TYPE	Nominal									Nom			
STORE USER	Nominal									Nom			
CONDENSED FROM D	Nominal									Nom			
CONDENSED FROM T	Nominal									Nom			
CONDENSED TO DAT	Nominal									Nom			
CONDENSED TO TIM	Nominal									Nom			

Group 14: User defined fields

The names of the user fields are defined in the Natural subprogram ASFUEXNA, which can be modified by the user. For more information, see the section User Fields in the *ASF User's Guide*. By default, the user fields are named as follows.

ASF Field Name	ADAREP/Session-Protocol	Description
USER-FIELD-A (01)		Alphanumeric user-field.
...		Alphanumeric user-fields.
USER-FIELD-A (10)		Alphanumeric user-field.
USER-FIELD-P (01)		Packed user-field.
...		Packed user-fields.
USER-FIELD-P (10)		Packed user-field.

Available units

ASF Field Name	Default	Bl	Da	Cy	Hr	MB	Se	By	%	Nom	1/call	1/min	Remark
USER-FIELD-A (<i>nn</i>)	Nominal									Nom			
USER-FIELD-P(<i>nn</i>)	Nominal									Nom			

7 Evaluation Report Formats

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- Evaluation Type 2 97
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- Download Evaluation Type 5-8 107
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This chapter covers the following topics:

Evaluation Type 1

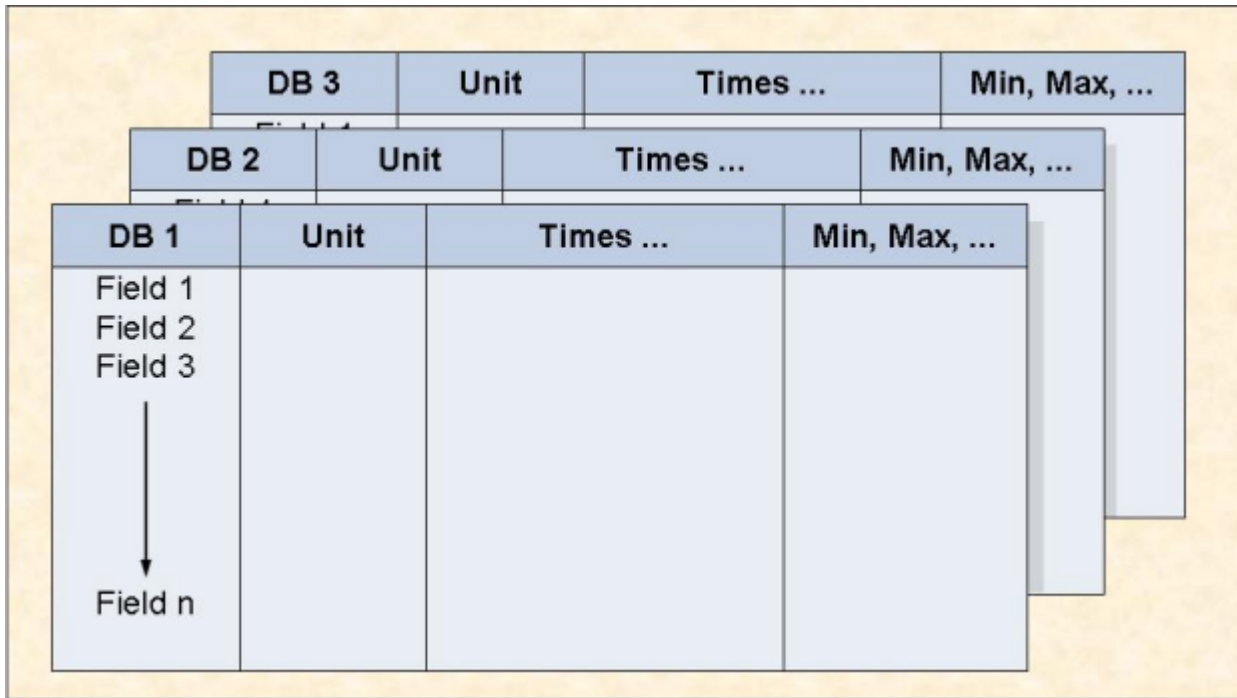


Figure 6-1: Evaluation Report Format for Evaluation Type 1

Evaluation Type 2

	Unit	Min, Max, ...	DB 1 Count 1	DB 2 Count 2	...
Field 1 Field 2 Field 3 ↓ Field n					

Figure 6-2: Evaluation Report Format for Evaluation Type 2

Evaluation Type 3

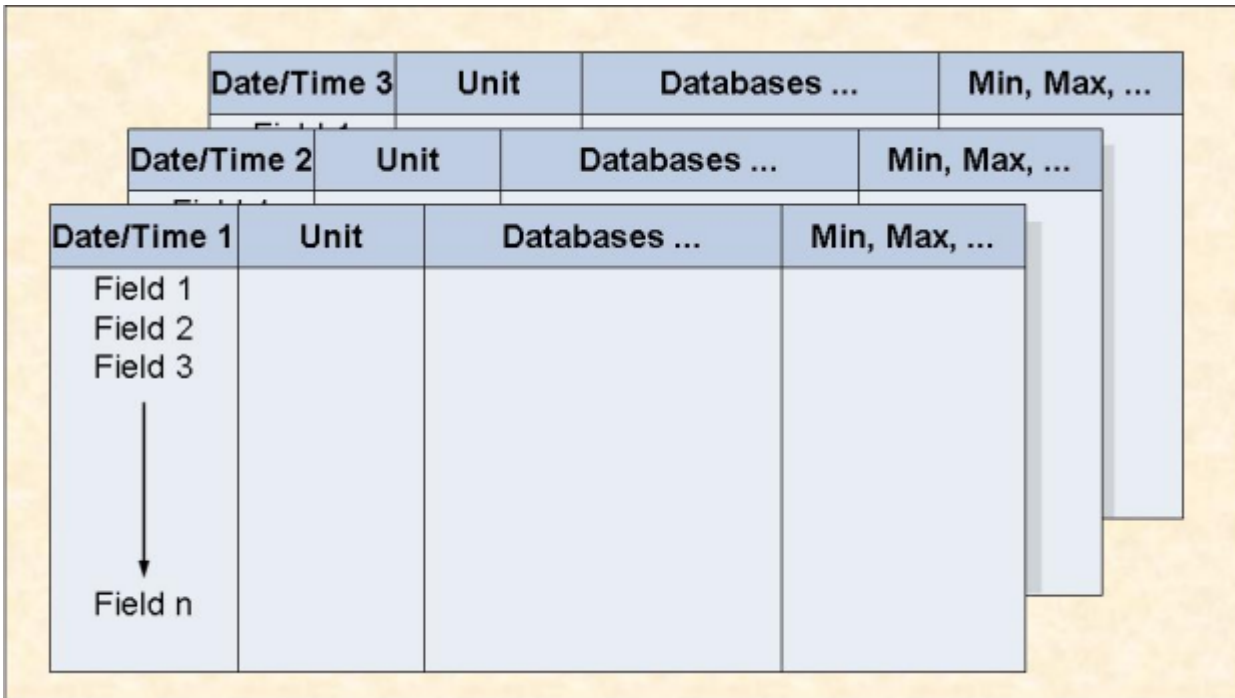


Figure 6-3: Evaluation Report Format for Evaluation Type 3

Evaluation Type 4

Field 3	Unit	Databases ...	Min, Max, ...
---------	------	---------------	---------------

Field 2	Unit	Databases ...	Min, Max, ...
---------	------	---------------	---------------

Field 1	Unit	Databases ...	Min, Max, ...
Date/Time 1			
Date/Time 2			
Date/Time 3			
↓			
Date/Time n			

Figure 6-4: Evaluation Report Format for Evaluation Type 4

Evaluation Type 5

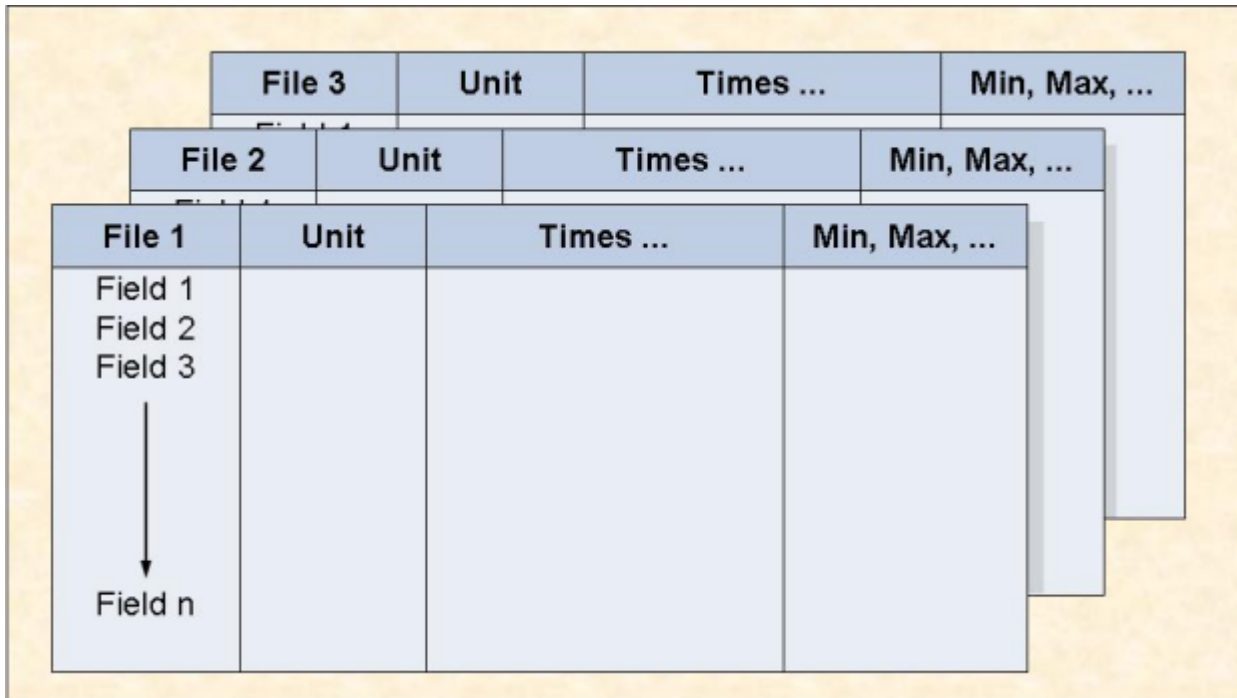


Figure 6-5: Evaluation Report Format for Evaluation Type 5

Evaluation Type 6

	Unit	Min, Max, ...	File 1 Count 1	File 2 Count 2	...
Field 1 Field 2 Field 3 ↓ Field n					

Figure 6-6: Evaluation Report Format for Evaluation Type 6

Evaluation Type 7

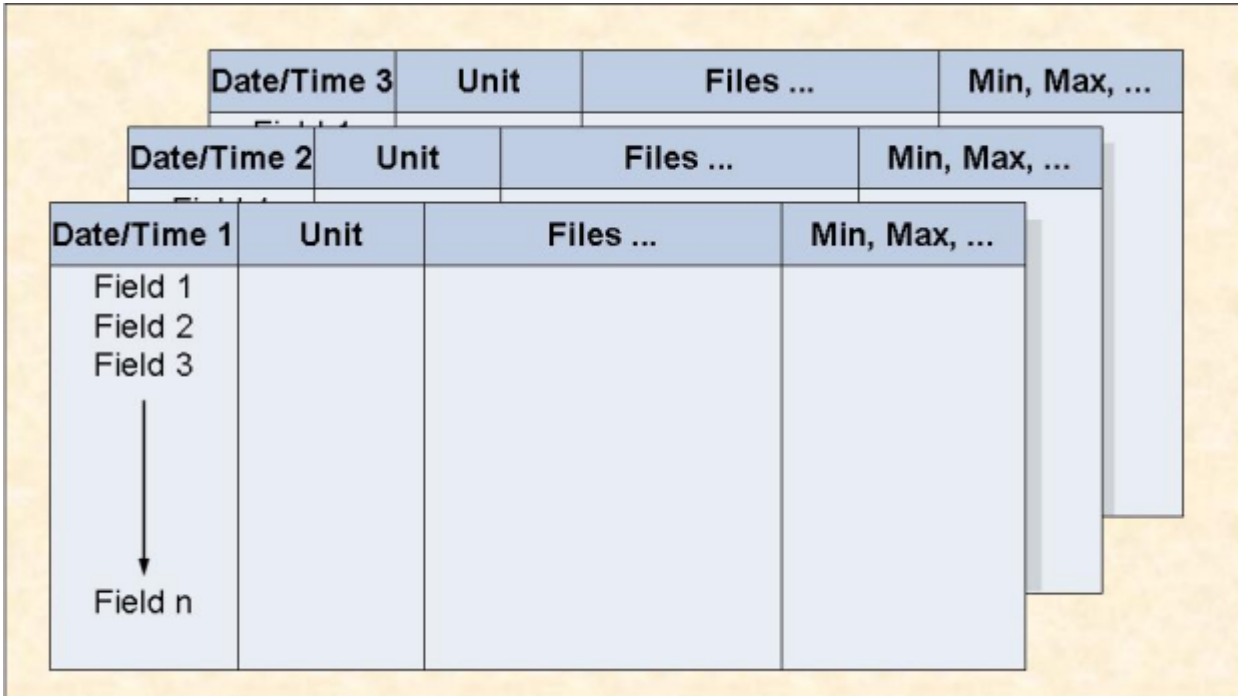


Figure 6-7: Evaluation Report Format for Evaluation Type 7

Evaluation Type 8

Field 3	Unit	Files ...	Min, Max, ...
---------	------	-----------	---------------

Field 2	Unit	Files ...	Min, Max, ...
---------	------	-----------	---------------

Field 1	Unit	Files ...	Min, Max, ...
Date/Time 1			
Date/Time 2			
Date/Time 3			
↓			
Date/Time n			

Figure 6-8: Evaluation Report Format for Evaluation Type 8

Evaluation Type 9

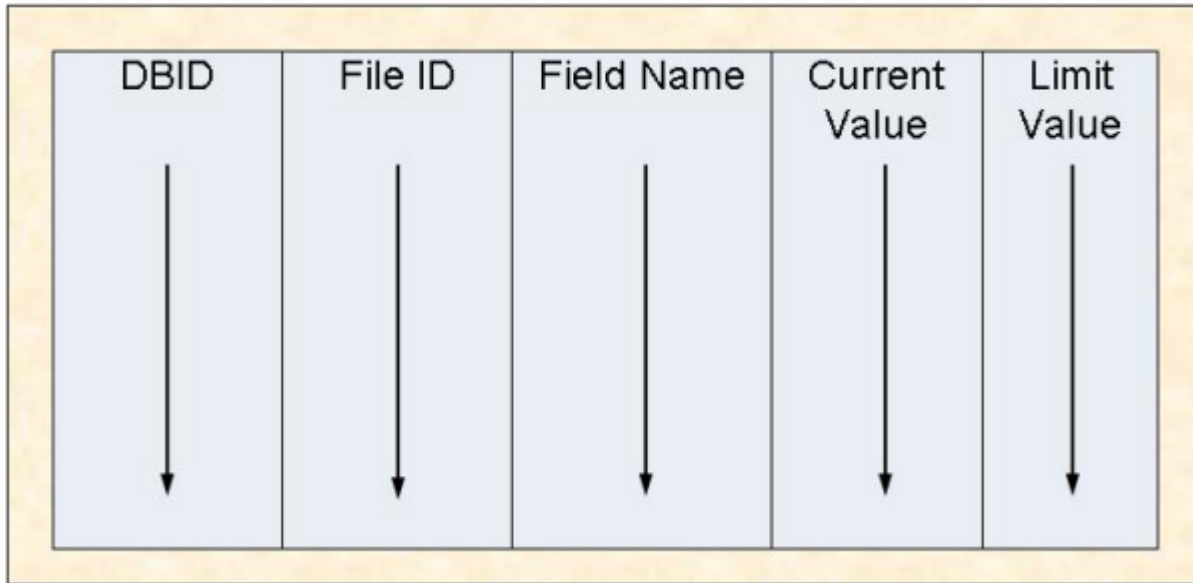


Figure 6-9: Evaluation Report Format for Evaluation Type 9

Evaluation Type 10

DBID	File ID	Field Name	Limit Value	Limit Date	Accuracy
↓	↓	↓	↓	↓	↓

Figure 6-10: Evaluation Report Format for Evaluation Type 10

Download Evaluation Type 1-4

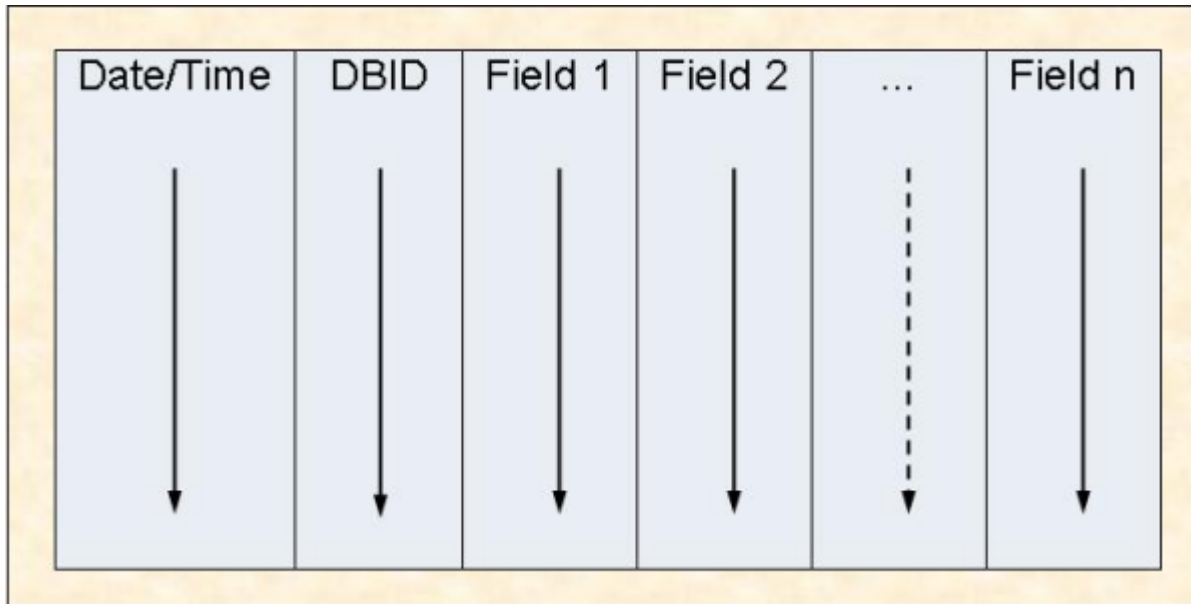


Figure 6-11: Standard or CSV Download Format for Evaluation Type 1-4

Download Evaluation Type 5-8

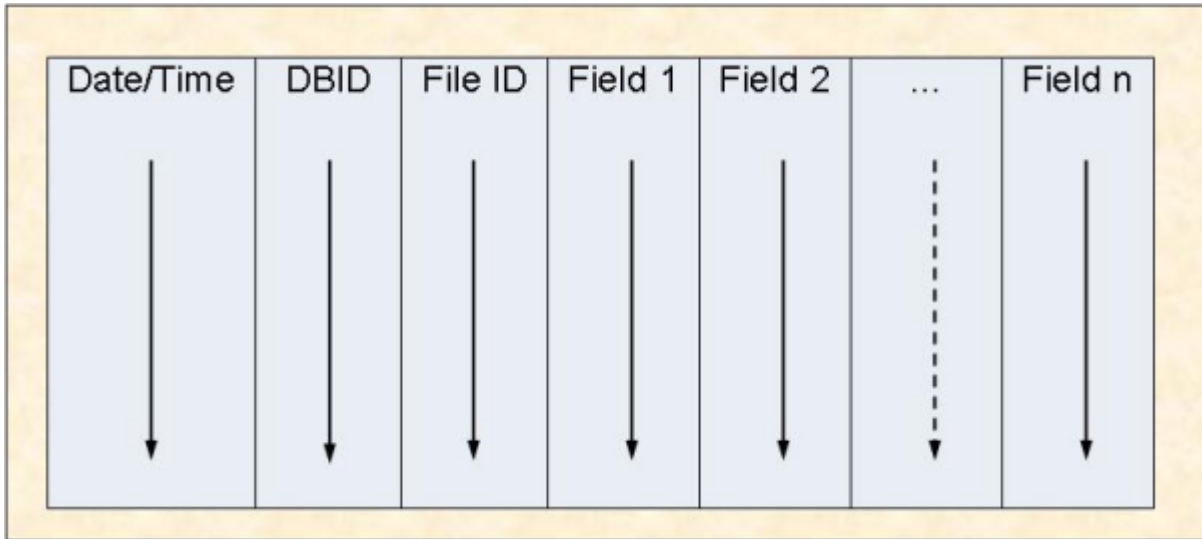


Figure 6-12: Standard or CSV Download Format for Evaluation Type 5-8

Download Evaluation Type 9

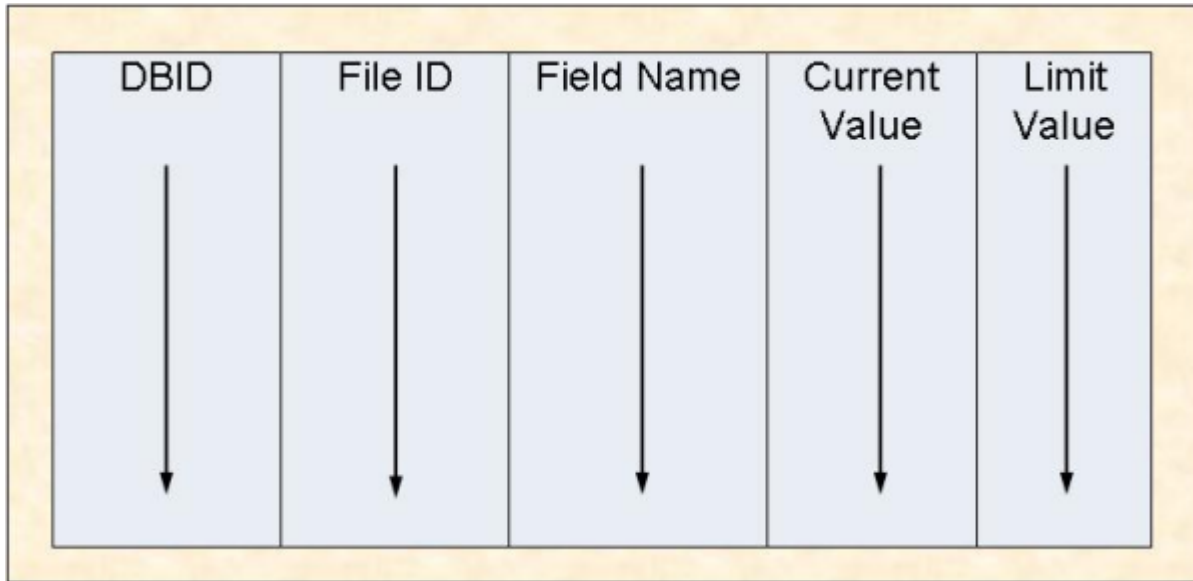


Figure 6-13: Standard or CSV Download Format for Evaluation Type 9

Download Evaluation Type 10

DBID	File ID	Field Name	Limit Value	Limit Date	Accuracy	Last Base Value
↓	↓	↓	↓	↓	↓	↓

Figure 6-14: Standard or CSV Download Format for Evaluation Type 10

8

Supplied Sample Data

- Sample Data of TEST-DB-ALL 112
- Sample Data of NEW-TEST-DB-ALL 112

This section summarizes the sample data which is supplied by Software AG as part of the ASF product. The data was generated in the years 1992 and 1993.

This chapter covers the following topics:

Sample Data of TEST-DB-ALL

The following data was stored with the Store Profile TEST-DB-ALL.

Store Type	Description	From Date	To Date
+D	Condensed daily modified average	1992-03-16	1992-04-13
&W	Condensed weekly difference	1992-03-18	1992-04-15
DA	Original daily storage	1992-03-09	1992-04-21
SN	Original start nucleus	1992-04-13	1992-04-13
WE	Original weekly storage	1992-03-09	1992-04-13

Sample Data of NEW-TEST-DB-ALL

The following data was stored with the Store Profile NEW-TEST-DB-ALL.

Store Type	Description	From Date	To Date
+M	Condensed monthly modified average	1992-09-15	1993-02-15
+W	Condensed weekly modified average	1992-09-02	1993-03-17
&M	Condensed monthly difference	1992-10-15	1993-02-15
&W	Condensed weekly difference	1992-09-09	1993-03-17
#M	Condensed monthly average	1992-09-15	1993-02-15
#W	Condensed weekly average	1992-09-02	1993-03-17
DA	Original daily storage	1992-09-01	1993-03-25

9 Supplied Store Profiles

- Store Profile TEST-DB-ALL 114
- Store Profile NEW-TEST-DB-ALL 114

This section summarizes the Store Profiles which are supplied by Software AG as part of the ASF product.

This chapter covers the following topics:

Store Profile TEST-DB-ALL

The Store Profile TEST-DB-ALL refers the following databases and files.

DBID	Files
16	221, 235, 227, 118, 125, 122
17	39, 71, 55
26	44, 45, 185, 193
36	22, 58
37	14, 15, 105, 104

Store Profile NEW-TEST-DB-ALL

The Store Profile NEW-TEST-DB-ALL refers the following databases and files.

DBID	Files
16	36, 55, 114, 191
17	39, 45, 54, 71
19	12, 29, 30, 76, 86
26	4, 100, 185, 193
27	3, 4, 5, 9, 10
36	7, 15, 22, 26
37	7, 34, 35

10 Supplied Store Types

This section summarizes the Store Types which are supplied by Software AG as part of the ASF product.

Store Type	Name	Description
+D	Aver/Delta Day	Condensed daily modified average records (24-hour environment).
+F	Aver/Delta from/to	One condensed modified average record (24-hour environment) for the entire period.
+M	Aver/Delta Month	Condensed monthly modified average records (24-hour environment).
+W	Aver/Delta Week	Condensed weekly modified average records (24-hour environment).
&D	Difference Day	Condensed daily difference records.
&F	Difference from/to	One condensed difference record for the entire period.
&M	Difference Month	Condensed monthly difference records.
&W	Difference Week	Condensed weekly difference records.
#D	Average Day	Condensed daily average records, nucleus restarted daily.
#F	Average from/to	Condensed one average record for the entire period, nucleus restarted daily.
#M	Average Month	Condensed monthly average records, nucleus restarted daily.
#W	Average Week	Condensed weekly average records, nucleus restarted daily.
AH	Ad hoc	Store on a one-off basis (sporadically).
CY	Cyclic	Store on a cyclic basis.
DA	Daily Storage	Store on a daily basis.
EN	End Nucleus	Store immediately before ending the nucleus session.
ET	End TP-Monitor	Store immediately before the TP monitor is terminated.
RN	Refresh Nucleus	Store immediately before the nucleus statistical values are refreshed by the ADADBS "REFRESHSTATS" function.
SN	Start Nucleus	Store immediately after the Nucleus startup.
ST	Start TP-Monitor	Store immediately after the TP monitor is started.

Supplied Store Types

Store Type	Name	Description
TE	Test Storage	Store for test purpose.
WE	Weekly Storage	Store on a weekly basis.

11 Supplied Evaluation Profiles

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This section summarizes the Evaluation Profiles which are supplied by Software AG as part of the ASF product. Note that if your ASF Profile file was originally loaded with ASF version 7 or before, you may not have all profiles listed below. The profiles delivered with earlier version do not reflect new ASF fields (e.g. AC2 fields). Additionally they do not make use of dynamic database lists, i.e. they specify the sample databases explicitly so that they must be modified before they can be used for other environments.

Some Critical Reports reflect Adabas version 7 limits as the maximum of five extents. For Adabas version 8 this limit can be increased or the FREE EXTENTS field can be used for the limit definition.

This chapter covers the following topics:

AC2-IN-USE

Alias: none

Type: 9 (Critical Report)

Purpose:

This Critical Report shows all files which use the secondary address converter, i.e. spanned records.

ADABAS-VERSION

Alias: none

Type: 9 (Critical Report)

Purpose:

This Critical Report shows all databases with an Adabas Version lesser than 8.

BUFF.EFFICIENCY

Alias: none

Type: 4 (General Evaluation)

Purpose:

This evaluation shows the development of a single database-related ASF data field (for example buffer efficiency, DATA and ASSO reads/writes) in several databases over a period of time.

CLUSTER

Alias: none

Type: 9 (Critical Report)

Purpose:

This Critical Report shows all databases with run in a cluster environment, i.e. with NUCID > 0.

FILE-OVERVIEW-A

Alias: none

Type: 5 (General Evaluation)

Purpose:

This evaluation shows the historical development of disk-related ASF fields (including AC2 values) of a file.

FILE-OVERVIEW-B

Alias: none

Type: 7 (General Evaluation)

Purpose:

This evaluation shows the status of disk-related ASF data fields of several files at a point in time.

FREE-EXTENTS

Alias: none

Type: 9 (Critical Report)

Purpose:

This Critical Report shows all files with 10 or less free file extents.

HEAD-PROFILE-*nn*

Alias: none

Type: 1-8 (General Evaluation)

Purpose:

Special Evaluation Profiles called Head Profiles are a standard component of ASF. There are 8 such profiles, one per General Evaluation Type, and they contain data which determines the format of the headings which appear in the corresponding Evaluation Reports. The Head Profiles cannot be modified or deleted. The Head Profiles are called HEAD-PROFILE-*nn*, where *nn* is a two digit value in the range 01 to 08.

IO-ALL-DB

Alias: none

Type: 3 (General Evaluation)

Purpose:

This evaluation shows the I/O usage (for example ASSO reads, DATA reads, logical reads) of several databases at a point in time.

IO-ONE-DB

Alias: none

Type: 1 (General Evaluation)

Purpose:

This evaluation shows the I/O usage (for example ASSO reads, DATA reads, logical reads) of a database over a period of time.

ISNSIZE3

Alias: none

Type: 9 (Critical Report)

Purpose:

This Critical Report shows all files which should be upgraded to ISNSIZE 4. It lists the files which uses an ISNSIZE 3 and have a TOPISN close to the highest 3-byte value ($\text{TOPISN} \geq 16.000.000$).

MINISN-SET

Alias: none

Type: 9 (Critical Report)

Purpose:

This Critical Report shows all files which have a MINISN greater than 1.

NEW-AMOUNT-IO

Alias: none

Type: 3 (General Evaluation)

Purpose:

This evaluation shows for condensed records the I/O usage of several databases at a point in time.

NEW-AVER-CRIT

Alias: none

Type: 9 (Critical Report)

Purpose:

This Critical Report shows all databases and files with critical space values (ASSO/DATA Used, File Extents) or some other critical values (Buffer Efficiency, S2 commands, High Index).

NEW-DB-IO-1

Alias: none

Type: 1 (General Evaluation)

Purpose:

This evaluation shows the development of the I/O usage for a single database over a period of time.

NEW-DB-PARA

Alias: none

Type: 1 (General Evaluation)

Purpose:

This evaluation shows the development of the ADARUN parameters over a period of time.

NEW-DB-SPACE-1

Alias: none

Type: 1 (General Evaluation)

Purpose:

This evaluation shows for condensed records the development of the database space usage (ASSO/DATA DEFINED/USED) over a period of time.

NEW-FILE-FIELDS

Alias: none

Type: 8 (General Evaluation)

Purpose:

This evaluation shows the development of a single file-related ASF data field (mainly new introduced fields) in several files over a period of time.

NEW-FILE-FLDS

Alias: none

Type: 8 (General Evaluation)

Purpose:

This evaluation gives an overview of some file fields over a period of time (number of records loaded, updates and commands).

NEW-LIST-FILES

Alias: none

Type: 9 (Critical Report)

Purpose:

This Critical Report lists all files for which statistical data is stored.

NEW-LIST-FILES-D

Alias: none

Type: 9 (Critical Report)

Purpose:

This Critical Report lists all files of a single database (sample database 26) for which statistical data is stored.

NEW-SPACE-DB

Alias: none

Type: 2 (General Evaluation)

Purpose:

This evaluation shows the maximum and minimum values for various disk-related ASF data fields in several databases within a time frame.

NEW-SPACE-FILE

Alias: none

Type: 6 (General Evaluation)

Purpose:

This evaluation shows the maximum and minimum values for various file-related ASF data fields in several files within a time frame.

PROD-LIMIT-BLUE

Alias: none

Type: 9 (Critical Report)

Purpose:

This Critical Report lists all databases and files where resources are being wasted, such as: ASSO usage under 50%, pool usage under 20%, Normal Index unused blocks greater than 10000 blocks.

PROD-LIMIT-RED

Alias: none

Type: 9 (Critical Report)

Purpose:

This Critical Report shows the databases and files which have reached levels which require immediate attention by the DBA, such as: ASSO or DATA usage over 95%, or files with 4 or more extents.

PROD-LIMIT-TREND

Alias: none

Type: 10 (Critical Trend)

Purpose:

This Critical Trend Report shows predicted disk space problems.

PROD-LIMIT-YELL

Alias: none

Type: 9 (Critical Report)

Purpose:

This Critical Report shows the databases and files where the disk-related ASF data fields have reached levels which will require attention by the DBA in the near future, such as: ASSO or DATA usage over 85%, or files with 3 or more extents.

PROD-LIMIT-YELL1

Alias: none

Type: 9 (Critical Report)

Purpose:

This Critical Report shows the databases and files where performance-related ASF data fields have reached levels which will require attention by the DBA in the near future. Examples of the fields are: high water marks, S2 commands, format overwrites and throwbacks.

RESOURCES-ALL-DB

Alias: none

Type: 3 (General Evaluation)

Purpose:

This evaluation shows the status of resource-related ASF data fields (for example thread usage, command usage) of several databases at a point in time.

RESOURCES-ONE-DB

Alias: none

Type: 1 (General Evaluation)

Purpose:

This evaluation shows the historical development of resource-related ASF fields (for example thread usage, command usage) of a database.

SAG-ALL-1

Alias: SA1

Type: 1 (General Evaluation)

Purpose:

This evaluation shows the development of most database-related ASF fields of a database over a period of time.

SAG-ALL-3

Alias: SA3

Type: 3 (General Evaluation)

Purpose:

This evaluation shows the most database-related ASF fields of several databases at a point in time.

SAG-CMDS-1

Alias: SC1

Type: 1 (General Evaluation)

Purpose:

This evaluation shows the development of the Adabas commands which have been issued over a period of time.

SAG-CMDS-3

Alias: SC3

Type: 3 (General Evaluation)

Purpose:

This evaluation shows the development of the Adabas commands which have been issued at a point in time.

SAG-CRIT-10

Alias: S10

Type: 10 (Critical Trend)

Purpose:

This Critical Trend can be used to predict the time when the database or file space usage will become critical.

SAG-CRIT-9

Alias: S9

Type: 9 (Critical Report)

Purpose:

This Critical Report monitors databases and files with critical disk space usage. The creation and contents of this profile are described in detail in the section [SAG-CRIT-9](#).

SAG-DATABASE-1

Alias: SD1

Type: 1 (General Evaluation)

Purpose:

This evaluation summarizes the development of the disk space usage of a database over a period of time.

SAG-DATABASE-2

Alias: SD2

Type: 2 (General Evaluation)

Purpose:

This evaluation gives an accumulated overview of the disk space usage of several databases over a period of time.

SAG-DATABASE-3

Alias: SD3

Type: 3 (General Evaluation)

Purpose:

This evaluation gives an overview of the disk space usage of several databases at a point in time.

SAG-FILE-5

Alias: SF5

Type: 5 (General Evaluation)

Purpose:

This evaluation summarizes the development of the disk space usage of a file over a period of time.

SAG-FILE-6

Alias: SF6

Type: 6 (General Evaluation)

Purpose:

This evaluation gives an accumulated overview of the disk space usage of several files over a period of time.

SAG-FILE-7

Alias: SF7

Type: 7 (General Evaluation)

Purpose:

This evaluation gives an overview of the disk space usage of several files at a point in time.

SAG-FREE-09

Alias: SF9

Type: 9 (Critical Report)

Purpose:

This Critical Report monitors the disk space usage (free space), whereby all critical limits are expressed as a percentage (60%) of the maximum possible value.

SAG-HWM-1

Alias: SH1

Type: 1 (General Evaluation)

Purpose:

This evaluation shows the development of the maximum database load (High Water Marks) of a database over a period of time.

SAG-HWM-3

Alias: SH3

Type: 3 (General Evaluation)

Purpose:

This evaluation gives an overview of the maximum database load (High Water Marks) of several databases at a point in time.

SAG-IO-1

Alias: SI1

Type: 1 (General Evaluation)

Purpose:

This evaluation shows the development of the I/O load of a database over a period of time.

SAG-IO-2

Alias: SI2

Type: 2 (General Evaluation)

Purpose:

This evaluation gives an accumulated overview of the I/O load of several databases over a period of time. The creation of the profile SAG-IO-2 is described step by step in the section [SAG-IO-2](#).

SAG-IO-3

Alias: SI3

Type: 3 (General Evaluation)

Purpose:

This evaluation gives an overview of the I/O load of several databases at a point in time.

SAG-RESSOURCE-1

Alias: SR1

Type: 1 (General Evaluation)

Purpose:

This evaluation shows the development of memory requirements of a database over a period of time. This indicates the usage of memory and thereby determines areas where too many or too few memory resources have been allocated.

SAG-RESSOURCE-3

Alias: SR3

Type: 3 (General Evaluation)

Purpose:

This evaluation gives an overview of the of memory requirements of several databases at a point in time.

SAG-SESSION-1

Alias: SS1

Type: 1 (General Evaluation)

Purpose:

This evaluation shows the development of the Adabas session parameters of a database over a period of time.

SAG-SESSION-3

Alias: SS3

Type: 3 (General Evaluation)

Purpose:

This evaluation gives an overview of the of the Adabas session parameters of several databases at a point in time.

SPACE-ALL-DB

Alias: none

Type: 3 (General Evaluation)

Purpose:

This evaluation shows the status of disk-related ASF data fields (for example ASSO usage, DATA usage) of several databases simultaneously.

SPACE-ONE-DB

Alias: none

Type: 1 (General Evaluation)

Purpose:

This evaluation shows the historical development of disk-related ASF fields (for example ASSO usage, DATA usage) of a database..

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Supplied Predefined Evaluations

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This section gives a short description of each of the Predefined Evaluations supplied as part of the ASF product. These sample Predefined Evaluations access test ASF data records, so you can activate any of them immediately after installing ASF in order to view some sample ASF reports. You can use them as draft when you create Predefined Evaluations of your own.

This chapter covers the following topics:

Predefined Evaluation 1

This is a Critical Report, showing ASF data fields which have reached levels which require immediate attention by the DBA, such as: ASSO or DATA usage over 95%, or files with 4 or more extents.

This evaluation uses the Evaluation Profile PROD-LIMIT-RED, and accesses ASF records which were stored using the Store Profile TEST-DB-ALL and Store Type WE.

Predefined Evaluation 2

This is a Critical Report, showing disk-related ASF data fields which have reached levels which will require attention by the DBA in the near future, such as: ASSO or DATA usage over 85%, or files with 3 or more extents.

This evaluation uses the Evaluation Profile PROD-LIMIT-YELL, and accesses ASF records which were stored using the Store Profile TEST-DB-ALL and Store Type WE.

Predefined Evaluation 3

This is a Critical Report, showing performance-related ASF data fields which have reached levels which will require attention by the DBA in the near future. Examples of the fields are: high water marks, S2 commands, format overwrites and throwbacks.

This evaluation uses the Evaluation Profile PROD-LIMIT-YELL1, and accesses ASF records which were stored using the Store Profile TEST-DB-ALL and Store Type WE.

Predefined Evaluation 4

This is a Critical Report, showing where resources are being wasted, such as: ASSO usage under 50%, pool usage under 20%, Normal Index unused blocks greater than 10000 blocks.

This evaluation uses the Evaluation Profile PROD-LIMIT-BLUE, and accesses ASF records which were stored using the Store Profile TEST-DB-ALL and Store Type WE.

Predefined Evaluation 5

This is a Critical Trend Report, showing predicted disk space problems.

This evaluation uses the Evaluation Profile PROD-LIMIT-TREND, and accesses ASF records which were stored using the Store Profile TEST-DB-ALL and Store Type WE.

Predefined Evaluation 6

This is an evaluation of type 1, showing the historical development of disk-related ASF fields (for example ASSO usage, DATA usage) of a database.

This evaluation uses the Evaluation Profile SPACE-ONE-DB, and accesses ASF records which were stored using the Store Profile TEST-DB-ALL and Store Type WE.

Predefined Evaluation 7

This is an evaluation of type 3, showing the status of disk-related ASF data fields (for example ASSO usage, DATA usage) of several databases simultaneously.

This evaluation uses the Evaluation Profile SPACE-ALL-DB, and accesses ASF records which were stored using the Store Profile TEST-DB-ALL and Store Type WE.

Predefined Evaluation 8

This is an evaluation of type 5, showing the historical development of disk-related ASF fields of a file.

This evaluation uses the Evaluation Profile FILE-OVERVIEW-A, and accesses ASF records which were stored using the Store Profile TEST-DB-ALL and Store Type WE.

Predefined Evaluation 9

This is an evaluation of type 7, showing the status of disk-related ASF data fields of several files simultaneously.

This evaluation uses the Evaluation Profile FILE-OVERVIEW-B, and accesses ASF records which were stored using the Store Profile TEST-DB-ALL and Store Type WE.

Predefined Evaluation 10

This is an evaluation of type 1, showing the historical development of I/O-related ASF fields (for example ASSO reads, DATA reads, logical reads) of a database.

This evaluation uses the Evaluation Profile IO-ONE-DB, and accesses ASF records which were stored using the Store Profile TEST-DB-ALL and Store Type WE.

Predefined Evaluation 11

This is an evaluation of type 3, showing the status of I/O-related ASF data fields (for example ASSO reads, DATA reads, logical reads) of several databases simultaneously.

This evaluation uses the Evaluation Profile IO-ALL-DB, and accesses ASF records which were stored using the Store Profile TEST-DB-ALL and Store Type WE.

Predefined Evaluation 12

This is an evaluation of type 1, showing the historical development of resource-related ASF fields (for example thread usage, command usage) of a database.

This evaluation uses the Evaluation Profile RESOURCES-ONE-DB, and accesses ASF records which were stored using the Store Profile TEST-DB-ALL and Store Type WE.

Predefined Evaluation 13

This is an evaluation of type 3, showing the status of resource-related ASF data fields (for example thread usage, command usage) of several databases simultaneously.

This evaluation uses the Evaluation Profile RESOURCES-ALL-DB, and accesses ASF records which were stored using the Store Profile TEST-DB-ALL and Store Type WE.

Predefined Evaluation 14

This is an evaluation of type 4, showing the development of a single database-related ASF data field (for example buffer efficiency, DATA and ASSO reads/writes) in several databases simultaneously.

This evaluation uses the Evaluation Profile BUFF. EFFICIENCY, and accesses ASF records which were stored using the Store Profile TEST-DB-ALL and Store Type DA.

Predefined Evaluation 15

This is an evaluation of type 8, showing the development of a single file-related ASF data field (for example, NUM. RECS LOADED) in several files simultaneously.

This evaluation uses the Evaluation Profile NEW-FILE-FIELDS, and accesses ASF records which were stored using the Store Profile TEST-DB-ALL and Store Type DA.

Predefined Evaluation 16

This is an evaluation of type 2, showing the maximum and minimum values recorded during 1 month for various disk-related ASF data fields in several databases simultaneously.

This evaluation uses the Evaluation Profile NEW-SPACE-DB, and accesses ASF records which were stored using the Store Profile TEST-DB-ALL and Store Type DA.

Predefined Evaluation 17

This is an evaluation of type 6, showing the maximum and minimum values recorded during 1 month for various file-related ASF data fields in several databases simultaneously.

This evaluation uses the Evaluation Profile NEW-SPACE-FILE, and accesses ASF records which were stored using the Store Profile TEST-DB-ALL and Store Type DA.

Predefined Evaluation 18

This shows all databases and files for which data is stored. The list is generated by using a Critical Report in an unusual way, namely by specifying the search criteria as “every database and file whose ID is greater than 0”. Since this is true for all databases and files, the Critical Report will display them all.

This evaluation uses the Evaluation Profile NEW-LIST-FILES, and accesses ASF records which were stored using the Store Profile NEW-TEST-DB-ALL and Store Type DA.

Predefined Evaluation 19

This shows all files of single database for which data is stored. The list is generated by generating a Critical Report using the same technique as for Predefined Evaluation 18.

This evaluation uses the Evaluation Profile NEW-LIST-FILES-D, and accesses ASF records which were stored using the Store Profile NEW-TEST-DB-ALL and Store Type DA.

Predefined Evaluation 20-24

The slots for the predefined evaluations 20-24 are empty. You can use them for your own predefined evaluations.

Predefined Evaluation 25

This is an evaluation of type 1, showing values for I/O related ASF data fields for a single database on a daily basis over a period of 3 months.

This evaluation uses the Evaluation Profile NEW-DB-IO-1, and accesses ASF records which were stored using the Store Profile NEW-TEST-DB-ALL and Store Type DA.

Predefined Evaluation 26

This is an evaluation of type 1, showing I/O related ASF data fields from weekly modified average records over a period of 3 months for a database.

This evaluation uses the Evaluation Profile NEW-DB-IO-1, and accesses ASF records which were stored using the Store Profile NEW-TEST-DB-ALL and Store Type "+W" (weekly modified average records).

Predefined Evaluation 27

This is an evaluation of type 1, showing the same information as for Predefined Evaluation 26, but based on monthly modified average records instead of weekly modified average records.

This evaluation uses the Evaluation Profile NEW-DB-IO-1, and accesses ASF records which were stored using the Store Profile NEW-TEST-DB-ALL and Store Type "+M" (monthly modified average records).

Predefined Evaluation 28

This is an evaluation of type 1, showing the weekly changes which occurred (differences only) for certain nucleus parameters over a period of about 10 weeks for a database.

This evaluation uses the Evaluation Profile NEW-DB-PARA, and accesses ASF records which were stored using the Store Profile NEW-TEST-DB-ALL and Store Type “&W” (weekly difference records).

Predefined Evaluation 29

This is an evaluation of type 1, showing the values of nucleus parameters on a daily basis over a period of about 5 weeks for a database.

This evaluation uses the Evaluation Profile NEW-DB-PARA, and accesses ASF records which were stored using the Store Profile NEW-TEST-DB-ALL and Store Type DA.

Predefined Evaluation 30

This is an evaluation of type 1, showing similar values as Predefined Evaluation 28, but showing monthly differences over a period of 4 months.

This evaluation uses the Evaluation Profile NEW-DB-PARA, and accesses ASF records which were stored using the Store Profile NEW-TEST-DB-ALL and Store Type “&M” (monthly difference records).

Predefined Evaluation 31

This is an evaluation of type 1, showing the development of disk-related ASF data fields expressed as a weekly difference over a period of several months.

This evaluation uses the Evaluation Profile NEW-DB-SPACE-1, and accesses ASF records which were stored using the Store Profile NEW-TEST-DB-ALL and Store Type “&W” (weekly difference records).

Predefined Evaluation 32

This is an evaluation of type 3, showing a comparison of monthly loads in several databases simultaneously.

This evaluation uses the Evaluation Profile NEW-AMOUNT-IO, and accesses ASF records which were stored using the Store Profile NEW-TEST-DB-ALL and Store Type “&M” (monthly difference records).

Predefined Evaluation 33

This is an evaluation of type 4, showing a comparison of weekly averages (for non-cumulative ASF data fields such as BUFF.EFFICIENCY) and weekly differences (for cumulative fields such as READ ASSO) in several databases simultaneously over a period of several months.

This evaluation uses the Evaluation Profile BUFF.EFFICIENCY, and accesses ASF records which were stored using the Store Profile NEW-TEST-DB-ALL and Store Type “+W” (weekly modified average records).

Predefined Evaluation 34

This is a Critical Report, showing critical ASF data fields in a given monthly modified average record.

This evaluation uses the Evaluation Profile NEW-AVER-CRIT, and accesses ASF records which were stored using the Store Profile NEW-TEST-DB-ALL and Store Type “+M” (monthly modified average records).

Predefined Evaluation 35

This is an evaluation of type 8, showing the development of disk-related information for files in the given databases. The values show weekly differences in several files simultaneously over a period of several months.

This evaluation uses the Evaluation Profile NEW-FILE-FLDS, and accesses ASF records which were stored using the Store Profile NEW-TEST-DB-ALL and Store Type “&W” (weekly difference records).

