****************** ***** **** **** **** Readme.txt **** **** This file contains the latest technical details of **** **** "Adabas Client for Java" **** **** **** ******************* ______ Adabas Client for Java Version 2.0.1.0 October 2018 ______

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1. Supported Platforms

Please confer to the System Requirements of the installation documentation "Installing Adabas Client for Java" for details about the supported operating system platforms.

2. Prerequisites

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"Adabas Client for Java" requires Java Version 1.8 or above.

For remote database access Entire Network needs to be installed with the most current ZAP updates or hotfixes, respectively.

To call remote databases, in this version the need of Entire Network client is obsolete.

3. Installation/Configuration

The "Adabas Client for Java" is installed with the Software AG Installer. The package consists of

- o The Adabas Client for Java API including examples, javadoc and jar files
- o The Adabas Data Designer a data browser and configuration tool The Adabas Data Designer is supported on Linux and Windows platforms only
- o The Adabas REST Interface based on Jetty providing JSON and XML based

REST access on Adabas data including an example application

To get full local database access on z/OS, an additional product Adabas Client for z/OS is needed. To use Adabas Client for Java on z/OS, please contact Software AG.

4. Documentation

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You can get the documentation for "Adabas Client for Java" at the Software AG Documentation Web site at

http://documentation.softwareag.com. There you always find the latest documentation available.

The documentation is available as HTML and PDF documents.

The installation contains the HTML-based Javadoc of the "Adabas Client for Java" API.

5. New Features

v2.0.0:

Adabas Client for Java Version 2.0.0 does include some refactoring new functionality. The overall aim is to provide more Natural like search methods. Due to refactoring of Adabas Client for Java API, it might be necessary to recompile the code

- o Old obsolete methods are removed and multiple methods merged to to one method or are set to be deprecated.
- o Super descriptors search could be defined using complete one String query. It's similar to Natural usage of Super Descriptors.
- o Adabas Data Designer is provided as Eclipse plugin for the Eclipe SDK.

See point 7.

- o Adabas Id on zOS is generated correctly
- o Rest server handles binary Lob read and store data into Adabas
- o A number of internal bugs and errors are fixed
- o Fix a number of problems in search tasks
- o Add correct CORS handling in Adabas Client for Java Rest server
- o Add support for zOS CICS environment (additional CICS component is needed)
- o Deliver log4j2 instead of logback. Nevertheless logback can still be used with Adabas Client for Java

o close() calls will not do an implicit End of Transaction. Instead, if Transactions are still active, the Backout Transaction is called. In case of an error or without End of Transaction call, all transaction will be reverted.

v2.0.0.1:

In addition to the list of problems listed below, various Adabas Client for Java Mainframe sepcific problems were fixed.

Adabas Client for Java Map definitions work with fractional shifts in Packed and Unpacked numeric fields. Empty Unicode fields cause errors which are fixed. Fix handling of charset definition in Adabas Client for Java Maps. Packed NATTIME calculation was fixed.

The CL call usage inside Adabas Client for Java is reduced.

Adabas Client for Java Data Designer stability is improved. Especially Map handling on Mainframe databases is stable now. Validation checks for new Adabas FDT files and Adabas Map definitions is enhanced. Field filter in Map Definition and Data view is working with all tree levels.

It is possible to define a refresh time to refresh the Map Definition and Data data content periodically.

The version v2.0.0.1 of Data Designer works with Eclipse Oxygen.

Adabas RESTfull server example pages shows metadata access. In this Update a template Docker configuration is being included. With Docker using Linux amd64 platforms the Adabas Client for Java RESTfull server can be started inside a Docker container.

Various enhancements are implemented in the Mapping tool.

v2.0.1.0:

This version contains various performance optimizations and bugfixes.

6. Solved Problems

Version 2.0.1.0

ACJ-113: vulnerable third party tool log4j

ACJ-117: Creation of a new Adabas file with Adabas Data Designer not possible

ACJ-118: Import fail if no Adabas MAP definition file is available

ACJ-119: Wrong FormatBuffer generated

ACJ-120: Read data: field missing

Version 2.0.0.1

ACJ-54: DataDesigner: deselect all fields ignores subfields of suband super-descriptors

ACJ-72: DataDesigner: Filter Fields in DataView2() selcts only level 1 fields.

ACJ-83: DataDesigner -> Create New File Dialog: creation of the meta data file fails

ACJ-102: close() caused by Exception stores records

ACJ-103: Memory leak storing records

- ACJ-104: Too many closes breaks Transaction
- ACJ-105: Eclipse Oxygen failed to work
- ACJ-106: Data Designer menu entries not working

Version 2.0.0

- ACJ-102: close() caused by Exception stores records
- ACJ-101: Search criteria using Packed cause Exception
- ACJ-100: End of Transaction ISN array < number of transaction
- ACJ-98: vulnerable 3rd party logback used
- ACJ-93: Rest Server access with huge result lists using JSON gets MemoryException

Version 1.1.2

- ACJ-95: DataDesigner: not possible to create map file using existing adabas demo fdt file
- ACJ-94: ReadRequest#resetFieldDefinition() also deletes mapping information
- ACJ-84: Enhancement: Provide the example database as backup or adaord file
- ACJ-80: DataDesigner: Adabas exception if the map file already exists

Version 1.1.1

- ACJ-63: Mainframe descriptor-sorted read with offset return no record
- ACJ-85: SQL null field cause error in binary field
- ACJ-87: Descending descriptor read return ascending data
- ACJ-88: Super descriptor search with GE returns incorrect data
- ACJ-89: Not possible to reset result in ReadRequest
- ACJ-90: Error when opening file in Adabas Data Designer

Version 1.1

- ACJ-5: LA fields don't support partial lob format buffer on Mainframe
- ACJ-39: DataDesigner: Type for sub-field of PE group not shown
- ACJ-40: Creating wrong file number for new Adabas Data Designer file
- ACJ-41: Validation of Javadoc jar failed ACJ-42: Alpha field types changed to LOB in Adabas Data Designer
- ACJ-45: Long names with white spaces
- ACJ-47: DataDesigner: subfields of Super- and Sub-Descriptor fields are now duplicated
- ACJ-49: DataDesigner: modify fields using doubleclick seems to be ignored
- ACJ-50: DataDesigner: null pointer exception using edit map
- ACJ-52: DataDesigner: select two subfields of a period group displays data of both fields in one column (duplicated)
- ACJ-53: DataDesigner: missing explanation for NB option of LOB-fie (same as classic view)
- ACJ-55: DataDesigner: rename file seems to be ignored
- ACJ-56: DataDesigner: rename of database cancel required using task manager (windows)
- ACJ-59: DataDesigner: create file/map returns Adabas response 40 using Finish button
- ACJ-60: DataDesigner: short names not unique

Version 1.0.1

- ACJ-2: NC Null value indicator cause rsp 55
- ACJ-3: ACJ Map hierarchy not valid
- ACJ-4: Deep PE groups cause problems during parser
- ACJ-6: Field level information lost using maps
- ACJ-9: Online calls to Net-Work 7.6 cause sporadic disconnects
- ACJ-10: QUERY: PopUp Window cannot be closed anymore need to kill Data Designer using Taskmanager
- ACJ-11: QUERY: mapfile without any fields generated
- ACJ-12: REST: start server failed on Linux misleading error message
- ACJ-15: REST: error for input string returned using "Free Form"
- ACJ-17: QUERY: Data Designer fails to start on Linux
- ACJ-19: QUERY: any changes in field editor seems to be ignored
- ACJ-29: DataDesigner: it's not possible to use mis.fdt to create mapping for an existing Adabas Demo File
- ACJ-36: DDM are exported by SYSOBJH not SYSTRANS

7. Adabas Client for Java on z/OS USS

To use Adabas Client for Java on z/OS USS, the prerequisite Adabas Client for z/OS is needed. In addition the ACJ package for z/OS USS contains libraries needed to call local Adabas databases on z/OS host. Consider Adabas Client for z/OS Readme to read installation steps. Please source sagenv.new which should be located on top of both Adabas Client and Adabas Client for Java extraced packages.

Adabas Client for Java supports both 32-Bit and 64-Bit z/OS Java version. By default the 64-Bit libraries are used. To use Java 32-Bit versions you need to set the ACL32 envionment variable to any value. Example:

export ACL32=on

Source sagenv.new after that.

The Adabas Client for Java delivers two JCL script examples in the "examples" directory.

Please ask support to get the corresponding prerequisite.

8. Adabas Client for Java in z/OS CICS

Adabas Client for Java can be used inside an CICS java program accessing Adabas using the Adabas CICS Link Routine. To enable you need to install the Adabas Client for Java archive called CORIC for Adabas Client for Java.

Please ask support to get the corresponding prerequisite.

9. Adabas Client for Java Data Designer plugin

A Data Designer Eclipse plugin is part of the Adabas Client for Java installation. Up to now the Software AG Designer integration is not done.

To install the Eclipse plugin you can add the update-site directory inside the AdabasDataDesigner to the Eclipse installation with

Help -> Install new Software ... -> Add.. -> Local..

Browse to the update-site directory inside the Adabas Client for Java Data Designer installation. The Data Designer plugin is not encrypted at the moment.

After the installation a new Adabas perpective is available inside Eclipse.

10. Known Issues

- o After uninstalling "Adabas Client for Java" the Adabas Data Designer directory needs to be removed manually.
- o Adabas Client for Java API uses SLF4j (http://www.slf4j.org) for logging and tracing facilities. SLF4J can be used with various log systems underneath, Adabas Client for Java uses Log4j per default. A configuration template "log4j.properties" is part of the distribution. If this property file is not part of the classpath, the following warning can be shown:

 - log4j:WARN Please initialize the log4j system properly.
 - log4j:WARN See

 $\label{loging.apache.org/log4j/1.2/faq.html#noconfig} \ \ for \ \ more \ info.$

If however the slf4j Java archives are not part of the classpath, following message can be shown:

- SLF4J: Failed to load class "org.slf4j.impl.StaticLoggerBinder".
- SLF4J: Defaulting to no-operation (NOP) logger implementation
- SLF4J: See http://www.slf4j.org/codes.html#StaticLoggerBinder for further details.
- o On NUMA-Machines with SUSE Enterprise Linux the Adabas Client for Java API might show bad performance. This depends on the machine. If such bad performance is observed, please set the environment variable ACL NOTIFY DISABLE=1.

11. Copyright Information

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