ixi-UMS MDS

Installation & Configuration

Onlineversion

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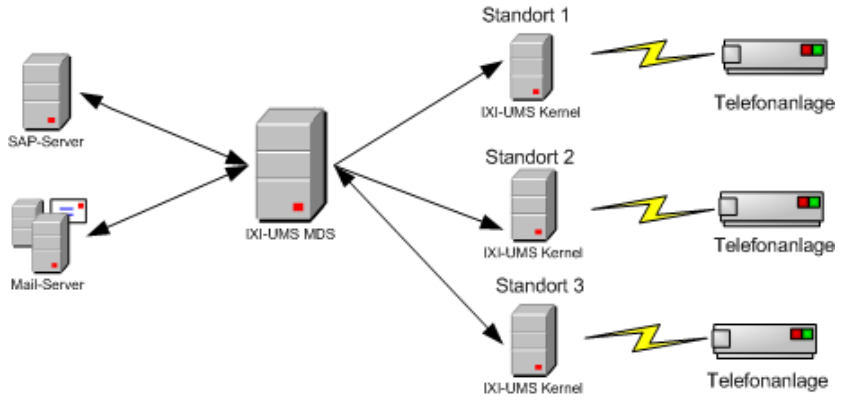
1 Overview

The ixi-UMS Message Distribution Server (ixi-UMS MDS) enables the connection of several locations to one or multiple central Connector-servers. The sketch below shows the constellation with one Connector-Server.



Outgoing messages can be sent from different locations on the basis of their recipient numbers or defined sender information, so that costs can be saved.
Incoming messages can be received at the locations, be picked up by means of ixi-UMS Message Distribution Server and be delivered to a central mail server.

1.1 Features

The ixi-UMS Message Distribution Server enables:

- Outbound Routing
  On the basis of the recipient number or a definded sender information, the outgoing message is routed to the location configured for that.

- Inbound Routing
  Incoming ixi-UMS messages are picked up by different locations and are distributed to the single systems via a central system via one or multiple ixi-UMS Connectors (e.g. ixi-UMS SI CON Connector, ixi-UMS Mail Server Connector etc.).

- Load Balancing
  Outgoing messages are distributed to multiple ixi-UMS Kernels for an optimal balancing.

- High Availability
  When a location is not available, outgoing messages are passed on to a still available ixi-UMS Kernel of the location or of another location.

1.2 Preconditions

Preconditions for the operation of the ixi-UMS Message Distribution Server are:

- ixi-UMS Kernel 7.00 or higher at the locations
- ixi-Framework 7.00 must be installed on the ixi-UMS Message Distribution Server Server
- Network connection to the locations to be connected with (with use of WebDav imperatively TCP/IP)

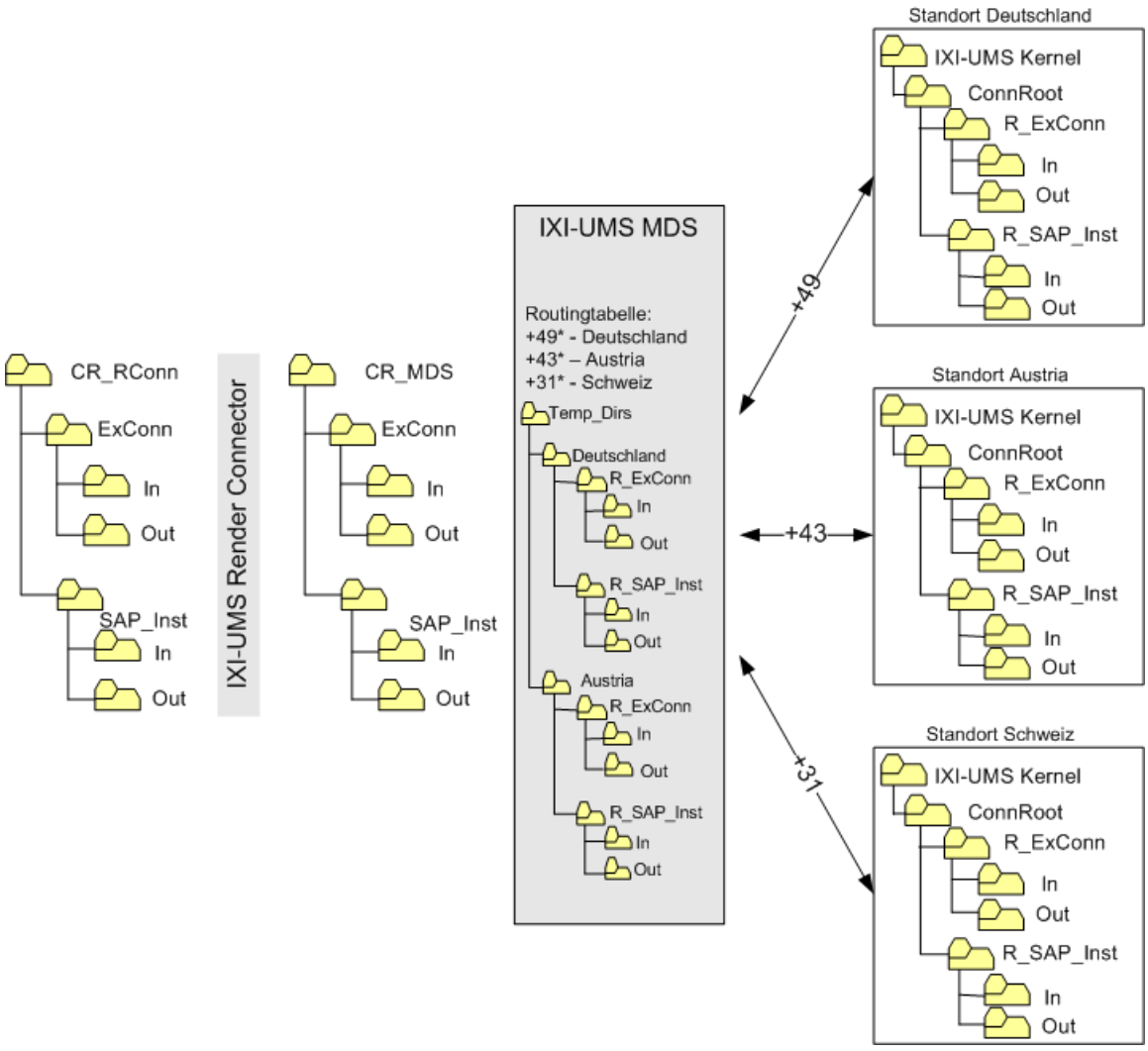
Operating System
- Windows 7/10 (32bit / 64bit)
- Windows Server 2012/2012R2, 2016/2019

Remark:
When outgoing messages shall be rendered at the ixi-UMS Kernel locations, the ixi-UMS Render Connector must be deselected during installation.

1.3 Function

The ixi-UMS Message Distribution Server (or ixi-UMS MDS) has the task to pass on the ixi-UMS messages to the location configured for it by means of the recipient number. Outgoing messages are deposited in a central directory, e.g. via ixi-UMS Mail Server Connector, *ixi-UMS SI CON Connector* or ixi-UMS FAPI Connector (in the example: CR_RConn).

The ixi-UMS Render Connector picks up the files from this directory and converts them into a fax-capable format (rendering). After that, the message is passed on to the transfer directory of the ixi-UMS Message Distribution Server (in the example: CR_MDS).



The ixi-UMS Message Distribution Server picks up the files and checks - by means of the routing table - to which location the message shall be transferred. It stores these files - sorted according to destination and Connector - in the directory "Temp_Dirs".

After having established a connection to the destination, the message is transferred to the destination directory. The connection can be defined via WebDav or by UNC-Path. On the destination server, the same directory names are used as in the transfer directories.

In order to be able to differentiate between locally installed Connectors on the ixi-UMS Kernel machine and "ixi-UMS Message Distribution Server" Connectors, an "R_" is put in front of the directory name. That way, the original Connector-directory in the transfer directory "ExConn" turns into a "R_ExConn" on the destination servers. The directories are created by the ixi-UMS Message Distribution Server itself.

When the destination cannot be reached, the message remains in the directory "Temp_Dirs". An entry is created in the Eventlog and an e-mail can be sent to the administrator optionally.

If the message is addressed to a recipient number that does not match a destination in the routing table, the message is shifted to a particular directory named "NoRouteDir". Here it can/must be processed by the administrator manually.

The single In-directories on the destination server are checked for new incoming messages and replies regularly.
When there are messages, they are picked up and passed on to the respective CR_MDS-directory. Here the messages are picked up by the ixi-UMS Render Connector and are returned or passed on to the ixi-UMS Connectors.

Error Processing: If errors occur, they are written into the Router.Log and are put out in the Event. In addition to that, an e-mail notification may be activated.

1.4 Planning and Preparation

The planning, preparation, installation and implementation of the ixi-UMS MDS in many respects depends on whether a new ixi-UMS structure is established or an available ixi-UMS environment is enhanced.

- In either case, a share has to be set up at the ixi-UMS Kernel Server. The access is possible by UNC or by WebDav (recommended).
- It has to be determined at any rate, where the rendering shall be made. See "Planning the Rendering".
- If the ixi-UMS Kernel Render Connector at the locations is **not** required, it has to be disabled. For more informationen please refer to the additional information.
- If the ixi-UMS MDS is installed on a server on that there is already an ixi-UMS Kernel and/or a ixi-UMS Render Connector, the available ixi-UMS Render Connector must be used. In this case the transfer directories have to be configured.
- If the ixi-UMS connectors are already installed on the server, the new transfer directories configured.
- If the WebDav access shall be realized by HTTPS, the Apache servers must be prepared accordingly.
- If the WebDav accesses shall be via the FQDN, these have to be entered in the Apache server.
- Monitoring of the single components must be planned (e.g. by deploying the IXI-Inspector).
- Availability and performance of additonal features like remote inquiry, sender identification, print incoming, user look-up must be taken into account and checked.
- In many cases, a "number conversion" is necessary. This feature is with costs and must be considered with the planning.

1.5 Planning the Rendering

Basically it has to be determined before the installation, whether and on which server outgoing faxes shall be rendered. The following scenarios can also be combined, because messages in both directions can also pass through several ixi-UMS Render Connectors.

When fax messages with attachments, e.g. Word-doc etc., shall be sent, the respective document has to be converted into a fax-capable format at a server (rendering). Basically, there are 2 scenarios:

Central Rendering (at the ixi-UMS MDS Server)

Usually, also a central processing of the messages shall be achieved by deploying the ixi-UMS MDS.
f there is no ixi-UMS Render Connector on the server yet, the installation of ixi-UMS MDS will also install the ixi-UMS Render Connector. The software applications required for the rendering (Word, Excel etc.) only must be installed on the ixi-UMS MDS Server/s.

The following has to be considered then:

- All the cover pages are administered centrally
- The perfomance of the servers has to be sufficient (printing requires main memory)
- When problems with the rendering occur, this may cause a blocking of the ixi-UMS Render Connector. The entire message traffic comes to a standstill then. A monitoring of the directories should be implemented (e.g. by applying the ixi-Inspector)
- At the ixi-UMS Kernel Server, the messages are only received and send. The ixi-UMS Kernel Render Connector installed by default must be disabled..
- No conversion software (Word, Excel etc.) must be installed on the ixi-UMS Kernel Servers.

Local Rendering (at the ixi-UMS Kernel Servers)

It may make sense in exceptional cases to use the ixi-UMS Render Connctor on the single ixi-UMS Kernel Servers.

Please take into account then, that

- every software needed for the rendering has to be installed on every ixi-UMS Kernel Server
- every ixi-UMS Kernel Server must be monitored accordingly
- the cover pages have to be administered at the locations

When deploying the ixi-UMS SI CON Connector, it is mandatory to choose one of the scenarios described above.
When fax messages are exclusively sent by users from a Windows-workstation (e.g. via Outlook), the server-based rendering is not absolutely necessary.

Client-based Rendering (at the Workstations)

Precondition for this is the use of the printer "ixi-UMS FAX" of the ixi-UMS Client Tools at every workstation. The ixi-UMS Client Tools must be installed on every workstation.

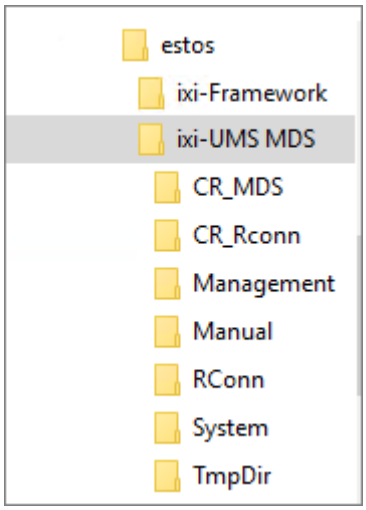
However, it is absolutely necessary that the messages pass any ixi-UMS Render Connector in the system in order to accomplish final conversions and to generate a coverpage, if necessary.
A control of the ixi-UMS Render Connectors though is not required and software for the conversion of messages is not needed on the servers.

If the features / options

- printing incoming
- "Sender Identification"
- converting incoming faxes into PDF

are wanted, you have to keep in mind when choosing the installation location of the ixi-UMS Render Connector where the network printers and / or the MetaDir Is / are installed and which recipients shall be allowed to receive faxes as PDF.

2 Installation



By installing the ixi-UMS MDS,

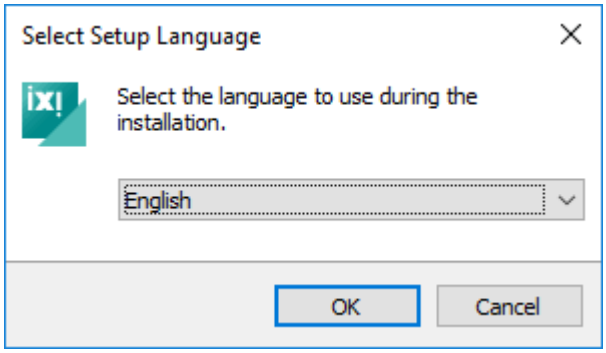
- the directory structure displayed below is set up
- the ixi-UMS MDS Render Connector is installed (can be dropped)
- the configuration SnapIns for the ixi-UMS MDS the ixi-UMS Render Connector are registered.

If the ixi-UMS Connectors have been installed before the ixi-UMS, the transfer directories of the ixi-UMS Connectors must be entered manually after the installation of the ixi-UMS MDS.

If you have not executed the changes and configurations as described at "Planning and Preparation" yet, please take the following steps after the installation of the ixi-UMS MDS in the following order:

- Change output directory in the ixi-UMS Connectors (optional)
- Change transfer directoy of the available ixi-UMS Render Connector (optional)
- Configure Apache server for SSL and / or FQDN access
- Set up share for UNC or WebDav access at the ixi-UMS Kernel Servers
- Define locations
- Set up routing table

2.1 Language

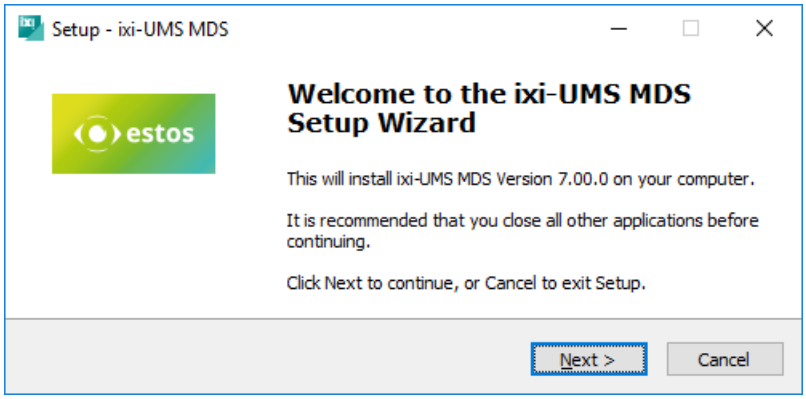


The ixi-UMS MDS can be executed in the languages German and English.

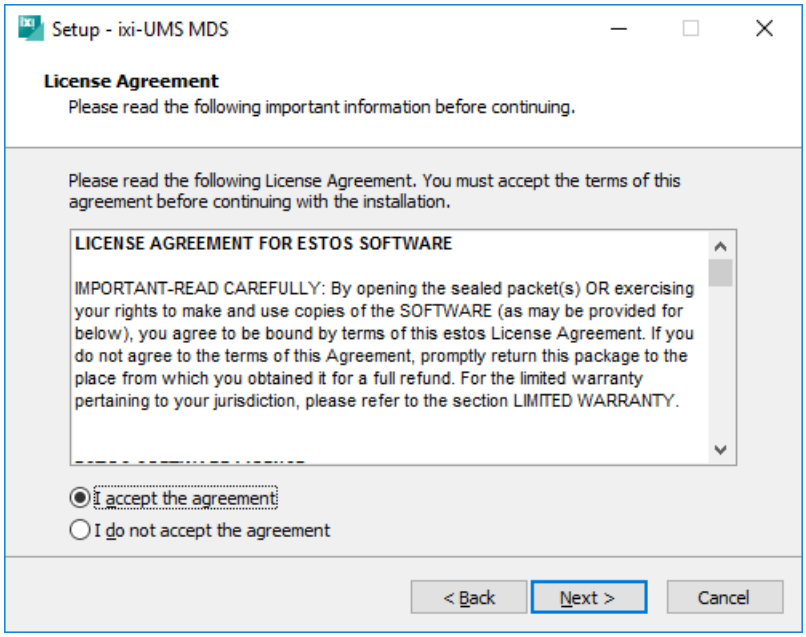
The configuration in the MMC is started in the same language, but can be changed

2.2 Welcome

After having determined the language, the installation is started.



2.3 License Agreement

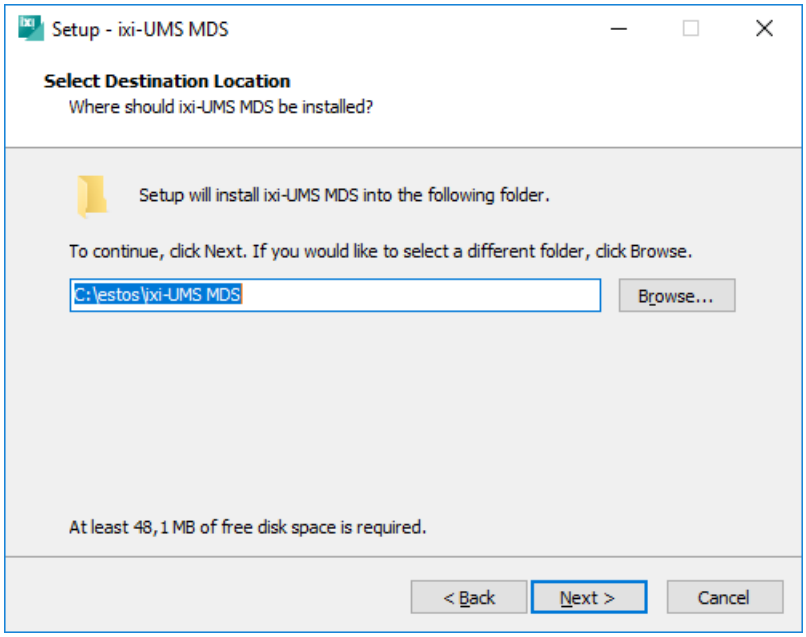


The end user's licence agreement is indicated.

Peruse this carefully and choose "I accept..."

Only then the installation can be continued.

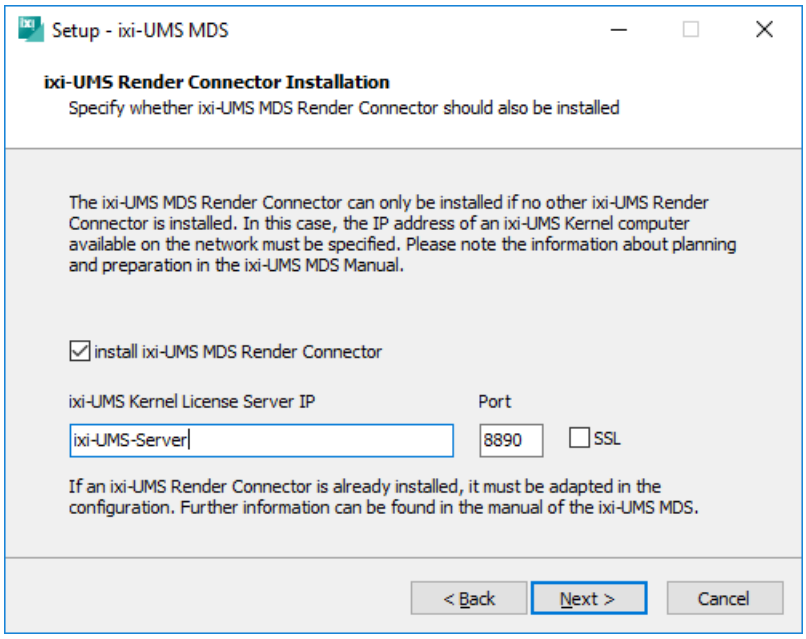
2.4 Destination Location



After that, you have to determine the installation path. By default, the same path is determined as with the ixi-Framework installation.

2.5 ixi-UMS Render Connector Installation

You have to decide now whether the ixi-UMS Render Connector shall be installed in addition. This selection is only available if no ixi-UMS Kernel Render Connector is installed. Please read carefully the article "Planning and Preparation" and "Planning Rendering".



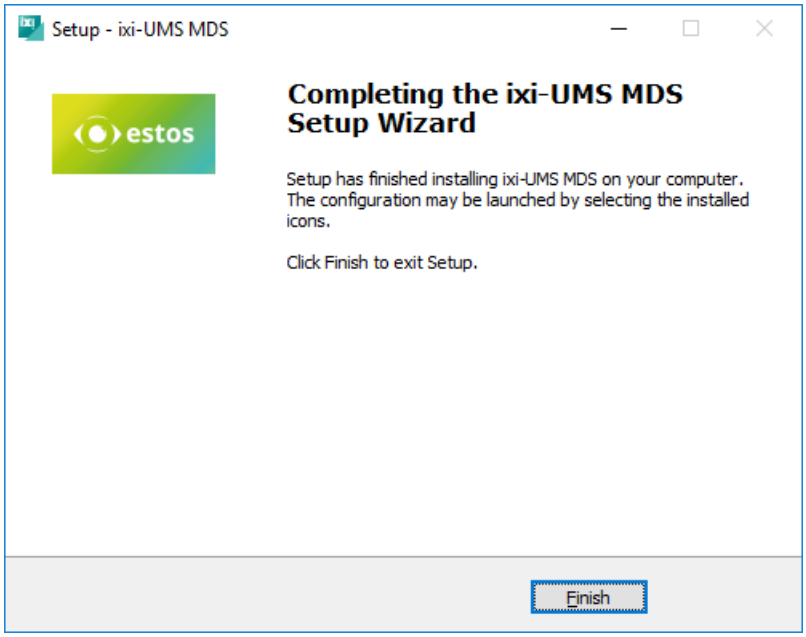
If the ixi-UMS Render Connector shall be installed additionally, the IP-address of an ixi-UMS Kernel Server has to be stated in order to be able to query the licensing information.

Optionally the connection to ixi-UMS Kernel per SSL can be specified.

After having determined which components are installed, the copying- and installation process starts.

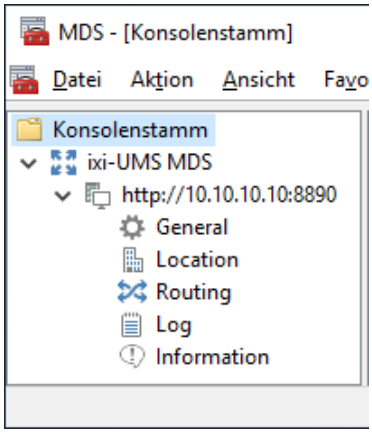
2.6 Finish

In order to complete the installation, please click on "Finish".



3 ixi-UMS MDS Configuration

The ixi-UMS MDS is configured via a Snap-In in the Microsoft Management Console (MMC).

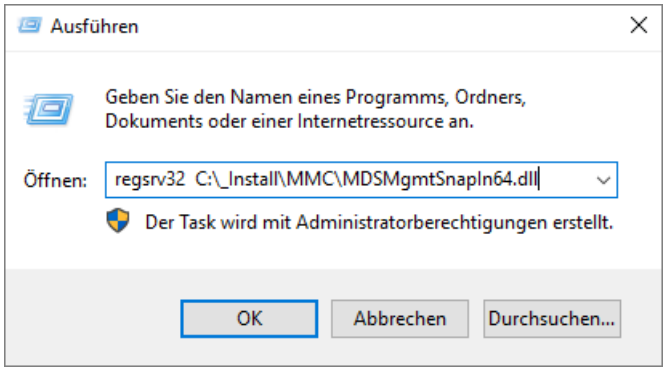


The needed Snap-In is registered automatically on the machine during the installation.

The call of the MMC is desposited in the start menu, in which the Snap-In is already available. The Snap-In - as any other Snap-In - can also be added to an MMC.

Changing the language of the Snap-In

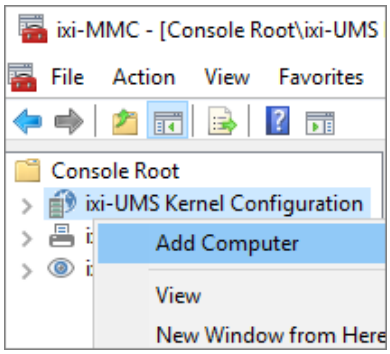
It is explained at additional information "Changing MMC Language" how the language of the MMC is changed after the installation.



The required files are provided in the respective installation directory of the ixi-UMS Component in the sub-folder "Management".

Copy the folder "Management", at the least the respective "...Snapin.dll" with the accompanying ini-file, to the machine. Close all the MMC's and register the files with "regsvr32".
Add the SnapIn in an MMC.

Add the SnapIn in a MMC and establish the connection to the ixi-UMS server



After adding the SnapIn in the MMC, the connection to another ixi-UMS component of the same version installed in the network can be added to the console by "right-clicking" on the respective component (here: "ixi-UMS Kernel Configuration") and "Add Computer".

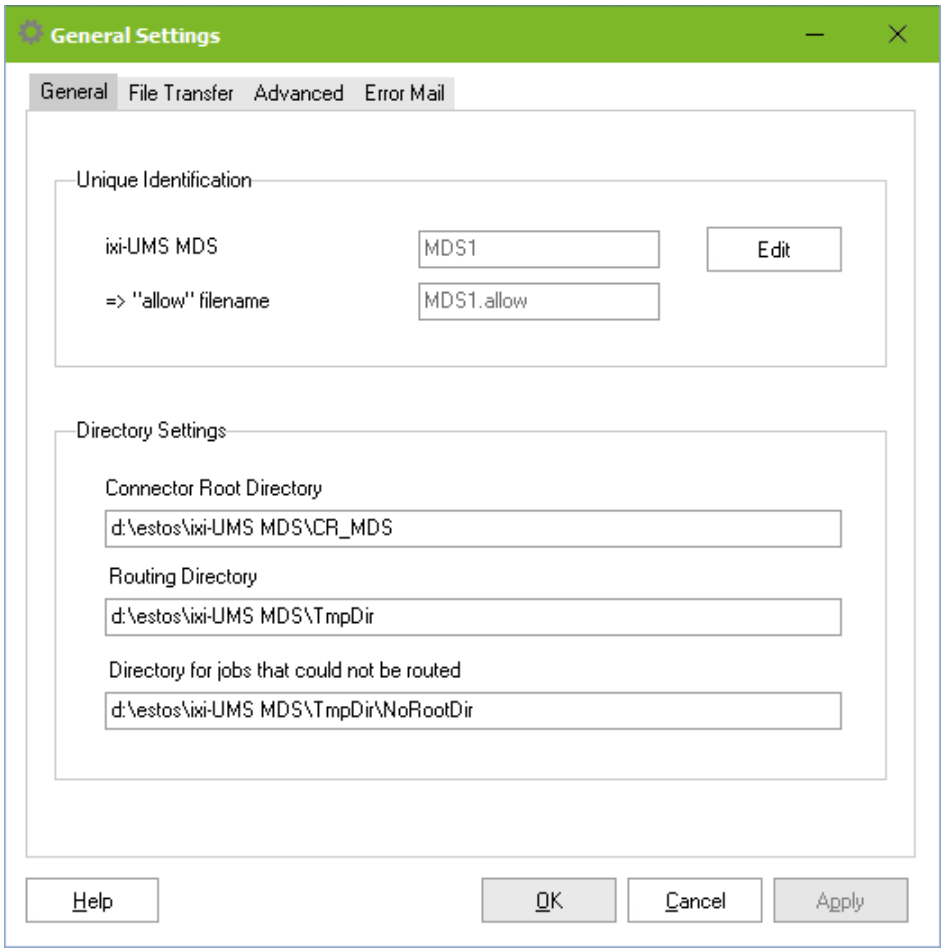
3.1 General

The directories for the ixi-UMS MDS must be defined here. Moreover, general settings for connection times and connection type can be made.

3.1.1 General

Every ixi-UMS MDS needs a unique identification which is used for the renaming and copying of files. When multiple ixi-UMS MDS are deployed, a unique name has to be assigned to each of them. The name should not consist of more than 6 characters.

At "**Directory Settings**", all the needed directories have to be entered. A change of the directories entered with the setup is only required if the ixi-UMS MDS is going to be integrated into an existing structure.



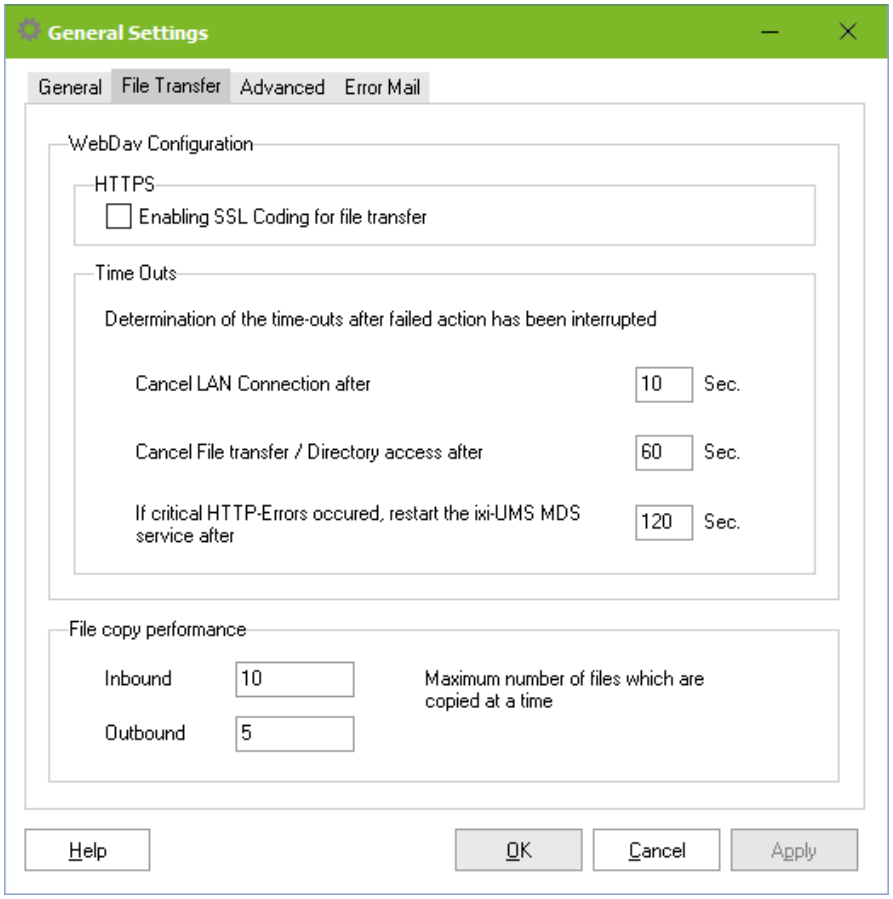
Connector Root Directory
Directory in that all the ixi-UMS Connector directories are stored. See also "Output Directory in the ixi-UMS Connectors"

Routing Directory
In this directory, the outgoing messages from ixi-UMS MDS - sorted according to the destination - are deposited until they are sent

Directory for jobs that could not be routed
When the message is addressed to a recipient number that cannot be assigned to a destination in the routing table, the message is shifted to an own directory, e.g. "NoRouteDir". Here it can/must be processed by the administrator manually.

3.1.2 File Transfer

The performance of the ixi-UMS MDS in network access and file transfer can be influenced here.
The first settings exclusively affect the access by WebDav.
The ixi-UMS MDS by default supports no SSL coding. If the WebDav-connections shall be established via the ***HTTPS*** protocol, this feature must be enabled. Please note that in this case, also all the Apache Servers must be configured accordingly and certified. For more informationen please refer the Additional Information.



At "**Time Outs**" it is determined, when a connection or an access has failed.

Cancel LAN Connections
If no connection to the destination server can be established within the stated time, an error is reported. The ixi-UMS MDS transfers the outgoing messages to another server, if necessary. If there is none, the next location is addressed immediately.

Cancel File transfehr..
If a connection can be established within the stated time, however, a directory cannot be read out of a message cannot be transferred, an error is reported and the next directory is addressed.

HTTP-error
If a connection has been established, but is in an undefined state, the ixi-UMS Message Distribution Server service is restarted and an error is reported.
A restart of the ixi-UMS MDS can be caused e.g. by an HTTP-error reported from the remote station.

All actions and their causes are logged.

The settings at "**File copy performance**" are valid for WebDav- as well as for UNC-connections.

Inbound	Number of messages that are copied by the ixi-UMS Kernel Servers per directory at the time.
Outbound	Number of messages that are routed to the ixi-UMS Kernel Servers per directory at a time.

Depending on whether more messages are received or sent, the respective value at WebDav-connections should not be too low, as otherwise the data throughput declines (Overhead).

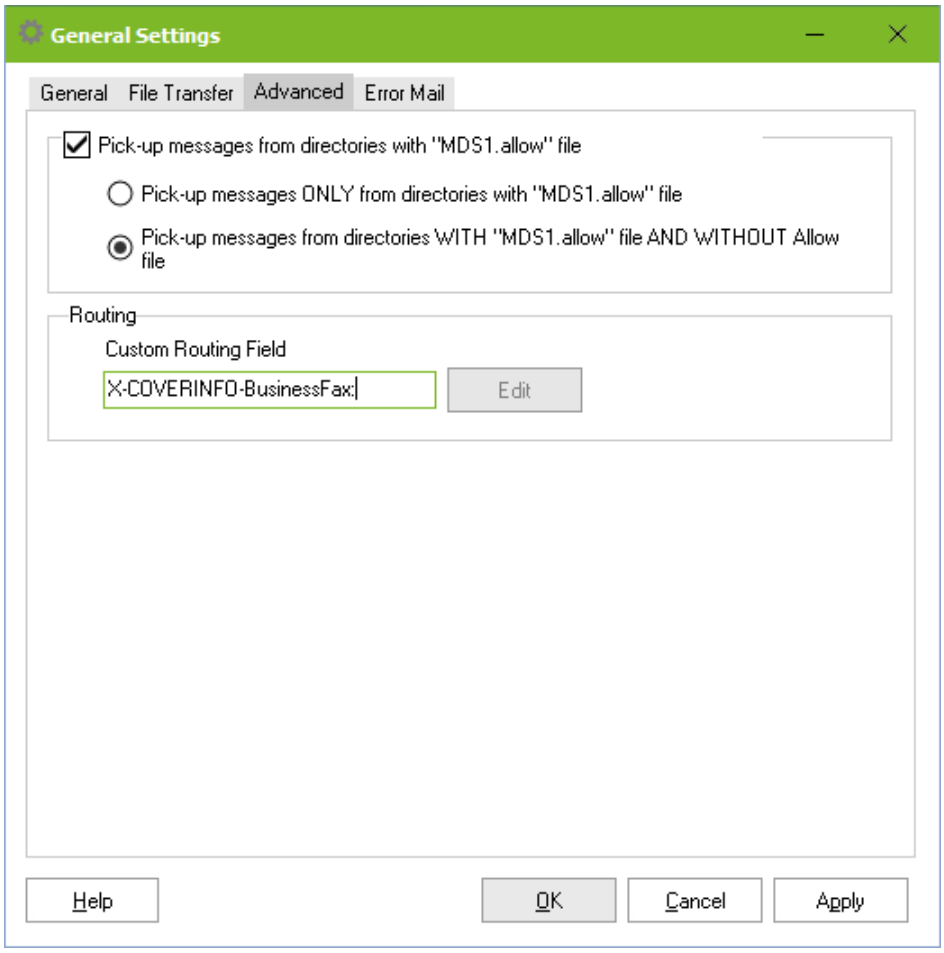
3.1.3 Advanced

Additional options or extended configurations can be carried out here.

Pick-up messages from directories
This option has to be activated only in special cases.
You can determine whether the ixi-UMS MDS shall check the IN-directories for "its" allow file.

If this option is activated, you can select whether the ixi-UMS MDS shall make a check for incoming messages ONLY in directories especially "shared" for it or also all the other directories as well.

Please read also the additional information: Exclusive directories - Exclusive Accesses..



Routing
Outgoing messages by default are routed by means of the recipient number or recipient information. If this information is not sufficient in order to map the structure and the routing, another field can be determined.

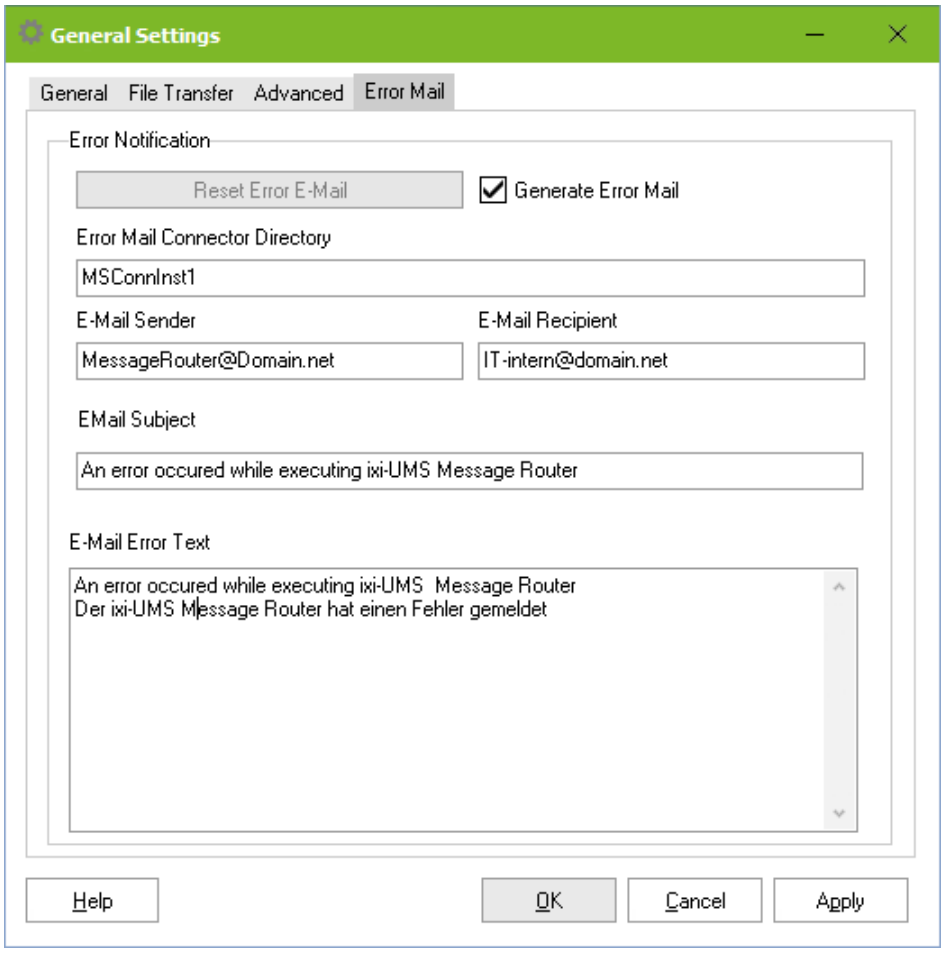
3.1.4 Error Mail

If the ixi-UMS MDS shall send an e-mail when an error is recognized, a sender, a recipient and the respective ixi-UMS Connector directory have to be entered here.

The e-mail is sent with the following problems:

- Error with reading our a server directory
- Error with reading our an In.directory (within the server directory)
- In case of a system error with subsequent automatic restart of the MDS
- Error with the inbound file transfer (download, deletion of the file at the ixi-UMS Kernel Server)
- When no routes are defined with the start of the ixi-UMS MDS
- When the local Connector Root directory cannot be read out
- When a job could not be routed and was shifted to the respective "NoRoute"-directory
- When at a location, no valid server entry is available
- Error with the outbound file transfer (to the ixi-UMS Kernel Server)

Please note that most of the problems listed above do not affect the functionality of the ixi-UMS MDS in general but are only network problems that occur temporarily.



In order to receive an **e-mail notification** it has to be determined, in which Connetcor-directory it shall be created. The directory of an installed ixi-UMS Connector has to be stated.

The e-mail addresses of the sender and the recipient as well as the text of the e-mail are freely selectable and can be changed at any time. The same text as above will always be sent - no matter what error the mail was generated due to. More detailed information about the cause of the error can be found in the log and in the event.

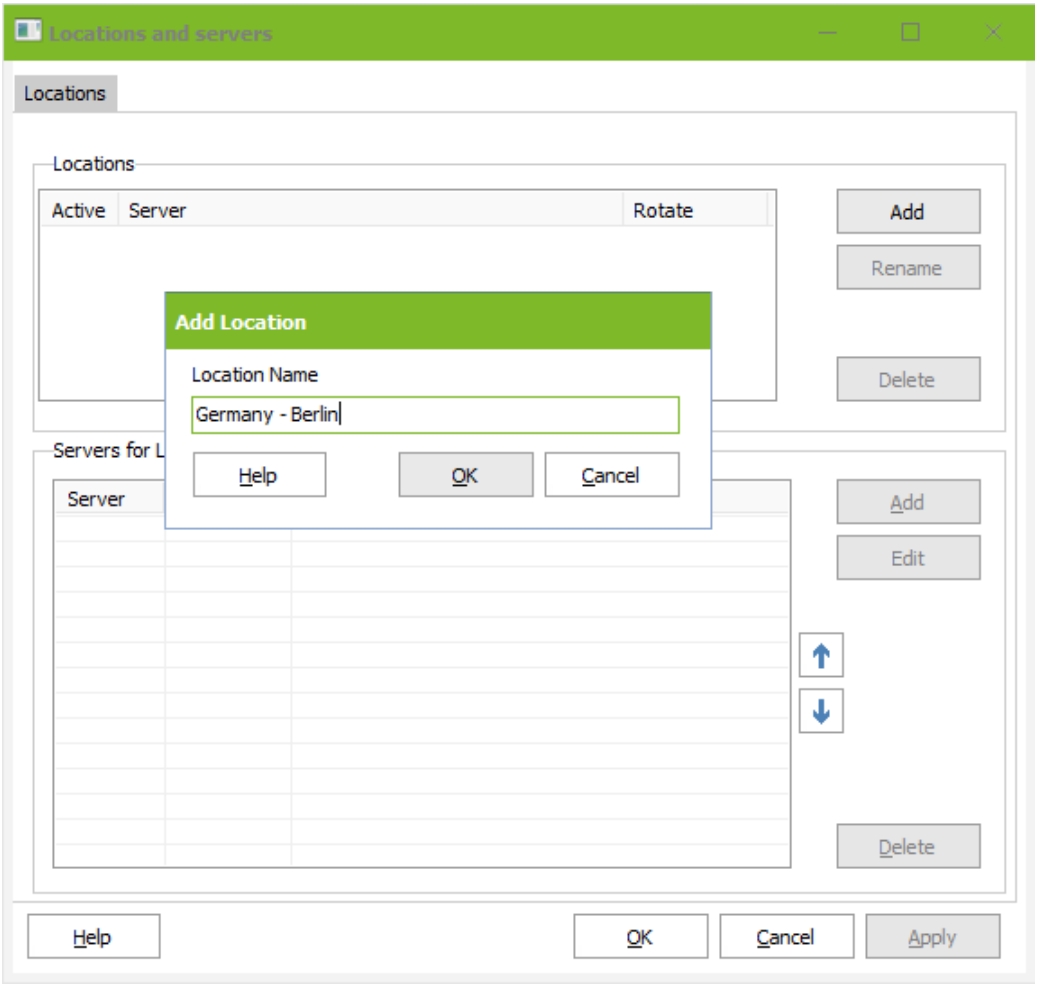
An e-mail notification is generated only once! Once the email has been sent, it must be resent by clicking the "Reset email error" button or restarting the service.

3.2 Locations

After all the directories and the performance of the ixi-UMS MDS have been determined, the respective locations with its servers and the routing have to be configured.
Messages are always routed to the "locations". One or multiple ixi-UMS Kernel Servers can be assigned to the locations.
In the "Locations", the setting "Rotate" also determines whether and with which ixi-UMS Kernel servers a load balancing and / or a high availability should be used.

3.2.1 Add Location

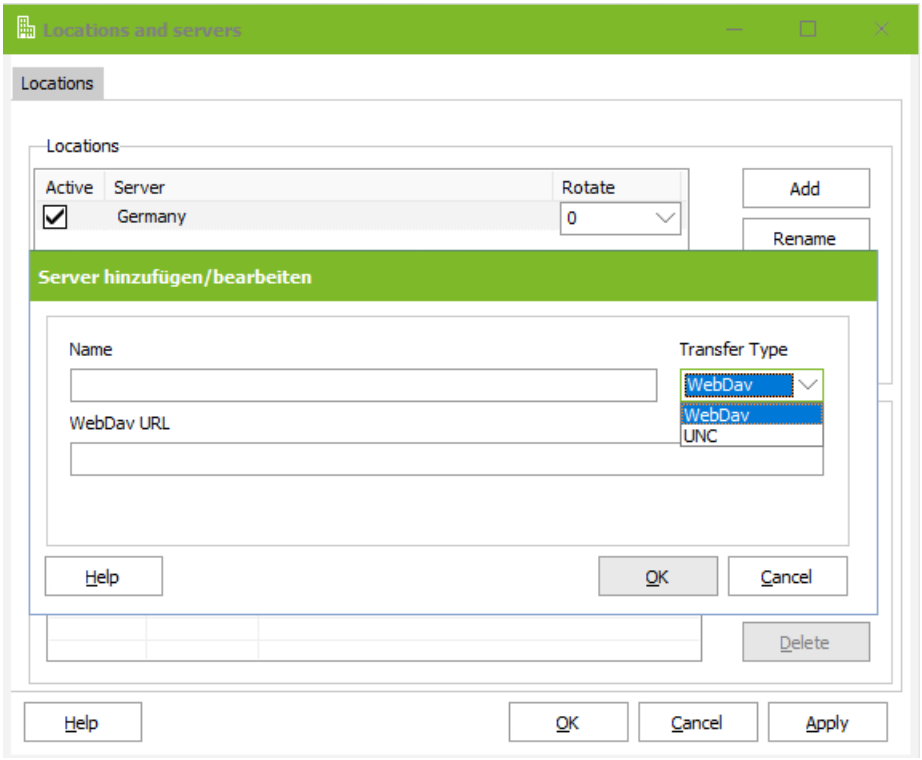
In order to define a new location, a name has to be entered via the button Add". It should be definite, which servers or outgoing messages this location is responsible for. According to the structure, this can e.g. be a country, a city or the company name.



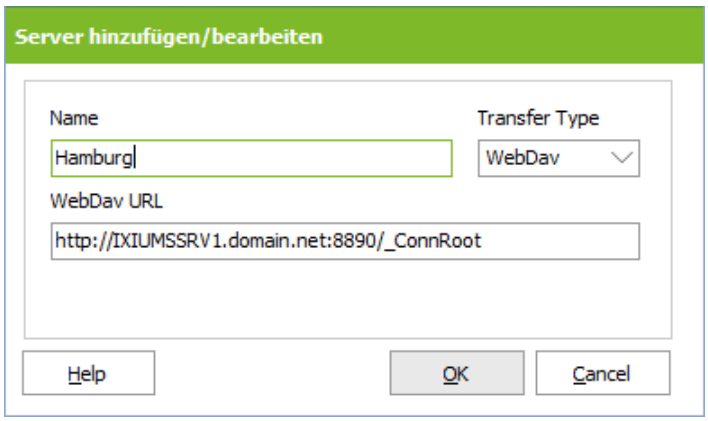
After that, the ixi-UMS Kernel Servers responsible for it must be assigned to this location via "Edit".

3.2.2 Add Server

The servers are entered in direct assignment to a location. To enter the connection data to a new server, the location must be marked and then the connection to the new server must be entered in the lower part of the window via "Add".



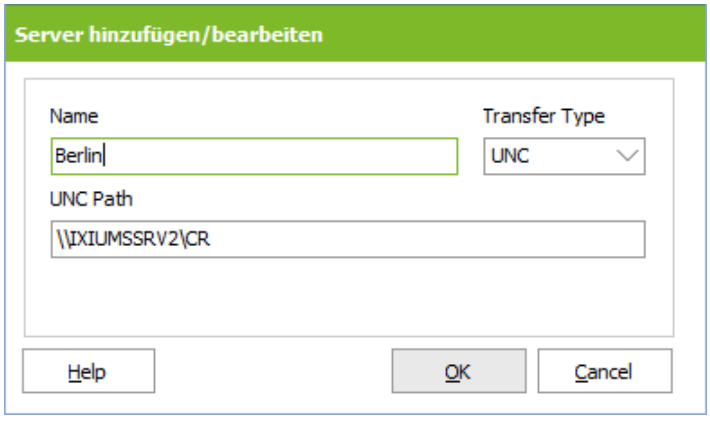
Here, too, the first thing you have to do is enter an appropriate designation, e.g. the computer name of the server.
After that, the transfer type has to be determined.



If the connection via WebDav is used (recommended, especially for WAN or long-distance LAN-connections), the "Kernel Directory" must be entered as URL.

Remark:
The entry depends on the configuration of the respective Apache Server. Use the same "server name" and follow the spelling of the WebDav-share.

By use of HTTPS you read please also "SSL connections" under "Additional Information".

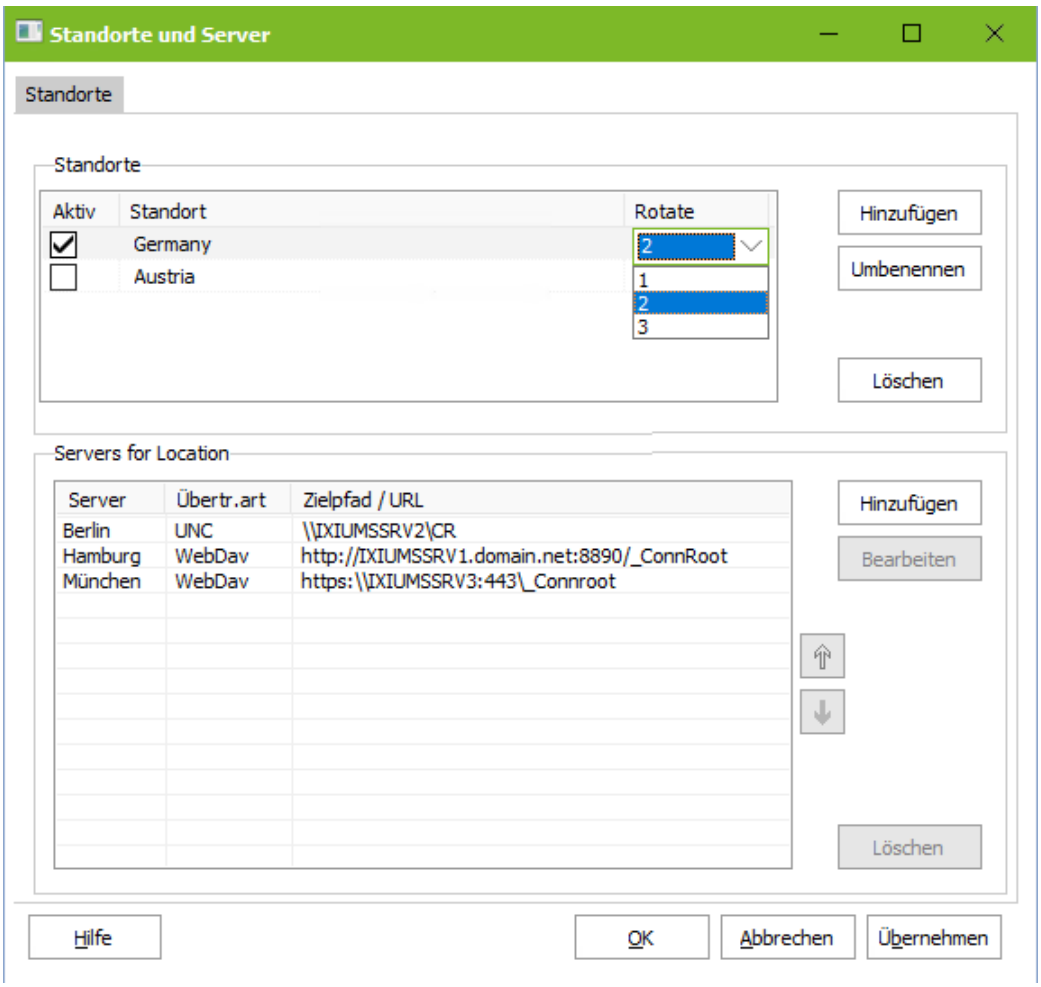


If "UNC" is selected as transfer type, the respective ixi-UMS Kernel directory must be shared.

3.2.3 Load Balancing and High Availability

After all the servers for the location are entered you have to determine, when the ixi-UMS MDS transfers messages to these ixi-UMS Kernels. With the setting under "Rotate" it can be determined whether load balancing and/or fail-safe should be used

Example: Three servers are assigned to the location "Germany"



Rotate: 1	All the messages for this location are transferred to the server "Berlin", because it is on top of the list. If this Kernel is not available, all the messages are sent to the Kernel "Hamburg", which is in second place. If neither of these Kernels is available, the third in the list (Kernel "Wien") is addressed.
Rotate: 2	The messages for this location are sent to the first (Berlin) and to the second (Hamburg) server in the list alternatively. There are always so many messages transferred to the server as stated at "File Transfer", then the other server is addressed. If none of both the servers is available, the server Wien is used.
Rotate: 3	All the messages for this location are sent to the three servers entered in the list alternatively.

The order of the servers can be changed via the arrows.

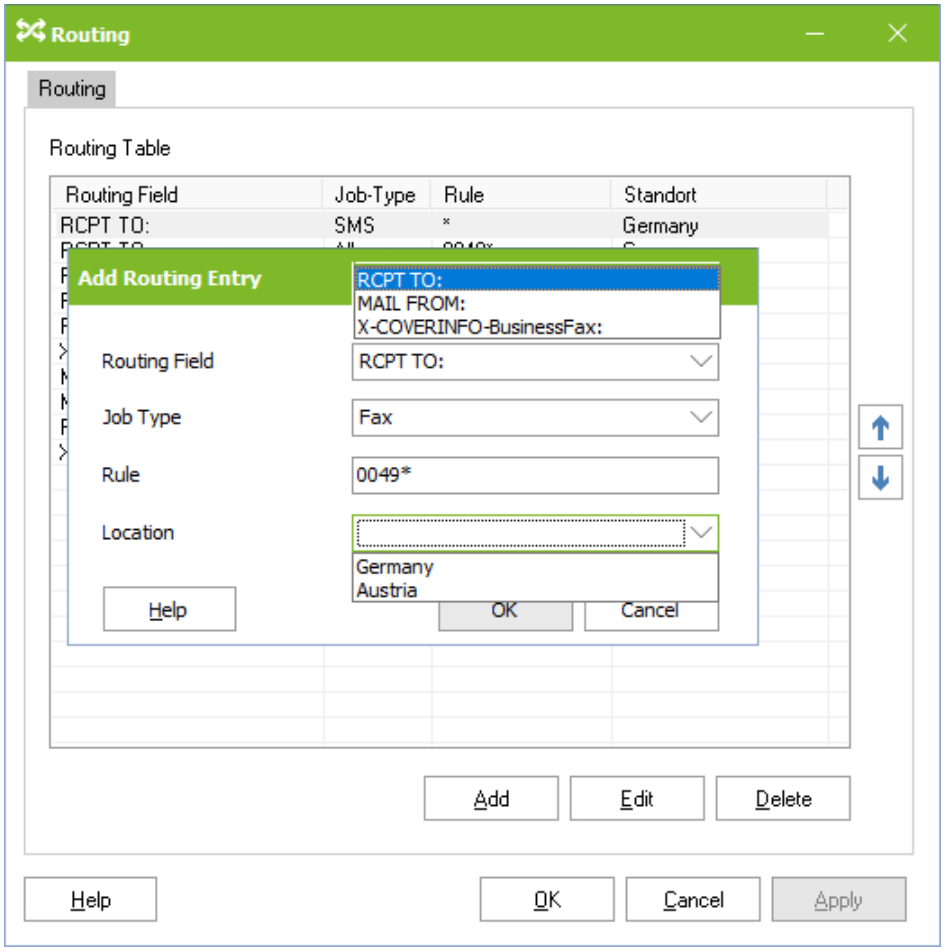
Even if a server is never set up for the sending directly (standby), its directories are checked for incoming messages.

3.3 Routing

In order to be able to set up the routing, all the required locations have to be installed.Outgoing messages can be routed based on the following information, depending on the service:

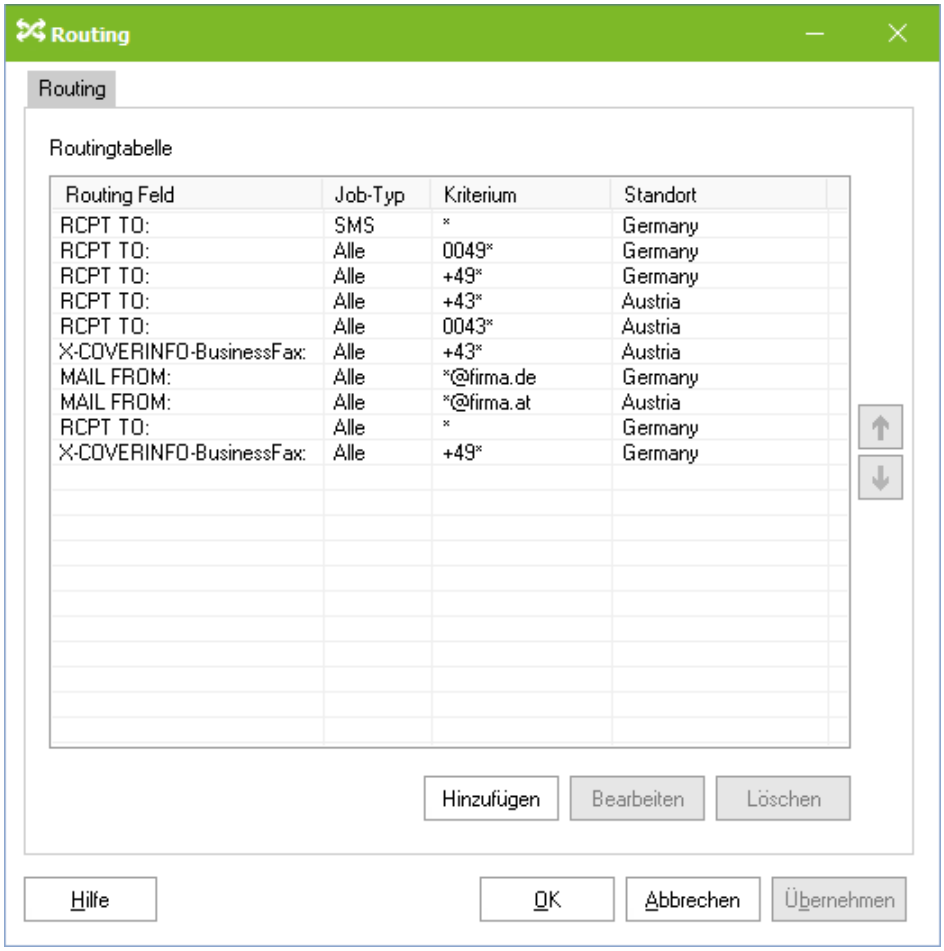
RCPT TO:	Recipient number: Please note that the service to be used (SMS, Voc etc.) is part of the addressing and must be entered here as well (e.g. SMS#+4917*)
MAIL FROM:	Sender of the message. Depending on the ixi-UMS Connector, this is an e-mail address (ixi-UMS Mail Server Connector) or a fax sender number (e.g. ixi-UMS Connector for use with SAP® R/3®)
Individual setting, below: X-IFAXDATA-DChID	A field determined at "Advanced" with information you can determine freely

Via the button "Add", a form is opened that provides the possible options.
The Routing Filed has to be selected and the Criterion has to be entered. After that, a location has to be chosen to that a message, which fulfills this criterion, shall be transferred.



The rules are processes from the top to the bottom. It is mandatory to get the entries in the right order. The processing of the rules is finished when the entry * is reached.

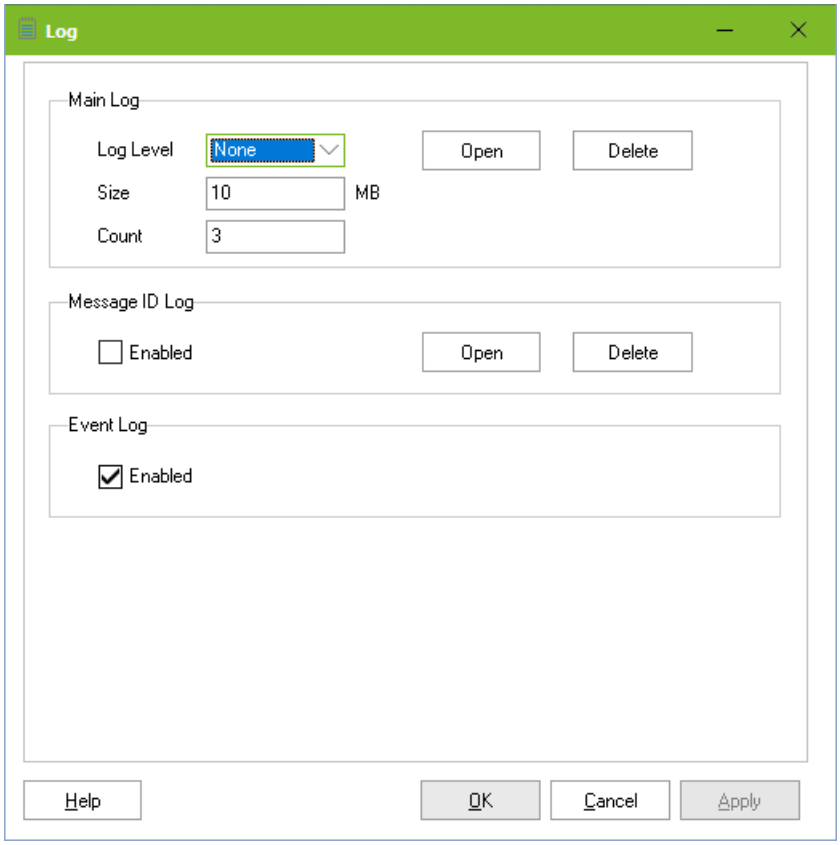
In the following example it is first checked if it is an SMS.
If not, the message is first checked for the recipient. Only if the recipient number does not start with +43/0043 or +49/0049, the specified header field is read. If there is no +43 number, the sender of the message will be read.
If @firma.de or @firma.at is not part of the sender, the message will be transferred to the location "Germany" using the criterion "*".



The last entry is not analyzed. If it should be anylized, too, you would have to move it upwards via the up-arrow button.

3.4 Log

Multiple logs can be enabled.

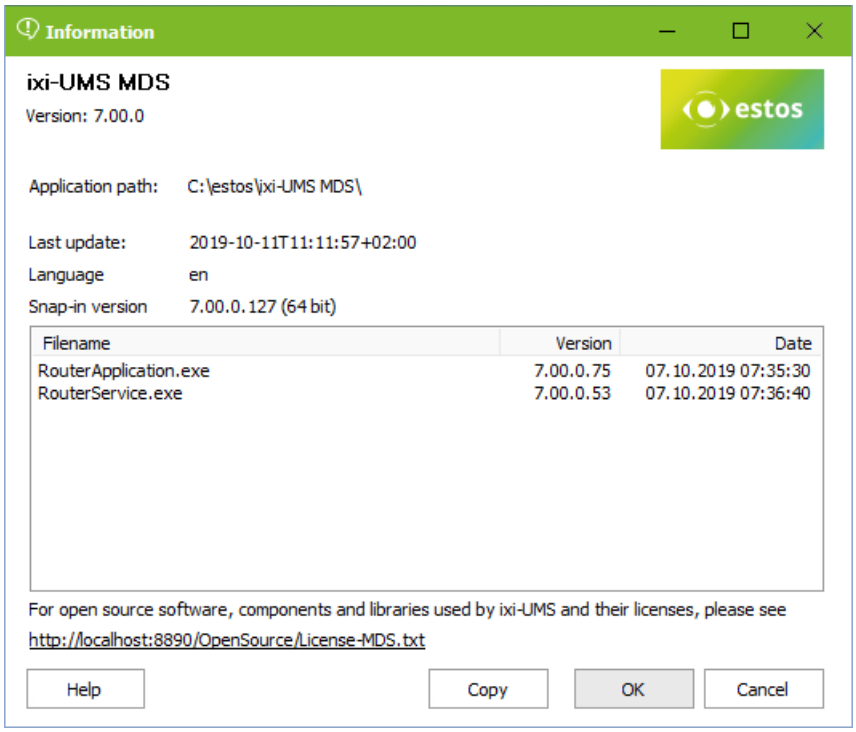


Main Log
In the log level "***Normal***", only errors are logged.
In the log level "***Debug***", the entire message process of every message is logged. Please take into account, that the files get very big very soon in the debug-mode. The log level should be set to "Debug" for debugging only, not steadily.

Message ID Log
The message ID of each message is logged.

Event Log
In addition to some errors, entries are made in the Microsoft Event Log.

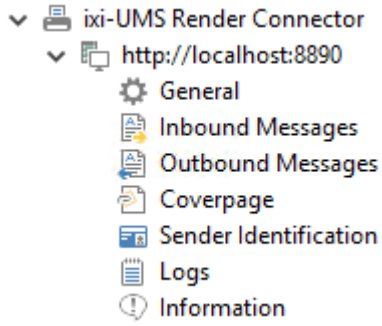
3.5 Information



Here some information about installed file versions can be queried.

4 ixi-UMS Render Connector Configuration

During the installation, the needed snap-ins are registered on the machine automatically.
However, the snap-ins - like any other snap-in - can be added to a MMC.



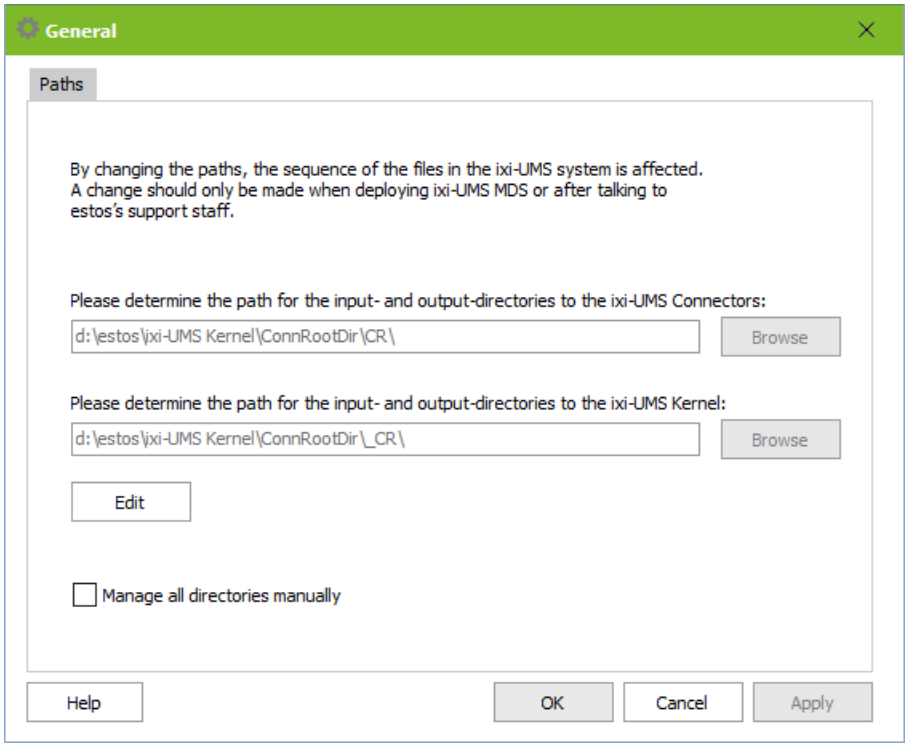
Here, various settings for the performance of the ixi-UMS Render Connector with incoming and outgoing messages can be executed.

Moreover, the feature "number conversion" with incoming messages can be configured, provided that is has been licensed.

Changing the language of the Snap-In
It is explained at Additional Information "Changing MMC Language" how the language of the MMC is changed after the installation.

4.1 General

The ixi-UMS Enterprise components use "transfer directories" for the transfer of the incoming and outgoing UMS-messages from one component to another. The directories are created during the installation and the ixi-UMS components are automatically configured accordingly.
If the ixi-UMS MDS was installed on a computer with an installed ixi-UMS Kernel, the ixi-UMS Render Connector of the ixi-UMS Kernel must be used. This changes the path of the transfer directory to ixi-UMS Kernel.



Select the button "Edit" and then for the lower path (Pleace.....to the ixi-UMS Kernel) on the button "Browse".

Navigate to the folder .
..\ixi-UMS MDS\CR_MDS
and select it.

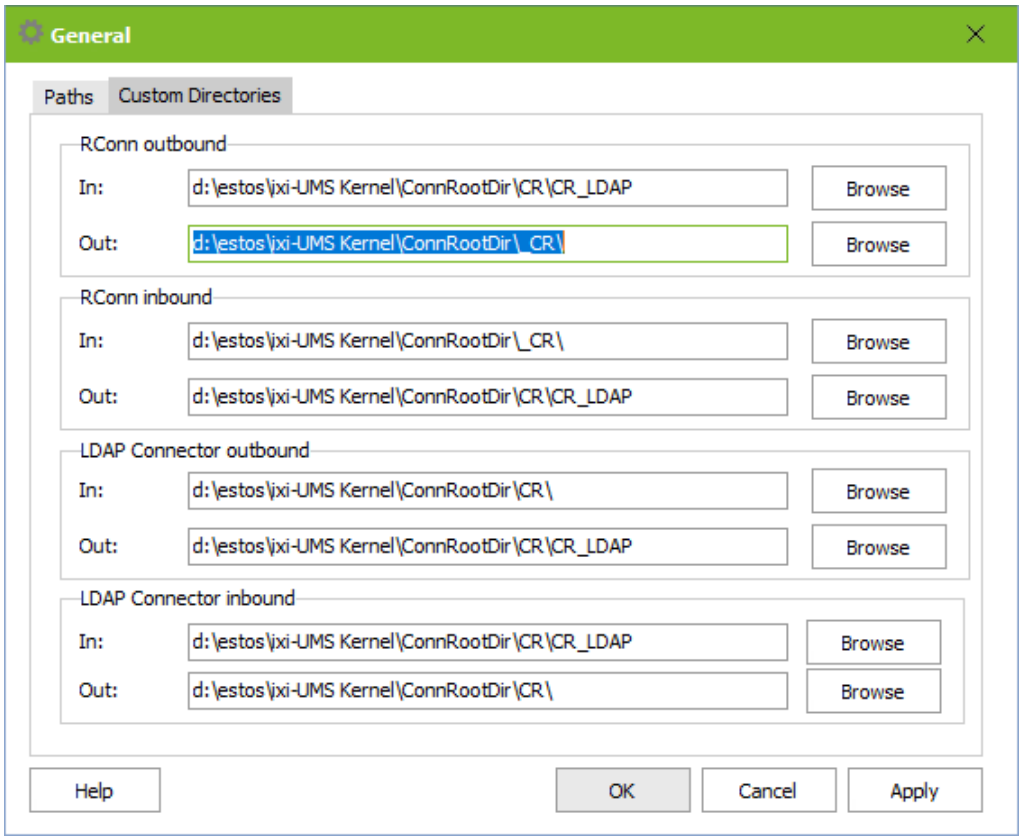
If no additional ixi-UMS components are installed, the path "Create ... to the ixi-UMS Connectors" must not be changed !

If additional ixi-UMS components are to be used to process the files, the directories must be managed manually.

If the option "Manage all directories manually" is activated, all automatic settings are deactivated !

The paths given here should only be changed after consulting estos GmbH.

If the option "Manage all directories manually" is activated, all automatic settings will be deactivated!
In this case, follow the instructions of the relevant component.



4.2 Incoming Messages

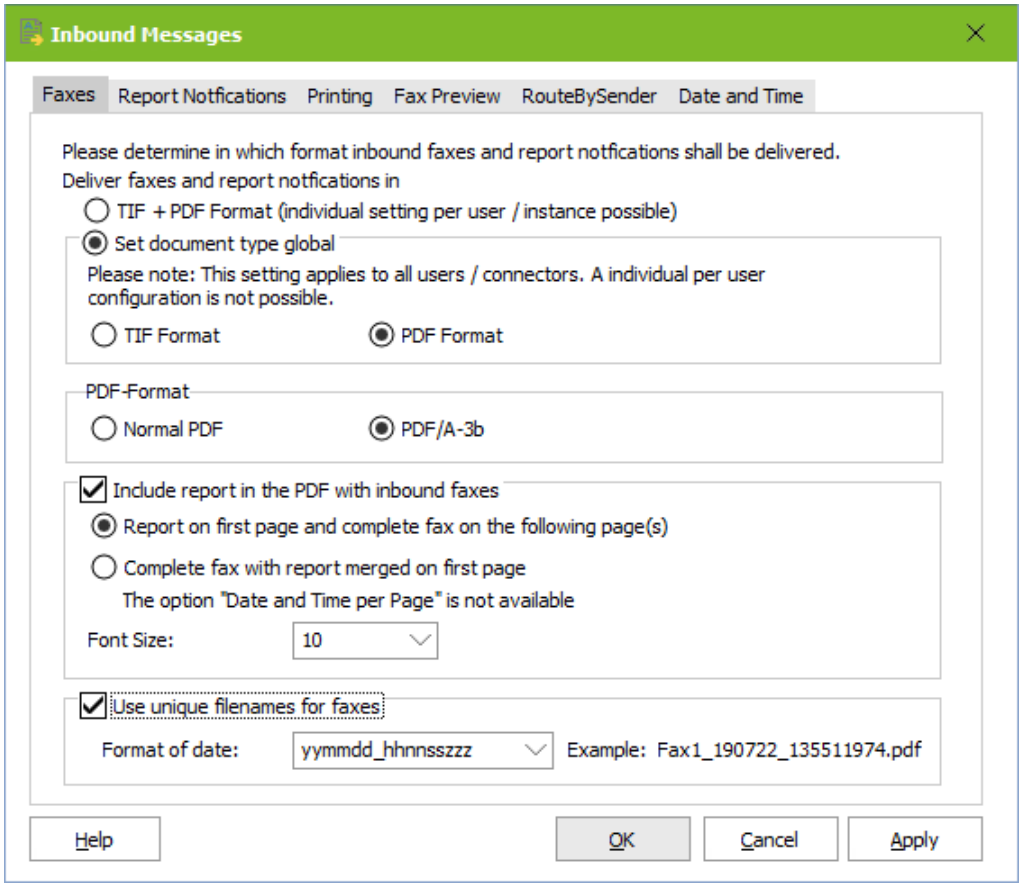
Please determine how incoming messages are converted and whether further actions shall be executed.

4.2.1 Faxes

Here you can determine, whether the incoming faxes are delivered to the recipient **as PDF- and / or as TIF-attachment** in the mail client. Some additional options are only available when the fax messages are converted into PDF-format.

TIF + PDF-Format
If this option is selected, you can specify (when receiving the messages via the ixi-UMS Mail Server Connector in a mail serve) per user whether he receives the messages as Tif and / or PDF file.
For all other ixi-UMS connectors, this setting can be made per instance.

Set dokument type global
If all recipients and connectors should receive the ixi-UMS in the same format, it can be specified whether the fax message is delivered as a TIF or PDF file.



PDF-Format
When incoming faxes are converted to a PDF file, by default the file is created as "Normal PDF" (in PDF 1.4 version).
Optionally, the files can be created in PDF/A-3b format (PDF version 1.4). This format is recommended by the KLA (Digital Archive Committee) for archiving files in the authorities and courts.

A PDF file in PDF/A format (especially if the report or the receipt stamp is included in the PDF) is significantly larger than a "standard PDF" file, because, among other things, the fonts are embedded.
If PDF/A is not explicitly required, the setting "Normal PDF" is recommended.

Include Report in the PDF...
When the faxes are delivered to the user in PDF-format, the report of the ixi-UMS server and the OCR-Text - if available - can be imported into the PDF.

The ixi-UMS Kernel report is inserted in the "Text only" format. Follow the setting to the language and contents in the ixi-UMS Kernel Manual

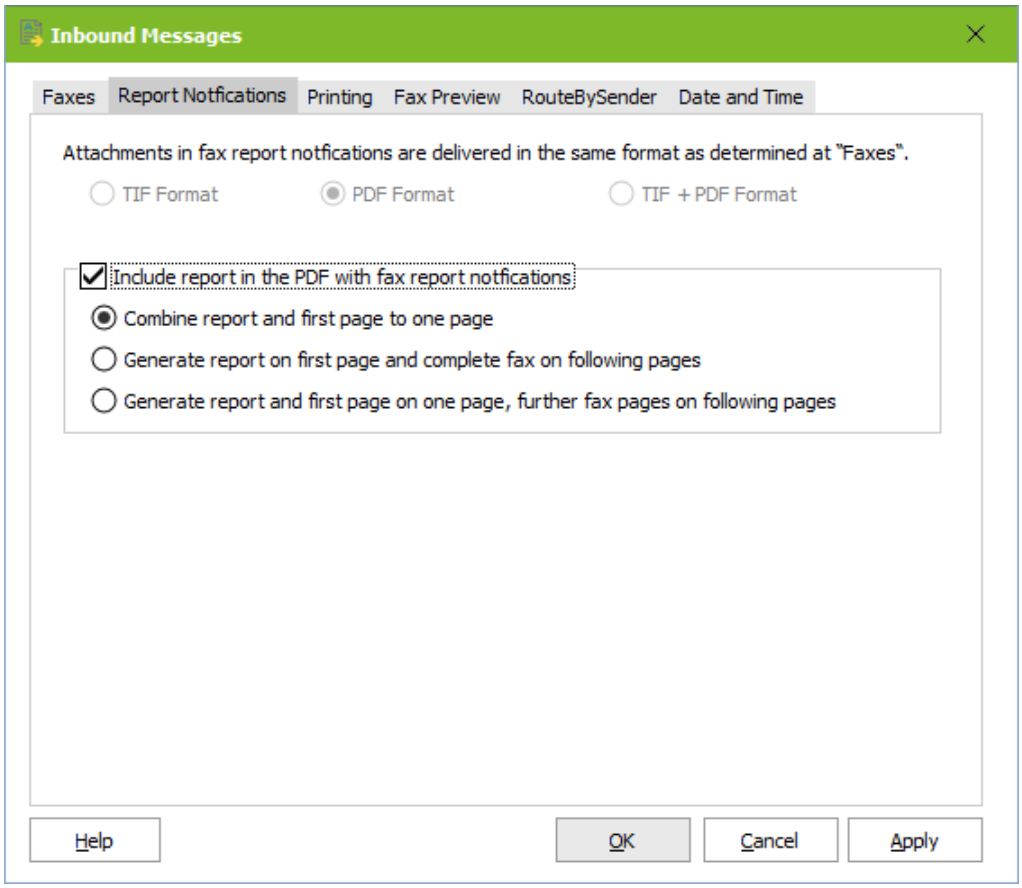
Use unique filenames..:
By default, the file name of all the incoming fax messages is "Fax.pdf" or "Fax.tif". The file name can be extended by date/time, if the file be converted into a PDF-file
The default format of the file names can be adjusted, if necessary.

4.2.2 Report Notifications

As configured at Faxes, the reports are also delivered to the recipient as PDF and / or as TIF-attachment in the mail client. Whether the fax is available at the reports is determined at ixi-UMS Kernel - Reports.

When the faxes and therewith also the reports are delivered to the user in PDF-format, the report of the ixi-UMS Server can be adopted into the PDF.

It can be determined whether and how the ixi-UMS Kernel Report shall be adopted into the sent fax (as PDF).



The ixi-UMS Kernel report is inserted in the "Text only" format. Follow the setting to the language and contents in the ixi-UMS Kernel Manual

4.2.3 Printing

Incoming faxes with or without report and send-reports can be printed on a printer in the network.

You can determine whether only the faxes and reports to a particular call number or all the faxes of a particular number range shall be printed.

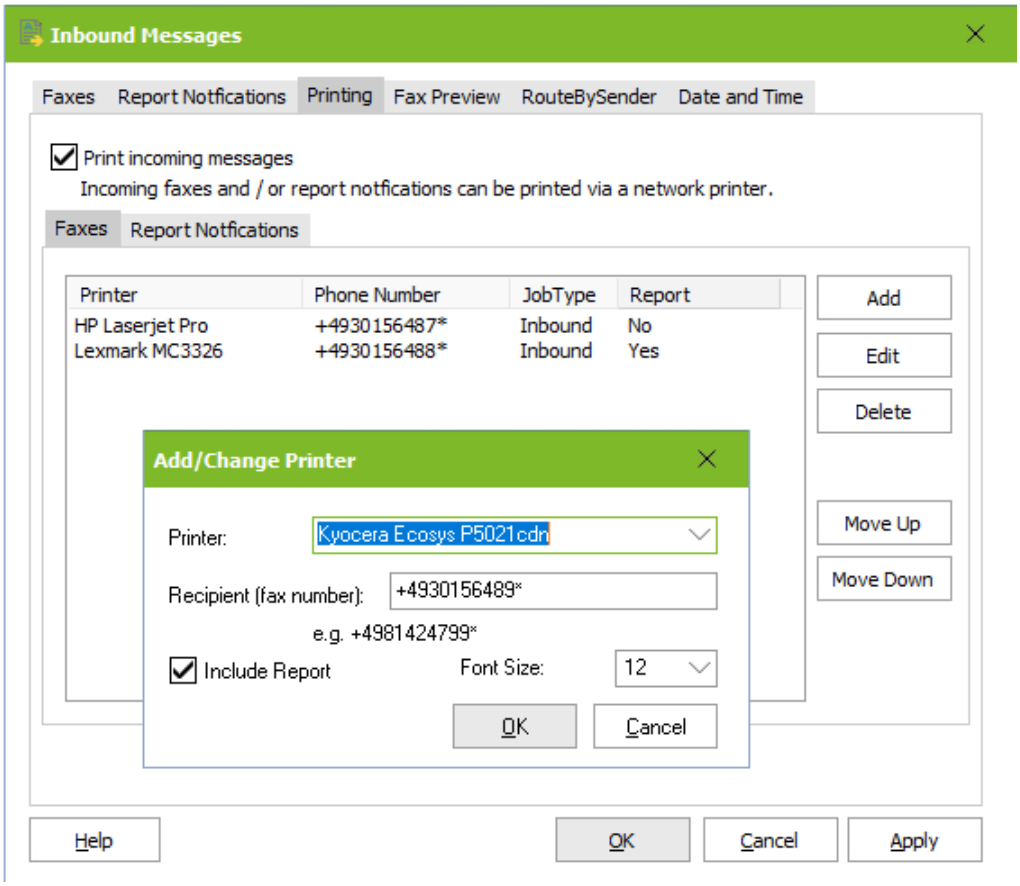
Recommend:
- The printer has to be installed on the ixi-UMS server as printer in the network.
- The ixi-UMS Serviceaccount must have permission to print on this printer.

The ixi-UMS Kernel report is inserted in the "Text only" format. Follow the setting to the language and contents in the ixi-UMS Kernel Manual

Faxes

When the printer is installed, it can be selected via "Add" and the respective number can be entered.

The whole fax recipient number without spaces has to be entered always the way it is also maintained at the user.
You can work with an * in order to define a range.
Example: +4981424799*
Every fax that begins with these digits is printed.



If only an * is entered, every incoming fax is printed.

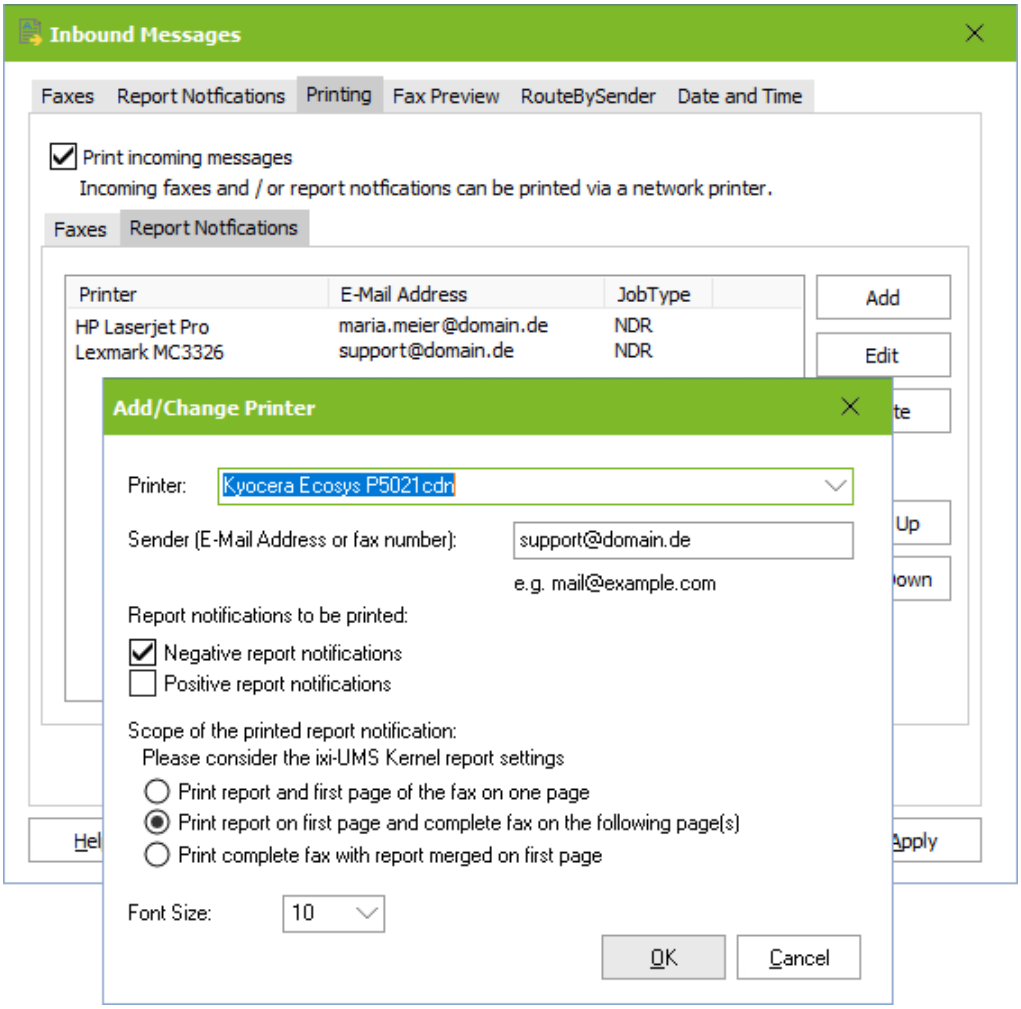
The rules are processed top down. This means that it is absolutely required to put the entries into the correct order. The procession of the rules is finished when the entry * is reached.

You can select whether incoming faxes shall be printed with or without the report (body text of the e-mail including OCR-text, if applicable). If the report shall be printed additionally, it is printed on a separate page.

Reports

In the second part, sending reports can be printed.

You can determine for which fax-**sender** and which kind of report shall be printed.
The sender of a fax (=recipient of the report) depends on the respective ixi-UMS Connector.



With ***ixi-UMS Mail Server Connector***, the e-mail address must always be entered.

With the ***ixi-UMS SI CON Connector***, the fax number of the user is used as sender by default.
This must be entered like it is in the report. Default: +498142479943

The sender of a fax via the ***ixi-UMS FAPI Connector*** depends on the creation of the faxes and the configuration of the ixi-UMS FAPI Connector. An e-mail address as well as a fax number can be entered.

Scope of the printed report

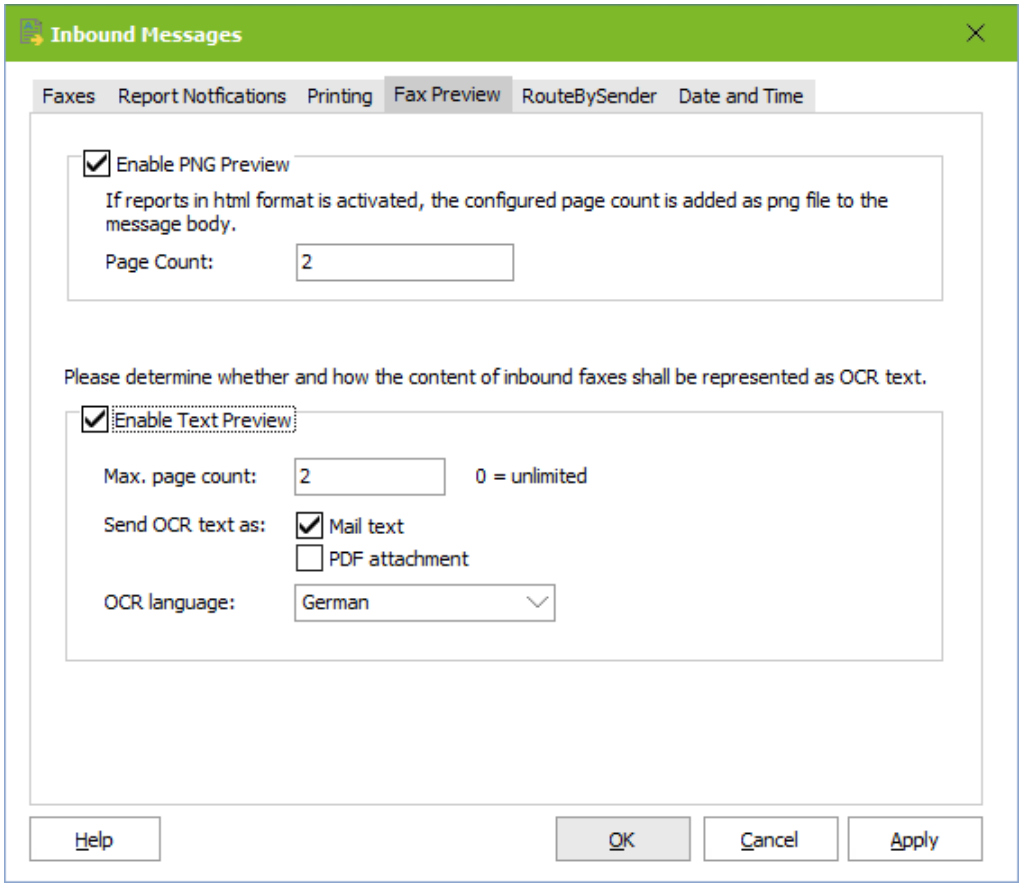
If the reports in the ixi-UMS Kernel are configured in a way that the actual fax is attached to the report, it can also be printed. Depending on the setting, only one page or the complete fax is printed.

The rules are processed top down. This means that it is absolutely required to put the entries into the correct order. The procession of the rules is finished when the entry * is reached.

4.2.4 Fax Preview

Enable PNG Preview
This function requires an ixi-UMS Mail Server Connector with the "Create reports in HTML format" function enabled.
The incoming faxes are sent to the users as an attachment in an e-mail. Optionally, the incoming fax can also be created as a png file and embedded in the e-mail body to get a "preview".

Enable Text Preview
Incoming faxes can be displayed as OCR text. It can be defined if the text should be provided in the mail body and/or as a PDF attachment.



The **max. page count** should not be chosen too high, because the process causes a lot of CPU load.
Should only one preview be available in the E-mail, reaches the first side.

The **OCR language** should correspond with the language, in which the fax messages are received primarily.

Please note that only the e-mail text can be read when listening to the faxe messages via ixi-UMS Voice-Mail Server.

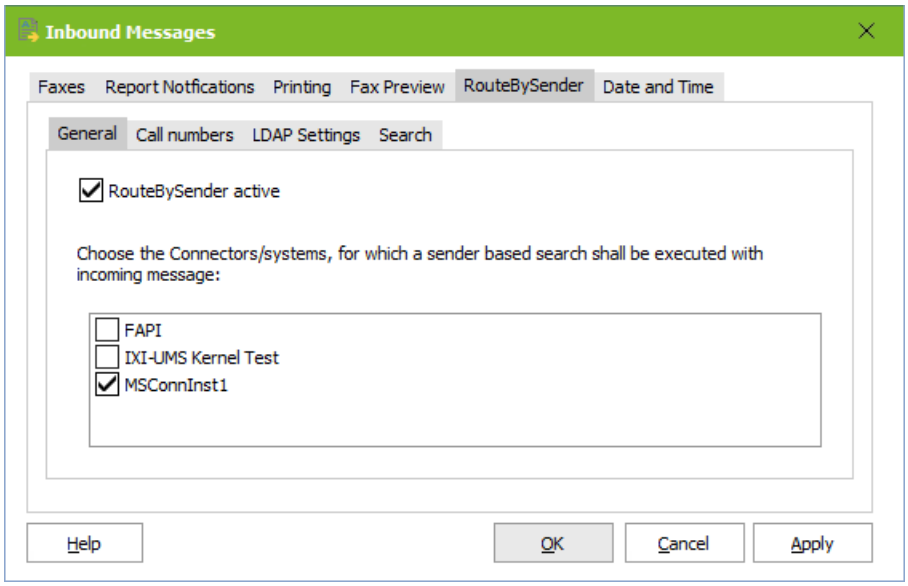
At OCR it can be determined, how many pages of an incoming fax are displayed as OCR text and whether the OCR text shall be sent to the user as mail text or as attachment in PDF-format.

Per default the OCR-Text is inserted in the "Text only" format. If the option "Reports in the HTML format" is activated and furnished in the ixi-UMS Kernel, form and writing can be changed.

4.2.5 RouteBySender

With **incoming** UMS-messages, an LDAP-search for the sender (mail from:) is executed. When the sender is found, the determined field is read out and entered as recipient of the UMS-message.

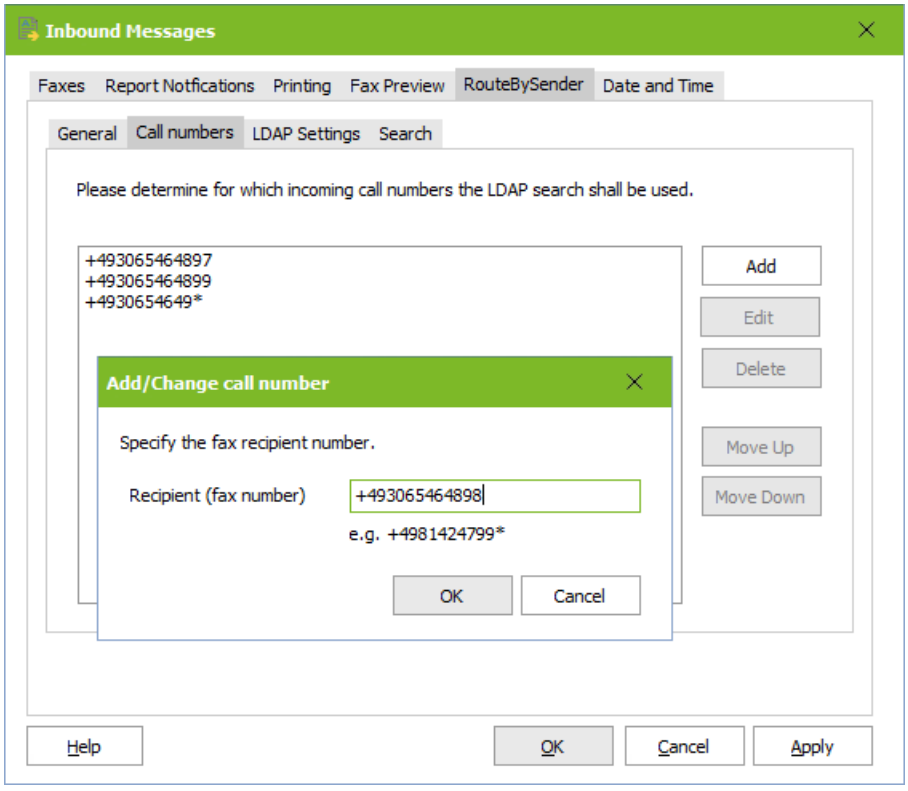
4.2.5.1 General



First of all, you have to determine for which ixi-UMS Connectors (and therewith for which system) the LDAP-search shall be executed.

4.2.5.2 Call Numbers

It has to be determined whether only for messages to a certain recipient number or for all the faxes to a certain range, the LDAP-search shall be executed.



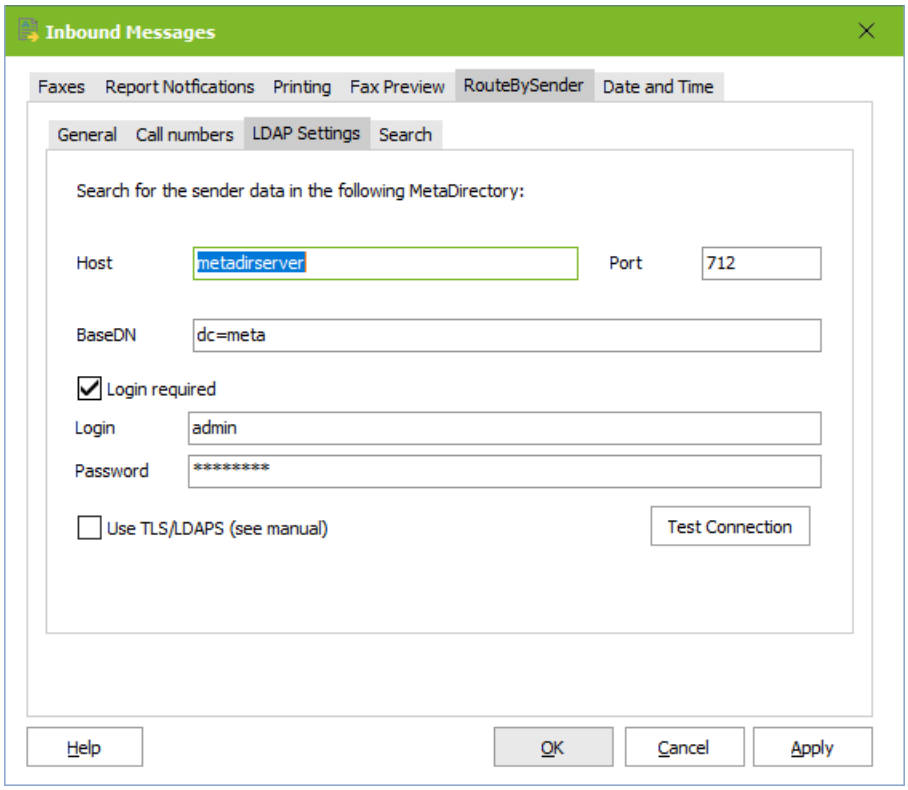
The fax recipient number without blanks or special characters must be entered.

If the LDAP-search shall be executed for a call number range, you can work with *.
Example:
+4981424799*
This means that for every fax that starts with this number, an LDAP-search is executed.

If only * is entered, the LDAP-search is executed for every inbound fax and the fax is delivered on the basis of the sender.

The rules are processed top down. This means that it is absolutely required to put the entries into the correct order. The procession of the rules is finished when the entry * is reached.

4.2.5.3 LDAP Settings



At "LDAP Settings", the connection data to the MetaDirectory must be entered.

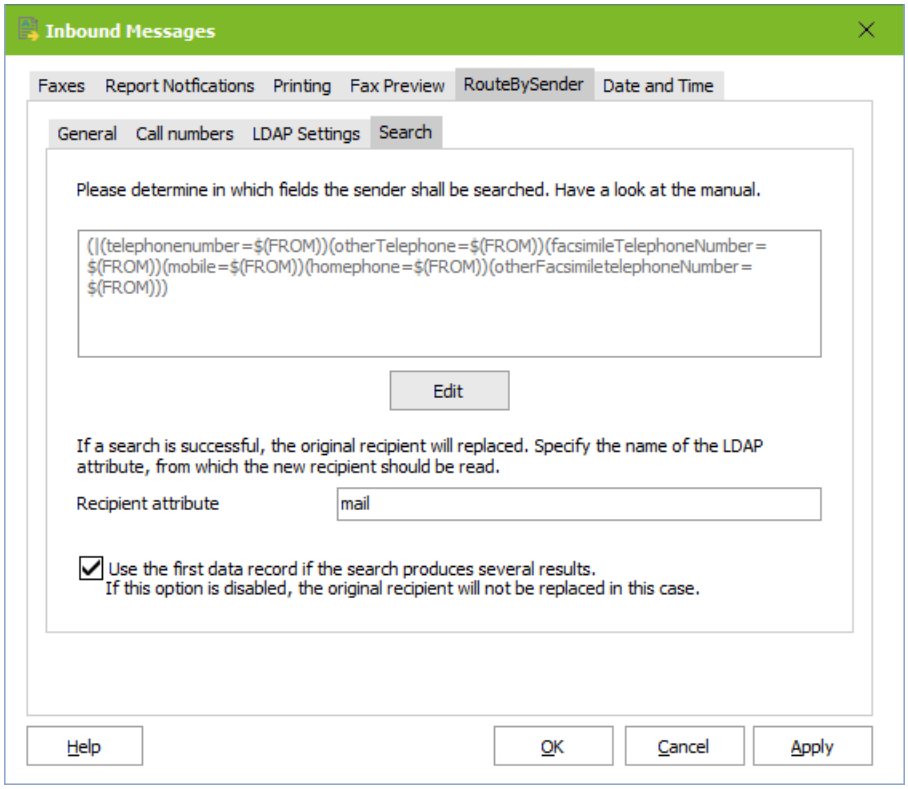
If an estos MetaDirectory is installed you must give as a base DN:

DC=meta

Login required
Optionally, the user and password for logging in to the MetaDirectory can be given.
This is required if the estos MetaDirectory with activated user management is in use.

Use TLS/LDAPS
If the connection is to be established via TLS/LDAPS, the corresponding certificate must be available in the computer. For more information, please refer to the ixi-UMS Kernel manual under "Additional information - Certificates".

4.2.5.4 Search



The sender number is searched in the incoming UMS-message on account of the header field

"mail from"

The sender number must be entered in the used MetaDirectory.
Which fields are searched for this number can be adjusted via "Edit".

As "Recipient attribute", the attribute must be entered in the MetaDir, which contains the e-mail address of the fax recipient that shall receive the fax.

Use the first data record...:
By default, the new mail adress is only entered when there is only one search result.
Alternatively, the data from the first found data record can be entered.

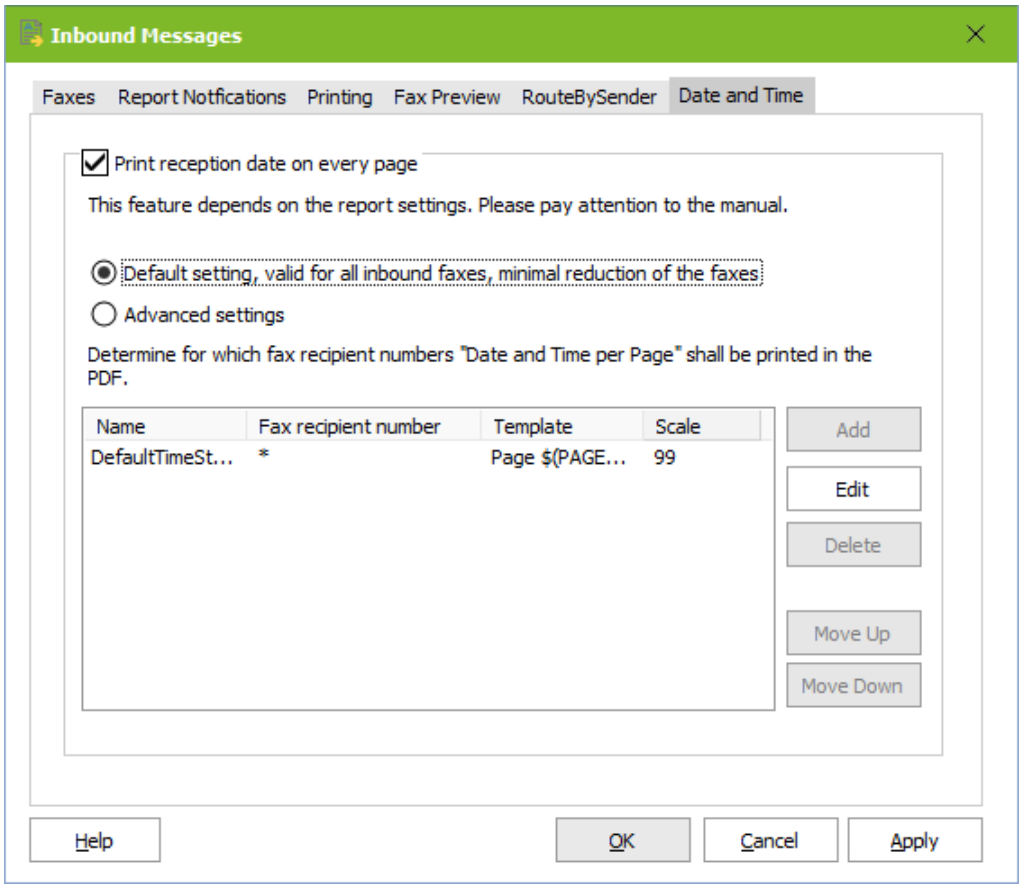
4.2.6 Date/Time

This option "**Print reception date on every page**" depends on the used CAPI and is only available when in the settings for "Faxes":

- deliver incoming faxes in "PDF format" or "PDF + Tif format" is selected.
- "Include report in the PDF" is deactivated

If the required data are passed on to the ixi-UMS Kernel, they can be printed on every incoming fax page.

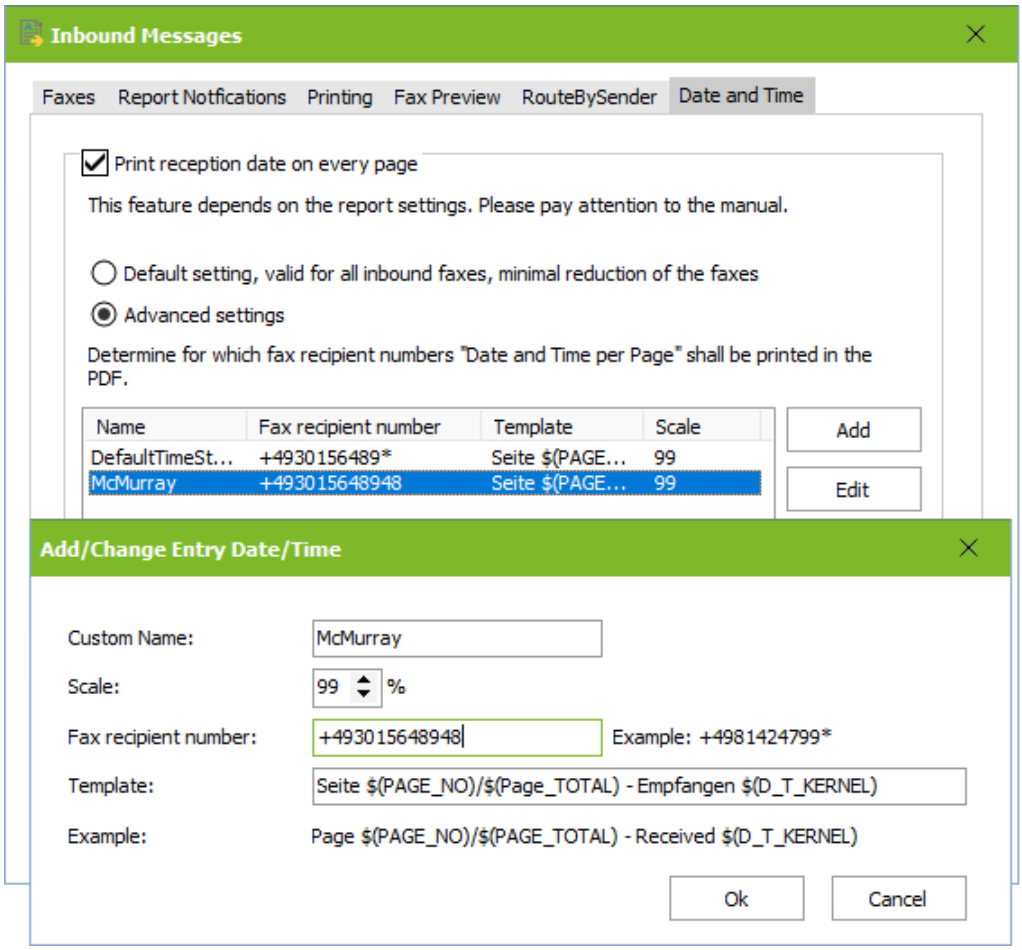
With ***Default setting***, this option is active for all the incoming faxes.
The single fax pages are thereby scaled down minimally. The text for the print can be determined with the button "Edit".



If the option ***Advanced settings*** has been selected, entries with individuall settings can added or deleted

Name:
An arbitrary name must be selected.

Scale:
The print is below the actual fax page, so the fax must be scaled down a little bit.



Fax recipient number:
Please define, for which recipient number date and time shall be printed on the pages of the fax. The fax recipient number must be entered completely without any blanks or special characters.

If the faxes for a certain range shall be printed, you can use *.
Example:
+4981424799*
This means that every fax that starts with this number is printed out.

The rules are processed top down. This means that it is absolutely required to put the entries into the correct order. The procession of the rules is finished when the entry * is reached.

4.3 Outgoing Messages

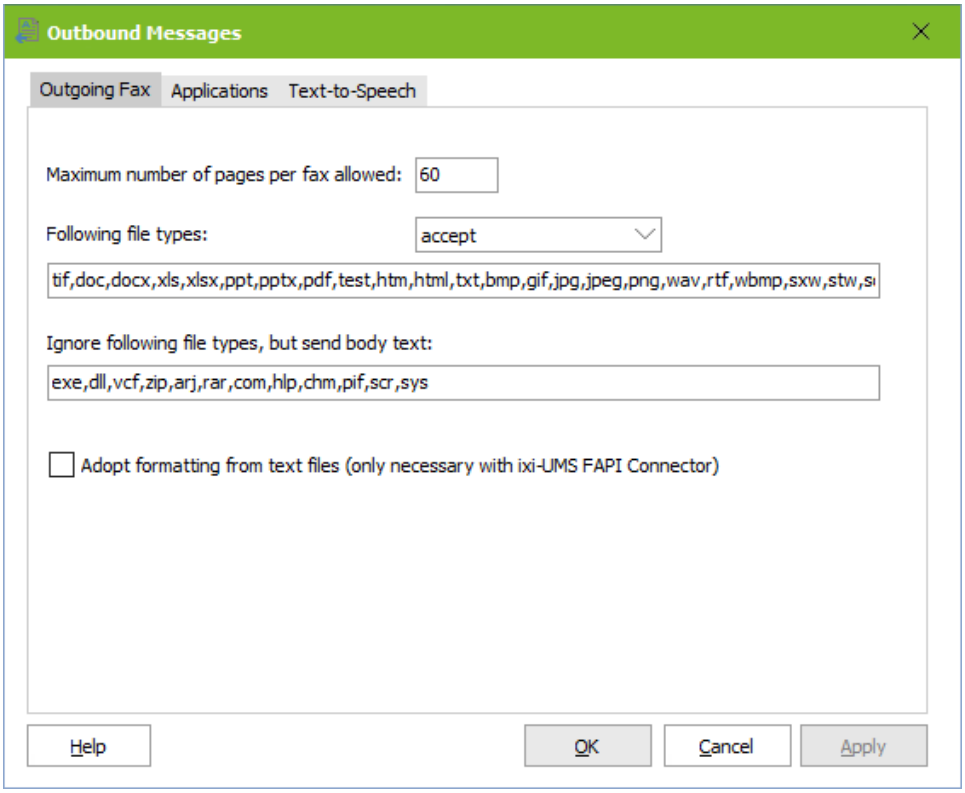
Some settings for the rendering by the Render Connector can be determined here. Please have a look at the Requirements for the rendering (in ixi-UMS Kernel Manual) and the remarks to the software deployed by you - if available - at "Additional Information".

4.3.1 Outgoing Fax

It can be determined how many pages a fax may have in maximum. If the maximum number of pages is exceeded, the fax is not processed and the user receives a respective message in the mail client. The number of pages can be **reduced** individually at the user settings.

File endings stated in the following:
It can be determined which file endings may be sent and which not (send back). Recommended is the determination of the allowed (accept) file endings.
This definition has a direct impact on the reports to the sender.

Example: MS Word is not installed as render software.
When the file ending DOC is not entered here a user tries to send a DOC-file, he receives a report that the file is **not allowed**.
When the file ending DOC is entered, the Render Connector tries to process the file. The user then receives the information that the file **could not be processed**. werden.



Ignore following file types, but send body text:
Attachments with the file endings stated here are removed from the faxes. The actual mail text, however, is sent by fax.

Adopt formatting from text files:
This checkmark has to be set when txt-files are sent as attachment or bodytext via the ixi-UMS FAPI Connector. If this feature is not activated, tables and spaces cannot be converted correctly. See also the information at "Cover".

4.3.2 Applications

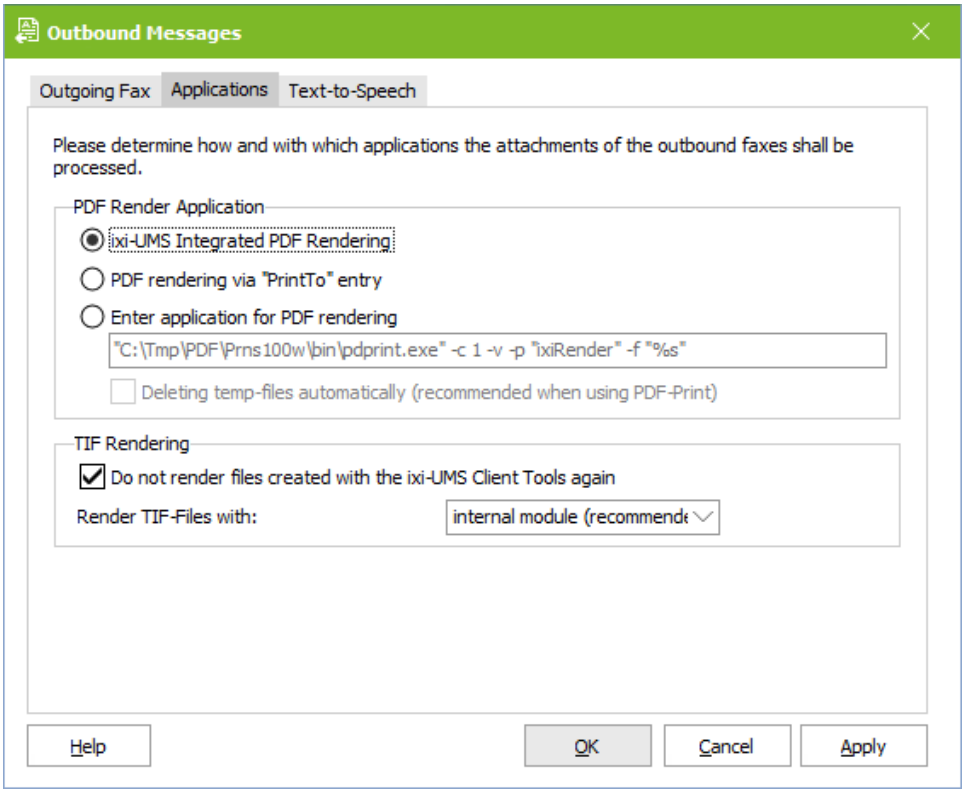
Here the checkmarks to the applications needed for the rendering can be set.

PDF Render Application:
Here it must be determined, which application shall be used for the Rendering of PDF-attachments.

- The ixi-UMS Integrated PDF Rendering is liable to costs and is released with the license in theixi-UMS Kernel. The tool can be used without a valid license, however, a "demo"-watermark is inserted on every page then.

- By default, the installed software for the printing of PDF-attachments is used. The file thereby is transferred to the application via the "PrintTo"-call.

- If a command line-oriented software is applied for the printing of PDF-attachments, the call must be entered here. Please note that the parameters for the transfer, the printer and further information, if necessary, must be entered as well. See details in the manual of the respective PDF-software.
  If the option is activated, empty folders set up by the printing in the ...\RConn\tmp\<Connector>\out can be deleted automatically. This option is recommended for the use of "PDF Printer Shell" of the company PDF Tools.



TIF Rendering:
Do not render files created with Client Tools again:
As the TIF-files created with the ixi-UMS Client Tools are already in the correct format, they do not have to be processed again. If a layout-file is deposited, it is added nevertheless.

Render TIF-Files with:
Depending on the creation of the TIF-files (scans, screenshots, processed TIF), problems with the printing may appear.
In this case, the Render Connector can be adjusted in a way that it also uses the "Print to" method and that the installed software is used for the printing that way.

4.3.3 Text-to-Speech

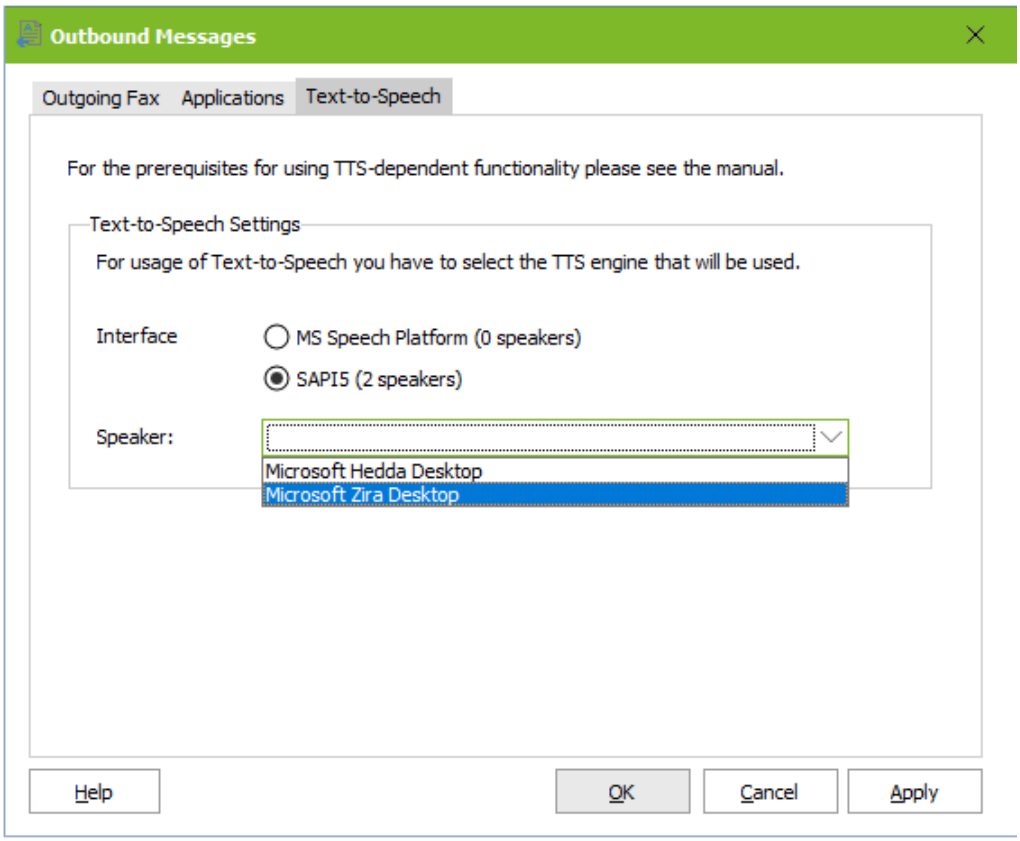
A "text to speech engine" converts text into audio-files . You need this funtion to:

- send text message, which are read out to the called participant.
- listen to E-Mails and faxes (need OCR) with the ixi-UMS Voice-Mail Server

Note: If the ixi-UMS Voice-Mail Server is not installed on the ixi-UMS Kernel server, please read ixi-UMS Voice-Mail Server Manual - Additional Information - Distributed Installations

Here, the TTS engine can be set up to convert a sent text message to a WAV file.
The TTS function for retrieving messages by telephone must be configured in the ixi-UMS Voice-Mail Server.

Whether and for which **interface** (SAPI5, MS Speech Platform) a speaker is available is displayed behind the selection.
After selecting the interface, the desired speaker / TTS engine can be selected.



The interface defined here is valid for all ixi-UMS components on this server. If this is changed, the other components (e.g. ixi-UMS Voice-Mail Server) must also be changed.

Depend on the operating system and the installed language some TTS are installed from Microsoft.
ixi-Framework comes with Microsoft TTS engines in various languages for the Microsoft Speech platform and can be installed.

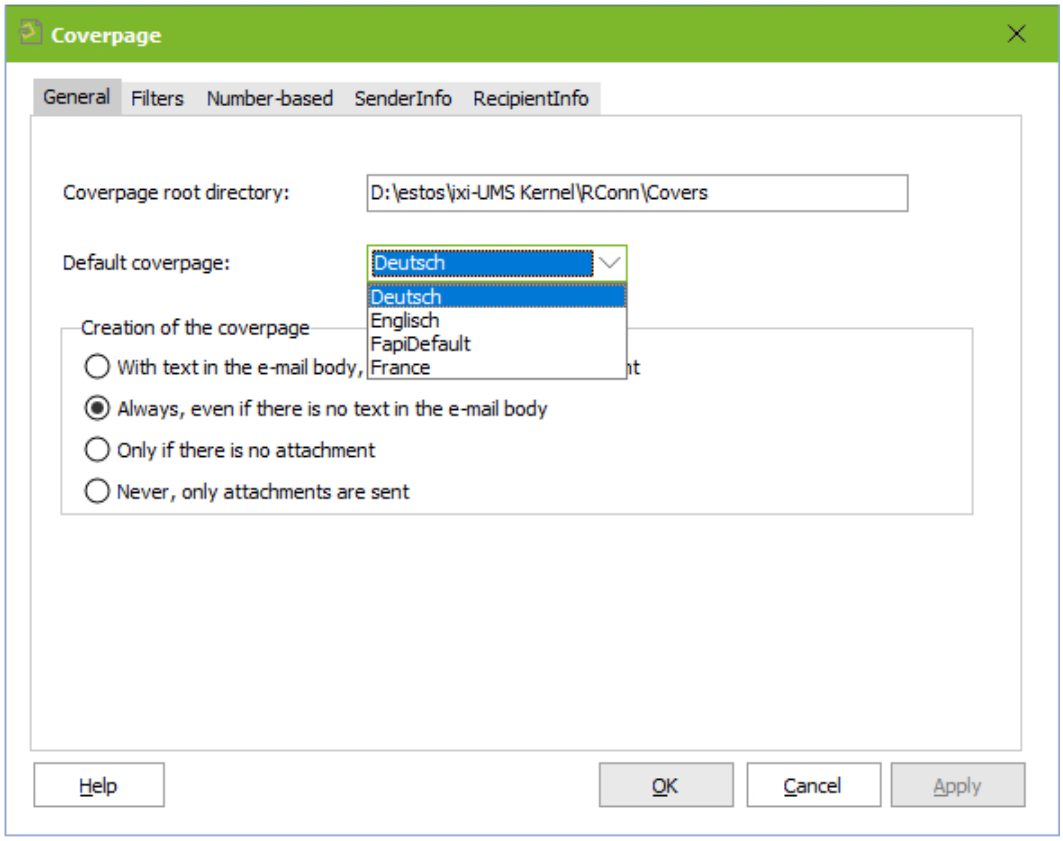
4.4 Coverpages

Please note that the coverpages have to be changed into "UTF-8"-format.

4.4.1 General

Here it is determined how coverpages and the mailbody shall be processed.
The coverpage **must** be deposited as HTML-file. Please refer to the Additional Informationa "Creation of a Coverpage".

When faxes are sent via anixi-UMS FAPI Connector as txt-files in the attachment, a particular fax.htm may be needed in which the font size is predetermined. If this is the case, the respective folder has to be stated in the fax. An example folder has be set up during the installation.



The **Coverpage root directory** is deposited in the Render Connector by default. If the directory is moved, please take care that the access times are not too long.

The **Default coverpage** is always used when there is no other one entered in the outgoing message or no assignment for the outgoing message is entered at "Coverpage - Recipient Assignment". See also the user configuration in the Connector manual and Additional Information: "individual coverpage per fax".

Creation of the coverpage
With text in the e-mail... **:** By default, a coverpage is only created when there is text in the e-mail body (independent of whether an attachment exists or not).

This behavior can be changed to:
Always, even if there is... **:** A coverpage is generated with every fax (also faxes without text in the e-mail body).
Only if there is no attachment **:** A coverpage is generated if there is text in the e-mail body, but no attachment exists.
Never, only attachments... **:** No coverpage is created. In this case, the text in the e-mail body is never sent.

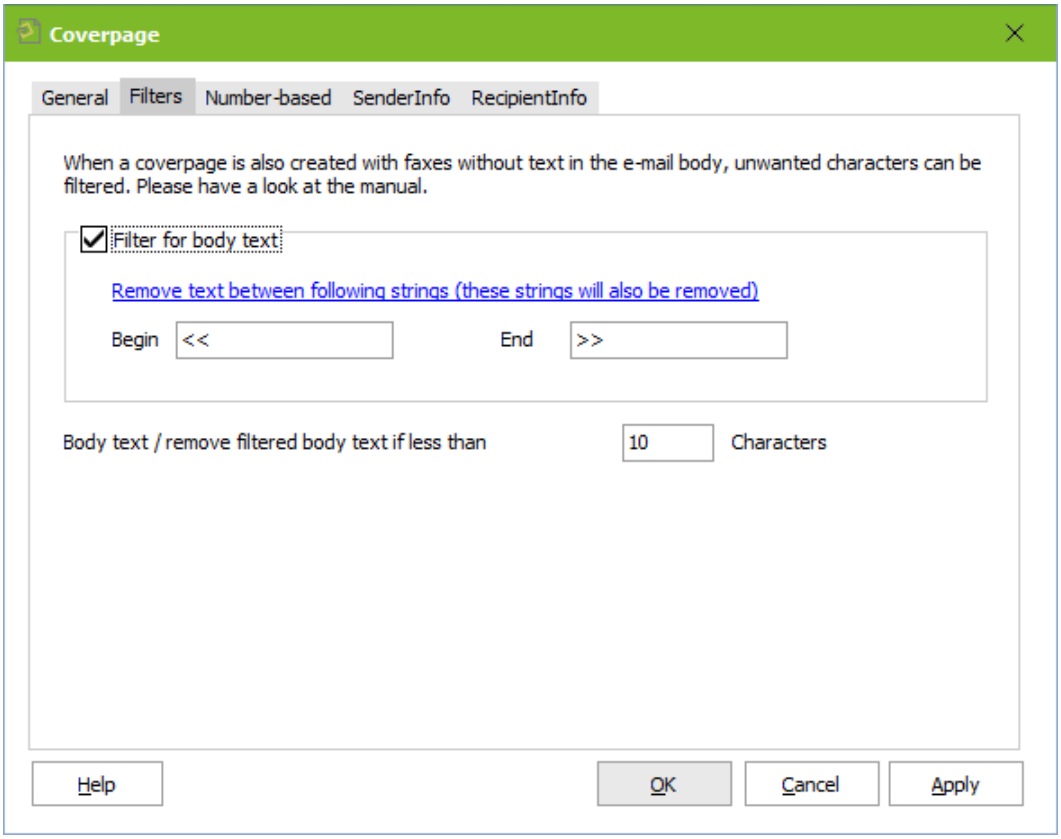
If "Never.." is selected and a user only sends text in the e-mail body, an error message is created.

4.4.2 Filters

Depending on the applied mail client and its configuration it may happen that always a plain sheet is generated, also if only one document is attached to the mail. The reson for this are "invisible characters" in the mail body or - by transfer of files to the e-mail client - inserted character strings.

The **Filter for body text** filters the entire text between the stated begin- and the subsequent end-entry.

If this problem arises, please read the article in the additional information: "Determination of invisible characters".



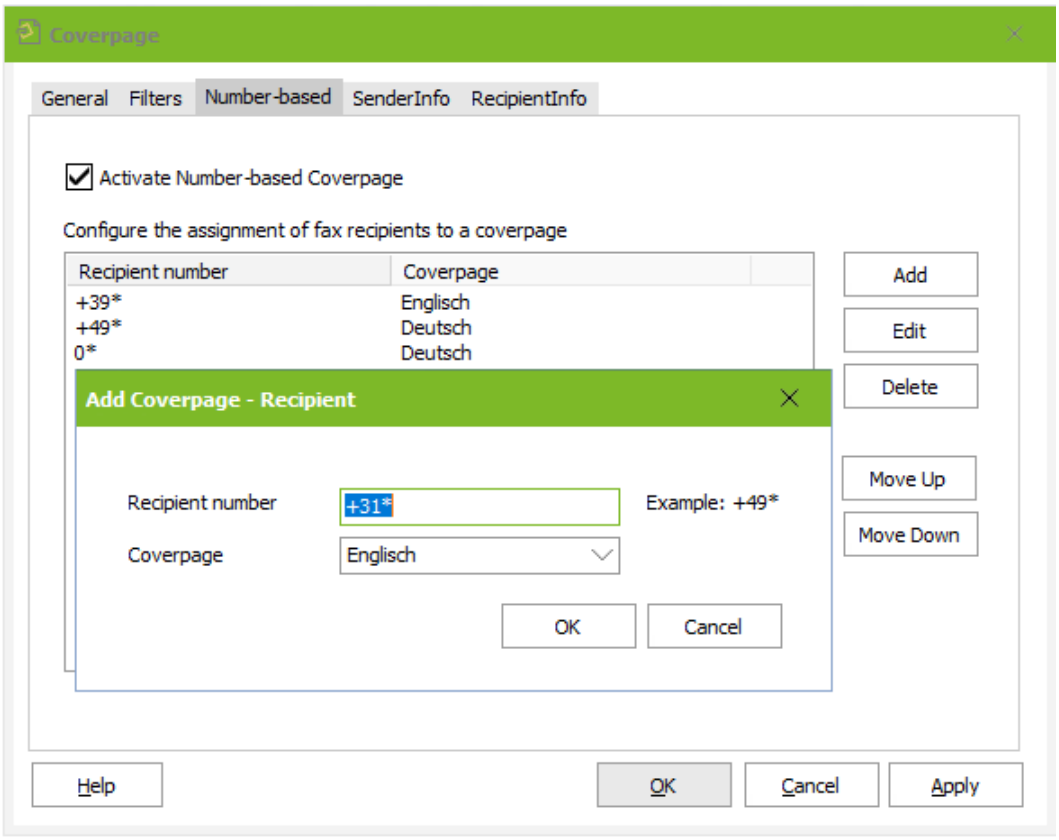
The number of "**Characters**" only applies if the fax to be sent has an attachment.

Remark:
If the body text (including HTML-data from Outlook) exceeds 5KB, it is no longer filtered according to "Characters".

Settings above:
First of all, all characters between << and >> are removed. If there are still more than 10 characters contained in the body text, a coverpage is created. If there are less than 10 characters, these are removed and only the attachments are sent.

4.4.3 Number-based

A coverpage can be determined depending on the recipient number.
Please take into account, that the fax recipient number is not converted into a standardized format.
Only an addressing with 00 is converted into +.
Example: 00498142479940 is converted into +49 8142479940



The assignment is **not** applied when

- a coverpage is deposited in the ixi-UMS Configuration at the user
- a coverpage is stated via the
  ixi-UMS FAPI- or R/3-Connector
- the user sets a coverpage via the address line.

4.4.4 SenderInfo

In order to be able to create a coverpage with individual sender information with the sending via an ixi-UMS SI CON Connector or ixi-UMS FAPI Connector, these data must be read out from an LDAP-database.

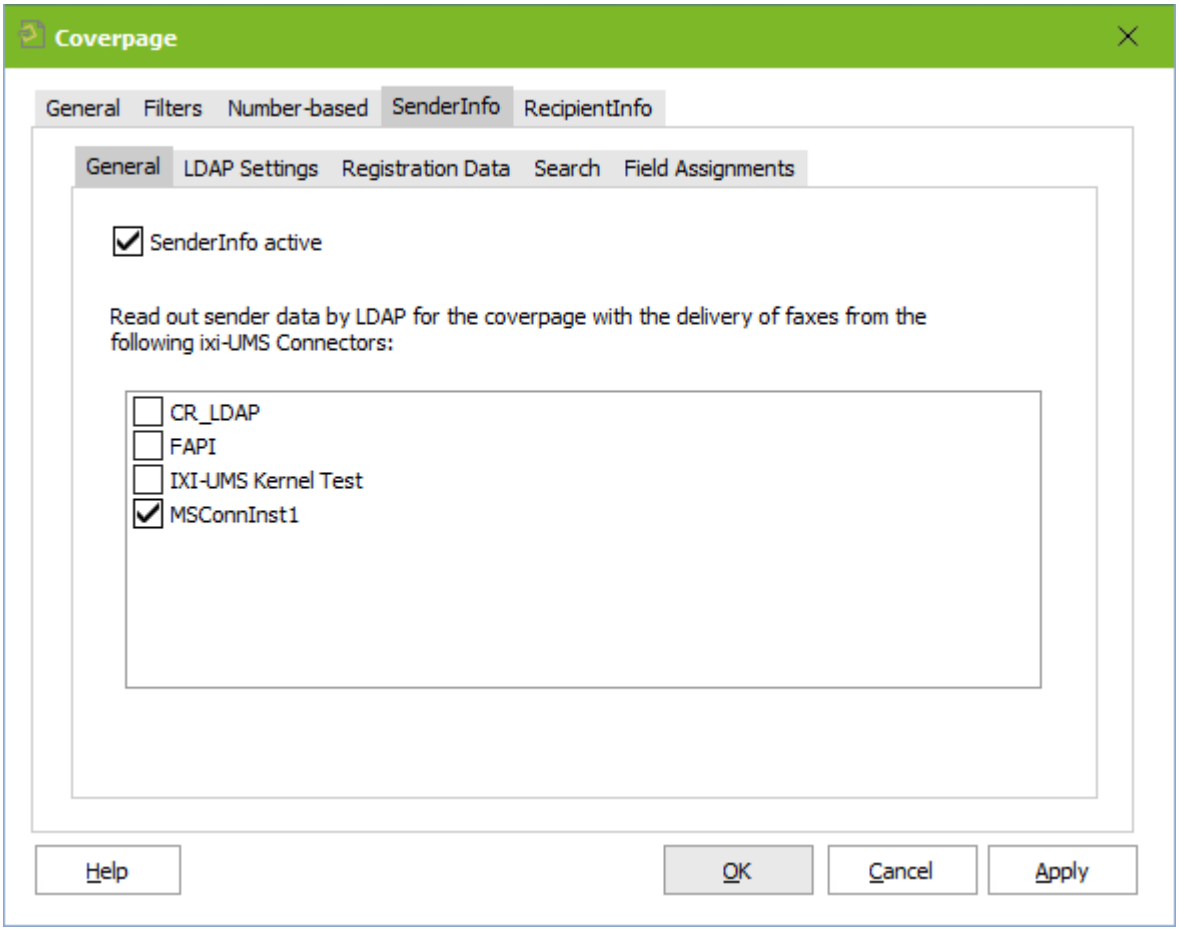
The sender is searched in the LDAP-fields "E-Mail-Addresses", "Fax Number" and "Other Fax Number".

The value in the LDAP must be entered exactly as in the "mail from"-field in the TMP-file of the outgoing message.

If the header fields are already filled by the ixi-UMS Connector or the job, they are not overwritten by default.

4.4.4.1 General

Whether a search for the sender information is executed depends on the system the fax messages are sent from. Choose the Connectors/systems, for which an LDAP-search shall be executed with outgoing fax messages.

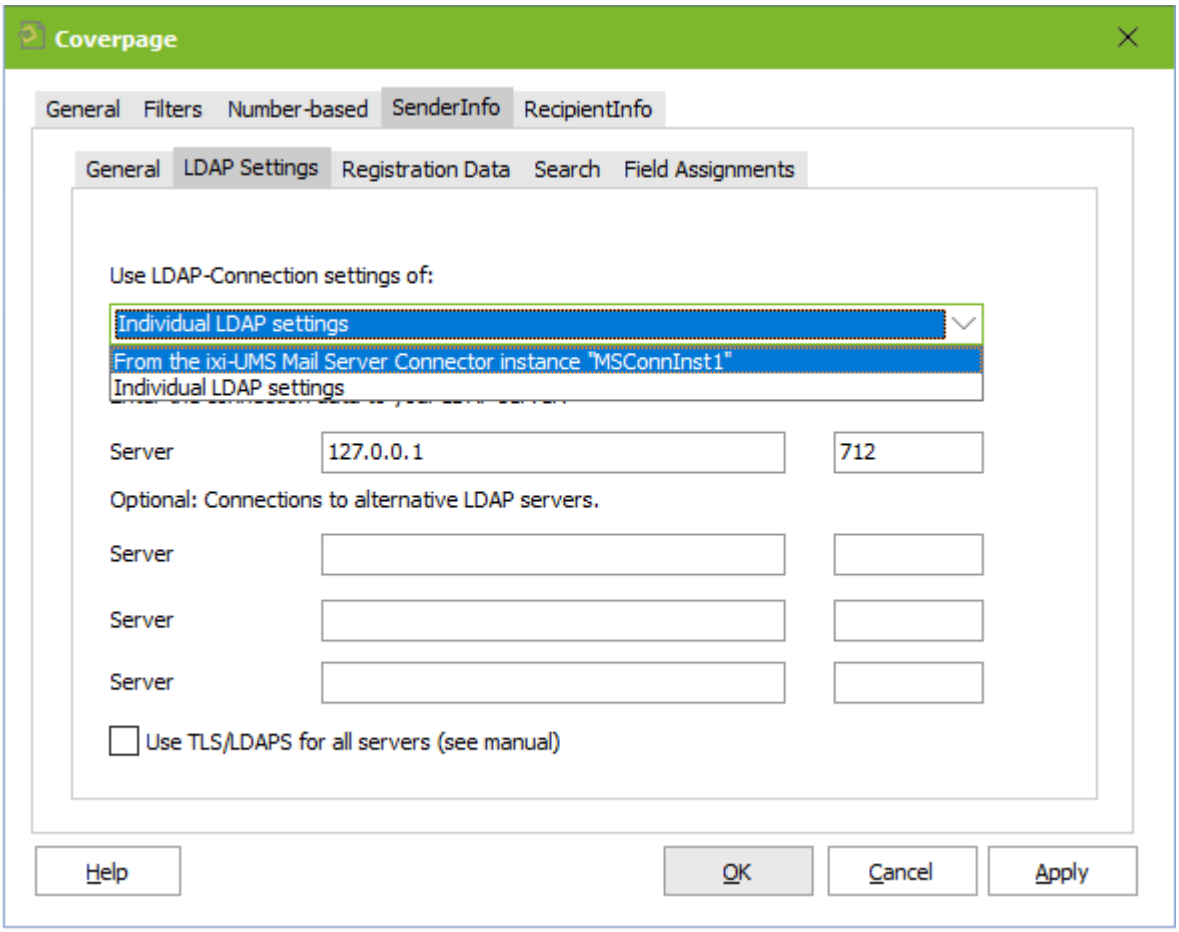


4.4.4.2 LDAP Settings

At "**LDAP Settings**", the connection data must be entered. The connection data of the installed ixi-UMS Mail Server Connector Instanz shall be adopted. This function requires only "read" access to the database.

When the connection data differ from the settings of the installed ixi-UMS Mail Server Connector or when only an ixi-UMS Connector WITHOUT LDAP-connection is installed, e.g.
- ixi-UMS FAPI Connector
- ixi-UMS SI CON Connector,

the connection data can be entered individually.



Further servers can be entered optionally. When the first server is not accessible, the alternative servers are used. All of these servers must be domain controllers / LDAP-database server of the same domain on the same level.

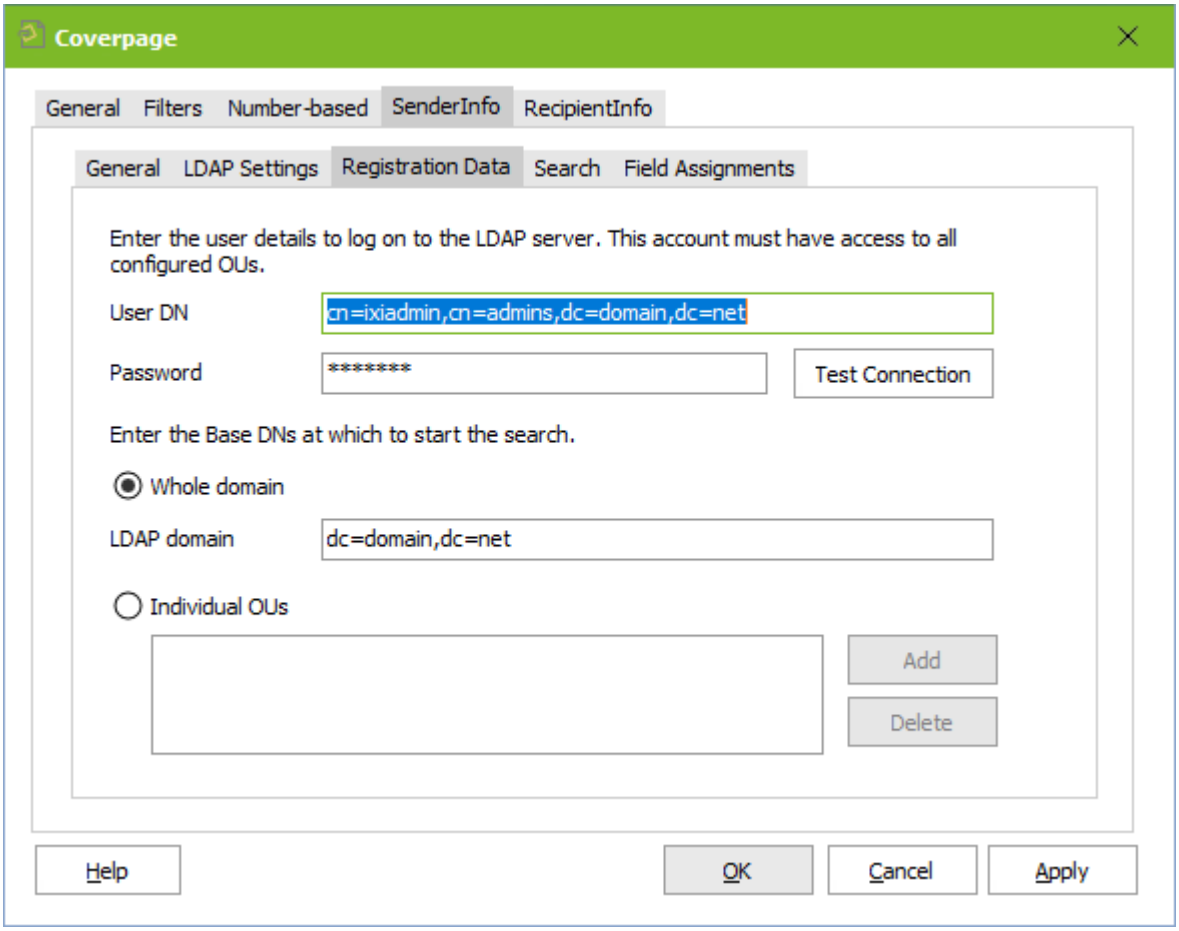
Use TLS/LDAPS

If the connection is to be established via TLS/LDAPS, the corresponding certificate must be available in the computer. For more information, please refer to the ixi-UMS Kernel manual under "Additional information - Certificates".

In MultiSite operation, this feature is only available per ixi-UMS Render Connector and not per site. If multiple LDAP databases are used, the required data would have to be combined in a central LDAP database. eg Meta Directory

4.4.4.3 Registration data

Enter the text here. These settings can only be changed if the item "Individual LDAP Settings" have be selected at "LDAP Settings". Otherwise, the data from the entered ixi-UMS Mail Server Connector Instance are adopted.
For the search for user data, a login at the LDAP-Server must be executed and be determined.
With the account entered here, the query on the LDAP database is executed. Only "read" access is required.
For the Base DN, User DN and Password for this user, please refer to the configuration of your LDAP-Server.



The LDAP-query can be executed on all the OUs within a domain.

When you want to restrict the search to single OUs, please click "Add" and enter the complete Base DN. Any number of DNs can be entered.

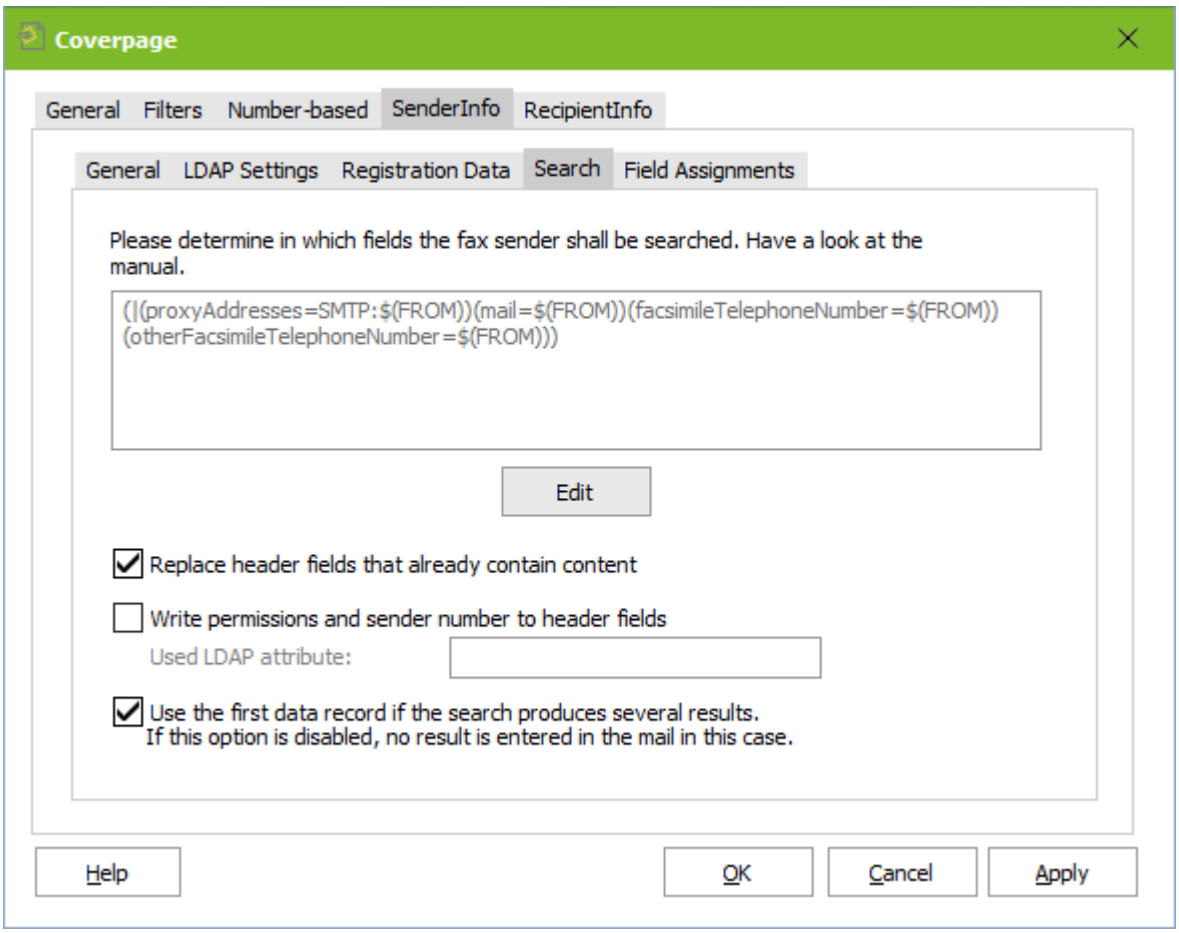
4.4.4.4 Search

The information for the coverpage are searched in the stated LDAP-directory in the outgoing fax message on the basis of the header field "mail from". The sender information stated in the "mail from"- field must be entered for the respective user in the used LDAP-data base.

With the ixi-UMS SI CON Connector , the fax number of the user is displayed as sender by default. Default: +498142479943

The sender of a fax via the ixi-UMS FAPI Connector depends on the creation of the faxes and the configuration of the ixi-UMS Connector. An e-mail address as well as a fax number can be entered.

The search can be adjusted accordingly via "**Edit**".



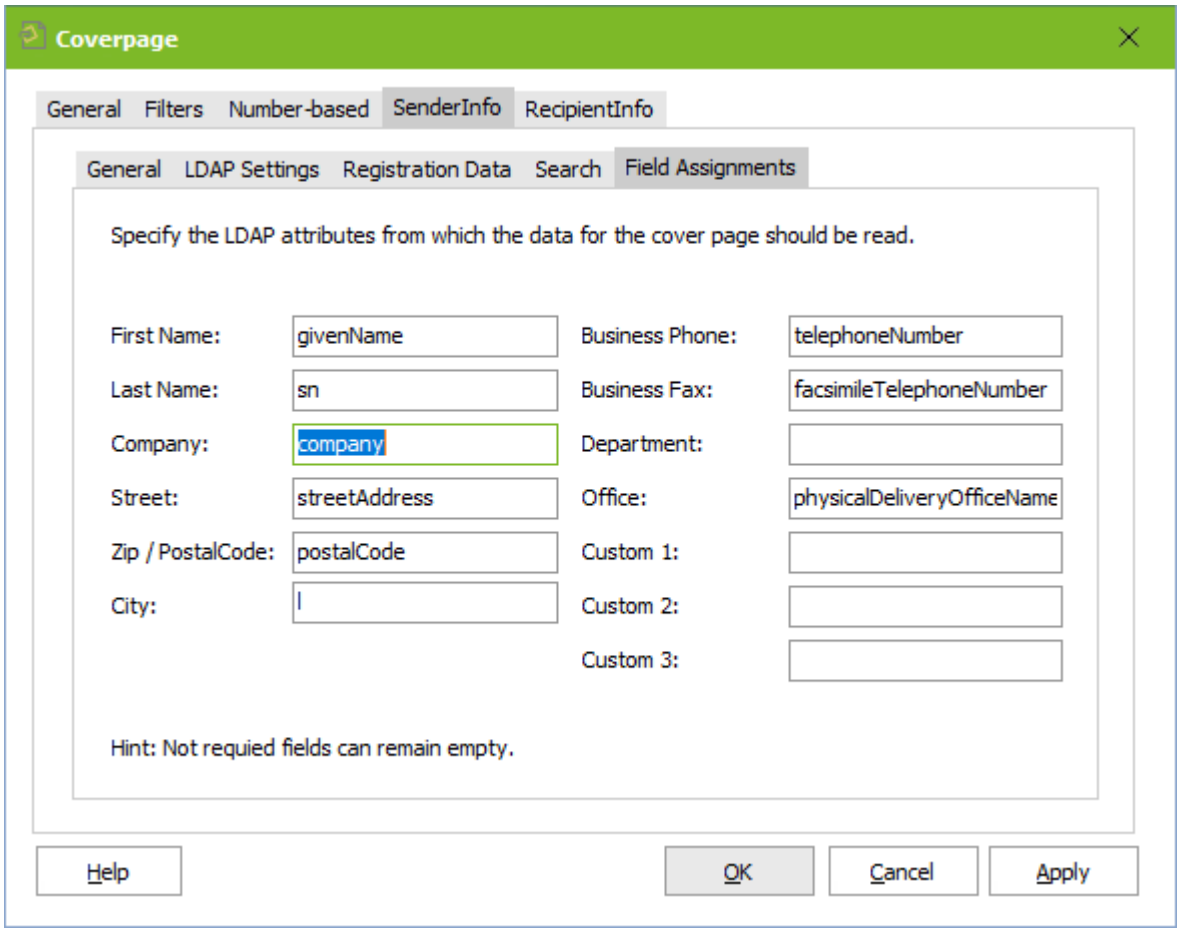
Replace header fields..:
Even if only one field with information for the coverpage is transferred from the system, no data are read out from the LDAP-database. If you want to change this behavior, please note that this is valid for all the chosen systems.

Write permission and sender number ...:
Optionally, the "ixi-UMS sender information" (permission, sender-ID, etc.) can also be read out of the LDAP-directory in addition and can be entered in the outgoing UMS-message.

Use the first data record...:
By default, the sender information is only entered when there is only one search result.
Alternatively, the data from the first found data record can be entered.

4.4.4.5 Field Assignment

Please enter the LDAP-Attributes from that the sender information of the users shall be read out.



The information read out is written into the header fields in the tmp-file and then can be adopted into the coverpage.

4.4.5 RecipientInfo

With outgoing fax messages, the recipient number (rcpt to:) is searched by LDAP in the fields "facsimilietelephonenumber" and "OtherFacsimileTelephoneNumber" in the MetaDirectory (without spaces).

If an entry is found, the following LDAP-fields are read out:

givenName	*first name*
department	*department*
streetAddress	*street*
postalCode	*ZIP-code*

sn	*surname*
company	*company*
l	*city*
physicalDeliveryOfficeName	*office address*

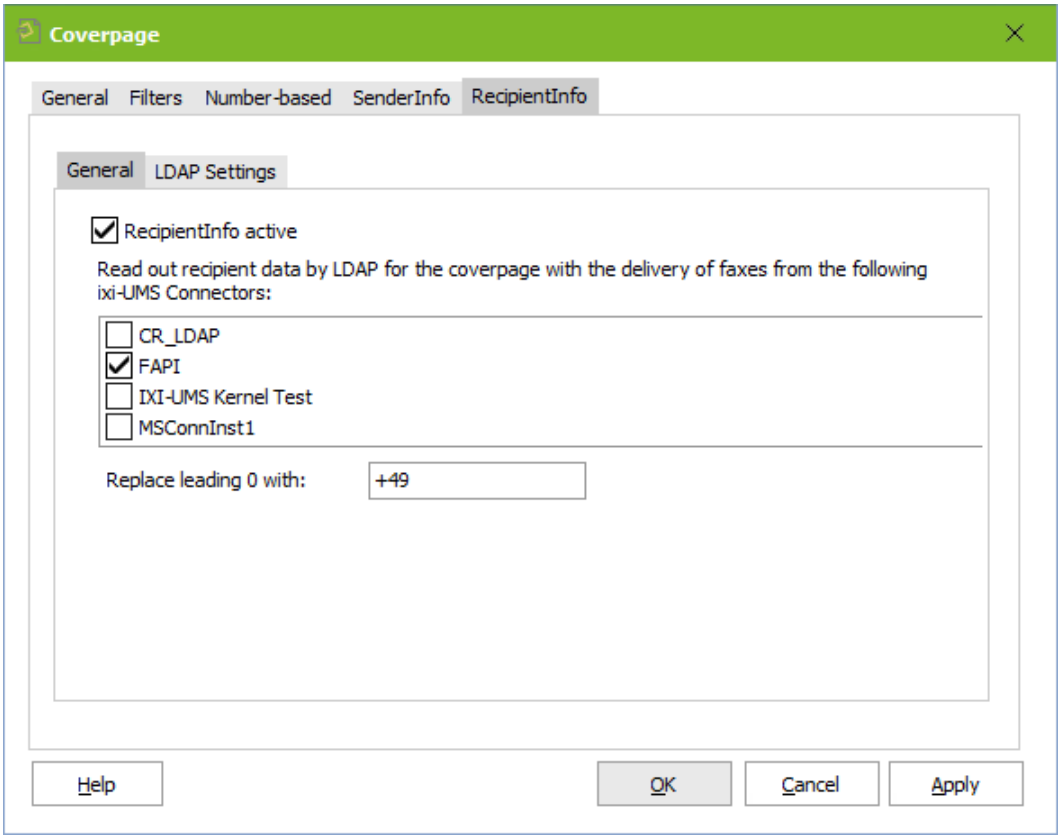
The information read out is written into the header fields in the tmp-file and then can be adopted into the coverpage.

If the LDAP-query provides a result and at least one of the header fields is filled, the "faxrcpt.htm" from the stated coverpage-folder is taken. If none of the fields is filled, the normal fax.htm is used.

If a message has several recipients, no matter in which field (To, CC, BCC), NO LDAP-query is executed.

4.4.5.1 General

First of all, you have to determine for which ixi-UMS Connectors (and therewith for which system) the LDAP-search shall be executed.



Nationally addressed messages (e.g., 08142479943@ixifax.com) must be brought to international format for search. To do this, the country prefix must be specified in "**replace leading by**".

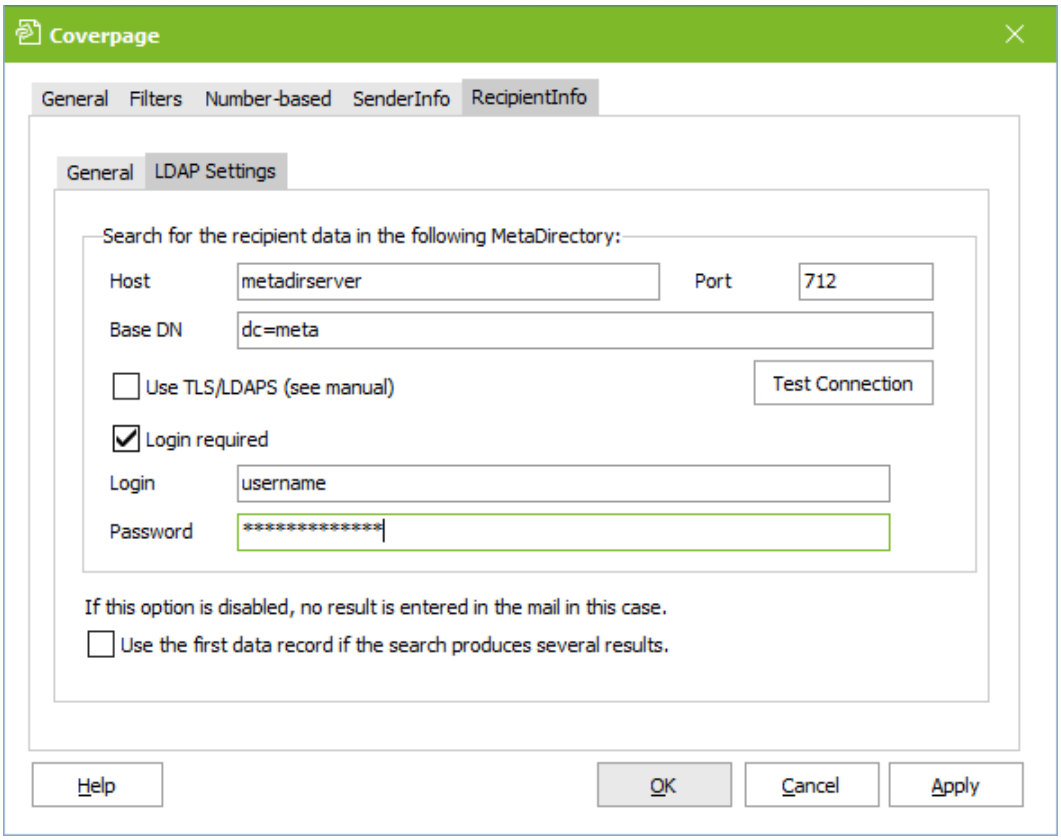
4.4.5.2 LDAP Settings

The connection data to the MetaDirectory must be entered. The MetaDirectory data base can be installed on the UM-server or on another server.

If an estos MetaDirectory is installed you must give as a base DN: DC=meta

Use TLS/LDAPS

If the connection is to be established via TLS/LDAPS, the corresponding certificate must be available in the computer. For more information, please refer to the ixi-UMS Kernel manual under "Additional information - Certificates".



Login required

Optionally, the user and password for logging in to the MetaDirectory can be given. This is required if the estos MetaDirectory with activated user management is in use.
The specified username must match the username in MetaDirectory. eg: "user@domain.com" or "user name"

When the checkmark is set at "**Use the first data...**" and several results are found with a search, the data from the first data record are entered. If this option is disabled, data is only entered in the mail when the result is unambiguous.

4.5 Sender Identification

Normally the SenderInformation-Text is inserted in the "Text only" format. If the option "Reports in the HTML format" is activated and furnished, form and writing can be changed. For more information please refer the ixi-UMS Mail Server Connector Manual.

The sender numbers are searched for in the fields:

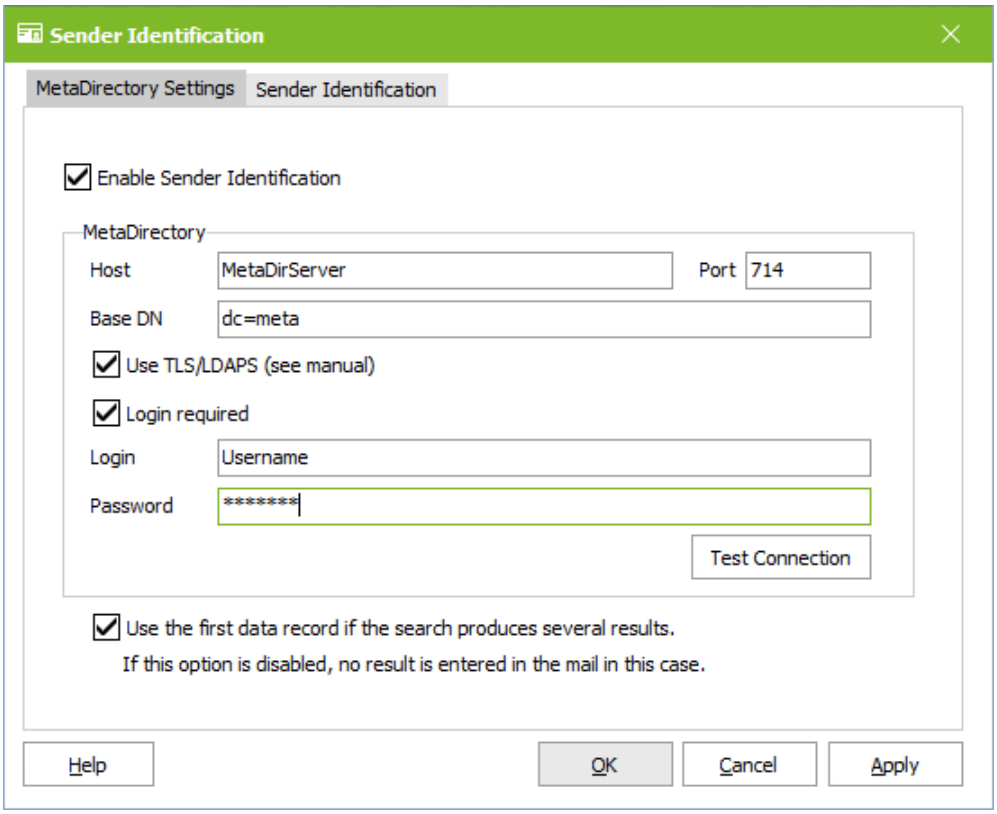
- telephoneNumber
- facsimileTelephoneNumber
- otherFacsimiletelephoneNumber
- mobile
- homePhone
- otherTelephone

In order to resolve sender numbers, an installed MetaDirectory is required. The Meta Directory is liable to costs.

4.5.1 MetaDirectory Settings

The connection data to the MetaDirectory must be entered. The MetaDirectory data base can be installed on the UM-server or on another server.
If an estos MetaDirectory is installed you must give as a base DN: DC=meta

Use TLS/LDAPS
If the connection is to be established via TLS/LDAPS, the corresponding certificate must be available in the computer. For more information, please refer to the ixi-UMS Kernel manual under "Additional information - Certificates".

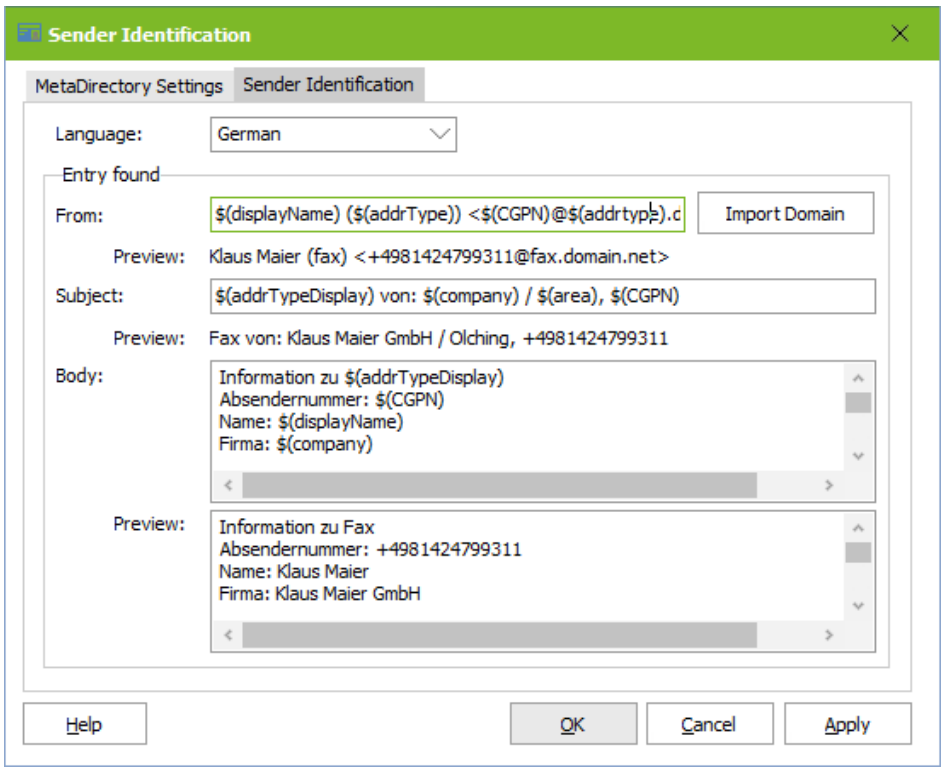


Login required
Optionally, the user and password for logging in to the MetaDirectory can be given.
This is required if the estos MetaDirectory with activated user management is in use.
The specified username must match the username in MetaDirectory.
eg: "user@domain.com" or "user name"

When the checkmark is set at "**Use the first data...**" and several results are found with a search, the data from the first data record are entered. If this option is disabled, data is only entered in the mail when the result is unambiguous.

4.5.2 Sender Identification

At the tab "Sender Identification" it can be determined, which fields from the MetaDirectory shall be read out and entered in the e-mail. Normally the SenderInformation-Text is inserted in the "Text only" format. If the option "Reports in the HTML format" in ixi-UMS Kernel Configuration is activated and furnished, form and writing can be changed. For more information please refer the ixi-UMS Connector Manual.



In from field the answer address and the kind of message should be contained and not only the name of the sender (display name).

The addressing valid for you can be taken from the ixi-UMS SMTP Connector Snap-In.
Via the button "**Import Domain**", the entry from the ixi-UMS SMTP Connector can be taken over at any time.

At the same time, the "From"-line is relocated in a way that also the feature remote inquiry of the **ixi-UMS Enhanced Voice Package** can assign the incoming messages.

Remark:
With the definition of the From-line please take care that you enter the variable $(addrType) with the creation of the reply address.
Example:

$(CGPN)@ixi$(addrType).com	+49814278569@ixifax.com
$(CGPN)@company.$(addrType)	+49814278569@company.fax

Setting up the Sender Identification:
After having activated the feature, the following data are displayed by default, provided that the resolution was successful:

Example:

From:	Display name	From:	Klaus Meier
Subject:	Service from Company / City	Subject:	Fax from estos / Olching
Body:	Name	Body:	Name: Klaus Meier
	Company		Company: estos GmbH
	E-mail		E-mail: Meier@firma.de
	Phone number		Phone number: +49814247990
	Fax number		Fax number:
	Mobile number		Mobile number:

If further information shall be displayed, this can be changed here. The following variables are available:

$(displayName)	Display name
$(firstName)	First name
$(lastName)	Last name
$(address)	Street
$(zipcode)	ZIP Code
$(area)	City
$(country)	Country
$(company)	Company
$(CGPN)	Sender number
$(addrType)	Message type: Fax, Voc, SMS, Important for the creation of the reply address !!
$(addrTypeDisplay)	Message type in the subject: Fax, Call, SMS
$(mail)	E-mail address
$(phone)	Business phone
$(fax)	Business fax
$(mobile)	Mobile phone
$(custom1), $(custom2), $(custom3),	free defined fields. Please refer to the additional information: Sender Identification advanced

Normally the SenderInformation-Text is inserted in the "Text only" format. If the option "Reports in the HTML format" in ixi-UMS Kernel Configuration is activated and furnished, form and writing can be changed. For more information please refer the ixi-UMS Connector Manual.

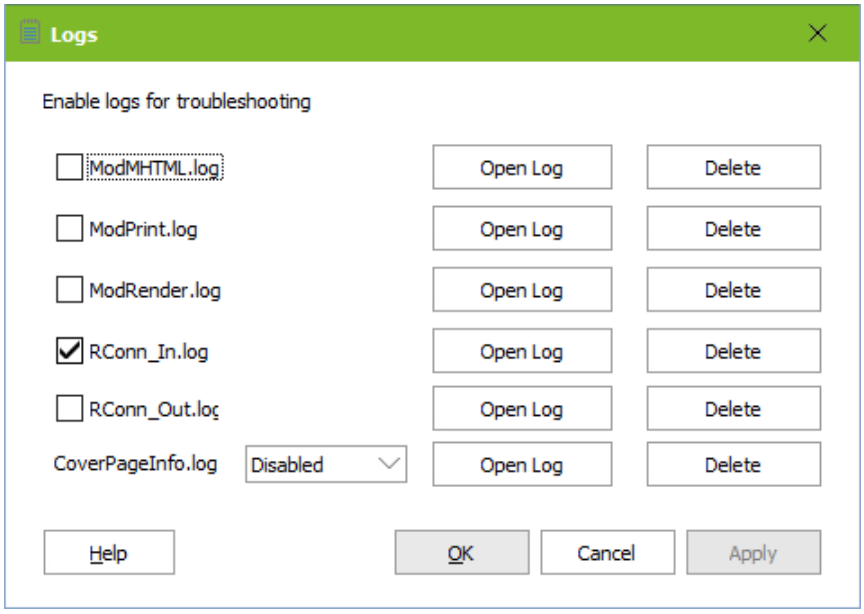
Please take into account the limitation of the number of digits in the subject field.

If the call number of the sender has not been found in the MetaDirectory, the following is displayed:

Example:

From: Sender number	From +498142479985@ixifax.com
Subject: Service from City / Country	Subject: Fax from Olching / Germany

4.6 Log

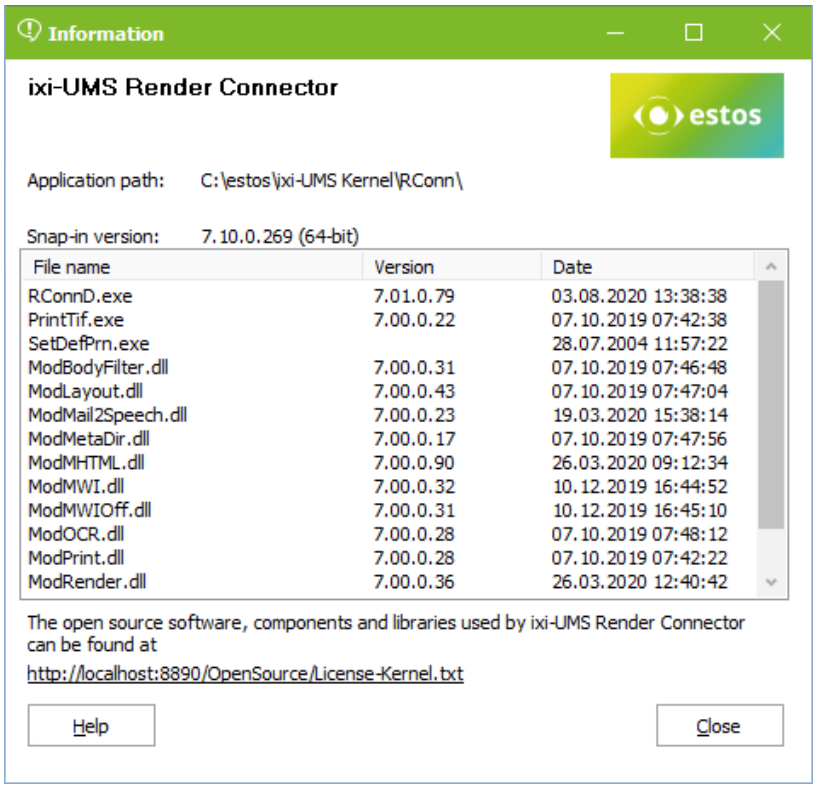


In case of a failure, the logs for the ixi-UMS Render Connector can be activated here.

These logs should only be activated in the case of a failure and on advice of the company estos GmbH, as they are not limited in size.

4.7 Information

Version information is listed here. In a support case the installed version can be determined quickly.



If a problem should be passed on to the ixi-UMS Support, this information is often mandatory.

5 Info

5.1 About estos

estos GmbH, headquartered in Olching near Munich, Germany, is a leading manufacturer of software solutions with focus on unified communication with unified messaging, fax, voice mail, SMS and CTI (Computer Telephony Integration) with presence and instant messaging. The products of %Firma% support existing standards like standard interfaces and standard hardware; proprietary solutions are avoided. The company strives to provide its customers with future-oriented product development, with a focus on integration in available environments.

Contact details:

estos GmbH
Ilzweg 7
82140 Olching
Germany

Phone: +49 8142 4799-0
Fax: +49 8142 4799-3434
E-mail: sales@estos.de
Web: www.estos.com

For more information about estos GmbH and its products, please visit estos GmbH website.

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5.2 Version

Software: ixi-UMS Message Distribution Server
Version: 7.10
Date: 3/12/2021