

Adabas Parallel Services

Adabas Parallel Services 7.5 Release Notes

Version 7.5.1

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Adabas Parallel Services

This document applies to Adabas Parallel Services Version 7.5.1 and to 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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1 Adabas Parallel Services 7.5 Release Notes

This document describes the enhancements and changes provided in Adabas Parallel Services version 7.5. Adabas Parallel Services is the multi-update-nuclei implementation of an earlier product, Adabas Support for Multiprocessing (ADASMP).

Error messages, ADARUN parameters associated with the Adabas nucleus, and utility functions used with Adabas Parallel Services are documented in the base Adabas version 7.4 documentation. Parameters associated with the ADACOM program are documented in section *ADACOM Initialization Parameters* in the *Adabas Parallel Services Operations Manual*.

See the section *Utility Processing* in the *Adabas Parallel Services Operations Manual* for pointers to relevant information in the Adabas Utilities documentation.

This document is organized as follows:

• <i>Required Environment</i>	Describes the operating system, Software AG product, and zap requirements for this release.
• <i>Migration from Earlier Releases of Adabas Parallel Services</i>	Provides information on migrating Adabas Parallel Services cluster from older releases to this one.
• <i>Enhancements</i>	Describes the new features in this release of Adabas Parallel Services
• <i>Adabas Add-on Products Overview</i>	Lists the Adabas add-on products supported by this release of Adabas Parallel Services.

2 Required Environment

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This chapter covers the following topics:

Operating System Environment

Adabas Parallel Services version 7.5 requires

- OS/390 version 2, release 10
- z/OS version 1, releases 1-4
- z/OS version 1, release 5 if you want to use global cache in shared 64-bit addressable storage (parameter CLUCACHETYPE=V64)
- z/OS.e *, releases 3-4
- VSE/ESA version 2, releases 5, 6, and 7
- BS2000: For information on the BS2000 OSD versions supported by this release of Adabas Parallel Services, access Software AG's ServLine24 web site at <http://servline24.softwareag.com/public/>. In the left menu of this web page, expand **My ServLine24** 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 review platform support information for specific Software AG products and releases.

* Support for z/OS.e is currently restricted to client programs executing in batch, or under TSO or Com-plete.

Software AG Product Environment

Adabas Parallel Services version 7.5 requires Adabas version 7.4.2 or later. The FRZ.ADA744.MVSLX01 dataset, included with Adabas 7.4.4, includes all the current LX dataset maintenance available to use Adabas Parallel Services 7.5.1 with Adabas 7.4.4 or its prior releases.

If, however, you have only Adabas 7.4.2 installed, the following zaps must be applied if Adabas Parallel Services version 7.5 is to function properly:

- AI742026
- AI742027
- AI742029
- AN742149

In z/OS or OS/390 environments, the following additional zaps must also be applied to Adabas 7.4.2 systems:

- AO742020

- AO742021

For BS2000 environments, Software AG recommends that you use Adabas version 7.4.4. If, however, you are using Adabas 7.4.3, you must apply zap AB743002. In addition, if Adabas version 7.4.2 is used, the following additional zaps must be applied:

- AB742015

AB742019, AB742020, and AB742021

AB742023, AB742024, and AB742025

AB742027

AB742029 through AB742036

AB742045



Note: AB742030 needs an expansion to ADAMP2 (for more information, please see the description of this zap).

- AI742001

AI742019

AI742026

AI742028

AI742038

AI742039

- AN742026

AN742032

AN742044

AN742048 and AN742049

AN742064

AN742087

AN742101

AN742105 and AN742106

AN742216

AN742221

■ AU742006

AU742012

If you are using Adabas 7.4.2 in VSE environments, the following additional zaps must be applied:

■ AD742009

■ AD742019

■ AD742020

■ AD742023

■ AD742053

Please check ServLine24 for cluster-related Adabas zaps as well, when installing Adabas Parallel Services version 7.5.

If Entire Net-Work 5.8.1 is installed, the following zap must also be applied: WM58074M.

If you install Adabas Online System (AOS), either the demo version delivered with Adabas 7.4 or the version 7.4 AOS selectable unit is required. AOS is compiled under Natural version 3.1 and runs on that and all subsequent versions of Natural.

The full version 7.4 AOS selectable unit is required for the triggers and stored procedures facility.

Applying Zaps to Parallel Service Components

Usually zaps for Parallel Services nuclei can be applied and made active one nucleus at a time. That is, individual nuclei can be shut down, have the zap applied, and be brought up again without ever shutting down the entire cluster. This is the default way 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 nucleus at a time would introduce erroneous behavior in the nuclei 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.

Zaps to the SVCCLU component of the Adabas router (Adabas SVC), as well as the ADACOM task/job, always require the shutdown of the entire cluster before they can be activated, since every Parallel Services cluster works with only one router (SVC) and one ADACOM, and since both must stay active as long as the cluster is active.

3 Migration from Earlier Releases of Adabas Parallel Services

All nuclei of an Adabas Parallel Services cluster must migrate to version 7.5 at one time. Different releases of Parallel Services cannot coexist in the same cluster.

It is possible to run Adabas Parallel Services 7.4 with the ADASVC from the Adabas Solution tape containing the data set ADA742.LX01. If you run multiple databases with Parallel Services 7.4, you can migrate them to version 7.5 one by one.

4 Enhancements

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This chapter describes the enhancements made to Adabas Parallel Services in version 7.5.

Shared 64-Bit Addressable Virtual Storage

On z/OS systems running version 1 release 5 or later, global cache data can now be maintained in two ways: the traditional dataspace and shared 64-bit addressable virtual storage. When only a dataspace is used for global cache, the maximum size is 2 GB, a limit imposed by the operating system. However, using 64-bit addressable virtual storage for global cache, the operating system's virtual storage constraint is eased and the maximum size of the cache is now extended from 2 GB to tens of GB.

To accommodate the shared 64-bit global cache, a new ADARUN parameter, CLUCACHETYPE, has been added and use of the CLUCACHESIZE parameter has been slightly modified. When CLUCACHETYPE is set to V64 (activating the shared 64-bit global cache), the CLUCACHESIZE parameter is used to specify the amount of shared 64-bit virtual storage to use for cached data.

To use shared 64-bit global cache, Adabas Parallel Services version 7.5 must be running under z/OS version 1 release 5 or later. Your systems programmers must also enable shared 64-bit virtual storage in SYS1.PARMLIB.

For more information about using 64-bit addressable virtual storage, read *Global Cache Storage Options* in the *Adabas Parallel Services Concepts and Facilities Manual*.

CLUCACHETYPE: Type of the Global Cache

Parameter	Specify...	Possible Values	Default
CLUCACHETYPE	the virtual storage construct for the global cache.	DSP V64	DSP

Use the CLUCACHETYPE parameter of ADARUN to specify the virtual storage construct for global cache. Valid values are DSP (available on all supported operating systems) and V64 (available only on z/OS systems running version 1 release 5 or later).

The default value is DSP, indicating a dataspace of the size specified by the CLUCACHESIZE parameter of ADARUN will be used for both control structures and cached data. When only a dataspace is used for global cache, the maximum size is 2 GB, a limit imposed by the operating system.

If V64 is specified, the setting of the CLUCACHESIZE parameter is used to specify the amount of shared 64-bit virtual storage that will be used for cached data. In this case, a dataspace will still be created to contain control structures such as cache directories and indices. It is not necessary to specify the size of the control structure dataspace, but note that the dataspace is constrained by its 2 GB limit for control structures. Consequently, the maximum size of the shared 64-bit cache

depends on ADARUN parameters DIRRATIO and ELEMENTRATIO (the ratio of directory entries to data elements) and the block sizes of the DATA and ASSO database files.

To use the 64-bit global cache, Adabas Parallel Services must be running under z/OS version 1 release 5 or later. Your systems programmers must also enable shared 64-bit virtual storage in SYS1.PARMLIB.

New Messages

The following new messages were added or changed to support the use of 64-bit addressable virtual storage for the global cache.

ADAS21 REPLACED SVC CSA NOT RELEASED, {nn} PENDING RESOURCE MANAGERS

Explanation: ADASIP is being used to reinstall a copy of the ADABAS SVC, replacing an existing instance that was installed in CSA with ADASIP. ADASIP cannot release the CSA storage used by the existing instance because one or more z/OS Resource Manager routines may be pending.

Action: ADASIP installs the new SVC instance and does not release the CSA used by the previous instance.

ADAS30 {nn} SVC WORKAREAS RELEASED

Explanation: During termination, the server will release work areas that were obtained in the server's address space by the SVC to process user commands. The number of work areas is the high-water mark of the number of simultaneous processes.

Action: Information only, no action required.

ADAS31 SERVICE ABTERM RESOURCE MANAGER { ADDRSPC TERM | TASK TERM} SERVICE ABTERM RESOURCE MANAGER RELEASED IDTE

Explanation: A z/OS Resource Manager recovery routine was entered after a server address space abend to release the IDTE.

Action: If the release was successful, it will not be necessary to specify ADARUN FORCE=YES when restarting.

ADAS32 S64 {scope} AFFINITY RESOURCE MANAGER {event} S64 OBJECT AT {address} S64 OBJECT USER TOKEN IS {token} S64 {scope} AFFINITY RELEASED S64 {scope} AFFINITY RELEASED {return-code}/{reason-code}

Explanation: A z/OS Resource Manager recover routine was entered after an abend to release a local or system affinity to a z/OS-shared 64-bit addressable memory object. Any non-zero return code received from z/OS IARV64 is shown.

Action: If the attempt fails, examine the IARV64 return and reason code description in IBM documentation. If the cause is not clear, notify your Software AG technical support representative.

ADAX5B {dbid} CONNECTING TO S64 CACHE AT {address}
 {dbid} CONNECT TO S64 CACHE RETURN CODE {ADAIOR - rc/zOS-rc/zOS-rc}
 DISCONNECTING FROM S64 CACHE
 DISCONNECT FROM S64 CACHE RETURN CODE {ADAIOR-rc/zOS-rc/zOS-rc}

Explanation: Adabas Parallel Services is using z/OS shared 64-bit addressable storage as part of its cache configuration. Connecting to the S64 object establishes a local affinity and makes the object addressable. Disconnecting deletes the affinity, after which the object is no longer addressable. Any non-zero return code received from z/OS IAFV64 is formatted.

Action: If the attempt fails, examine the IARV64 return and reason code description in IBM documentation. If the cause is not clear, notify your Software AG technical support representative.

DSP003 DATASPACE MAY ALREADY EXIST, ATTEMPTING DELETE

Explanation: If the first member nucleus of an Adabas Parallel Services cluster attempts to allocate a dataspace, a dataspace may already exist, possibly as the result of a previous abend for which recovery was unsuccessful. The deletion attempt will generate DSP005 messages, after which the allocation attempt will be retried.

Action: If you receive an error due to invalid sizes, review your ADARUN parameters, correct the error, and restart ADACOM. All other messages are for information only and require no action.

DSP010 S64 OBJECT BEING ALLOCATED I {CACHE | LOCK | MESSAGE}
 S64 OBJECT MAY ALREADY EXIST AT {address}
 ATTEMPTING DELETE
 ALLOCATION TOKEN IS {token}
 REQUESTED SIZE IN MB (ROUNDED) IS {size}
 FUNCTION COMPLETED NORMALLY
 ADDRESS IS {address}
 ERROR: RETURN CODE 12, REASON CODE {zOS-re zOS-reason-code}
 ERROR: RETURN CODE 12, REASON CODE {zOS-re zOS-reason-code}
 ERROR:ABEND CODE {system-code}, REASON CODE {reason-code}

Explanation: This series of messages describe an attempt to allocate a shared 64-bit addressable memory object of the specified type. If the allocation is successful, the address of the object is shown. If ADAIOR reports return code 12, the z/OS return and reason codes are shown. If the request resulted in an abend, the system and reason codes are shown.

If the first member nucleus of an Adabas Parallel Services cluster attempts to allow a S64 object, one may already exist, possibly as the result of a previous abend for which recovery was unsuccessful. The deletion attempt will generate DSP01I messages, after which the allocation attempt will be retried.

- Action:** If the request fails, examine the z/OS IARV64 abend, return, and reason code descriptions in IBM documentation. If the cause is not clear, notify you Software AG technical support representative.
- DSP011** **S64 OBJECT BEING DELETED IS {CACHE | LOCK | MESSAGE}**
S64 OBJECT MAY ALREADY EXIST AT {address}
ALLOCATION TOKEN IS {token}
ACTUAL SIZE IN MB IS {size}
ADDRESS IS address
FUNCTION COMPLETED NORMALLY
ERROR: RETURN CODE 12, REASON CODE {zOS-rc }{zOS-rsn-code}
ERROR: ABEND CODE {system-code}, REASON CODE {reason-code}
- Explanation:** This series of messages describe an attempt to delete a shared 64-bit addressable memory object of the specified type. If ADAIOR reports return code 12, the z/OS return and reason codes are shown. If the request resulted in an abend, the system and reason codes are shown.
- Specifically, what is being deleted is the z/OS system affinity.. A z/OS S64 memory object will not actually be deleted until all local affinities are also deleted. A local affinity is created when a Parallel Services nucleus establishes a connection with the S64 object in its own address space. Local affinities are deleted when the nucleus ends.
- Action:** If the request fails, examine the z/OS IARV64 abend, return, and reason code description in IBM documentation. If the cause is not clear, notify your Software AG technical support representative.
- PLX056** **{dbid} DATASPACE/S64 ACQUISITION FAILED**
- Explanation:** The Adabas Parallel Services nucleus was unable to connect to a storage object. Further details are available in the assoassociatededicated ADACOM job's messages.
- Action:** If the cause is not clear after examining the messages in the associated ADACOM, notify your Software AG technical support representative.
- PLX057** **{dbid} DATASPACE/S64 DELETE FAILED**
- Explanation:** The Adabas Parallel Services nucleus was unable to delete a storage object. Further details area available in the associated ADACOM job's messages.
- Action:** if the cause is not clear after examining the messages in the associated ADACOM, notify your Software AG technical support representative.

PLX087 {dbid} ATTEMPTING TO CREATE DATASPACES/S64

Explanation: ADACOM is attempting to allocate cluster data spaces and shared 64-bit addressable memory objects based on settings available in the first Adabas Parallel Services cluster nucleus to start. This message also occurs as other cluster nuclei start, even though the cluster data spaces and S64 objects have already been allocated.

PLX097 dbid DATASPACES AND S64 OBJECTS ACQUIRED

Explanation: The cluster data spaces and shared 64-bit addressable memory objects have been successfully allocated.

Action: Information only, no action required.

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Adabas Add-on Products Overview

Adabas Parallel Services version 7.5 supports add-on products as follows:

Adabas Product	Compatible Version Level
Adabas Caching Facility (ACF)	version 7.3 (initial release) or 7.4
Adabas Delta Save Facility (ADE)	version 7.4
Adabas Fastpath (AFP)	version 7.3 or above
Adabas Manager (AMA)	version 1.1.1 or above
Adabas Online System (AOS)	version 7.4
Adabas Review (REV)	version 4.3 Upgrade Adabas Review to version 4.3 first; then upgrade Adabas to version 7.4.
Adabas SAF Security (AAF)	version 7.3 or above
Adabas Statistics Facility (ASF)	version 7.1
Adabas Transaction Manager (ATM)	version 7.4 Adabas Parallel Services does not yet fully support distributed transactions, but provides limited support through DTP=ET.
Adabas Vista (AVI)	version 7.3 or above

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