ADABAS SQL Server 1.4.3

Release Notes for UNIX and OpenVMS

Manual Order Number: ESQ143-008UNV

This document applies to Adabas SQL Server Version 1.4.3 for UNIX and OpenVMS 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.

Readers' comments are welcomed. Comments may be addressed to the Documentation Department at the address on the back cover or to the following e-mail address:

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ADABAS SQL SERVER VERSION 1.4.3
RELEASE NOTES FOR UNIX AND OPENVMS

Hardware and Software Prerequisites

Adabas SQL Server is available only on the platforms listed in the table below.

Hardware	Operating System	Adabas	Net-Work (WCP)	Adabas ODCB Client (AOC)
Intel	SCO Unixware 7.1 SCO Unixware 2.1	2.2.3.45	2.1.1.14	2.1.1.1
HP9000 S800 S700	HP–UX 10.20 HP–UX 11.0 (32 Bit)	3.1	2.1.1.2	2.1.1.1
IBM RS/6000	AIX 4.2, AIX 4.3.2	3.1	2.1.1.2	2.1.1.1
Sun Sparc/ Ultrasparc	Solaris 2.6	3.1	2.1.1.2	2.1.1.1
Intel	Windows NT 4.0	3.1	2.1.1.2	2.1.1.1
Digital Alpha	Digital True64 Unix 4.0.d	3.1.1.12	2.1.1.2	2.1.1.1
Digital Alpha	OpenVMS 6.2	4.1.1	3.2.3	2.1.1.1
Digital VAX	OpenVMS 6.2	4.1.1	3.2.3	2.1.1.1

Support for Adabas SQL Server Versions

Product	Released	End of Support
Adabas SQL Server Version 1.4.2	November 1997	December 1999
Adabas SQL Server Version 1.4.3	July 1999	Current version

Important Information for UNIX Platforms

Adabas SQL Server 1.4.1 can NOT be used together with Adabas 3.1.1.

Adabas SQL Server 1.4.2 can be used together with Adabas 2.2.3 and above.

What Is New In Version 1.4.3

Version 1.4.3.1 is a patch level. There are bug fixes plus the following items within this version:

- Support for Natural ADVANCED Interactive Facilities has been removed on UNIX platforms.

Hints and General Information

Additional Information for Adabas 3.1 and Higher

Before starting your Adabas 3.1 database, ensure that the nucleus parameters in the file $ADADIR/db$ESQDBID/adanuc.bsh are set as required for Adabas SQL Server. The recommended minimum values are described in the *Installation and Operations Manual for UNIX*, Page 18.

An additional recommended parameter for Adabas 3.1 is:

nisnhq = 500

Starting an Adabas SQL Server Server using the esqstart Command

When you start an Adabas SQL Server Server using the esqstart command, the message

```
%ESQSTA–W–NOTACT,  NET–WORK not active
```

may be generated. This does not necessarily mean that Net–Work is not active due to some incompatibilities with some UNIX architectures. To find out if this is the case, execute the following command:

```
showipc –u <user–id>
```

where <user–id> is the user that started Net-Work. If the result of this command shows a line where the DBID field is set to “NET”, then Net-Work is active and the warning can be ignored.

Creating a New Server Using esqgen

When you create a new server using esqgen, the process may terminate with a rather cryptic message. The reason is that the DBID was not set, even though it is specified as a parameter in the esqgen parameter list. The work around (and hence a prerequisite) is to set the DBID using assign tool.

Hint when using Dynamic SQL and Adabas SQL Server Data Type DECIMAL

In the *Adabas SQL Server Programmer's Guide*, Page 96, it states that the SQLLEN encodes the precision and scale for columns of type DECIMAL by using the first byte to represent the precision and the second byte to represent the scale. This is meant to be taken literally; by converting the SQLLEN field into a 2 byte array, it is then possible to get the precision and scale without worrying about the Endian of your machine. The following macro for the programming language C may be used on all platforms without modification:

```
#define  SQLDA_GET_DECIMAL_PREC_SCALE(sqllen,sql_precision,sql_scale) \
              sql_precision = (int)(((char *)&sqllen)[0]); \
              sql_scale     = (int)(((char *)&sqllen)[1]);
```

Additional Hint for HP-UNIX

In case of an error message

```
9657 BUFFER MANAGER SERIALIZATION CALL FAILED
```

or

```
8612 ESQLNK ROUTER CALL FAILED WITH RESPONSE %S %S,
```

check the kernel parameters

SEMUME semaphore undo entries per process

SEMMNU number of semaphore undo structures

and increase their values according to your needs.

Additional Information for Digital UNIX

Using sources precompiled on any other UNIX plaform prior to Adabas SQL Server Version 1.4.1.3 will not run on Digital UNIX.

Corrections of Known Faults

The list below provides all problems and error corrections currently known, and even though it was set up with greatest diligence it cannot be complete. The list, therefore, does not give any guarantee regarding functionality either of the error corrections or the software involved or regarding the completeness of the problems and corrections stated.

Changes made for Adabas SQL Server Version 1.4.2 Patchlevel 2

This version was released only on OpenVMS.

Changes made for Adabas SQL Server Version 1.4.2 Patchlevel 8

Adabas SQL Server Version 1.4.2 is available on several porting platforms. The porting experience has flown back into development and is represented by Patchlevel 8. This was necessary due to internal versioning reasons.

Modifications have been made to the internal architecture of the utility esqgen. Although these modifications alter neither the functionality nor the call interface in any way, they do alter the appearance of the protocol.

Changes made for Adabas SQL Server Version 1.4.2 Patchlevel 9

The CREATE TABLE DESCRIPTION statement is designed to return the response of 4814 in the case of recognizing two superdescriptors having the same parent fields. In general, this may not happen with the specification of an FDT, too.

Adabas C usually defines by itself the rules for the generation of the superdescriptor’s format. Adabas C (OpenVMS) offers a special feature to allow the specification of two superdescriptors within an FDT having the same parent fields, but having different formats (see the *Adabas C (OpenVMS) Utilities Manual* / ADAFDU section).

The format information is not available to Adabas SQL Server. Adabas SQL Server at data definition time as well as at data manipulation time considers the formats following the rules defined by Adabas C.

The response code now will not appear if either no or only the first superdescriptor is referenced by the CREATE TABLE DESCRIPTION statement.

At data manipulation time, the superdescriptor in use is expected not to have unpacked (U) format.

Changes made for Adabas SQL Server Version 1.4.2 Patchlevel 10

A binary superdescriptor containing an unpacked parent field was used by Adabas SQL Server from an ASCII machine against mainframe Adabas, though the descriptor value cannot be correctly translated by Net-Work in this configuration.

Adabas SQL Server's descriptor selection logic has been changed such that descriptors will not be used when Adabas is on mainframe, Adabas SQL Server is not, and the descriptor format does not preserve the parent format.

Changes made for Adabas SQL Server Version 1.4.2 Patchlevel 11

Porting kit for special platform (customized solution).

Changes made for Adabas SQL Server Version 1.4.2 Patchlevel 12

A problem in the DML compiler, that occurs when the different predicates ">" and "=" are combined for the same descriptor. A workaround is to complicate the ">" predicate to avoid predicate merging, i.e. the following select will work correctly

```
select * from t where i + 0 > 0 and i = 1;
```

Changes made for Adabas SQL Server Version 1.4.2 Patchlevel 13

A memory allocation algorithm was improved.

Performance was improved for meta programs.

When an L3 is used with a superdescriptor, the end-of-range comparison may be done in metaprogram code. In this case, the comparison was based on the data type of the superdescriptor parent fields, not on the data type of the descriptor. This led to wrong results, e.g. when the parent type is F and the descriptor type is B, an F comparison will consider negative values less than positive values where a B comparison should do the opposite. This has been corrected. Superdescriptor comparison is now correctly based on the superdescriptor type.

Additional Information for Adabas SQL Server Version 1.4.2.13 Release on Special Platforms

Adabas SQL Server on Digital UNIX has a prerequisite of Adabas 3.1.1.12 or higher.
Adabas SQL Server on Digital UNIX does not include Advanced Interactive Facilities.

Changes made for Adabas SQL Server Version 1.4.2 Patchlevel 14

Adabas SQL Server Version 1.4.2.14 has been released for the Windows NT platform only.

Changes made for Adabas SQL Server Version 1.4.2 Patchlevel 15

Adabas SQL Server Version 1.4.2.15 has been released for the mainframe platform only.

Changes made for Adabas SQL Server Version 1.4.3 Patchlevel 1

Problems 151119 and 161970:

When a query contains a join condition based on a superdescriptor, the descriptor will never be used before the join condition is applied. The effect of this is that a constant restriction based on this superdescriptor will be performed many times instead of the required once.

Problem 159836:

The utility ESQGTD treated leading 0s (zeros) to mean that the Adabas database number and/or file number were in octal – they are now all treated as being in decimal.

Problem 168528:

Joins across views (two or more) that had extra brackets in the view definition could cause the SQL server to hang.

Problem 171660:

Generating a superdescriptor with a parent field of either NATURAL DATE or NATURAL TIME resulted in an Adabas error. This was caused by the to-value of the superdescriptor not being set.

Problem 176253:

A primary key constraint with one of its columns of type NATURAL DATE received an ESQ8811 error.

Problem 176790:

ESQ8118 and ESQ8010 errors were generated by the runtime engine when a FETCH into a structure with an indicator array was used. This was caused by ESQLNK generating invalid communications buffers.

Problems 179939 and 182304:

Not all resources were released during the handling of timeout events. Subsequent execution of the client application, could, result in the SQL response code ESQ8123 – “meta–program exclusive lock error”.

Problems 179942 and 180273:

User-exit 1 in ESQLNK handled differently for an explicit CONNECT statement than for an implicit CONNECT. The implicit CONNECT should be and is now be handled in exactly the same way.

Problem 179943:

The COBOL precompiler failed to generate the host variable name that was in error when generating a ESQ2260 error. This error occurs when a host variable is not found or can not be recognized.

Problem 180225:

ESQGTD overran output buffer when generating a cluster where some of the Predict names were 31 character or longer. This was specifically a problem of generating the Foreign Key clause within the cluster.

Problem 182622:

The conversion of binary and integer field values was not allowed. The comparison of binary and integer values, for example in search criteria, resulted in the SQL response code ESQ4308.

Adabas Web Gateway

Adabas SQL Server is packaged together with Adabas Web Gateway. This co-product enables access to Adabas databases from the Web using HTML. Standard SQL statements can be embedded into HTML sources, and SQL query results can be converted into standard HTML statements. This feature enables dynamic generation of HTML pages with up-to-date information kept in Adabas databases.

Adabas Web Gateway must be installed and run locally on an HTTP server. Adabas SQL Server can run remotely (using Entire Net-Work) on any available platform.

Adabas Web Gateway Documentation

The user documentation is part of the installation kit, and is supplied as text files (xxx.txt) and as HTML files (xxx.html) in the directory $ESQDEMO/www (UNIX) or SAG$ROOT:[ESQ.V143.EXAMPLES.WWW] (OpenVMS). After Adabas SQL Server has been installed, the documentation files can be found in the directories mentioned above and the HTML pages can be viewed using a browser.

Status of User Documentation

- Some manuals have been newly written or updated to reflect the Version 1.4.3 functionality
- Some manuals for Version 1.4.2 are still valid and are delivered with Version 1.4.3
- Release Notes for Version 1.4.2 may still be of interest — they are not delivered with Version 1.4.3

Manuals Issued with Version 1.4.3

Adabas SQL Server Reference Manual (Order No. ESQ143-030ALL):

Two changes to the CONNECT Statement:

- The length of the Password specifier is now up to 32 characters
- Limitations have changed

Adabas SQL Server Messages and Codes Manual (Order No. ESQ143-060ALL):

- Eight new Abend Codes for Mainframe Platforms
- Nine new Adabas SQL Server Error Messages

Adabas SQL Server Programmer's Guide (Order No. ESQ143-020ALL):

- Minor changes to the section **Compiler Options** of Chapter 1
- New Chapter 13

Adabas SQL Server Installation and Operations Manual (MVS) (Order No. ESQ143-010IBM):

- Minor updates throughout

Adabas SQL Server Installation and Operations Manual (VSE) (Order No. ESQ143-010VSE):

- Minor updates throughout

Adabas SQL Server 1.4.3 Release Notes for MVS and VSE (Order No. ESQ143-008IBM):

- Completely new

Adabas SQL Server 1.4.3 Release Notes for UNIX and OpenVMS (Order No. ESQ143-008UNX):

- Completely new

Manuals Issued with Version 1.4.2 and Delivered with Version 1.4.3

Adabas SQL Server Installation and Operations Manual for OpenVMS (Order No. ESQ142-010VMS)

Adabas SQL Server Installation and Operations Manual for UNIX (Order No. ESQ142-010UNX)

Adabas SQL Server Installation and Operations Manual for Windows NT (Order No. ESQ142-010WNT):

Release Notes Issued with Version 1.4.2 (not Delivered with Version 1.4.3)

Adabas SQL Server 1.4.2 Release Notes for MVS (Order No. ESQ142-008IBM)

Adabas SQL Server 1.4.2 Release Notes for VSE (Order No. ESQ142-008VSE)

Adabas SQL Server Release Notes Version 1.4.2 for OpenVMS (Order No. ESQ142-008VMS)

Adabas SQL Server 1.4.2 Release Notes for UNIX (Order No. ESQ142-008UNX)