Adabas Bridge for DL/1

Release Notes for Adabas Bridge for DL/I Version 2.3.1

Version 2.3.1

June 2008

Adabas Bridge for DL/1

This document applies to Adabas Bridge for DL/1 Version 2.3.1 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 Bridge for DL/I Version 2.3.1 Release Notes

This documentation provides an overview of the Release Notes for the Adabas Bridge for DL/I Version 2.3.1.

The following topics are covered:

	Introduction
	Supported Platforms
	Enhancements
	Dropped Features
	Upgrade to ADL 2.3
	Limitations and Restrictions
	Software AG Product Compatibility
	End-of-Support Dates
	Documentation

2 Introduction

These Release Notes describe the enhancements provided with Version 2.3.1 of the Adabas Bridge for DL/I (ADL). This version contains all Zaps, INPL updates and source changes applied to ADL 2.2.2 as error corrections.

Important: Before you can run with ADL 2.3 some special tasks are required:

- Migrate the data and definitions to the ADL 2.3 layout.
- Re-link z/OS CICS applications.
- Replace the Consistency table of non-converted Adabas files DAZNCF by the table of converted Adabas files DAZTCF.
- To activate ADL under z/OS CICS, an SVC must be installed.

These tasks are described in the section **Upgrade to ADL 2.3**.

3 Supported Platforms

ADL Version 2.3 is released for the following operating environments and TP monitors:

- z/OS: All versions currently supported by IBM.
- z/VSE: All versions currently supported by IBM.
- CICS: Release 3.2 and above (if supported by IBM)
- IMS/TP: All versions currently supported by IBM

4 Enhancements

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This document describes the enhancements that have been made to ADL version 2.3. It is divided into the following sections:

Changes Related to Adabas

This section covers the following topics:

- Support of Adabas 4-byte ISN
- Support of Adabas 2-byte DBID and File Number

Support of Adabas 4-byte ISN

ADL 2.2 supported only 3-byte ISNs which restricted the maximum ISN value to 16.777.215. ADL 2.3 supports 4-byte ISNs which allows having up to 4.294.967.293 records in a file.

Support of Adabas 2-byte DBID and File Number

ADL 2.2 supported only 1-byte DBIDs and file numbers which restricted the maximum value to 255. ADL 2.3 supports 2-byte DBIDs and file numbers which allows having DBIDs in the range of 1 - 65535 and file numbers in the range of 1 - 65534. The ADL directory DBID and file number can be in the range from 1 to 32767.

Changes Related to Natural

This section covers the following topics:

- ADL Online Services Support of New Natural Versions
- ADL Consistency Support of New Natural Versions
- Table of Converted Files
- More Detailed ADL Consistency Status
- De-synchronization of the ADL CALLDLI and Native Adabas
- Natural for DL/I to Natural/Adabas Conversion

- Natural for DL/I INQY (Inquiry) Call

ADL Online Services Support of New Natural Versions

The ADL Online Service is cataloged with Natural 4.1. It is able to run under all Natural versions supporting Natural 4.1 cataloged programs.

ADL Consistency Support of New Natural Versions

The ADL Consistency supports all Natural versions currently supported by Software AG.

Table of Converted Files

The ADL Consistency table of non-converted Adabas files DAZNCF has been replaced by the table of converted Adabas file DAZTCF. DAZTCF supports 2-byte DBIDs and file numbers. For further information see *Consistency Interface* in the section *Batch Installation and Operation* of the *ADL Interfaces* documentation.

More Detailed ADL Consistency Status

The subprogram ADLACTIV, which verifies whether the ADL Consistency is active, returns additional response codes. For further information see the section *Using ADL Files with Natural/Adabas* in the *ADL Interfaces* documentation.

De-synchronization of the ADL CALLDLI and Native Adabas

Adabas calls issued by the ADL CALLDLI Interface and calls issued directly in the program can be de-synchronized with the parameter setting `ADAUSR=YES`. For further information see the section *CICS Installation and Operation* in the *ADL Interfaces* documentation.

Natural for DL/I to Natural/Adabas Conversion

The new section *Converting "Natural for DL/I" Programs* in the *ADL Interfaces* documentation describes what you can achieve and what you must respect when you convert a Natural for DL/I program to a "normal" Natural/Adabas program.

Natural for DL/I INQY (Inquiry) Call

ADL supports the INQY (Inquiry) call issued by Natural for DL/I.

Enhanced Usage of ADL in Batch, CICS and IMS/TP

This section covers the following topics:

- Improved CALLDLI interface
- Language Parameter for ADL Batch Interface
- Simplified Batch TRACE Parameter
- Support of New CICS Versions
- CICS Release Independent Language Interface
- CICS SVC
- CICS Storage Protection
- Storage and Buffer Allocation under CICS
- Storage and Buffer Allocation under IMS/TP

Improved CALLDLI interface

- Call with implied (i.e. missed level) SSA has been revised.
- The delete and replace logic after an unsuccessful path call has been revised.
- Internal fields are only read from Adabas when needed. This reduces not only the amount of data to be shipped but can also improve performance especially when the Adabas Multifetch feature is used.
- The symbolic restart (XRST call) in batch has been revised.

Language Parameter for ADL Batch Interface

A new parameter `LANG` (language) for ADL batch interface DAZIFP is available with the same meaning as the `LANG` parameter in the PSB. It overwrites the language of the PSB. This allows for example to run a DAZZLER stream against a PL/I PSB without the need to generate a new PSB.

Simplified Batch TRACE Parameter

The `TRACE` parameter of DAZIFP can be specified without trailing commas, e.g.

```
TRACE=(RD)
```

Support of New CICS Versions

ADL 2.3 runs under CICS TS 3.2 and below. Note that ADL 2.2 offered only a restricted support for CICS TS 3.1 and did not support CICS TS 3.2.

The ADL load library contains modules which are CICS release dependent. The members in the standard z/OS load library are for CICS TS 3.1 and CICS TS 3.2. When you run under CICS TS 2.3 or below, the ADL.LC23 library must be concatenated in front of the ADL load library.

Under z/VSE, the ADL load library contains the CICS TS 1.1 modules.

CICS Release Independent Language Interface

The ADL 2.2 language interface (DAZLICI2) for z/OS CICS programs was CICS release dependent and did not support CICS TS 3.1 and above. The old language interface is replaced by the new language interface DAZLICI3 which is CICS release independent. All programs which have been linked with DAZLICI2 must be relinked with DAZLICI3.

The ADL language interface provides a new entry point “CEETDLI” to support the IBM language environment (LE) compiler.

CICS SVC

ADL requires an SVC to get control under z/OS CICS. You must specify the SVC parameter in the ADL parameter module and install the ADL SVC in CICS as described in the section *CICS Installation and Operation* of the *ADL Interfaces* documentation.

CICS Storage Protection

CICS applications running against the ADL can use the CICS storage protection feature.

Storage and Buffer Allocation under CICS

ADL 2.3 allocates most storage and buffers under CICS above the line. Some areas must still be allocated below the line because of restrictions when running against HLPI in mixed mode.

ADL has reduced the frequency of storage allocation to improve the performance of online applications.

Storage and Buffer Allocation under IMS/TP

ADL has reduced the frequency of storage allocation to improve the performance of online applications.

Enhanced ADL Conversion and Maintenance tools

This section covers the following topics:

- ADL Conversion Utility Enhancements
- Pseudo mixed mode for unload utility
- Performance improvement for building up logical relationships
- Simplified handling of migrated files

ADL Conversion Utility Enhancements

- The Logical ID of the DBD/segment can be specified at the DBD conversion with the LOGID parameter of the GENDBD/GENSEG function. The logical ID replaces the former DBID and file number info in the ADL internal fields. See *ADL Conversion Utilities for DBDs and PSBs* in the *ADL Conversion* documentation for more information.
- It is possible to omit the DBID parameter at the DBD conversion. At runtime the DBID of the ADL directory will be taken for such a DBD. This easies the creation of mirror databases. For more information see the section *Managing ADL Files* in the *ADL Interfaces* documentation.
- A segment may have the same name as the DBD.
- When loading segments with variable length, the data is correctly initialized.

Pseudo mixed mode for unload utility

The ADL unload utility DAZUNDLI can run in *pseudo mixed mode*. This simplifies the reorganization of migrated files. Pseudo mixed mode is described in detail in the section *Managing ADL Files* of the *ADL Interfaces* documentation.

Performance improvement for building up logical relationships

When DBDs are connected with logical relationships, the ADL utility DAZELORE must run to connect the corresponding data. This must be performed at the initial load and at the reorganization of the data. A new run mode TURBO has been defined for the DAZELORE utility. This mode is much faster than the SPECIAL procedure. With the TURBO version of DAZELORE about 70% of the elapsed time can be saved, e.g. a run which has required 11 hours with the SPECIAL procedure, has only required 3.3 hours with `MODE=TURBO`.

The NUMLC parameter has been replaced by the NUMCP parameter, and the new parameters RESTART and MAXDPISN have been added.

See *Establishing Logical Relationship* in the section *ADL Data Conversion Utilities* of the *ADL Conversion* documentation for a detailed description.

Simplified handling of migrated files

With the introduction of logical IDs, the concept of logical file numbers has become obsolete. The DAZLDT entries can be removed from the ADL parameter source. The new concept simplifies the handling of migrated files as described in the section *Managing ADL Files* of the *ADL Interfaces* documentation.

Enhanced ADL Online Services

This section covers the following topics:

- List applied zap numbers in the ADL Online Services

- Enhanced List Segment Menu

List applied zap numbers in the ADL Online Services

The numbers of the zaps applied to the ADL CICS nucleus can be viewed in the ADL Online Services. See the section *ADL Online Services* in the *ADL Interfaces* documentation for further details.

Enhanced List Segment Menu

The List Segment Menu in the ADL Online Services displays the logical ID specified for the DBD/segment. See the section *ADL Online Services* in the *ADL Interfaces* documentation for further details.

Other enhancements

This section covers the following topics:

- SQL access to migrated data
- Enhanced support of GSAM databases
- ADL Installation Verification Package

SQL access to migrated data

With the Adabas SQL Gateway, the migrated DL/I data can be accessed quickly and easily by any ODBC, JDBC, OLE DB or .NET standard SQL application. IT and business users also can access the data with SQL-based reporting tools, such as Business Objects, Crystal Reports and MS Office. See the section *SQL Access to the Migrated Files* in the *ADL Interfaces* documentation for further details.

Enhanced support of GSAM databases

A GSAM data base uses the Generalized Sequential Access Method (GSAM) under DL/I. ADL 2.2.2 has supported GSAM under z/OS batch and IMS/TP with some restrictions. ADL 2.3 supports GSAM also under z/OS CICS, z/VSE batch and z/VSE CICS.

With ADL 2.3 the ADACMP cards for a GSAM DBD are generated automatically.

For a detailed description see the section *Migration of a GSAM Data Base* in the *ADL Conversion* documentation.

ADL Installation Verification Package

The ADL Installation Verification Package (IVP) provides you with a full DL/I application environment. It can be used to verify the successful installation of the ADL. It helps to gain experience in the ADL concepts and the various ADL tools. If you do not yet have DL/I or Adabas knowledge, you will learn about the most important terms of the both database systems, and how ADL connect the both. The detailed description can be found in the new chapter *ADL Installation Verification Package* in the *ADL Installation* documentation.

5 Dropped Features

- Logical File Numbers 18
- Internal Pointer Fields Processing Sequence 18
- Table of Non-Converted Adabas Files 18
- Predict Integration 18

This section covers the following topics:

Logical File Numbers

With the introduction of logical IDs, the concept of logical file numbers has become obsolete. The DAZLDT entries can be removed from the source of the ADL parameter module.

Internal Pointer Fields Processing Sequence

The `SEQ` (processing sequence) parameter of the DBDGEN function of the ADL Conversion Utility has become obsolete. ADL 2.3 uses a new layout which is the only one supported. The new layout of the ADL internal pointer field has the same performance advantages as the previous `SEQ=SEG` setting. For further information on the new layout see section *Performance Considerations* in the *ADL Interfaces* documentation.

Table of Non-Converted Adabas Files

The ADL Consistency table of non-converted Adabas files DAZNCF has been replaced by the table of converted Adabas file DAZTCF. For further information on DAZTCF see *Consistency Interface* in the section *Batch Installation and Operation* ot the *ADL Interfaces* documentation.

Predict Integration

The current version of ADL does not support a Predict integration of the migrated structures.

6 Upgrade to ADL 2.3

The tape delivered for ADL 2.3 may be considered as a normal installation tape as described in the ADL Installation documentation.

However, if ADL is already installed, follow the steps outlined in *Upgrading to New ADL Releases* in section *Miscellaneous* of the *ADL Installation* documentation. Additionally to the general procedure, all data which have been converted with ADL 2.2 or below must be migrated to the new ADL 2.3 layout. See *Migration to ADL 2.3 and Backward Migration* in the *ADL Installation* documentation.

The following ADL procedures have been changed with ADL 2.3:

- The SEQ parameter in the DBD conversion has become obsolete. A new parameter LOGID is defined for the DBD conversion. It is only required if the data has been migrated from ADL 2.2 or if the database is involved in logical relationships. See *ADL Conversion Utilities for DBDs and PSBs* in the *ADL Conversion* documentation.
- The Consistency table of non-converted Adabas files DAZNCF must be replaced by the table of converted Adabas file DAZTCF. See *Consistency Interface* in the section *Batch Installation and Operation* of the *ADL Interfaces* documentation for further information.
- The ADL substitute for the Adabas link module in batch, ADALNK must be linked with the Adabas link-globals-table LNKGBLS when running with Adabas version 8 or above. See the section *z/OS Installation* or *z/VSE Installation* in the *ADL Installation* documentation for details.
- The activation of ADL under z/OS CICS requires the installation of an SVC. See *CICS Installation and Operation* in the *ADL Interfaces* documentation for further information.
- z/OS CICS application programs which have been linked with the ADL language interface DAZLICI2, must be re-linked with the new language interface DAZLICI3. This is especially true for all precompiled EXEC DLI programs. See *CICS Installation and Operation* in the *ADL Interfaces* documentation for further information.

7 Limitations and Restrictions

The DL/I features not supported are listed in the section *Introduction* of the *ADL Installation* documentation.

The ADL Consistency does not support the new extended Adabas control block (ACBX). Any call using the ACBX is forwarded to Adabas. This is in general no problem because Natural uses the ACBX only if the Adabas file makes use of expanded features (for example, spanned records, increased limits, or large object fields). And since ADL files do not contain expanded features, Natural uses the ACB when accessing migrated data.

8 Software AG Product Compatibility

Product	Compatible Version Levels and Notes
Adabas (ADA)	ADL supports all Adabas versions currently supported by Software AG. When you run the ADL Consistency in CICS with Adabas version 8.1, a correction must be applied to Adabas (CI812002 for Adabas 8.1.2 or CI813001 for Adabas 8.1.3).
Natural (NAT)	The ADL Online Service is cataloged with Natural 4.1. It is able to run under all Natural versions supporting Natural 4.1 cataloged programs. The ADL Consistency supports all Natural versions currently supported by Software AG.

9 End-of-Support Dates

For information on how long a product is supported by Software AG, 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 request support information for specific products and releases.

10 Documentation

The Adabas Bridge for DL/I version 2.3.1 is delivered with the following documentation:

Adabas Bridge for DL/I 2.3.1 Release Notes

It describes the supported platforms, enhanced and dropped features, how to upgrade to ADL 2.3, limitations and restrictions, product compatibility, end-of-support dates and the documentation of ADL.

ADL Installation Documentation

It describes the installation of the ADABAS Bridge for DL/I related to the different operation system environments. Additionally it describes the ADL Installation Verification Package.

ADL Conversion Documentation

It describes the conversion of the data definitions and of the data.

ADL Interfaces Documentation

It covers :

- the installation and operation of the CALLDLI and Consistency Interface in a batch environment and in the online environment related to the TP monitor in use.

Further it describes:

- the ADL Online Services,
- the ADL Precompiler,
- Natural programming against migrated data,
- how to convert Natural for DL/I programs,
- the SQL access to migrated files,

- the ADL trace facility,
- the DAZZLER test utility,
- the managing of ADL files,
- performance considerations, and
- recovery and restart procedures.

ADL Messages and Codes Documentation

It comprises a list of all error codes and messages issued by ADL together with a glossary of terms related to DL/I, Adabas and ADL.