software AG

Adabas Statistics Facility

Adabas Statistics Facility (ASF) Version 8.1.1 Release Notes

Version 8.1.1

May 2011

Adabas Statistics Facility

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1 Adabas Statistics Facility (ASF) Version 8.1.1 Release Notes

Version 8.1.1 is a new version of the Adabas Statistics Facility (ASF). This document describes the new and modified features of the product. Running with ASF 8.1.1 ensures that all known problems are fixed, and also allows faster and better support for your installation.

Please read this document carefully before installing or upgrading ASF.

The following topics are covered:

●	**Supported Operating Systems**
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2 Supported Operating Systems

Adabas Statistics Facility Version 8.1 is available for the following operating system environments:

- BS2000/OSD
- z/OS
- z/VM
- z/VSE

Before attempting to install Adabas Statistics Facility, ensure that the host operating system is at the minimum required level. Complete information on the platforms supported by Software AG and Adabas Statistics Facility is provided at this link: *http://www.softwareag.com/corporate/products/bis/platforms/default.asp*.

3 Compatibility with Previous Versions of ASF

The ASF 8.1 Data file requires new Adabas fields. These fields are added to the ASF Data file as described in the section **Upgrading to ASF 8.1.1**.

ASF 8.1 is unable to work with data of previous ASF versions as long as the new fields are not added. If you try to access data where the new fields have not been added, an Adabas response 41 ("Invalid format buffer") is returned from ASF.

On the other hand, ASF 7.1 can work on the ASF 8.1 Data file but it does not access any of the new fields.

The ASF Profiles file has not been changed. Thus you can continue to work with your existing Profiles file. The delivered new Profiles file contains some new Evaluation Profiles as described in the *ASF Examples* documentation. Most delivered sample evaluations do no longer specify any database or file number. This change makes the evaluation more flexible because they can be used for any Store Profile data. For more details, see the section Link Databases to Profile in the *ASF User's Guide*.

4 Installing ASF

The section ASF Installation in the *ASF Installation* documentation provides the installation procedure for new customers. If you are using Software AG's System Maintenance Aid (SMA) for the installation process, set the ASF-FIRST-INSTALL parameter to Y. For information about using SMA, refer to the System Maintenance Aid Documentation. The executable cataloged programs of ASF are loaded into the library SYSASF.

5 Upgrading to ASF 8.1

The section Upgrading an ASF Installation in the *ASF Installation* documentation provides the upgrade procedure for existing ASF environments. ASF 8.1 uses new and modified Adabas field definitions for the ASF Data file. Therefore you must perform the procedure described in the section Customize Adabas Field definitions in the *ASF Installation* documentation.

If you are using Software AG's System Maintenance Aid (SMA) for the installation process, set the ASF-FIRST-INSTALL parameter to N. For information about using SMA, refer to the System Maintenance Aid Documentation.

The executable cataloged programs of ASF are loaded into the Natural library SYSASF.

6 Enhancements

This document describes the enhancements that have been made to ASF version 8.1.1.

This chapter covers the following topics:

Adabas Version 8 Support

ASF 8.1 is the first version supporting Adabas 8, and it also supports Adabas 7. Before you upgrade to Adabas 8, you should therefore install ASF 8.1 which is able to work with both Adabas versions.

This section covers the following topics:

- Containers and Files
- Spanned Records Support
- New and Modified ASF Fields

Containers and Files

With Adabas version 8, the limit of five logical file extents for each Adabas file extent type has been lifted. Additionally the Associator and Data Storage components of the Adabas database may each contain more than five physical (database container) extents. ASF supports the new limits for the Adabas files and containers.

The length of the EXTENTS fields (ASSO, DATA, AC, UI, NI, and DS) in the ASF Data file has been increased to reflect the new Adabas limits for extents. The Critical Trend Report and the "Store trend records" function have been revised to support more than five file extents.

The total number of Adabas file extents is restricted to the number of extent directory entries in the FCB which fit into one Adabas Associator block. The new ASF field "FREE EXTENTS" indicates the minimum possible free extent entries which still fit into the Associator block. For critical reports, you may replace the check against the file extent fields by a check against the "FREE EXTENTS" field.

Example

Replace (4th extent reached for any file extent)

```
AC EXTENT    GE  4
UI EXTENT    GE  4
NI EXTENT    GE  4
DS EXTENT    GE  4
```

by (only 10 or less entries free for file extents)

```
FREE EXTENTS LE 10
```

Spanned Records Support

With Adabas 8, record spanning is introduced. If spanned records are used, a secondary address converter (AC2) is used to map the secondary ISNs to the RABNs of the Data Storage blocks where the secondary records are stored. New fields have been added to ASF to provide the information of the secondary address converter.

New and Modified ASF Fields

The following fields are new for ASF 8.1:

ASF field	Description
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.
AC2 TOP ISN	Highest ISN used in the secondary address converter.
EXTENTS	Number of used file extents (AC, AC2, DS, NI and UI).
FREE EXTENTS	Number of free file extents which are at least available.
ISNSIZE	Indicates whether ISNs are 3 or 4 bytes long.
MIN ISN	Lowest ISN for the file.
NUCID	The Adabas nucleus Id used in a cluster environment. It is "0" for a non-cluster environment.
SVC	Adabas SVC.
TOP ISN (3 BYTE)	The TOP ISN for files with ISNSIZE=3, "0" otherwise.
TOTAL EXTENTS	Total number of file extents which are at least available.

In the group "Physical DB layout" the fields "DB DATA..." have been renamed to "DATA ..." and in the group "File description" the fields "DATA ..." have been renamed to "DS ...".

The fields ASSO EXTENTS, DATA EXTENTS, AC EXTENTS, UI EXTENTS, NI EXTENTS, and DS EXTENTS have been increased to length 6.

Every Extent field can be displayed as percentage value, even the AC and AC2 Extents. The formula for the percentage calculation has been changed. With ASF 7.1 it was calculated as:

```
Percentage: 100 * (Extents + Used / Defined)
```

With ASF 8.1 it is calculated as

```
Percentage: 100 * Extents * Used / Defined
```

E.g. four extents allocated; three and a half full (in average). This situation was indicated in ASF 7.1 as 487%, and is indicated in ASF 8.1 as 350%.

For ASF 7.1 the fields "MAX ISN" and "TOP ISN" did not show correct values if "MIN ISN" was set to a value greater than "1". This has been corrected.

The field "TOP ISN" can be displayed in percentage of "MAX ISN" and the field "AC2 TOP ISN" in percentage of "AC2 MAX ISN".

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. E.g. specify in a Critical Report:

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

The Critical Report lists all files which should be upgraded to ISNSIZE 4.

The field VERSION (Adabas version) can be displayed in the unit "BL". If this unit is selected, the Adabas version/release/SM level is displayed as six digit number "*vvrrss*". This unit can be used with the functions MIN and MAX to obtain the minimum and maximum Adabas version or in Critical Reports to list all databases which are above/below a specific Adabas version. E.g. the sample Critical Report ADABAS-VERSION lists all databases which are still at Adabas version 7 or below.

Profile Administration

This section covers the following topics:

- Profile Selection
- Evaluation with Dynamic Database List
- Using Internal Field Numbers
- Group Selection Screen

- File Selection

Profile Selection

If you mark a field in the profile selection list or in the active help list with a valid code of the calling mask, the corresponding function is performed.

Selecting the function "S" in the "Store profile administration", the "Select store profile from list" screen is displayed.

Marking a profile in this list with an "M", displays the corresponding profile for modification.

Evaluation with Dynamic Database List

For Evaluation Profiles, the definition of databases is now optional.

Specifying databases restricts the evaluation to the given values (as with ASF 7.1). This restriction was especially a handicap for the delivered sample evaluations. They had been linked to the databases used in the sample data and could not be used for user data without modification.

If no database is specified, the databases and files are linked dynamically to the profile when the evaluation is performed. In this case, all databases and files found in the data are used. See the section Link Databases to Profile in the *ASF User's Guide* for more information.

Using Internal Field Numbers

Each ASF field is internally represented in two ways:

- External field number starts from "1". The external group and field numbers are saved in the ASF profile. They do not change for new ASF versions.
- The internal field number (one-dimensional). It is unique for each ASF field.

The internal field number is displayed in the "Active help: Select fields" screen. It can be used as abbreviation for the corresponding field when editing a profile. See the section Profile Element: Accumulation in the *ASF User's Guide* for further information.

Group Selection Screen

The group selection screen displays the total number of selected fields and the total maximum number of selectable fields accumulated over all groups.

File Selection

In the "Link databases to profile" screen, you can reach the list of files not only by pressing PF4 but also by typing ".F" into the first two character positions of the database Id or "F" into the "dyn" field.

Evaluation

This section covers the following topics:

- Date Format
- Download
- Send Critical Report as E-Mail
- Critical Trend
- Predefined Evaluation
- Sample Evaluations

Date Format

A date can always be specified as "dd.mm.yyyy" or as "yyyy-mm-dd" regardless of the current selected default date format if you specify all digits and use the corresponding separator character. A two-digit year is also possible. ASF translates the date into the current selected default date format. For more information see the section Absolute and Relative Date Format in the *ASF User's Guide*.

A relative date can specify the number of records (time-stamps) in the form ±*nnnn*R.

Download

In the general evaluation you can mark the field 'PC-File' with "X", "C", or "F". The meaning is as follows:

ASF 8.1	ASF 7.1	Format	Layout	Description
X	S	Standard	2D	Any PC spreadsheet format supported by Entire Connection can be selected. This format is the new default.
C	n/a	CSV	2D	The data is written as comma-separated-values (CSV).
F	X	Full	3D	The data is downloaded page by page similar to the screen output. No header line was downloaded for ASF 7.1. One header line is downloaded with ASF 8.1.
n/a	H	Header	3D	The data is downloaded page by page similar to the screen output. A header line is downloaded with each page. This format is no longer supported.

The CSV Format can also be used for Critical Reports and Critical Trends.

The old 3-dimensional (3D) layout looks similar as the screen output. The new 2-dimensional (2D) layout is flat and can be used better for further processing with spreadsheet tools like Excel.

The ASF 8.1 standard format is available for ASF 7.1 as "special" format if correction MJ71207 is applied. With the ASF 7.1 special format at most 51 columns are downloaded whereas the ASF 8.1 standard and CSV format download up to 201 columns. Like the ASF 7.1 download, the first column contains the date and time by default. Additionally with ASF 8.1, the next columns contain the DBID and if appropriate, the file number by default.

In general it is recommended to use the CSV format.

The download formats and their layouts are described in details in the section Download to a PC-File in the *ASF User's Guide*.

Send Critical Report as E-Mail

The ASF Critical Report is used to check the database against 'critical' values as specified by the user in the 'Critical Evaluation Profile'. A Critical Reports usually runs as batch job, preceded by a STORE step, in a periodic time interval, e.g. once the day. This new function of ASF gives the user the possibility to send the result of the Critical Reports as e-mail to selected recipients. This enables a DBA to be informed about any critical database value even if he has currently no access to the mainframe.

The settings (e-mail addresses etc.) are specified in the e-Mail Profile. For more information see the section Sending a Critical Report as e-Mail in the *ASF User's Guide*. This functionality was available for ASF 7.1 if correction MJ71211 was applied.

Critical Trend

An ASF 7.1 critical trend showed values which will become critical in the given time period. Unfortunately it did not show values which are already critical.

The ASF 8.1 first checks if the last record in the base time period is already critical. If it finds such a record, it is indicated in the accuracy column as "reached". If the value is not yet critical, ASF calculates and checks future values.

When the critical trend is downloaded to a PC, an additional column "Last Base" displays the value of the last record in the given base time period.

See the section Critical Trend Report in the *ASF User's Guide* for more information.

Predefined Evaluation

When you delete a predefined evaluation, you must confirm the deletion in a pop-up window.

A security check has been introduced for predefined evaluations. A user is only able to modify or delete a predefined evaluation (Workplan) if the user is authorized to modify evaluation profiles.

Sample Evaluations

Most delivered evaluation profiles do no longer specify database Ids. Therefore they can be used without any change not only for the delivered sample data but also for the data generated by the user.

New fields have been added to existing evaluations and new evaluations have been created using new ASF fields. The delivered evaluation profiles are listed in the section Supplied Evaluation Profiles in the *ASF Examples* documentation. Note that the new and modified evaluations are only available for a first install of ASF.

Store

This section covers the following topics:

- Direct Command "FSTORE"
- Display Messages
- Store Authorization

Direct Command "FSTORE"

With the direct command "FSTORE" you can store database records only i.e. without the file information. For more details see the section Direct Command Line in the *ASF User's Guide*.

Display Messages

If you press PF9 in the "Store Nucleus Records" menu, the error messages of the last store are listed. In batch, the error messages are listed by default. For more details see the section Store Nucleus Records in the *ASF User's Guide*.

Store Authorization

In the User Maintenance, a new "Store" authorization has been introduced. A user can only store data if the corresponding flag is set. When upgrading from ASF 7.1 the flag is automatically set for all users which have the authority to modify store profiles.

This functionality was available for ASF 7.1 if correction MJ71212 was applied.

Diagnostic Features and User Exits

This section covers the following topics:

- SYSPROD Support
- Trace Function for API
- SYSRDC Interface
- User Exits

SYSPROD Support

ASF is displayed in the product information list of the Natural SYSPROD utility.

Trace Function for API

A new TRACE parameter has been added to the ASF API (ASFGET01) which starts the ASF internal trace functions. The parameter is the last parameter and defined as "BY VALUE OPTIONAL". This way the interface is compatible to existing calls, which means that there is no need to change existing applications.

This functionality was available for ASF 7.1 if correction MJ71218 was applied.

For more details see the Section ASFGET01 Parameters in the *ASF User's Guide*.

SYSRDC Interface

The interface to the Natural Data Collection Utility SYSRDC has been improved. See the section Interface to SYSRDC in the *ASF User's Guide* for more information.

User Exits

The user exits ASFUEXIT and ASFUEX01 have been changed to reflect the new layout of the ASF Data view ASF-STAMM. If you are using a modified user exit, you must adjust it accordingly.

The user exit source programs are no longer delivered on a special library. They are delivered on SYSASF. They are named XXXUEX*. Before you can use them, you must copy them to ASFUEX*.

7   Limitations and Restrictions

This chapter covers the following topic:

Cluster Service

ASF Version 8.1 does not support Adabas cluster service. If you run ASF against a cluster database, ASF collects data from one nucleus only, i.e. the one which has performed the open. The data of the other nuclei are not collected. The ASF NUCID field indicates from which nucleus the data is derived.

8 **Software AG Product Compatibility**

ASF uses interfaces to other Software AG products, such as Adabas, Adabas Online System, Natural, Natural Security, Natural Connection and Con-nect, to perform certain operations. Problems detected by ASF which are related to another Software AG product can only be fixed if you are using a supported version of that product.

ASF 8.1 runs with Adabas Version 7 or 8. Statistical data which has been collected from previous Adabas versions can still be evaluated.

ASF requires some subprograms of the Adabas Online System (AOS). All these subprograms are on the SYSASF library delivered. You must have installed an AOS version compatible with your Adabas version. For more information about the AOS version required, see the appropriate AOS manual or the Adabas Release Notes.

ASF 8.1.1 is cataloged with Natural 4.2. Note that ASF is not able to run with Natural 4.1 or below.

ASF has interfaces to Natural Security and to Con-nect. When ASF uses these interfaces, it expects that some modules of these products are available.

> **Note:** The delivered SYSASF library of ASF 8.1.1 does not contain these modules.

See the sections Step 5: Setting up User Security and Step 8: Setting up Con-nect in the *ASF Installation* documentation for the action required when you want to use the Natural Security interface or the Con-nect interface.

9 End-of-Support Dates

For information on how long a product is supported by Software AG, access Software AG's Empower web site at **https://empower.softwareag.com**. In the left menu of this web page, expand **Empower** and log into Secured Services.

Once you have logged in, you can expand **Products** in the left menu of the web page and select **Product Roadmaps** to access the Product Version Roadmaps application. This application allows you to request support information for specific products and releases.

10 Documentation

ASF 8.1 is delivered with the following documentation:

Adabas Statistics Facility 8.1.1 Release Notes

This describes the supported operating systems, how to install or upgrade to ASF 8.1, enhanced features and limitations, product compatibility, end-of-support dates and the documentation of ASF.

ASF Installation

This describes in detail the installation of the Adabas Statistics Facility and the upgrade to new ASF versions. Additionally it provides an installation verification procedure.

ASF User's Guide

This gives you an overview of the ASF concepts and components. It describes in detail the ASF menu system, the ASF utilities and services, the application programming interface (API) and the user exits.

ASF Examples

This provides examples for the various ASF evaluation types and how the output and the downloaded data looks like. It contains a Planning Guide with guidelines for planning and using ASF. The creation and using of a general evaluation and of a critical report is demonstrated by taking the sample evaluations SAG-IO-2 and SAG-CRIT-9. It lists all ASF groups and field names. The evaluation report formats and the download formats are described. Finally it summarizes the delivered sample data, the Store Profiles, the Store Types, the Evaluation Profiles and the Predefined Evaluations supplied as part of the ASF product.

ASF Messages and Codes

This lists all ASF messages together with an explanation and the action recommended.