Adabas Delta Save

Adabas Delta Save Facility Installation

Version 8.5.4

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ADABAS & NATURAL

This document applies to Adabas Delta Save Version 8.5.4 and all subsequent releases.

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

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Preface

This document describes the prerequisites and installation procedure for installing the Adabas Delta Save Facility.

This document is organized as follows:

System Requirements	Describes the system requirements of Adabas Delta Save Facility.
Installation Procedure	Describes the steps to install the Adabas Delta Save Facility.
Sequential File Table	Summarizes the sequential files added or changed by the Adabas ADASAV utility for Delta Save operations.
Applying Fixes to Adabas Delta Save Facility	Describes how to apply fixes to the Adabas Delta Save Facility.

1 About this Documentation

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Document Conventions

Convention	Description
Bold	Identifies elements on a screen.
`Monospace font`	Identifies service names and locations in the format *`folder.subfolder.service`*, APIs, Java classes, methods, properties.
`Italic`	Identifies: Variables for which you must supply values specific to your own situation or environment. New terms the first time they occur in the text. References to other documentation sources.
`Monospace font`	Identifies: Text you must type in. Messages displayed by the system. Program code.
{ }	Indicates a set of choices from which you must choose one. Type only the information inside the curly braces. Do not type the { } symbols.
|	Separates two mutually exclusive choices in a syntax line. Type one of these choices. Do not type the | symbol.
[ ]	Indicates one or more options. Type only the information inside the square brackets. Do not type the [ ] symbols.
...	Indicates that you can type multiple options of the same type. Type only the information. Do not type the ellipsis (...).

Online Information and Support

Product Documentation

You can find the product documentation on our documentation website at **https://documentation.softwareag.com**.

Product Training

You can find helpful product training material on our Learning Portal at **https://learn.softwareag.com**.

Tech Community

You can collaborate with Software GmbH experts on our Tech Community website at **https://techcommunity.softwareag.com**. From here you can, for example:

- Browse through our vast knowledge base.
- Ask questions and find answers in our discussion forums.
- Get the latest Software GmbH news and announcements.
- Explore our communities.
- Go to our public GitHub and Docker repositories at **https://github.com/softwareag** and **https://hub.docker.com/publishers/softwareag** and discover additional Software GmbH resources.

Product Support

Support for Software GmbH products is provided to licensed customers via our Empower Portal at **https://empower.softwareag.com**. Many services on this portal require that you have an account. If you do not yet have one, you can request it at **https://empower.softwareag.com/register**. Once you have an account, you can, for example:

- Download products, updates and fixes.
- Search the Knowledge Center for technical information and tips.
- Subscribe to early warnings and critical alerts.
- Open and update support incidents.
- Add product feature requests.

Data Protection

Software AG products provide functionality with respect to processing of personal data according to the EU General Data Protection Regulation (GDPR). Where applicable, appropriate steps are documented in the respective administration documentation.

2 System Requirements

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- Required Software AG Products 7

This chapter describes the system requirements for Adabas Delta Save Facility.

Supported Operating System Platforms

Software AG generally provides support for the operating system platform versions supported by their respective manufacturers; when an operating system platform provider stops supporting a version of an operating system, Software AG will stop supporting that version.

For information regarding Software AG product compatibility with IBM platforms and any IBM requirements for Software AG products, please review the *Product Compatibility for IBM Platforms* web page.

Before attempting to install this product, ensure that your host operating system is at the minimum required level. For information on the operating system platform versions supported by Software AG products, complete the following steps.

1. Access Software AG's Empower web site at *https://empower.softwareag.com*.
2. Log into Empower. Once you have logged in, you can expand **Products & Documentation** in the left menu of the web page and select **Product Version Availability** to access the Product Version Availability screen.
3. Use the fields on the top of this screen to filter its results for your Software AG product. When you click the **Search** button, the supported Software AG products that meet the filter criteria are listed in the table below the filter criteria.

   This list provides, by supported operating system platform:

   - the Software AG general availability (GA) date of the Software AG product;
   - the date the operating system platform is scheduled for retirement (OS Retirement);
   - the Software AG end-of-maintenance (EOM) date for the product; and
   - the Software AG end-of-sustained-support (EOSS) date for the product.

Note: Although it may be technically possible to run a new version of your Software AG product on an older operating system, Software AG cannot continue to support operating system versions that are no longer supported by the system's provider. If you have questions about support, or if you plan to install this product on a release, version, or type of operating system other than one listed on the Product Version Availability screen described above, consult Software AG technical support to determine whether support is possible, and under what circumstances.

Supported Hardware

For general information regarding Software AG product compatibility with other platforms and their requirements for Software AG products, visit Software AG's ***Hardware Supported*** web page.

Required Software AG Products

This version of Adabas Delta Save Facility requires the following Software AG products and versions and additional software:

- Adabas Version 8.5
- Adabas Online System (AOS) demo version delivered with Adabas or alternatively, the full version AOS selectable unit. The load module AOSASM from the Adabas load library must be included in the link of the Natural nucleus.

If you want to use online facilities to restart an interrupted online save operation after a system or other user ABEND (see section *Restarting an Interrupted Save Operation* in the *Adabas Delta Save Facility Utilities Manual*), you will need to use the selectable unit AOS.

For information regarding Software AG product compatibility with IBM platforms and any IBM requirements for Software AG products, please review the ***Product Compatibility for IBM Platforms*** web page.

3 Installation Procedure

To install the Adabas Delta Save Facility, perform the following steps:

1 Verify you have prepared and installed the product license file, as described in the *Adabas for Mainframes Version 8.5* installation.

2 If you plan to perform save operations online, allocate space for the DSIM data set and format the data set with the ADAFRM DSIMFRM function, as described in *Adabas Utility Functions for Delta Save* in the *Adabas Delta Save Facility Utilities Manual*.

3 Add the ADARUN parameter DSF=YES to the nucleus and utility jobs used to operate the database (DSF=YES is required for the nucleus and the DSF-related functions of the ADASAV, ADARES, and ADAULD utilities; it is optional for the other utilities. See the section *ADARUN Parameter DSF* in the *Adabas Delta Save Facility Administration Guide* for more information);

4 To automatically submit a delta save job when the DLOG area usage exceeds a certain threshold, provide the delta save user exit along with the job control statements it requires, and specify the ADARUN DSFEX1 parameter.

5 Start the nucleus (with DSF=YES);

6 Using the Adabas Online System (either the demo or full version) "Install DSF" special function described in section *Special Online Functions* in the *Adabas Delta Save Facility Administration Guide*, allocate the DSF logging area;

7 Perform a normal Adabas database save operation (ADASAV SAVE) to create a full save data set and to enable Delta Save logging. If the save operation is online, merge the online full save data set with the DSIM data set to produce an offline full save, and to free the DSIM data set for further use.

4 Sequential File Table

This section summarizes the sequential files added or changed by the Adabas ADASAV utility for Delta Save operation. Appendix A of either volume of the *Adabas Utilities* documentation contains a listing of all sequential files, by utility.

Utility	File Name	VSE Tape SYS	Out	In	BLKSIZE by device	Concatenation
ADASAV	DD/FULL	30		x		Yes
	DD/DEL1	31		x		Yes
	DD/DEL2	32		x		Yes
	DD/DEL3	33		x		Yes
	DD/DEL4	34		x		Yes
	DD/DEL5	35		x		Yes
	DD/DEL6	36		x		Yes
	DD/DEL7	37		x		Yes
	DD/DEL8	38		x		Yes

5 Applying Fixes to Delta Save

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Fixes to Delta Save follow the same guidelines as fixes to Adabas. See the *Adabas Installation* documentation for information about applying fixes to Adabas.

Applying Fixes to Delta Save Using MSHP PATCH

A sample job to insert a fix to Adabas Delta Save facility using MSHP PATCH is as follows:

```
// JOB PATCHD       APPLY PATCH TO ADABAS DELTA SAVE
// OPTION LOG
// EXEC PROC=ADEVvLIB
// EXEC MSHP
   PATCH SUBLIB=saglib.ADEvrs
   AFFECTS PHASE=phasenam
   ALTER offset vvvv: rrrr
/*
/&
```

-where

vrs	is the Adabas version/revision/system maintenance (SM) level
saglib	is the Adabas library name in the procedure ADEVvFIL
phasenam	is the Adabas phase to be zapped
offset	is the hexadecimal offset into the phase
vvvv	is the verify data for the ZAP
rrrr	is the replace data for the ZAP

The above sample JCL is available in member MSHPPATD.X on the Delta Save sublibrary.

Applying Fixes to Delta Save Using MSHP CORRECT

Because Delta Save is installed into a separate sublibrary (ADEvrs) and has a separate product code, it is maintained as a separate MSHP component. Delta Save users must therefore run a MSHP ARCHIVE job for Delta Save.

Note: This job uses the history file identified by the IJSYSHF label in the VSE standard label area.

```
// JOB ARCHIVE      ARCHIVE ADABAS DELTA SAVE
// OPTION LOG
// EXEC PROC=ADAVvLIB
// EXEC MSHP
 ARCHIVE ADEvrs
  COMPRISES 9001-ADE-00
  RESOLVES 'SOFTWARE AG - ADABAS DSF Vv.r'
 ARCHIVE 9001-ADA-0E-vrs
  RESIDENCE PRODUCT=ADEvrs -
            PRODUCTION=saglib.ADEvrs -
            GENERATION=saglib.ADEvrs
/*
/&
```

-where

vrs	is the Adabas version/revision/system maintenance (SM) level
saglib	is the Adabas library name in the procedure ADEV*v*FIL

The above sample job is available in member MSHPARCD.X on the Delta Save sublibrary.

A sample job illustrating the use of MSHP CORRECT to install a fix to Adabas Delta Save is as follows:

```
// JOB CORRECT      APPLY FIX TO ADABAS DSF
// OPTION LOG
// EXEC MSHP
 CORRECT 9001-ADE-00-vrs: ATnnnnn
 AFFECTS MODE=modname
 ALTER   offset vvvv: rrrr
 INVOLVES LINK=lnkname
/*
/&
```

-where

vrs	is the Adabas version/revision/system maintenance (SM) level
nnnnn	is the Adabas fix number
modname	is the Adabas object module to be zapped and then relinked
offset	is the hexadecimal offset to the beginning of the ZAP
vvvv	is the verify data for the ZAP
rrrr	is the replace data for the ZAP
lnkname	is the link book for the phase affected

The above sample JCL is available in member MSHPCORD.X on the Delta Save sublibrary.

The following link books are defined on the Delta Save sublibrary:

ADADSFN ADADSFR ADADSFS ADAMGS

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