

NotesDB User Guide

for Release 4.5

Versions

Version	Date	Author	Comment
1.0	15.04.2013	Johannes Fiala	Initial version
1.1	20.06.2013	Johannes Fiala	Updates regarding installation
1.2	28.06.2013	Johannes Fiala	Updates regarding installation, added screenshots for new features
1.3	05.08.2013	Johannes Fiala	Added hint regarding notes.ini paths
1.4	13.03.2014	Johannes Fiala	Added hint regarding fields with empty name, Exception You are not authorized ...
1.5	25.08.2018	Johannes Fiala	Added view and folder export, API documentation and further topics

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Introduction

NotesDB is packaged together with the sample database "sample.nsf", which showcases all the features of NotesDB.

Each version of NotesDB has been tested using the following Lotus Notes versions:

- Lotus Notes 8.5
- Lotus Notes 9.0

The following Notes versions are supported:

- Lotus Notes 8.0
- Lotus Notes 8.5
- Lotus Notes 9.0

Parts of the NotesDB Package

NotesDB ships with the following contents:

Filename	Description	NotesDB Edition
notesdb-*.nsf	Central configuration database	Standard+Enterprise
Directory lib	includes the libraries required for the export	Standard+Enterprise
Directory sample results with sample.nsf	includes the sample results of exporting the database sample.nsf	Standard+Enterprise
HtmlToRichtext.doc	Word-Documents with macros allowing conversion of HTML to Word	Enterprise

Installation of NotesDB

PREPARE THE NOTES.INI FILE

You need to supply the following JAR files to the Notes client:

- notesdb-export-4.0.x.x.jar (please use the exact file name of the Jar provided)
- log4j-1.2.15.jar
- commons-codec-1.5.jar
- the JDBC driver, you like to use - e.g. mysql-connector-5.1.24.jar

You need to modify the configuration file NOTES.INI of the Lotus Notes client installation. The NOTES.INI file is usually located at the program directory of your Lotus Notes client: C:\Program Files (x86)\IBM\Lotus\Notes8\NOTES.INI

Please also include the JDBC-driver you need:

e.g. you want to use the MySQL 5 JDBC driver: mysql-connector-5.1.24.jar

Hint: Notes has a 255 character limit on the properties in the NOTES.INI file, so if you want to use larger paths, please use the following configuration:

```
[Notes]
JavaUserClassesExt=ST00,ST01,ST02,ST03
ST00=C:\...\lib\notesdb-export-4.x-ENTERPRISE-small.jar
ST01=C:\...\lib\log4j-1.2.15.jar
ST02=C:\...\lib\commons-codec-1.5.jar
ST03=C:\...\lib\mysql-connector-java-5.1.24-bin.jar
```

If you have really short paths below the 255 character limit, you can use the `JavaUserClasses` setting:

```
JavaUserClasses=c:\notesdb\lib\notesdb-export-4.0.x.x.jar;c:\notesdb\lib\log4j-1.2.15.jar;c:\notesdb\lib\commons-codec-1.5.jar;c:\notesdb\lib\mysql-connector-5.1.24.jar
....
```

SETUP RDBMS SPECIFIC CONFIGURATION FOR JDBC

If you want to use a direct JDBC connection:

Please also enter the fully qualified classname of the JDBC driver in the "RDBMS specific configuration".

You can find this in the notesdb-*.nsf file provided:

Open the View "Admin\RDBMS specific configuration".

Choose the type of RDBMS you want to access (e.g. mySQL).

Then enter the JDBC driver class name in the input field provided:

RDBMS-specific Configuration

RDBMS identifier:	mysql
JDBC driver class name	com.mysql.jdbc.Driver (e.g. com.mysql.jdbc.Driver)
DROP TABLE Syntax:	DROP TABLE IF EXISTS {Stablename};
Limit for VARCHAR fields	255
maximum rowsize	40000
maximum fields per row	100
fieldlength adjustment factor	10 (10 = 10 percent more)
allow nonalphabetic characters in fieldnames	<input checked="" type="checkbox"/> allow

Picture 1: RDBMS-specific configuration

PICKING THE RIGHT JDBC DRIVER

You have to use a JDBC driver which Java version is \leq the version Lotus Notes supports. E.g. if you are using Lotus Notes 8.5, you have to use a JDBC driver which is capable of supporting Java 6.

IBM provides a list of which Java version is supported by which version of Lotus Notes.
<http://www-01.ibm.com/support/docview.wss?uid=swg21188789>

Notes Version	Java JDK version
1.0 to 3.x	Not Available
4.5 to 4.6.7a	JRE/JDK 1.1
5.0 to 5.0.13a	JRE/JDK 1.1.8
6.0 to 6.5.6	JRE/JDK 1.3.1
7.0 to 7.0.3	JRE/JDK 1.4.2
8.0 to 8.0.1	JRE/JDK 1.5.0
8.5 to 8.5.2	JRE/JDK 1.6.0
9.0	JVM 6 32-bit
9.01+	JVM 8 32-bit

<http://www-01.ibm.com/support/docview.wss?uid=swg22003617>

MS SQL JDBC drivers

You can download MS SQL JDBC drivers here:

<https://www.microsoft.com/en-sg/download/details.aspx?id=11774>

<https://docs.microsoft.com/de-de/sql/connect/jdbc/system-requirements-for-the-jdbc-driver?view=sql-server-2017>

For MS SQL JDBC drivers you have to pick the correct JDBC drivers:

<https://docs.microsoft.com/de-de/sql/connect/jdbc/microsoft-jdbc-driver-for-sql-server-support-matrix>

Please note that the JDBC drivers 4.0 and below are no longer supported.

Here you can find the SQL JDBC drivers at the Maven repository:

<https://mvnrepository.com/artifact/com.microsoft.sqlserver>

If you use a newer JDBC driver for an older version of Notes, you'll get the following exception:

Error: java.lang.UnsupportedOperationException: Java Runtime Environment (JRE) version 1.6 is not supported by this driver. Use the sqljdbc4.jar class library, which provides support for JDBC 4.0.

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We recommend using a newer Notes client version if necessary or you can use the offline option to do the imports manually.

The quick guide: 4 Steps to your converted database in the RDBMS

This chapter shows you how quickly you can use NotesDB to convert a Notes database into an RDBMS:

You have to do the following steps:

1. Exporting the Notes Database to a relational database
2. Export of Richtext-Items (Enterprise Edition only)
3. Export to MS Word/Richtext (Enterprise Edition only)

EXPORTING THE NOTES DATABASE TO A RELATIONAL DATABASE

You need to do the following steps:

1. Deploy the sample.nsf database to a Notes-server of your choice (you can also run NotesDB on a database on the local filesystem, but if you want to export Richtext items as well, you need a Notes Server with the Domino HTTP task activated)

2. Open the database "notesdb-*.nsf" (locally or on a Notes server) and open the view "Databases",

Open the sample configuration "c:/dev_notesdb/notesdb/sample.nsf" (sample for a database on the local filesystem).

a) If you want to export using a Notes server, enter the Server name and reduce the path to "notesdb/sample.nsf".

The database_id should be a unique number of the database, which will be used in all tablenames.

Filter formula: here you can filter the documents dynamically using a Notes formula. Leave this field empty to export all documents.

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- b) Target RDBMS Datasource
 - RDBMS configuration

If you want to connect to the database directly, please also enter:

- JDBC URL (for connecting to the database using JDBC)
- username
- password

- c) Target Path for SQL-scripts

Using this option, you can record all SQL-statements into a text file.

To activate this, check the checkbox "Export to SQL-files" and enter the target path.

- d) Attachment configuration options:

You can export file attachments and embedded objects using the option "Export attachments to disc".

- e) Folder configuration options

You can export folder references by checking the checkbox "Export folders"

3. Start the export:

- a) Open the view "Databases"
- b) Select the database document you'd like to export.
- c) Press the button "Generate DDL" to create all the tables.
- d) Press the button "Export data" to export the data
- e) Press the button "Get Richtext data" to export richtext data (Enterprise Edition only)

EXPORT OF DOCUMENTS

NotesDB will export documents for each form into a separate database table.

In fact, NotesDB will do everything automatically, so there is no need to manual mapping work. It will create a separate table for each form and will only create multiple tables if the table limits (number of columns per table/rowsize per table) is exceeded.

For documents with many fields, NotesDB uses the overflow suffix at the end of each table name: If the maximum row limit or column limit is reached, NotesDB will automatically create overflow tables with an increased suffix.

If you want to suppress overflow tables to be used, increase the maximum rowsize, as this also plays a role in determining when tables are splitted.

SUPPORT FOR RICHTEXT ITEMS

The Notes client is used to read the data and insert it into the target SQL database.

The Standard edition is capable of exporting the richtext items in plain text format.

The Enterprise edition is also capable to export the richtext items in html format:
For HTTP conversion, we are using the Domino server to read the richtext items in HTML format.

So for the server part, you only need to start the HTTP task and make sure the target database is accessible.

In NotesDB, you have to edit the database configuration document and enter the server url and (http) username/password there.

EXPORT OF ATTACHMENTS

NotesDB is able to extract all file attachments.

Alle files will be extracted to the configured filepath of the Database configuration -> Attachment configuration options -> Path for attachments.

NotesDB will extract all attachments attached to the document itself or to any of its richtext items.

The attachments will be extracted to a directory for each document.
By default, NotesDB will use the DocumentUniqueID as a name for each directory.
You can change the directory name using the "Formula for directories" which will be calculated for each directory.

The filename will be the same filename as used in the document/richtext item.

If you have a JDBC connection, you can also store all attachments directly as BLOBs.

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The following attachment properties are exported into the attachments table:

- Filename
- Filesize
- Datecreated
- Datelastaccessed
- Datelastmodified
- Richtextitem_name
- fullpath

SUPPORT FOR DOCUMENT PROPERTIES

The following document properties are automatically exported into a separate properties table:

- Created
- Encryptsend
- Isdeleted
- Isprofile
- Isresponse
- Issigned
- Invalid
- Profilekey
- Lastaccessed
- Lastmodified
- Nameofprofile
- Noteid
- Parentdocumentunid
- Signonsend
- Signer
- Docsize
- Attachments (Number of attachments)
- doclinks

NotesDB Enterprise Features

These features are supported in the Enterprise Edition only.

EXPORT OF RICHTEXT-ITEMS

You can export Richtext-Items using the Domino HTTP Server with the button "Get richtext data".

Start the export using the Domino HTTP server:

1. Deploy the Notes database to a Domino HTTP server and activate the HTTP-task (lo http).
2. Make sure the Notes database is accessible using HTTP.
If your Notes database is not accessible for the user "Anonymous", you have to enter the HTTP username and password into the database configuration.
3. If you want a specific form layout different from the default document (form) layout, you can control this by creating a view "NotesDb-Richtext-<Formularalias>". If NotesDB finds a view with this name for any form, it will export all documents using the form selected in the "Display form" option of this view.
4. After this, you only have to press the button "Get Richtext" and NotesDB will retrieve all documents in HTML format and will convert them into Pdf automatically (using external conversion software).

You can also choose to save all HTML content directly into the database as CLOBs. NotesDB will then store the HTML content in separate tables with the suffix "_html".

EXPORT OF LINKS

NotesDB will automatically extract all anchor links into a separate table with the suffix "_links".

There you can find all links in a document, including document links, database links...

EXPORT VIEWS

NotesDB allows you to export views.

You can also set a whitelist and a blacklist to include specific views (all views containing any of the string values will be included/excluded with the blacklist taking precedence).

Enterprise: View export options

Export views	<input checked="" type="checkbox"/> Export views
View name whitelist	All views containing any of these strings will be included (multiple values separated with comma/semicolon allowed).
View name blacklist	dblookup All views containing any of these strings will be excluded (multiple values separated with comma/semicolon allowed).

Picture 2: View export options

EXPORT TO MS WORD

To export to MS Word, please open the MS-Word Dokument HtmlToRichtext.doc. In this Word document, you can find the macro "Konvertierung_Html_Rtf". Enter the path of your HTML-documents (in our sample package "c:\temp\notesdb\attachments").

Then you can run the macro and all the HTML files will be converted to Richtext files automatically.

EXPORT TO PDF

To export to PDF, please enter the commandline for the conversion tool into the Admin\General settings document.

NotesDB will then automatically call the conversion software for each document to be processed.

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General Settings	
Htmldoc Commandline	

Picture 3: Htmldoc commandline

EXPORT OF EMBEDDED OBJECTS

The export of embedded objects is supported in the Enterprise Edition only.

NotesDB is able to extract all supported embedded objects.

Supported embedded object types include:

- MS Word
- MS Excel

If you miss an embedded object type you'd like to have exported, please contact us for a quote for adding it.

The embedded objects will be extracted to a directory for each document. By default, NotesDB will use the DocumentUniqueID as a name for each directory. You can change the directory name using the "Formula for directories" which will be calculated for each directory.

The filename of the embedded object will be as follows:

- For Embedded objects embedded in the document:
Embedded_Document_<object type >_<internal filename>.doc
- For Embedded objects in an richtext item:
Embedded_RTitem_<itemname>_<object type>_<internal filename>.doc

EXPORT FOLDER REFERENCES

supported in the Enterprise Edition only

NotesDB can export all the folders a document is contained in. This enables you to reuse the existing folder infrastructure in the new relational database.

NotesDB does this by searching through all database folders individually. This means, that this feature is independent of the new "Folder References" feature since R5, which keeps track of the folder references in a separate document item.

Features of NotesDB in more detail

NAME OF THE DATABASE CONFIGURATION

Firstly, you have to give the database configuration a descriptive name:

NotesDB Database Configuration	
Name	Sample Database MS Access brief name/comment regarding this configuration

Picture 4: Name of the database configuration

Field	Description
Name	The name of the database configuration

CONFIGURE THE SOURCE LOTUS NOTES DATABASE

Source Lotus Notes Database

Server	(full server name - e.g. Developer1/Acme; leave empty if you want to access a local database)
Path (*)	j:/dev_notesdb/notesdb/sample.nsf (full path to the file on the server or local file system - e.g. notesdb/testdb.nsf or c:/notesdb/testdb.nsf)
database_id (*)	102 (must be unique across all database configurations, numeric values recommended - e.g. 01)
Filter-Formula	Enter a Formula to filter the documents dynamically. You can enter any valid @Formula-Expression (e.g. Deleted="N" & Inactive="N") The formula will be used for every form which gets exported.

Picture 5: Source Lotus Notes database

Field	Description
Name	The name of the database configuration
Server	The name of the Domino server
Path	The full path to the file on the server (which will be populated automatically) or the full path of the local file system.
Database_id	A unique ID for the database configuration document. This will be included in every table name of the generated RDBMS tables.
Filter-Formula	Enter a Formula to filter the documents dynamically. You can enter any valid @Formula-Expression (e.g. Deleted="N" & Inactive="N") The formula will be used for every form which gets exported.

Filter formula support for export

To allow for more flexible exports, it is now possible to use the "filter formula".

If you enter a filter formula, NotesDB will only export the documents which pass through this filter formula.

You can enter any filter formula you like, the syntax is the Notes Formula Language Syntax. You can filter for timestamps as well as for any field contained in the Notes documents.

Examples:

Filter formula	Description
Form="Person"	to filter for documents created with the form "Person"
@modified >= @date(2007;11;01)	to filter for documents modified after 2007-11-01
@created >= @date(2007;11;01)	to filter for documents created after 2007-11-01
Form="Person" & @created >= @date(2007;11;01)	to filter for documents of form="Person" created after 2007-11-01

DIRECT RDBMS DATASOURCE

Next, you can decide whether to create the tables in the target RDBMS automatically. Check "Execute SQL in database" to create them automatically.

Please also supply the JDBC url of the database server as well as username/password for login. Leave username/password empty, if no login is required.

Target RDBMS Datasource

RDBMS Configuration (*)	mySQL
Connect to database	<input checked="" type="checkbox"/> Execute SQL in database
JDBC url	jdbc:mysql://localhost:3309/notesdb e.g.: jdbc:mysql://localhost:3309/notesdb
username	root
password	test

Picture 6: Target Lotus Connector Datasource (RDBMS system)

Field	Description
RDBMS dialect	<p>The RDBMS dialect allows you to choose from a list of pre-defined dialects:</p> <ul style="list-style-type: none"> • MS Access • MS SQL • MS SQL Unicode • mySQL • Oracle • Oracle Unicode • postgres <p>You can add further RDBMS dialects in the Admin interface of NotesDB or contact our support to have them added by our support staff.</p>
JDBC Url	JDBC-URL for connecting to the database
Username	Username (leave empty, if authentication is not required)
Password	Password

EXPORT COMPLETE SQL SCRIPTS

Alternatively to creating tables automatically, you can also decide to export SQL scripts (CREATE TABLE statements and full INSERT-statements).

Target Path for SQL-scripts

Export to SQL-files	<input checked="" type="checkbox"/> Export SQL stream to files
Path for SQL-scripts	c:\temp\notesdb\inserts (if you enter a path here, NotesDB will write the complete SQL-INSERT-scripts into this path)
MIME Charset for SQL-scripts	UTF-8 (supported starting with Notes R6, no selection uses the ANSI charset)

Picture 7: Configure path for SQL scripts

Field	Description
Export to SQL-files	Activate this checkbox to export SQL scripts to files
Path for SQL-scripts	The path for the SQL scripts (this path will be created automatically, if it doesn't exist)
MIME Charset for SQL-scripts	This allows you to configure the Character set of the SQL script. This feature is supported for Notes R6 and above. If you do not enter a value, the ANSI charset will be used.

ATTACHMENT EXPORT

For exporting attachments, you have the following configuration options:

Attachment Configuration options

Attachments	<input checked="" type="checkbox"/> Export attachments to disc
Path for attachments	c:/temp/notesdb/attachments e.g. c:\temp\attachments
Formula for directories	e.g. @NoteID (default is @DocumentUniqueID); make sure the result will be unique across all documents, otherwise you risk mixing of document attachments.
Prefix for attachment names	Enter a prefix to be set before each attachment filename.
Export as BLOB	<input type="checkbox"/> Export attachments to BLOB

Picture 8: Attachment configuration options

Field	Description
Attachments	Activate the checkbox "Export attachments to disc" to export attachments.
Path for attachments	This denotes the full path to write the attachments to. e.g.: c:\temp\attachments NotesDB creates this path automatically, if it doesn't exist already. NotesDB creates a subdirectory with the database_id (e.g. db_102) for each database configuration. The attachments get saved in a separate folder for each document. The DocumentUniqueID (NotesUNID) is used to make each folder unique.
Formula for directories	This allows you to enter a formula for the document folder used. You can enter any formula you like. You have to make sure, that this formula makes it possible to uniquely identify the correct folder for each document. Since release: 2.9.3.0 (2008-10-13)
Prefix for attachment names	A prefix to be set before each attachment filename.
Export as BLOB	This option is only available if you have a direct JDBC connection. This allows you to store all attachments in the database as BLOBs.

RICHTEXT EXPORT

You only need access to a Domino server if you want to extract the Notes documents into HTML format.

HTTP-Configuration for Richtext Items

HttpServer	<input type="text" value="http://localhost:8090"/> e.g. http://localhost
HttpPath	<input type="text" value="notesdb"/> Path to the database on the server url - e.g. /notesdb
Notes Server Version	<input type="radio"/> Notes R4.6 oder R5 <input checked="" type="radio"/> Notes 6 or higher
Save HTML in database	<input checked="" type="checkbox"/> Save html in database Save HTML contents in a database table with suffix "_html"
Parse Anchors	<input checked="" type="checkbox"/> Parse and replace anchor links Checking this option will replace all anchor links with local references, thus an attachment link becomes a link to the corresponding directory and filename (e.g. /<docUNID>/filename.pdf).
Save Anchors in database	<input checked="" type="checkbox"/> Save anchor links in database Save anchor links in a database table with suffix "_links"
Image Prefix	<input type="text" value="SGINumber_"/> Enter a prefix to be set before each embedded image in the html files.
Maximum number of sections to expand	<input type="text" value="20"/>

HTTP-Authentication information:

Username	<input type="text"/> leave empty if there's no authentication required when accessing the database using a Web Client.
Password	<input type="text"/>

Field	Description
HttpServer	Link to the Domino server (the source Notes database has to be stored on this server)
HttpPath	Path where the database can be found
Notes Server version	Enter the version of your Domino server
Save HTML in database	This option will store all html content in separate tables with the suffix "_html" in CLOB-format.
Parse Anchors	Checking this option will replace all anchor links with local references, so an attachment link becomes a link to the local file.
Image Prefix	Enter a prefix to be set before each embedded image in the html files
Maximum number of sections to expand	Enter the maximum number of sections NotesDB should open.

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HTTP Username	Username for accessing the Domino server
HTTP Password	Password for accessing the Domino server

EXPORT FOLDER REFERENCES

NotesDB can export all the folders a document is contained in. This enables you to reuse the existing folder infrastructure in the new relational database.

This feature is available in the NotesDB Enterprise Edition only.

NotesDB does this by searching through all database folders individually. This means, that this feature is independent of the new "Folder References" feature since R5, which keeps track of the folder references in a separate document item.

Folder Configuration options	
Export folders	<input type="checkbox"/> Export folders

Picture 9: Export folder references

Check the checkbox "Export folders" to export folder references into a separate table.

Extended features of NotesDB

RDBMS-SPECIFIC CONFIGURATION

NotesDB allows you to configure the RDBMS dialect exhaustively.
You can configure the RDBMS dialect as well as the RDBMS-specific data types.

RDBMS-specific Configuration

RDBMS identifier:	MS Access
DROP TABLE Syntax:	DROP TABLE {tablename};
Limit for VARCHAR fields	250
maximum rowsize	400000
maximum fields per row	100
fieldlength adjustment factor	10 (10 = 10 percent more)
allow nonalphabetic characters in fieldnames	<input type="checkbox"/> allow
escape character for \$-sign in fieldnames	
maximum length for tablename	
maximum length for columnname	

Enclose field names in DDL/DML using:

leading character	[
trailing character]

Escape Characters

for backslash (\)	
for single quotes (')	
for double quotes (")	

Picture 10: RDBMS-specific configuration for MS Access

Support for RDBMS-specific data types

We allow for RDBMS-specific mappings of NotesFieldTypes to RDBMS data types. This means, you can enter the RDBMS specific names for CLOB/BLOB field types.

Additionally, this will also allow for Unicode specific data type mappings (NVARCHAR, NCHAR, NTEXT, ...).

If you check the checkbox "Treat as Unicode type", then NotesDB will add an N-prefix before each INSERT:

```
e.g. INSERT INTO ... VALUES (N'...',...);
```

Support for RDBMS-specific escape character configuration

Added RDBMS specific escape character configuration:

You can now enter the escape characters for backslash (\), single quotes (') and double quotes (") in the RDBMS specific configuration.

Bypass the automatic field name correction for non-alphabetic field names

You can bypass the automatic field name correction routine for non-alphabetic field names using the RDBMS specific configuration.

This is turned on by default now, so if you use NotesDB 2.9, you don't have to worry regarding this.

If you face troubles with special characters in field names, simply disable this in the RDBMS specific configuration.

DYNAMIC CONVERSION OF EMPTY FIELDNAMES

If NotesDB detects an empty fieldname (=field with name "") in a document, it will also export its data.

The fieldname used will be "notesdb_fieldname_is_empty" to generate valid SQL scripts. This way, also fields with no name can be exported.

BLOB SUPPORT

BLOBs are supported for attachments if you use the JDBC connection.

For Embedded Objects in MS SQL the Notes type EMBEDDEDOBJECT has to be mapped to VARBINARY.

AUTOMATIC RECOVERY FEATURE

If NotesDB crashes for whatever reason, it is capable to automatically restart with the last document it converted following the next export run.

Automatic recovery information

When exporting larger databases you might experience the error message "Out of memory". In this case, you only have to restart the PC and then run the export again. NotesDB will ask you whether it should resume the export with the last document or start over again.

Enable	<input checked="" type="checkbox"/> Enable
--------	--

Enable automatic recovery will slightly slow down the conversion process, as we have to save the document UNID of each document for restart in case of a crash.

Standard Automatic recovery

Last Document-UNID	
--------------------	--

Enterprise: Richtext Automatic recovery

Last Document-UNID	
Next Document UNID	This UNID is for use only if NotesDB cannot recover automatically due to errors in processing the "Restart Document-UNID". Please copy the "Next Document UNID" into the "Restart Document-UNID" to skip the erroneous document.

Picture 11: Automatic recovery information

HANDLING ERROR MESSAGE "YOU ARE NOT AUTHORIZED ..."

If you get the following exception during conversion:

NotesException: Notes error: You are not authorized to perform that operation

The reason for this could be that NotesDB is trying to access a document which is accessible only with specific roles.

Please check the access control list roles inside the database.

If you are missing a role, grant the user all missing roles available in the database.

If this is not possible or not desired, exclude the protected documents using the filter formula.

Database specific use-cases

EXPORTING MAIL DATABASES

NotesDB will support you with the following output to export your mail database content:

- Document HTML content can be retrieved using a custom URL suffix
- Folder references of documents are exported into the table „folders“
- Nested folders are supported and escaped using the RDBMS specific configuration rules for backslashes
- View content is exported into separate view tables

Exporting mail database HTML content using a URL suffix

Mail databases based on Notes mail templates (e.g. StdR85Mail) are rendered using iNotes.

As iNotes is using Javascript/Ajax to render the document, the html content is not readable offline.

To turn iNotes off, you can disable it for the complete database, or better disable it only using the URL suffix „&ui=webmail“.

For more information how to disable it for the complete database see

<https://stackoverflow.com/questions/33181072/how-to-disable-inotes-for-a-single-mail-file>

In the NotesDB database configuration document, you can simply hit the button „Set suffix for mail database“ to set the proper suffix.

Url-Suffix	<input type="text" value="&ui=webmail"/> <input type="button" value="Set suffix for mail database"/>
------------	--

Custom suffix to be appended to the document url (especially for mail databases to disable iNotes rendering)

If necessary, you can set any custom URL suffix to be appended to the URL for HTML retrieval.

If problems occur...

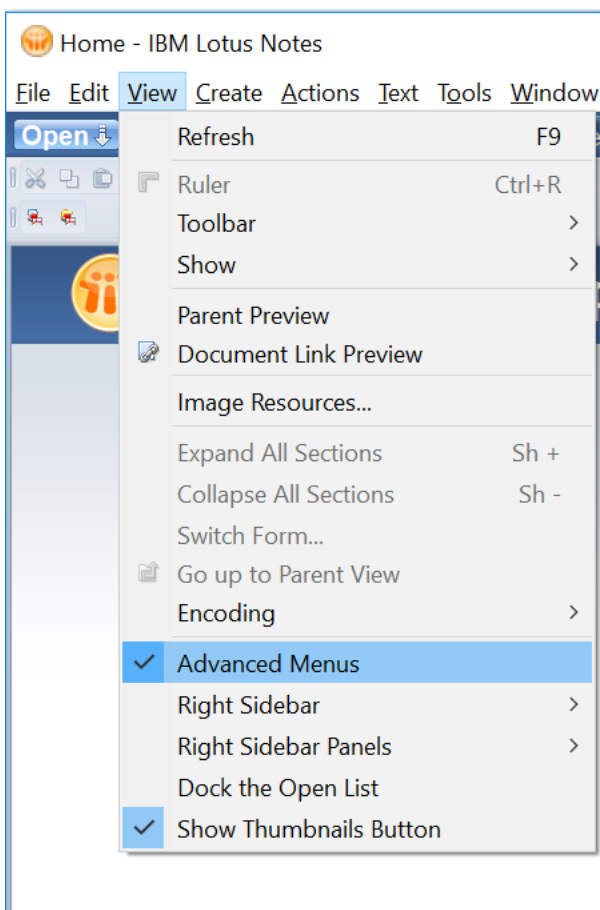
DISPLAYING JAVA CONSOLE MESSAGES

Java is used for the conversion, so please check the Java console output in the Lotus Notes client for any error messages.

This is the steps you have to take:

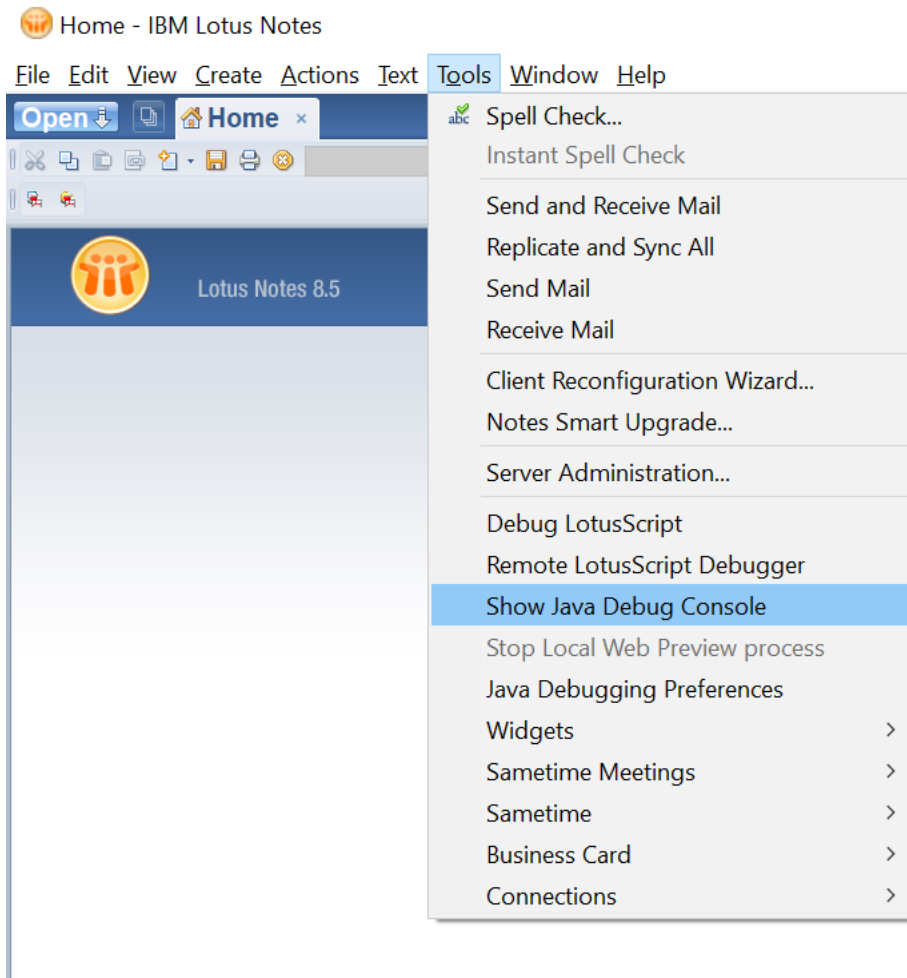
- 1.) View -> Advanced menus
- 2.) Tools -> Show Java debug console

To show the Java debug console, you need to activate the "Advanced menus" first:



Picture 12: Activate the advanced menus

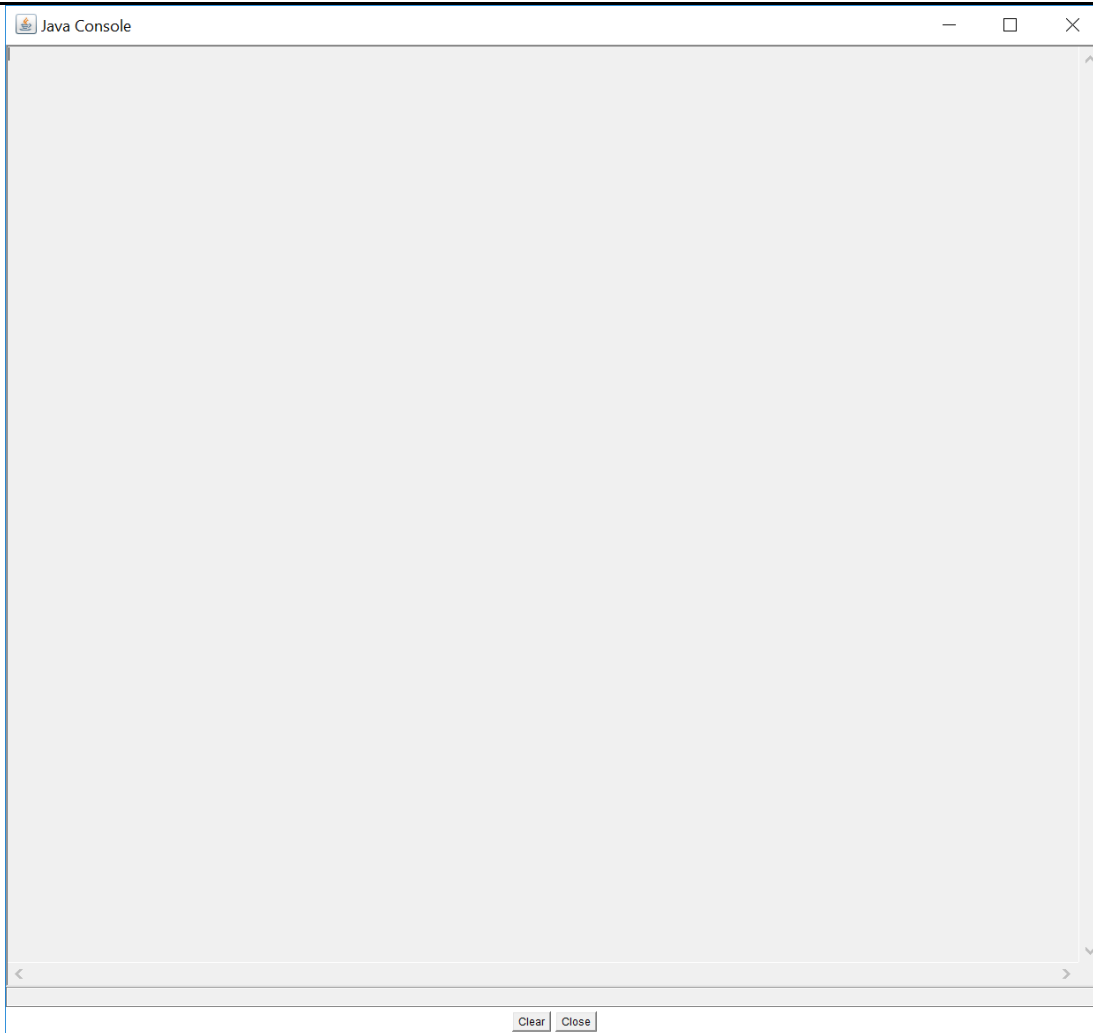
Next, you can pick Tools => „Show Java Debug Console“ from the menu.



Picture 13: Show Java Debug Console

Notes will open a small Java console window.

Then you can select all the text displayed there and copy it to clipboard and send it to us for further analysis.



Picture 14: Java console

Advanced topics

INTEGRATING NOTESDB - USING THE NOTESDB API

It is possible to run NotesDB from a Java program.

NotesDB provides the following API entry points:

- NotesDBGenerateRunner
- NotesDBExportRunner
- NotesDBRichtextRunner

You can pass a NotesDB database configuration document to any of these runners and it will do the same as if you select the database configuration document in the NotesDB UI and hit the appropriate button to run.

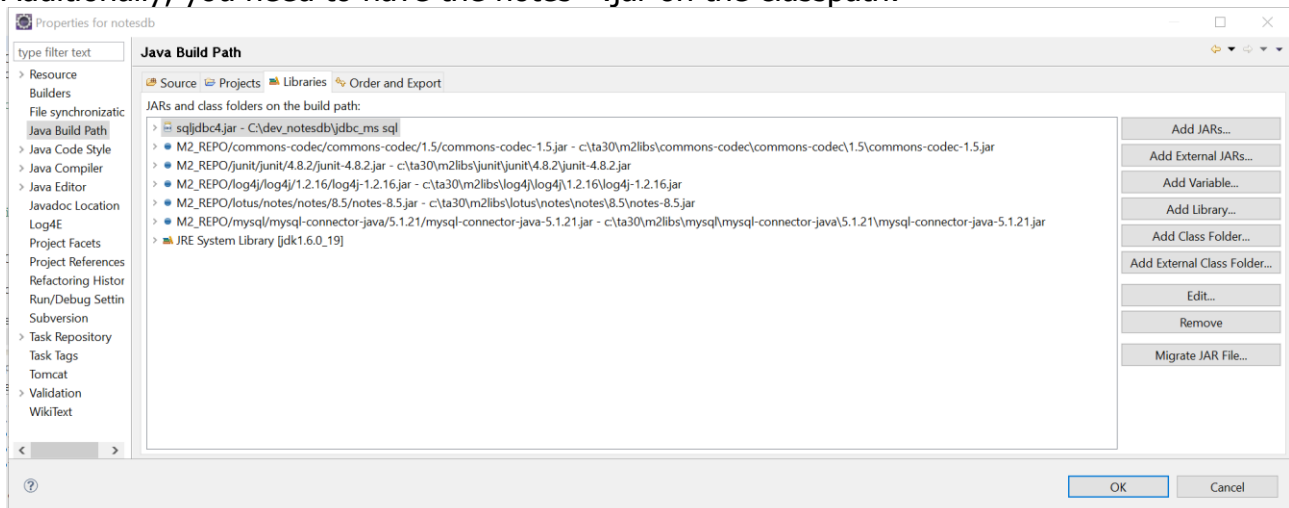
Setting up the Java environment

You need to add the following setting to the Java VM arguments:

`-Djava.library.path="C:/Program Files (x86)/IBM/Lotus/Notes"`

This tells Java where to find the Lotus Notes executables.

Additionally, you need to have the notes-*.jar on the classpath:



Picture 15: Classpath for developing with NotesDB in Eclipse

Generate DDL

This is a code example of how to generate a DDL for a NotesDB configuration document:

```
import lotus.domino.*;

import at.fwd.notesdb.converter.command.NotesDBGenerateRunner;

public class JavaAgent extends AgentBase {

    public void NotesMain() {

        try {

            Session session = getSession();
            AgentContext agentContext = session.getAgentContext();

            DocumentCollection coll = agentContext.getUnprocessedDocuments();

            Agent agent = agentContext.getCurrentAgent();
            String noteid = agent.getParameterDocID();
            Database notesdbDatabase =
agentContext.getCurrentDatabase();

            Document doc = notesdbDatabase.getDocumentByID(noteid);

            if (doc != null) {
                System.out.println("starting NotesDBGenerateRunner" );
                NotesDBGenerateRunner.run(session, notesdbDatabase, doc);
            }

        } catch(Exception e) {
            e.printStackTrace();
        }
    }
}
```

Export documents

```
import lotus.domino.*;

import at.fwd.notesdb.converter.command.*;

public class JavaAgent extends AgentBase {

    public void NotesMain() {

        try {

            Session session = getSession();
            AgentContext agentContext = session.getAgentContext();

            Agent agent = agentContext.getCurrentAgent();
            String noteid = agent.getParameterDocID();

            Database notesdbDatabase = agentContext.getCurrentDatabase();

            Document doc = notesdbDatabase.getDocumentByID(noteid);

            if (doc != null) {
                System.out.println("starting NotesDBExportRunner" );
                NotesDBExportRunner runner = new NotesDBExportRunner();
                runner.export(session, notesdbDatabase, doc);
            }

        } catch(Exception e) {
            e.printStackTrace();
        }

    }
}
```

Export Richtext

```
import lotus.domino.Database;
import lotus.domino.AgentBase;
import lotus.domino.Session;
import lotus.domino.Document;
import lotus.domino.DocumentCollection;
import lotus.domino.*;

import at.fwd.notesdb.converter.command.*;

public class JavaAgent extends AgentBase {

    public void NotesMain() {

        try {

            Session session = getSession();
            AgentContext agentContext = session.getAgentContext();

            DocumentCollection coll = agentContext.getUnprocessedDocuments();

            Agent agent = agentContext.getCurrentAgent();
            String noteid = agent.getParameterDocID();
            Database notesdbDatabase =
agentContext.getCurrentDatabase();

            Document doc = notesdbDatabase.getDocumentByID(noteid);

            if (doc != null) {

                System.out.println("starting
NotesDBRichtextRunner" );
                NotesDBRichtextRunner runner = new NotesDBRichtextRunner();
                runner.export(session, notesdbDatabase, doc);

            }

        } catch(Exception e) {
            e.printStackTrace();
        }

    }

}
```

OFFLINE IMPORTING SQL SCRIPTS USING MS SQL

1.) BLOB fields in the DDL should be changed to type TEXT

2.) You can import the SQL scripts easily using sqlcmd:

```
sqlcmd -H <hostname> -S <servername> -i inserts_db_001_tbl...grp_1.sql -d Notesdb -b  
-b will break if an error occurs
```

<http://stackoverflow.com/questions/431913/how-do-you-import-a-large-ms-sql-sql-file>

<https://msdn.microsoft.com/en-us/library/ms162773.aspx>

3.) You can suppress the "1 rows affected" by editing the script and adding this as the first line: SET NOCOUNT ON;

4.) You can check the number of records then easily:

```
SELECT COUNT(*) FROM [dbo].[db_001_tbl...grp_1];  
==> no more errors, ... records inserted...
```

<http://stackoverflow.com/questions/2014129/is-there-a-way-to-suppress-x-rows-affected-in-sqlcmd-from-the-command-line>

DEALING WITH MEMORY PROBLEMS

NotesDB frees memory after each document converted, so memory issues during the conversion are rare.

With the default memory settings of Notes in rare cases you might run into an OutOfMemory Exception in rare cases.

Here is how you can increase the memory available for the JVM in the Notes client:

https://www.ibm.com/developerworks/community/blogs/storage_redbooks/entry/lotus_notes_thanks_for_the_memory?lang=en

DEALING WITH CORRUPT DOCUMENTS

If Notes crashes and also the auto-recovery feature is unable to get across a single document, you can exclude this document.

In case of a crash, the last DocumentUniqueID is logged in the Java console.

FWD GmbH.

You can exclude this single document using the SELECT formula in the database configuration document:

@text(@documentuniqueid) != "<last document UNID>"

Filter-Formula	@text(@documentuniqueid) != "<last document UNID>" Enter a Formula to filter the documents dynamically. You can enter any valid @Formula-Expression (e.g. Deleted="N" & Inactive="N") The formula will be used for every form which gets exported.
----------------	---

Picture 16: Excluding a corrupt document from the export