ELO SAND

Installation and operation

Table of contents

Installation

Requirements

SAND requires:

- IBM Domino R8.5.2 or higher

- ELO server components (ELOam, ELOdm, ELOix) version 2011 or higher, or version 9.0 if the ELO Java Client is used for configuration. Additional ELO Fulltext components may also be necessary.

- 32-bit systems: Tomcat/ELO server, or Domino server with http task and the *ELONotesSBIX* servlet installed on a Tomcat/ELO server.

- 64-bit systems: 32 or 64-bit Tomcat/ELO server, or Domino server with http task and the *ELONotesSBIX* servlet installed on a 64-bit Tomcat/ELO server.

> **Please note**
>
> On older 64-bit systems (Domino versions lower than R9.0.1 FP4), you cannot run SAND on a 64-bit Tomcat. This is because the *nlsxbe.dll* that is required for running the Java commands in C/C++ code are only available for 32-bit systems. You cannot copy the *nlsxbe.dll* file from the Domino directory to the IBM Notes directory either.

- For EML conversion on 64-bit systems: 32-bit Tomcat/ELO server, or IBM Domino R9.0 or higher with http task and the "ELONotesSBIX" servlet installed on a 64-bit Tomcat/ELO server. Starting with IBM Domino R9.0.1 FP4, a 64-bit Tomcat/ELO server is also possible. To configure EML conversion, the profile database version must be 8.02.036 or higher.

- For PDF conversion (as well as for DXL conversion with PDF preview): Domino server with accessible http task

- For PDF/A conversion: Ghostscript 8.70 (32-bit version) and "ELO PDF to PDF/A converter"

- PDF conversion on 64-bit systems with installed Notes Traveler: SAND cannot run on Domino. Instead, it must be installed on a Tomcat or ELO server (because jaxen-1.1.1.jar and xml-apis.jar need to be removed from SAND, and PDF conversion is not possible afterwards)

- To display DXL documents: ELO Java Client, ELO Notes Client (as a Notes Client plug-in), or ELO Windows Client 7 (changes to the e-mail template must be permitted in this case).

- Installed Notes Client on the SAND server in order to configure ELO Windows Client 7 or ELO Java Client.

> **Please note**

The Notes Client must have been installed in single-user mode; with multi-user installations, SAND cannot establish sessions on the Domino server.

- User-defined archiving: adjustments to the mail template must be permitted.

- Multiple ELO repositories: a profile database version 9.00.040 or higher.

Installation

SAND consists of three parts that have to be installed. First is the SAND servlet itself, which must be installed on the Tomcat server. The second step consists of installing and configuring the Notes ELO profile database. Third, a number of ELO scripts must be installed.

Servlet installation

Before you can install the servlet on Tomcat, you will have to make some preparations as described in the following.

Preparing the servlet installation

First, you must configure several files for the servlet on Tomcat and then the PDF converter.

The 'nlsxbe.dll' file

SAND uses the *nlsxbe.dll* file from Notes or Domino. You may have to enter the path for this DLL to the *Path* environment variables. Running SAND on a 32-bit Tomcat requires the (32-bit) *nlsxbe.dll* from the Notes directory. When installing SAND on a 64-bit Tomcat, the (64-bit) *nlsxbe.dll* from the Domino directory is used instead.
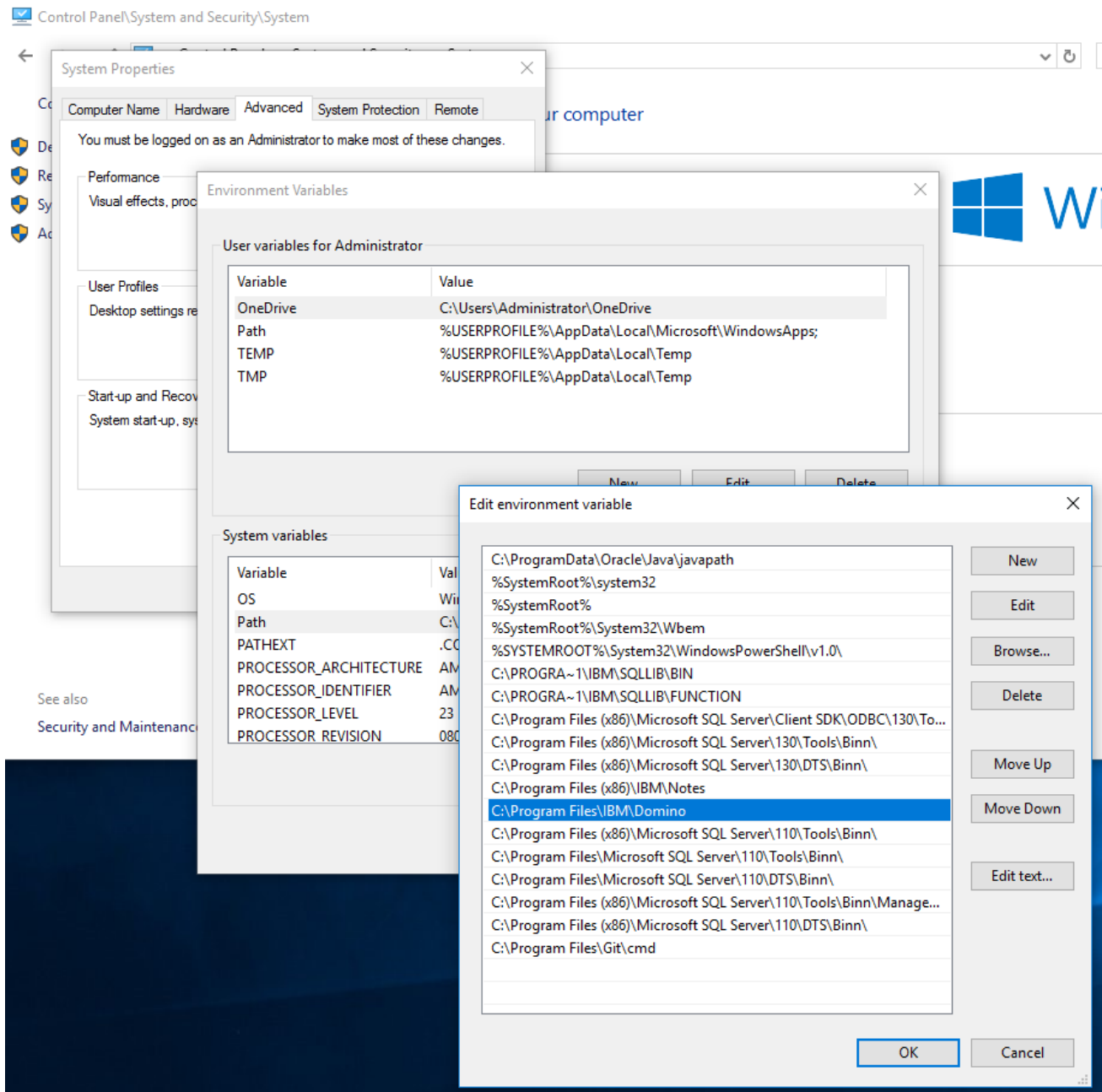
Fig.: Path for 'nlsxbe.dll'

If both directory paths are already entered to your path variables, ensure that the correct path to IBM Notes (IBM Domino) is entered first. You may need to restart your computer if you make changes to the *Path* environment variables.

Context files

Configure the archiving servlet in the profile database. The context file *config.xml* only contains information on how the servlet finds the profile database. More precisely, it contains the name of the Domino server, the path name of the profile database, the user name of the Notes user (if applicable), the Notes password, and a few other user-specific computer settings. The directory of

the context files also contains the configuration file of the Tomcat logger (*log4j.properties* or *logback.xml*).

Look for the ELOenterprise or ELOprofessional configuration directory, such as *c:\ELOenterprise\config*.

Create a subdirectory called *EloNotesSB*, then copy the provided context file, *config.xml*, and the logging configuration file *log4j.properties* or *logback.xml* into it (for explanations on logging as well as information about which configuration file is used for logging, refer to the *"Logging configuration with Logback or Log4j"* section below).
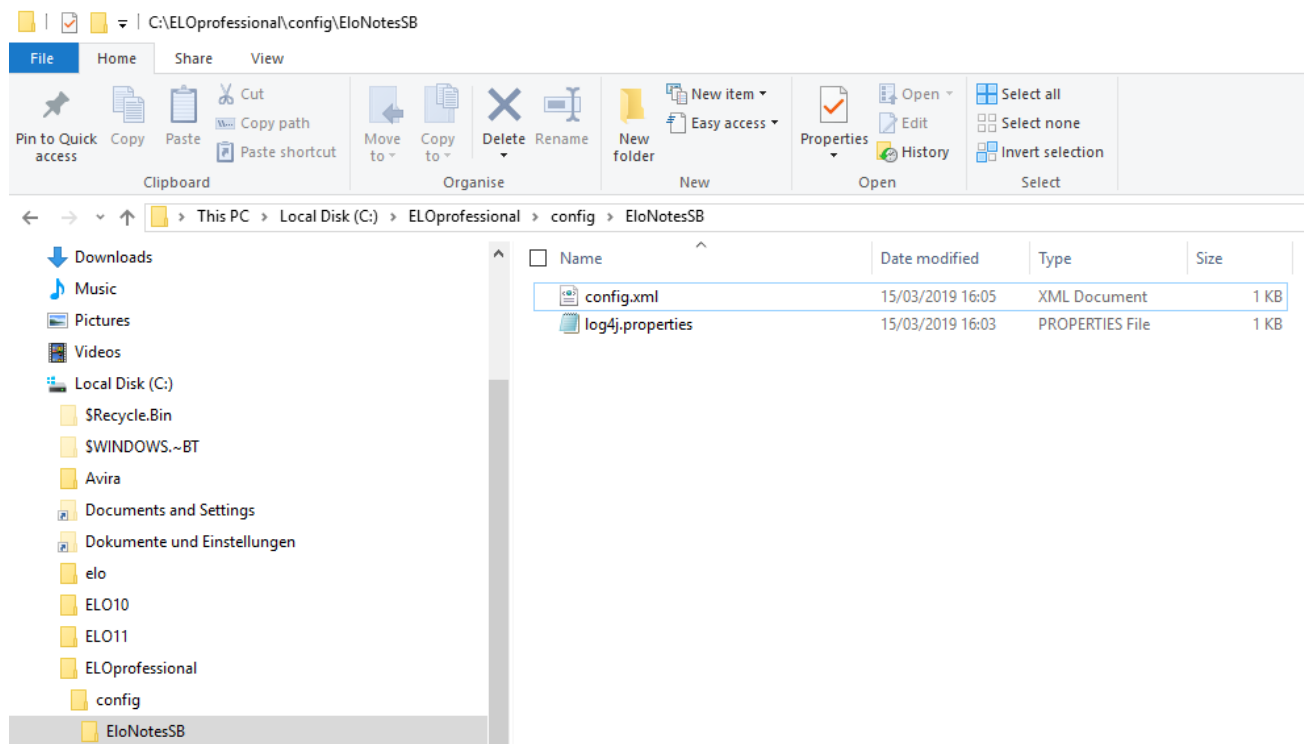
Example:

Fig.: Context files

config.xml configuration

Edit the *config.xml* file and enter the name of the Domino server, as well as the file path of the profile database (relative to the data directory of the Domino server). If you do not enter the name of the Domino server, the system will attempt to locate the Domino server using the local mail file.

On a 32-bit Tomcat, the system logs on with the user whose ID is entered to *KeyFilename* in the *notes.ini* file saved on the computer. You will then only need to enter the Notes password for this user.

Important

Entries in *LOCALNOTESUSER* cause errors on a 32-bit Tomcat. Enter an empty string here.

> However, on a 64-bit Tomcat, you must complete the *LOCALNOTESUSER* field!

On a 64-bit Tomcat, you have to enter the user SAND will log in as on Domino under LOCALNOTESUSER.

```
config.xml - Notepad
File  Edit  Format  View  Help
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE properties SYSTEM "http://java.sun.com/dtd/properties.dtd">
<properties>
<comment>PWD encoded</comment>
<entry key="ELODB">ELO32\ELOProfil.nsf</entry>
<entry key="LOCALNOTESUSERPWD">232-142-15-213-172-4-212-220</entry>
<entry key="NOTESSERVER">Notes</entry>
<entry key="LOCALNOTESUSER">Administrator/ELO</entry>
</properties>
```

Fig.: config.xml on a 64-bit system

Additional parameters in config.xml:

- PDFACONVERTER: the PDF/A converter

    - (Default: `<program directory>\pdfaconverter\\pdf2pdfa.exe`).

- ELOatTimerLookupInterval: time interval in seconds in which SAND checks whether a task should be running (default: 60 seconds).

- STARTBROWSERFREQ: time interval in seconds in which the status page is refreshed before the actual refresh interval is read from the profile database (default: 10 seconds).

- THRESHOLD: determines the behavior when threshold values for databases are exceeded.

    - Threshold = 1: Continue
    - Threshold = 2: Continue, but do not perform any changes to e-mails (default)
    - Threshold = 0: Cancel archiving of the affected database

- CHANGEMAILS: determines whether e-mails can be changed during archiving (CHANGEMAILS = 1 means they can; CHANGEMAILS = 0 means they cannot). Default: 1.

- DEBUGDB: enables debugging for certain databases, even if debugging is turned off for individual e-mails in the profile database. Example:

    - `DEBUGDB=(mail\administ.nsf;mail\srenz.nsf)`

- NOTESEXCWAIT: determines the time to wait (in seconds) after a Notes error to determine whether this is an actual error or the Domino server http task has simply shut down (default: 4 seconds).

-

PDFCONVERTERSTOPBHV: determines the behavior of SAND when PDF converter stops. The following values are possible: PDFCONVERTERSTOPBHV = 1 (error) or PDFCONVERTERSTOPBHV = 0 (archiving performed in ASCII format). (Default: 0).

- ECDLINK: Defines whether ELO links are set as ECD links (ECDLINK=1), or as ELO buttons (which are configured in the profile database; ECDLINK=0). ECDLINK=1 is set by default.

- USECLUSTER: If set to "1", the Notes databases in the Domino server cluster are searched (profile database and mail databases). USECLUSTER=0 is the default setting.

- ARCHIVELN8EMLNOTMIMEASTEXT: If set to "1" and SAND is running on a Domino version earlier than R9 (EML conversion, or more precisely MIME conversion could cause the Domino server to crash), the e-mails will instead be archived in text format when otherwise MIME conversion would be necessary.

- INFOTEXT_LANG: Language of the information text placed before the ELO link. SAND then searches for the information text to be inserted that ends in this name token, e.g. INFOTEXT_BODYREMOVED_EN if English ("EN") is set, or INFOTEXT_BODYREMOVED_CZ if Czech ("CZ") is set.

  If INFOTEXT_LANG is not configured (or empty), the information texts are inserted in all language versions configured in the config.xml file. For example, if INFOTEXT_BODYREMOVED_EN and INFOTEXT_BODYREMOVED_CZ are configured, information texts are inserted in both languages.

  If no information texts are configured, default texts are inserted in the system language.

- INFOTEXT_BODYREMOVED_BOLD: Here, you can specify whether the information texts indicating that the e-mail body had been removed is shown in bold ("TRUE") or not ("FALSE") (default: "TRUE").

- INFOTEXT_BODYREMOVED_FONTSIZE: Here, you can specify the font size for information texts indicating that the e-mail body has been removed (default: 12).

- INFOTEXT_BODYREMOVED_EN: Here, you can enter the information text in English indicating that the e-mail body has been removed and replaced by a link (default: "The document has been shortened during the archiving process. You will find the original document in the repository under this link:").

- INFOTEXT_BODYREMOVED_URL_EN: Here, you can enter the information text in English indicating that the e-mail body has been removed and a URL inserted in addition to the ELO link (default "Or in Web Client using the following URL:"). If you do not want to insert an information text before the URL, you have to configure a space here, as otherwise default texts will be inserted.

- INFOTEXT_ATTREMOVED_BOLD: Here, you can specify whether the information texts indicating removed attachments are shown in bold ("TRUE") or not ("FALSE) (default: "FALSE"):

-

INFOTEXT_ATTREMOVED_FONTSIZE: Here, you can specify the font size for information texts indicating that attachments have been removed (default: 10).

- INFOTEXT_ATTREMOVED_EN: Information text for the link to deleted attachments.

- INFOTEXT_ATTREMOVEDLIST_EN: Information text as a header in the list of deleted attachments. If you do not want to insert a header, you have to configure a space here, as otherwise a default text will be inserted.

- You can also configure any other language. Simply enter a token for the language under INFOTEXT_LANG and name the tags for the text for removed bodies/additional URLS for deleted attachments.

  Example: For German information texts, enter "DE" under INFOTEXT_LANG and create the entries "INFOTEXT_BODYREMOVED_DE" and "INFOTEXT*BODYREMOVED_URL_DE" or "INFOTEXT_ATTREMOVED_DE" and "INFOTEXT_ATTREMOVEDLIST_DE".

Logging configuration with Logback or Log4j

Here, we have to differentiate between different cases. SAND uses the "Logback" framework to create log files when SAND is running as version 20 and as a Tomcat servlet. Otherwise, meaning with SAND versions earlier than 20, or if SAND is running in a Domino servlet container, "Log4j" is used as before (see separate documentation on installing SAND on Domino).

> **Attention**
>
> SAND versions earlier than 20 and SAND running on Domino use log4j; SAND running on Tomcat with ELO versions 20 and higher uses Logback. In the first case, configure *log4j.properties*, otherwise *logback.xml*.

Logging with Log4j:

Once you have copied *log4j.properties* to the *EloNotesSB* directory, edit this file and enter the correct path to the Tomcat log files, e.g.

C:/Program Files/Apache Software Foundation/Tomcat 8.0/logs/EloNotesSB.log

```
log4j.properties - Notepad

File  Edit  Format  View  Help

# CVS: serversetup $Revision: 1.2 $ $Date: 2003/10/22 16:54:32 $
# Level (debug oder info):
log4j.rootLogger=info, FI

# uncomment the following lines for debug output:
#log4j.logger.eloNotesSB=debug
#log4j.logger.eloNotesConverter=debug
#log4j.logger.eloNotesSBBasic=debug

# output in file:
log4j.appender.FI=org.apache.log4j.DailyRollingFileAppender
log4j.appender.FI.File=C:/temp/logs/EloNotesSB.log

# DatePattern: one file each day:
log4j.appender.FI.DatePattern='.'yyyy-MM-dd
log4j.appender.FI.layout=org.apache.log4j.PatternLayout
log4j.appender.FI.layout.ConversionPattern=%d{ABSOLUTE} %1x %-5p (%F:%L) - %m%n

# if append is true, the log file is not deleted when the program is started:
log4j.appender.FI.append=false
```

Fig.: log4j.properties

Logging with Logback:

Copy the *logback.xml* file to the *EloNotesSB* directory and edit the file. Enter the correct path to the Tomcat log files, e.g.

C:/Program Files/Apache Software Foundation/Tomcat 8.0/logs/EloNotesSB.log

```
*C:\Users\Administrator\git\SAND\logback.xml - Notepad++ [Administrator]

File  Edit  Search  View  Encoding  Language  Settings  Tools  Macro  Run  Plugins  Window  ?

logback.xml    log4j.properties

 1  <configuration>
 2    <appender name="FILE" class="ch.qos.logback.core.FileAppender">
 3      <file>C:/Program Files/Apache Software Foundation/Tomcat 8.0/logs/EloNotesSB.log</file>
 4      <append>true</append>
 5      <encoder>
 6        <pattern>%d{HH:mm:ss.SSS} %-60(%thread %X{NDC} %-5level \(%logger{0}.java:%L\)) - %msg%n</pattern>
 7      </encoder>
 8    </appender>
 9
10    <root level="info">
11      <appender-ref ref="FILE" />
12    </root>
13
14    <logger name="byps" level="error">
15      <appender-ref ref="FILE" />
16    </logger>
17  </configuration>
```

Fig.: logback.xml

EloNotesSB.xml:

Finally, search for the *conf\Catalina\localhost* path on the Tomcat server (e.g.:

C:\Program Files\Apache Software Foundation\Tomcat\conf\Catalina\localhost)

and copy the available *EloNotesSB.xml* file to this directory.
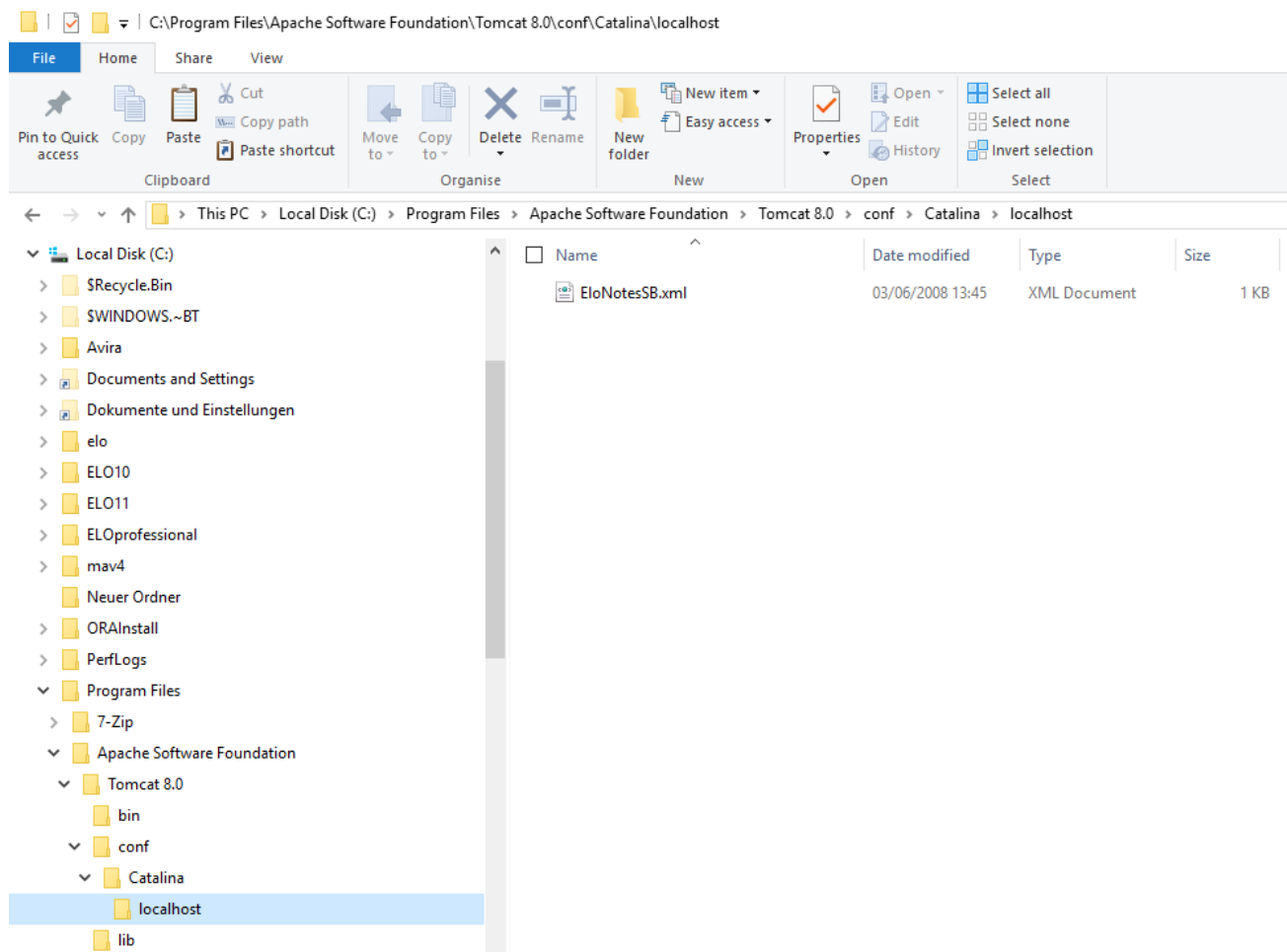
Fig.: conf\Catalina\localhost

Edit *EloNotesSB.xml* and update the path for *webappconfigdir*. Enter the path to the directory containing the EloNotesSB context file here.
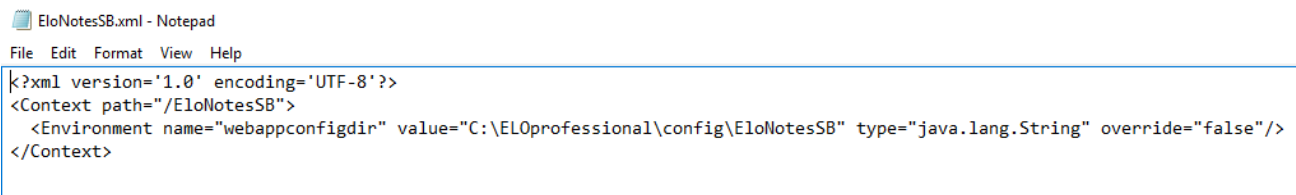

Fig.: EloNotesSB.xml

Http task

If you want to archive in PDF format, please ensure that the Domino http task is running on port 80 on the Domino server. If not, start the task.

If the task uses a different port, this must be configured in the profile database under *Opt. Serverarchiv* (options server archiving) as *Default Http Portnumber*. If the task is not visible in this view, start the task using the button on the right of the toolbar.
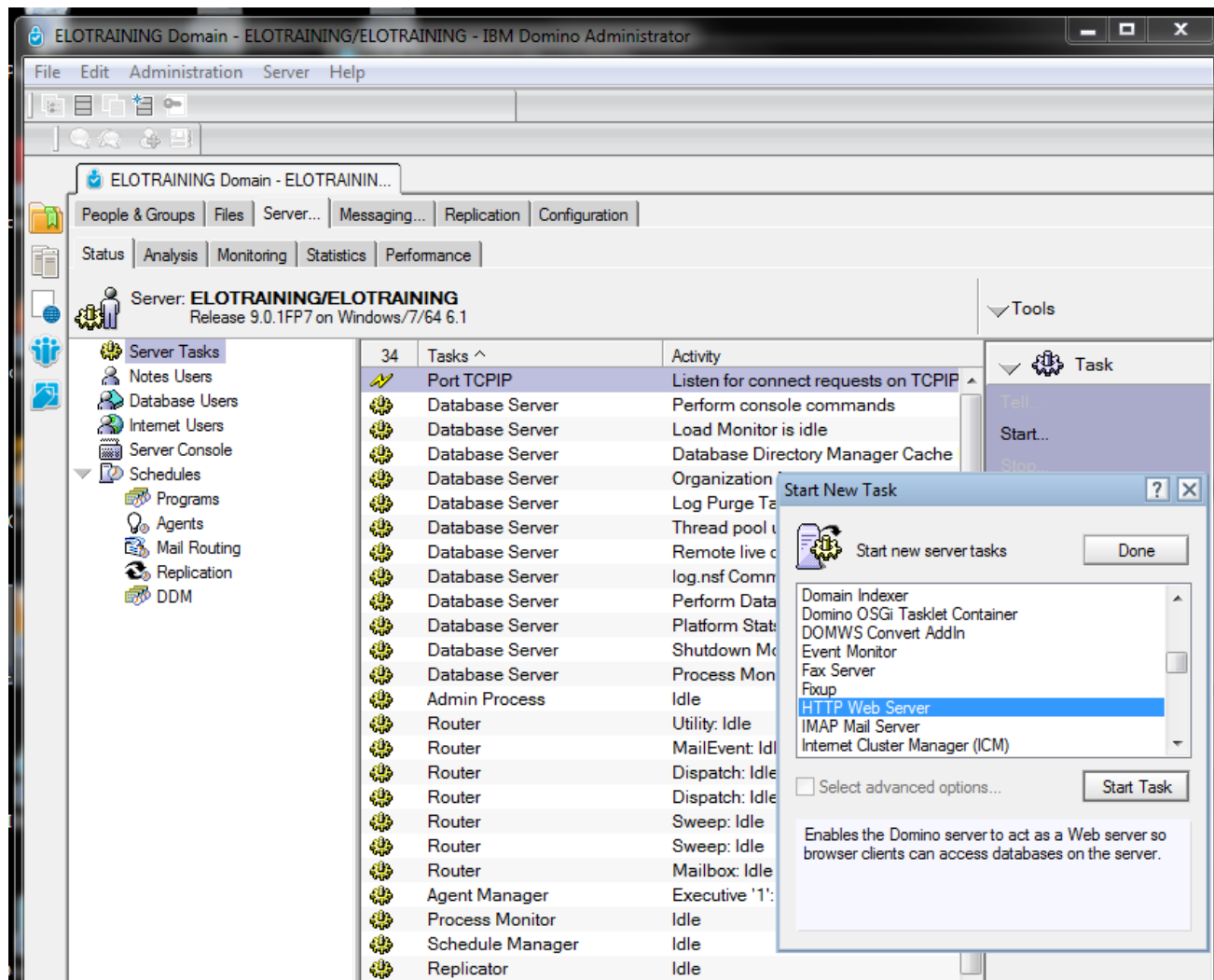
Fig.: Starting the http task

The http server should now be running.
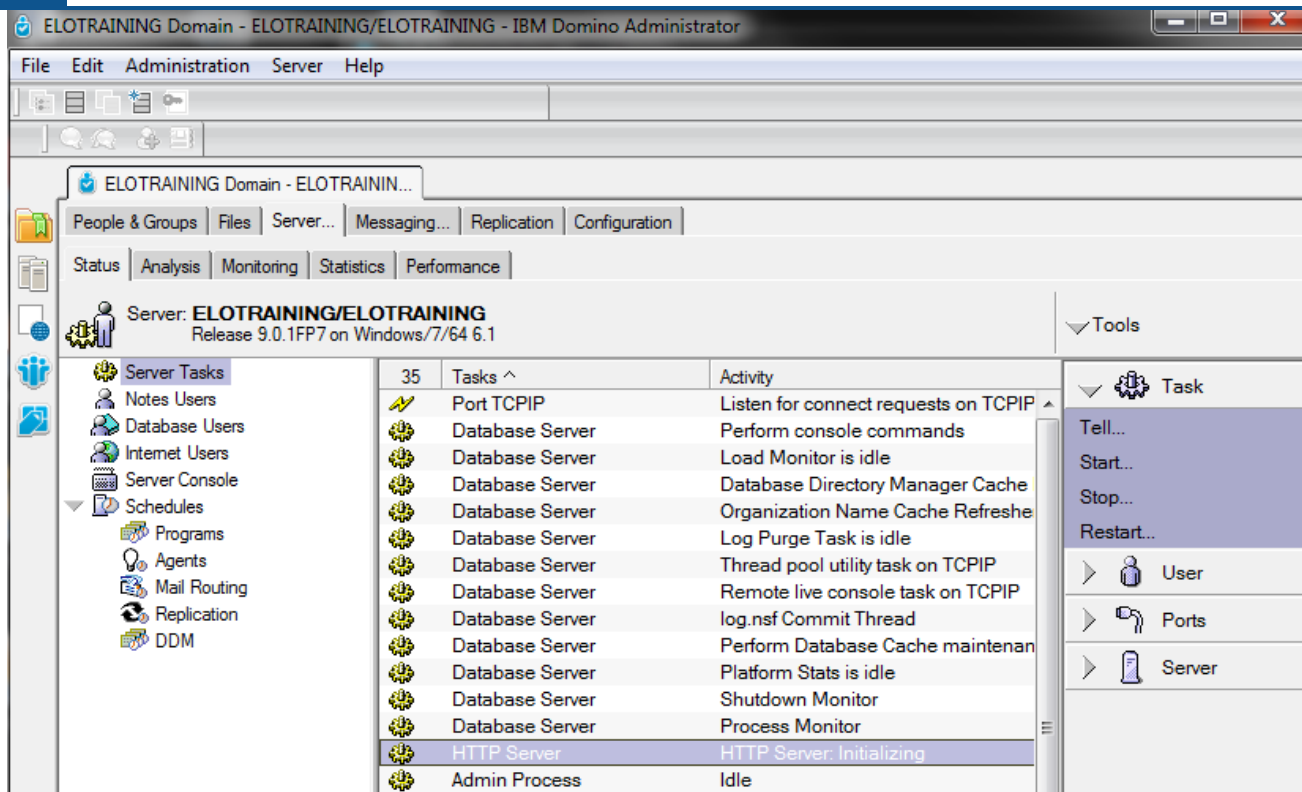
Fig.: Http task in the Domino Administrator task overview

If a separate PDF conversion database is defined in the profile database under serverbase options, the port number of this HTTP task is automatically retrieved from the server address book. In future versions, the port number will also be queried if no PDF conversion database is registered. If this special PDF conversion database is stored on another Domino server, the http task must then be started on that server.

Converting to PDF/A

If you wish to archive in PDF/A format, you must first install Ghostscript 8.70 (32-bit version). You can download Ghostscript from the Internet, or use the package provided with SAND.

Next, you must install the ELO "PDF to PDF/A converter". This software is not provided with the SAND package, but it can be ordered from ELO separately.

The PDF/A converter is installed to the *Program Files* directory by default. Check the *Program Files* environment variable, create a subdirectory titled *pdfaconverter*, and copy the PDF/A converter files *Pdf2Pdfa.exe* and *DoPdfA.exe* into this directory.

Important: If you are using a 32-bit version of Tomcat on a 64-bit operating system, the *ProgramFiles* environment variable may reference the 64-bit directory (*c:\Program Files*), while the *ProgramFiles* variable in the 32-bit version of Tomcat refers to the program directory in the 32-bit program files directory (*c:\Program Files (x86)*).

If you do not want to install the PDF/A converter to your program directory, you can also install it to any other directory. Simply make a corresponding entry in the *config.xml* file. You must enter a new line for the *PDFACONVERTER* key, for example:

```
<entry key="PDFACONVERTER">c:\servlets\pdfaconverter\pdf2pdfa.exe</entry>
```

By default, e-mail messages are only archived in PDF format. If you want to file e-mail messages in PDF/A format, you have to configure this in *Options Serverarchiv* (server archiving options) in the profile database.

Servlet installation

Copy the provided EloNotesSB.war file to the Tomcat server's *webapps* directory (such as *c: \Program Files\Apache Software Foundation\Tomcat \webapps*). Wait for the Tomcat server to configure the EloNotesSB servlet. You may need to stop and restart Tomcat.

Starting with version 20, the Notes.jar file can no longer be provided for licensing reasons. After you have installed Notes on your computer, this file is available on your computer, however, and you simply have to enter the file in the catalina.properties (in the Tomcat or ELO Server conf directory) under "shared.loader".

The Notes.jar requires the geronimo-corba_3.0_spec-1.1.jar (which is installed with the SAND servlet). This file also has to be loaded with the Notes.jar file by the Shared Loader, as otherwise Notes.jar will not be able to find the file. So, under "shared.loader" in the catalina.properties, link these two files, e.g.

shared.loader="E:\\Program Files\\HCL\\Domino\\jvm\\lib\\ext\\Notes.jar","C:\\elo\\servers\\ELO-DESKTOP-UUH4S35-2\\webapps\\EloNotesSB\\WEB-INF\\lib\\geronimo-corba_3.0_spec-1.1.jar"

Restart Tomcat.

By making this entry under "shared.loader", the servlet can be started separately later without having to restart the entire Tomcat server or ELO Server.

Alternatively, you can also copy the Notes.jar from the "…\HCL\Domino\jvm\lib\ext"-directory (or .. \HCL\Notes\…) to the "…\webapps\EloNotesSB\WEB-INF\lib" SAND directory in the Tomcat. Disadvantage: It is not possible to restart SAND separately; the entire Tomcat server or ELO Server has to be restarted.

Servlet configuration in the Notes Client

The servlet is actually configured in the Notes Client, more specifically, in the profile database. Licenses are not checked during configuration in the profile database, but rather only when the archiving tasks are run. Archiving tasks can be managed without entering the administrator to the profile database user management system.

File installation

First, copy the files

- *commons-codec*.jar*,
- *commons-httpclient.jar*
- *commons-logging.jar*
- *EloNotesSBRescan.jar*

to the Notes Client directory:

..\jvm\lib\ext (e.g.: c:\Program Files (x86)\IBM\ \Notes\jvm\lib\ext)

You can find these files in the installation package for the ELO IBM Notes interface in the *Jar* folder (that is, in the supplied ZIP file, e.g. *ELO IBMNotesInterfaceVersion10.01.000.002.zip*). Afterwards, you need to restart your IBM Notes Client (these files are needed for informing the SAND servlet that there are new or changed filing tasks in the profile database or ones that require deletion).

If you want to archive e-mails in NSF format, you must also install the *EloNSFTe.nsf* database, which is also a part of the package, on your Domino server. Use the Notes Client to do so.

Installing the profile database

First, install the new profile database, then update any existing profile databases. You will find the profile database in the "Databases and Templates" folder in the installation package for the ELO IBM Notes interface.

Installing 'ELOProfil.nsf'

- Copy the ELO profile database from the installation package to a temporary directory.
- If needed, create an ELO32 directory on the Domino server under data
- Open the temporary profile database
- Copy the temporary profile database in Notes to the Domino server, path name *EL32\ELOProfil.nsf* and disable the *Access control list* check box.
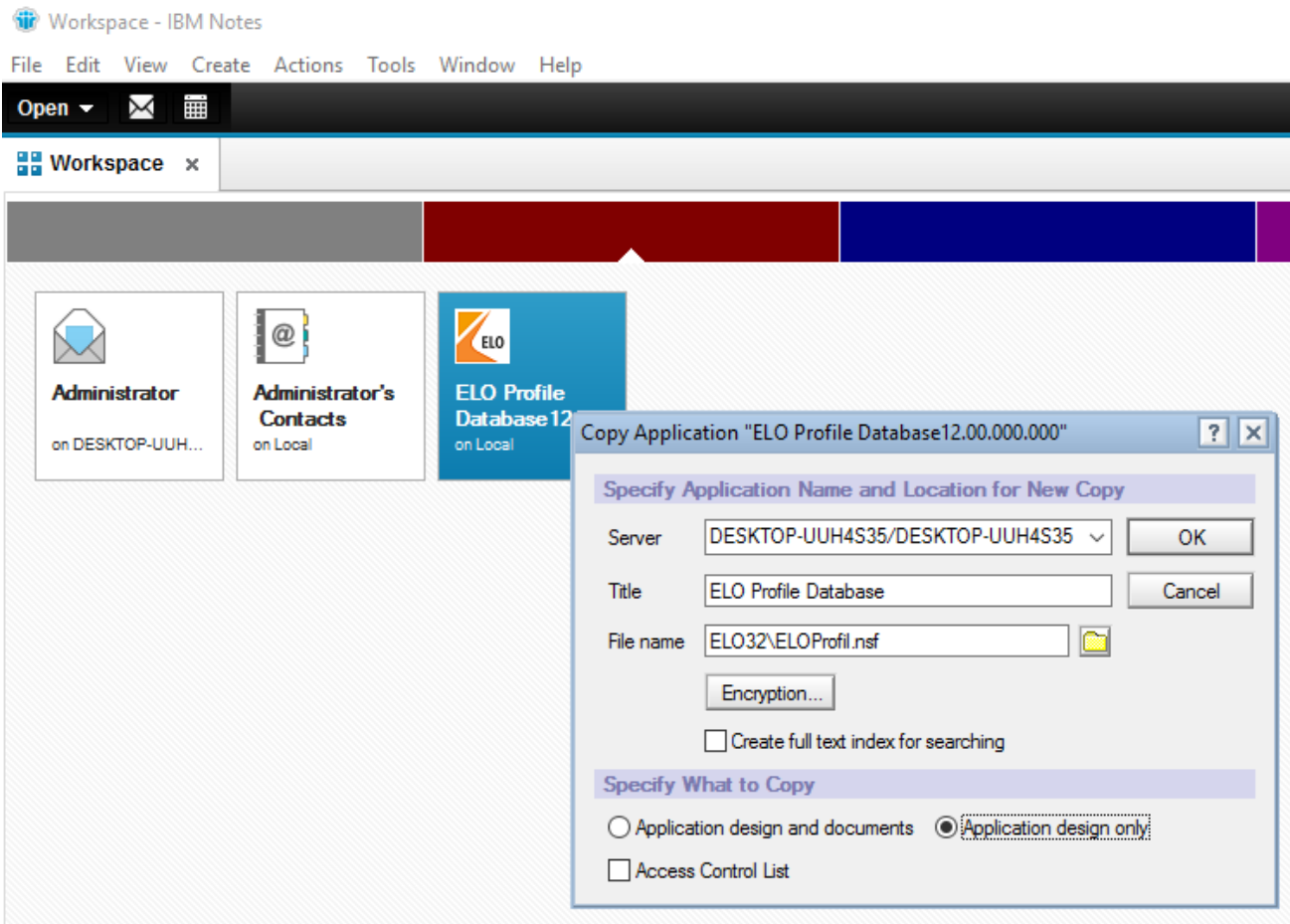
Fig.: Copying the profile database

You may also choose a different directory relative to the Domino data directory, but then you have to adjust the notes.ini accordingly by the environment variable

```
"$ELO_DB", e.g. $ELO_DB=ELOProfil.nsf.
```

If the profile database is on a different Domino server than the server you are logged on to, you need to make sure that the profile database is searched on "your" Domino server. For this, set the environment variable "$ELO_SERVER" to the server of the profile database in the *notes.ini* (such as $ELO_SERVER=ds-srv-02/contoso). The "MailServer" default environment variable is evaluated when "$ELO_SERVER" has not been set and the profile database cannot be found.

Updating an older profile database version

You should initially always test the software with a temporary version. You can update the old profile database (or a copy thereof) via a template (profile database export and import are no longer supported).

Updating the profile database with a template

1.

Copy the new profile database, for example, to the temp directory on your PC.

2. Open the profile database in Notes.

3. In the Notes Client, copy the profile database to the Domino server and rename it as a template, therefore with the extension ".ntf" instead of ".nsf".

4. Open the properties of the profile database template and enter a template name, such as "ELOProfile".

5. As stated above, you should first test this with a copy. Copy the old profile database to the Domino server with a new name, such as "ELOProfile802034.nsf" (with design and documents).

6. Assign the test database the profile database template.

7. Change the default profile database in the *notes.ini* file as described above.

8. Close and open the Notes Client.

9. Open the new test profile database and call up the *ProfildbUpdate* action. Choose the current version of the profile database that is to be updated anyway. For versions before 5.00.088, choose 5.00.088 anyway; for versions higher than 8.00.030, select ">Version 8.00.030".
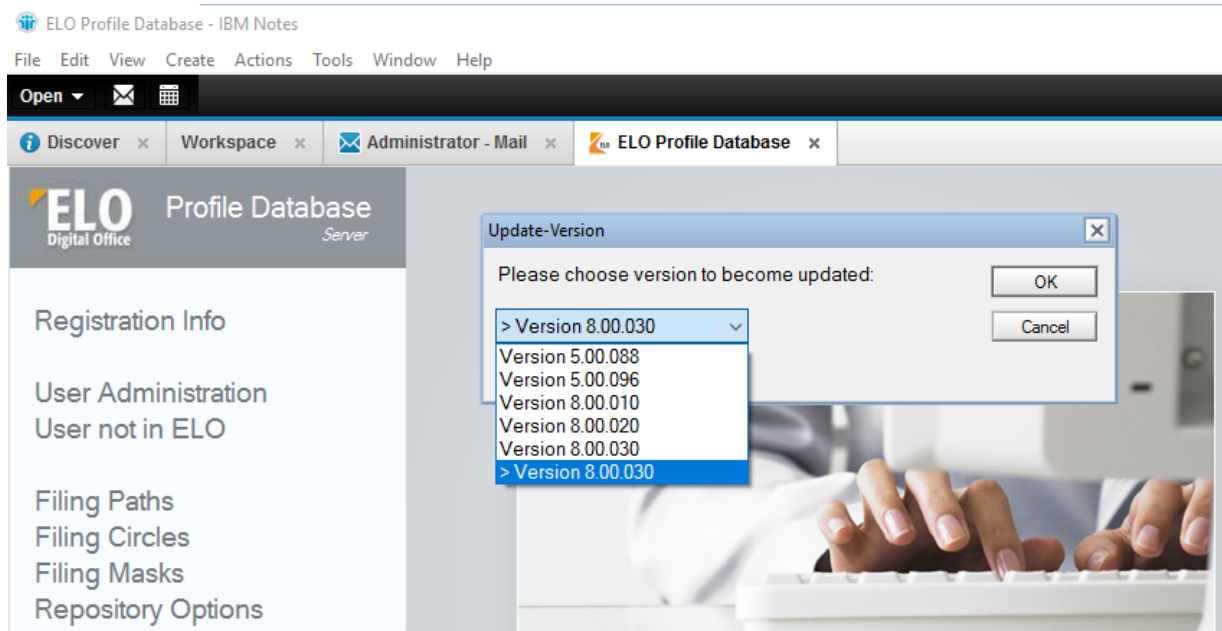
Fig.: Updating the profile database

10. If you only see the SAND version of the profile database, but have licenses for client archiving (the association groups are not displayed, for example), you need to reassign the licenses.

11. Test the profile database.

Setting the test profile database as the current profile database

If you want to continue to work with the default path of the profile database, in the Notes client, copy the new tested database to the Domino server under the name "ELO32\ELOProfil.nsf", which is the default name.

Delete the *$ELO_DB* entry in the *notes.ini* file of the test user (now, close and reopen the Notes Client).
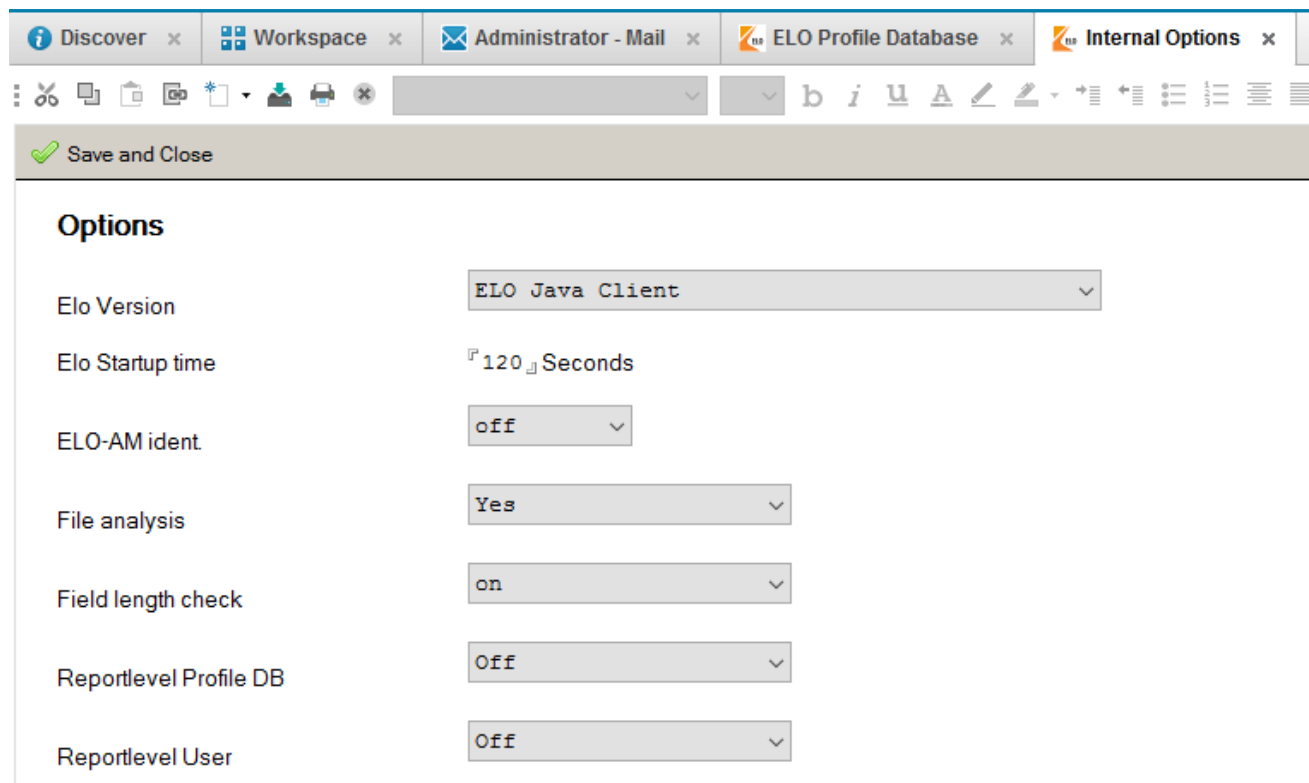
Configuring the profile database

The following describes the process for configuring the profile database as is relevant for SAND.

"Options"

Open the new profile database

Set the options

Fig.: Options in the profile database

Information on the "ELO version" field: Enter which ELO client is running on the computer on which you would like to configure the profile database here.

Information on the 'ELO AM ident.' field: If you want to manage multiple ELO repositories in this profile database with the same name, you need to enter "yes" in this field. This adds the ELO Access Manager URL to the repository name, making the repository name unique in the profile database. This field must be set BEFORE other settings are performed in the profile database.

Information on the "Field length check" field: When "on" (default) is set, a length check is performed when entering metadata; if necessary, the texts are shortened to the maximum length permitted by the ELO Indexserver.

> **Please note**
>
> If the field length check is not performed, database errors may result during filing, namely when maximum field lengths are exceeded.

Information on the "Set extra text" field: When "on" (default) is set, the text content of the e-mails is entered to the metadata under Extra text.

Information on the "Mark as ELO e-mail" field: When "on" (default) is set, the SORD type for Note e-mails is set to "261" (e-mail).

Information on the "Internet address" field: When "on" (default) is set, addresses are not saved as Notes addresses, but as Internet addresses when entering metadata. This requires an Internet address to be specified for individuals in the address database. Otherwise, SAND attempts to build an Internet address using the abbreviated name and the domain from the address book.

Setting Notes options
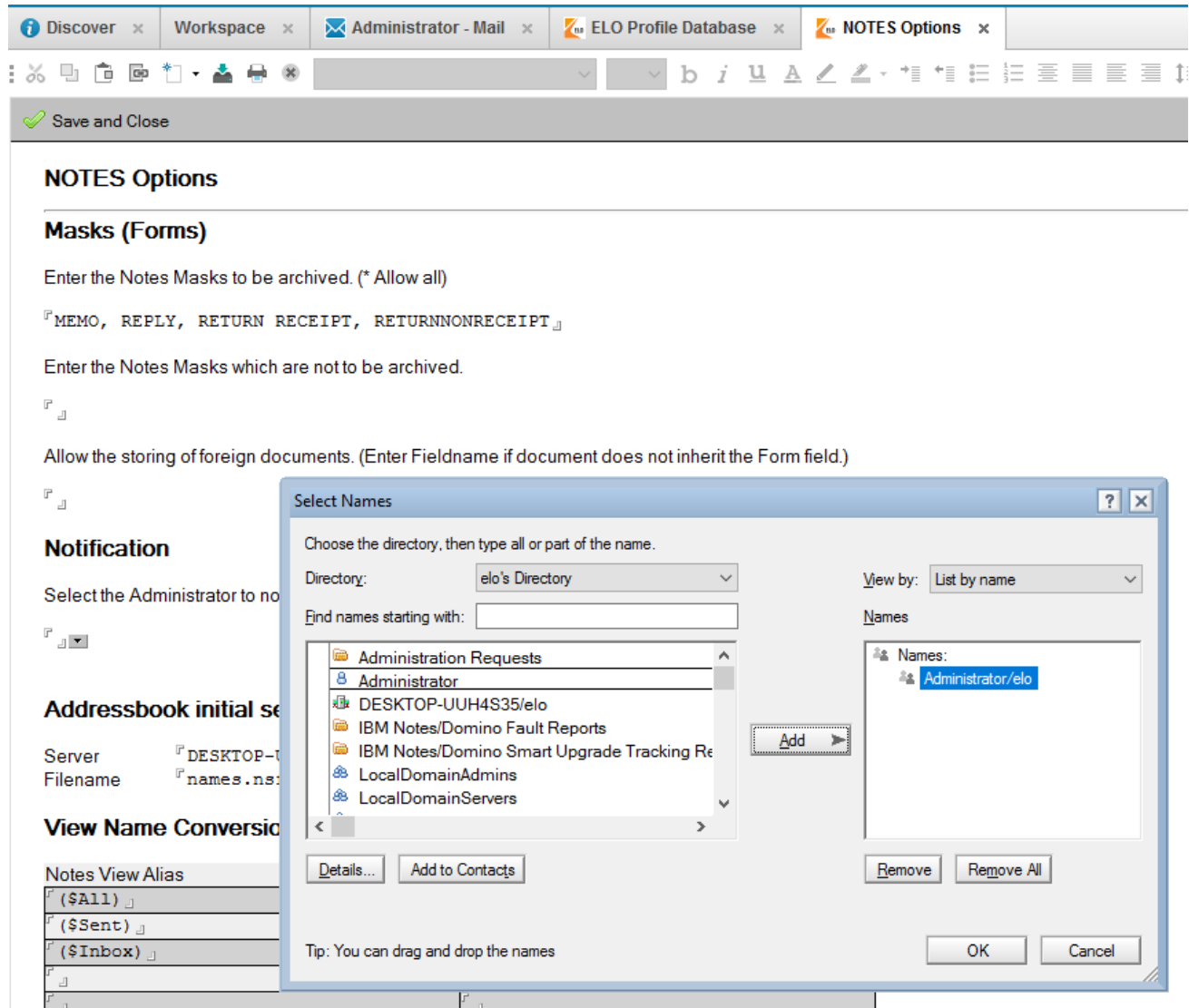
Fig.: Notes options in the profile database

Enter the address book server and persons to be notified.

Importing license data
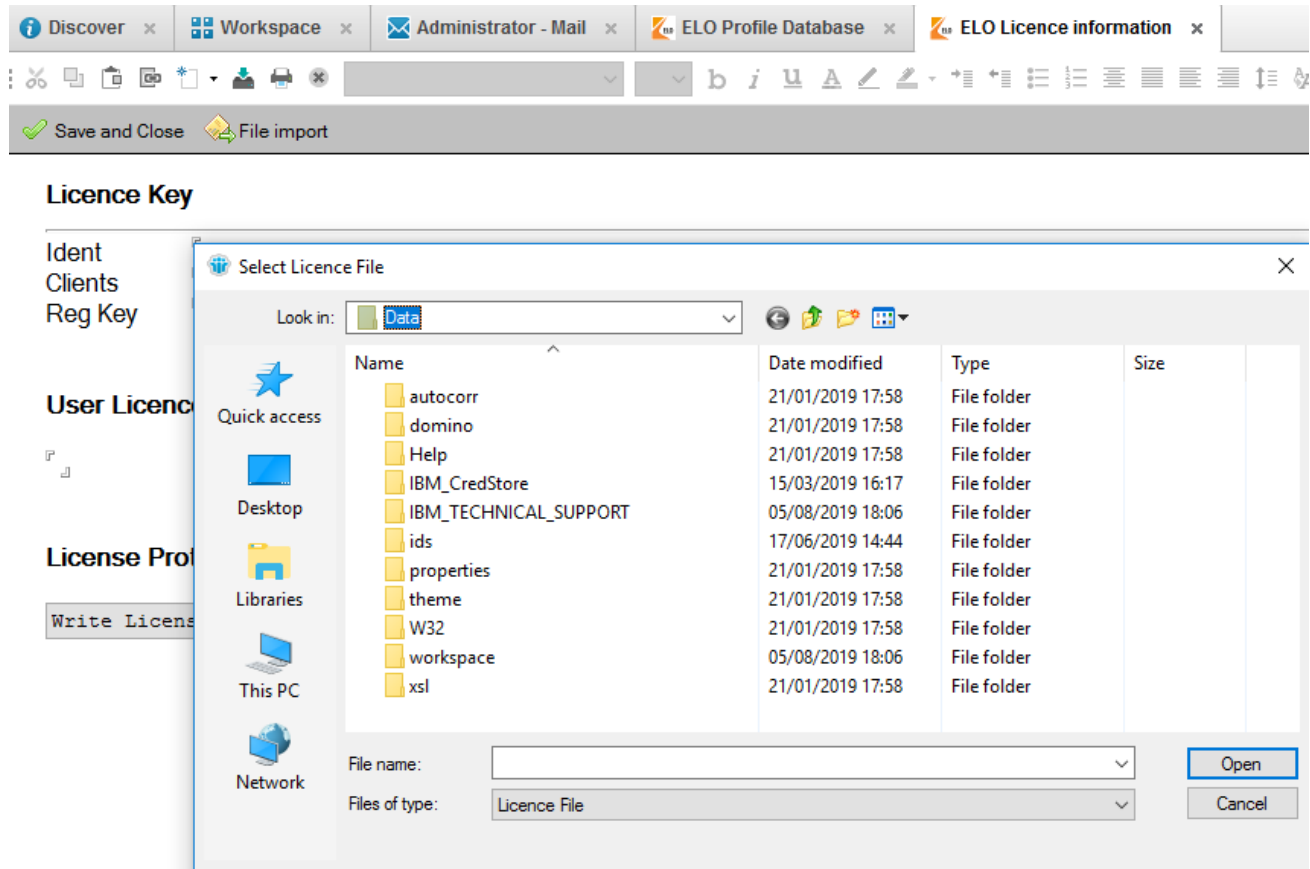
Fig.: License data in the profile database

You may be requested to open the profile database again. Depending on the license, you will then only see the entries relevant for the application (for server archiving, you will not see any association groups, for example).

Statistics for company licenses

Starting with version 12, statistics can be created for archived Notes databases with a company license.

Fig.: License log settings in the profile database

- This feature has to be activated in the ELO license information in the profile database: Select *Write license log: on* to create the log
- Select *Write license log: off* to disable logging.
- To delete previous logs, click *Delete license log*.

Restart the SAND servlet for the settings to take effect.

Fig.: License log view

The log is shown in the *SANDLicenseReports* view, where the individual logs are categorized by year, month, and day. The Notes database, the start time, and the number of archived documents are logged.

The view is only visible in the Notes Designer.

Creating filing circles

The filing path consists of fixed filing circle names and the dynamic filing path name set during filing.
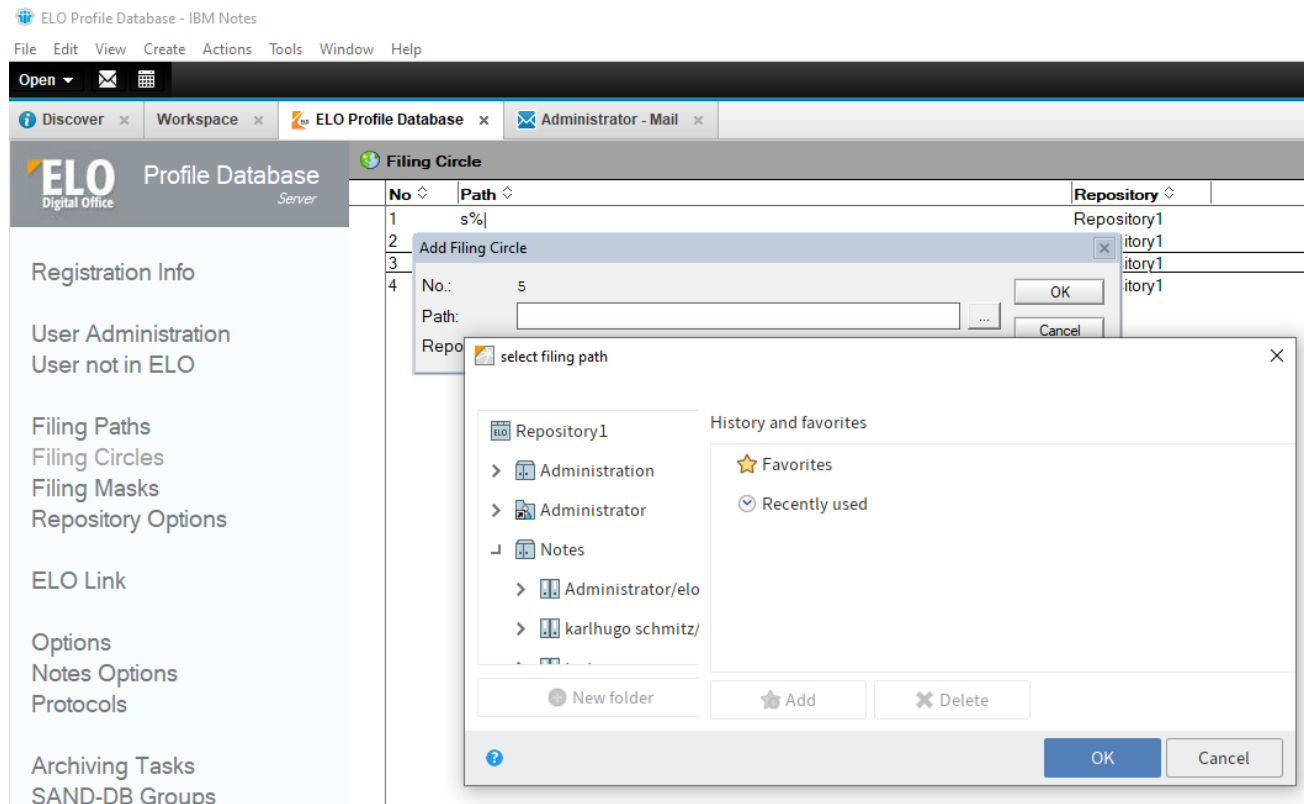
Fig.: Creating filing circles

First, create filing circles.

Creating filing paths

Then, create filing paths:
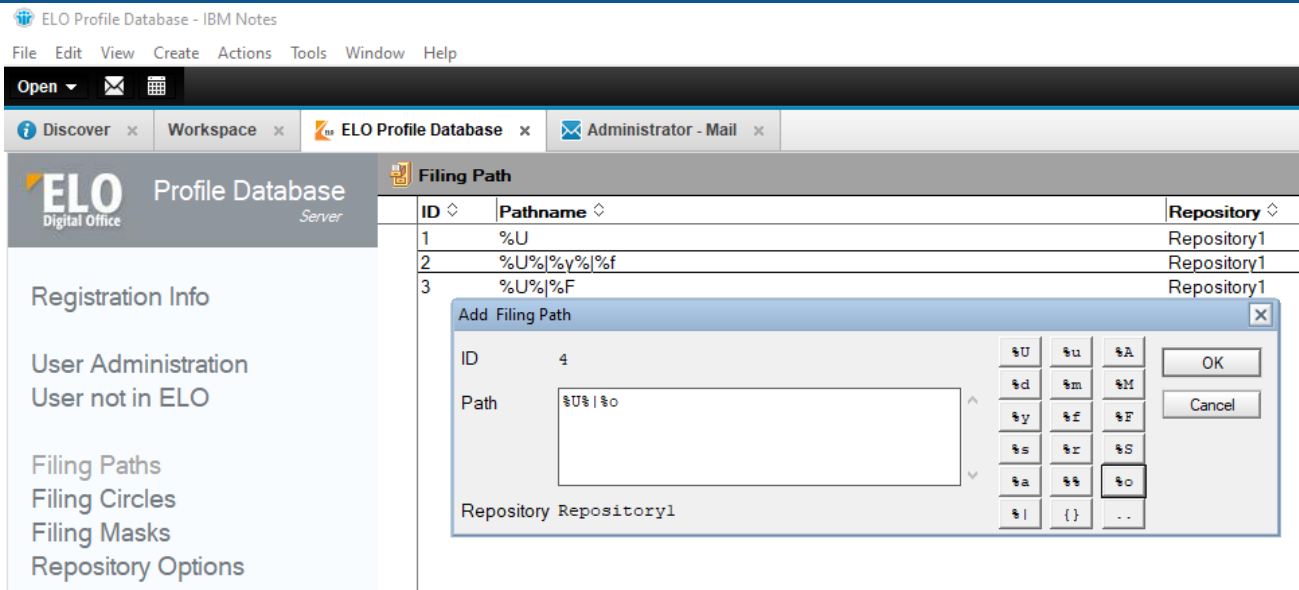
Fig.: Creating filing paths

The parameters here mean:

- %%: The access control list (ACL) is set after this marker.
- %U: Notes user name (common name, "Alfred/Server", name of the owner of the e-mail database)
- %u: ELO user name ("Alfred Candelone", the ELO name of the owner of the e-mail database)
- %A: Notes user name (abbreviated name, "Alfred", the shortened name of the owner of the e-mail database)
- %d: Day (01 to 31)
- %m: Month (01 to 12)
- %M: Month (Jan to Dec)
- %y: Year (2018)
- %f: Notes view name (e.g. "($Inbox)")
- %F: Notes view name translated (e.g. "Inbox")
- %s: Sender
- %r: Recipient
- %S: For inbox: sender; otherwise: recipient
- %a: Database name
- %|: Separator symbol
- %o: Structure archiving folder
- %e: E-mail address of the inbox owner
- {…}: Notes field name/field formula

Please note

In the editor for Notes field names/field formulas, the button for listing possible Notes fields is only available if the e-mail database of the current Notes user contains at least one e-mail.

Create metadata forms

Automatic entry of metadata is based on the configuration of the metadata forms. E-mail metadata forms and attachment metadata forms have to be configured where you can then assign Notes field names and ELO field names. Next, you have to set a metadata form to be used by SAND when creating ELO folders.
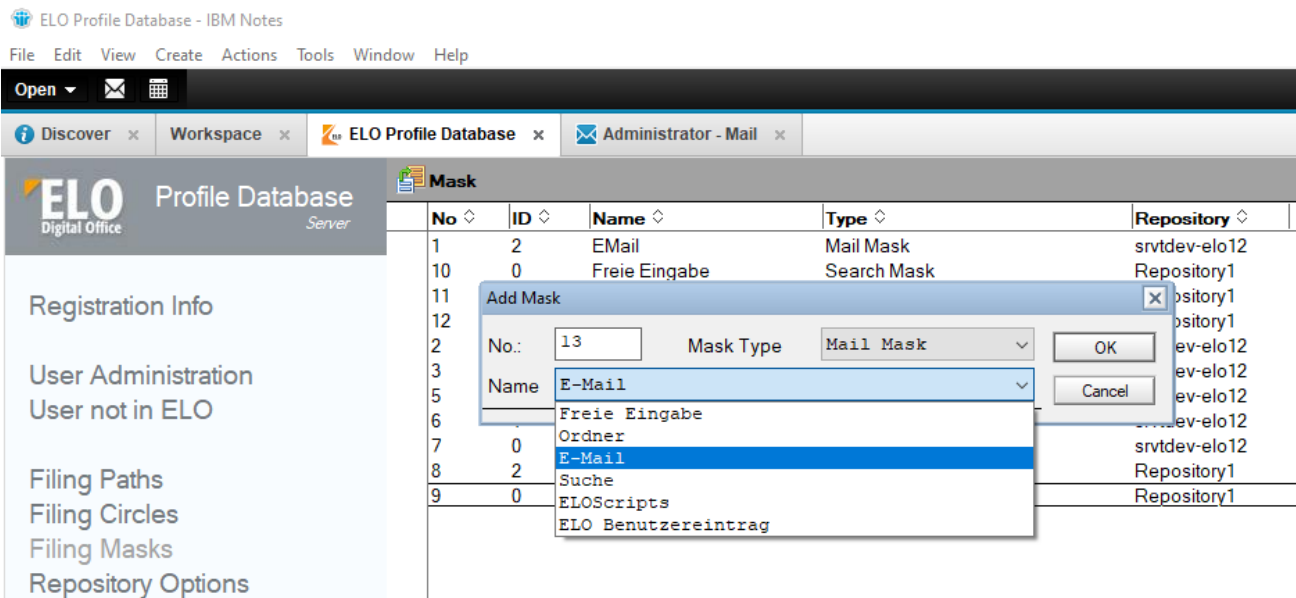
Fig.: Creating metadata forms

The following forms must be created:

a) E-mail forms for archiving Notes e-mails

Fig.: Assigning field names in an e-mail keywording form

b) Attachment forms for archiving Notes attachments

c) Folder form for entering metadata for new ELO folders (only fill in *ELO form name*)

Possible Notes field names for e-mail and attachment forms

- SUBJECT
- SENDTO (possibly select *Column index* so that recipient lists are entered to the metadata)
- FROM
- COPYTO

Special cases for Notes fields:

- <ATTNAME> File name of the attachment, only available in the attachment form
- <UID> Universal Document ID (Notes)
- >TEXT< Fixed text

Setting up repository options

Configurations specific to an ELO repository are made in the profile database repository options. Here, the *SAND* section is relevant.

- *Serverbase URL*: In the *SAND* section, enter the URL for the SAND server to *Serverbase URL* so that the profile database can sync with the servlet.

> **Please note**
>
> Starting with version 12, the URL parameter "?__cmd__=restart" has to be added to the SAND URL in the repository options.

Example:

http://localhost:8094/EloNotesSB/EloNotesServerbase?__cmd__=restart

Here, "restart" is important, not "status"!

- *SBIX*-URL: If you want to run SAND as a Domino servlet (not as a Tomcat servlet), enter the URL for the repository-specific SBIX servlet in the SBIX-URL field. If the field is not filled out, the SBIX-URL is read from the server archiving options, section *Indexserver options*, *EloNotesSBIX URL* field (see *Configuration in the server archiving options*). For more information on configuring SAND as a Domino servlet, refer to the *ELO Domino for SAND Quick Start Guide* documentation.

- *Indexserver URL/computer name/language/country/user name/password*: Enter the login information for the repository-specific Indexserver here. If the field is not filled out, the corresponding value is read from the server archiving options, section *Indexserver options* (see *Configuration in the server archiving options*).

- *Link URL*: Enter a URL to be added to Notes e-mails as an ELO link after filing (if configured in the filing tasks). This requires the ELO DocLink solution to be installed as well.

   Please note

   The *Link URL* option requires the ELO DocLink solution to be installed as well.

- *Set ACL*: In the *Set ACL* field, you can enter a Notes user name. This user must also be registered as an ELO user. If rights assignment ("%%") has been configured in the filing paths, this user is assigned access rights to the new ELO folder if the database to be archived is not a user e-mail database and the owner of this database is not registered as an ELO user in the profile database user manager.

- *Autom. login*: Here, you can set whether single sign-on should be allowed in ELO for every individual repository (only ELO Windows Client, requirement: ELO is configured accordingly).

Fig.: Serverbase URL from version 12 in the repository options

Link button

SAND can be configured to remove the content of the filed e-mails and replace it with a link button following archiving. ELO links are used by default. However, it is also possible (not recommended) to use definable links in this section.

> **Please note**
>
> Only use ELO links if the body and attachments are to be deleted from the filed e-mails following archiving.

Create user

To compare Notes and ELO names, you can create user profiles. This is necessary if, when archiving mailboxes, the mailbox owner in ELO is to be assigned rights to the filed documents (if this is not possible, access rights are assigned to a standard ELO user – see *Set ACL* in the repository options),

or ELO folders are to be created with the user's ELO name as the folder name. You can either import individual ELO users or all ELO users to the profile database. You can also import Notes user groups from the address database to the profile database. In the user manager, you can add or remove license keys.

Importing ELO users
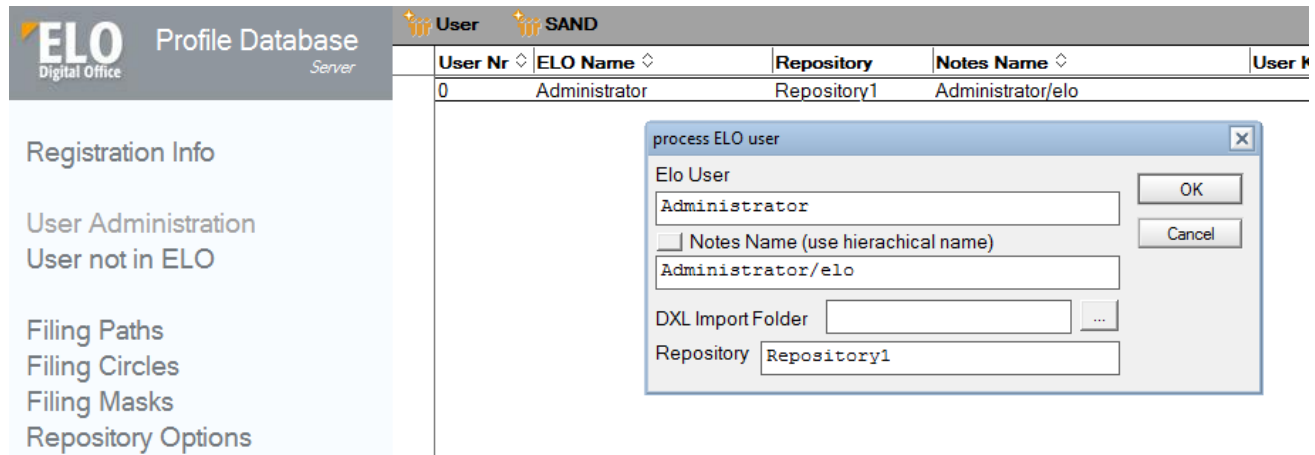
Fig.: Adding a user

Please take the following into account:

The *Notes Name* field must be filled out (the button makes suggestions by comparing the ELO-NT names, first and last names, and ELO e-mail names)

You can display all users in the *Users not in ELO* view who have not received an ELO name.

The *DXL import folder field*: When using the ELO Windows Client, e-mails filed in DXL format are imported back into Notes into this folder. The field is irrelevant for the ELO plug-in or ELO Java Client.

Notes user groups import

You can configure the check of Notes and ELO names to import Notes user groups in the profile database. Notes environment variables are used for this. The Notes shortname is compared to the

a) (normal) ELO name when the environment variable *$ELO_ELOVglName* is set to "ELONAME" (default)

b) ELO NT names when this variable is set to "ELONTNAME"

c) OUTLOOK names when they are set to "OUTLOOKNAME".

Since the Notes short name could consist of multiple parts, you can also use the variable *ELO_NotesVglNameMode* to define which part should be used for the comparison:

the comparing name component is entered (such as "1")

if it is set to "A", all parts of the name are compared until a correlation has been found

if it is not set, the first part of the name is used as a comparison criterion

Configuration in the server archiving options

General servlet configuration (not repository-specific) is performed in the profile database under the server archiving options.

Fig.: Server filing options (excerpt)

Open *Options Server Archiving* and enter the URL of the Indexserver, as well as the name of the administrator and the corresponding password. Below you will find explanations for important fields and some fields that are often unclear to users.

"Servlet options" section:

-

Include folder references: Here, enter whether to use the hidden Notes views *$FolderInfo* and *$FolderRefInfo* (default: yes) when filing documents in a folder to improve performance. This requires the *FolderReferencesEnabled* property in the respective Notes database to be set to true. For more information on how this property can be set, refer to the IBM Notes documentation.

- Include view formula: Here, you can enter whether the Notes view search formula should be used (default: yes) when searching for documents in a Notes view.

"HCL Notes options" section:

- For simple PDF conversion, go to the *Options IBM Notes* section and enter the name and password of a Notes user whose corresponding ACL allows it to be used for PDF conversion. The password will be encrypted automatically.

"Indexserver options" section:

- Here, enter the ELO Indexserver logon information (only if you would like to configure one single ELO repository or one ELO Indexserver in this profile database).
- If you want to run SAND as a Domino servlet (not as a Tomcat servlet), enter the SBIX servlet URL to the EloNotesSBIX-URL field (only if you would like to configure one single ELO repository or one ELO Indexserver in this profile database). For more information on configuring SAND as a Domino servlet, refer to the *ELO Domino for SAND Quick Start Guide* documentation.

> **Please note**
>
> If you would like to configure multiple repositories or ELO Indexservers in this profile database, you have to set up repository options for each repository and enter the ELOix logon information or EloNotesSBIX-URL there (see section *Setting up repository options*)

"Document options" section:

- *Timeout* field: In this field, you can enter time limits for PDF conversion of individual documents. When this time is exceeded, SAND continues by converting the next document (default: 60 seconds).

"DXL options" section:

- *Full text* field: Here, you can configure whether any e-mail attachments should be filed along with the DXL file when filing in XML format ("DXL") so they can be found by the ELO full text.

"Rendering options" section:

- *Database* and *Metadata form* fields: If you do not want Notes documents to be converted on the server on which the profile database is running, or if you want to use a different database, you can also enter a different server or database (a so-called "imaging database") that is part of this package. It must be copied to a Domino server. This could be because the http task (required for PDF conversion) does not run on the current Domino server for security

reasons, or that the PDF converter may send confirmations of receipt when the original e-mails are converted, or non-western European characters were found during EML conversion.

You can also enter a different form to be used for PDF or EML conversion. This is useful if you want to archive Notes documents without forms. Before PDF conversion, e-mails are copied to this database. Before EML conversion, they are rendered. For EML conversion, you can also specify in what cases e-mails should be rendered in the database before conversion in the corresponding section (see below). If you have specified a form here, make sure the form also exists in the e-mail databases in which the documents may be opened again.

"PDF options" section:

- The *Page size* field is only relevant for filing in PDF format.

"EML options" section:

- The *Render before conversion* allows you to configure in what cases documents are rendered to the imaging database before conversion: always, never, or only in case of error.

Configuration and operation

Archiving tasks
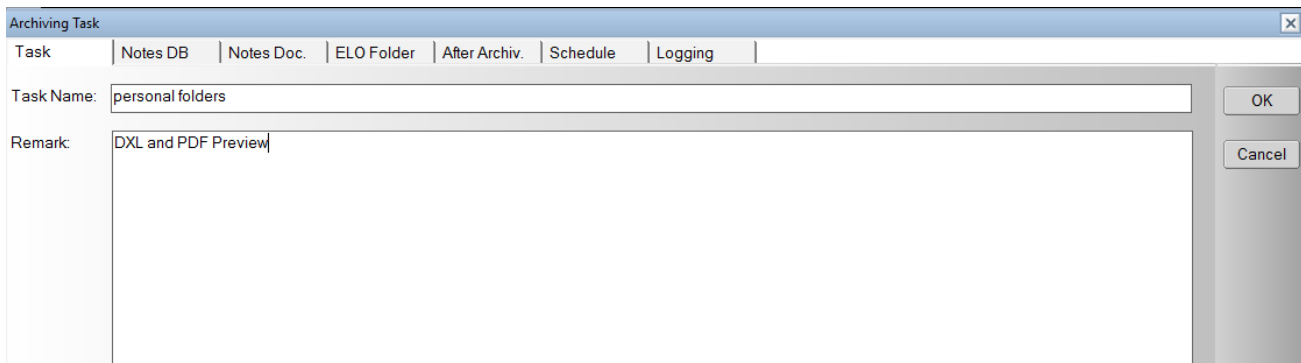
Archiving tasks are defined in the profile database. Start the profile database and open the archiving tasks.

Defining archiving tasks

Create an archiving task by clicking *Archiving task > Add*.

You will see a form with several tabs.

'Task' tab

Fig.: Archiving tasks

On the first tab, Task, enter the name of the task and comments.

'Notes DB' tab

Fig.: Archiving tasks: Notes database selection

On the second tab, *Notes DB*, you will configure which databases will be archived.

Select *From mail databases*. All users are listed here who were entered to the user manager of the profile database. Alternatively, select *From database* for non-e-mail databases. Select *From database groups* if you do not see all users you configured in the profile database (the length of Notes fields is limited, so it may occur that not all users can be listed). You can see how these groups are defined *below*.

If you select the databases with *From databases*, you must assign the ACLs using the *Check Lic.* button. If you have a site license, this does not apply.

Select the databases for which you need a license and then click *OK*. The licenses are added. Proceed as follows to remove licenses: To exit the screen, click *Cancel*.

Fig.: Licenses in archiving tasks

Please note

To exit the license manager, click *Cancel*.

'Notes doc.' tab

Fig.: Archiving tasks: Notes document selection

On the third tab, Notes doc., define which documents you want to archive. This means that you can configure Notes forms, Notes views, and folders.

Comments on the 'From view/folder' field:

In this field, you can specify either folders/views whose content you want to archive or wildcards. Take the following special cases into account:

- Wildcard "*": The "*" is then replaced with all folders and views (exception: the "($All)" view). In the *Except* field, you can specify folders/views you do not want to archive. Please note that there are a great deal of views in a Notes database by default.

- "($All)" view: All documents in this database are archived (restricted by additional archiving criteria in this archiving task).

  Please note

  Notes can only determine the folder in which a document is located if it is found via a search for a folder/view; when searching via the "($All)" view, Notes cannot determine the folder in which a file was located and thus, the Notes folder structures (with the path name token "%f" or "%F") cannot be created in ELO if the "($All)" view is specified here.

-

Replicating Notes folder structures in ELO with $ELO_PersonalFolders: Enter this variable if you want to archive all personal folders. At runtime, SAND will replace the variable with all personal folders that exist at the time to replicate the Notes folder structure in ELO (if the filing path is configured with the tokens %f or %F).

Example: This task would archive all personal folders, the inbox, and the *Sent* folder to folders of the same name in ELO (that may have to be created):

Fig.: Archiving tasks: Personal folders

The following image shows the filing path configuration for replicating the Notes folders with the token %F:

Fig.: Archiving tasks, configuring the filing path for folder replication

You can also complete additional Notes field values as archive criteria. To do so, click *Field criteria*. In this example, all e-mails with a "Posted Date" earlier than May 12, 2018 will be archived.

In the *Search formula* field, you can enter a search formula in the Notes formula language directly. This is combined by default with the other search criteria (metadata form, field contents, full text search, and other attributes) with an "OR". If the search formula starts with an "&", the search formula is combined with the other search criteria with an "AND". If it starts with a "|", it uses "OR".

In the *Other Attributes* field, in the future you will see some preconfigured criteria that are not Notes document fields. Currently, you can check the maximum or minimum size of an e-mail message.

Fig.: Archiving tasks: document size

If you click *Task is user-defined*, users themselves will be able to select which documents are selected for archiving. This means that you can select folders and documents in your mailboxes - see *below*.

'Target in ELO' tab

Fig.: Archiving tasks: Filing types

On the fourth tab, *Target in ELO*, enter the ELO repository and ELO folder to which the converted documents should be moved, and how they are to be converted. The drop-down menu lists the repositories with configured metadata forms (see *Create metadata forms*). You can enter a fixed filing target by clicking *To folder*. The filing path can also be created dynamically by selecting a *filing circle* and a *filing path*. Also select the metadata form that should be used by ELO. You must configure filing circles, filing paths, and metadata forms in the profile database.

> **Please note**
>
> The 'To folder' field is only shown if you have selected the following values in the drop-down lists for the *Filing circle* and *Filing path* fields:
>
> "---"

Some notes on filing types: *XML&PDF* means that documents will be archived in *DXL* (Domino XML) format with a PDF preview document. The *NSF* filing type requires the *EloNSFTe.nsf* database installed on the Domino server. The *only rework* filing type means that documents have already been archived and should only be moved, or that they will remain as empty containers. For the *EML*

filing type, it is not possible to additionally file the main document in PDF format. However, you can separately file the attachments.

If you do not want to check whether documents have already been archived, set "*Re-archive*" to "*Re-archive document*".

'After archiving' tab

Fig.: Archiving task: After archiving

On the fifth tab, *After archiving*, you can define what happens to the documents after they have been filed.

Note on the *After archiving* field: Possible values include different settings for removing the content of a document, some with the option (*Insert ELO URL*): In the remaining stub, you will find an ELO URL that can be used by the ELO DocLink solution (which has to be installed additionally). This means that the archived document is displayed in ELO when you click the URL. This URL is pre-configured in the profile database in the Link URL field of the archive options. In these cases, you can also archive the shortened document as a PDF document.

> **Please note**
>
> The option ...*(Insert ELO URL)* requires the ELO DocLink solution to be installed as well. If the content of the documents should be deleted after filing, you should use the options that insert an ELO link.

Fig.: Archiving task: archiving a shortened document additionally as PDF

'Scheduling' tab

Fig.: Archiving task: scheduling

On the *Scheduling* tab, you can define when the archiving will begin.

'Log' tab

Fig. : Archiving task: logging

On the seventh tab, *Logging*, the administrator can configure logging features.

The error log will be sent to the user entered to the profile database under *Notes Options* as administrator to be notified. Error logs can also be found in the profile database in the *SAND Logs* area. A (limited) number of documents that cannot be archived will be linked with the error log. The number of documents can be restricted by entering a value to the *Max. Number of Document Links* field (entering -1 means entries will not be restricted).

In addition, you can set here whether the archiving process of every document should be logged in the servlet log file, which is configured in logging configuration file *log4j.properties* or *logback.xml*, e.g. *EloNotesSB.log*. By default, only the start and end sequences of the archiving tasks are logged, even if "debug" has been entered to *log4j.properties* file.

Confirm your settings by clicking *OK*. The definition dialog box then closes.

The archiving task will attempt to inform the SAND servlet of any changes, such as new, changed, or deleted archiving tasks. If the update to the servlet is unsuccessful, for example because the SAND servlet was not started, you will be notified. In this case, click *Rescan Notes* on the servlet status page, or wait until the servlet periodically rescans the profile database.

User-defined archiving tasks ("Backup")

As already mentioned, it is possible to allow the user to define which folders and documents should be filed. For this purpose, define a special archiving task: fill out all tabs, except for the *Notes doc.* tab, as described previously. On the third tab, *Notes DB*, select the entry *Task is user-defined*. If you select this entry, all other fields on this tab will be hidden, as they are no longer needed.

Fig. : Archiving: definition user-defined

The Notes user will then define which documents will be archived within that user's e-mail database. There are additional buttons in ELO folders and work areas for this purpose.

Fig.: Archiving: user has selected "Backup" documents
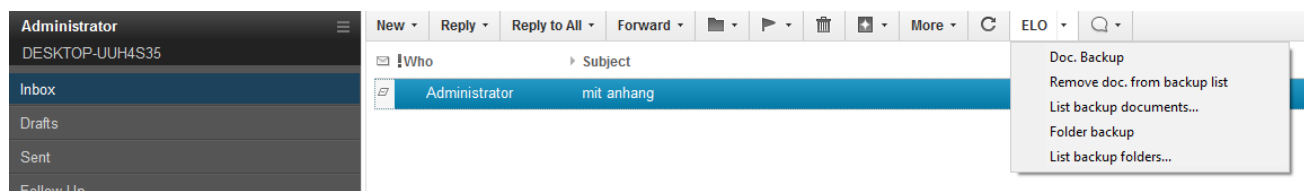
To select a folder, select a document and then click *Folder backup*. The software will inspect the folder in which the selected document is located, then list the folder as "to be archived". Individual documents to be archived will then be assigned a special marker in the profile database, which is configured in the profile database in the *AT Mark* field of the options.

Operations on archiving tasks

After definition, the status of the task is active - see overview in the profile database.

Fig.: Archiving tasks overview

The most recent run, next run, and number of archived documents are shown there.

All operations performed on archiving tasks must be performed in the profile database. During the next scan of the profile database, the servlet receives the information about the next important steps, such as starting, stopping, or continuing a task.

As described above, the scan is initiated after each change related to archiving. If you are not sure whether the servlet has been informed of all changes, you can click *Servlet sync*. This restarts the synchronization between the servlet and the profile database.

SAND database groups

Fig.: Database groups

As explained above, you can enter "Database groups" to the archiving tasks if you do not want to edit the databases individually in the archiving tasks. These groups are also defined in the profile database. You can add, edit, or remove database groups under *SAND Database Groups*.

You can not only import individual databases but also import/add entire Notes user group databases. The difference between "import" and "add" is that with the "import" function, the users from the Notes group are imported to the database group, while the "add" function simply adds the group name of the database group; the group is then resolved at SAND runtime. You can move databases into other groups, or copy, rename, and remove groups. If you want to enter e-mail databases for users who have already been entered to the profile database in the user administration, you can do so directly in the user administration.

If you do not have a SAND site license, all databases in the database groups must be assigned a license key (exception: the license check for "added" Notes groups is performed at SAND runtime).
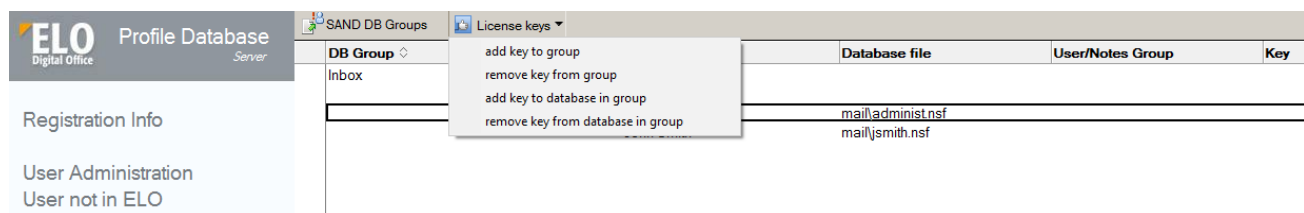
Fig.: Database groups: edit license key

License keys can either be assigned to all databases of a group, or to individual databases. You can also unassign keys. This process is synchronized with the user administration in the profile database. This means that you will see the license keys in the user administration that you have assigned here, and vice versa. As mentioned, the license check for "added" Notes groups is performed at SAND runtime, which is why licenses cannot be assigned to such groups.

SAND log documents

			Start at	Task name	Number arch. doc.	Number not arch. doc	Number error doc
2020							
	03						
		15					
			16:17:04	2112	0	0	1
	07						
		03					
			11:05:41	Demo	0	0	1

Fig.: SAND log documents

As already mentioned, you can find SAND log files in the profile database in the *SAND Logs* section. They can be sorted by year, month, and date. You can define whether logs should only be created when errors occur, or if SAND should always create log files.

Avoiding replication

Sometimes when using SAND, e-mail databases are replicated between Domino servers during archiving. SAND sets a marker for the archived documents, which after further processing can lead to a "backwards replication", causing deleted documents to show up again in their owners' mailboxes. In order to avoid this, the parameter CHANGEMAILS=0 can be set in the configuration files, i.e. either in *config.xml* or *servlets.properties* (if SAND is running in the Domino servlet container). In this case, the archived e-mail messages will not be changed, allowing replication to be avoided.

Additional requirements for this are:

- Archiving is performed in PDF format in the *imaging.nsf* database.
- *Shorten body* cannot be selected as option following archiving.
- Archiving cannot be *User-defined*.
- No specific folders or views may be selected for archiving ("*" must be entered in the *From view/folder* field).

These requirements are checked when CHANGEMAILS is set to 0. If they are not fulfilled, the task is not started and the status is set to *Error*. An error message is also written to the log file.

Fig.: SANDLastArchived view in the profile database

If the requirements are fulfilled, SAND sorts the documents of each database by date and Note ID before archiving, then makes a note of the last archived document per corresponding database in the *SANDLastArchived* view in the profile database, which in turn is created automatically. If you want to archive the documents again later, you must delete the corresponding database from this view. To do so, open the profile database, click *View > Go to...*, and select the *SANDLastArchived* view. Select the line with the affected database and delete it.

Status page of the servlet

The status of the servlet will be displayed on a status page in the browser. Enter this URL (of course, update the server name and port number as needed):

http://localhost:8094/EloNotesSB/EloNotesServerbase?__cmd__=status

Fig.: Status display

This SAND version runs starting with ELO Indexserver version 11. The major release number of the ELO Indexserver is thus shown as the major release number. However, as it is only available after authenticating with the ELO Indexserver, a default value is initially shown as the major release number when starting the SAND servlet ("20"). After the first archiving run, the version number displayed is updated, e.g. "12.00.003.000" or "20.00.000.000" (the version history is kept separately for each main release, resulting in different version numbers).

The following is displayed on the status page: the most recent and next planned scan of the profile database, the number of started tasks, the number of documents archived up to this point, the number of non-archived documents, and the number of documents that have been archived with additional information.

The most recently processed archiving task is shown, as well as the most recently archived Notes database.

All archiving tasks from the profile database are listed with their current status in the "Archiving Tasks" section. However, you cannot (yet) start or stop individual tasks in the status display; you are instead linked to the profile database.

If you have not given archiving tasks a name, the Note ID for the task is shown instead.

The status display automatically refreshes the document counter, the current archiving task, and the most recently archived Notes database at an interval of a few seconds.

The archiving task list is synchronized between the profile database and servlet periodically and whenever changes are made to the profile database. On the status page, this scan can also be started manually by clicking *Rescan Notes*: The servlet scans the list of archiving tasks in the profile database and starts/stops internal servlet processing of the archiving tasks. You can refresh the display alone (meaning without processing archiving tasks) by clicking *Refresh*.

By clicking *Edit* and entering the Tomcat user name and password, you can change the servlet debug level:

ELO Notes Importer Status Report

Refresh   Rescan Notes

Running

Version	20.00.000.000	
Status		
Process started	2020-07-08 14:59:09 +0200	
Domino Server	DESKTOP-UUH4S35	
Profile Database	ELO32\ELOProfil.nsf	
Last Scan at	2020-07-08 15:02:17 +0200	
Next Scan approx. at	2020-07-08 20:02:17 +0200	
Scheduled Tasks	2	
Documents archived	0	
Documents not archived	1	
Documents archived with info	0	
Processing archiving task	Demo (since 2020-07-08 15:02:18)	
Processing database	DESKTOP-UUH4S35!!mail\administ	
Archiving Tasks		
Administrator Mailbox	Status=started, Last Run=never, Next Run=Wed Jul 08 15:14:00 CEST 2020, Interval=on business days	
Demo	Status=Restart, Last Run=never, Next Run=undefined, Interval=once	
Ditec GmbH	Status=finished, Last Run=Wed Jul 08 11:48:16 CEST 2020, Next Run=undefined, Interval=once	
DLX mit PDF	Status=aborted, Last Run=Wed Jul 08 11:48:52 CEST 2020, Next Run=undefined, Interval=once	
Logging		
Level	DEBUG	DEBUG
Logfile	C:\Program Files\Apache Software Foundation\Tomcat 8.0\logs\EloNotesSB.log	DEBUG / INFO / WARN / ERROR
System		
Memory (free, total, max)	2,012.6 MB, 2,147.5 MB, 2,147.5 MB	
Current time	2020-07-08 15:02:28 +0200	

Fig.: Changing the debug level on the status page

Configuring e-mail journaling and archiving e-mail messages from the e-mail journal

If you want to archive e-mail messages BEFORE they are received by their recipients, use "Mail Journaling". First, set up e-mail journaling, then configure a corresponding archiving task in the profile database.

E-mail journaling setup

Step 1: In the Domino Administrator, on the *Configuration tab,* go to *Server > Configurations* and add a configuration document. On the *Basics* tab, click *Use these settings as the default settings for all servers*. Save the document.
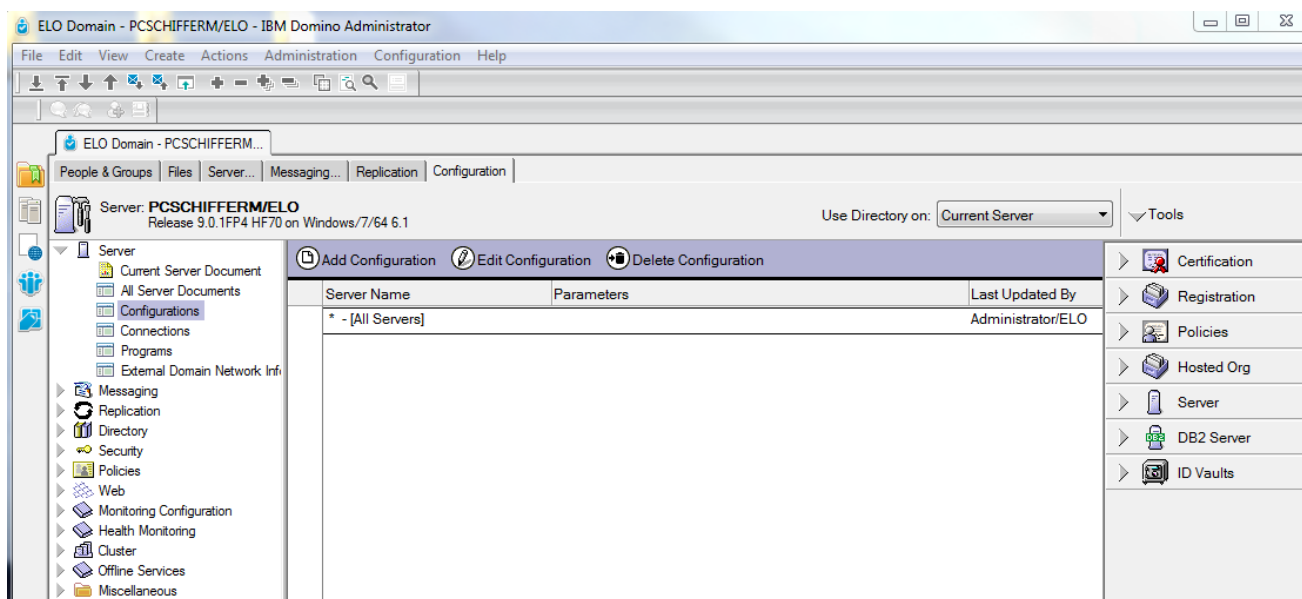

Fig.: E-mail journaling: server configuration

Step 2: Open the configuration document again. Go to *Router/SMTP > Restrictions and Controls > Rules* and create a new rule like the one in the following example:
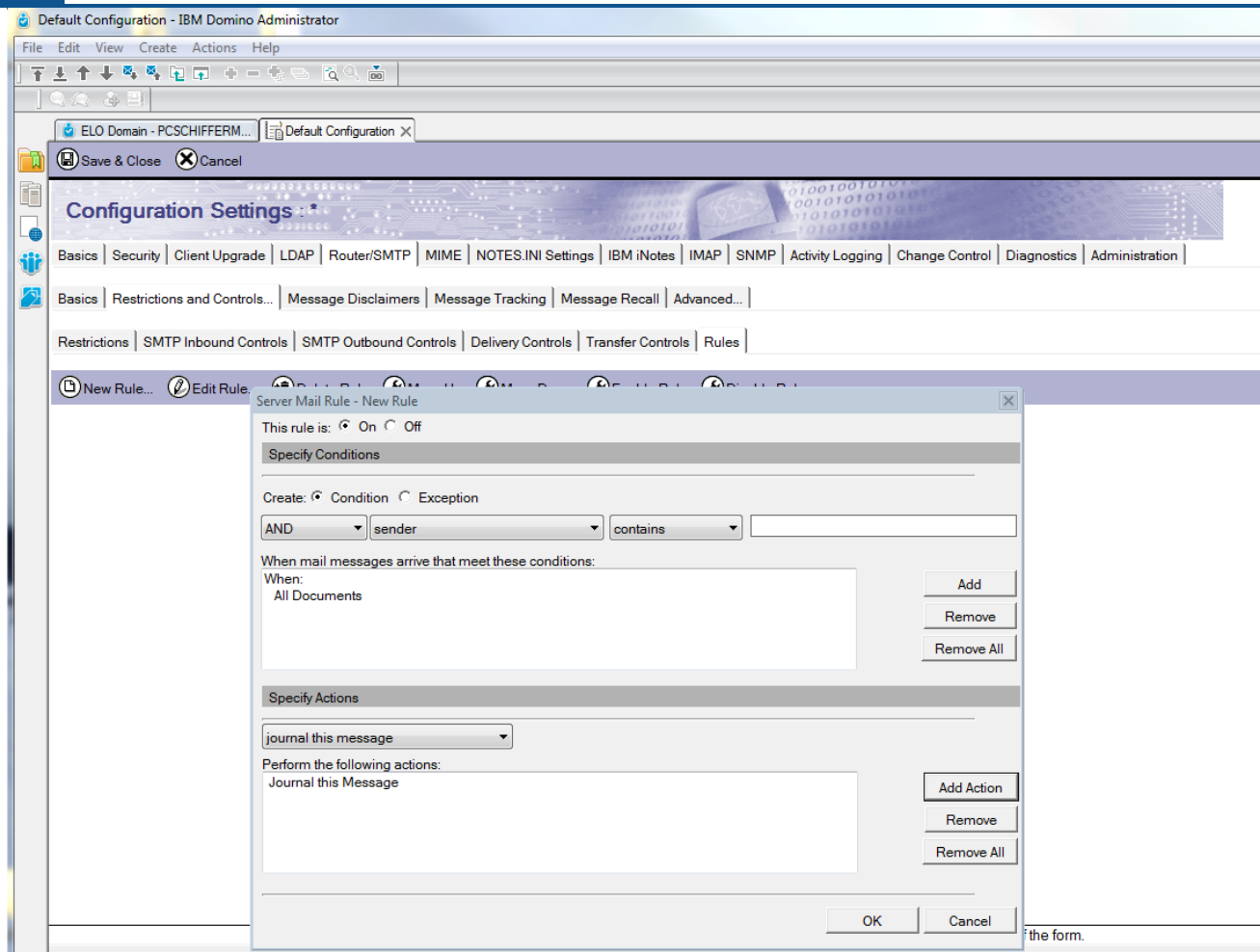
Fig.: E-mail journaling: rule creation

In the drop-down list under *Specify Conditions*, click *all documents* then *Add*.
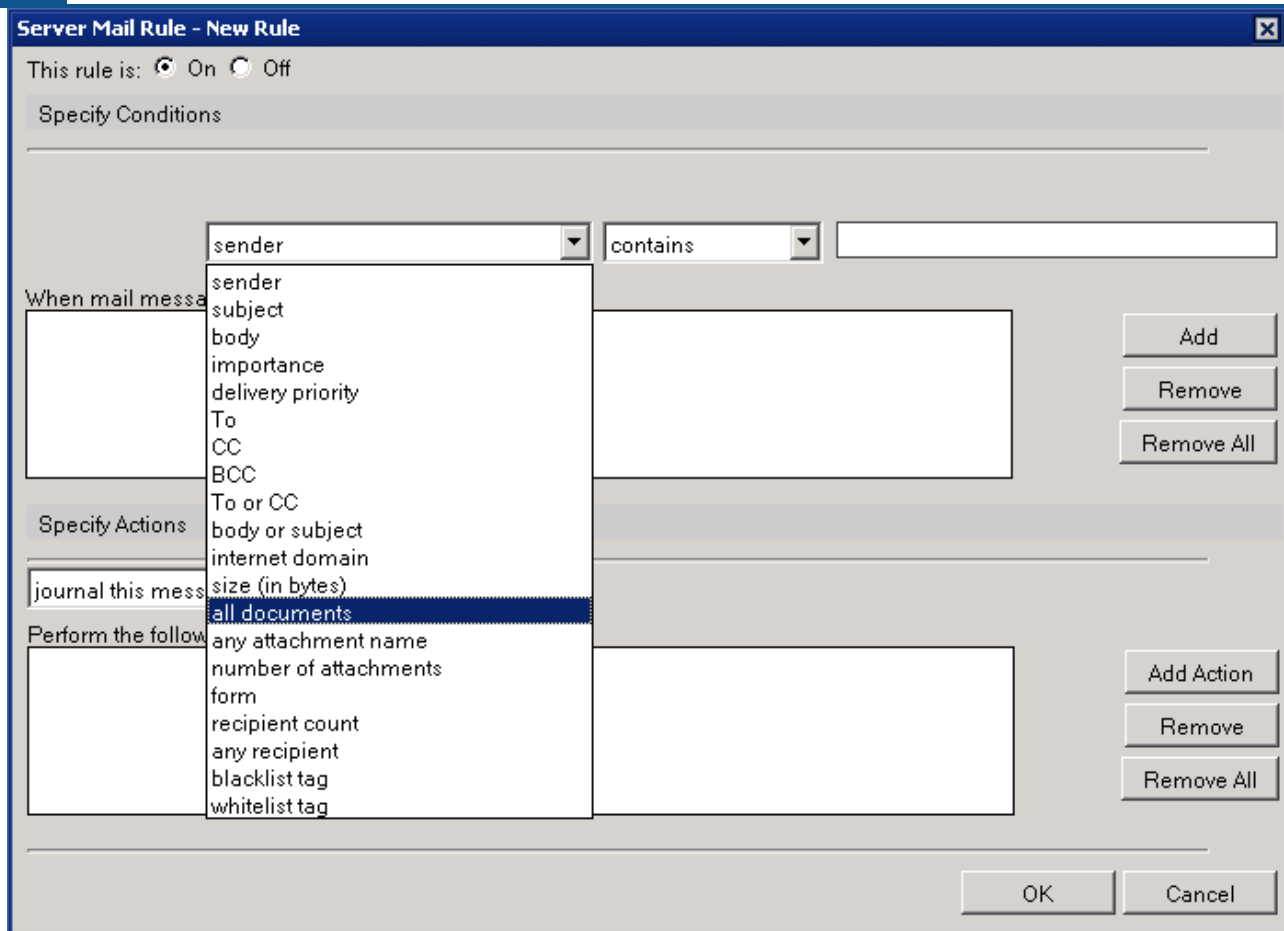
Fig.: E-mail journaling: Rule creation for all documents

In the drop-down list under *Specify Actions*, select *journal this message* (default) and click *Add Action*.

The rule should then look as follows:

Fig.: Journaling rules

Click *OK* to close the rule.

Step 3: Go to *Router/SMTP > Advanced > Journaling* and enter the same values to the fields as in the following example. Please note that, in the fields to be left out of the encryption, the *Body* field must be included, as well as the fields that need to be completed with metadata or that are to be used as the names of ELO folders (such as *SendTo* and *Subject*).

> **Please note**
>
> If you choose *EML* as the archiving format, the e-mails are archived encrypted from the journaling database. Enter the Domino server name to the *Encrypt on behalf of user* field.
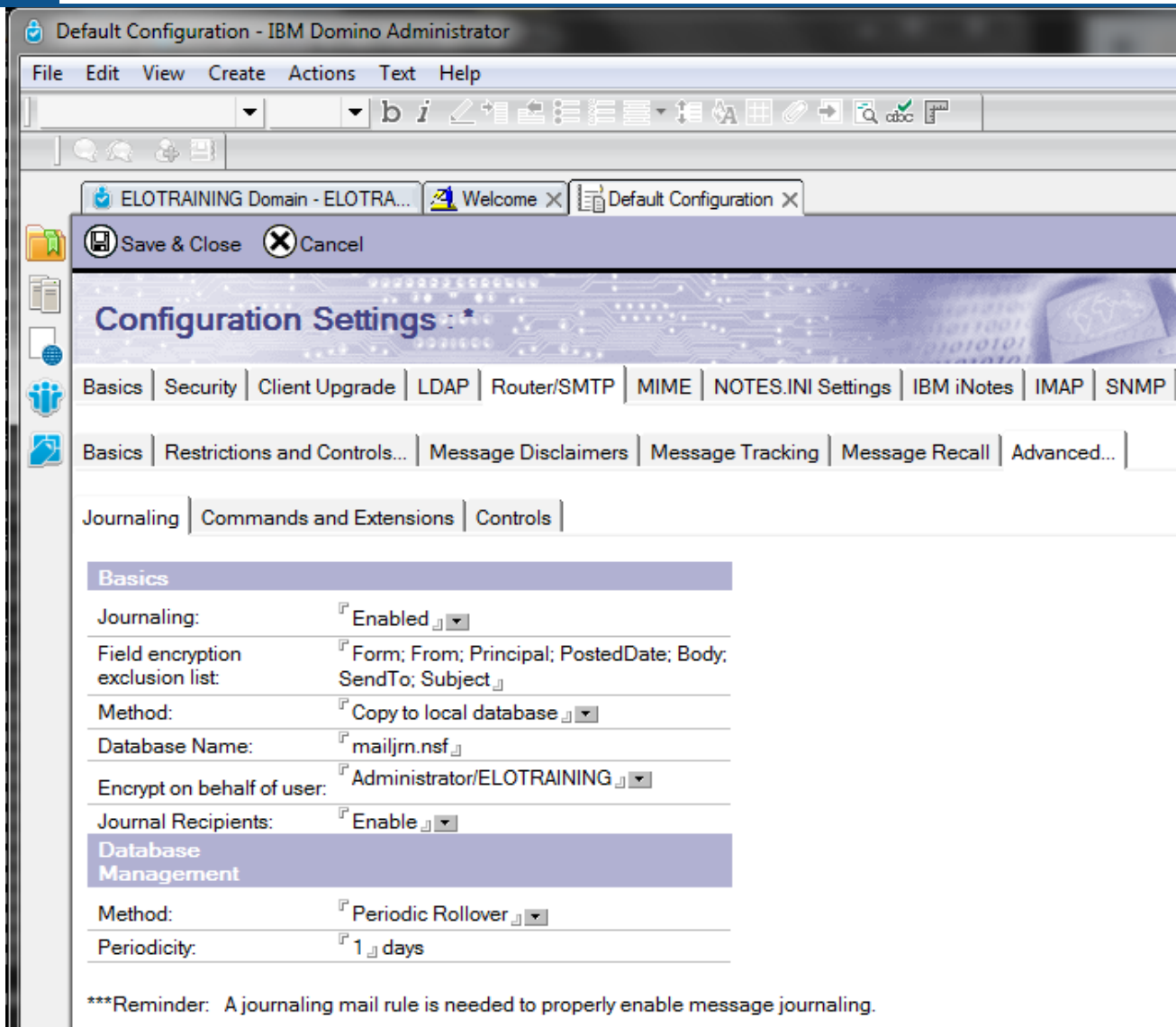
Fig.: E-mail journaling: router settings

Step 4: Save and close the configuration document. You may need to restart the Domino server.

Configuring journaling archiving tasks

In the profile database, you must add a corresponding archiving task. The following tabs must be filled out here: the journaling database (*mailjrn.nsf* on the server), view (*$All*), the *Reply*, and *Notes* forms, the filing circle, and the filing path.

Fig.: E-mail journaling: Definition of archiving tasks

In this example, e-mail messages are archived in the ELO folder titled *Journaling*. Here a separate folder is created for each user, with subfolders for the date.

> **Note**
>
> For security reasons, the journaling database *mailjrn.nsf* is "hidden" by default and is not shown in the dialog box for opening the database; you have to enter the database name manually.

Troubleshooting

Information about troubleshooting:

- Make sure that the correct *nlsxbe.dll* is in use.

- If the error message "inotes is not licensed for this browser version" appears: in the *notes.ini* file (in the Domino directory, not the Notes directory; restart the Domino server afterwards), set the environment variable *iNoteswaDefaultUI* to *webmail* (`inotes_wa_DefaultUI=webmail`).

  Alternative solution: In the profile database, under *Server archiving options > EML/PDF options*, set the database to that with the provided *imagein.nsf* and set *(wMemo)* as the form. Then restart the Domino server.

- For the error message "Disk I/O Error": in the Domino Administrator, give the user defined in the *config.xml* file the right to *sign or run unrestricted methods and operations*.

- If the Tomcat server aborts while the servlet is starting: Check whether the correct libraries are in use, especially *notes.jar*. If necessary, replace the existing *notes.jar* with the *notes.jar* from the local Notes directory.

- If you cannot connect to the Indexserver using the servlet, and the Indexserver log file produces serialization errors, check the versions of *EloixClient.jar* and *javautils.jar* in the `webapps\lib` directory of EloNotesSB. These files are provided with the Indexserver (in older versions, in *EloixClient.zip*). Copy both files (replacing old ones as needed) to the `webapps\lib` directory of EloNotesSB. Restart the Indexserver and EloNotesSB.

- If starting/stopping/etc. archiving tasks in the profile database is not synchronized with the servlet, the cause may be that a secure connection is entered to the archive options in the profile database in the Serverbase URL field. Enter *http* instead of *https* here.

- If the metadata is not saved or folder names are not created in ELO when using journaling, make sure that the fields in the Notes document profiles and the document bodies are shared as *not encrypted*.

- When archiving in PDF format, if no e-mails are archived and the log file contains error messages with *Upload failed* in them, and/or when archiving in *XML&PDF* format the e-mails appear to be archived in XML format, but no preview can be displayed in ELO (meaning that the PDF preview file is empty), the cause may be that the server archiving options under *IBM Notes Options* do not contain a correct user name or password. Another possible source of errors could be that the *jaxen*.nsf* or *xml-apis.jar* files could not be found in the servlet JAR libraries.

- Error message: "Multiple clients can only access the address database if you open all clients on the Domino server" (or when running the SAND servlet, either the Notes Client cannot be opened, or the profile database only lists partial forms instead of the usual menu): both the Notes Client and SAND access the local address book *names.nsf*.

Solution: SAND and Notes Client must access the address book in different ways: SAND must access a copy of the address book and the Notes Client must access the original.

- Create a copy of the address database (give it a name like *namesSAND.nsf*).

- Copy the *notes.ini* for Notes, then give the copy a name such as *notesClient.ini*.

- Add the following line to the (original) *notes.ini* (that SAND will access): `NAMES=namesSAND.nsf`.

- Add the following line to *notesClient.ini*: `NAMES=names.nsf`.

- Make sure that the Notes Client is started with *notesClient.ini*: Open the *Link* tab in the properties of the link to the Notes Client on your computer's Desktop and enter the new *notesClient.ini* as the *Target*, such as the following:

```
"c:\Program Files (x86)\IBM\Notes\notes.exe" "=c:\Program Files (x86)\IBM\Notes\
```

(with the quote marks, and possibly for the Notes Designer and Notes Administrator as well).

- When you create the new *notesClient.ini*, you must make sure that the Notes Client has the necessary rights to write to this file (otherwise, you will be unable to start the Notes Client).

- After modifying, creating, or deleting archiving tasks in the profile database, the following message appears.

Fig.: Error message while rescanning the profile database
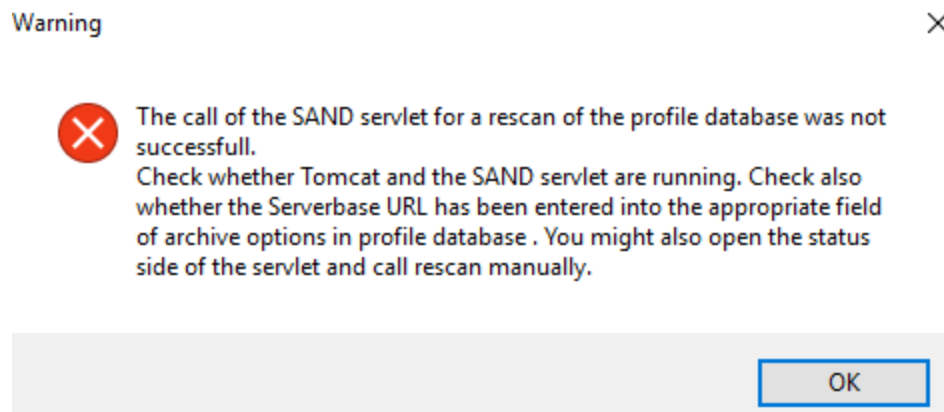
- At this point, the profile database tries to inform the SAND servlet about changes. In addition to the instructions in the error message, check whether you have copied the following jar files that are required for synchronization from the Jar directory, which is provided along with the profile database, to the following directory of your Notes Client:

..\jvm\lib\ext

(e.g.:*c:\Program Files (x86)\IBM\Notes\jvm\lib\ext*)

- commons-codec*.jar

- commons-httpclient.jar

- commons-logging.jar

- EloNotesSBRescan.jar

◦ Afterwards, you need to restart your IBM Notes Client.

◦ Starting with version 12, ad the following URL parameter to the serverbase URL in the profile database repository options: ?__cmd__=restart.

◦ Alternatively, you can click *Rescan Notes* (for the profile database) on the SAND status page. The automatic rescan function runs (can be set) every five hours.

- After making changes to/creating/deleting archiving entries in the profile database, no more messages will appear, including error messages in the Notes client status bar, however the servlet does not sync with the profile database: Check the serverbase URL in the profile data base repository options. ?__cmd__=status may have been added as a URL parameter and not ?__cmd__=restart. Replace status with restart (SAND 12 and higher).

- When archiving in EML format, the following errors occur in the log file: "NotesException: Conversion To MIME Failed", "HTMLAPI Problem converting to HTML". The Notes user entered in the SAND *config.xml* file or the Notes client user on the computer on which SAND is running may not have the rights required for MIME conversion.

- If SAND is unable to access databases on other Domino servers, a connection document may be missing (in the Notes address book/Advanced/Connections).

Another possible error: SAND server access is not configured for the server document of the server to be accessed. On the second server, open the Domino Administrator, open *Server > Current Server Document > Security*, then enter the SAND server (or a group the SAND server belongs to) to *Trusted servers*.
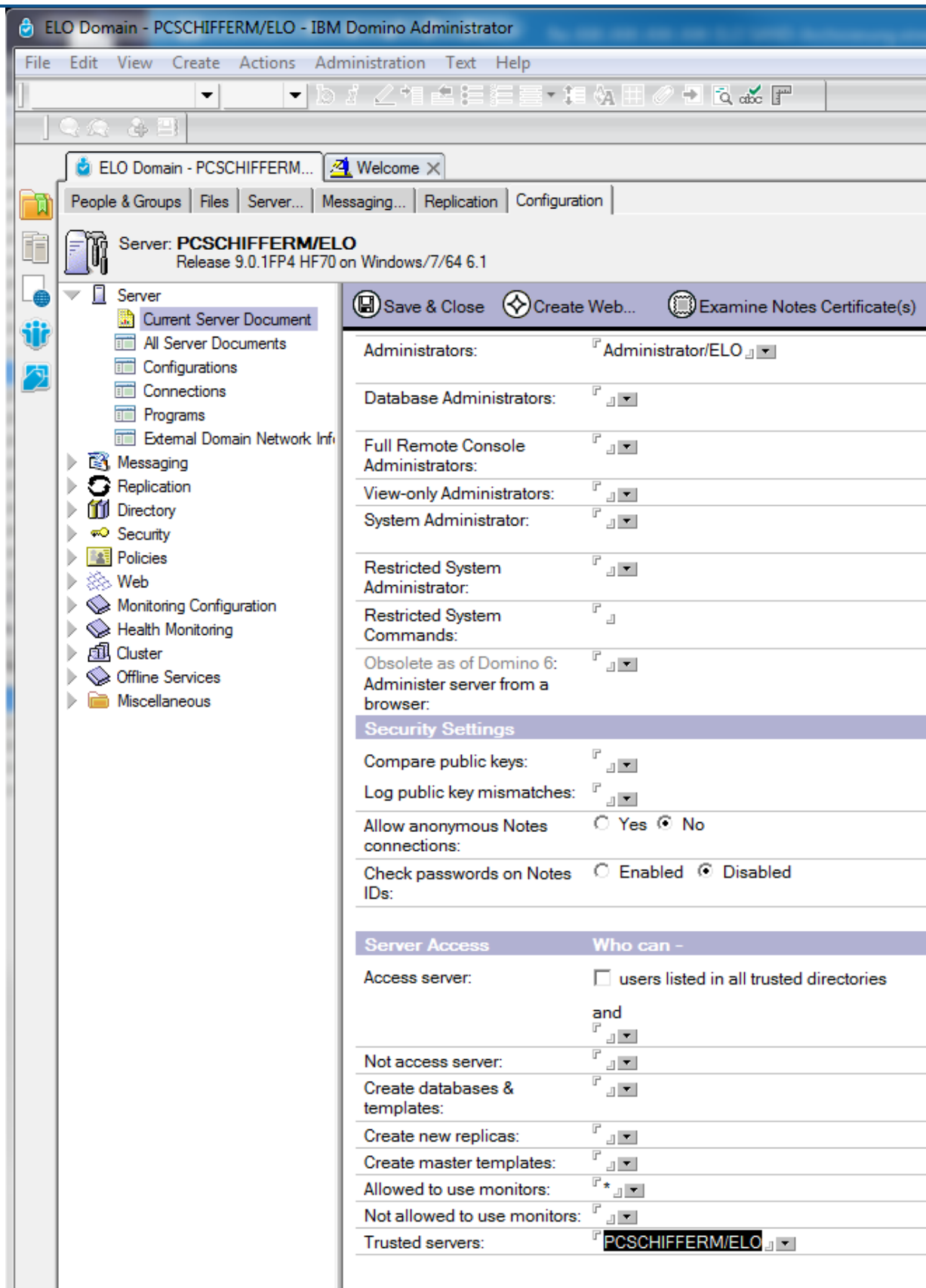
Fig.: Trusted server configuration

•

The SAND servlet does not start with the error message "NotesException: When running on a server, you must have UNRESTRICTED access in order to set environment variables or get system variables"

- ◦ Open the Domino Administrator, open *Server > Current Server Document > Security*, and enter the SAND user to the *Sign or run unrestricted methods and operations* field. Next, restart the Domino server. Example:
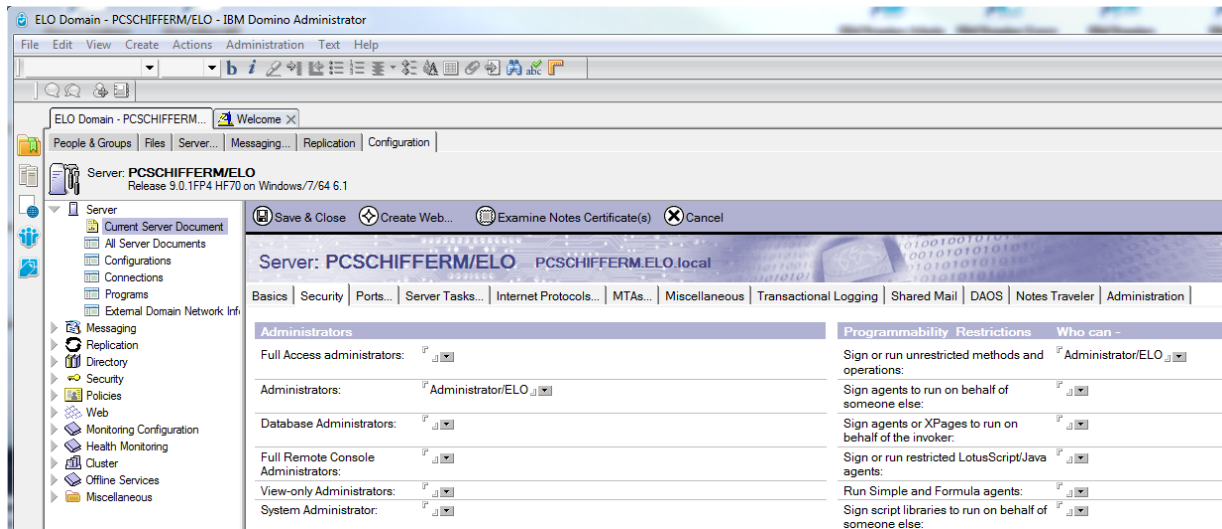

Fig.: Setting "Unrestricted Methods and Operations"

- SAND won't start, and the log file contains the following message: "Cannot create session with password".

  - ◦ Check whether the Notes Client was installed in multi-user mode. SAND requires an installation in single-user mode. You may have to install the Notes Client again in single-user mode.

- SAND won't start, and the log file contains the following messages: "Cannot create session with password" and "NotesException: CS_WRITE_DISABLE_IMPLICIT_SCHEDULING":

  - ◦ You are likely working on a 64-bit system and have probably only entered a password to config.xml, and no users. Add a notes user, e.g. <entry key="LOCALNOTESUSER">Administrator</entry>. Restart the servlet.

- On Notes version 10 and higher, you cannot import license files and receive the error message "This function is only available starting with Lotus Notes version 5": this is a bug. Update to SAND version 11.00.001.002, 12.00.003.000, or 20.00.000.000.

- SAND does not start, instead showing the error message that the class "org\omg\CORBA\UserException" could not be found. In this case, this is because the geronimo-corba_3.0_spec-1.1.jar that Notes.jar requires cannot be found. In this case, copy the Notes.jar from the Domino\jvm\lib\ext directory to the SAND servlet lib directory, e.g. "C:\elo\servers\ELO-DESKTOP-UUH4S35-2\webapps\EloNotesSB\WEB-INF\lib", and remove the Notes.jar and the geronimo-corba_3.0_spec-1.1.jar in the catalina.properties (in the Tomcat

server/ELO Server directory) from the list of files loaded by the shared loader. Restart the
Tomcat server/the ELO Server.

Status changes to the servlet in the profile database

The following status modifications of archiving tasks will be shown in the overview in the profile database:

- Task status after being added (but not started by the servlet): "active"
- After new scan and servlet started: "started"
- After completion of the task: "finished" for a one-time task. For tasks with periodic intervals between runs, "started" will remain.
- After entering the command to stop a task (but not stopped by the servlet): "Stop"
- After another scan and stop of the servlet: "stopped"
- After entering the command to restart a task (but not restarted by the servlet): "Restart"
- After a rescan and restart of the servlet: "started"
- After entering the command to continue a task (but not resumed by the servlet): "waiting for Resume"
- After a rescan and resume by the servlet: "started"