Adabas Online System

Installation Guide

Version 8.2.5

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Adabas Online System

This document applies to Adabas Online System Version 8.2.5.

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 how to install Adabas Online System (AOS) manually. Installation on systems using Software AG's System Maintenance Aid (SMA) is described in the *Adabas Installation* documentation. For information about SMA, see the *System Maintenance Aid* documentation.

The Adabas Online System installation documentation is organized in the following topics:

Installation Requirements
Installing on z/OS or z/VSE Platforms
Installing on BS2000 Platforms
Installing with Natural Security
Setting the Adabas Online System Defaults

1 Conventions

Throughout this document, the terms "Adabas Online System" and "AOS" are used interchangeably.

Data set names starting with DD are referred to in Adabas Online System Documentation with a slash separating the DD from the remainder of the data set name to accommodate z/VSE data set names that do not contain the DD prefix. The slash is not part of the data set name.

A product version is identified by the first two digits of the versioning number. Software AG distinguishes between major and minor versions according to the amount of functionality or technology added to the product. All other digits indicate correction levels.

In the product documentation, the notations *vrs*, *vr*, or simply *v* are often used as placeholders for the current product version, for example, in data set or module names.

Placeholder	Meaning	Definition
v	version	**Major Version** The first digit of the product version number indicates major architecture and functionality implementation or enhancement that adds value to the product.
r	release	**Minor Version** The second digit of the version number indicates new or enhanced functionality that adds value to the product.
s	system maintenance level	**Correction Level** Correction levels contain error corrections only, without new functionality, including documentation of all modifications and repairs. In case it is necessary to include functional changes into a correction level, an exception handling process ensures that corresponding quality assurance activities are triggered. These functional changes are documented. The main goal is to avoid impacts when you install such a correction level. The third number of an Adabas version denotes the system maintenance level.

Placeholder	Meaning	Definition
		On certain platforms supported by Adabas, additional levels may exist, such as update package, patch level, service pack and hot fix.

2 Installation Requirements

- Natural and Natural Security Requirements 5
- AOS Compatibility with Other Adabas Products 5

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.

The delivered *ALLINPL* file, *ADAvrs.ALLINPL* (where *vrs* is a number representing the version of Adabas), contains the Adabas Online System (AOS) base and also functions as a demo.

To use the full version of AOS, you must copy the contents of the AOS version 8.2 load library to the base Adabas version 8.2 (or Adabas 7.4) load library with the REPLACE option to make AOS licensed (otherwise AOS will execute in 'Demo Mode'). This library must be available to the Adabas nucleus. To make it available, restart the Adabas nucleus. When allocated to the running Adabas environment, this completes the AOS to make it a licensed copy.

Note: The AOS load modules can also be made available to Adabas by concatenating the AOS load library to the Adabas load library in the Adabas startup JCL.

The distributed INPL jobs (both the sample jobs and the SMA-generated jobs) that you use to load the Adabas INPL library load it in a date-sensitive manner. In other words, the load process will now check the dates of your existing INPL library and will not allow older members to overwrite members with newer dates. However, if you use your own Natural batch jobs to load the Adabas INPL library, you will need to modify them to be date-sensitive. To do this, specify the following `CMSYNIN` primary command input in your job (this setting assumes the Natural input parameters in the job are specified in comma-delimited mode, or `IM=D`):

```
B,,,,,,,Y
```

The "B" setting indicates that the INPL action should load everything; the next six fields (comma-delimited) are defaults, the eighth field is specified as "Y" to indicate that dates in the INPL library should be checked, and the ninth field is not included in the specification because the default for that field will be used. For more information about Natural `CMSYNIN` input, refer to your Natural documentation.

Note: When migrating an Adabas 8.1 installation, this procedure does not apply. Instead, you should replace the 8.1 INPL library members with the latest Adabas 8.2 INPL library members, regardless of the dates of the members, to avoid creating a library containing members from both releases.

Natural and Natural Security Requirements

AOS version 8.2 requires Natural version 4.2 or above.

If you do not upgrade or install Natural with the Adabas version 8.2 release, you will need to relink the Adabas version 8.2 AOSASM module with your Natural in order for AOS 8.2 to function correctly. This AOSASM module is downward compatible with previous versions.

Natural Security is a prerequisite for AOS Security. See the *Adabas Security* documentation for more information.

AOS Compatibility with Other Adabas Products

In general, AOS is fully backward-compatible. In other words, this version of AOS will support any supported versions of Adabas, Adabas Caching Facility, or other Adabas add-on products. However, you cannot use any AOS 8.1.3 or later withAdabas Caching Facility 8.1.2 or earlier; you must migrate your Adabas Caching Facility 8.1.2 environment to Adabas Caching Facility 8.1.3 or later in order to use any version of AOS later than 8.1.2.

Note: Depending on the platforms supported, demo versions of Adabas Vista (AVI), Adabas Fastpath (AFP), Adabas SAF Security (AAF), and Adabas Transaction Manager (ATM) are automatically installed when you install either the demo or full version of AOS.

3 Installing on z/OS or z/VSE Platforms

Note: Depending on the platforms supported, demo versions of Adabas Vista (AVI), Adabas Fastpath (AFP), Adabas SAF Security (AAF), and Adabas Transaction Manager (ATM) are automatically installed when you install either the demo or full version of AOS.

To install AOS on a z/OS or z/VSE system, complete the following steps:

1 To use the full version of AOS, you must copy the contents of the AOS version 8.2 load library to the base Adabas version 8.2 (or Adabas 7.4) load library with the REPLACE option to make AOS licensed (otherwise AOS will execute in 'Demo Mode'). This library must be available to the Adabas nucleus. To make it available, restart the Adabas nucleus. When allocated to the running Adabas environment, this completes the AOS to make it a licensed copy.

   Note: The AOS load modules can also be made available to Adabas by concatenating the AOS load library to the Adabas load library in the Adabas startup JCL.

2 For a Com-plete or CICS environment, link the correct object module with the Natural TP nucleus.

   If a split Natural nucleus is to be installed, the AOSASM module *must* be linked to the shared portion of the nucleus and *not* to the thread portion.

3 Optionally, set the AOS defaults. Parameters that control the operation of AOS can be set at installation time by changing the defaults in the Natural program AOSEX1 found in library SYSAOSU. For complete information about these parameters, read ***Setting the Adabas Online System Defaults***, elsewhere in this guide.

4 After setting the AOS defaults in the previous step, copy the AOSEX1 member and its companion member P-AOSEX1 from the SYSAOSU library to the SYSAOS library. The programs for AOS are stored in library SYSAOS, and these members and the correct AOSEX1 parameters for your environment must be present in SYSAOS for AOS to run.

The SYSAOSU library is provided to ensure that AOS settings (including the AOSEX1 settings) in your running AOS installation are not overwritten when you upgrade or apply maintenance to your AOS code. Whenever you upgrade or apply maintenance, you must ensure that the AOSEX1 member in the SYSAOSU library is updated appropriately and copied (with P-AOSEX1) to the SYSAOS library.

5 Perform a Natural INPL.

The medium containing Adabas contains an INPL-formatted data set in Natural version 4.2 or above. The programs for AOS are stored in library SYSAOS. Verify you have handled the requirements regarding the INPL-formatted data set, as described in ***Installation Requirement***, elsewhere in this guide.

6 Locate module ADAAOS in the AOS*vrs* load (module) library, (where *vrs* is a number representing the version of Adabas). Make this module available to your Adabas nucleus either by copying it to the ADA*vrs* load (module) library or by concatenating it with the ADA*vrs* load library in the nucleus startup job.

7 Load the AOS error messages using the Natural utility ERRLODUS.

The error messages are stored in an ERRN-formatted data set included on the medium.

See the *Natural Utilities* documentation for information about the ERRLODUS utility.

8 Finally, execute AOS by logging on to the application library SYSAOS and entering the command `MENU`.

4 Installing on BS2000 Platforms

Note: Depending on the platforms supported, demo versions of Adabas Vista (AVI), Adabas Fastpath (AFP), Adabas SAF Security (AAF), and Adabas Transaction Manager (ATM) are automatically installed when you install either the demo or full version of AOS.

To install AOS on a BS2000 system:

1 To use the full version of AOS, you must copy the contents of the AOS version 8.2 load library to the base Adabas version 8.2 (or Adabas 7.4) load library with the REPLACE option to make AOS licensed (otherwise AOS will execute in 'Demo Mode'). This library must be available to the Adabas nucleus. To make it available, restart the Adabas nucleus. When allocated to the running Adabas environment, this completes the AOS to make it a licensed copy.

   Note: The AOS load modules can also be made available to Adabas by concatenating the AOS load library to the Adabas load library in the Adabas startup JCL.

2 Link the module AOSASM to the (shared) Natural nucleus.

3 Optionally, set the AOS defaults. Parameters that control the operation of AOS can be set at installation time by changing the defaults in the Natural program AOSEX1 found in library SYSAOSU. For complete information about these parameters, read *Setting the Adabas Online System Defaults*, elsewhere in this guide.

4 After setting the AOS defaults in the previous step, copy the AOSEX1 member and its companion member P-AOSEX1 from the SYSAOSU library to the SYSAOS library. The programs for AOS are stored in library SYSAOS, and these members and the correct AOSEX1 parameters for your environment must be present in SYSAOS for AOS to run.

   The SYSAOSU library is provided to ensure that AOS settings (including the AOSEX1 settings) in your running AOS installation are not overwritten when you upgrade or apply maintenance to your AOS code. Whenever you upgrade or apply maintenance, you must ensure that the

AOSEX1 member in the SYSAOSU library is updated appropriately and copied (with P-AOSEX1) to the SYSAOS library.

5 Perform a Natural INPL.

The medium containing Adabas contains an INPL-formatted data set in Natural version 4.2 or above. The programs for AOS are stored in library SYSAOS. Verify you have handled the requirements regarding the INPL-formatted data set, as described in ***Installation Requirement***, elsewhere in this guide.

6 Locate module ADAAOS in the AOS*vrs* load (module) library, (where *vrs* is a number representing the version of Adabas). Make this module available to your Adabas nucleus either by copying it to the ADA*vrs* load (module) library or, using BLSLIBs, concatenate it with the ADA*vrs* load library in the nucleus startup job.

7 Load the AOS error messages using the Natural utility ERRLODUS.

The error messages are stored in an ERRN-formatted data set included on the medium.

See the *Natural Utilities* documentation for information about the ERRLODUS utility.

8 Finally, execute AOS by logging on to the application library SYSAOS and entering the command `MENU`.

5 Installing with Natural Security

If Natural Security is installed, define at least the following libraries to it:

SYSAOS
SYSTRG
SYSAEO
SYSSPT

Define the following libraries as needed:

- For Adabas Vista: SYSAVI and SYSMV*vrs*
- For Adabas Fastpath: SYSAFP and SYSMW*vrs*
- For Adabas SAF Security: SYSAAF and SYSMX*vrs*
- For Adabas Transaction Manager: SYSATM and SYSMT*vrs*

Software AG recommends you define all of these libraries as protected.

Specify the start-up program for SYSAOS as MENU. Do not specify a start-up program name for the other libraries.

Natural Security must be installed before implementing Adabas Online System Security. See the *Adabas Security* documentation for more information. For information about installing Natural Security for use with AOS Security, see the *Natural Security* documentation.

Natural Security includes the ability to automatically close all open databases when the Natural command mode's LOGON function of Adabas Online System is invoked.

6 Setting the Adabas Online System Defaults

Parameters that control the operation of Adabas Online System can be set at installation time by changing the defaults in the Natural program AOSEX1. Once you have altered the parameters as needed for your installation, copy the AOSEX1 and P-AOSEX1 members from the SYSAOSU library to the SYSAOS library.

The table below lists the parameters and possible values.

Parameter	Valid Values	Default	Description
ADMIN-LEVEL	0-9	6	Administration level: Allows access to certain functions that can cause error conditions in the ADABAS environment. When set to 8 or higher, it allows the "CATCH RSP-CODE" direct command to occur, and when set to 9, it allows the "ZAP" function to be issued.
AOS-END-MSG	Yes (Y) or No (N)	Y	Display AOS end-of-session message?
AOS-LOGO	Yes (Y) or No (N)	N	Display AOS logo?
BATCH-ERROR	Yes (Y) or No (N)	N	Batch job cond code: When AOS is executing from a batch job and has an error condition, and if BATCH-ERROR is set to "Y", AOS will terminate with a condition code of 8. This function will be fully implemented over time, as all AOS programs must be modified for this.
BLK-CYL	Cylinder (C) or Block (B)	B	Space control by block or cylinder
CMD-INT	Natural (N) or AOS (A)	A	Pass-through control for invalid AOS commands: "N" passes invalid commands to Natural; "A" displays an error message for invalid commands.
CPEXLIST	No (N) or Yes (Y)	N	Display extended checkpoint list? A value of "N" displays the normal list; a value of "Y" displays the extended list.
EX1-A1	---	---	Reserved for future use.

Parameter	Valid Values	Default	Description
EX1-N3	---	---	Reserved for future use.
EXF-UTI	E or U	U	UTI or EXF file lock exception. A value of E specifies an EXF exception; a value of U specifies a UTI exception.
MAX-AC-IOS	0-999999	150	AC read converter block threshold value
MAXANZ	1-99999999	100	Maximum displayed user queue elements
NR-EXT	1-5	4	Critical extent threshold for listing file. This parameter applies to Adabas 7.4 (or earlier) installations.
NR-EXT2	1-99	50	Critical extent threshold for listing file. This parameter applies to Adabas 8 (or later) installations.
NR-PERCENT	1-99	89	Report function: NR-PERCENT is a threshold value for the display of critical files concerning the percentage full of the extents reached in AC/UI/NI/DS table type. A value greater than NR-PERCENT will be highlighted.
PURGE-UQE	Yes (Y) or No (N)	N	Remove user queue element?
SAVEFDT	Yes (Y) or No (N)	N	Keep deleted file's FDT?
STATINTV	1-9999 seconds	60	Statistics-gathering interval, in seconds
TID-DISPLAY	B, A, I	I	Control display for TID in "display user queue" function: "B" = binary TID display; "A" = alpha TID display; "I" = alpha for A-Z/0-9, otherwise binary.
TIMELA	0-99999999 seconds	0 (no limitations)	Display user queue elements with activity during the last "n" seconds.
TIN-JOBN	T or J	J	Display either job name or time-in in "display command queue" function. A value of "T" indicates that time-in should be displayed; a value of "J" indicates that the job name should be displayed.

To change the defaults, you must edit the Natural AOSEX1 program and make the changes directly within the program listing in the defaults area, which looks as follows:

```
  .
    .
    .
DEFINE DATA PARAMETER USING P-AOSEX1
END-DEFINE
*
* SET THE DEFAULTS
*
ADMIN-LEVEL = '6'    (Allows access to certain functions that can cause error ↩
conditions in the ADABAS environment)
AOS-END-MSG = 'Y'    (Display end-of-session message)
AOS-LOGO = 'Y'       (Adabas Online System logo display-set to 'N' for no logo ↩
display)
```

```
BATCH-ERROR = 'N'    (If BATCH-ERROR is set to "Y", AOS will terminate with a ↩
condition code of 8 if an error occurs.)
BLK-CYL  = 'B'       (Space allocation default-set to 'C' for cylinders)
CMD-INT  =  'A'      (Pass invalid Adabas commands to (N)atural, or intercept (A))
CPEXLIST = 'N'      (Checkpoint list control-set to 'Y' for extended checkpoint list)
NR-EXT2 = '50'       (ADA V8 critical extent threshold.  Range: 1-99)
EXF-UTI  = 'U'      (File locking exception-set to 'E' to except files in EXF status)
MAXANZ  = 100       (Maximum user queue elements displayed. range: 1 - 99,999,999 ↩
elements)
NR-EXT = 4           (ADA V7 critical extent threshold.  Range: 1, 2, 3, 4, or 5)
NR-PERCENT = '89'    (NR-PERCENT is a threshold value for the display of critical ↩
files)
MAX-AC-IOS = 150     (AC read converter block threshold)
PURGE-UQE  = 'N'     (Remove element from user queue. Pre-5.1 default is "Y")
SAVEFDT  = 'N'       (Keep old FDT for SAVE operation-set to 'Y' to save FDTs)
STATINTV = 60        (Statistic-gathering time. range: 1 - 9999)
TID-DISPLAY = 'I'    (TID display control: B=binary, A=alpha, I=normally alpha, ↩
special characters as binary)
TIMELA = 0          (Include activity in last 'n' seconds. range: "all" (0) -last ↩
99,999,999 seconds)
TIN-JOBN = 'J'       (Command queue display-"J" for job name, "T" for "time in ↩
queue" )
*
END
```

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