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Adabas Cluster Services

Release Notes

Version 8.2.3

May 2011

Adabas Cluster Services

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This documentation provides detailed information on Adabas Cluster Services version 8.2 and describes the updates and modifications of this version. It covers the following topics:

Please note that there are no intermediate releases of Adabas Cluster Services between Version 8.1 SP3 and 8.2 SP2.

Adabas Cluster Services 8.2 Enhancements

This section describes the Adabas Cluster Services 8.2 enhancements.

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Support for Adabas 8.2

Adabas Cluster Services 8.2 introduces support for Adabas 8.2 databases in an Adabas cluster. Adabas Cluster Services 8.2 SP3 requires Adabas 8.2 SP3 or later; Adabas Cluster Services 8.2 SP2 requires Adabas 8.2 SP2. For more information, read *Adabas Requirements*, in the *Adabas Cluster Services Installation Guide*.

Establishing the DBID Target on a Specific System

Adabas Cluster Services 8.2 SP3 allows you to easily define the database's DBID target on a system (LPAR) of your choice. The DBID target is established with Entire Net-Work and is used to route commands from systems with no active PLXCB (e.g., outside the parallel sysplex) to the cluster database. Two new commands have been introduced to provide this support:

■ The TARGET command can be used to specify the system on which the Entire Net-Work DBID target for the cluster database is to be established. Specify a system name or the NUCID of a cluster nucleus on that system. The DBID target can be established on any system where a nucleus of the cluster is active. It is used to route commands from users on remote systems with no active PLXCB. Such systems may be part of the z/OS sysplex or other Entire Net-Work nodes outside the sysplex.

For complete information, read *TARGET Command: Route Commands to Specified Target*, in the *Adabas Cluster Services Reference Guide*.

■ The DTARG command can be used to display the system image currently servicing commands routed using the Entire Net-Work DBID target.

For complete information, read *DTARG Command: Display System Image*, in the *Adabas Cluster Services Reference Guide*.

Adjusting the Cache Vector Size for Adabas Caching Facility

Adabas Cluster Services 8.2 SP3 now allows you to adjust the size of the cache vector used by Adabas Cluster Services and Adabas Parallel Services for tracking Adabas Caching Facility blocks. A new ADARUN parameter, `CLUCACHEEXTRA`, has been introduced to provide this support. Use this new parameter to specify the additional vector size needed, in blocks.

The CLUCACHEEXTRA parameter replaces special zap AY8xx115, which was previously used to specify the additional cache vector size.

For complete information, read *CLUCACHEEXTRA Parameter: Adjust Shared Cache Vector Size*, in the *Adabas Cluster Services Reference Guide*.

Support for Advance File Lock (ALOCKF)

Adabas Cluster Services 8.2 SP3 provides support for advance file locks in cluster nuclei. You can now advance-lock a file within a cluster for a subsequent Adabas utility or user to obtain exclusive control of it. You can also release the advance-lock on a file. The following functions, which in previous versions were available only in non-cluster environments, are now supported in cluster environments:

■ ALOCKF: Use the ALOCKF operator command or ADADBS OPERCOM ALOCKF function to advance-lock a file.

■ RALOCKF: Use the RALOCKF operator command or ADADBS OPERCOM RALOCKF function to release the advance-lock on a file.

■ RALOCKFA: Use the RALOCKFA operator command or ADADBS OPERCOM RALOCKFA function to release the advance-lock on all files.

For complete information, read about these commands in your Adabas operator command documentation in the *Adabas Operations Manual* or in your ADADBS OPERCOM function documentation in the *Adabas Utilities Manual*.

Multi-Line WTO Console Messages

Support for the MLWTO parameter is provided in Adabas Cluster Services 8.2 SP3. Use this parameter to specify whether multi-line write-to-operator (WTO) messages that are normally written to the operator console as a series of single-line WTO messages should instead appear as multi-line WTO messages. This ability is controlled by support for the ADARUN parameter MLWTO in cluster environments. For complete information, read *MLWTO Parameter: Multi-Line Console Message Control*, in the *Adabas Cluster Services Reference Guide*.

Better Performance for Search Commands That Use Search Algorithm 3

A new, improved implementation of search algorithm 3 offers better performance for S1 or S2 commands with applicable search criteria. Search algorithm 3 is used for commands where the search criterion consists of between two and five subcriteria specifying descriptor-equals-value conditions, the subcriteria being connected by AND operators. Prior to Adabas Cluster Services 8.2 SP3, such search commands were executed with the more general, but also more expensive, search algorithm 4, because the old implementation of algorithm 3 could not be used by cluster nuclei. The new implementation offers a noticeable performance improvement for such search commands.

Tracking of Cluster Database Users Via Global Locks

Adabas Cluster Services 8.2 SP3 introduces new logic for tracking the nucleus to which a user is assigned. In previous releases, the user-to-nucleus assignments were tracked only via entries in the user tables belonging to the PLXCBs in common storage (ECSA). For users on systems with no active PLXCB (e.g., outside the parallel sysplex), whose commands to the cluster are routed via the DBID target established with Entire Net-Work, changes in the cluster configuration (e.g., the location of the DBID target) might lead to the delivery of commands to different cluster nuclei than before. With Adabas Cluster Services 8.2 SP3, the cluster nuclei keep locks in the lock structure in the coupling facility for each of their users. This allows the nuclei to detect more reliably whether an apparently new user is in fact already known to another nucleus in the cluster, but now routed to a different nucleus.

As part of the new user tracking logic, Adabas Cluster Services now performs, per user session, two additional lock requests to the lock structure in the coupling facility. In installations where the majority of users issue many Adabas commands in their sessions, these two additional lock requests should be barely noticeable. However, installations where many users perform very short Adabas sessions, comprising just a few Adabas commands, may see a more noticeable increase in lock requests over previous releases of Adabas Cluster Services.

Timeout Logic for ADALNK Calls to Entire Net-Work

Adabas Cluster Services 8.2 SP3 subjects all interactions of cluster nuclei with Entire Net-Work to timeouts. That is, if a call to Entire Net-Work is not returned within a specific timeframe, the nucleus stops waiting for a response and considers the call to have ended with the new response code 225.

■ Calls to the local Entire Net-Work server (usually, requests to establish or remove an Entire Net-Work target ID) are timed out after 5 seconds.

■ Calls to a remote Entire Net-Work server (usually, requests to update or return information about remote cluster nuclei or users) are timed out after the number of seconds specified by the MXMSGWARN ADARUN parameter.

Any such timeouts are reported in messages ADAM98, PLI093, PLX049, or PLX093 as occurrences of response code 225.

These enhancements reduce the dependency of an Adabas cluster on Entire Net-Work: Cluster nuclei no longer wait indefinitely if an Entire Net-Work server stays (formally) active but is unable or very slow to respond to requests.

> **Note:** Delays due to slow responses by Entire Net-Work may still stand out during nucleus session start and shutdown, especially if multiple commands are sent via Entire Net-Work to remote systems and each one takes unusually long (many seconds) to be processed and returned.

Most aspects of this enhancement have been retrofitted into Adabas Cluster Services 8.1 via zaps AI814032, AN814165, AN814166, AN814168, AN814169, AN814173, AN814177, and AO814027.

Reaction to Missing Responses from Peer Nuclei

In Adabas Cluster Services 8.2 SP3, a nucleus that has sent out an internal request (V2 command) to one or more peer nuclei in the cluster no longer cancels peer nuclei that do not respond in time, if the request is of a type that allows the sender to proceed normally even without a response. For example, if one nucleus propagates a DELUI operator command to the other nuclei in the cluster, it does not really need a response from each peer nucleus before it can consider the processing of the operator command complete. Also, it does not need to cancel a peer nucleus that is unable or very slow to respond.

■ For request types where the sender can proceed normally even without a response, the V2 command is timed out after the number of seconds specified by the MXMSGWARN ADARUN parameter and an ADAX9E message is printed. (If the MXMSGWARN parameter has been set to zero, the timeout occurs after MXMSG/4 seconds.)

■ For request types where the sender requires a response from each recipient, a missing response causes a warning message (ADAX9C) to be printed after the number of seconds specified by the MXMSGWARN ADARUN parameter. The V2 command is timed out after the number of seconds specified by the MXMSG ADARUN parameter, an ADAX9E message is printed, and peer nuclei that did not respond are canceled.

In both cases, the indication that a peer nucleus is unable or very slow to respond is given after the number of seconds specified by the MXMSGWARN ADARUN parameter.

These enhancements slightly reduce the dependency of cluster nuclei on one another.

ADACOM Terminates When CMDMGR=NO

With Adabas Cluster Services 8.2 SP3, the ADACOM task used to allocate and monitor the PLXCB and subordinate data structures in common storage (ECSA) terminates after processing the commands given in DDKARTE, if CMDMGR=NO has been specified for all SVC/DBID pairs. If CMDMGR=YES (the default setting) has been specified for one or more SVC/DBID pairs, the ADACOM task stays active and accepts operator commands for displaying and controlling the multiprocessing environment.

Lock Structure Changes

In Adabas Cluster Services 8.2 SP2, the lock structure formula has changed. You may find it necessary to either increase the size in the CFRM policy or decrease the value of the ADARUN parameters NU, NH, or LDEUQP. For more information, read *Lock Structure Size in the Coupling Facility* , in the *Adabas Cluster Services Operations Guide*.

Performance Improvements

Adabas Cluster Services 8.2 SP2 has enhanced the unique descriptor logic so that fewer cache writes for index (NI) blocks are performed, resulting in better performance. With the enhanced logic, the use of the unique descriptor pool (LDEUQP parameter) may increase somewhat when parallel transactions insert unique (UQ) descriptors.

The performance of large object (LOB) updating has been improved by eliminating redundant serialization. All nuclei now reduce their use of the unique descriptor pool for LOB updates and customers using LOBs from Adabas 8.1 may be able to reduce the unique descriptor pool size (ADARUN parameter LDEUQP). Adabas Cluster Services and Adabas Parallel Services configurations no longer acquire external unique descriptor locks for LOB updates.

Default Redo Pool Sizes Reset

In Adabas Cluster Services 8.2 SP2, the default size of the redo pool for production cluster databases has been reset. Redo pool size is specified using the ADARUN parameter LRDP. For Adabas Cluster Services 8.2, the new default size is either the value of the LFIOP ADARUN parameter or ten megabytes (10M), whichever is lower.

To determine whether this default value is reasonable for your clusters, monitor the redo high-water mark value produced in the output of the DRES operator command and in the cluster nucleus shutdown statistics.

Unique Descriptor Pool Processing Changes

Adabas makes an entry in the unique descriptor pool every time a record with a unique descriptor is deleted or altered such that an existing descriptor value is *deleted* from the index. Support was added in Adabas Cluster Services 8.2 SP2 such that Adabas Cluster Services nuclei will also make an entry when a record with a unique descriptor is *inserted* and thus the ADARUN LDEUQP parameter setting may require a larger value. Entries in the unique descriptor pool generally exist for the duration of a transaction. For more information, read *LDEUQP Parameter: Length of Unique Descriptor Pool* , in the *Adabas Cluster Services Reference Guide*.

Extended SMF Support

Adabas 8.2 SP2 introduces support (in z/OS environments) for SMF records, allowing Adabas nuclei to generate SMF records to record performance and resource consumption information. For complete information on this support, refer to your Adabas documentation.

This release of Adabas Cluster Services extends the SMF data that can be recorded in z/OS cluster environments. New SMF record detail sections can be generated containing statistics from global cache, global lock, and internucleus messaging. Operands for the ADARUN SMFDETAIL parameter, the SMFDETAIL operator command, and the ASMFREC mapping macro have been extended for this support.

For complete information, read *SMFDETAIL Parameter: Selecting Detail SMF Record Sections* and *SMFDETAIL Command: Select the Detail Section Types in SMF Interval and Termination Records* , in the *Adabas Cluster Services Reference Guide*. For information about the ASMFREC macro, read *AS-MFREC Mapping Macro*, in the *Adabas Cluster Services Operations Guide*.

Adabas Online System Screen Enhancements

Effective with Adabas Cluster Services 8.2 SP2, you can use the PF2 key (function key 2) on some cluster environment screens in Adabas Online System (AOS) to scroll through the nuclei in a cluster. This allows you to review the same sets of statistics for each of the nuclei in a cluster. When you press PF2 on such an AOS screen (or enter the `NextNucid` command), the same screen appears, but with data pertaining to the nucleus with the next highest nucleus ID in the cluster. If there is no higher nucleus ID, AOS cycles back to the beginning and displays the same screen, with data pertaining to the nucleus with the lowest ID in the cluster.

In addition, cluster-related nucleus ADARUN parameters now can be reviewed (some can be maintained) on AOS screens.

For more information, read *Scrolling through Nucleus IDs in a Cluster*, in the *Adabas Cluster Services Operations Guide* or the documentation provided with your Adabas Online System installation.

ADADBS OPERCOM DPARM Enhancements

Effective with Adabas Cluster Services 8.2 SP2, the ADADBS OPERCOM DPARM utility function displays cluster-related nucleus parameters for cluster nuclei.

Operator Command Enhancements

The following operator command enhancements have been introduced with Adabas Cluster Services 8.2:

Command	New or Changed?	Description
ALOCKF	Changed	Support for this command, provided for non-cluster environments in prior versions, is now provided in cluster environments. For complete information, read about this command in your Adabas operator command documentation in the *Adabas Operations Manual* or in your ADADBS OPERCOM function documentation in the *Adabas Utilities Manual*.
DTARG	New	This new command can be used to display the system image currently servicing commands routed using the Entire Net-Work DBID target.
RALOCKF	Changed	Support for this command, provided for non-cluster environments in prior versions, is now provided in cluster environments. For complete information, read about this command in your Adabas operator command documentation in the *Adabas Operations Manual* or in your ADADBS OPERCOM function documentation in the *Adabas Utilities Manual*.
RALOCKFA	Changed	Support for this command, provided for non-cluster environments in prior versions, is now provided in cluster environments. For complete information, read about this command in your Adabas operator command documentation in the *Adabas Operations Manual* or in your ADADBS OPERCOM function documentation in the *Adabas Utilities Manual*.
TARGET	New	This new command can be used to specify, using a system name or the NUCID of a cluster nucleus, the system on which the Entire Net-Work DBID target for the cluster database is to be established.

ADARUN Parameter Enhancements

The following ADARUN parameter enhancements were introduced in Adabas Cluster Services 8.2:

Parameter	New or Changed?	Description
CLUCACHEEXTRA	New	Use the new CLUCACHEEXTRA parameter to specify the additional vector size, in blocks, required to allow Adabas Cluster Services to track the blocks held by Adabas Caching Facility in the different cluster nuclei.
LDEUQP	Changed	Adabas makes an entry in the unique descriptor pool every time a record with a unique descriptor is deleted or altered such that an existing descriptor value is *deleted* from the index. Support was added in Adabas Cluster Services 8.2 SP2 such that Adabas Cluster Services nuclei will also make an entry when a record with a unique descriptor is *inserted* and thus the ADARUN

Parameter	New or Changed?	Description
		LDEUQP parameter setting may require a larger value. Entries in the unique descriptor pool generally exist for the duration of a transaction.
MLWTO	New	Support for the MLWTO parameter is provided in this release of Adabas Cluster Services. Use this parameter to specify whether multi-line messages that are normally written to the operator console as a series of single-line write-to-operator (WTO) messages should instead appear as multi-line WTO messages.

Prerequisites and Required Operating Environment

For information about the operating system and Software AG product requirements for Adabas Cluster Services 8.2, read *Prerequisite Software and Required Operating Environment*, in the *Adabas Cluster Services Installation Guide*.

Adabas Product Support

In general, Adabas Cluster Services version 8.2 supports or is supported by the same add-on products as Adabas 8.2. The following table describes Adabas 8 compatibility with other Adabas products, including prior releases of Adabas itself. You may need to upgrade your installation of the software if your existing release is not listed.

Product	Compatible Version Levels and Notes
Adabas (ADA)	The version used of the Adabas SVC must be the same as or greater than the version of any Adabas database used in your Adabas environment. For example, the Adabas 8.2 SVC can be run in the same environment with Adabas 7.4, 8.1, or 8.2 databases. However, an Adabas 8.2 database cannot run in the same environment with an Adabas 8.1 SVC. For any given database (on disk), the Adabas nucleus and utilities of the same version and release level as the database must be used. If you need to convert a database to a higher version or release level, or revert it to a lower version or release level, the ADACNV utility of the higher level must be used. The Adabas link (Adalink) routines can be used across versions. For example, Adabas 8 link routines can be used to issue calls to Adabas 7 databases. Unless the new ACBX direct call interface is used, Adabas 7.4 link routines can be used to issue calls to Adabas 8 databases. Software AG recommends that you use the Adabas 8 link routines for all programs that issue Adabas direct calls.

Product	Compatible Version Levels and Notes
Adabas Bridge for DL/I (ADL)	Version 2.3 SP1 and above supports Adabas 8.
Adabas Bridge for VSAM (AVB)	Version 5.1 SP1 releases support Adabas 8 databases that do not make use of the expanded features (for example, spanned records, increased limits, or large object fields) available in Adabas 8.
Adabas Caching Facility (ACF)	Version 8.2 and above fully support all Adabas 8.2 databases and expanded features. Adabas Caching Facility 8.1 must be run with Adabas 8. Likewise, Adabas Caching Facility 7.4 must be run with Adabas 7.4. You cannot run Adabas Caching Facility 7.4 with Adabas 8.
Adabas CICS Interface (ACI)	Version 8.2 and above fully supports all Adabas 8.2 databases and expanded features.
Adabas Cluster Services (ALS)	Version 8.2 SP3 supports Adabas 8.2 databases and requires the Adabas 8.2 SP3 load library, with appropriate Adabas 8.2 SP3 zaps applied.
Adabas Delta Save (ADE)	Version 8.2 and above fully support all Adabas 8.2 databases and expanded features. Adabas Delta Save 8.1 must be run with Adabas 8.1. Likewise, Adabas Delta Save 7.4 must be run with Adabas 7.4. You cannot run Adabas Delta Save7.4 with Adabas 8.1.
Adabas Fastpath (AFP)	Version 8.1 and above fully support all Adabas 8.1 databases and expanded features. Version 8.1 and above fully support Adabas 8.2 databases including any features that had been introduced by Adabas 8.1 (no new Adabas 8.2 features are supported), but this support requires additional installation steps and applied zaps. For more information, refer to the instructions provided in **Empower**. Once you have logged into **Empower**, select **Knowledge Center** and then **Technical Papers**. The paper is entitled "Using 8.1.2 ATM, AFP, AVI, AAF, COR with ADA 8.2 SP2 in z/OS".
Adabas IMS Interface (AII)	Version 8.2 and above fully support all Adabas 8.2 databases and expanded features.
Adabas Manager (AMA)	Version 7.5 and 7.6 releases support Adabas 7 and 8.1 databases. Version 7.7 fully supports Adabas 8.2 databases and expanded features. **Note:** Version 7.7 supports Adabas Cluster Services 8.2 and Adabas Parallel Services 8.2, but does not display session-related information from a specific nucleus (NUCID) in a cluster.
Adabas Native SQL (SQL)	Version 2.4 SP1 supports Adabas 8 databases that do not make use of the expanded features (for example, spanned records, increased limits, or large object fields) available in Adabas 8. Full support for Adabas 8 is planned.
Adabas Online System (AOS)	Version 8.2 and above fully support all Adabas 8.2 databases and expanded features. You can also access Adabas 7.4 databases using Adabas Online

Product	Compatible Version Levels and Notes
	System Version 8, but you cannot access Adabas 8 databases using Adabas Online System 7.4.
Adabas Parallel Services (ASM)	Version 8.2 SP3 supports Adabas 8.2 databases and requires the Adabas 8.2 SP3 load library, with appropriate Adabas 8.2 SP3 zaps applied.
Adabas Review (REV)	Version 4.5.1 and above support Adabas 8.2 databases and expanded features. Version 4.4 SP1 supports Adabas 8.1 databases and expanded features. For a complete description of the compatibility between Adabas Review and Adabas 8, read the section entitled *Adabas Review Version Compatibility* in the Adabas Review Release Notes.
Adabas SAF Security z/OS (AAF)	Version 8.1 and above fully support all Adabas 8.1 databases and expanded features. Version 8.1 and above fully support Adabas 8.2 databases including any features that had been introduced by Adabas 8.1 (no new Adabas 8.2 features are supported), but this support requires additional installation steps and applied zaps. For more information, refer to the instructions provided in **Empower**. Once you have logged into **Empower**, select **Knowledge Center** and then **Technical Papers**. The paper is entitled "Using 8.1.2 ATM, AFP, AVI, AAF, COR with ADA 8.2 SP2 in z/OS".
Adabas Statistics Facility (ASF)	Version 8.1 and above fully support all Adabas 8 databases and expanded features. It also supports Adabas 7 databases.
Adabas SQL Gateway (ACE)	Version 6.6 and above support Adabas 8 databases that do not make use of the expanded features (for example, spanned records, increased limits, or large object fields) available in Adabas 8. Full support for Adabas 8 databases and expanded features is planned.
Adabas SQL Server (ESQ)	Version 1.4 SP3 supports Adabas 8 databases that do not make use of the expanded features (for example, spanned records, increased limits, or large object fields) available in Adabas 8.
Adabas System Coordinator (COR)	Version 8.1 and above fully support all Adabas 8.1 databases and expanded features. Version 8.1 and above fully support Adabas 8.2 databases including any features that had been introduced by Adabas 8.1 (no new Adabas 8.2 features are supported), but this support requires additional installation steps and applied zaps. For more information, refer to the instructions provided in **Empower**. Once you have logged into **Empower**, select **Knowledge Center** and then **Technical Papers**. The paper is entitled "Using 8.1.2 ATM, AFP, AVI, AAF, COR with ADA 8.2 SP2 in z/OS".
Adabas Text Retrieval (TRS)	Version 2.1 SP4 works with Adabas 8.2 SP2 when the Adabas Text Retrieval 2.1 SP4 hyperexit TRSHEX12 is enabled to run with the Version 8 interface by applying zaps TR21454 and TR21455. This hyperexit will then only operate with Adabas Version 8. If you then want to run Adabas Text Retrieval 2.1 SP4 with Adabas Version 7 again, you must either undo the zaps or use a copy of the hyperexit where zaps TR21454 and TR21455 are not applied. If

Product	Compatible Version Levels and Notes
	you do use TR21454 and TR21455, the following additional Adabas Text Retrieval fixes must be applied as prerequisite zaps: TR21420, TR21421, TR21422, TR21423 and TR21424. These zaps can be found in Empower. It is not necessary to use the Adabas Hyperexit Stub in conjunction with Adabas Text Retrieval.
Adabas Transaction Manager (ATM)	Version 8.1 and above fully support all Adabas 8.1 databases and expanded features. Version 8.1 and above fully support Adabas 8.2 databases including any features that had been introduced by Adabas 8.1 (no new Adabas 8.2 features are supported), but this support requires additional installation steps and applied zaps. For more information, refer to the instructions provided in **Empower**. Once you have logged into **Empower**, select **Knowledge Center** and then **Technical Papers**. The paper is entitled "Using 8.1.2 ATM, AFP, AVI, AAF, COR with ADA 8.2 SP2 in z/OS".
Adabas Vista (AVI)	Version 8.1 and above fully support all Adabas 8.1 databases and expanded features. Version 8.1 and above fully support Adabas 8.2 databases including any features that had been introduced by Adabas 8.1 (no new Adabas 8.2 features are supported), but this support requires additional installation steps and applied zaps. For more information, refer to the instructions provided in **Empower**. Once you have logged into **Empower**, select **Knowledge Center** and then **Technical Papers**. The paper is entitled "Using 8.1.2 ATM, AFP, AVI, AAF, COR with ADA 8.2 SP2 in z/OS".
Data Archiving for Adabas (ADR)	Version 1.1 supports Adabas 8.1 or above in z/OS environments.
Entire Net-Work (WCP)	Version 6.1 and above fully support Adabas 8 databases and expanded features, as well as ACBX interface direct calls.
Entire System Server	Entire System Server Version 3.4 fully supports Adabas 8 databases and expanded features.
Event Replicator for Adabas (ARK)	Version 3.3 SP2 supports Adabas 8.2 SP2 and 8.2 SP3. Version 3.2 SP1 with additional load library ARF321.L001 supports Adabas 8.2 SP2 and 8.2 SP3. A z/OS Event Replicator Server can also be an Adabas 8.2 SP2 or later nucleus (server). For more information, refer to your Event Replicator for Adabas documentation.
Natural (NAT)	Version 4.2, with Entire System Server 3.3 fully supports Adabas 8.1 databases and expanded features. Please consult the applicable Natural Release Notes for information regarding Natural support of the new Adabas 8.2 features that enhance the Adabas direct call interface.
Predict	Version 4.5 fully supports Adabas 8.1 databases and expanded features. Please consult the applicable Predict Release Notes for information regarding Predict support of the new Adabas 8.2 features that enhance the Adabas direct call interface.

Product	Compatible Version Levels and Notes
EntireX Communicator/webMethods EntireX	Version 7.2 SP1 and later fully support the Adabas 8 SVC and the use of an Adabas 8 database as a persistent store.

Restricted Support for Adabas Features

This section describes facilities of Adabas that are not supported by cluster nuclei running under this Adabas Cluster Services or Adabas Parallel Services version. The facilities are supported normally for noncluster nuclei; however, no Adabas Cluster Services or Adabas Parallel Services functionality is available to them.

For an Adabas nucleus running in cluster mode (CLUSTER=LOCAL or SYSPLEX), the following features are not available and cannot be specified:

- `MODE=SINGLE`

- sequential protection log (DDSIBA)

- synchronous buffer flush (LFIOP=0)

The following features are not currently supported by nuclei running in cluster mode under this Adabas Cluster Services or Adabas Parallel Services version, but may be supported in subsequent versions of the product:

- `READONLY=YES` (receives PARM ERROR 71 if attempted).

- `UTIONLY=YES` can be specified for a cluster nucleus; if you start cluster nuclei with conflicting settings of `UTIONLY`, the system will change them to conform to the setting of the first active nucleus. Currently, however, the `UTIONLY` setting cannot be changed using an ADADBS OPERCOM or Adabas Online System function. Once the cluster is started, the only way to change the `UTIONLY` setting is to bring down the whole cluster and restart it with a different setting.

- online reorder.

Enhanced error recovery is supported; however, option changes are effective only for the local nucleus.

TCP/IP direct links are supported; however, the IP address/port is tied to an individual nucleus.

Migrating from Prior Versions

▶ **To migrate from Adabas Cluster Services 8.2 SP2 to Adabas Cluster Services 8.2 SP3, complete the following steps:**

1   Shut down the whole cluster. Run the Adabas ADARES PLCOPY or ADASAV SAVE utility operations as necessary for your installation. For more information on these utility functions, refer to your Adabas documentation.

2   Replace the load library in your existing installation with the library supplied by Software AG containing Adabas 8.2 SP3 (ADA823.LOAD) and Adabas Cluster Services 8.2 SP3 (ALS823.LOAD) data sets. Then apply the zaps delivered with Adabas Cluster Services 8.2 SP3 and any Adabas Cluster Services zaps and pertinent Adabas zaps downloaded from Software AG's Empower (*https://empower.softwareag.com*) web site.

3   Install the Adabas 8.2 SP3 SVC if you have not already done so.

4   Restart the cluster.

▶ **To migrate from Adabas Cluster Services 8.1 SP3 to Adabas Cluster Services 8.2 SP3, complete the following steps:**

1   Shut down the whole cluster. Run the Adabas ADARES PLCOPY or ADASAV SAVE utility operations as necessary for your installation. For more information on these utility functions, refer to your Adabas documentation.

2   Replace the load library in your existing installation with the library supplied by Software AG containing Adabas 8.2 SP3 (ADA823.LOAD) and Adabas Cluster Services 8.2 SP3 (ALS823.LOAD) data sets. Then apply the zaps delivered with Adabas Cluster Services 8.2 SP3 and any Adabas Cluster Services zaps and pertinent Adabas zaps downloaded from Software AG's Empower (*https://empower.softwareag.com*) web site.

3   Install the Adabas 8.2 SP3 SVC if you have not already done so.

4   Run the ADACNV utility to convert it to Adabas 8.2 format. For more information about using the ADACNV utility, refer to your Adabas 8.2 documentation (available at *http://documentation.softwareag.com/adabas/default.htm*).

5   Restart the cluster.

End of Maintenance

For information on how long a product is supported by Software AG, access Software AG's Empower web site at *https://empower.softwareag.com*.

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

Zap Information

This section covers the following topics related to zaps and your use of Adabas Cluster Services:

- Adabas Zaps on Empower
- Applying Zaps to Adabas Cluster Services Components

Adabas Zaps on Empower

Please be sure to check the Knowledge Center in Software AG's Empower (*https://empower.softwareag.com*) web site for any cluster-related Adabas zaps when you install Adabas Cluster Services. The complete Adabas zaps may not be supplied with your Adabas Cluster Services product.

Applying Zaps to Adabas Cluster Services Components

Usually, zaps for components of Adabas Cluster Services (Adabas nuclei, the SVCCLU component of the Adabas SVC, the ADACOM task) can be applied and made active one component at a time. That is, individual components can be shut down, have the zap applied, and be brought up again without ever shutting down the entire cluster. This is the default method of applying zaps, which is in effect if the zap description does not explicitly state otherwise.

In some cases, it may be possible that applying and activating a zap one component at a time would introduce erroneous behavior in the components that have not yet been zapped. If this is the case for a zap, it will be clearly indicated in the zap description, and instructions will be given for how to apply and activate the zap properly.

Documentation

The documentation for this product is new with this release. When additional updated versions of the documentation are created, you can review them by linking to the Software AG document-

ation web site: *http://documentation.softwareag.com/*. If you have an Empower account, updated and past versions of the documentation can also be reviewed and downloaded by linking to the Software AG Empower web site: *https://empower.softwareag.com*. If you do not have an Empower user ID and password yet, you will find instructions for registering on this site (free for customers with maintenance contracts).

The Adabas Cluster Services documentation includes:

- online HTML topics describing all aspects of the product;

- Adobe Acrobat Reader Portable Document Format (PDF) files created from the HTML topics;

- Adobe Acrobat Reader Portable Document Format (PDF) files for a series of manuals created from the HTML topics.

No hard-copy documentation is provided, but you can print the PDF and HTML files on your local printer.

Viewing Software AG Product Documentation under Windows XP SP2

With Service Pack 2 (SP2) for Windows XP and Service Pack 1 (SP1) for Server 2003, Microsoft introduced a range of powerful new security features that restrict active content that runs locally on your computer. Active content includes ActiveX controls, Java applets, and JavaScript. Software AG's documentation web pages contain some JavaScript, and the SEARCH, INDEX and CONTENTS capabilities are implemented as Java applets. As a result, when viewing documentation web pages that reside on your PC using Internet Explorer and Mozilla Firefox under Windows XP SP2, note that active content is blocked. You must explicitly and repeatedly allow active content if you want to make use of the documentation's full navigation features. Note that this behavior is only observed when reading web pages installed locally on your PC, including those on CD in the PCs CD-ROM drive.

The active content for which Software AG is responsible, that is, the JavaScript code in our HTML documentation pages, will not harm your computers. The risk in using the navigation applets is negligible: Software AG has received no reports from users concerning any harm caused to a computer by the applets. We therefore suggest that when reading Software AG documentation in a local context, you should allow active content via the Security settings in the browser (with Internet Explorer, usually found under Tools > Internet Options > Advanced).

Full details of alternatives can be found on the home page of the suppliers of the navigation applets: *http://www.phdcc.com/xpsp2.htm*.

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