Adabas Native SQL

Adabas Native SQL Version 2.4.1 Release Notes

Version 2.5.0

September 2024

ADABAS & NATURAL

This document applies to Adabas Native SQL Version 2.5.0 and 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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Adabas Native SQL Version 2.4.1 Release Notes

This document describes the new and changed features of Adabas Native SQL.

The new release of Adabas Native SQL has the following changes:

- Adabas V8.1 new features.
- Predict V4.5 support.
- Unicode Support.
- Cobol / V3 large numeric numbers support.
- Enhancement to Open Cursor handling.
- Support for Adabas Vista file translation for Predict.
- Support for Adabas sub codes in the Response code interpretation.
- Problem corrections.

The following document describes the new and changed features:

General Information	This section provides the general information about the new product version.

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Document Conventions

Convention	Description
Bold	Identifies elements on a screen.
`Monospace font`	Identifies service names and locations in the format *`folder.subfolder.service`*, APIs, Java classes, methods, properties.
`Italic`	Identifies: Variables for which you must supply values specific to your own situation or environment. New terms the first time they occur in the text. References to other documentation sources.
`Monospace font`	Identifies: Text you must type in. Messages displayed by the system. Program code.
{ }	Indicates a set of choices from which you must choose one. Type only the information inside the curly braces. Do not type the { } symbols.
|	Separates two mutually exclusive choices in a syntax line. Type one of these choices. Do not type the | symbol.
[ ]	Indicates one or more options. Type only the information inside the square brackets. Do not type the [ ] symbols.
...	Indicates that you can type multiple options of the same type. Type only the information. Do not type the ellipsis (...).

Online Information and Support

Product Documentation

You can find the product documentation on our documentation website at **https://documentation.softwareag.com**.

Product Training

You can find helpful product training material on our Learning Portal at **https://learn.softwareag.com**.

Tech Community

You can collaborate with Software GmbH experts on our Tech Community website at **https://techcommunity.softwareag.com**. From here you can, for example:

- Browse through our vast knowledge base.
- Ask questions and find answers in our discussion forums.
- Get the latest Software GmbH news and announcements.
- Explore our communities.
- Go to our public GitHub and Docker repositories at **https://github.com/softwareag** and **https://containers.softwareag.com/products** and discover additional Software GmbH resources.

Product Support

Support for Software GmbH products is provided to licensed customers via our Empower Portal at **https://empower.softwareag.com**. Many services on this portal require that you have an account. If you do not yet have one, you can request it at **https://empower.softwareag.com/register**. Once you have an account, you can, for example:

- Download products, updates and fixes.
- Search the Knowledge Center for technical information and tips.
- Subscribe to early warnings and critical alerts.
- Open and update support incidents.
- Add product feature requests.

Data Protection

Software GmbH products provide functionality with respect to processing of personal data according to the EU General Data Protection Regulation (GDPR). Where applicable, appropriate steps are documented in the respective administration documentation.

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The chapter topics covered by this document are as follows:

Compatibility with Other Products

Adabas Native SQL V2.4.1 is compatible with Predict V4.5.x together with Predict V4.4, V4.3, V4.2 and V4.1.

Adabas Native SQL V2.4.1 is compatible with Adabas V7.1.x and above.

Note: 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.

End-of-Support Dates

For information on how long a product is supported by Software AG, access Software AG's Empower web site at **https://empower.softwareag.com**. In the left menu of this web page, expand Empower 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.

ADABAS V8.1 New Features

Adabas V8.1 introduces new features and reduces some of the limits in previous versions. Adabas Native SQL V2.4.1 is adapted to support Adabas V8.1 with the following new features:

1. Native SQL will recognize the language specific generation code default in Predict “I8” and “R8” used to specify if descriptors will be generated in the Record buffer. (This is the same as it currently supports “I7” and “R7”).
2. The new Large Object types of Adabas V8.1 will not be supported. However, the definition of Large object in Predict which is “LO” in the Field format definition will be recognized by Native SQL. In case of such field definition, Native SQL will issue a warning message and will skip this field.
3. The new ACBX calling mechanism will not be generated by Native SQL and there is a new error message in case Adabas buffers exceed the length of 32K.
4. The MU and PE occurrences for up to 65K will be supported, however Native SQL will keep the compatibility of previous versions:

- The default of MU number of occurrences will be 191. This default will be used in case that no max occurrences is defined in Predict.
- The default of PE number of occurrences will be 99. This default will be used in case that no max occurrences is defined in Predict.
- The default of the counter field definition will be 2 binary bytes field. However, there will be a new `OPTIONS` parameter:

  ```
  OPTIONS LONG-COUNTER
  ```

  This will cause the generation of the counter field to be 4 binary bytes.
- The 1-LAST definition for MU will generate 191 occurrences in the Record buffer. In case that the max occurrences number in Predict is larger than 191 occurrences, there will an error message and the record buffer generation will have only 191 occurrences.
- The Format buffer and Search buffer contents will be generated with up to 5 digits for the occurrences number.
- The internal field names of fields within the Value buffer in case of a specific occurrenc descriptor (which is part of a periodic group) will now have a suffix of up to 5 digits instead of two digits in previous versions.

5. The max size allowed for the generated Format buffer will be increased to 32K (instead of 10K). In Cobol a new redefined field will be generated on the Format Buffer Length field in the Adabas Control Block. In case of Format Buffer length greater that 9999 bytes, there will be an assignment of the real length to that field before the Adabas call.

Predict V4.5 Support

Predict V4.5 is now recognized by Adabas native SQL including the new definitions for Adabas V8.1 features.

Unicode Support

Native SQL is now supporting Unicode. The support is divided into two parts:

1. Alpha fields with Unicode format are defined in Predict as alphanumeric fields with SQL-CHAR-SET = “M”. Native SQL checks every alphanumeric field for the SQL-CHAR-SET and in case of Unicode, it generates a “W” format in the Search and Format buffers. In addition the initial value generated in the Value buffer will be Low-values in Cobol and PL/1.
2. The *CONNECT* statement has now two new optional parameters to specify the encoding relevant to the session if different from the default set in the Adabas nucleus. The new parameters are:

```
[ACODE = value]
```

This value represents the key of supplied encoding for *A* fields during the user session.

```
[WCODE = value]
```

This value represents the key of supplied encoding for *W* fields during the user session.

Cobol / V3 large numeric numbers support

In Cobol/V3 there is a compiler option "ARITH(EXTEND)" that allows for numeric Unpacked and Packed fields to contain up to 31 digits. Native SQL has a new `OPTIONS` parameter:

```
OPTIONS LARGE-NUMBERS
```

This parameter generates the Numeric and Packed fields in Cobol up to 31 digits. The user should be responsible for the appropriate compiler option in the Cobol compiler.

Support for Adabas Vista file translation for Predict

In case that the Predict file is defined under Adabas Vista Configuration, the DBID and file number specified in the Native `SQL SYSFILE` parameter do not match the physical Predict numbers that are in the Predict Control record. With this version of Native SQL there is a new `OPTIONS` parameter:

```
OPTIONS VISTA
```

This will cause Native SQL to ignore the unmatched numbers and take the numbers from the Control record to be used in the generation of the Global format id.

Support for Adabas sub codes in the Response code interpretation

The *RESPINT* modules now display also the additions-2 field in case of an invalid Response code. The first two bytes as alphanumeric characters and the last two bytes as a binary number (the sub-code).

Problems fixed

The following problems have been fixed in this new release:

1. P 286632 – Abend if the first field in the first SELECT is a PE field that is redefined.
2. P 274258– Wrong generation of a PE field in the first SELECT if followed by a field from another PE.