A MITEL
PRODUCT
GUIDE

Unify OpenScape Xpressions V7

IBM Notes Gateway

Installation and Admini strator Documentation
11/2018

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Mitel

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Contents

History of Changes

Date	Changes	Reason
2011-12-19	First version	
2012-10-31	A local system account must be used for NDL conversion (see step 6 on page 250).	CQ00231981
2012-10-31	Lotus Domino 8.5.3 und Lotus Notes 8.5.3 werden unterstützt.	
2012-10-31	Registry keys NDLRemoveMrsCnvIcon [REG_DWORD] on page 252 and NdlWaitPrintEndSleep [REG_DWORD] on page 253 added	CQ00230550
2013-10-07	Registry key NonFaxDefaulDeliveryReport [REG_SZ] on page 237 added	CQ00272515
2014-02-10	Starting with version 9, “Lotus Notes” and “Lotus Domino” are called “IBM Notes” and “IBM Domino”.	
2014-02-10	IBM Notes 9 and IBM Domino 9 are supported.	FRN6618, FRN7467
2014-02-25	The supported IBM/Lotus Notes and IBM/Lotus Domino versions are indicated by a link to the release notice (see Section , “Introduction”, on page 9).	
2014-03-10	If you connect XPR to IBM Notes 9.0 Social Edition (Basic Configuration) and IBM Domino 9.0 Social Edition, use the mail templates for Lotus Notes 8 (see Section 3.4.1.2, “Modifications to the IBM/Lotus Notes Mail Template”, on page 42, Section 4.2.1, “Creation of the Administration Database”, on page 61, Section 4.4.1, “General Considerations”, on page 75Section C.1.1, “General Considerations”, on page 161).	
2016-08-26	Updated steps to extend an UM Mail Template by Shared Actions (see Section 4.4.3.7, “Extending the Mail Template by Shared Actions”, on page 105). Updated instructions to modify default Forms and Design Elements for UM and TUM functions (See Appendix C.1.9, “Design Elements for IM and TUM Functions”).	UCBE-7536

1 Introduction

Thank you for the decision to operate the OpenScape Xpressions (Message Routing System) under IBM/Lotus Notes.

OpenScape Xpressions for IBM/Lotus Notes extends your existing IBM/Lotus Notes application by the functions of an advanced unified messaging system that integrates all communications (telephony, e-mail, voice mail, fax and SMS) on one platform, thus significantly improving workstation efficiency. In addition you can extend every workstation by multimedia call center functions.

Using XPR with IBM/Lotus Notes has the following advantages:

- The entire message administration occurs clearly and in one place.
- Simple transmission and receipt of fax, e-mail and voice messages and sending of SMS messages via the familiar IBM/Lotus Notes interface.
- CTI features such as telephone journal in IBM/Lotus Notes for all telephone calls and simple dialing from the address book.
- Mobile access via Web to the stationary workplace telephone and to all messages.
- Easy learning owing to integration in the familiar IBM/Lotus Notes interface.

NOTE: The products Lotus Notes, Lotus Domino Lotus Domino Adminstrator and Lotus Domino Designer are called IBM Notes, IBM Domino, IBM Domino Adminstrator and IBM Domino Designer starting with version 9.

IMPORTANT: All specifications in this manual that refer to version 7.x of Lotus Domino, Notes templates and Notes clients apply for the other supported versions of IBM/Lotus Domino, Notes templates and Notes clients also. Refer to the *OpenScape Xpressions Release Notice* to retrieve these versions. The GUI may appear slightly different, but the functionality is the same.

1.1 About this Book

This manual describes the structure and administration of an XPR system under IBM/Lotus Notes. Information about using the XPR extensions integrated in IBM/ Lotus Notes are provided in a separate user manual.

In order to understand the described functions and processes, the reader must have specialized knowledge in the following areas:

- Administration and configuration of the Windows Server 2008 operating system
- Administration and configuration of the supported IBM/Lotus Domino versions
- Network technology
- Installation and configuration of the XPRsystem. This knowledge can be obtained by participating in a Unify Software and Solutions GmbH & Co. KG seminar.
- Configuration of a PBX used in connection with the XPRsystem.

1.2 General Notes for this Manual

1.2.1 Manual Structure

The manual is divided into the following sections:

- Introductory chapter with general notes on the product and on how to use the manual (current chapter).
- Realization Concept (Chapter 2).
- Installation of the IBM/Lotus Notes Gateway (Chapter 3).
- Configuration and Extension (Chapter 4).
- Configuration of the IBM/Lotus Notes Gateway (Appendix A)
- Configuration of the Administration Database (Appendix B)
- Design Elements of the XPR Mail Template (Appendix C)
- Installing and Integrating optiClient 130 (Appendix D)
- Information about fax templates, Legacy fax support, assist mails, update and Citrix Metaframe setup (Appendix E)
- Function Reference (Appendix F).

1.3 Required Tools

1.3.1 Manuals

During the XPR installation and configuration the following manuals in electronic or printed format will be referred to:

- Server Installation
- Server Administration
- IBM Notes Extensions – operating instructions

1.4 Document Conventions

Passages in the text conveying important information are indicated by striking symbols.

IMPORTANT:
Such a section points to settings and processes to be performed with special care.

NOTE:
Such a section marks passages in the text that contain additional notes or supplementary examples.

1.4.1 Acronym Directory

The following table lists the acronyms used in alphabetic sequence.

Acronyms	Description
ACL	**A**ccess **C**ontrol **L**ist
APL	**A**ccess **P**rotocol **L**ayer
CTI	**C**omputer **T**elephony **I**ntegration
HKCU	HKEY_CURRENT_USER
HKLM	HKEY_LOCAL_MACHINE
IM	**I**ntegrated **M**essaging
LNAPL	**L**otus **N**otes-**APL**, IBM/Lotus Notes Gateway
LnUmAPL	**L**otus **N**otes **U**nified **M**essaging-**APL**
MSP	**M**essage **S**ervice **P**rovider
MTA	**M**essage **T**ransfer **A**gent
TUM	**T**rue **U**nified **M**essaging
UM	**U**nified **M**essaging
XPR	OpenScape **Xpr**essions

1.5 Data Protection and Data Security

This system also processes and uses personal data for purposes such as billing, displays, and customer data acquisition.

In Germany, the processing and use of such personal data is subject to various regulations, including the regulations of the Federal Data Protection Law (Bundesdatenschutzgesetz = BDSG). For other countries, please follow the appropriate national laws.

The aim of data protection is to protect the rights of individuals being affected by use of their personal data.

In addition, the aim of data protection is to prevent the misuse of data when it is processed and to ensure that one's own interests and the interests of other parties which need to be protected are not affected.

NOTE:
The customer is responsible for ensuring that the system is installed, operated and maintained in accordance with all applicable labor laws and regulations and all laws and regulations relating to data protection, privacy and safe labor environment.

Employees of Unify Software and Solutions GmbH & Co. KG are bound to safeguard trade secrets and personal data under the terms of the company's work rules.

In order to ensure that the statutory requirements during service – whether during "on-site service" or during "remote service" – are consistently met, you should always observe the following rules. You will not only maintain the interests of your and our customers, you will also avoid personal consequences.

A conscientious and responsible approach helps protect data and ensure privacy:

- Ensure that only authorized persons have access to customer data.
- Take full advantage of password assignment options; do not allow unauthorized persons to gain access to passwords by writing them down on a piece of paper or via other means.
- Ensure that no unauthorized person is able to process (store, modify, transmit, disable, delete) or use customer data in any way.
- Prevent unauthorized persons from gaining access to storage media, such as backup diskettes or log printouts. This applies to service calls as well as to storage and transport.
- Ensure that storage media which are no longer required are completely destroyed. Ensure that no sensitive documents are left unprotected.

Work closely with your customer contact; this promotes trust and reduces your workload.

2 Realization Concept

This chapter describes the realization concept of the XPR integration with IBM/ Lotus Notes (IBM/Lotus Notes Gateway). The first paragraphs include basic information on the IBM/Lotus Notes Gateway structure, which will be important for the later configuration and administration of the product.

Since the terms **Unified Messaging (UM)**, **Integrated Messaging (IM)** and **True Unified Messaging (TUM)** will be often used in this manual, this chapter contains a description of these terms along with detailed information on the functionality of all three Unified Messaging technologies.

NOTE: Please read this chapter attentively before the installation and configuration of the IBM/Lotus Notes Gateway, since the concepts described here is the basis for the correct and trouble-free operation of the product.

2.1 General Structure Concept

Figure 1 shows how the XPR system can be integrated in an existing LAN or ISDN infrastructure. The IBM/Lotus Notes Gateway is installed on the XPR server executing all Unified Messaging functions. The XPR server is integrated in the existing LAN and a PBX.

Integration to the PBX may be via ISDN or LAN (Voice-over-IP), provided that the applied PBX supports Voice-over-IP technology.

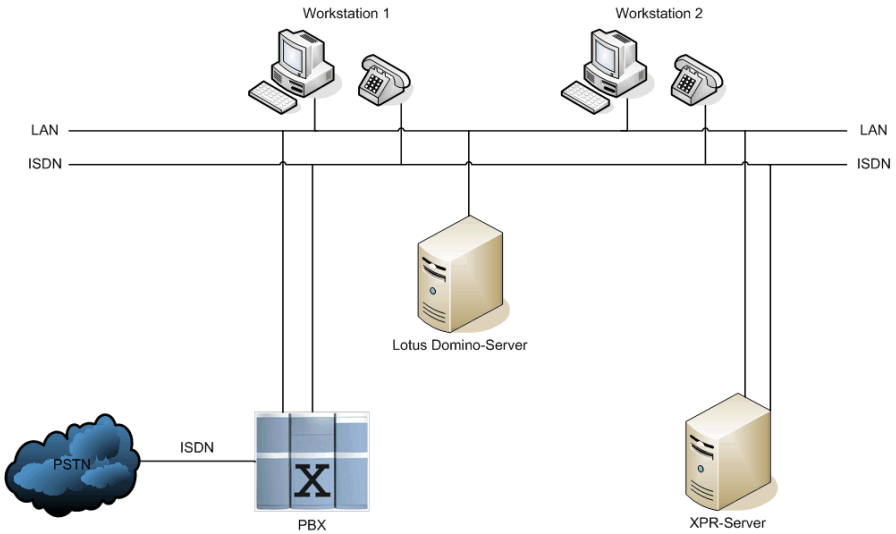


Figure 1 Structure concept - Overview

The users' workstation computers are connected to the IBM/Lotus Domino server via LAN. Each workstation has a telephone. Between the XPR server and the PBX a CTI link (via LAN or ISDN) can be established, enabling the user to:

- control telephones and other devices under IBM/Lotus Notes
- receive telephone journals in IBM/Lotus Notes

With the XPR integration into IBM/Lotus Notes the user is able to use all message types out of his/her IBM/Lotus Notes work environment. The XPR system provides so-called mail file extensions via which the Unified Messaging features of the XPR system can be added to the default mail file of a IBM/Lotus Notes system.

In Figure 2 the XPR system integration into a IBM/Lotus Notes environment is depicted more clearly. The XPR server software and a IBM/Lotus Notes client are installed on the XPR server. The IBM/Lotus Notes APL uses the IBM/Lotus Notes client information to connect with the IBM/Lotus Domino server. From the IBM/Lotus Domino server's point of view, the die Lotus Notes APL is nothing else but a user.

A IBM/Lotus Notes client is installed on the user's workstation computer, communicating with the IBM/Lotus Domino server via LAN. If a user applies the XPR services fax, voice mail and SMS in addition to the normal e-mail

functionality, these messages will be sent directly from the IBM/Lotus Notes client to the IBM/Lotus Domino server. The Domino server processes the messages and forwards them to the Lotus Notes APL of the XPR server. From here, they are sent to a recipient e.g. via a Telematic APL (ISDN or IP).

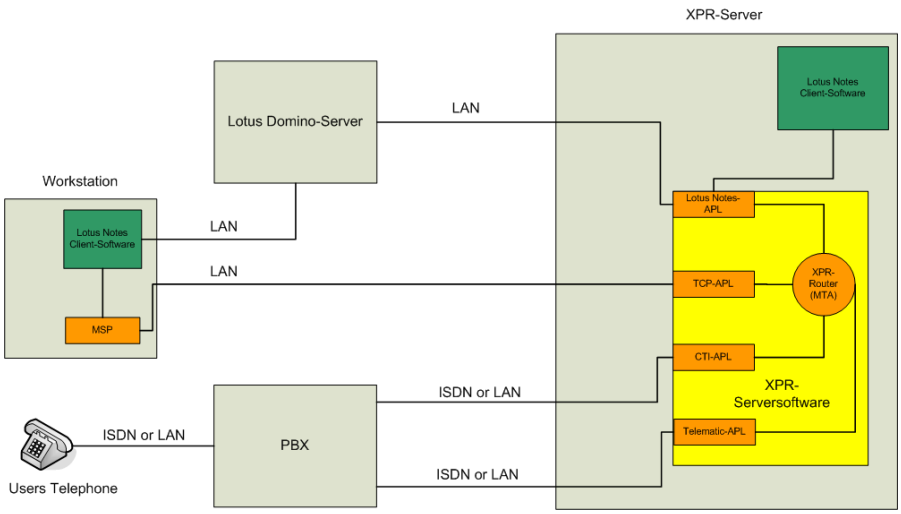


Figure 2 Structure concept - Detailed view

If the CTI service is to be used additionally (sending or listening to voicemails via telephone, telephone control via the IBM/Lotus Notes client, etc.), the Message Service Provider (MSP) must be installed on the workstation computer of the XPR. The MSP communicates via LAN with the XPR server. If a user wants to control his/her telephone with the IBM/Lotus Notes client, a connection request is transmitted from the IBM/Lotus Notes client to the MSP, which sends this request via the LAN to the TCP APL of the XPR server.

In the XPR server the connection request is forwarded to the CTI APL. The CTI APL sends the request via a LAN or ISDN connection to the PBX. The PBX will then establish the connection to the dialed phone number.

2.2 Unified Messaging Technologies

In this manual, the terms **Unified Messaging (UM)**, **Integrated Messaging (IM)** and **True Unified Messaging (TUM)** are often used. For a better understanding the meaning of the terms and their functionality will be explained in the following paragraph.

2.2.1 Unified Messaging

Unified Messaging offers the possibility to access messages by means of one journal independent of the service used for sending them. This means you can view or play back fax messages, voice mails or e-mail messages from within IBM/ Lotus Notes.

If you have installed the Lotus Notes APL but have not performed any configuration steps yet, it is exclusively possible to use Unified Messaging. *Unified Messaging* can therefore be considered as the basic function.

Depending on the Lotus Notes APL configuration you can extend this basic functionality to the advanced functionality of *Integrated Messaging* and/or *True Unified Messaging*.

In the following sections sending and receiving messages with *Unified Messaging* will be explained with the help of an example.

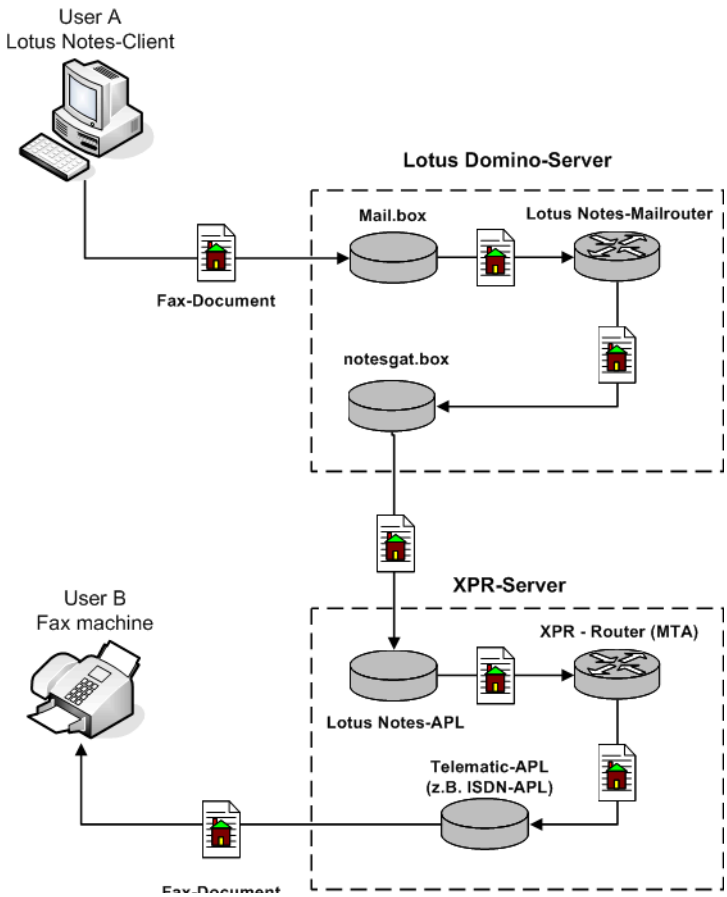
2.2.1.1 Sending a Fax Message

User A wants to send a fax message out of his/her IBM/Lotus Notes client to an external user B. User A creates the fax messages as usual in his/her IBM/ Lotus Notes mail application and enters the fax number of the external user B as recipient address.

With its transmission the fax message is at first stored in the mail database of user A and by the IBM/Lotus Notes mailrouter transferred to the foreign domain defined during the Lotus Notes APL installation (the document is copied to the corresponding database, e.g. **notesgat.box**).

The Lotus Notes APL (LnAPL) installed on the XPR server checks the gateway mailbox regularly for new messages. If this is the case, the LnAPL fetches the message and forwards it to the MTA.

The MTA recognizes the message as a fax document and sends it to the Telematic APL (e.g. ISDN APL). The Telematic APL sends the fax message via the telephone network to the fax device of user B.

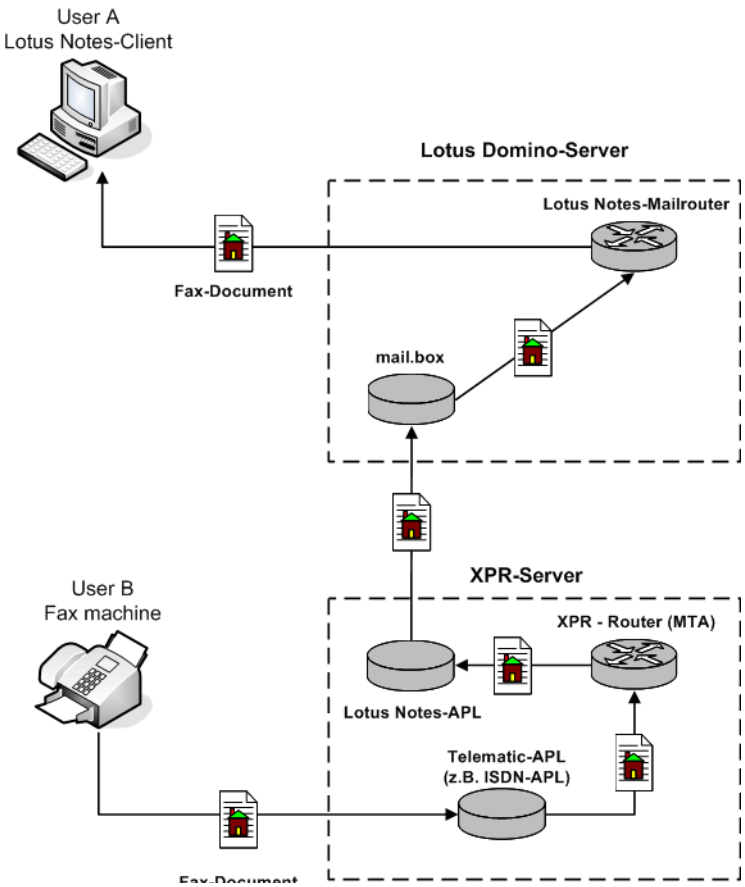


2.2.1.2 Receiving a Fax Message

In the reversed case, external user B wants to send user A a fax message via his/her fax device. Therefore user B inserts the message in his/her fax device and dials user A's fax number. The document is sent to the XPR server where it is first evaluated by the Telematic APL and then transmitted to the MTA.

The MTA sends the fax message to the Lotus Notes APL. The Lotus Notes APL copies the message to the server mailbox of the IBM/Lotus Domino server (**mail.box**).

From there it is forwarded by the IBM/Lotus Notes mailrouter to the mail database of user A. As soon as user A opens his/her IBM/Lotus Notes mail application, the fax message is displayed as a new message. He/she may open and view it in his/her mail application.



2.2.2 Integrated Messaging (IM)

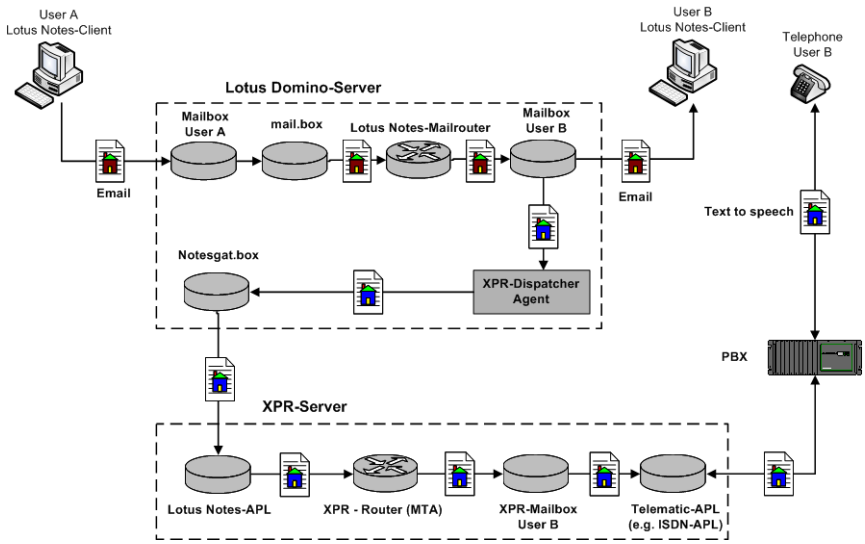
For *IM* a so-called inbox replication from a user's IBM/Lotus Notes mail database to his/her XPR mail database on the XPR server and vice versa takes place. The advantage of Integrated Messaging is that a user can read messages in his/her IBM/Lotus Notes mail application, but also retrieve this message e.g. via a telephone from the XPR server.

The inbox replication is performed in both directions, i.e. from the IBM/Lotus Domino server to the XPR server as well as from the XPR server to the IBM/Lotus Domino server. These procedures will be explained with the help of the following two examples.

2.2.2.1 Inbox Replication from IBM/Lotus Domino to XPR

User A sends user B an e-mail via the IBM/Lotus Notes client. Since user B is sales representative and thus cannot always check his e-mail messages via his/her IBM/Lotus Notes client in the company, user B exclusively uses the XPR server to retrieve his/her latest messages. However, he/she can only retrieve the

messages that have been received directly via the XPR server (e.g. a fax message that has been received from outside). He/she is not able to retrieve e-mail messages from the XPR server that have been sent to him/her via IBM/ Lotus Notes without *IM* (inbox replication).



The e-mail that user A sends to user B via IBM/Lotus Notes is at first copied from the mail database of user A to the server mail-database of the IBM/Lotus Domino server (**mail.box**). The IBM/Lotus Notes mailrouter transfers this message to the IBM/Lotus Notes mail database of user B. From here user B can open and read the e-mail in his/her IBM/Lotus Notes mail application. Since this transmission process is performed in IBM/Lotus Notes, XPR server is not informed so that user B can only access this message via his/her IBM/Lotus Notes client.

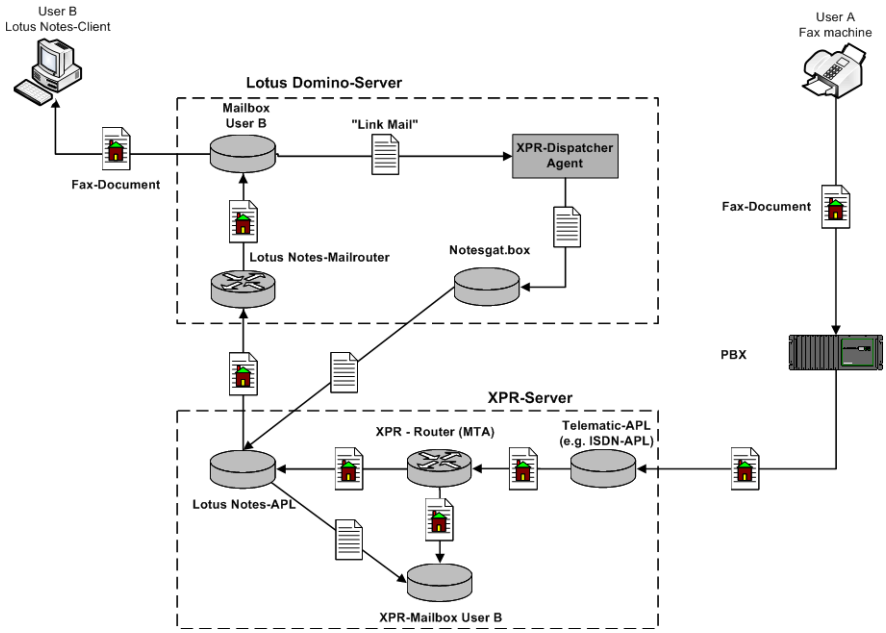
If however *IM* has been activated, the XPR dispatcher agent running on the IBM/ Lotus Domino server creates a copy of the received e-mail and sends it to the foreign domain defined during the Lotus Notes APL installation (gateway mailbox **notesgat.box**). The Lotus Notes APL regularly checks the gateway mailbox for new messages.

If a new message is found, the Lotus Notes APL copies it from the gateway mailbox via the MTA to the XPR mail database of user B. User B can now access his/her XPR mail database by telephone and have the received e-mail read out e.g. via Text-to-Speech.

2.2.2.2 Inbox Replication from XPR to IBM/Lotus Domino

An external originator sends a fax message to user A. The fax is at first received by the Telematic APL of the XPR server (e.g. ISDN-APL) and transferred to the MTA.

The MTA enters the document once in the XPR mail database of user A and at the same time hands a copy over to the Lotus Notes APL. The Lotus Notes APL transfers the fax message to the IBM/Lotus Notes mailrouter, which stores the document in the IBM/Lotus Notes mail database of user A.



When the fax message has arrived at the IBM/Lotus Notes mail database of user B, the XPR dispatcher agent creates a so-called “link mail” from the incoming fax message. This “link mail” serves for the synchronization of the document information (e.g. Message ID) between the fax document in the IBM/Lotus Notes mail database and the fax document in the XPR mail database. The XPR dispatcher agent sends the link mail to the gateway mailbox **notesgat.box**. The Lotus Notes APL fetches it from here and sends it to user B's XPR mail database.

In this example, user B is able to open a received message as well in his IBM/ Lotus Notes client as to retrieve it via the XPR server.

2.2.3 True Unified Messaging (TUM)

For *TUM* in contrast to *Integrated Messaging* no inbox replication takes place but the data storage or the mail databases of the foreign system (e.g. IBM/ Lotus Notes) are directly accessed. The advantages are that data need not be kept twice as with *IM* and long waiting periods caused by replication can be ruled out since the foreign system transmits the requested messages nearly in real-time.

TUM and *IM* can be operated on the XPR server in parallel. For each single user you can define whether to use *IM* or *TUM*.

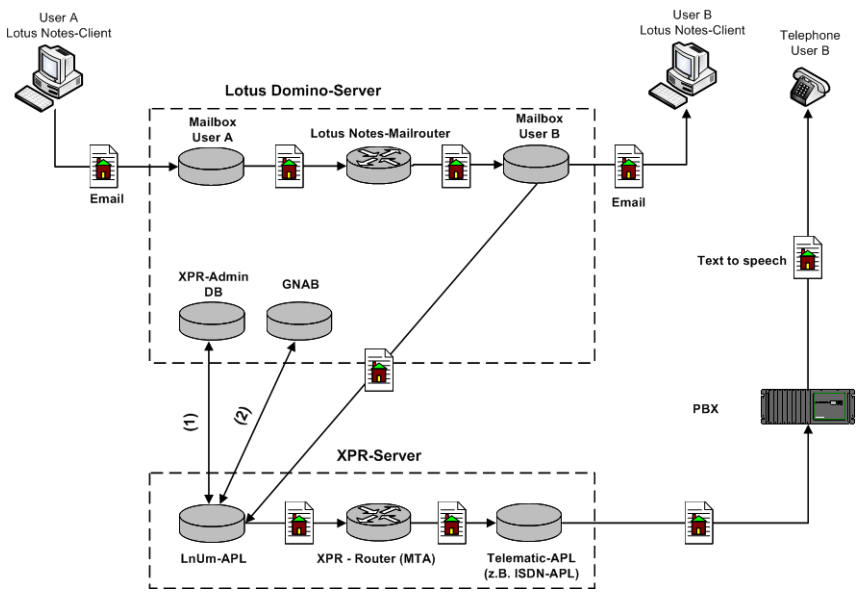
NOTE: To use *TUM*, the Lotus Notes Unified Messaging APL (LnUmAPL) must be installed in addition to the Lotus Notes APL (LNAPL).

2.2.3.1 TUM Functionality

User A sends user B an e-mail via the IBM/Lotus Notes client. User B is sales representative and retrieves his/her messages mostly via telephone.

The e-mail is first stored in the IBM/Lotus Notes mail database of user A and then sent by the IBM/Lotus Notes mailrouter to the IBM/Lotus Notes mail database of user B. Since no inbox replication takes place with *TUM* as with *IM*, the e-mail is exclusively stored in user B's IBM/Lotus Notes mail database.

When user B retrieves this e-mail e.g. via telephone, the Lotus Notes Unified Messaging APL (LnUmAPL) first accesses the administration database, reads out the user information stored there (relationships between IBM/Lotus Notes and XPR) and checks in the Domino Directory which IBM/Lotus Notes mail database user B uses. Subsequently the LnUmAPL directly accesses the mail database of user B and forwards the e-mail to the MTA, which routes the e-mail via the Telematic APL to the telephone that user B uses for message retrieval.



If user A sends user B a fax message via a fax device instead of an e-mail, the externally received fax message is stored in user B's IBM/Lotus Notes mail database via the Lotus Notes APL (LnAPL) with *UM* (see also example in Section 2.2.1.2, “Receiving a Fax Message”, on page 19). User B can then retrieve the fax message via *TUM*.

2.3 Computer Telephony Integration (CTI)

The term CTI comprises all functions that enable a logical linking of data and telephone services. The key to this is the connection of a computer workstation to a telephone. A simple case of a CTI application can be e.g. starting a defined PC application when a call arrives at the telephone terminal device. This can be extended at will, so that an incoming call can be linked to more complex, computer-based workflows, for example reading caller-specific information out of a database with subsequent preparation and representation.

CTI works the other way round just as well. A good example is the setup of a communication connection to a telephone user from a computer application. The most simple form of such an application is a so-called dialer, which establishes a phone connection with the entered number at the push of a button.

2.3.1 CTI Functions

CTI provides different features for controlling and monitoring PBX systems and telephone devices. The most important ones are:

- Control of telephone devices (accept call, establish connection, show display information etc.)
- Control of telecommunication connections (initiating connection setup, conferences, “park calls”, “alternate” etc.)
- Creation of CTI journals, to provide a complete telephone activities list.

2.3.2 CTI Functions under IBM/Lotus Notes

If you operate the IBM/Lotus Notes Gateway under IBM/Lotus Notes, you have two options to use the CTI functions:

a) Integration of the dialer **SimpleDialer** in an *UM* mail template. This version requires the additional installation of the **CTI-Light** script in the Telematic APL of the XPR server (see also Section 2.4, “CTI Light”, on page 26).

b) Usage of the additional software **optiClient 130 for Notes**. In case of this version you need not perform any modifications to a mail template.

optiClient 130 for Notes is based on IBM/Lotus Notes and extends or uses its existing functionality.

The most important functions are listed below.

- **Logging calls**
  A call dialog opens automatically for each inbound and outbound call. The call dialog contains the date and time of the call as well as the name of the calling/called party or the phone number. You can enter notes for each call. You can specify whether a journal item and/or a task are to be created in IBM/Lotus Notes for each call.
- **Initiating calls via IBM/Lotus Notes**
  optiClient 130 for Notes allows you to initiate a call from a IBM/Lotus Notes item (contact, journal entry, task, e-mail or appointment).
- **Using convenient telephony functions**
  You have access to typical telephony functions such as alternate, conference, forwarding, etc.
- **Managing List of missed calls**
  If the caller hangs up without you having accepted the call, optiClient 130 for Notes closes the call dialog again and generates a task item. The last six calls of that type are also displayed in the *Missed calls* context menu linked to the telephone icon so that you can directly initiate a callback. You can also generate a journal item instead of a task item.
- **Picked up calls: Sending notification**
  If you pick up a call that was directed to another user (telephone system group function or call forwarding), optiClient 130 for Notes opens a call dialog in which the e-mail address of the user who was originally being called and the name of the caller are displayed. You can also generate a journal item instead of a message.

2.4 CTI Light

In association with a **SimpleDialer** the CTI Light function can be used to establish a call connection via telephone.

For using the SimpleDialer, the IBM/Lotus Notes mail template must be extended by two design elements (cf. section “SimpleDialer Usage” on page 101).

The CTI Light script is automatically installed during the installation of a Telematic APL (e.g. ISDN APL). After the installation, further configurations are required, the description of which is provided in the *Server Administration* manual.

NOTE: So that the users can use the SimpleDialer, specify the computers' IP addresses or an IP address range in the SMTP APL. Information on how to configure the SMTP APL is contained in the *Server Administration* manual.

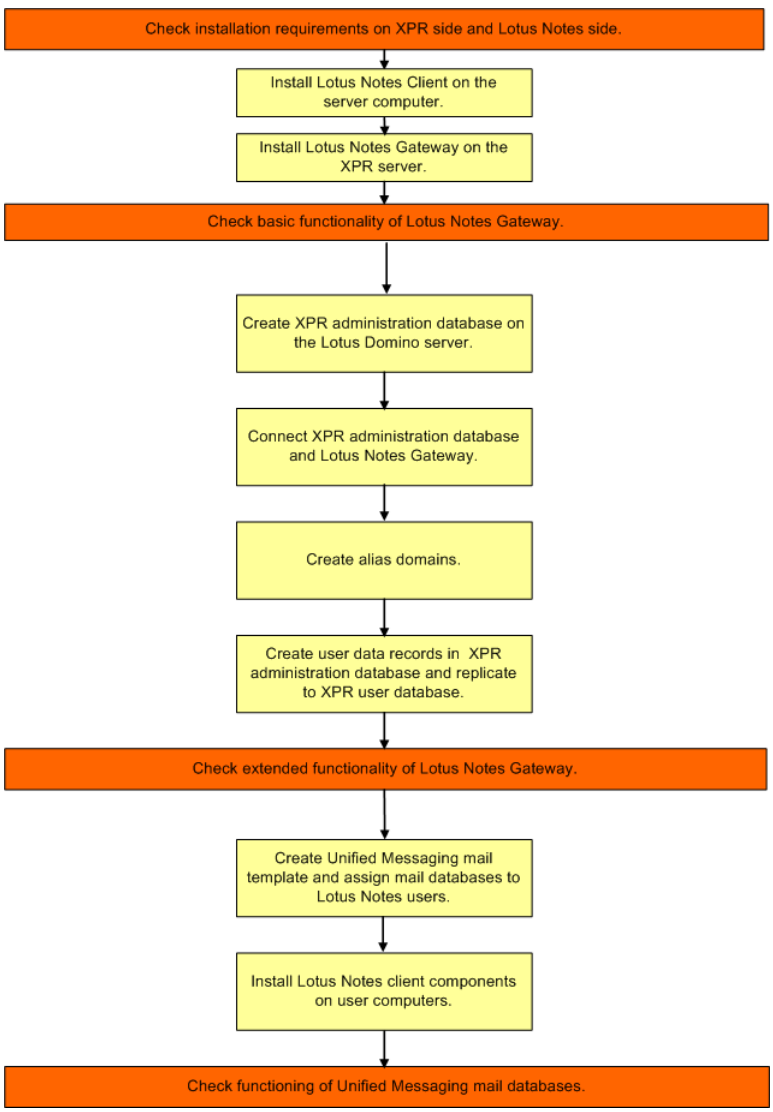
Usage of the SimpleDialer is described in the *IBM Notes Extensions* manual.

3 Installation of the IBM/Lotus Notes Gateway

Before you start the installation, please read Chapter 2, “Realization Concept”.

3.1 Graphic Overview of the Installation Process

The following figure shows the installation process of the IBM/Lotus Notes Gateway. The entire process is divided into three consecutive sections for simplification. After each installation section a functionality check takes place. Print out this page for a better overview and checkmark completed worksteps on the printout.



3.2 Installation Requirements on the XPR Side

3.2.1 Hardware Requirements of the XPR Server

For information about the hardware requirements of the XPR server please refer to the *Server Installation* manual.

3.2.2 Software Requirements of the XPR Server

In addition to the software requirements outlined in chapter two of the *Server Installation* manual, a IBM/Lotus Notes client of the supported versions must be present on the XPR server.

IMPORTANT: Operating a IBM/Lotus Domino server and an XPR server in parallel on a server computer is not possible. In principle, XPR server and IBM/Lotus Domino server are used on separate computers.

While you install the IBM/Lotus Notes client on the XPR server computer you need to specify the name of the Domino server incl. certifier (Domino tree/organization tree). Routing will otherwise not work. In case of doubt please check the content of the following registry key:

`HKLM\Software\`Wow6432Node\PP-COM/MRS\LNApl\Notes Connections\<domain>\GatewayServer

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3.2.3 Checking the Installation Requirements by Notes FailSafe

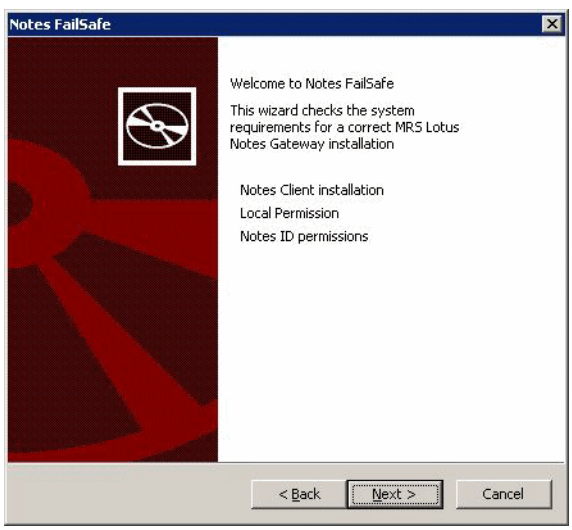
The Notes FailSafe tool checks whether the following requirements for setting up the LnAPL have been met and the configurations are correct:

- Installation of IBM/Lotus Notes (directories and DLLs)
- User privileges for accessing the IBM/Lotus Domino server and the required databases

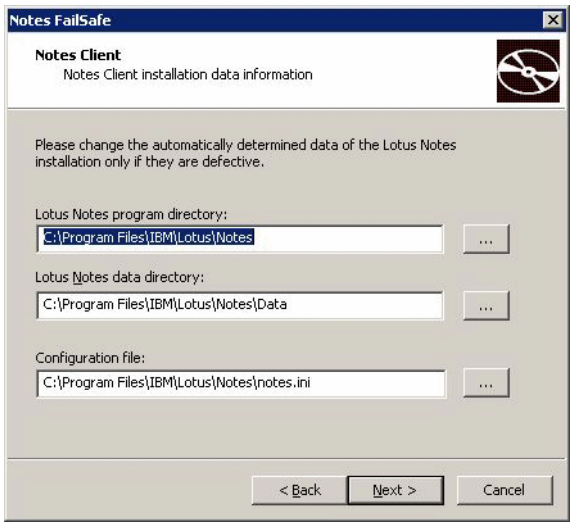
The LnAPL connects the XPR server to a IBM/Lotus Notes client that is connected to a IBM/Lotus Domino server.

Execute the following steps:

1. Verify that the following conditions have been met on the computer on which you wish to install the XPR server:
   a) Microsoft Visual C++ 2005 Distributable Package installed
   b) A IBM/Lotus Notes client connected to the corresponding IBM/Lotus Domino server must have been configured.
   c) The IBM/Lotus Notes client and all other IBM/Lotus Notes applications must have been shut down before you execute Notes FailSafe.
2. On the computer on which you wish to install the LnAPL or XPR server execute the `XpressionsInstall\Prerequisites\NotesFailSafe.exe` file on the XPR installation medium.

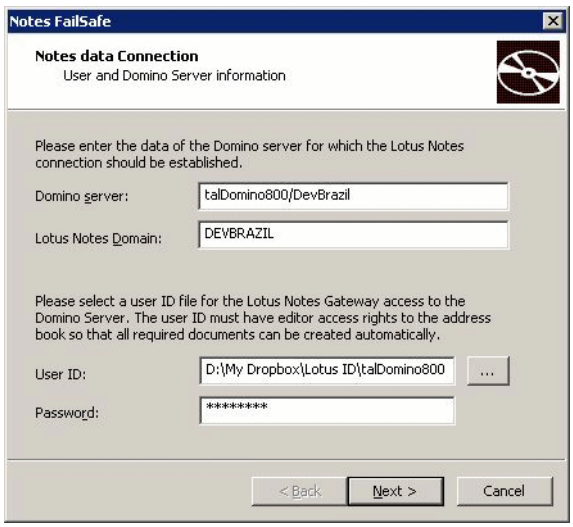


3. Click on **Next**.



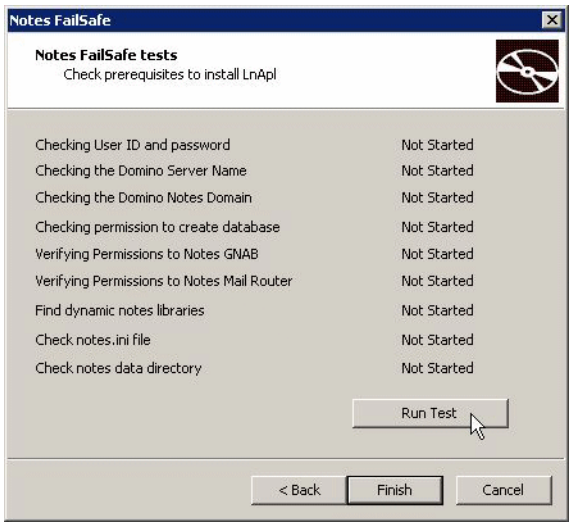
4. Enter the setup directory of the IBM/Lotus Notes client and IBM/Lotus Notes data directory and the configuration file path.

5. Click on **Next**.

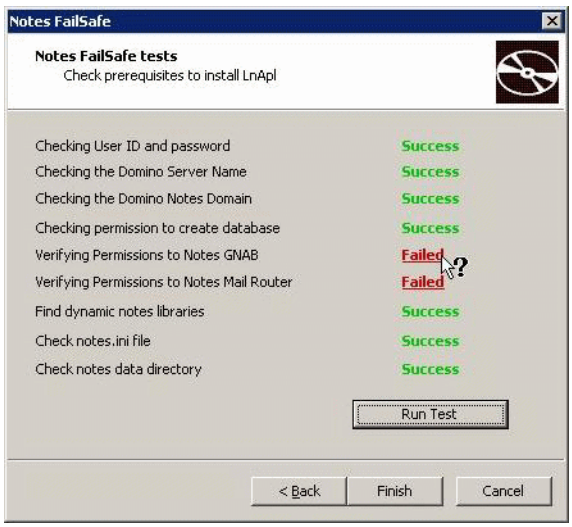


6. Enter the name of the IBM/Lotus Domino server and IBM/Lotus Notes domain, the user ID, and the password.

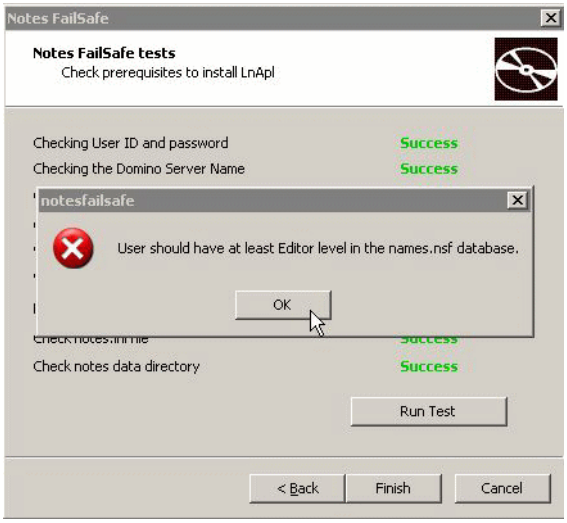
7. Click on **Next**.



8. Click on **Run Test** to start the check.



9. Click on **Failed** to receive a troubleshooting notice.



3.3 Installation Requirements on the IBM/Lotus Notes Side

Hardware requirements of the IBM/Lotus Domino server

For information on the hardware requirements of the IBM/Lotus Domino server please refer to the IBM/Lotus Domino product documentation.

Software requirements of the IBM/Lotus Domino server and the IBM/Lotus Notes client

The IBM/Lotus Notes gateway can cooperate with IBM/Lotus Domino servers and clients of the supported versions except Lotus Domino 6.0.

IMPORTANT: The IBM/Lotus Notes Gateway cannot be used in an xSP Domino environment.

3.3.1 Hardware Requirements on the Client

You find hardware and software requirements in the *Release Notes*, in the *Release Notice* for the XPR server and in the *Client Installations* manual.

3.3.2 User ID for the IBM/Lotus Notes Gateway

The IBM/Lotus Notes Gateway connects to the Domino Server via the IBM/Lotus Notes client that is installed on the same computer as the XPR server. Therefore a user ID must be created before the gateway installation that is used by the client. This user ID must be provided with special user rights so that the IBM/ Lotus Notes Gateway functionality can be ensured.

A differentiation is made between user rights required for the installation and configuration of the gateway and user rights that are necessary for the later operation of the gateway.

NOTE:
If it is not possible to provide the user ID with the required user privileges for security reasons, an installation with limited privileges must be performed (cf. Section 3.4.2, “Installation with restricted User Privileges”, on page 52).

3.3.2.1 Required Installation and Configuration Privileges

For the IBM/Lotus Notes Gateway installation and configuration the user ID must have the following privileges:

- Access authority for the **Name and Address Books of the IBM/Lotus Notes Domain**. The user ID must have **Editor** rights for the name and address books of the domain and must have the roles **NetCreator** and **NetModifier**. The editor privileges must include the right to delete documents.
- Access privilege for the database template **Mail Router Mailbox** (StdNotesMailbox, Mailbox.ntf) as **Manager**.
- Privilege to create databases. The user ID must have the **privilege** to **create new databases** on each of the Domino servers with which the Lotus Notes APL is to communicate. This authority is required during the installation of a **Foreign Domain**.
- When *TUM* is used, the user ID must have **manager rights** for the **user mailboxes**. This user right must be maintained for the later operation of the IBM/Lotus Notes Gateway.

After the user ID has been provided with the necessary authorizations, you should perform a functionality check. Therefore, use the IBM/Lotus Notes client that is installed on the XPR server and log in at the IBM/Lotus Domino server with the gateway user ID. Check then if the user ID is able to comply with the properties required above.

3.3.2.2 Required Operation Privileges

After the installation and configuration of the IBM/Lotus Notes Gateway the privileges of the applied user ID can be set back to the following privileges:

- **Read privileges** for the IBM/Lotus Notes domain **Name and Address Books**.
- You can withdraw the access rights for the database template **Mail Router Mailbox** (StdNotesMailbox, Mailbox.ntf) because they are no longer needed.
- You can withdraw the privilege for creating databases because it is no longer needed.
- When *TUM* is used, the **manager privilege for using the user mailboxes must be preserved**.

IMPORTANT: When *TUM* is used, this user ID or the IBM/Lotus Notes client installed on the server allows to access **all messages of all** users. Make sure that **no one** has unauthorized access to this user ID or this IBM/Lotus Notes Client.

3.4 Installation Process

The IBM/Lotus Notes Gateway installation is performed during an XPR server installation. You need a valid license key to use the gateway. There is one license key for the LnAPL and one for the LnUmAPL.

You settings are checked during the gateway installation. For example, a check is performed as to whether the Domino server is available and whether the gateway ID-file specified has the required privileges. If, for example, this ID-file does not have all required privileges, you receive an error message that points to the missing privileges. You can then change the gateway ID-file accordingly and continue with the installation without interruption.

Check the following before the installation process:

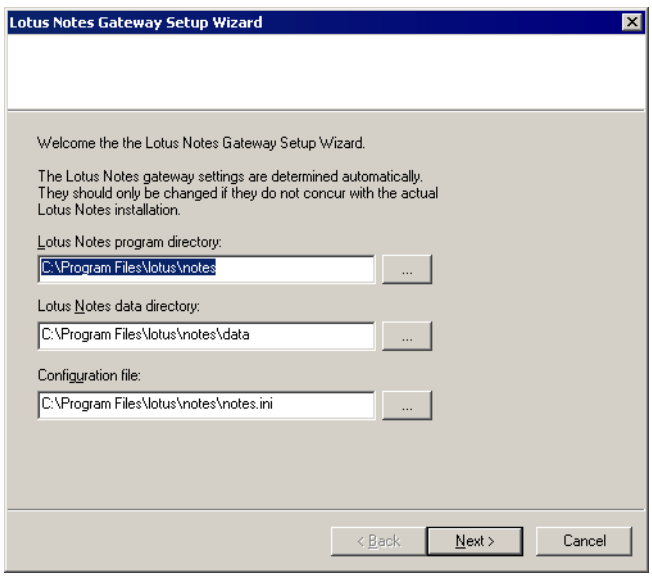
- A IBM/Lotus Notes client must be installed on the XPR server computer. If this is not the case, the IBM/Lotus Notes Gateway will not be displayed during the later selection of the XPR server components to be installed.
- The connection between the IBM/Lotus Notes client installed on the XPR server computer and the IBM/Lotus Domino server must run using the required gateway user ID (see also the information in Section 3.3.2.1, “Required Installation and Configuration Privileges”, on page 34).

If all conditions mentioned above are met, you may start the installation process. Proceed as follows:

1. Follow the installation process as described in the *Server Installation* manual.

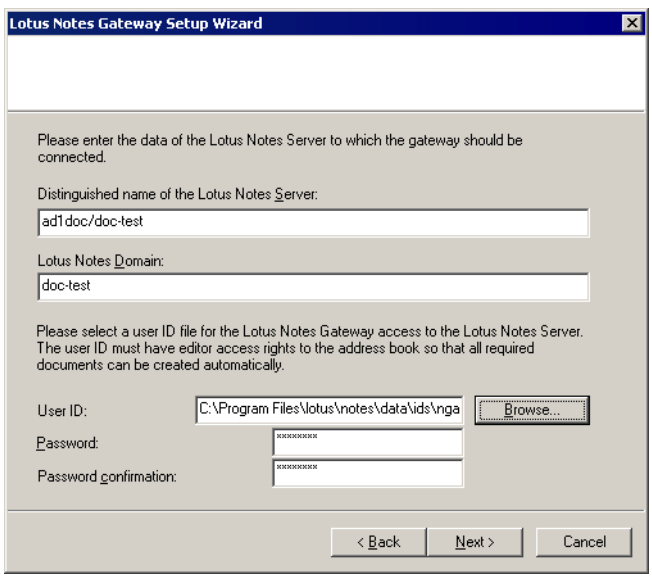
2. When the XPR setup program has reached the **Select components** dialog, you have to select the **Lotus Notes Gateway** component in the **selection list** under **Messaging and Directory Integration**. If you want to use *TUM*, select additionally the **Lotus Notes True Unified Messaging Gateway** component. Continue the dialog with **Next**.

3. Follow the XPR setup program until it displays the **Lotus Notes Gateway Setup Wizard**.



In this dialog you need to enter the local directory paths for the **Lotus Notes client program**, the **Lotus Notes data directory** and the **Lotus Notes configuration file** (notes.ini) on the XPR server computer. The Setup Wizard determines the data from the local IBM/Lotus Notes client installation. Only modify the paths if they are not conform with your system settings.

Click the **Next** button. Up comes this dialog:



4. Specify the **Lotus Notes Domain** name, if it has not been correctly entered yet, and the **Password for the User ID** of the IBM/Lotus Notes Gateway. Check if the correct path has been entered in the user ID field and adjust it if necessary.

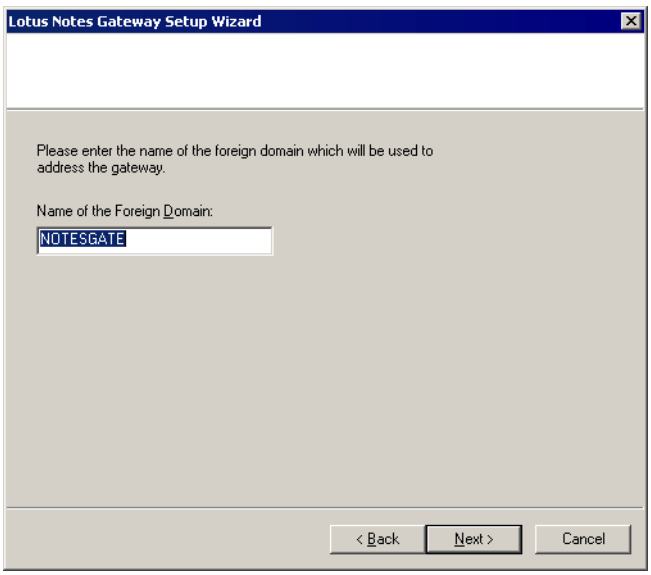
   The **Hierarchical name of the Lotus Notes &server** field already displays the correct name that the Setup Wizard has detected in the configuration file `notes.ini`. Check these specifications.

   If all specifications are correct, click on **Next >**.

NOTE: After you have clicked on **Next**, your settings and specifications are checked. If the setup routine detects errors here, you can correct them without having to interrupt the installation.

If, for example, the gateway ID does not have the required privileges, you can correct them on the Domino server and subsequently confirm the corresponding error message. The setup routine then checks the settings for correction once more.

Up comes this dialog:



5. In the following dialog assign a name to the foreign domain that uses the IBM/Lotus Notes Gateway for communication with the IBM/Lotus Domino server. By default, the field is preset with the name **NOTESGATE**.

IMPORTANT: When selecting the name, please note that the name of the foreign domain has to be unambiguous and must not be used by another foreign domain.

If the gateway installation was performed with restricted user privileges (see

Section 3.4.2, “Installation with restricted User Privileges”, on page 52), it is **mandatory** to enter the name here that has been assigned in the first step of this installation version for the foreign domain (see step 1 on page 52).

Click the **Next** button.

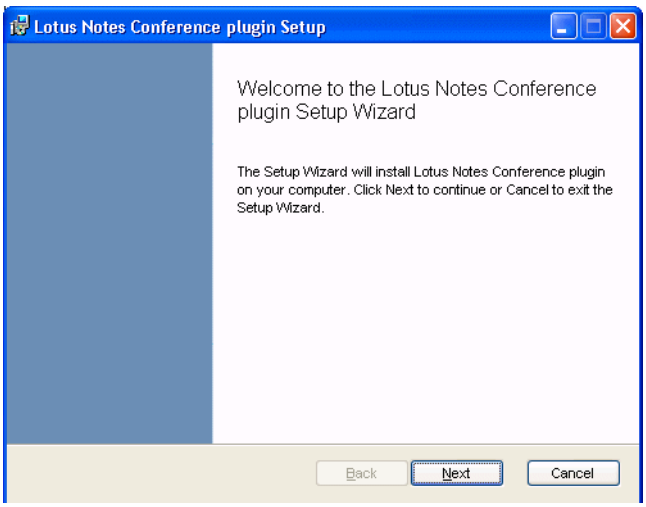
6. An **explanatory text** appears. Please read this text attentively and close the Setup Wizard with the **Finish** button.
7. Continue with the XPR setup program as described in the *Server Installation* manual.
8. After the successful XPR server software setup you can either install the IBM/Lotus Notes plugins for conferences (see Section 3.4.1, “Installation of the Conference Plugin for Lotus Notes”, on page 40) or start the XPR server and the XPR monitor and subsequently continue with the IBM/Lotus Notes Gateway configuration (see Chapter 4).

3.4.1 Installation of the Conference Plugin for Lotus Notes

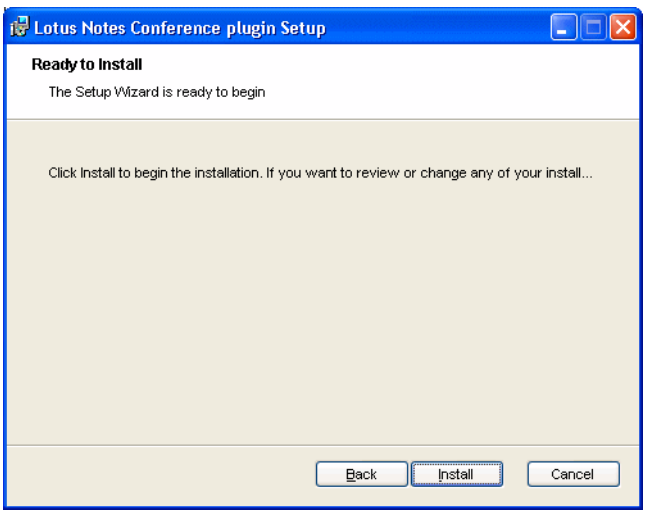
The conference plugin for Lotus Notes enables initiating voice conferences, web conferences and combined voice/web conferences from IBM/Lotus Notes. How to install the plugin:

3.4.1.1 Installation on the Client Computer

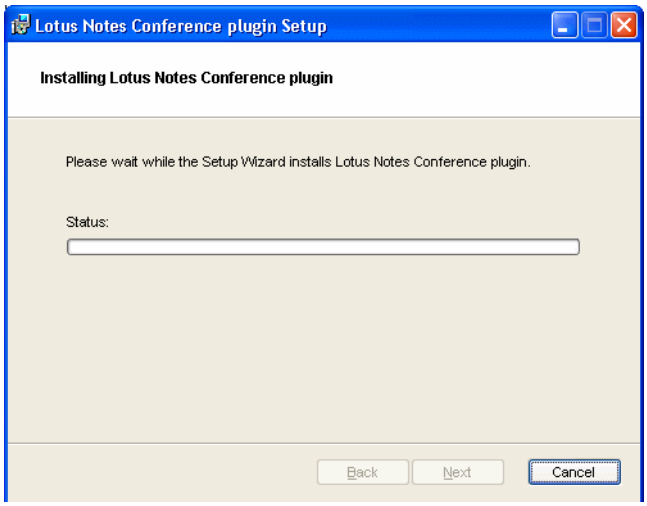
1. Start the `AddOn\Client\LotusNotes\LnConfPlugin\Setup.exe` of the XPR installation medium from the client computer.



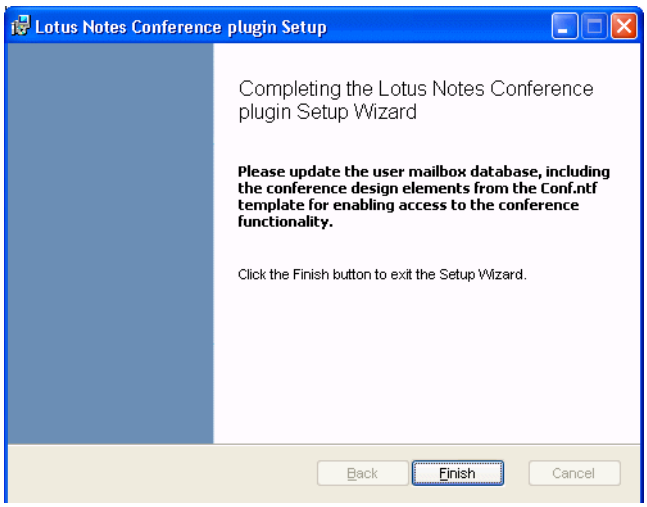
2. Click the **Next** button.



3. Click the **Install** button.



4. The following dialog appears:



5. Click on the **Finish** button.
6. Verify that the line `EXTMGR_ADDINS=extmgroc.dll` was inserted in the `notes.ini` file. You typically find this file in the `C:\Program Files\lotus\notes` directory.
7. Check whether the following files were added to the same directory:
   - `extmgrOC.dll`,
   - `ndbOC.dll`,
   - `toolbar_confagent.dxl`,
   - `toolbar_conficon.dxl` and
   - `toolbar_confoutline.dxl`

3.4.1.2 Modifications to the IBM/Lotus Notes Mail Template

NOTE: If you use IBM Notes 9.0 Social Edition (Basic Configuration) and IBM Domino 9.0 Social Edition, use the mail templates for Lotus Notes 8.

IMPORTANT: The instructions are divided into the sections Script library, Recompilation, Conference menu, Code change and Activation. Be sure to follow the instructions in exactly this order.

1. Start the IBM/Lotus Domino Designer client on a computer from which you can access the IBM/Lotus Domino server that hosts the mail template databases of the IBM/Lotus Notes users.

Script library

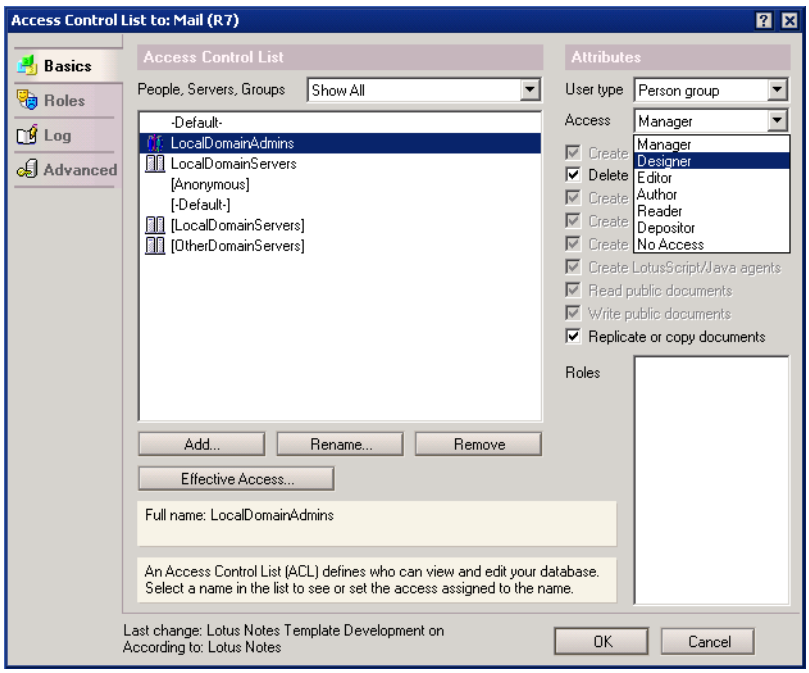
2. Open in the IBM/Lotus Domino Designer client the `conf.ntf` file in the `XpressionsInstall\AddOn\Client\LotusNotes\LnConfPlugin` directory of the XPR installation medium.
3. Click on the **Code** > **Script Libraries** library.
4. Mark the entry that, except for English, names the language to be used in the mailbox of the IBM/Lotus Notes user on the client computer.

   Examples:

   - English: **cyConference**
   - German: **cyConference_de-DE**
   - French: **cyConference_fr-FR**
   - Italian: **cyConference_it-IT**
   - Portuguese (Portugal): **cyConference_pt-PT**
   - Portuguese (Brazil): **cyConference_pt-BR**
5. Copy this entry to the clipboard.
6. Open the mail template database of the client on the IBM/Lotus Domino server. The mail template database typically has the file name *mail7.ntf*, the title *Mail (R7)* and the template name *StdR7Mail*.

   IMPORTANT: If the mail template extensions (see Section 4.4, “Mail Template Extensions”, on page 75) are already installed, the mail template database typically has still the title *Mail (R7)*, but it has, for example, the file name *mail7_um.ntf* and the template name *StdR7Mail/de_um*.

For this step and up to step 10 on page 43 as well as from step 16 on page 45 to step 26 on page 46 you need at least a developer's privileges to access the mail template database. You can modify the access privileges in the access control list (ACL). If you click this database in the workspace of the Notes client with the right mousebutton and select **Database** > **Access Control...**, the access control list opens.



For the persons, servers and groups displayed in the field on the left hand side you can set the access privileges in the **Access** field and in the checkboxes thereunder.

7. After you have made your settings, click on the **OK** button.
8. Click on the **Code** > **Script Libraries** library.
9. Insert the clipboard.

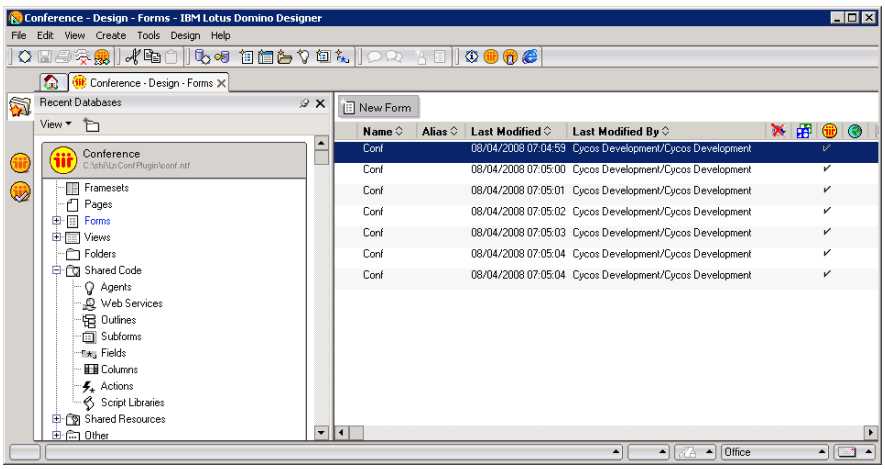
Recompilation

10. Select in the menu **Tools** > **Recompile All LotusScript**.

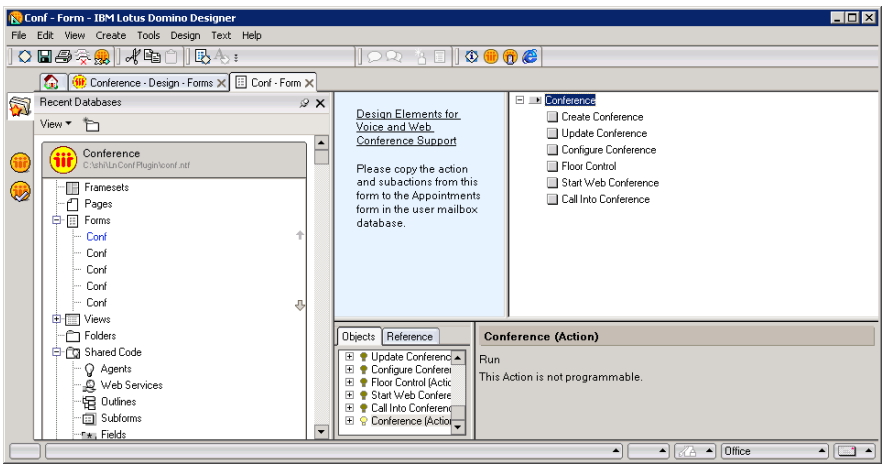
Conference menu

11. Open in the IBM/Lotus Domino Designer client the `conf.ntf` file in the `XpressionsInstall\AddOn\Client\LotusNotes\LnConfPlugin` directory of the XPR installation medium.

12. Click on the **Forms** directory.



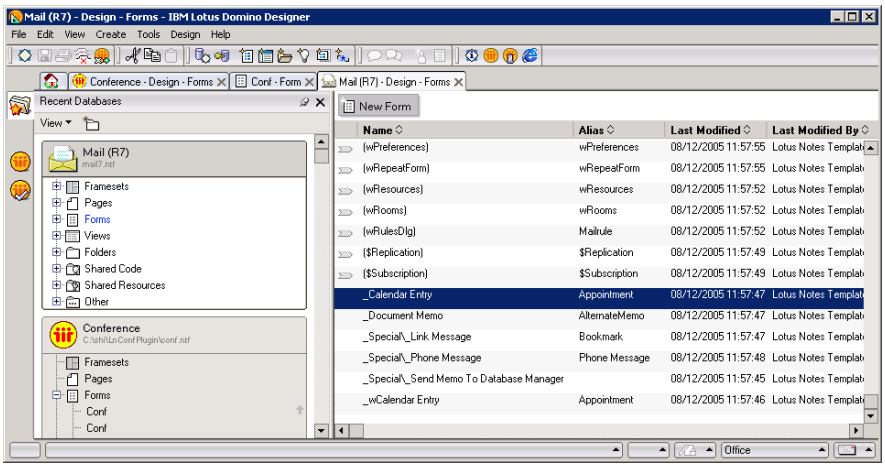
13. Doubleclick the **Conf** entry that names in the **Language** column the language used in the mailbox of the IBM/Lotus Notes user on the client computer.



14. Select the **Conference** action and copy it to the clipboard.

15. Open the mail template database of the client on the IBM/Lotus Domino server (compare step 6 on page 42).

16. Click on the **Forms** directory.

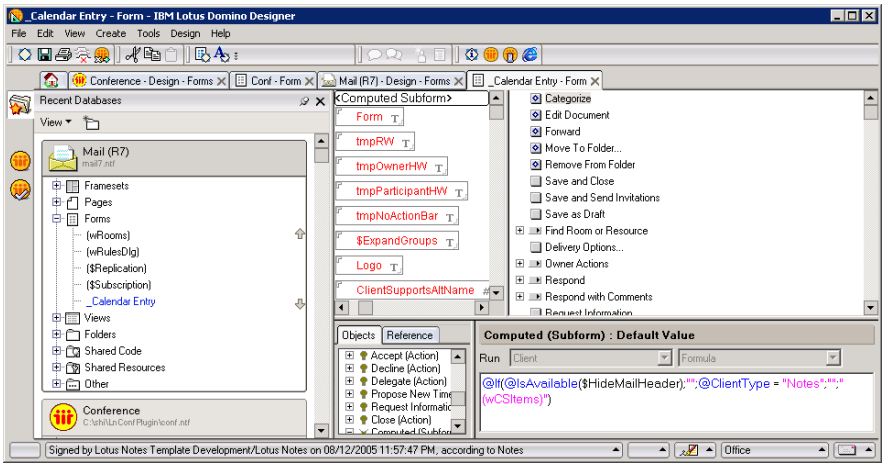


17. Click on the **Alias** column caption to sort according to this column. Doubleclick the entry for which the **Alias** column features the **Appointment** value and the **Name** column the **_Calendar Entry** value.

    Example of other languages:

    - English: **_Calendar Entry**
    - French: **_Entrée d'agenda**
    - Italian: **Vo_ce del diario**
    - Spanish: **E_ntrada de agenda**
    - Portuguese (Portugal): **_Entrada da agenda**
    - Portuguese (Brazil): **Entrada na_Agenda**
    - Dutch: **_Agenda-item**

IMPORTANT:
Do not click the entry that has value **_wCalendar Entry** in the **Name** column.



18. Select the **Categorize** action.
19. Insert the clipboard. The **Conference** action will then be inserted under the **Categorize** action.
20. Click with the left mousebutton on the **Conference** action just inserted, keep the mousebutton pressed, drag the mouse over the **Categorize** action and release the mousebutton again. The **Conference** action is now in top position.

Code change

21. Click the **Objects** tab beneath the form.
22. Select **Appointment (Form)** > **(Options)**.
23. Enter the following code in the **Appointment (Form) : (Options)** area on the right:

    ```
    Use "<script library>"
    ```

    Here, `<script library>` is the name of the library you selected in step 4 on page 42.
24. Click **Appointment (Form)** > **Queryclose** on the **Objects** tab.

    Code is automatically created in the **Appointment (Form) : Queryclose** area.
25. In this code, prefix the line

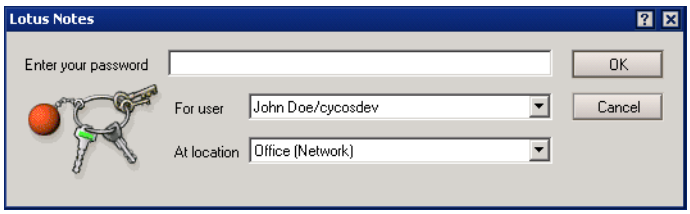
    ```
    End Sub
    ```

    with the following line:

    ```
    Call AutoUpdateConference(csEventObj)
    ```
26. Save the form.

Activation

27. Open a IBM/Lotus Notes client from which you can access the mailbox of the IBM/Lotus Notes user.



28. This dialog prompts you to specify the password for the first time after the conference-plugin installation. This is the moment when the conference toolbar is provided to the IBM/Lotus Notes client.

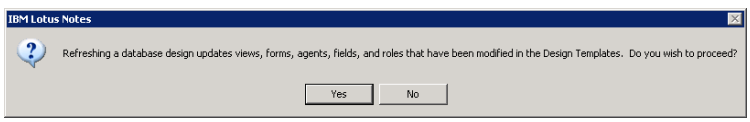
    Enter the password and click on **OK**.

29. Click in the workspace with the right mousebutton on the mailbox of the IBM/Lotus Notes user who is to deploy the conference plugin.

30. Select the menu option **Database** > **Refresh design...**. This menu option reads in other languages:

    - German: **Datenbank** > **Gestaltung aktualisieren...**.
    - French: **Base de documents** > **Actualiser conception...**
    - Italian: **Database** > **Aggiorna impostazione...**
    - Spanish: **Base de dados** > **Actualizar diseno...**

31. Select the IBM/Lotus Domino server on which the mail template is found that you just have modified and click the **OK** button.

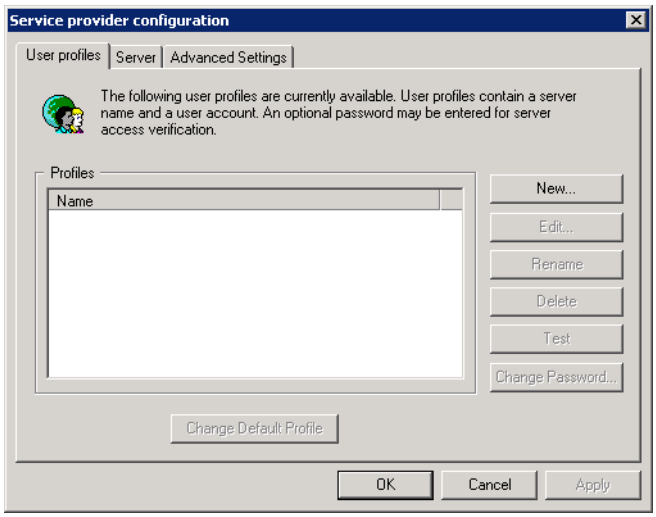


32. Click the **Yes** button.

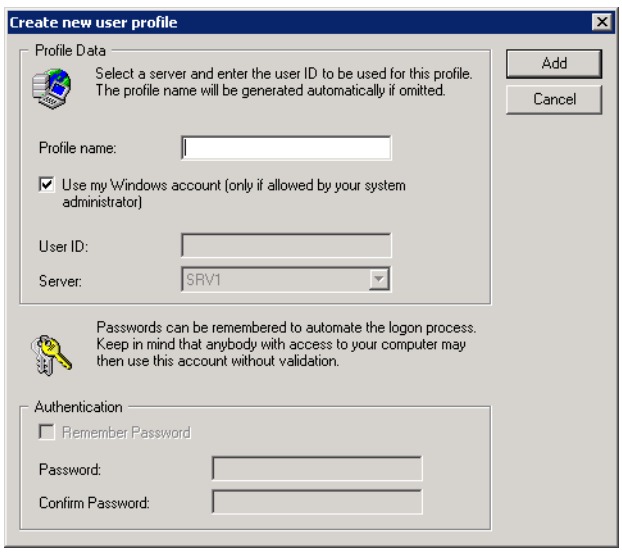
33. Start IBM/Lotus Notes on the client computer. This step is necessary because the conference icon is installed during the initial IBM/Lotus Notes client start after the conference-plugin setup.

34. If there is no profile for the MSP, a dialog opens in which you are asked whether you want to create a new profile.

a) Click the **OK** button.



b) Click the **New...** button.



c) Enter a profile name and, if required, also the user ID, server name and the password. Click the **Add** button.

d) Click on the **Finish** button.

35. The IBM/Lotus Notes client starts. You then need to start the IBM/Lotus Notes client a second time so that the conference icon appears in the toolbar:

Via this icon you reach the **Conferences** dialog of the *OpenScape Web Client*. In this dialog you receive an overview of all scheduled telephone conferences and may make adjustments if required. Please obtain further information about editing conferences in the *OpenScape Web Client* from the *OpenScape Web Client* manual.

NOTE: For a reinstallation of the icon, set the key `HKCU\SOFTWARE\Siemens\optiClient\RunConfToolbarSetup` in the registry to value `RUN` (type `REG_Z`).

If the icon is not displayed, perform the following steps:

a) Before you start IBM/Lotus Notes, set the following key (type `REG_SZ`) in the registry to value `DONE`:

`HKCU\Software\Siemens\optiClient\RunConfToolbarSetup`

b) Open in the IBM/Lotus Domino Designer client the `conf.ntf` file in the `XpressionsInstall\AddOn\Client\LotusNotes\LnConfPlugin` directory of the XPR installation medium.

c) Click on **Shared Resources**, then on **Images**.

d) Select the *Toolbar_CfIcon.gif* entry and copy it to the clipboard.

e) Open the mail template database of the client on the IBM/Lotus Domino server. The mail template database typically has the file name *mail7.ntf*, the title *Mail (R7)* and the template name *StdR7Mail*.

IMPORTANT: If the mail template extensions (see Section 4.4, “Mail Template Extensions”, on page 75) are already installed, the mail template database typically has still the title *Mail (R7)*, but it has, for example, the file name *mail7_um.ntf* and the template name *StdR7Mail/de_um*.

---

f) First click on **Shared Resources**, then on **Images**.

g) Insert the clipboard.

h) Close the IBM/Lotus Domino Designer client.

i) Start the IBM/Lotus Notes client.

j) Select in the **File** menu **Preferences**.

k) In the navigator, on the left hand side, click on **Toolbar** > **Customize**.

l) Click the **New** button in the **Available Buttons** section and select the **Button...** menu option.

m) Enter value `Conference Overview` in the **Button caption text** field.

n) Enter value `Conference Overview` in the **Popup help text** field.

o) Enter the following value in the **Formula** field:

```
URL:=@DbCommand("OC"; "GETURL"; "OVERVIEW");
@If(@IsNull(URL[1]); ""; @Command([Execute];
@Right(URL[1]; ":"); ""))
```

NOTE:
The word-wraps in the input are not required.

---

p) Click the **Change Icon** button.

q) Select the *Toolbar_CfIcon.gif* entry and click on **OK**.

r) Click the **OK** button.

s) Click the **OK** button.

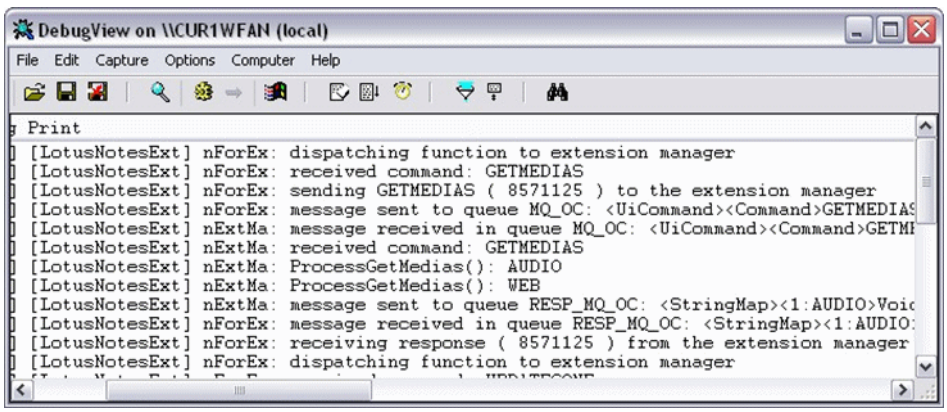
3.4.1.3 Conference Logging

Conference logging of the conference client

To create log outputs for the conference plugin for IBM/Lotus Notes, set in the registry on the client computer the key

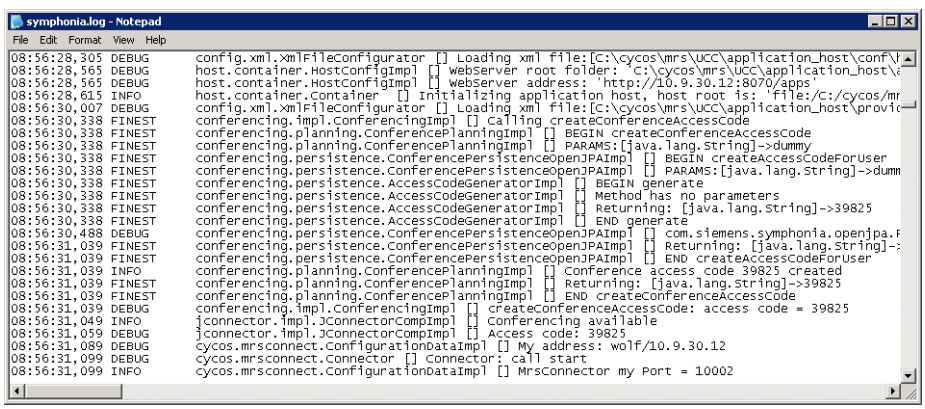
- `HKLM\Software\Wow6432Node\Cycos AG\UnifiedLog\LogActive` to `1` (type *REG_DWORD)* and value
- `HKLM\Software\Wow6432Node\Cycos AG\UnifiedLog\LogFilter` to `65535` or `0xFFFF` (type *REG_DWORD*).

Install Microsoft DebugView on the client computer.



Conference logging of the XPR server

The conference server log is stored on the XPR computer in the file <<XPR *Install*>`\UCC\equinox\log\symphonia.log`.



3.4.2 Installation with restricted User Privileges

This section describes the IBM/Lotus Notes Gateway installation in an environment where no advanced user privileges were assigned to the user ID. The first three steps must be performed by the system administrator, since administrative user privileges are indispensable for these jobs.

Proceed as follows:

1. The system administrator must **create** the **foreign domain** (e.g. NOTESGATE) as well as the **alias domains** (e.g. for FAXG3, VOICE, SMS) in the Domino Directory.

   IMPORTANT: The name of the foreign domain assigned here must be entered in the Setup Wizard during the later IBM/Lotus Notes Gateway installation (cf. step 5 on page 38 of the installation description).

2. The mail database belonging to the foreign domain (e.g. notesgat.box) must be created by the system administrator. The user ID of the IBM/Lotus Notes Gateway must receive the **Delete editor** and **documents** privileges for this database.

   IMPORTANT: In some IBM/Lotus Notes versions the **Delete document** privilege is not part of the editor access rights. Verify that the privilege is assigned at any rate.

   If the mail database of the foreign domain is to be cluster-replicated, its name must end in `.nsf` (e.g. notesgat.nsf), since in the cluster manager only databases with this suffix can be selected.

3. If *TUM* is to be used, the administrator must provide the user ID with **Manager** privileges to access the mail databases of the users.

When these steps have been performed by the system administrator, you may start with the IBM/Lotus Notes Gateway installation in the following steps:

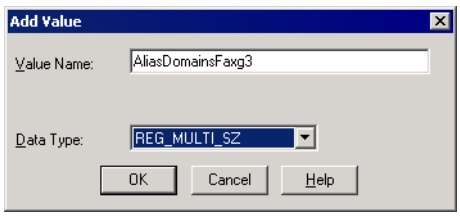
1. Install the IBM/Lotus Notes client on the XPR server computer. Use the user ID designed for the IBM/Lotus Notes Gateway (the ID with the restricted user privileges).
2. After the IBM/Lotus Notes client installation you need to install the XPR server software with the IBM/Lotus Notes integration (see Section 3.4, “Installation Process”, on page 36).
3. If the installation of the XPR server software and the IBM/Lotus Notes Gateway has been performed successfully, the **XPR** server **must not be started**.

4. Open the registry editor and perform the following settings:

   Enter the name of the mail database of the foreign domain in the following key (e.g. notesgate.box):

   ```
   HKLM\SOFTWARE\Wow6432Node\PP-COM\MRS\LnApl\
   Notes_Connections\Notesgate\GatewayDatabase
   ```

5. You can optionally enter further alias domains via **Edit** > **Add value**:

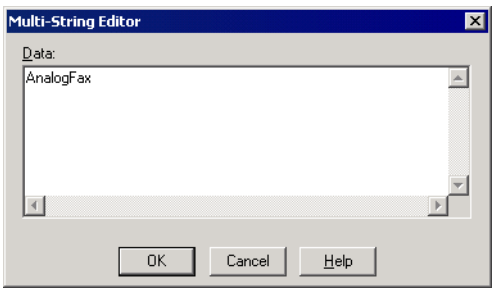
   

   How to enter an alias domain:

   a) Enter the **Value Name** in the corresponding field in the syntax `AliasDomains[Service]` (e.g. **AliasDomainsFaxg3** for the alias domain of the **FAXG3** service).

   b) Select **REG_MULTI_SZ** as data type.

   c) Confirm your entries with **OK** and enter one or several names for the alias domain in the following dialog (e.g. AnalogFax).

   d) Confirm this entry with **OK**. You have now created a value in the form `AliasDomainsFaxg3=AnalogFax`.

   e) Repeat the steps **a** to **d** for further alias domains.

6. After you have performed all necessary settings in the registry, you may close the registry editor.

7. Start the XPR server and the XPR monitor and continue with the IBM/ Lotus Notes Gateway configuration. Please refer to Chapter 4.

4 Configuration and Extension

Subsequent to the installation performed in Chapter 3, the configuration of the IBM/Lotus Notes connection will be completed and extended in this chapter.

NOTE: Since the extension of the IBM/Lotus Notes Gateway features depends on the customer requirement, in this chapter only a few practical examples will be given.

Proceed as follows:

1. Functionality check to ensure the basic functionality of the IBM/Lotus Notes Gateway (Section 4.1, “Basic Functionality Check”, on page 56).
2. Creation of an administration database on the IBM/Lotus Domino server (Section 4.2.1, “Creation of the Administration Database”, on page 61).
3. Activation of the administration database in the configuration dialog of the IBM/Lotus Notes Gateway (Section 4.2.2, “Activation of the Administration Database”, on page 64).
4. Creation of alias domains in the configuration dialog of the IBM/Lotus Notes Gateway (Section 4.2.3, “Creating an Alias Domain”, on page 66).
5. Create user in the administration database and synchronization with the XPR system (Section 4.2.4, “Creating User Data Records”, on page 68).
6. Functionality check to ensure the extended functionality of the IBM/Lotus Notes Gateway (Section 4.3, “Extended Functionality Check”, on page 74).
7. Simplification of message transmission and reception using Unified Messaging mail templates (Section 4.4, “Mail Template Extensions”, on page 75).
8. Installation of IBM/Lotus Notes client components (Section 4.5, “Installing IBM/Lotus Notes Client Components”, on page 109).
9. Check of Unified Messaging mail databases for correct functionality (Section 4.6, “Checking the Unified Messaging Mail Databases Functionality”, on page 110).

4.1 Basic Functionality Check

Before you perform further configuration steps, you should first check if the IBM/Lotus Notes Gateway basic functions work correctly. After you have successfully completed the basic functionality check, you may start configuring or extending the IBM/Lotus Notes Gateway according to your requirements.

4.1.1 Check-up Steps on the XPR Side

1. Start the XPR server.
2. Open the XPR monitor and check if the LnAPL starts correctly and connects with the gateway domain (e.g. NOTESGATE) on the IBM/Lotus Domino server.

   Pay attention to all messages that are displayed in the windows **Default Logging** and **Error Logging**.

   - A successful LnAPL start is issued in the **Default Logging** with the following, green, message:

     ```
     LnAPL version 6.00.27(Win-NT)Release Build 4487,OK.
     ```

     If the LnAPL has connected with the gateway domain on the IBM/Lotus Domino server, this is displayed in the **Physical Lines** window.

NOTE: If you have selected the LnUmAPL in addition to the LnAPL, it starts with an error message and is then stopped. However, this is not unusual, since the LnUmAPL requires a connection between the LnAPL and the administration database on the Domino server. This requirement is not yet met.

---

3. If error messages come up during the start of the LnAPL, please check the following issues:
   - Is the IBM/Lotus Notes client installed on the XPR server able to log in at the Domino server using the IBM/Lotus Notes Gateway user ID?
   - Is it possible to create a database and a foreign domain on the Domino server with the local IBM/Lotus Notes client using the IBM/Lotus Notes Gateway user ID?
   - For TUM: Can the local IBM/Lotus Notes client open the users' Notes mail databases using the user ID of the IBM/Lotus Notes Gateway?
   - If all these check-up steps were be performed successfully, but the LnAPL still does not start correctly, there might be an installation error. In this case, check whether all installation preparation requirements have been met (cf. Section 3.2, “Installation Requirements on the XPR Side”, on page 28) and, if required, perform the installation again (cf. Section 3.4, “Installation Process”, on page 36).
4. After a successful functionality check on the XPR side, continue with the check-up steps on the IBM/Lotus Notes side.

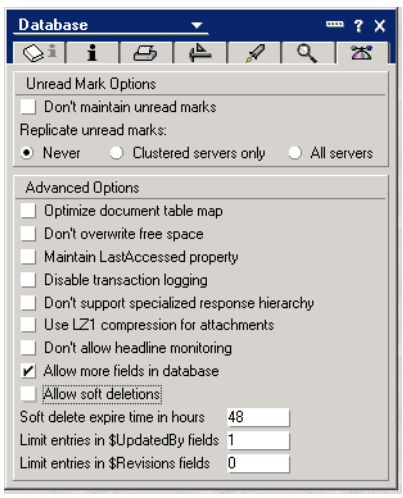
4.1.2 Check-up Steps on the IBM/Lotus Notes Side

1. Check in the **logging window of the IBM/Lotus Domino server**, if the LnAPL could log in with the user ID. If the user ID has, for example, received the user name **gateway** and is registered in the IBM/Lotus Notes domain **doc-test**, you find the following entry in the server log:

   ```
   Opened Session for gateway/doc-test (Release 6.5.1).
   ```

2. Start the IBM/Lotus Domino Administration client and check if

   - a foreign domain has been created in the Domino Directory of the IBM/ Lotus Domino server (e.g. the domain **NOTESGATE**) and
   - if a gateway mailbox has been created (e.g. the mailbox **notesgat.box**).



IMPORTANT: The default settings of the mailbox **notesgat.box** cause excess of the mail file quota, since deleted messages are first stored in the bin and are only deleted after the *Soft Delete Expire Time* has expired (default: 48h).

Make sure that the **Allow soft deletions** checkbox in the mailbox properties dialog on the **Advanced** tab is NOT selected.

NOTE: If you have performed an installation with restricted user rights, you can skip these check-up steps (see Section 3.4.2, “Installation with restricted User Privileges”, on page 52).

3. If errors come up on the IBM/Lotus Notes side, first check if the user ID of the IBM/Lotus Notes Gateway is provided with the required installation access rights (see Section 3.3.2.1, “Required Installation and Configuration

Privileges", on page 34). Furthermore, you may perform the check-up steps from Section 4.1.1, "Check-up Steps on the XPR Side", step 3 for trouble shooting.

4. After a successful functionality check on the IBM/Lotus Notes side, continue by sending a test message.

4.1.3 Sending a Test Message

At present the IBM/Lotus Notes Gateway is able to send fax messages from within a IBM/Lotus Notes client to a recipient.

Therefore you may perform a functionality check on the basis of a sent fax message. Proceed as follows:

1. Start the IBM/Lotus Notes client on a client computer. Do **not** use the IBM/Lotus Notes client that is installed on the XPR server.
2. Log in with the user ID of a regular IBM/Lotus Notes user. Do **not** use the user ID of the IBM/Lotus Notes Gateway for login.
3. Open the IBM/Lotus Notes client mail interface and click the **New Memo** button to create a new message.
4. Send a message to a phone number connected to a fax device. Proceed as follows:

Example: Test message to a fax device

The test message is to be sent to the fax device with the phone number 02404/1234-567. Therefore you must enter this phone number in the **To:** address field in the format:

`024041234567@FAXG3@NOTESGATE`

The parameter `faxg3` determines the message format, the parameter `notesgate` is the foreign domain name.

5. Enter the phone number in the address field **To:** as explained in the example and write a short message text.
6. Click the **Send** button to start sending the message immediately.
7. After a short time, your fax device should put out the message that had been sent.
8. If sending the test message has been completed successfully, the basic functionality of the IBM/Lotus Notes Gateway has been ensured.
9. Continue the installation of the IBM/Lotus Notes Gateway by creating the **administration database** (see next section).

4.2 The Administration Database

The administration database is used for the administration of user data (e.g. phone numbers for fax, voice mail etc.) under IBM/Lotus Notes.

NOTE: If the connection between the server and a client computer is too slow, the Notes templates use the local configuration data on the client computer instead of retrieving the configuration data from the server to open an XPR document. This reduces the waiting time until a document will be opened.

The XPR server controls the administration database and replicates changes or new user data automatically to its user database. Similarly, user data that has been changed in the XPR server is replicated back to the administration database and is thus available with IBM/Lotus Notes.

Furthermore, the administration database is used for the creation of additional features of the Lotus Notes APL (True Unified Messaging, CTI support etc.).

4.2.1 Creation of the Administration Database

A database template is used for the creation of the administration database that comes with all supported IBM/Lotus Notes versions. The file name of this template is `umAdmin.ntf` for all versions.

The database templates of the administration database are stored in the installation directory of the XPR server in the following path:

```
<XPR Install>\RES\LnApl\TemplatesR6
<XPR Install>\RES\LnApl\TemplatesR7
<XPR Install>\RES\LnApl\TemplatesR8
...
```

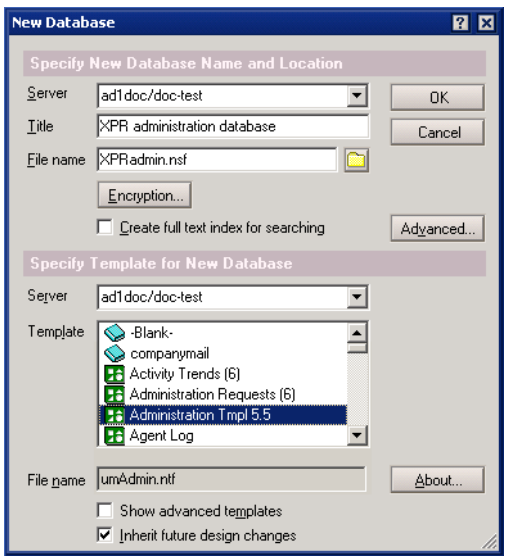
NOTE: If you use IBM Notes 9.0 Social Edition (Basic Configuration) and IBM Domino 9.0 Social Edition, use the mail templates for Lotus Notes 8.

NOTE: The database template is multilingual. At the moment, 10 languages are supported.

Please proceed as follows to create the administration database:

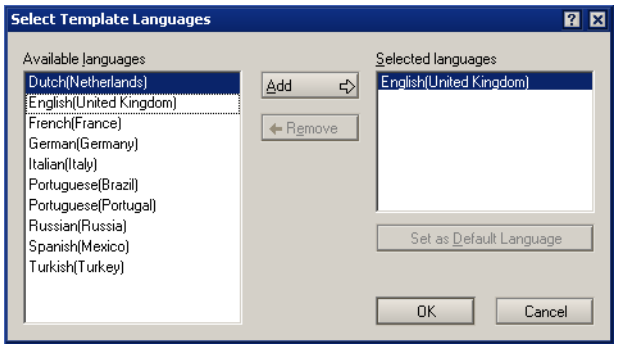
NOTE: For the following steps you must have access rights on the IBM/Lotus Domino server allowing you to create databases.

1. Start the IBM/Lotus Domino administration client or the IBM/Lotus Notes client and log in to the Domino server.
2. Copy the template file `umAdmin.ntf` from the XPR server installation directory to the IBM/Lotus Domino server `data` folder. This is the folder `\Lotus\Domino\Data` for a default installation.
3. Create a new database (**File** > **Database** > **New**).
4. Select the Domino server the IBM/Lotus Notes Gateway cooperates with as the **storage location** of the new database .
5. Enter a significant name for the new database in the **Title** field.
6. If necessary, adjust the file name and storage location of the database in the **File name** field. Generally, nothing needs to be modified here.
7. Select the Domino server the template has been copied to in step 2 as the **Template server**. The database template of the administration database is an advanced template, thus the check box **Show advanced templates** must be selected in the dialog.



8. Confirm the settings by clicking the **OK** button. The creation of the administration database will then start.

9. Select one or several languages in the following dialog and confirm your selection by clicking the **OK** button.



10. After the new database has been created successfully, you need to configure the database **access rights**. Decide which persons are to have access to this database and determine their privileges.

    It is especially important to assign the appropriate access rights to the user **ID** which is used by the IBM/Lotus Notes Gateway. This ID needs at least **editor access rights** with the privilege **delete documents** on the administration database.

IMPORTANT: In some Lotus Notes R6 versions the **Delete document** privilege is not part of the editor access rights. Make sure that the privilege is assigned at any rate.

NOTE: If the database cannot be created, check the access rights of the template first. You must at least have **Read** rights for accessing the template.

Furthermore, you need to check if you generally possess the right to create databases on the IBM/Lotus Domino server you have selected (you can check this in the server document of the IBM/Lotus Domino server on the **Security** tab).

---

11. Continue the installation of the IBM/Lotus Notes Gateway by activating the **administration database** in the configuration dialog of the IBM/Lotus Notes Gateway (see next section).

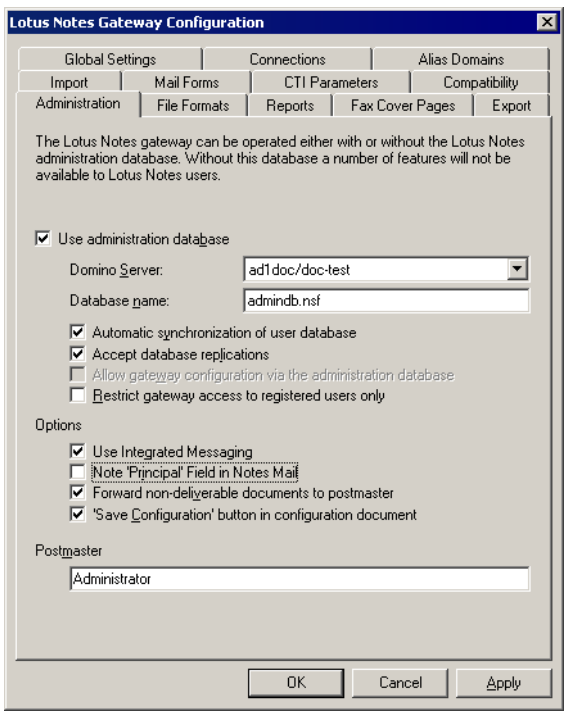
4.2.2 Activation of the Administration Database

In this installation step the administration database on the IBM/Lotus Domino server is connected to the IBM/Lotus Notes Gateway of the XPR server.

This connection is required for the replication of user data between the administration database and the XPR server on the one hand. On the other hand, the Lotus Notes Unified Messaging APL (LnUmAPL) uses this connection to realize the *True Unified Messaging* feature (see Section 2.2.3, “True Unified Messaging (TUM)”, on page 22).

Proceed as follows:

1. Start the XPR monitor.
2. In the **Components** window open the configuration dialog of the **LnAPL** and therein the **Administration** tab.



3. Activate the **Use administration database** option. The parameters that can be set will then be released.
4. The hierarchical name of the IBM/Lotus Domino server on which the administration database is stored is normally already entered in the **Domino Server** field. If this is not the case, select the appropriate Domino server here.
5. Enter the **file name** of the administration database in the field **database name**. If the database is stored in the `data` directory of the Domino Server, you do not need to enter a path. If the entry includes the database name and also a path (e.g. `XPR\XPRAdmin.nsf`), this path is interpreted relatively to the `data` directory of the IBM/Lotus Domino server - if it does not contain a

drive name or leading backslashes. Paths with drive names or leading backslashes such as `E:\XPR\XPRAdmin.nsf` or `\XPR\XPRAdmin.nsf`) are not allowed.

6. Activate the **Automatic synchronization of user database** option.

   Activating this option causes the synchronization of the user data records of the administration database with the user database. The LnAPL controls the administration database and synchronizes the user data records on both systems regularly.

7. Activate the **Accept database replications** option.

   Activating this option enables the LnAPL to cooperate with replicas of the administration database. If the administration database should not be available e.g. when the Domino server breaks down, the LnAPL switches to a Domino server where a replica of the administration database is stored.

8. Optionally you may also activate the **Restrict gateway access to registered users only** option.

   This function allows only IBM/Lotus Notes users that have been entered in the administration database to use the IBM/Lotus Notes Gateway. Users that have not been entered are then e.g. not able to send fax messages via the IBM/Lotus Notes client.

9. Save the settings via the **Apply** button and close the configuration dialog via the **OK** button.

NOTE: For information on the additional configuration possibilities of this dialog please refer to Chapter A, “Configuration of the IBM/Lotus Notes Gateway”.

   The connection between the administration database and the IBM/Lotus Notes Gateway has now been established.

10. It is also possible to create alias domains in the configuration dialog of the LnAPL that simplify the addressing of messages that are to be sent.

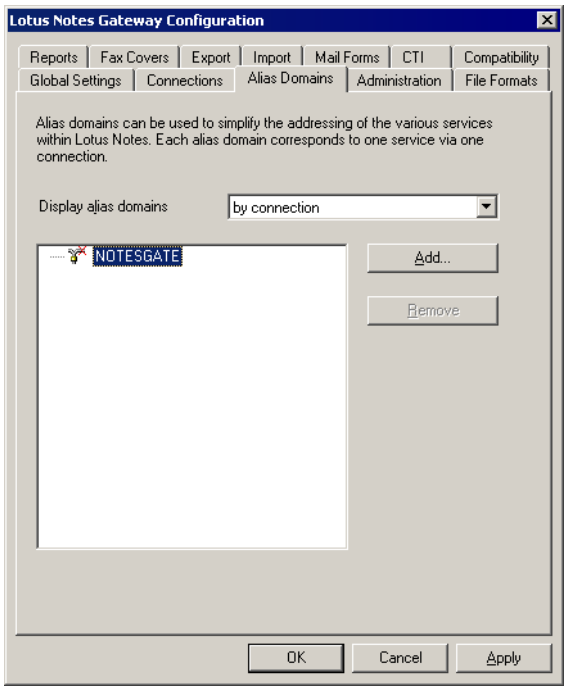
    If you do not wish to create alias domains, continue the installation process in Section 4.2.4, “Creating User Data Records”, on page 68.

4.2.3 Creating an Alias Domain

Creating an alias domain simplifies addressing because the syntax `<Call number>@<Service>@<Foreign Domain>` (e.g. `02404901123@FAXG3@NOTESGATE` to send a fax) no longer needs to be entered. If an alias domain with the designation **FAXG3** is set up, then only the syntax `<Call number>@`<New Alias Domain> (e.g.`02404901123@FAXG3`) needs to be entered.

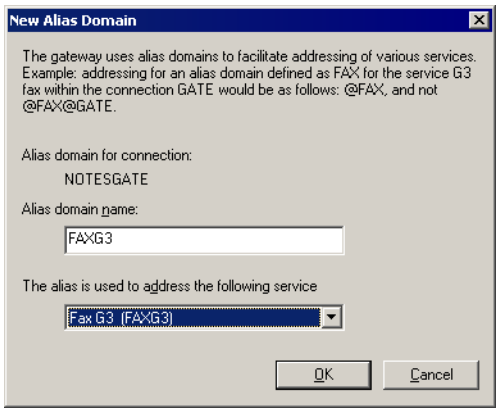
To create alias domains proceed as follows:

1. Open the LnAPL configuration dialog in the XPR monitor.
2. Change to the **Alias Domains** tab in the configuration dialog.



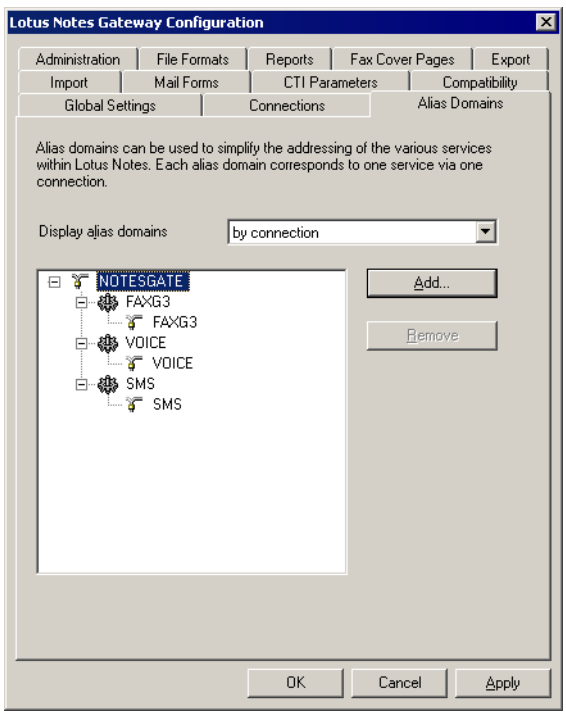
3. Select the already existing foreign domain (in this case **NOTESGATE**). The **Add** button will thus become active.

4. Click the **Add...** button and select the service you wish to create an alias domain for from the **list field** of the next dialog.



5. If you change the name created automatically in the **Alias domain &name** field, do not use an already existing alias domain name. Close this dialog via the **OK** button.

6. The alias domain that has been created is now displayed in the **List** of the available alias domains.



7. Proceed similarly to create additional alias domains.
8. You can remove a selected alias domain via the **Delete** button.
9. Save your settings by clicking on the **OK** button.

NOTE: Check if the alias domains have been created as additional foreign domains on the IBM/Lotus Domino server via the IBM/Lotus Domino administration client.

---

10. Continue the installation process in the following section.

4.2.4 Creating User Data Records

Before you start creating user data records in the administration database, you need to check the following issues:

- Which message types are the users allowed to send and receive?
- Have all scripts and extension ranges for these message types been configured?

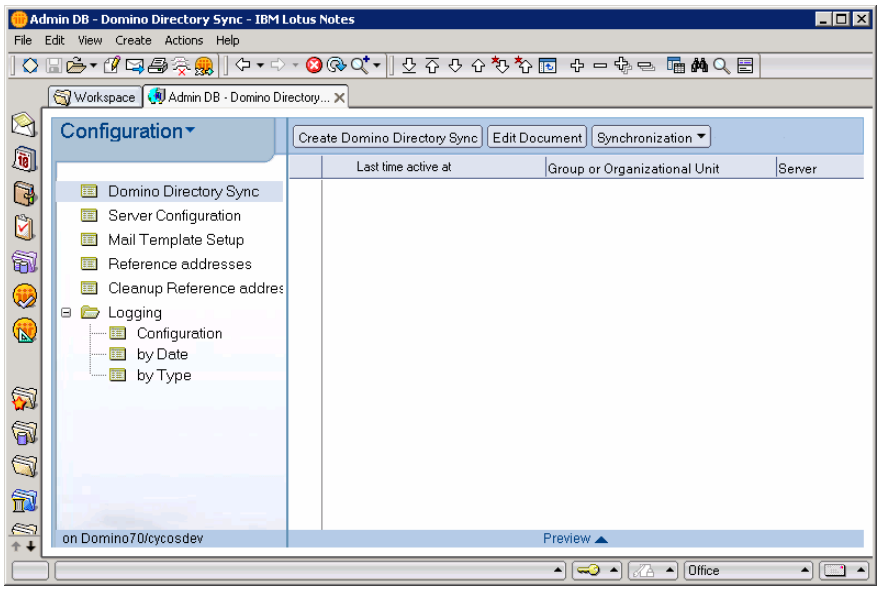
  Check if the scripts for the different message types have been created in the Telematic APL (ISDN or IP APL) of the XPR server. If users are to apply e.g. Voicemail, the Phonemail, VMS or ERGO protocol must exist in the Telematic APL and an extension range must have been set. For further information please refer to the manual *Server Administration*.

4.2.4.1 Administration Database for the supported IBM/ Lotus Notes Versions

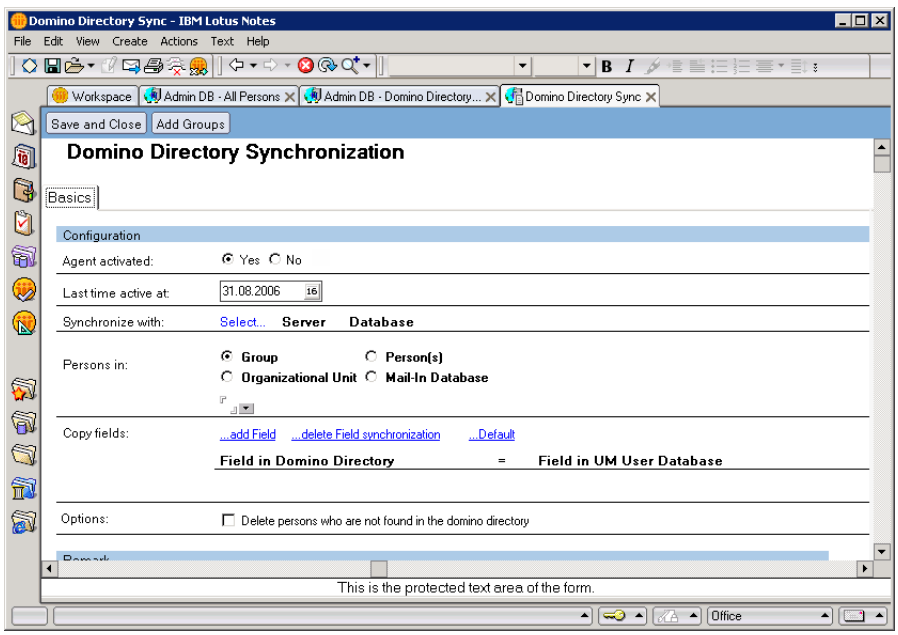
To create user data records in an administration database for the supported IBM/ Lotus Notes versions please proceed as follows:

1. Start the IBM/Lotus Domino administration client or the IBM/Lotus Notes client and log in to the Domino server.
2. Open the administration database.

3. In the **menu bar** of the IBM/Lotus Notes client click the **View** menu and select the **Domino Directory Sync** menu option. A new configuration interface opens.

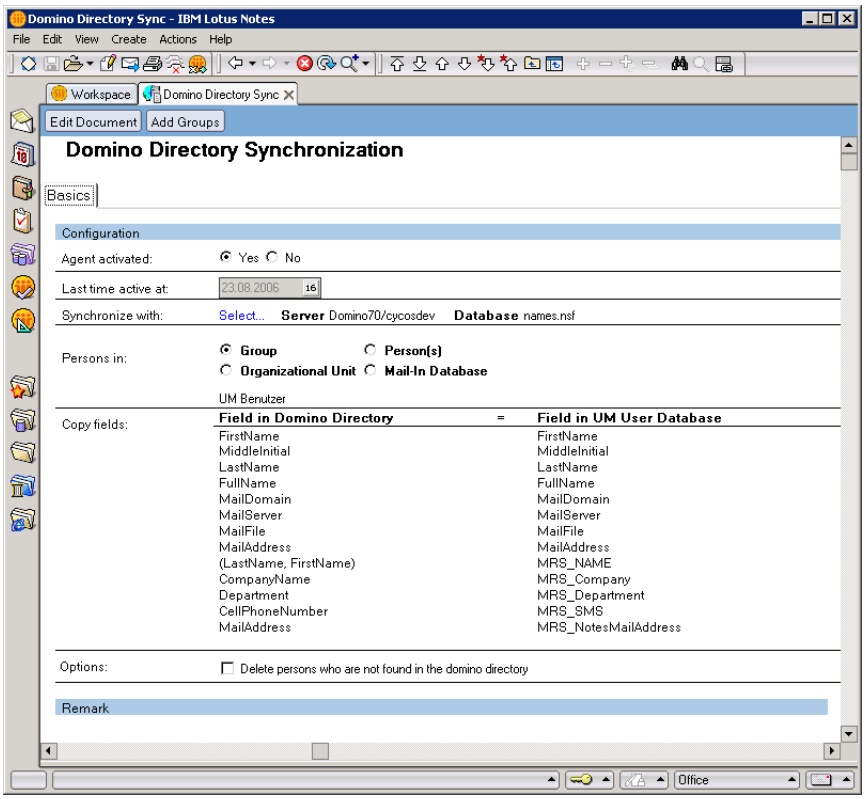


4. Push the **Create Domino Directory Sync** button. A window opens in which you need to perform the synchronization process settings.



- If you want to regularly synchronize the person documents with the Domino directory, the synchronization agent must be active (default setting in the **Agent activated** field). The initial activation of the agent opens a dialog in which you need to select the IBM/Lotus Domino server on which the synchronization agent is to be executed.

- The **Last time active at** field displays the date when the last synchronization was performed.



- Click the link **Select...** in the **Synchronize with** field and select in the following window the IBM/Lotus Domino server and the Domino Directory (`names.nsf`) of this server.
- In the **Persons in** section activate
  - the **Group** option and then push the **Add Groups** button, or
  - activate the **Person(s)** option and then push the **Add Persons** button.

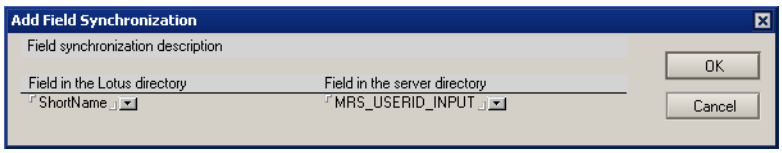
  In the following window select **one or several entries** from which you want to synchronize user data records.

IMPORTANT:
If your Notes directory contains a large number of users, the dialog capacity may be exceeded and an error message appears. In this case, use the **Add Groups** button in the document header. This button opens a dialog in which available groups can be selected.

- Click the**...Default** link in the **Copy fields** section. With this setting, the most important user data is assumed from the address book entries.

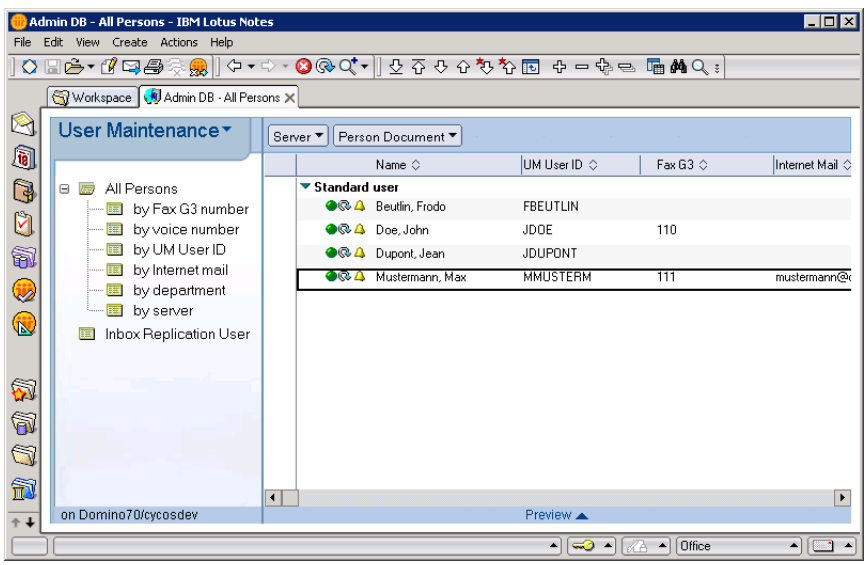
- Then click the **...add Field** in the same section. In the following selection dialog choose the **ShortName** parameter under **Field in the Lotus directory** and the **MRS_USERID_INPUT** parameter under **Field in the server directory**. Confirm the selection with **OK**.

NOTE:
By adding this additional field the automatic creation of a XPR user ID is suppressed. The ShortName of the corresponding user is then used as the user ID.



- You do not need to make a selection in the **Options** field.

5. Click the **Save and Close button** to complete the settings for the address book synchronization. You will now come to the main window again.



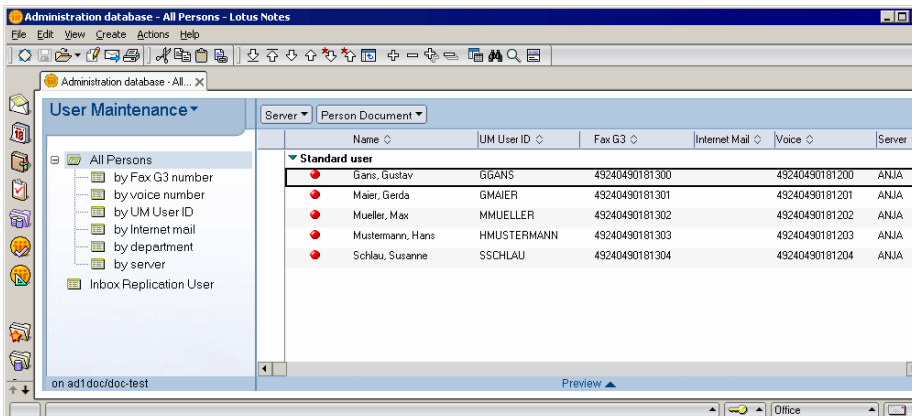
6. The created synchronization process is displayed in the list of the main window. Click the **Synchronization** button and select the **Synchronize now** option.

7. The synchronization process starts. The synchronization process can take a while depending on the number of the address book entries that need to be synchronized.

NOTE:
After the synchronization process has been finished, you find the synchronized user data records in the administration database user view.

---

8. After the synchronization process has been finished successfully, you may close the main window of the Domino directory synchronization and change to the administration database user view.



9. The user view now shows the following:

   - A red dot is displayed in front of each user data record as these data records have not been selected for the address book synchronization to the XPR server.
   - The XPR user ID has been entered in the **UM User ID** column. The XPR system uses this unique ID to identify each user. If the user ID is automatically created, an identification is entered in this field starting with `LNUSER....`
   - In each user data record a **FaxG3** number is entered since this phone number existed in the address book entry of the user.

10. If you do not want to send the user data to the XPR server at this point of time, proceed as follows:
    - Select all data records and click the **Server** button.
    - Select the **UM User Database Synch On** option in the menu that pops up.
    - All data records that have been selected are now replicated to the XPR server and then marked with a **green dot**.

NOTE:
Check if the transmission of the user data records has been successful. Therefore, start the *Communications* client and check if all data records can be found in the **user group**.

11. The creation of the user data records is thus completed for now. You may then modify the data records according to your requirements.
    - To perform global settings we recommend to create one or several user profiles first and to assign these to the users afterwards. The creation of user profiles is described in Section B.1.2.6, “The Profile Document”, on page 160.
    - All parameters you can set in a user data record, and all additional configuration possibilities of the administration database are depicted in Chapter B.

4.3 Extended Functionality Check

The following requirements must be met so that the extended functionality of the IBM/Lotus Notes Gateway can be checked.

- The basic functionality of the IBM/Lotus Notes Gateway must be available (see Section 4.1, “Basic Functionality Check”, on page 56).
- The administration database must exist on the IBM/Lotus Domino server (see Section 4.2.1, “Creation of the Administration Database”, on page 61).
- The IBM/Lotus Notes Gateway must be connected with the administration database (see Section 4.2.2, “Activation of the Administration Database”, on page 64).
- Alias domains must exist (see Section 4.2.3, “Creating an Alias Domain”, on page 66).
- In the administration database user data records must exist (see Section 4.2.4, “Creating User Data Records”, on page 68).
- The user data records must have been replicated to the XPR server (see Section 4.2.4, “Creating User Data Records”, on page 68).

When you have completed the steps in the previous two sections, you may now check the functionality according to the following example:

Example: IBM/Lotus Notes User with Fax and Voice Mail

A FaxG3 number and a voice mail number have been assigned to a IBM/Lotus Notes user. His/her user data record exists in the administration database and on the XPR server. The user shall now be able to send and receive fax messages via his/her IBM/Lotus Notes client as well as to receive and listen to voice messages.

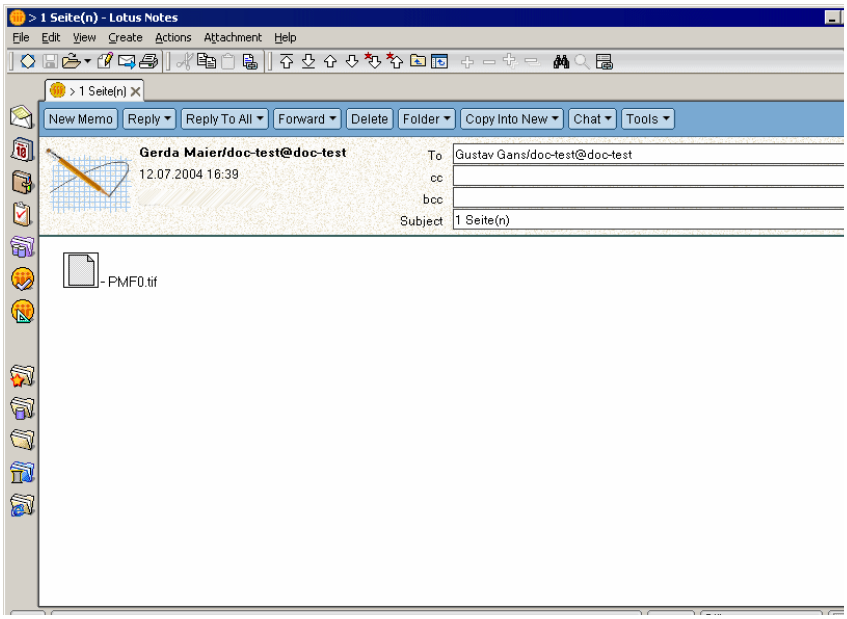
Proceed as follows:

1. Start a IBM/Lotus Notes client of a user who is to use the IBM/Lotus Notes Gateway. Do **not** use the IBM/Lotus Notes client that is installed on the XPR server.
2. Open the mail interface in this user's IBM/Lotus Notes client.
3. Send a fax message to a fax device by clicking the **New Memo** button in the IBM/Lotus Notes mail interface and entering an address with the following syntax in the address field **To:**:

   `<Fax phone number>@<Name of the alias domain>.`

   If the phone number of the fax device is e.g. **02404/1234-567** and the FaxG3 alias domain name is **FAXG3**, you need to use the address `567@FAXG3`.
4. Write a short message text and then click **Send**.

5. After a short time, your fax device should put out the message that had been sent.
6. Send the message you have received on the fax device back to the user's fax number.
7. After a successful transmission the IBM/Lotus Notes user must find a message in his/her inbox with the attached fax message file.



8. A double-click on the attached file opens it in a new window.
9. If you have assigned the user a voice mail number, call this number from a telephone and record a message for this user.
10. The voice mail must be displayed in the IBM/Lotus Notes user inbox after a short time. Again a file is attached containing the voice mail.
11. A double-click on the attached file opens it in a media player that is installed on the client computer (e.g. Windows Media Player).

4.4 Mail Template Extensions

4.4.1 General Considerations

After you have performed all steps in the sections 4.1 to 4.3, you have successfully added the Unified Messaging features of your XPR system to your IBM/Lotus Notes system.

In order to simplify sending and receiving of the message types the XPR server provides for the users, you may add Unified Messaging design elements to their IBM/Lotus Notes mail interfaces.

The Unified Messaging design elements come with so-called mail template extensions for the supported IBM/Lotus Notes versions.

NOTE: You find an overview of all mail template extensions and of the design elements contained therein in Section C.1, “XPR Mail Template for the supported Versions of IBM/Lotus Notes”, on page 161.

Adding the Unified Messaging design elements to the user mail interfaces has the following advantages:

- Addressing is simplified. The recipient addresses no longer need to be entered in the form `<Phone number>@<Service>@<Foreign Domain>` or `<Phone number>@<Alias Domain>`. If a user wants to send e.g. a fax message, he/she opens a fax entry form in his/her IBM/Lotus Notes mail interface and enters the recipient address as a normal phone number. He/she can also use the IBM/Lotus Notes address book to select a recipient.
- Received fax and voice mails are no longer delivered as file attachments that need to be opened with external programs. Thus a received voice message is opened in a form with an operating unit so that you can comfortably listen to the message.
- Voice mails can be created and sent. It is not possible to create voicemails in the IBM/Lotus Notes mail interface without mail template extensions. Therefore a form is added to the mail interface including an operating unit to record voice messages.

The following paragraphs describe the steps for the Unified Messaging extensions of the IBM/Lotus Notes mail interface.

The Unified Messaging design elements are added to a default IBM/Lotus Notes mail template (`mail6.ntf` or `mail7.ntf`). The procedures described are also applicable with mail templates already possessing company-specific extensions.

NOTE: If you use IBM Notes 9.0 Social Edition (Basic Configuration) and IBM Domino 9.0 Social Edition, use the mail templates for Lotus Notes 8.

IMPORTANT: Creating and extending a IBM/Lotus Notes mail template requires profound IBM/Lotus Notes knowledge. Thoughtless modifications might cause a breakdown of the IBM/Lotus Notes mail interface in the worst case.

4.4.2 Extended Mail Templates for Lotus Notes R7.x and higher

You create extended mail templates for the supported versions of Lotus Notes R7.x and higher and IBM Notes using a setup.

If the extended mail templates are to support several languages, the desired language packets must be installed on the Domino server. For the setup described here it is sufficient to merely expand the `mail7.ntf` template with the desired languages. For the time being, the Unified Messaging mail template (`umMail.ntf`) supports the following languages:

- German (DE)
- English (EN)
- French (FR)
- Italian (IT)
- Spanish (ES)
- Dutch (NL)
- Portuguese (PT)
- Brazilian (BR)

The extended mail templates created by the setup support the languages supported by the Notes mail template `mail7.ntf` as well as by the Unified Messaging mail template.

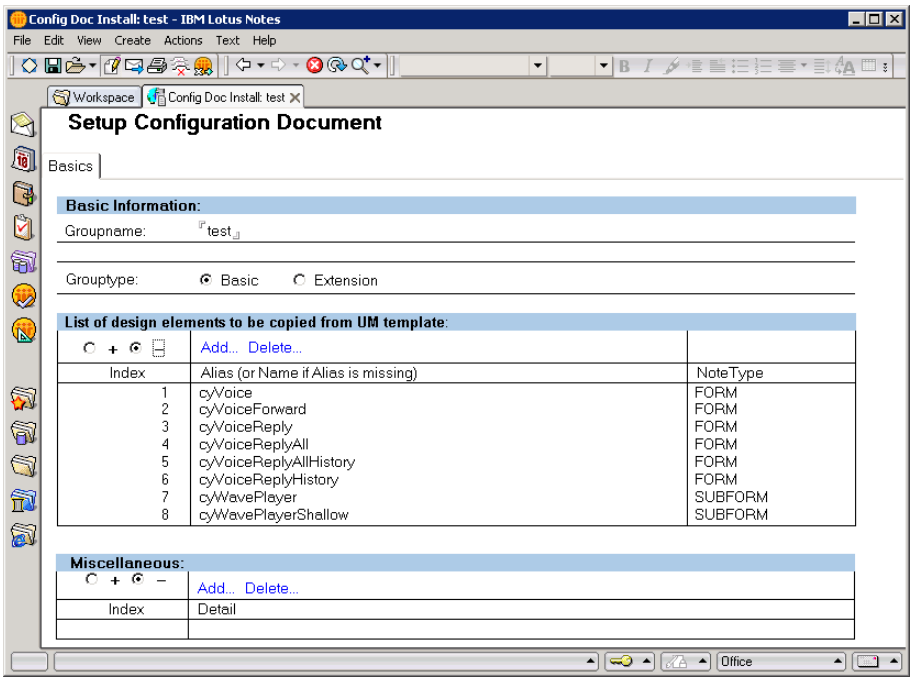
The setup is managed via configuration documents. The scope of delivery contains some configuration documents that cover scenarios often used. Some tailored configuration documents may be defined. Most scenarios, however, are mapped via combinations of already existing configuration documents, so that some configuration documents are not necessarily required.

The following configuration documents are already available:

- **Complete**: Contains a compilation of all functionalities
- **Standard**: Contains functionalities often used
- **CTI**: Contains all elements required for CTI
- **Fax**: Contains all elements required for Fax
- **Fod**: Contains all elements required for Fax-on-Demand
- **IM**: Contains all elements required for Integrated Messaging (may also be used for TUM)
- **SMS**: Contains all elements required for SMS

- **Voice**: Contains all elements required for Voice

A configuration document is divided into three sections:



Basic Information:

In this section you enter the **Groupname** and specify a **Grouptype**. The groupname is freely selectable. The following grouptypes are available:

- **Basic**: In a basic group all elements required for the basic functionality and/or for Integrated or Unified Messaging are compiled. During the setup you may select several basic groups, so that you can, for example, choose one basic group for the basic functionality, and another one for e.g. Integrated Messaging.
- **Extension**: An extension compiles all elements that expand a basic group with specific functions. For example, an extension may expand an Integrated Messaging basic group with the Fax function. During the setup you can select several extensions, of which each only adds a subset of the possible functionality (*Fax only* or *Fax and Voice* or *FoD and Fax* ...).

List of design elements to be copied from UM template:

This section displays all design elements (agents, forms, script libraries, subforms and views) that are a component of the configuration document and sorts them according to their index. The index complies with the sequence in which the design elements are added to the configuration document.

The list can be folded out or in via the **+** and **-** checkboxes. Using the links **Add...** and **Delete...** you can add design elements to the list or remove them from there.

Miscellaneous:

In this section you can enter actions for having necessary modifications to default design elements performed. The following actions are available:

- **Insert actions and form or view/folder:**
  Using this action, menu options are added to the inbox, so that a user may access functions such as **New Fax** or **Forward Fax**. Adding this option requires the performance of further steps:

  1. Select the design element (e.g. *$Inbox*), in which the menu options are to be inserted. Then click the **OK** button.
  2. Select the menu options (actions) that are to appear in the above design element (e.g. *Cycos New Fax*, *Cycos Forward Fax*, *Cycos Reply Fax*). Then click the **OK** button.

- **Modify database script**:
  This action modifies the database script to that effect that deleting a document in the IBM/Lotus Notes inbox is replicated to the XPR server.

- **Add entry in "NotesMailOutline"**:
  This action adds the menu options **Unified Messaging** and **Unified Messaging > Logging** to the default design element *$Inbox* underneath the **Tools** menu option.

- **Modify Lotus script in the memo form**:
  This action modifies the memo form to the effect that modifications to the status of a message (unread becomes read etc.) can be communicated to the XPR system. This enables the message status modification on the XPR server as well.

- **Insert column in inbox**:
  This action adds another column to the *$Inbox* default design element, in which an envelop icon displays that a message was sent or received via the XPR server.

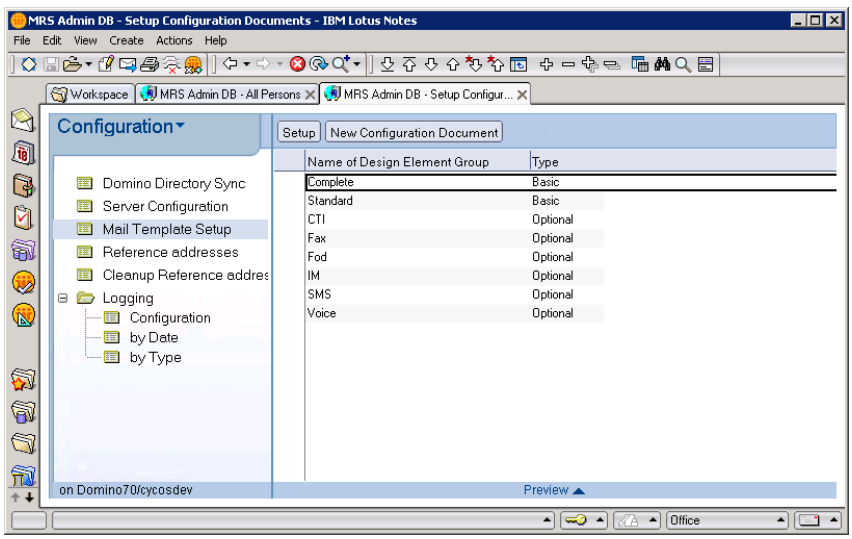
The list can be folded out or in via the **+** and **-** checkboxes. Using the links **Add...** and **Delete...** you can add actions to the list or remove them from there.

4.4.2.1 Defining individual Configuration Documents

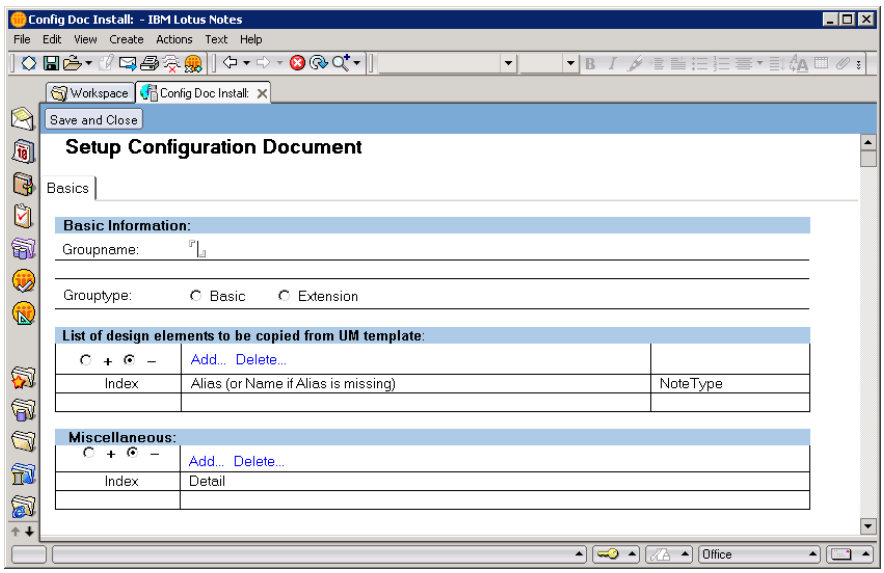
Using your own configuration document you can configure a setup precisely adapted to a specific environment. Such a document can be used for a setup everywhere.

We will illustrate the definition of a configuration document based on an example. The configuration document created in the example contains the necessary extensions for the Fax, Voice and CTI function and supports Integrated Messaging. Proceed as follows:

1. Start IBM/Lotus Domino Administrator client and open the XPR administration database.
2. Switch to the configuration view of the administration database. Click on **User Maintenance** and select the **Switch to configuration** option in the context menu.
3. Select the **Mail Template Setup** entry in the list. An overview displays the already available configuration documents:

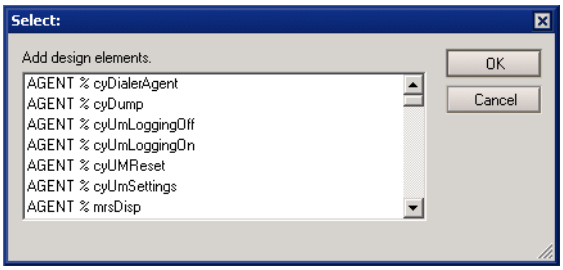


4. Click on the **New Configuration Document** button. A new configuration document opens:



5. In the **Basic Information** section enter a group name and select the desired grouptype via the corresponding selection field. The groupname can be freely selected.

6. Add the design documents to become components of your mail template. Click the **Add...** link. The following dialog opens:



Select the design documents that you want to add to the configuration document. We need the following elements for the example configuration document:

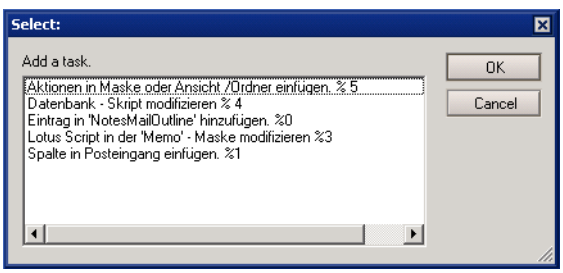
- Basic functionality (first table row)
- Sending and receiving fax messages (second table row)
- Sending and receiving voice mails (fourth table row)
- Integrated Messaging (penultimate table row)

IMPORTANT:
Verify that you select all elements in the table intended for the respective function. Missing elements lead to compilation errors and the extended mail template will not work.

---

7. Click the **OK** button to copy your selection. The selected elements are entered in the list.

8. In the **Miscellaneous** section, add actions to have the setup perform special adaptions to default design elements. Click the **Add...** link. The following dialog opens:



9. Select the action **Insert actions in form/folder** and click on **OK**. This action requires further configuration specifications.

10. Select the design element (e.g. *$Inbox*), to which the menu options are to be added. Then click the **OK** button.

11. Select the menu options (actions) to eventually appear in the design element (e.g. *Cycos New Fax*, *Cycos Forward Fax*, *Cycos Reply Fax*, ...). Then click on **OK**.

12. Specify the starting position (index) of the new menu options in the menu bar. The new menu options will then appear from this position in the menu bar. Example:

    If you specify starting position 1, the first new menu option will appear leftmost in the menu bar, all other to the right of it. The already available menu options will be moved to the right.

    Afterwards, click on **OK**. The action **Insert actions in form/folder** will now be entered in the **Miscellaneous** list.

13. In the **Miscellaneous** list click on the **Add...** link.

14. Add the following actions to the list in succession:

    - Modify database script
    - Insert column into inbox
    - Modify Lotus script in the memo form

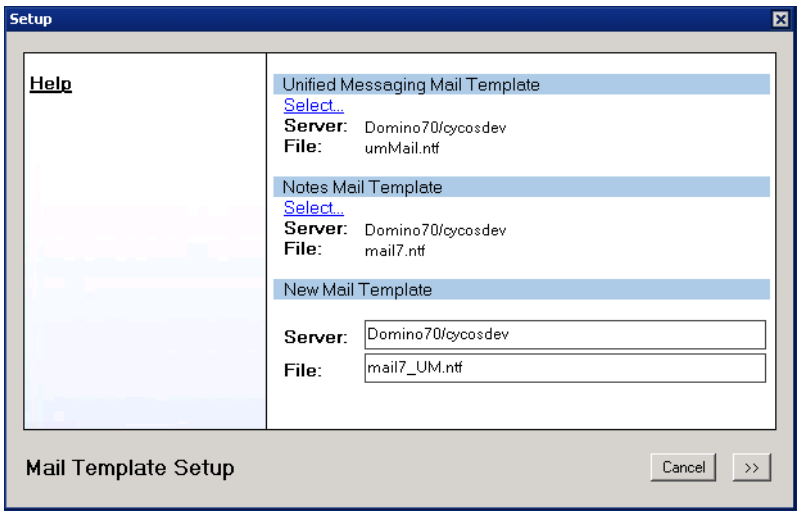
    The action **Modify database script** is added to the **Miscellaneous** list.

15. Save the configuration document via the **Save and Close** button.

4.4.2.2 Creating an extended Mail Template

How to create an extended mail template:

1. Start IBM/Lotus Domino Administrator client and open the XPR administration database.
2. Switch to the configuration view of the administration database. Click on **User Maintenance** and select the **Switch to configuration** option.
3. Select the **Mail Template Setup** entry in the list.
4. Click the **Setup** button. Up comes this dialog:

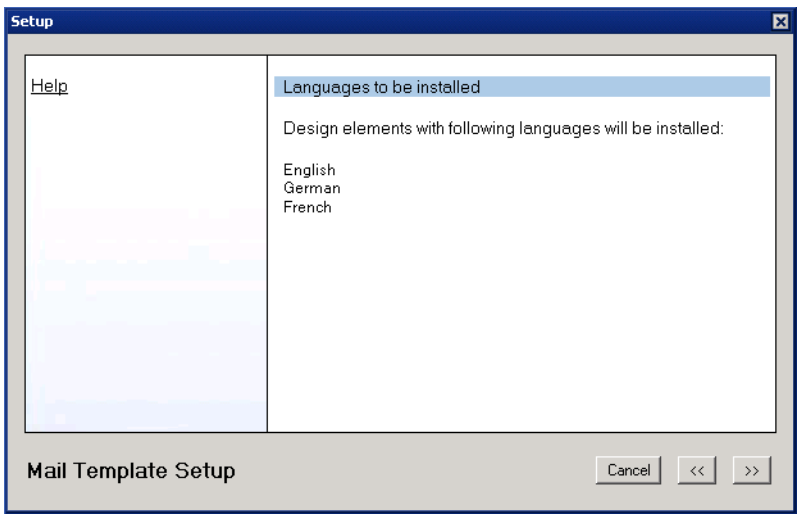


5. In this dialog you specify the Unified Messaging template (UM template) and the Notes mail template on the basis of which the extended mail template is to be created.

   The UM template is found in the `<XPR install>/res/LnApl/TemplateR7` respectively `<XPR install>/res/LnApl/TemplateR8` directory. In the **Unified Messaging Mail Template** section of the dialog click on the **Select...** link to find and select the UM template.

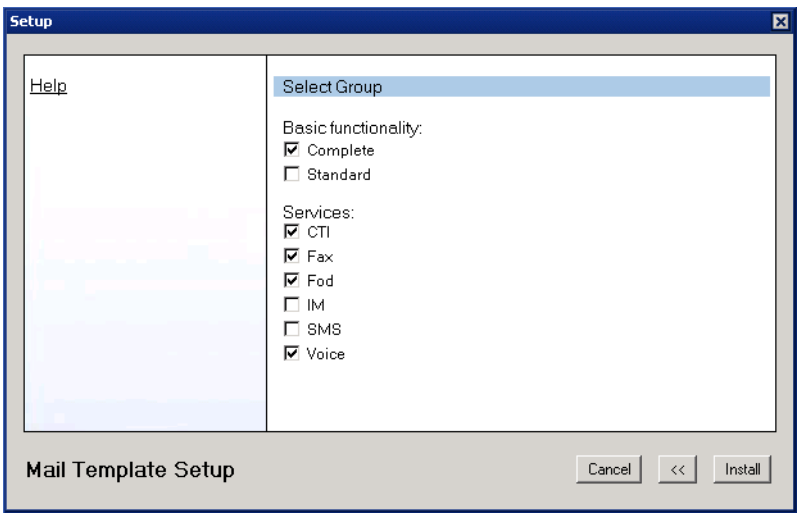
   You find the Notes mail template `mail7.ntf` in the `data` directory of the Domino server. In the **Notes Mail Template** section of the dialog click on the **Select...** link to find and select the Notes template.

   After you have selected both templates, click on the arrow icon in the dialog's bottom right corner. Up comes this dialog:



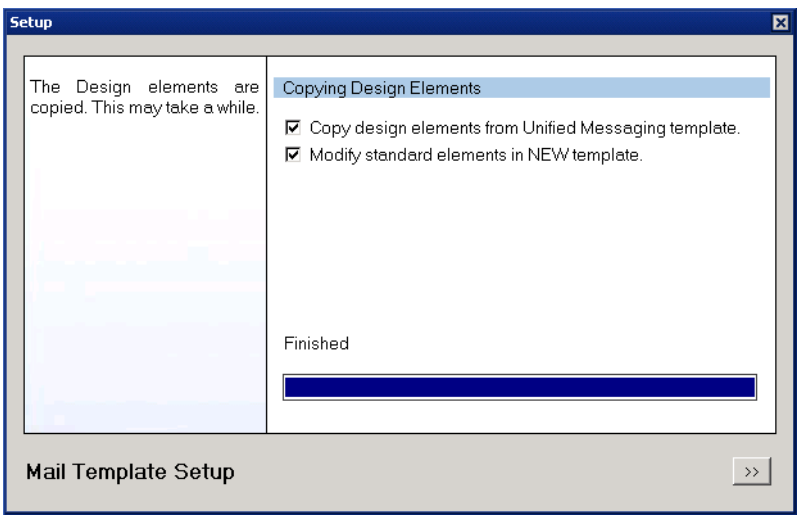
6. This dialog summarizes the languages that are installed. If not all desired languages are displayed, click on the arrow icon pointing to the left and select in the previous dialog a Notes template that contains all desired languages.

   When all desired languages are displayed, click on the arrow icon pointing to the right. Up comes this dialog:

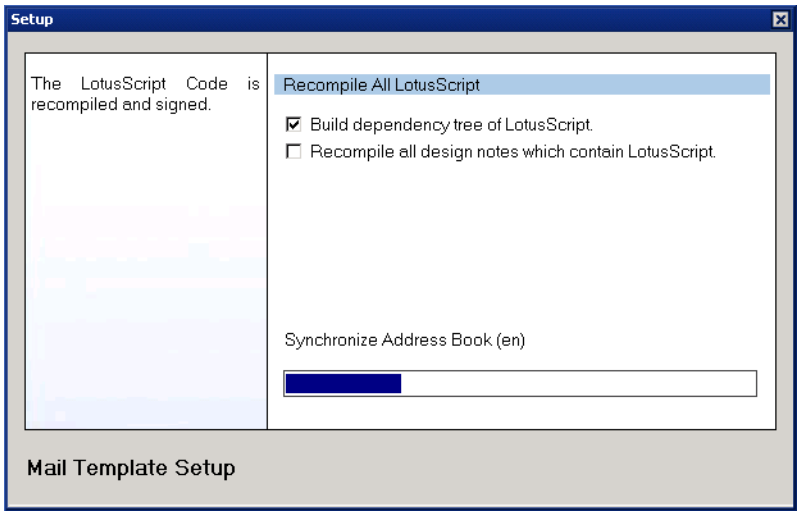


7. Select the basic functionality and the services to be installed. Then click the **Install** button.

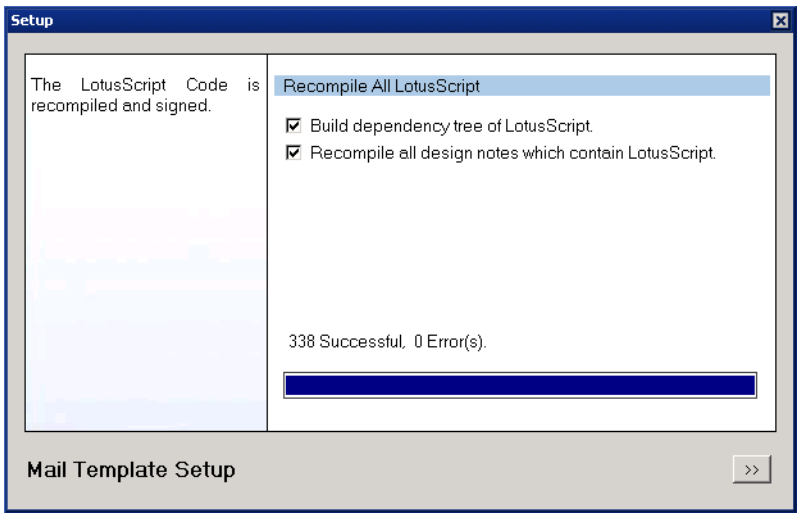
   Two actions will now be executed in succession: the selected design documents are copied and the default element of the new template are modified. Completed actions are indicated in the dialog's top section by a tick. The status of all upcoming actions is displayed by the progress bar. Depending on your selection, the actions may take a few minutes. When the actions are complete, the following dialog is displayed:



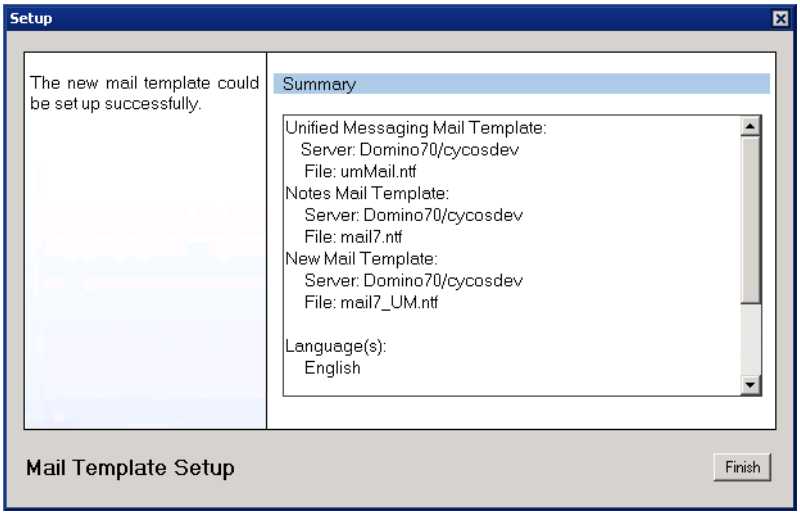
8. Click on the arrow icon pointing to the right. The Lotus ScriptCode compilation starts and the following dialog is displayed:



9. Depending on the computer performance, the ScriptCode compilation may take some time. The dialog shows, which component is being compiled. The compilation status is indicated by a progress bar. When the compilation is complete, the following dialog opens:



See that no errors occur during the compilation. Click on the arrow icon. A summary of the setup is displayed:



10. Click on the **Finish** button to complete the mail template setup.
11. Replace the user mail-databases design with the design of the just created mail template to provide the new functionalities to the users.

4.4.3 Mail Template Extensions for Lotus Notes R6.x

This section describes the extension of a Unified Messaging mail template with the help of an example. This example uses the Lotus Notes default mail template (mail6.ntf).

This template will first be extended with the basic design elements. Depending on the requirement, the following Unified Messaging functions can subsequently be integrated in the extended mail template.

- Sending and receiving fax messages
- Polling fax documents (fax-on-demand)
- Sending and receiving voice mails
- Sending and receiving SMS messages,

NOTE:
Please note that the SMS APL needs to be installed and configured on the XPR server for using the SMS service. For detailed information please refer to the *Server Administration* manual.

- SimpleDialer usage

NOTE:
Integrating the SimpleDialer in a mail template is only required if you do **not** want to use the additional CTI software optiClient 130 for Notes.

In further sections you learn how to add extensions for Integrated Messaging (see Section 4.4.3.5, “Creating Integrated Messaging Mail Templates”, on page 102) and/or True Unified Messaging functions (see Section 4.4.3.6, “Creating True Unified Messaging Mail Templates”, on page 104) to a mail template already extended by Unified Messaging functions.

4.4.3.1 Multi-Language Capability

The mail template extension **umMail.ntf** for Lotus Notes R6.x/R7.x is multilingual and thus contained in the `res\LnApl\TemplatesR6` folder only once.

For each supported language (see also Section C.1.1, “General Considerations”, on page 161) a design element is contained in the **umMail.ntf** file.

IMPORTANT: Always create a separate mail template for each desired language (see steps 3 and 4 of the basic steps)!

You may determine the distinction of the national languages in the Lotus Domino Designer client on the basis of the **Language** column.

4.4.3.2 Preparations

To create Unified Messaging mail templates you need the following items:

- A Lotus Domino Administrator Client of version R6.x/R7.x .
- A Lotus Domino Designer Client of version R6.x/R7.x .
- The default Lotus Notes mail template **mail6.ntf** (for R6.x) or **mail7.ntf** (for R7.x).
- The mail template extension **umMail.ntf**. You find it in the setup directory of the XPR server in the folders `res\LnApl\TemplatesR6` respectively `res\LnApl\TemplatesR7`

4.4.3.3 Procedure

The table on the following page gives an overview of the design elements that must be integrated into a mail template in order to receive a certain functionality.

The **Basic Function** row features elements that must **always** be included in a mail template. Starting from these basic elements, design elements for different functions can be integrated in the mail template.

Example: Creating a Mail Template

You want to create a mail template that has the functions **Sending/receiving fax messages** and **Sending/receiving voice mails**. The template should also enable **Integrated Messaging** (inbox replication).

First integrate all design elements from the **Basic Function** row in the new template. This process is described in Section 4.4.3.4, “After completing the design update, open the following templates in the Lotus Domino Designer client:”, on page 95.

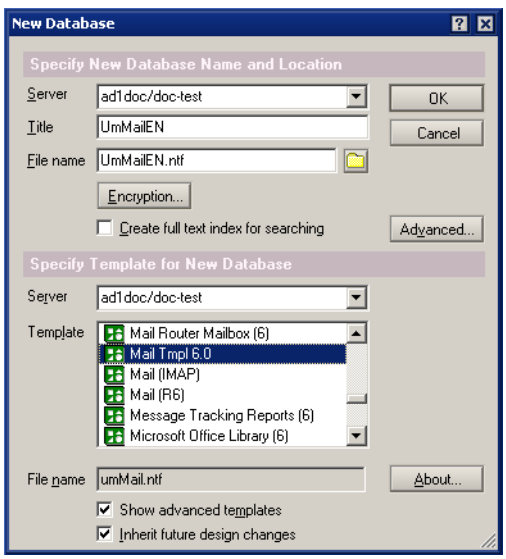
Furthermore you need to integrate

- all design elements from the **Sending/receiving fax messages** (forms, subforms and actions) in the mail template (see Section 4.4.3.4, “Creating a mail template for sending and receiving fax messages”, on page 98).
- all design elements from the **Sending/receiving voice mails** (forms, subforms and actions) in the mail template (see Section 4.4.3.4, “Creating a mail template for receiving and sending voice messages”, on page 100).

To support the Integrated Messaging function you need to implement the required design element (agent) from the **Integrated Messaging** row in the template and perform the steps for creating an Integrated Messaging mail template (see Section 4.4.3.5, “Creating Integrated Messaging Mail Templates”, on page 102).

4.4.3.4 Basic Steps

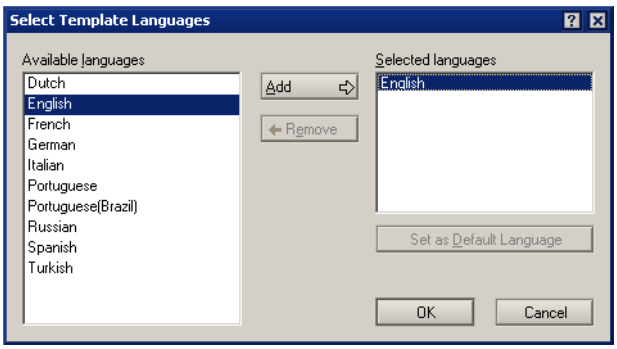
1. Start the Lotus Notes Client and open the mail template extension **umMail.ntf** from the directory `<XPR-Inst>\res\LnApl\TemplatesR6`.
2. Save a copy of this template in the data directory of the local Lotus Notes Client (default: `C:\Program Files\lotus\notes\data`).
3. Create a language reduced mail template extension. Therefore you need to create a new database **on the Domino server** first. Use the locally stored mail template extension **Mail Tmpl X.x** as **template for the new database. X.x** represents one of the following template versions:
   - Mail Tmpl 5.5
   - Mail Tmpl 6.0
   - Mail Templ 7.0



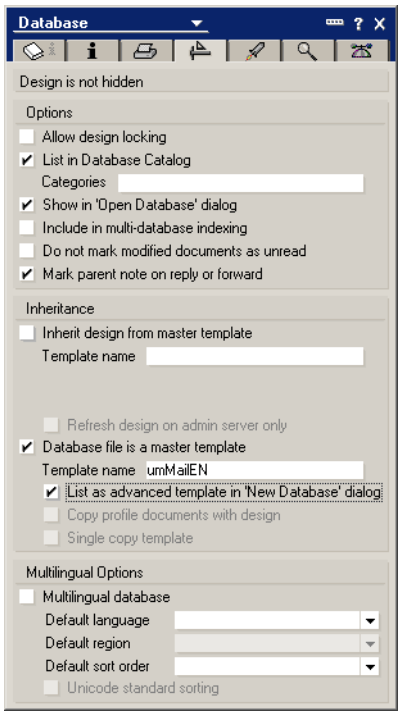
IMPORTANT: Make sure to assign the extension `*.ntf` to the new template.

NOTE: In this example the file name **UmMailDE.ntf** is assigned to the template and contains only Unified Messaging design elements in German. If you create a template for another language, select the file name accordingly.

4. Save your settings by clicking on the **OK** button.
5. In the following dialog select **only one** template language in the **Available languages** field and copy it with the help of the **Add** button to the **Selected languages** field. Save your settings by clicking on the **OK** button.

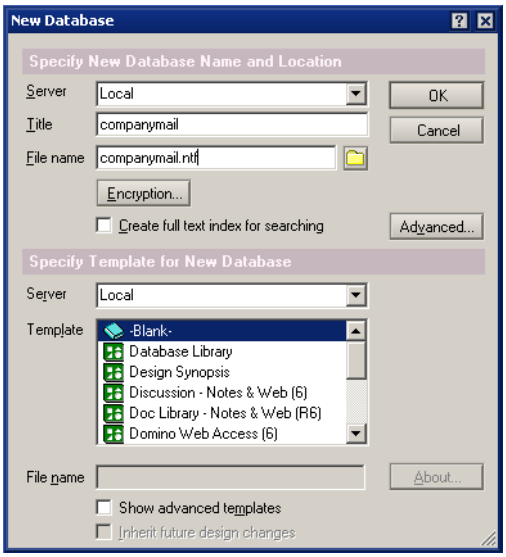


6. Open the **Properties** dialog of the template you have just created and change to the **Design** tab.



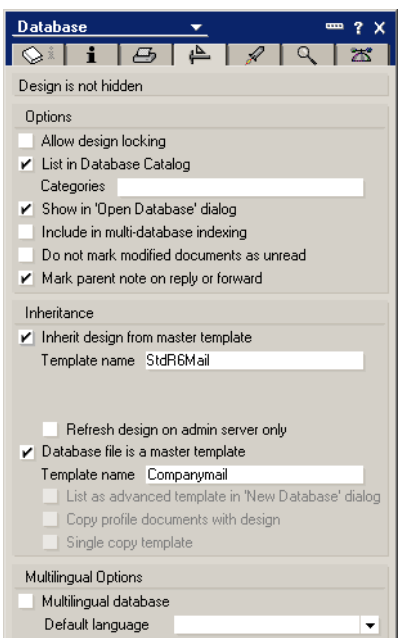
7. Activate the **Database file is a master template** option and enter a name for this template (in this example the file **UmMailDE**). If necessary, disable the **Inherit design from master template** option.

8. Create a new database template in your **local work environment**. Name the new database template for example **companymail.ntf**. Select the entry **Blank** as the **template for the new database**. Confirm with **OK**.



IMPORTANT: Make sure to assign the extension `*.ntf` to the new template.

9. Open the **Properties** dialog of the created template (in this example the file **companymail.ntf**) and change to the **Design** tab.

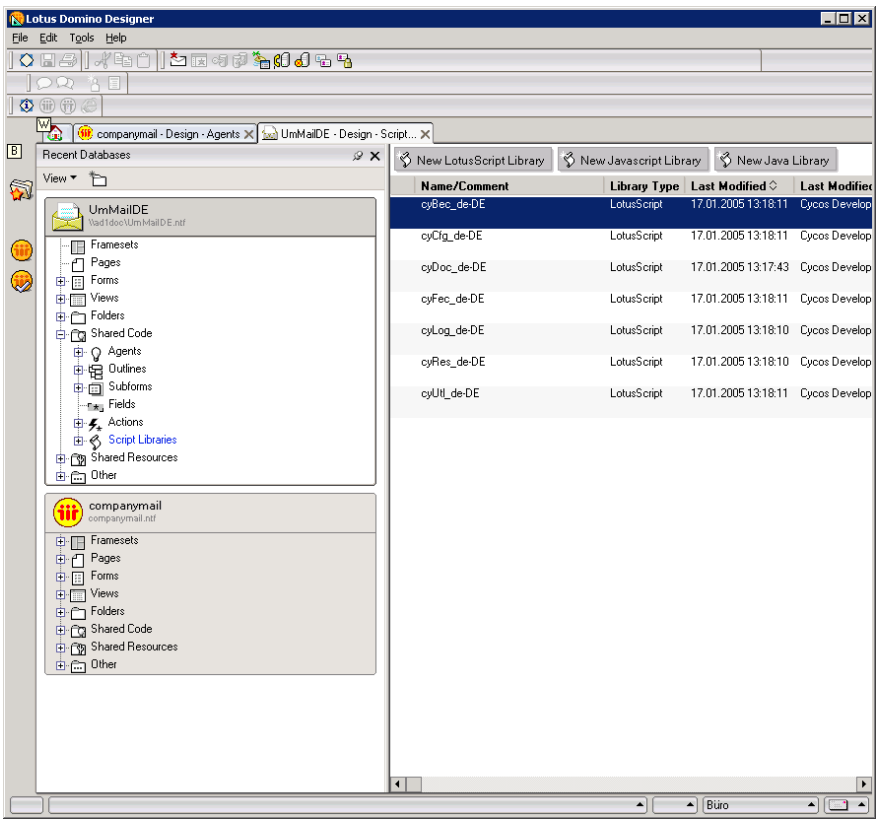


10. Activate the **Inherit design from master template** option and enter **StdR6Mail** as template name. Close the **Properties** dialog.

11. Select the templates in your work environment and update the design with **File > Database > Refresh design** with the design of the mail template extension **UmMailIDE.ntf** created in step 2.

12. After completing the design update, open the following templates in the Lotus Domino Designer client:

    - **companymail.ntf**
    - **UmMailIDE.ntf**



13. Now you have to copy several script libraries and design elements from the **UmMailIDE.ntf** file to the respective folder of the **companymail.ntf** file.

    Therefore select the elements listed below in the **UmMailIDE.ntf** file, copy it to the clipboard before adding them to the respective folder of the **companymail.ntf** file.

NOTE: After each copying process your are asked in a dialog whether the inserted design elements are to be updated if they are modified in the **umMail.ntf** template. **Do confirm this prompt for all design elements with Yes**.

Please consider the notes for the multilingual feature in Section 4.4.3.1, “Multi-Language Capability”, on page 89.

---

a) Copy the following script libraries from the **Shared Code\Script Libraries** folder in the **UmMailDE.ntf** file to the respective folder of the **companymail.ntf** file:

   – **cyFec-de_DE**

   – **cyBec-de_DE**

   – **cyCfg-de_DE**

   – **cyRes-de_DE**

   – **cyUtl-de_DE**

   – **cyLog-de_DE**

   – **cyDoc-de_DE**

b) Copy the following design elements from the **Masks** folder in the **UmMailDE.ntf** file to the respective folder in the **companymail.ntf** file. We refer to the names of the **Alias** column:

   – **cyMemo**

   – **cyReply**

   – **cyUmPerson**

   – **cyChooseDatabase**

   – **cyLogDoc**

c) Copy the following design elements from the **Views** folder in the **UmMailDE.ntf** file to the respective folder in the **companymail.ntf** file. We refer to the names of the **Alias** column:

   – **cyUnifiedMessaging**

   – **cyLogging**

   – **cyAllUmPerson**

   – **cyUmPersonAsMemo**

d) Copy the following design elements from the **Shared Code\Agents** folder in the **UmMailDE.ntf** file to the respective folder of the **companymail.ntf** file. We refer to the names of the **Alias** column:

   – **cyUmLoggingOff**

   – **cyUmLoggingOn**

- **cyUmSettings**

14. Open the folder **Shared Code\Outlines** in the **companymail.ntf** file and delete the default design element named **NotesMailOutline** in the **Alias** column.

IMPORTANT: If your default design element **NotesMailOutline** already contains other modifications, you **must not delete or override** it. In this case you must perform the Unified Messaging modification manually. A description on this is provided in Section 4.4.3.8, “Modifying the Default Outline MailOutline manually”, on page 107.

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15. Copy the following design elements via the clipboard from the folder **Shared Code\Outline** in the file **UmMailDE.ntf** to the folder **Shared Code\Outline** of the file **companymail.ntf**. Use the names from the **Alias** column:

    - **NotesMailOutline (NotesMailOutline65)**

IMPORTANT: Use the outline `NotesMailOutline` in connection with Lotus Notes 6 and the outline `NotesMailOutlin65` in connection with Lotus Notes 6.5. Then rename the outline `NotesMailOutline65` as `NotesMailOutline`.

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16. Copy the following design elements via clipboard from the folder **Shared Code\Subforms** in the **UmMailDE.ntf** file to the folder **Shared Code\Subforms** of the file **companymail.ntf**. Use the names from the **Alias** column:

    - **cyDelOptionSubform**
    - **cyRecipient**
    - **cyMessageDlg**

17. In the **Tools** menu call the **Recompile All LotusScript** option.
18. Save the **companymail.ntf** template.
19. At this point you can extend the mail template by one of several functions.

    - Sending and receiving fax messages (see Section 4.4.3.4, “Creating a mail template for sending and receiving fax messages”, on page 98)
    - Retrieving fax documents (see Section 4.4.3.4, “Creating a mail template for Fax-on-Demand”, on page 99)
    - Sending and receiving voice mails (see Section 4.4.3.4, “Creating a mail template for receiving and sending voice messages”, on page 100)

- Sending/receiving SMS messages (see Section 4.4.3.4, “Creating a mail template for sending and receiving SMS messages”, on page 100)
- SimpleDialer usage

NOTE: Integrating the SimpleDialer in a mail template is only required if you do **not** want to use the additional CTI software optiClient 130 for Notes.

- Integrated Messaging (see Section 4.4.3.5, “Creating Integrated Messaging Mail Templates”, on page 102)
- True Unified Messaging (Section 4.4.3.6, “Creating True Unified Messaging Mail Templates”, on page 104TUM)

Creating a mail template for sending and receiving fax messages

1. Make sure that the basic steps for creating a mail template have been executed (see Section 4.4.3.4, “Basic Steps”, on page 91).
2. Open the `Masks` folder in the **UmMailDE.ntf** file and copy the following design elements via the clipboard to the `Masks` folder of the **companymail.ntf** file. Use the names from the **Alias** column:
   - Mask **cyFax**
   - Mask **cyFaxReply**
   - Mask **cyControlMaster**
   - Mask **cyControlSlave**
3. Open the `Subforms` folder in the **UmMailDE.ntf** file and copy the following design elements via the clipboard to the `Subforms` folder of the **companymail.ntf** file. Use the names from the **Alias** column:
   - Subform **cyFaxViewer**
   - View **cyJournals**
4. Open the `Shared Code\Actions` folder in the **UmMailEN.ntf** file and copy the following shared actions via the clipboard to the `Shared Code\Actions` folder of the **companymail.ntf** file.
   - Cycos **New Fax**
   - Cycos **Forward Fax**
   - Cycos **Reply Fax**
   - Cycos **Reply All Fax**
   - Cycos **History Reply Fax**

- Cycos **History Reply All Fax**

5. Extend the mail template as described in Section 4.4.3.7, “Extending the Mail Template by Shared Actions”, on page 105.
6. In the **Tools** menu call the **Recompile All LotusScript** option.
7. Save the modifications performed in the **companymail.ntf** file.
   - If you want to provide your users with this template, continue reading in Section 4.4.3.9, “Assigning created Mail Template”, on page 108 .

Creating a mail template for Fax-on-Demand

1. Make sure that the basic steps for creating a mail template have been executed (see Section 4.4.3.4, “Basic Steps”, on page 91).
2. Open the `Masks` folder in the **UmMailDE.ntf** file and copy the following design elements via the clipboard to the `Masks` folder of the **companymail.ntf** file. Use the names from the **Alias** column:
   - Mask **cyFod**
   - Mask **cyFodReply** (optional)
3. Open the `Shared Code\Actions` folder in the **UmMailEN.ntf** file and copy the following shared actions via the clipboard to the `Shared Code\Actions` folder of the **companymail.ntf** file.
   - Cycos **New FoD**
   - Cycos **Forward FoD**
   - Cycos **Reply FoD**
   - Cycos **Reply All FoD**
   - Cycos **History Reply FoD**
   - Cycos **History Reply All FoD**
4. Extend the mail template as described in Section 4.4.3.7, “Extending the Mail Template by Shared Actions”, on page 105.
5. In the **Tools** menu call the **Recompile All LotusScript** option.
6. Save the modifications performed in the **companymail.ntf** file.
   - If you want to provide your users with this template, continue reading in Section 4.4.3.9, “Assigning created Mail Template”, on page 108 .

Creating a mail template for receiving and sending voice messages

1. Make sure that the basic steps for creating a mail template have been executed (see Section 4.4.3.4, “Basic Steps”, on page 91).
2. Open the `Masks` folder in the **UmMailDE.ntf** file and copy the following design elements via the clipboard to the `Masks` folder of the **companymail.ntf** file. Use the names from the **Alias** column:
   - Mask **cyVoice**
   - Mask **cyVoiceReply**
   - Mask **cyControlMaster**
   - Mask **cyControlSlave**
3. Open the `Subforms` folder in the **UmMailDE.ntf** file and copy the following design elements via the clipboard to the `Subforms` folder of the **companymail.ntf** file. Use the names from the **Alias** column:
   - Subform **cyWavePlayerShallow**
4. Open the `Shared Code\Actions` folder in the **UmMailEN.ntf** file and copy the following shared actions via the clipboard to the `Shared Code\Actions` folder of the **companymail.ntf** file.
   - Cycos **New Voice**
   - Cycos **Forward Voice**
   - Cycos **Reply Voice**
   - Cycos **Reply All Voice**
   - Cycos **History Reply Voice**
   - Cycos **History Reply All Voice**
5. Extend the mail template as described in Section 4.4.3.7, “Extending the Mail Template by Shared Actions”, on page 105.
6. In the **Tools** menu call the **Recompile All LotusScript** option.
7. Save the modifications performed in the **companymail.ntf** file.
   - If you want to provide your users with this template, continue reading in Section 4.4.3.9, “Assigning created Mail Template”, on page 108 .

Creating a mail template for sending and receiving SMS messages

1. Make sure that the basic steps for creating a mail template have been executed (see Section 4.4.3.4, “Basic Steps”, on page 91).
2. Open the `Masks` folder in the **UmMailDE.ntf** file and copy the following design elements via the clipboard to the `Masks` folder of the **companymail.ntf** file. Use the names from the **Alias** column:

- Mask **cySms**
- Mask **cySmsReply**

3. Open the `Shared Code\Actions` folder in the **UmMailEN.ntf** file and copy the following shared actions via the clipboard to the `Shared Code\Actions` folder of the **companymail.ntf** file. /7
   - Cycos **New SMS**
   - Cycos **Forward SMS**
   - Cycos **Reply SMS**
   - Cycos **Reply All SMS**
   - Cycos **History Reply SMS**
   - Cycos **History Reply All SMS**
4. Extend the mail template as described in Section 4.4.3.7, “Extending the Mail Template by Shared Actions”, on page 105.
5. In the **Tools** menu call the **Recompile All LotusScript** option.
6. Save the modifications performed in the **companymail.ntf** file.
   - If you want to provide your users with this template, continue reading in Section 4.4.3.9, “Assigning created Mail Template”, on page 108 .

SimpleDialer Usage

NOTE: For using the SimpleDialer the **CTI Light** script must be installed and configured in the XPR server telematic APL. Information on this is found in Section 2.4, “CTI Light”, on page 26 and in the *Server Administration* manual. Usage of the SimpleDialer is described in the *Lotus Notes Extensions* manual.

Integrating the SimpleDialer in a mail template is only required if you do **not** want to use the additional CTI software optiClient 130 for Notes.

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1. Make sure that the basic steps for creating a mail template have been executed (see Section 4.4.3.4, “Basic Steps”, on page 91).
2. Open the `Masks` folder in the **UmMailDE.ntf** file and copy the following design elements via the clipboard to the `Masks` folder of the **companymail.ntf** file. Use the names from the **Alias** column:
   - Mask **cySimpleDialer**
3. Open the `Shared Code\Agents` folder in the **UmMailEN.ntf** file and copy the following design elements via the clipboard to the `Agents` folder of the **companymail.ntf** file. Use the names from the **Alias** column:

- Agent **cyDialerAgent**

4. Extend the mail template as described in Section 4.4.3.7, “Extending the Mail Template by Shared Actions”, on page 105.
5. In the **Tools** menu call the **Recompile All LotusScript** option.
6. Save the modifications performed in the **companymail.ntf** file.
   - If you want to provide your users with this template, continue reading in Section 4.4.3.9, “Assigning created Mail Template”, on page 108 .

4.4.3.5 Creating Integrated Messaging Mail Templates

NOTE: To create an Integrated Messaging mail template the design elements of the mail template extension **UmMailDE.ntf** are necessary.

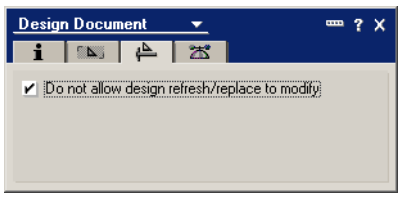
If you would like to create a mail template which is able to use the Integrated Messaging features, you need to proceed as follows:

1. Perform the basic steps to create a Unified Messaging mail template (see Section 4.4.3.4, “Basic Steps”, on page 91).
2. Add further design elements to the mail template from the **UmMail.ntf** file (e.g. Sending and receiving fax and voice mails etc.).
3. Open the `Shared Code\Agents` folder in the **UmMailEN.ntf** file and copy the following design elements via the clipboard to the `Agents` folder of the **companymail.ntf** file. Use the names from the **Alias** column:
   - Agent **mrsDisp**
4. Delete the design element **Memo** in the `Masks` folder in the **companymail.ntf** file.
5. Copy the **Memo** mask from the **UmMailDE.ntf** file to the `Masks` folder of the **companymail.ntf** file.
6. In the `Folder` folder open the design element **($Inbox)** in the **companymail.ntf** file with a double-click.

   IMPORTANT: Do not copy the complete *Inbox* **folder** from the *UmMailDE.ntf file* to the companymail.ntf file. This could lead to malfunctions of the mail template.

7. Add another column to the **Inbox folder** and enter the parameters described in Section C.1.9, “Design Elements for IM and TUM Functions”, on page 172.

8. Save the modifications of **Inbox folder** of the **companymail.ntf** file.
9. Open the Properties dialog of the design element **Database Script** in the **companymail.ntf** file of the `...Other\Database resources` folder with a right mouseclick.



10. Change to the **Design** tab and activate the option **Prohibit design refresh or replace to modify** .
11. Close the **Properties** dialog.
12. In the folder `...Other\Database resources` open the **database script** in the file **companymail.ntf** with a double-click.
13. Modify the **database script** in the **companymail.ntf** file by manually entering the parameters described in Section C.1.9, “Design Elements for IM and TUM Functions”, on page 172.

IMPORTANT: Do not copy the complete *Database Script* from the *umMail.ntf* file to the file *companymail.ntf*. This could lead to malfunctions of the mail template.

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14. Save the modifications of the **Database Script** of the **companymail.ntf** file.
15. In the **Tools** menu call the **Recompile All LotusScript** option.
16. Save the modifications you have made until now in the **companymail.ntf** file.

- If you want to provide your users with this template, continue reading in Section 4.4.3.9, “Assigning created Mail Template”, on page 108 .

4.4.3.6 Creating True Unified Messaging Mail Templates

NOTE: For the creation of a True Unified Messaging mail template, design elements of the mail template extension **UmMailDE.ntf** are required.

If you would like to create a mail template which is able to use the True Unified Messaging features, you need to proceed as follows:

1. Perform the basic steps to create an Integrated Messaging mail template (see Section 4.4.3.5, “Creating Integrated Messaging Mail Templates”, on page 102).
2. Add further design elements to the mail template from the **UmMail.ntf** file (e.g. Sending and receiving fax and voice mails etc.).
3. Additionally, the following requirements must be met for using True Unified Messaging:
   - the **LnUmApl** must be installed and functional
   - when using the **notification feature**, the Notification APL must be installed and functioning (see the *Server Administration* manual)
   - in the Web Assistant the **notification feature** must be active for each user (see the Web Assistant user manual),
   - in the administration database the supported forms must be entered in the **Notification** tab for each user data record (see Section B.1.2.4, “Notification tab”, on page 153).

     If True Unified Messaging and/or the notification features do not work, please do check:
     - if the LnUmApl is working properly (check the XPR monitor for error messages)
     - if the Notification APL is working correctly (check the XPR monitor for error messages)
     - the access rights of the IBM/Lotus Notes Gateway user ID being used (see also Section 3.3.2, “User ID for the IBM/Lotus Notes Gateway”, on page 34)
     - if the XPR dispatcher agent included in the mail template is operated on the correct Lotus Domino server (see Appendix C.1.9.4, “cyDispatcher Agent Settings”)
     - the status of the notification function in the Web Assistant (enabled or disabled for the respective user). If the notification function is enabled, also check for a bell icon in front of the relevant user data record in the main window of the administration database.

- the correct spelling and selection of the masks entered for the notification function in the administration database (**Unified Messaging - Notification** tab).

4. Save the modifications performed in the **companymail.ntf** file.

   - If you want to provide your users with this template, continue reading in Section 4.4.3.9, “Assigning created Mail Template”, on page 108 .

4.4.3.7 Extending the Mail Template by Shared Actions

In the **Inbox folder** of a mail template you can create shared actions to simplify routine tasks (e.g. opening the fax send form). The created actions are then displayed e.g. as menu.

NOTE: You will find a list of all available shared actions and their functions in Section C.1.8, “Shared Actions”, on page 170.

The following example describes the creation of shared actions in the **Inbox** folder of a mail template:

1. Open the mail template to be created in the Lotus Domino designer client.
2. Open the **($Inbox)** design element in the `Folder` folder with a doubleclick.
3. Select the menu item **Create > Action > Action with Sub Action...** in the Lotus Domino Designer client menu.
4. Assign a name for the new action in the appearing **Properties** dialog (e.g. **New UM Message**). Then close this dialog.
5. Delete the **Sub Action** named **(untitled)**.
6. Right-click on the newly created action and select the option **Insert Shared Action**.
7. In the subsequent dialog select the **Shared Actions** you would like to apply and click **Insert**.

   NOTE: To integrate all the supported Unified Messaging functions, i.e., Sending and receiving fax messages, Polling fax documents (fax-on-demand), Sending and receiving voice mails, and Sending and receiving SMS messages, in the extended mail template, you need to select all the Shared Actions listed below.

   - Forward\Cycos Forward Fax

   - Forward\Cycos Forward FoD

- Forward\Cycos Forward SMS
- Forward\Cycos Forward Voice

- New\Cycos New Fax
- New\Cycos New FoD
- New\Cycos New SMS
- New\Cycos New Voice

- Reply\Cycos Reply Fax
- Reply\Cycos History Reply Fax
- Reply\Cycos Reply FoD
- Reply\Cycos History Reply FoD
- Reply\Cycos Reply Voice
- Reply\Cycos History Reply Voice
- Reply\Cycos Reply SMS
- Reply\Cycos History Reply SMS

- Reply To All\Cycos Reply Fax
- Reply To All\Cycos History Reply Fax
- Reply To All\Cycos Reply FoD
- Reply To All\Cycos History Reply FoD
- Reply To All\Cycos Reply Voice
- Reply To All\Cycos History Reply Voice
- Reply To All\Cycos Reply SMS
- Reply To All\Cycos History Reply SMS

8. The selected shared actions are now displayed as sub actions of the newly created action.
9. Proceed as described in step 3 to 7 if you want to insert further shared actions.
10. After inserting all desired actions, call the **Recompile All LotusScript** option in the **Tools** menu.

4.4.3.8 Modifying the Default Outline MailOutline manually

If your **MailOutline** contains modifications already, you need to perform the Unified Messaging modifications at this design element manually.

Proceed as follows:

1. Open the mail template to be created in the Lotus Domino designer client.
2. Switch to the `Shared Code\Outlines` folder and open the **NotesMailOutline** design element.
3. Open the **Tools** entry with a click on the **+ character** to the left of the entry.
4. Select the **Stationery** subentry.
5. Click on **New Entry** and enter **Unified Messaging** in the **Label** field.
6. In the **Type** selection field choose the **Named Element** option. Next to this field another selection field is now displayed, in which you need to pick the **View** option.
7. Enter the ((`cyUnifiedMessaging`) parameter in the **Value** field.
8. Switch to the **Entry Hide When** tab and remove the tick for **Notes 4.6 or later**. Close the entry dialog.
9. If the **Unified Messaging** subentry is selected, click **New Entry** again and subsequently on **Indent Entry** to create a subentry of **Unified Messaging**. Enter **Logging** as label in the entry dialog.
10. In the **Type** selection field choose the **Named Element** option. Next to this field another selection field is now displayed, in which you need to pick the **View** option.
11. Enter the (`cyLogging`) parameter in the **Value** field.
12. Switch to the **Entry Hide When** tab and remove the tick for **Notes 4.6 or later**. Close the entry dialog.
13. Accomplish the entry with a click on the **minus character** to the left of the **Unified Messaging** entry. Close the **Tools** entry as well.
14. Save the modified design element and close it.

4.4.3.9 Assigning created Mail Template

This chapter includes a description of how to assign a created mail template to a Lotus Notes user mail database. After the assignment the user is able to use all services provided by the XPR server via his Lotus Notes mail interface.

NOTE: For the assignment process you need administrative access rights to the Lotus Notes mail databases of the users that are to use the mail template. for the assignment process.

Perform the following steps:

1. Start the Lotus Domino Administrator client. Apply a user ID with administrative access rights to log on.
2. In the working interface of the Lotus Domino Administrator client change to the **Files** tab and set the **All DB Types** option to **Show**.
3. Make sure that the created Unified Messaging mail template (**companymail.ntf**) is in the `\Lotus\Domino\Data` folder.
4. Open the folder storing the mail databases of the Lotus Notes users. For a default installation, this is the `\Lotus\Domino\Data\mail` folder.
5. Right-click on a user mail database and select the option **Properties**.
6. In the Properties dialog of the user mail database to the **Design** tab.
7. Check if the **Inherit design from template** option is activated and enter **UM Mail Template** as template name.
8. Save the settings and close the Properties dialog of the user mail database.
9. Select the user's mail database and select the option **File > Database > Refresh design...** in the **menu bar** of the Lotus Domino Administrator client.
10. The refreshing process starts.
11. After a successful refreshing process check if all design elements from the Unified Messaging mail template are available in the user mail database. Therefore you need to open the mail database of the corresponding user.

NOTE: If the update process has not been successful, you should first check all notifications logged in the **status line** of the Lotus Domino Administrator client. Furthermore check if the **template name** that has been assigned in step 7 is written correctly.

4.5 Installing IBM/Lotus Notes Client Components

Depending on the features you have integrated in the Unified Messaging mail template, IBM/Lotus Notes Client components are necessary on a user computer.

NOTE: You will find a description of the installation and configuration for the different client components in Section C.2, “Installation of the IBM/Lotus Notes Client Components”, on page 180.

IBM/Lotus Notes Client components must be installed on a user computer for the following features:

- **Viewing received fax messages:**
  For this, you need the ActiveX client components (see Section C.3, “Installation of the ActiveX Components”, on page 180).
- **Creating voice mails / Listening to received voice mails:**
  For this you need the ActiveX client components (see Section C.3, “Installation of the ActiveX Components”, on page 180).
- **Replying to messages with a voice annotation:**
  For this you need the ActiveX client components (see Section C.3, “Installation of the ActiveX Components”, on page 180).

If you have installed the appropriate IBM/Lotus Notes client component, you may check in the following section if the user mail database that has been extended with the Unified Messaging features works correctly.

4.6 Checking the Unified Messaging Mail Databases Functionality

For this functionality check the following requirements must be met:

- The basic functionality of the IBM/Lotus Notes Gateway must be available (see Section 4.1, “Basic Functionality Check”, on page 56).
- The administration database must exist on the IBM/Lotus Domino server (see Section 4.2.1, “Creation of the Administration Database”, on page 61).
- The IBM/Lotus Notes Gateway must be connected with the administration database (see Section 4.2.2, “Activation of the Administration Database”, on page 64).
- Alias domains must exist (see Section 4.2.3, “Creating an Alias Domain”, on page 66).
- In the administration database user data records must exist (see Section 4.2.4, “Creating User Data Records”, on page 68).
- The user data records must have been replicated to the XPR server (see Section 4.2.4, “Creating User Data Records”, on page 68).
- The advanced functionality of the IBM/Lotus Notes Gateway must have been checked successfully (see Section 4.3, “Extended Functionality Check”, on page 74).
- A Unified Messaging mail template must have been created. This template must be assigned to a IBM/Lotus Notes user mail database (see Section 4.4, “Mail Template Extensions”, on page 75).
- IBM/Lotus Notes client components must be installed and configured on the user computers (see Section 4.5, “Installing IBM/Lotus Notes Client Components”, on page 109).

If you have completed the steps in the sections 4.1 to 4.5, you may now check the functionality according to the following example:

Example: Fax G3 and voice mail for a Notes user

A FaxG3 number and a voice mail number have been assigned to a IBM/Lotus Notes user. His/her user data record exists in the administration database and on the XPR server. The user shall now be able to send and receive fax messages and voice mails via his/her IBM/Lotus Notes client. The user shall be able to listen to received voice messages on his telephone.

NOTE: The following functionality check will refer to the *IBM Notes Extensions* user manual.

Proceed as follows:

1. Start a IBM/Lotus Notes client of a user who is to use the IBM/Lotus Notes Gateway. Do **not** use the IBM/Lotus Notes client that is installed on the XPR server.
2. Open the mail interface in this user's IBM/Lotus Notes client.
3. Send a fax message to a fax device. Follow the description in the IBM/ Lotus Notes Gateway user manual.
4. After a short time, your fax device should put out the message that had been sent.
5. Send the message you have received on the fax device back to the user's fax number.
6. After a successful transmission the IBM/Lotus Notes user must find a message in his inbox.
7. A double-click on the received message opens it in a fax view window. The form for viewing received fax messages works.
8. Send a voice mail to the user's own voice mail number. Follow the description in the IBM/Lotus Notes Gateway user manual.
9. After a successful transmission the IBM/Lotus Notes user must find a voice mail in his inbox.
10. A double-click on the received message opens it in a form containing an audio operating unit. Play the received voice mail as described in the IBM/ Lotus Notes Gateway user manual.
11. If you were able to listen to the voicemail on the user's phone, the functionality check has been successful.

NOTE: On the basis of the procedures described in the IBM/Lotus Notes Gateway user manual, you may perform further functionality checks (e.g. check CTI features etc.).

4.7 Error Messages

If the IBM/Lotus Notes Gateways (LN APL) setup fails with reference to the notes.ini file, check the following:

- Do old, faulty setups exist?
- Is a multiuser setup available?
- Is a notes.ini or lotus.ini file used by old setups?

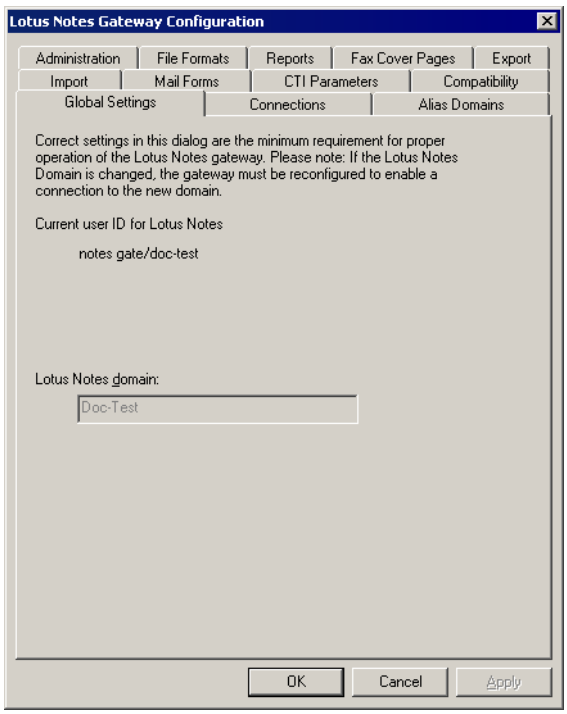
If the LN APL starts but cannot connect to the IBM/Lotus Domino server, check the following:

- If the user ID was newly certified or the password changed you need to perform a new installation.
- If the user ID is unchanged, perform the following:
  1. Stop the LN APL.
  2. Create in the IBM/Lotus Notes client a connection document to the server.
  3. Restart the LN APL.
  4. Create a complete log. Here you can see which databases can be accessed or which servers cannot be reached.
- If none of the two above points applies you need to reinstall the LN APL.

A Configuration of the IBM/Lotus Notes Gateway

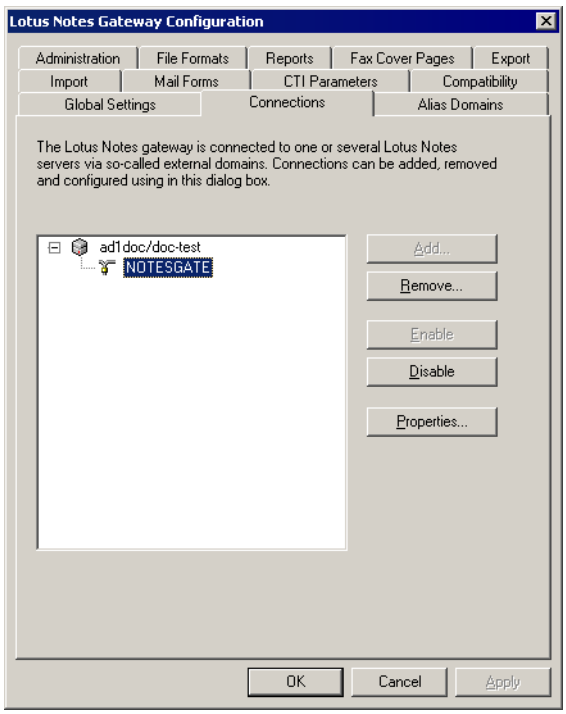
In this chapter you will find an overview of all parameters that can be set via the configuration dialog of the IBM/Lotus Notes Gateway.

A.1 *Global Settings* Tab



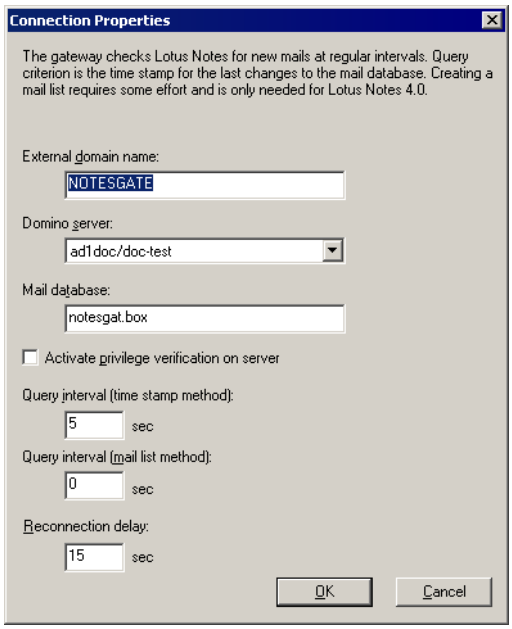
Parameters / Button	Description
Current Lotus Notes user ID:	Displays the name of the user ID that is used by the IBM/ Lotus Notes Gateway.
Lotus Notes domain:	This field contains the name of the IBM/Lotus Notes domain the IBM/Lotus Notes Gateway is connected with.

A.1.1 *Connections* Tab



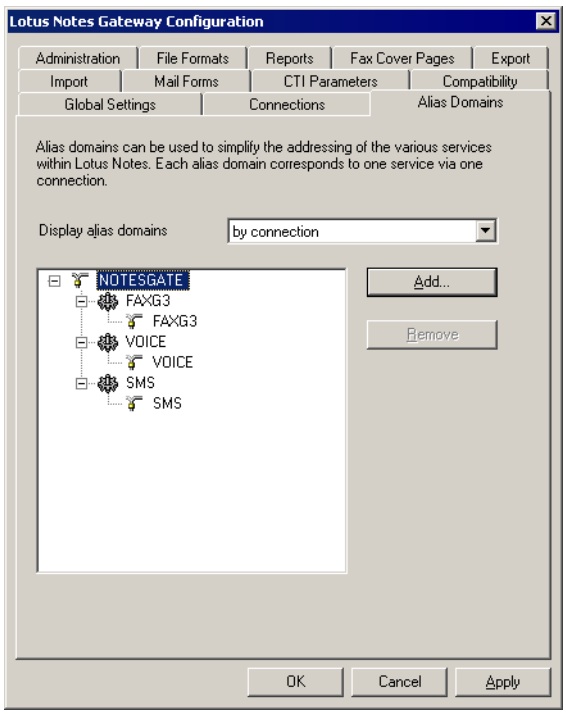
In this dialog every connection to a foreign domain that exists on a IBM/Lotus Domino server is displayed. Via the buttons on the right hand side it is possible to **create** a new connection or **remove** an existing one. You can **disable** and **enable** existing connections.

If a foreign domain has been selected, the **Properties...** button is activated. A click on this button opens a dialog in which the connection properties may be configured.



Parameters / Button	Description
External domain name:	Name of the foreign domain to which this connection exists (Default: NOTESGATE).
Domino server	Hierarchical name of the IBM/Lotus Notes server that administers the foreign domain.
Mail database	Database name of the gateway mailbox (Default: notesgat.box)
Activate privilege verification on server	If this option is activated, the XPR server checks the send privileges that have been assigned in the XPR system for their authorization.
Query interval (time stamp method):	Indicates the time interval during which the IBM/Lotus Notes Gateway searches the gateway mailbox on the IBM/Lotus Domino server for new messages in seconds.
Query interval (mail list method)	This value is only used with a connection to a IBM/Lotus Domino server of the versions R4.x.
Reconnection delay:	The value entered here determines how many seconds are to pass between two connection attempts. The minimum time interval is 15 seconds.

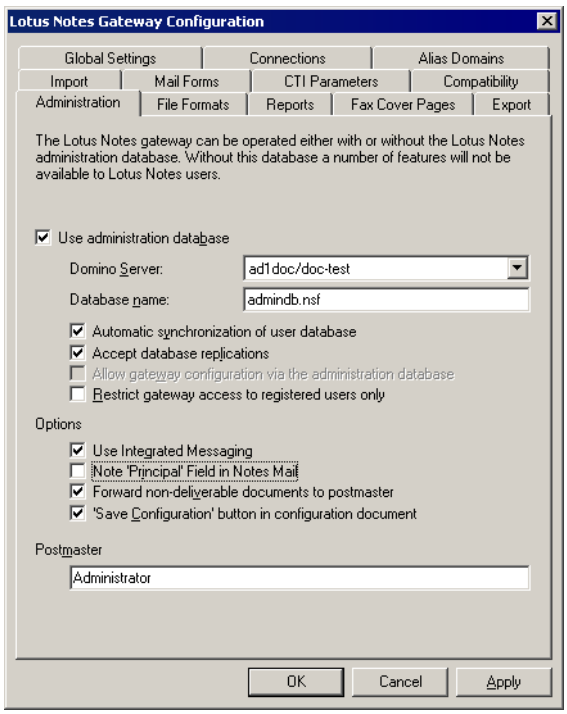
A.1.2 *Alias Domains* Tab



Alias domains can be installed on every connection to simplify the addressing of the various services. Each alias domain corresponds to an XPR service e.g. FAXG3, FAXG4, SMS or VOICE.

By default, only the alias domain NOTESGATE is configured during the installation. Further alias domains can be generated via the **Add** button. The name of an additional alias domain must not match the name of an alias domain already used. Obsolete entries can be deleted with the **Remove** button. The alias domains display can be sorted by connections or services.

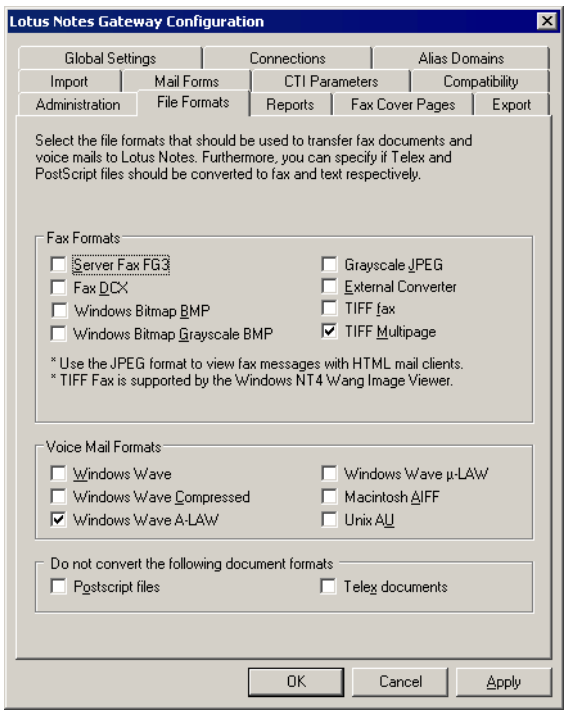
A.1.3 *Administration* Tab



Parameters / Button	Description
Use administration database	Enables / Disables the usage of the administration database.
Domino server	In this field the hierarchical name of the IBM/Lotus Domino server where the administration database is stored is entered.
Database name	File name of the administration database. If the database is stored in the `data` directory of the Domino server, you do not need to enter a path. If the entry includes a path in addition to the database name (e.g. `XPR\admindb.nsf`), this path is interpreted relatively to the `data` directory of the IBM/Lotus Domino server - if it does not contain a drive name or leading backslashes. Paths with drive names or leading backslashes are not allowed (such as `E:\XPR\admindb.nsf` or `\XPR\admindb.nsf`).
Automatic synchronization of user database	Activating this option causes the synchronization of the user data records of the administration database with the user database. The LnAPL controls the administration database and synchronizes the user data records on both systems regularly.
Accept database replications	Activating this option enables the LnAPL to cooperate with replicas of the administration database. If the administration database should not be available e.g. when the Domino server breaks down, the LnAPL switches to a Domino server where a replica of the administration database is stored.

Parameters / Button	Description
Allow gateway configuration via the administration database	This parameter is reserved for future applications.
Restrict gateway access to registered users only	This function allows only IBM/Lotus Notes users that have been entered in the administration database to use the IBM/ Lotus Notes Gateway. Users that have not been entered are then e.g. not able to send or receive fax messages via the IBM/Lotus Notes client.
Use Integrated Messaging	Enables / Disables the Integrated Messaging Feature.
Note 'Principal' Field in Notes Mail	When the option is enabled, the IBM/Lotus Notes Gateway enters the user form the principal field as originator. This check box must be active for sending a fax on behalf of another user.
Forward non-deliverable documents to postmaster	Documents that could not be delivered are forwarded to the IBM/Lotus Notes user entered in the **Postmaster Account**.
'Save Configuration' button in configuration document	When the option is enabled the a button is integrated in the configuration document you receive during a change of configuration via e-mail. Clicking this button saves the changed configuration parameters.
Postmaster	Hierarchical name of a IBM/Lotus Notes user who is to receive messages that could not be delivered as postmaster.

A.1.4 *File Formats* Tab



The file formats for voice and fax messages which are supported by the client used on the IBM/Lotus Notes side are specified here. If a message arrived that was not supported by the user client, it would be converted to a format which is can be read by the user client.

Only one conversion is performed at a time, even if several formats have been selected. The system automatically evaluates the selected formats and selects the conversion that the converter considers the “cheapest“.

Formats not supported by the client are converted into one of the selected file formats by the XPR server.

If your client is able to display **postscript** or **telex** files, you should prevent the conversion of these files to a graphic or text format (section **Do not convert the following document formats**).

The following **Fax formats** are available:

Format	Description
Server Fax FG3	Proprietary fax format of the manufacturer (XPR Viewer).
Fax (DCX)	Multipage PCX graphic format. Used by Microsoft Fax.
Windows Bitmap BMP	Each individual fax page is converted into a Windows bitmap.
Windows Bitmap Grayscale BMP	Individual fax pages are converted in a Windows Bitmap, where a trilinear grayscale interpolation is performed.

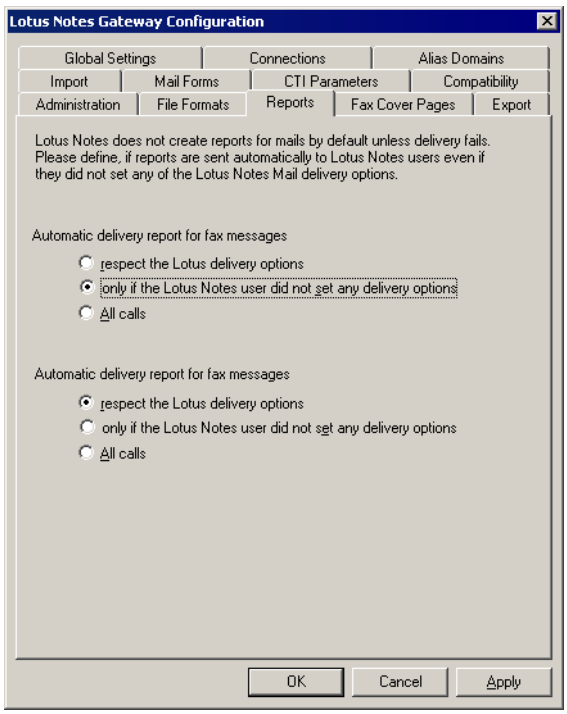
Format	Description
Grayscale JPEG	Fax data is converted in a 9-color JPEG grayscale format. This format is particularly suitable for viewing the HTML mail client.
TIFF bitmap	Each individual fax page is converted into a standard TIFF bitmap.
TIFF fax	TIFF Fax => External Converter Support Selecting this format activates an external converter. You find the preferred Fax2PDF converter in the `XpressionsInstall\AddOn` directory on the XPR installation medium. For this feature, you must make the following registry entries under the key `[HKLM\SOFTWARE\Wow6432Node\PP-COM\mrs\Mrs Globals\Converter\]`: • TiffToExternalConverter REG_SZ `<program name with parameters>` • TiffToExternalExtension REG_SZ `<extension>` Example of `<program name with parameters>`: D:\xpr\res\convert\Fax2PDF\Fax2Pdf %1 %2 Example of `<extension>`: pdf The format TIFF DIB-MONO (TIFF single page) is no longer used and is replaced by the external converter.
TIFF multipage	Fax according to TIFF standard (multipage).

The internal Notes Viewer cannot display asymmetrical TIFF files, e.g. low resolution fax messages (200 x 100 dpi).

The following **voice mail formats** are available:

Format	Description
Windows Wave	Windows sound format
Compressed Windows Wave	Compressed Windows sound format. The audio codec used for compression is set via the MTA configuration. The appropriate codec to playback compressed files is also required on the client computer.
Windows Wave A-law	Wave sound file with A-Law encoding.
Windows Wave µ-law	Wave sound file with µ-Law encoding.
Macintosh AIFF	Audio format, mainly used on Apple Macintosh computers.
Unix AU	Unix Audio Format.

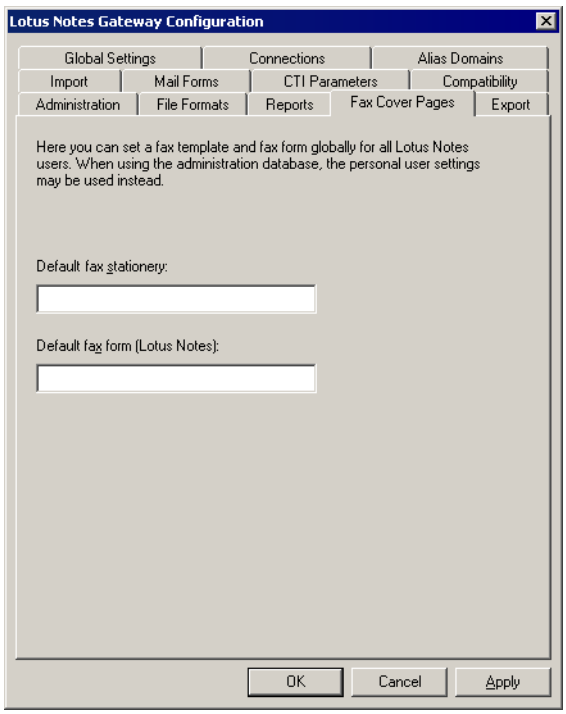
A.1.5 *Reports* Tab



You can set here whether the IBM/Lotus Notes Gateway demands a delivery report from XPR for fax documents and other message types, even if the IBM/ Lotus Notes user did not request such a report in the delivery options.

Reports can always be generated, i.e. even if the user explicitly deactivates this setting. The user may also switch off the delivery report or limit it e.g. to mistakes. The third option disables the automatic sending of a delivery report.

A.1.6 *Fax Cover Pages* Tab



In case of the XPR system, fax cover pages are created using the *Communications* client and stored on the XPR server.

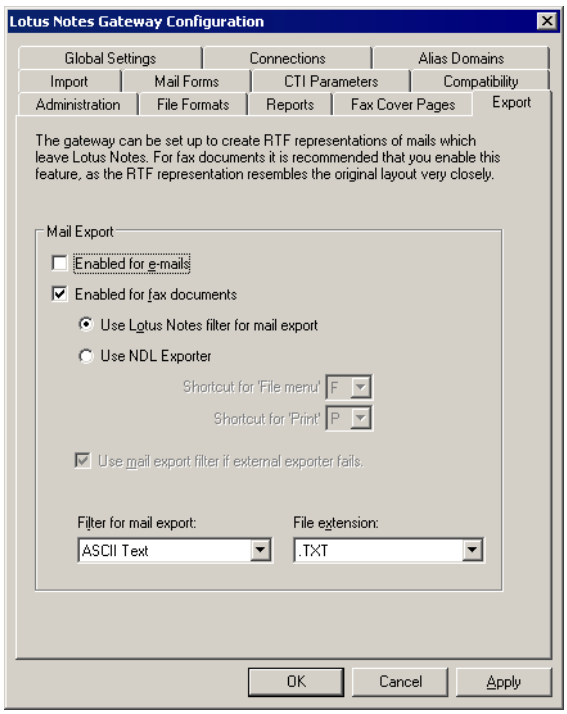
The name of the fax stationary you would like to use must be entered in the **Default MRS fax stationary** field. Please note that the name of the fax cover page must be written in the same way as it has been entered in the *Communications* client under **Tools > Fax Stationery...**.

NOTE: For further information on the creation of fax covers and fax stationery please refer to the *Communications user manual*.

In the **Default Fax Form (Lotus Notes)** field you may implement a IBM/Lotus Notes fax form for all IBM/Lotus Notes users.

NOTE: Information on creating IBM/Lotus Notes fax forms can be obtained from the IBM/Lotus Notes help.

A.1.7 *Export* Tab



Export filters can be set for e-mail as well as fax transmission from IBM/ Lotus Notes to the XPR server. The export filters create a Rich Text display format for each message that leaves the IBM/Lotus Notes system.

IMPORTANT: If you use a fax cover sheet, the text fields contained therein will only be correctly filled in if you set the **ASCII Text** option as **Filter for mail export** and the **.TXT** option in the **File extension** field of this tab. Otherwise, some fields may appear on individual pages of the resulting fax.

The following filters are available for fax message export:

- **Lotus Notes Mail Export Filter**
  Export filter that is integrated in IBM/Lotus Notes. Notes to the configuration and operation can be found in the IBM/Lotus Notes help.
- **NDL Exporter**
  Export filter that is integrated in the IBM/Lotus Notes Gateway. Notes for the installation and configuration of the NDL Exporter can be found in Section E.3, “Integration in a IBM/Lotus Domino Cluster Environment”, on page 214.

  IMPORTANT: The registry key *NDLConversion_FormPrintMode* is active by default (see Section F.1.1.5, “Import and Export”, on page 246).

There are three ways to access the printing feature:

- Menu option **File > Print**

  This is only possible if the *NDLConversion_FormPrintMode* registry key is inactive (see Section F.1.1.5, “Import and Export”, on page 246).

  If the NDL exporter is used, the **Shortcut for 'File menu'** and **Shortcut for 'Print'** selection fields determine with which key combinations the file menu and subsequently the print function is to be automatically invoked (e.g. combination **ALT + F** for invoking the **File** menu). Subsequently a key combination for the print function must be defined (e.g. combination **ALT + P** for the **Print** option). Which key combination is used for the single menu options depends on the program and language version of the IBM/Lotus Notes client. The German client of version 7.0 expects the combination *Alt-D* for the **Datei** menu as well as for the **Drucken** menu option. An English client of version 7 expects *Alt-F* for the **File** menu and *Alt-P* for the **Print** menu option.

- Menu option **Action > Print**.

  This is only possible if the *NDLConversion_AgentPrintMode* registry key is active and the *NDLConversion_FormPrintMode* registry key is inactive.

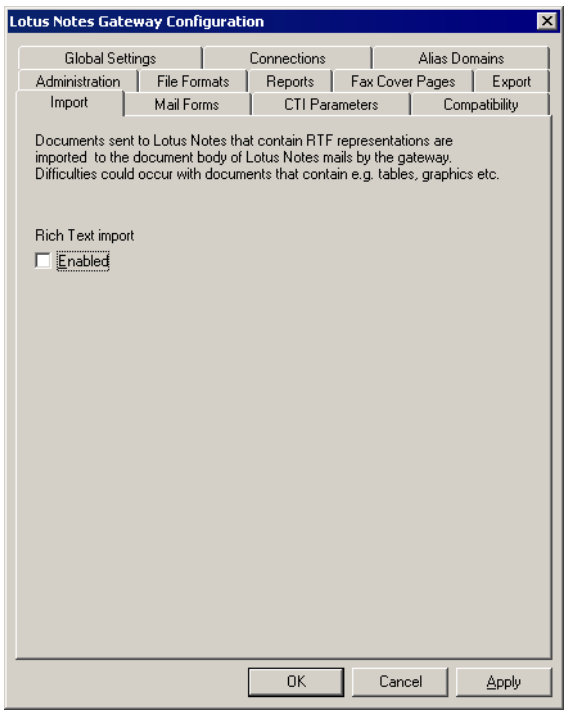
  The values described in Section F.1.1.5, “Import and Export”, on page 246 for the *NDLConversion_AgentPrintMode* registry key must be set in the combo boxes **Shortcut for ’File menu’** and **Shortcut for ’Print’**.

- Opening the document

  This is only possible if the *NDLConversion_FormPrintMode* registry key is active (see Section F.1.1.5, “Import and Export”, on page 246). In this case the values set in the **Shortcut for ’File menu’** and **Shortcut for ’Print’** combo boxes are irrelevant.

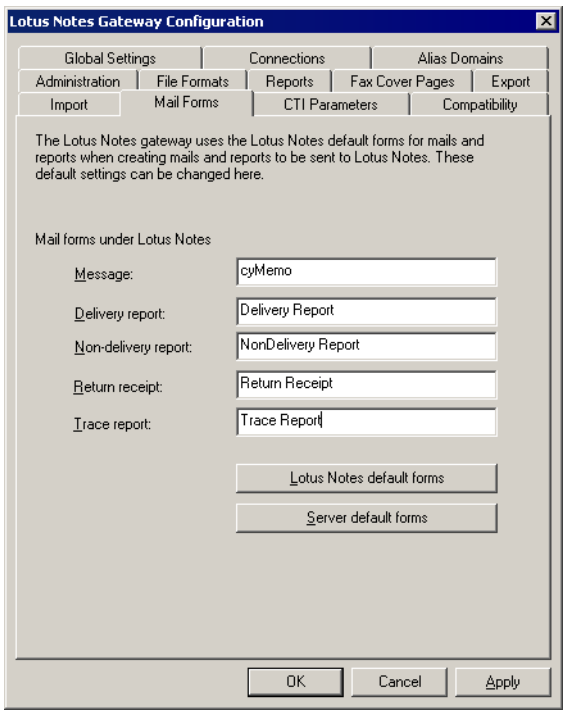
In the selection fields **Filter for mail export** and **File extension** the export format can be set. For a Rich Text export, the **Microsoft RTF** filter and the file extension **RTF** must be set.

A.1.8 *Import* Tab



An existing RTF representation can be imported for the import of messages that originate from the XPR server. In case of complex document formats this may fail.

A.1.9 *Mail Forms* Tab

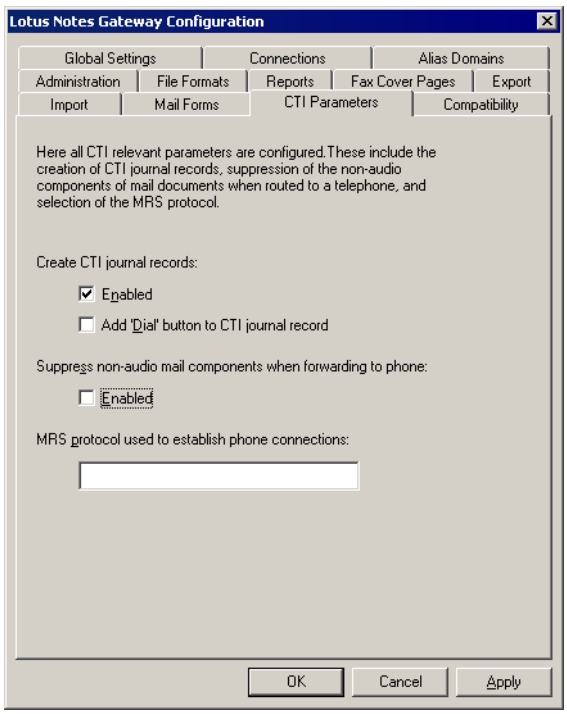


IBM/Lotus Notes uses default forms for messages and reports. All of these standard forms can be replaced by an individually adapted mail form.

IBM/Lotus Notes administrators are responsible for ensuring that alternative mail forms are placed in the user's mail database. Since mail databases are generally configured in a way that they automatically inherit their design from a template, it is sufficient to integrate alternative forms into this template.

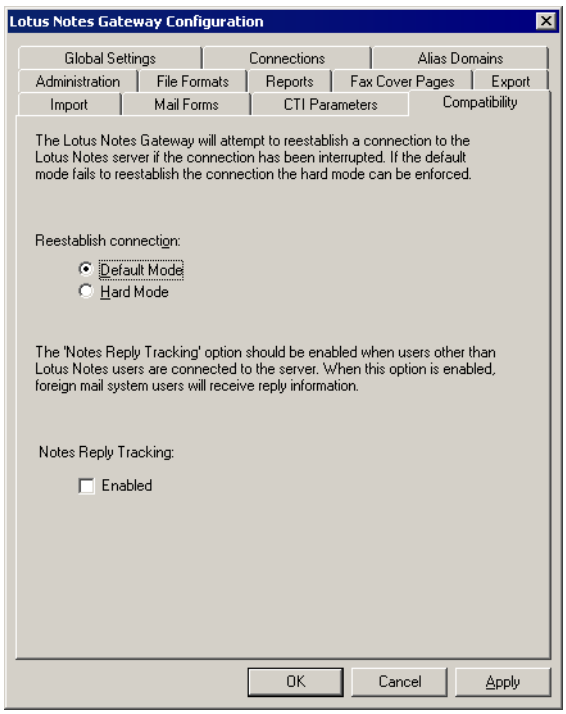
NOTE:
If you use Unified Messaging mail templates, the **Server default forms** option must be selected.

A.1.10 *CTI Parameters* Tab



Parameters / Button	Description
Create CTI journal records	This option has the effect that a system user receives a journal document for incoming and outgoing telephone calls. It must always be active if the CTI function under IBM/Lotus Notes is used (this applies to the usage of optiClient 130 for Notes as well).
Add 'Dial' button to CTI journal record	Lotus Notes R5.x is not supported.
Suppress non-audio mail components when forwarding to phone:	Lotus Notes R5.x is not supported.
XPR protocol used to establish phone connections	Lotus Notes R5.x is not supported.

A.1.11 *Compatibility* Tab



The **Reestablish connection** option is the standard method for reestablishing a connection if the IBM/Lotus Notes Gateway loses contact with the IBM/Lotus Domino server. The **Hard Mode** should only be selected if the Standard Mode fails to reestablish a connection with the server.

The **Notes Reply Tracking** option should be activated if clients other than IBM/Lotus Notes are to be used. For messages that are sent from the XPR system to IBM/Lotus Notes and read in IBM/Lotus Notes, a message with a "read" flag is sent from IBM/Lotus Notes to the XPR system.

NOTE: This option is not activated by default. Activate it if you use neither TUM nor IM. If you use the NOT APL also, you need the TUM/Ergo or PhoneMail rules described in the *Server Administration* manual.

B Configuration of the Administration Database

B.1 Administration Database for the supported versions of IBM/ Lotus Notes

B.1.1 General Information

Default values in forms

For some configuration options, default values can be loaded. This is done via an option next to the section header (e.g. **...Default**).

The person document (user entries)

The person documents contain all IBM/Lotus Notes and Unified Messaging user data. The procedure of creating new person documents with user data is described in Section 4.2.4.1, “Administration Database for the supported IBM/ Lotus Notes Versions”, on page 68.

Change permission for users

Next to some of the fields you will find a **red cross** or **a green tick**. A **green tick** enables the user to modify this value in the user profile of his/her mail database. A **red cross** shows that the user is not allowed to change this value. With a mouseclick on the cross or tick the IBM/Lotus Domino administrator client may change the privilege.

Deleting a user

If a user is deleted from the administration database, he/she will no longer be replicated via the synchronization agent. Otherwise it would not be possible for an administrator to remove a user permanently. To replicate a deleted user from the Domino Directory to the administration database again, you are required to synchronize manually. This can e.g. take place via a synchronization document. It is also possible to make a pseudo-modification (e.g. add a space) to the person document of this user. The synchronization agent enters the modified user in the administration database during the next run.

Tool tips

Tool tips exist for each option that can be configured in a person or profile document. To display the tool tips you need to move the mouse pointer towards an option until the mouse pointer changes to a **hand icon**. Then click the left mouse button once and keep pressing it. The corresponding tool tip is displayed in a yellow window.

B.1.2 Main Window

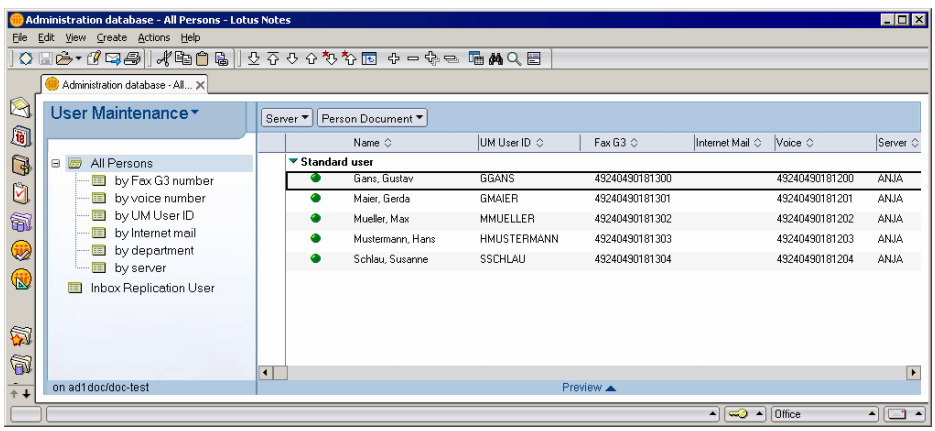
The main window of the administration database is divided into two sections.

The area on the **left side** is used for navigation in the three configuration tabs **User Maintenance**, **Profile Maintenance** and **Configuration**. In the top part of the navigation panel you will find a button (flagged with an arrow) via which you may call each of the three configuration sections.

A list of the database entries is provided in the **display area** on the right. In the top part of the display section you will find a toolbar with the buttons **Server** and **Person document**. If you click on one of these buttons a menu is displayed showing further selection possibilities.

B.1.2.1 User Maintenance

The user data of the administration database are displayed in the navigation area in a sorted manner according to different criteria. If you select the sorting criterion **All Persons by Fax G3 number**, all person documents are displayed sorted according to FAXG3 numbers in the display area on the right. A double-click on a person document opens it. The particular fields of the person document are described in Section B.1.2.4, “The Person Document”, on page 142.



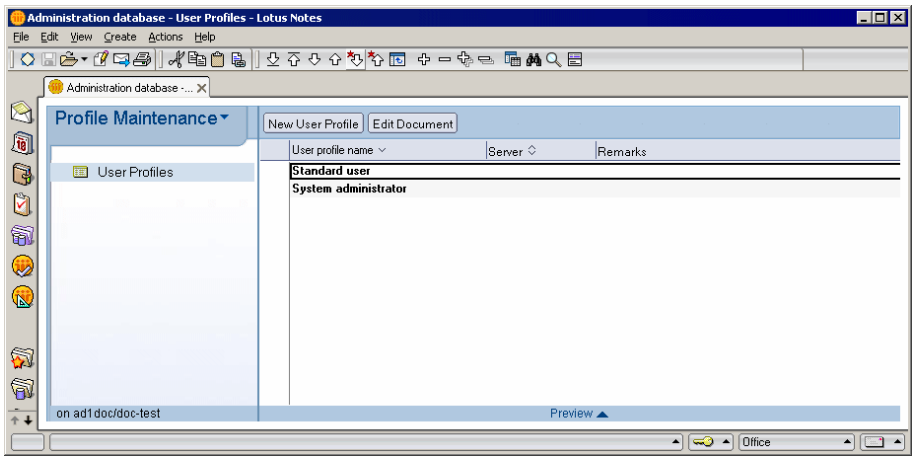
The tool bar buttons in the display area have the following functions:

Button	Description
Server	This button opens a **menu** wherein the following features may be performed. • **UM User Database Synchronization On / Off** Enables or disables the synchronization of user data records between the administration database and the user database. • **Inbox Replication On / Off** Enables or disables the inbox replication between the IBM/Lotus Domino server and the XPR server. If the inbox replication is active, an icon is displayed next to the corresponding person document.
Person document	This button opens a **menu** wherein the following features may be performed. • **New Person** Opens a guideline for creating new person documents. New persons can only be created via the synchronizing document. • **Edit document** Opens the person document of a selected user for editing. • **Use profile** Applies a profile to the selected person documents.

NOTE:
If the notification function is enabled, also check for a bell icon in front of the relevant user data record in the main window of the administration database.

B.1.2.2 Profile Maintenance

In the navigation section it is possible to select the **User Profiles** option. The created user profiles are displayed on the right hand side. The creation of user profiles is described in Section B.1.2.6, “The Profile Document”, on page 160.



The tool bar buttons in the display area have the following functions:

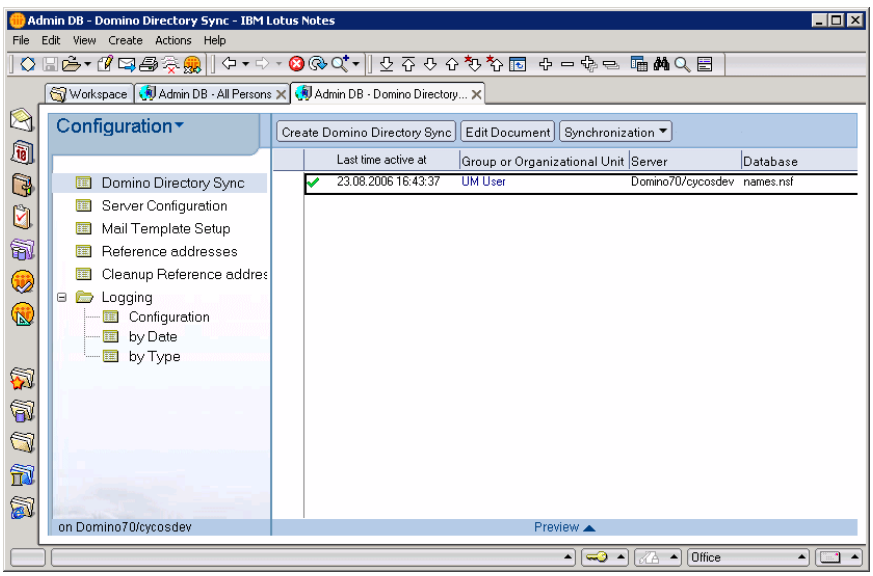
Button	Description
New User Profile	Via this button a profile document will be opened where a new profile document can be created.
Edit Document	Via this button the profile document of a selected user profile can be opened in order to edit it.

B.1.2.3 Configuration

In the navigation section you can select the options **Domino Directory Sync, Server Configuration**, **Mail Template Setup**, **Reference addresses, Cleanup Reference addresses** and **Logging**.

Domino Directory Sync

The user entries from the IBM/Lotus Notes address book are synchronized with the user entries of the administration database via the **Domino Directory Synchronization** option. The configuration of the synchronization procedure is described in Section 4.2.4.1, “Administration Database for the supported IBM/Lotus Notes Versions”, on page 68.



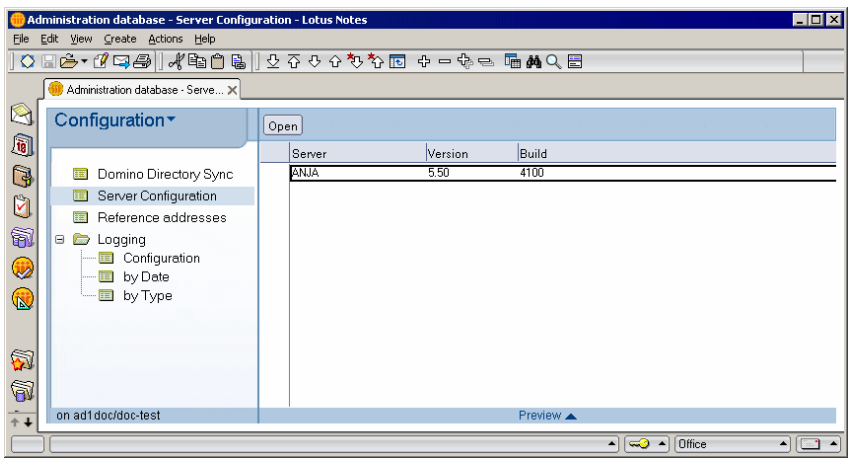
The tool bar buttons in the display area have the following functions:

Button	Description
Create Domino Directory Sync	Via this button a document will be opened where a new synchronization process can be created.
Edit Document	Via this button a selected synchronization process can be opened in order to modify it.
Synchronization	Via this button a selected synchronization process can be **activated**, **deactivated** or **directly started**. A document is indicated with a green tick, when the agent has been activated for this document and this entry has been selected for synchronization. If a document is indicated with a red cross, the agent has not become active for this document.

Server Configuration

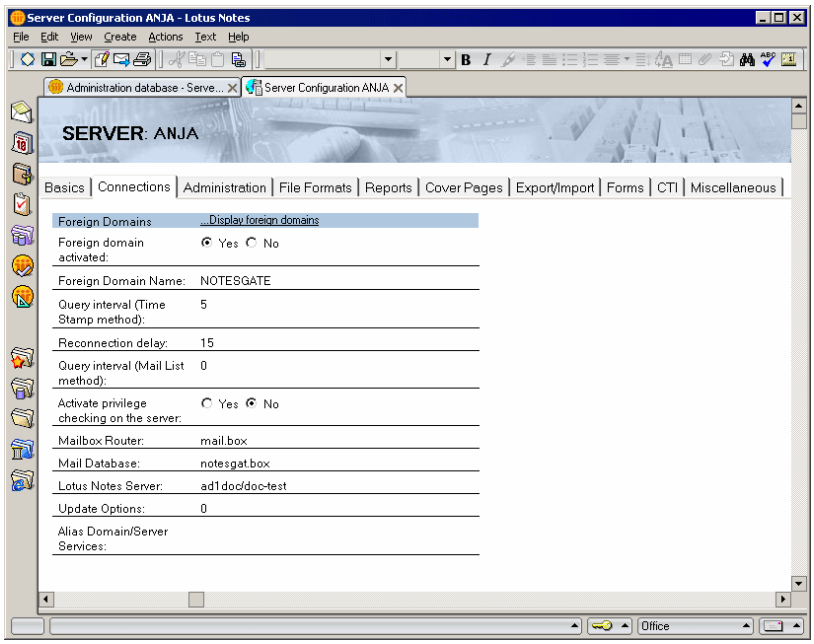
Via the **Server Configuration** option a list of the available XPR servers is displayed in the right display area. The **Server** column shows the name of the XPR server, the **Version** column shows the XPR software version used and the **Build** column shows the build version used.

NOTE: If questions should occur concerning the XPR server and/or IBM/ Lotus Notes Gateway you have to indicate the XPR version number and the build version number in any case!



A doubleclick on an entry opens the corresponding server document where you can see the whole IBM/Lotus Notes Gateway configuration. The tabs are identical with the tabs in the IBM/Lotus Notes Gateway configuration dialog on the XPR server (cf. Chapter A, “Configuration of the IBM/Lotus Notes Gateway”).

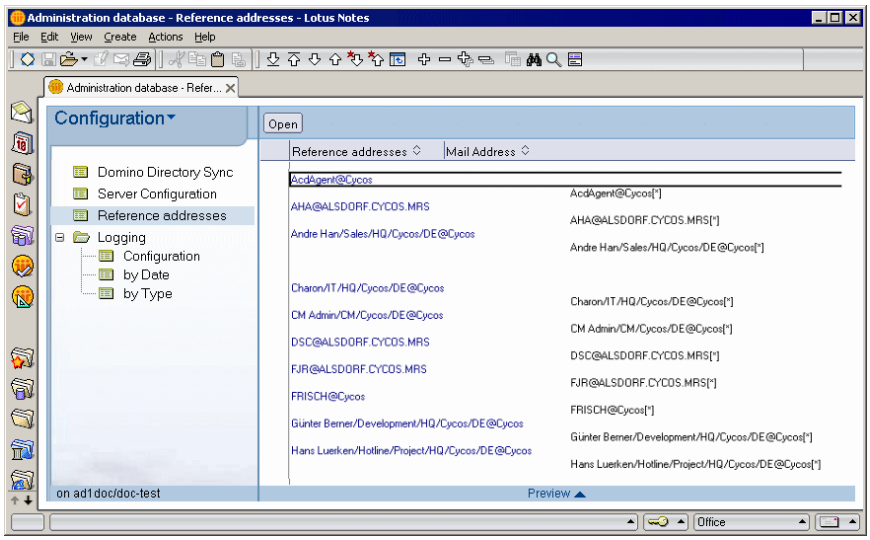
Modifications cannot be made in this document.



Reference addresses

The option **Reference addresses** shows a list referencing the IBM/Lotus Notes mail addresses in contrast to the XPR mail addresses. The IBM/Lotus Notes mail addresses are listed in the **Reference Addresses** column. The column **Mail Addresses** shows the corresponding XPR mail address.

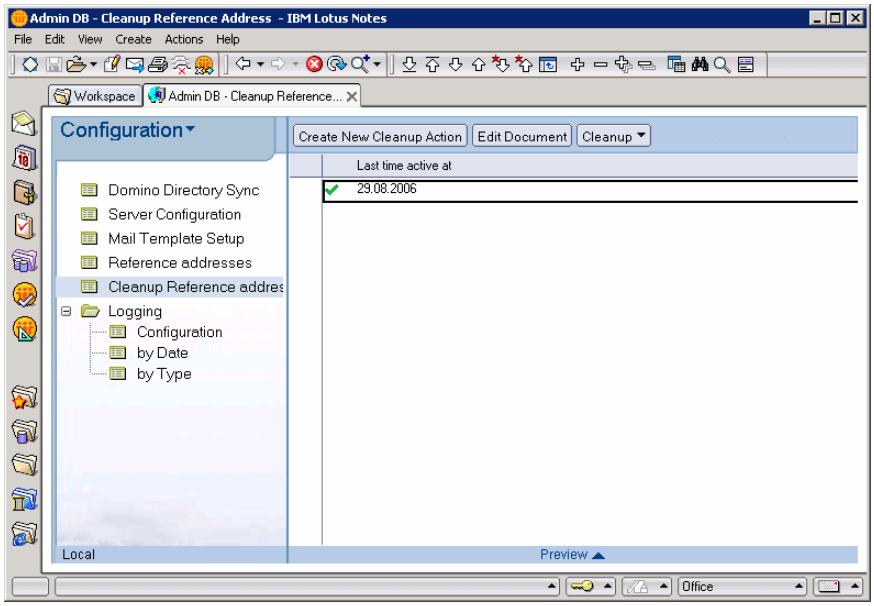
NOTE: The entries in this view are automatically administered by the IBM/ Lotus Notes Gateway. They may also be maintained by an administrator.



The reference addresses specified here serve for the communication with the XPR server. The XPR server has an internal length restriction of 64 Byte for mail addresses. IBM/Lotus Notes addresses can be of any length.

Cleanup Reference addresses

With this function you can clean up the list of reference addresses. This is performed by an agent that is activated and configured via a cleanup document.

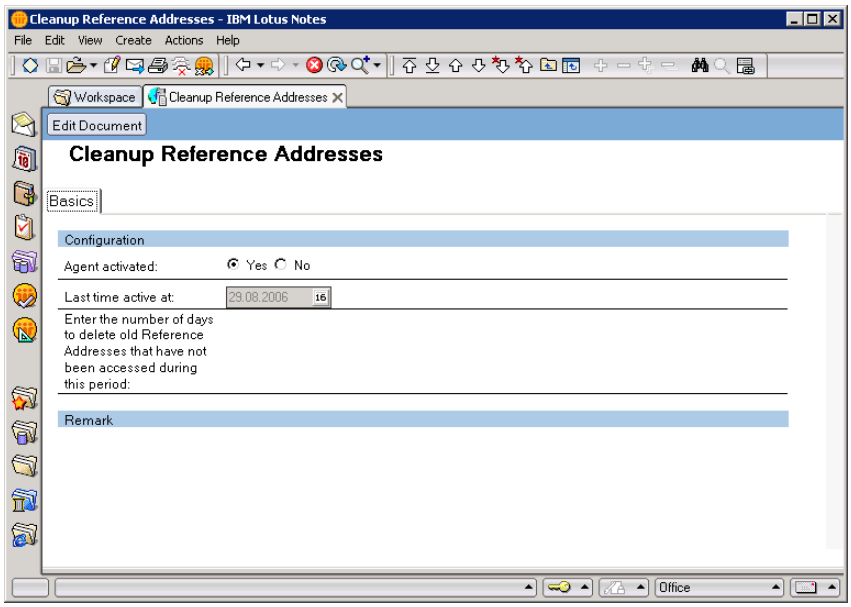


NOTE:
Only one cleanup document can be created. If a cleanup document already exists, it must be edited.

How to create a cleanup document:

1. Open the **Configuration** section in the administration database.

2. Select the **Cleanup Reference addresses** entry or doubleclick on the already existing document. The following view opens:



3. Click on **Edit Document**.
4. Activate the agent in the **Agent activated** section via the **Yes** option.
5. In the **Last time active at** section set a day from which the interval for the agent is to be calculated. The current date is entered here by default.

   If, for example, you create the cleanup document on a Tuesday, but the agent is to run on every other Sunday, enter here the date of the last Sunday and set the interval to 14 days.
6. Enter the number of days from which old reference addresses that were not used in this period are to be removed.
7. Click on **Save and Close**.

Creating a cleanup document is complete.

Logging

Via the **Logging** option all system activities on the IBM/Lotus Notes side in the context of the XPR connection to IBM/Lotus Notes can be logged. Logging is a helpful tool for recording system states in case of errors.

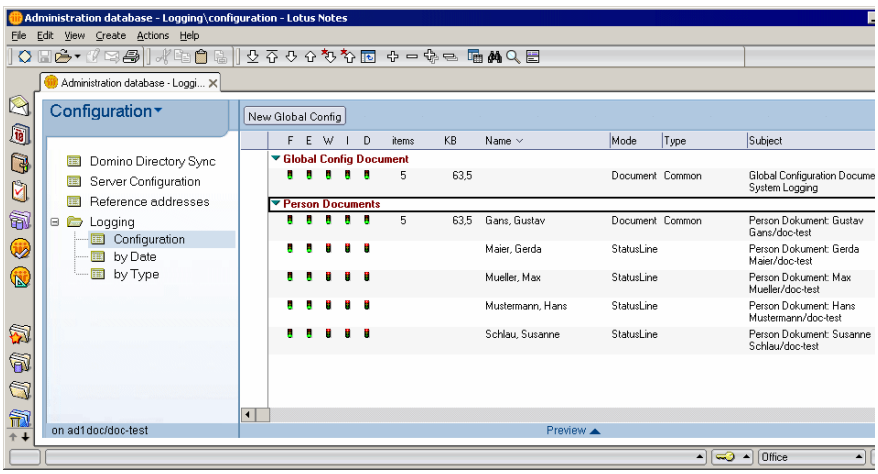
NOTE: The logging output is exclusively created in English.

Logging can be configured for each user in his person document in the XPR administration database. Global logging can be performed for activities that are not user-related (e.g. Domino Directory Synchronization or Searching a person document). Logging is divided into three views:

- **Configuration**

  In this view all logging configurations that have been set are displayed. You may create a **Global configuration document** in which you can determine the logging settings for the administration database global activities.

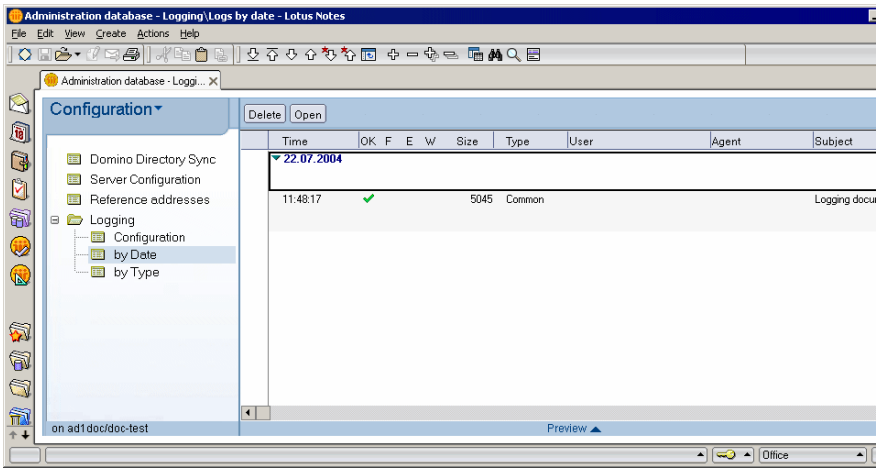
  After a person document has been created for a user, the logging configurations contained therein are visible in the **Person Documents** area.



  A double-click on a logging configuration opens the corresponding configuration document. The creation of a global configuration document is described in Section B.1.2, “Main Window”, on page 130. The logging configuration within a person document is described in Section B.1.2.4, “Logging tab”, on page 157.

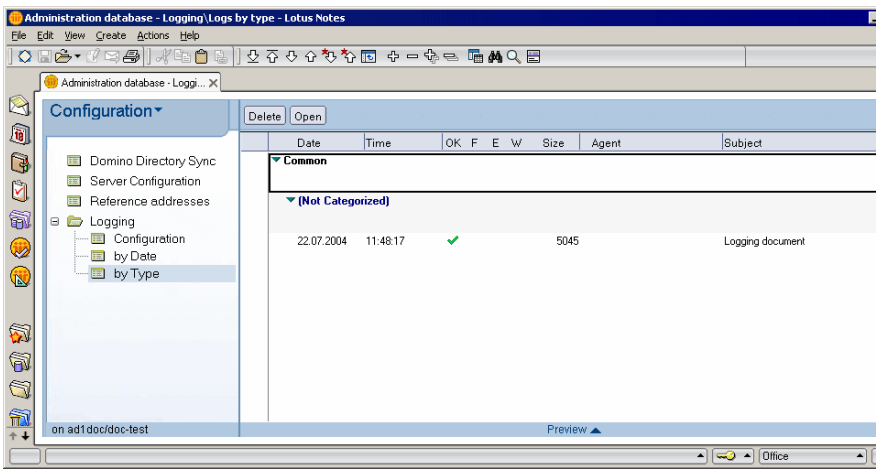
Logging by Date

In this view all logging output documents are sorted by their creation date. A double-click on a logging document opens it for viewing.



Logging by Type

In this view all logging output documents are sorted by output type (see also Section B.1.2.4, “Document type”, on page 157). A double-click on a logging document opens it for viewing.



Creating a global logging configuration document

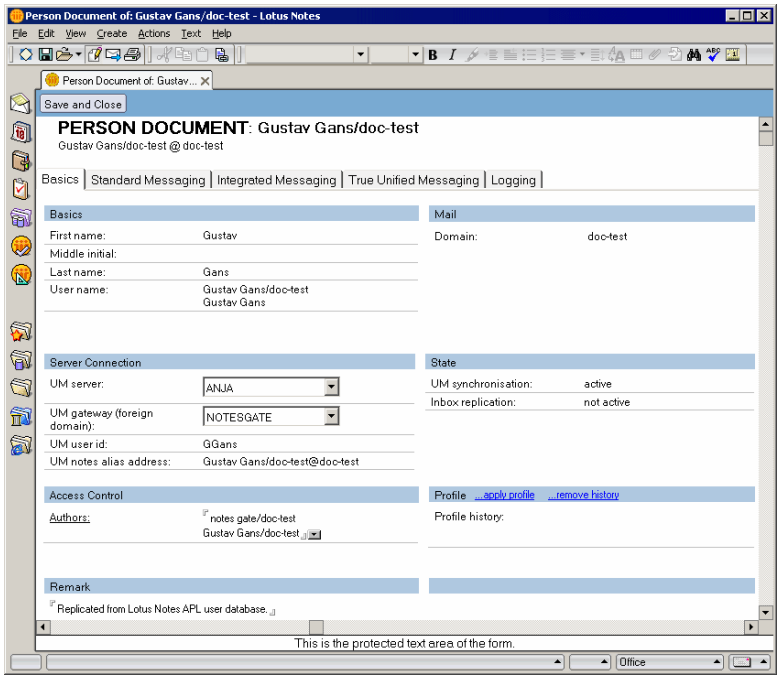
To create a new global logging configuration document please proceed as follows:

1. Click the **New global configuration** button in the **Configuration** view.
2. A configuration document opens where you can perform settings for global logging. Possible settings are described in Section B.1.2.4, “Logging tab”, on page 157.
3. Save the document after successful configuration.

B.1.2.4 The Person Document

Document header

In every person document the corresponding IBM/Lotus Notes user name can be found in the head area of the person document (**Person Document:**). The corresponding IBM/Lotus Notes e-mail address can be found under the user name. Modifications on the person document can be made via the **Edit document** button.



Basics tab

Basics section:

Option	Description
First name	The first name of the user.
Middle initial	The middle initial of the user.
Last name	The surname of the user.
User name	The hierarchical IBM/Lotus Notes user name.

Server Connection section:

Option	Description
UM server	Here the Unified Messaging server (XPR server) that has been used is displayed. If more than one UM server is used, the server name this user data record is to belong to can be selected here. In case of a server name alteration, server-dependent fields are automatically adapted (one message window per adapted field appears then).
UM gateway (foreign domain)	Displays the foreign domain name the IBM/Lotus Notes Gateway is connected to.
UM user id	This is the XPR user name which is used to synchronize the user data with the XPR server.
UM Notes alias address	If the hierarchical user name exceeds the length of 64 characters, an alias entry will be generated automatically that will be entered to the XPR user data.

Access Control area:

Option	Description
Authors	Displays the users that have at least author access privileges for this user data record. Author access privileges allow the modification of all fields indicated with a green tick.

Remark section:

The **Remark** field provides information. The notes entered here will be displayed in the user data of the XPR server in the **Remarks** field.

Mail section:

Option	Description
Domain	The IBM/Lotus Domino domain where the user is registered in.
Mail Server	The IBM/Lotus Domino server where the mail database of the user is stored on.
Mail database	The name of the mail database of the user.
Forward Address	Users have the possibility to forward their mail to another address via a forwarding address.

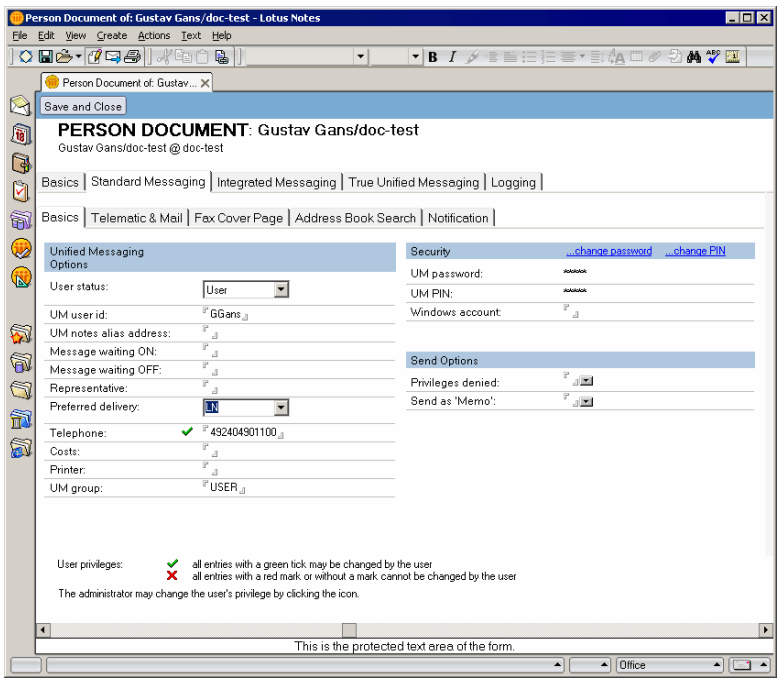
State section:

Option	Description
UM synchronization	Displays whether address book synchronization with the XPR server is **activated** or **deactivated**.
Inbox replication	Displays whether inbox replication is **available** or **unavailable**.

Profile section:

Option	Description
... apply profile	Opens a dialog wherein an existing profile can be selected. This profile will then be applied to the person document.
... remove history	Deletes the protocol for profile application.
Profile protocol	Shows when and by whom the selected profile has been applied to the person document.

Standard Messaging tab



Basics tab

The following fields correspond to entries in the user database and affect the processing of documents in the XPR system.

Unified Messaging Options section:

Option	Description
User status	Here you can select whether the current user has user status or postmaster status. All messages that could not be delivered are sent to the postmaster account.
UM user id	A value defined here replaces the unambiguous ID which was generated automatically for the user during the creation of the person document. This value corresponds to the XPR user ID. If an existing XPR user account is indicated, it has to be considered that the values in the IBM/Lotus Notes person document have priority during the user data replication.
UM Notes alias address	The IBM/Lotus Notes alias address used by the XPR server can be entered here.
Message Waiting ON	The order sequence necessary for the message waiting function is entered here (e.g. `CIT_BASIC/123`).
Message waiting OFF	If a value is entered in this field it will be used for deactivating the message waiting signal otherwise CIT would be used for deactivating it.
Representative	If an XPR user account is entered in this field, all documents are automatically forwarded to this.

Option	Description
Preferred delivery	The preferred service for the delivery is entered here. The value **LN** is entered by default (when using the Integrated Messaging feature the value **MAILBOX** is given) if the user works with IBM/Lotus Notes.
Telephone	The extension of the user.
Charges	The cost center for call detail recording (CDR) the user is assigned to.
Printer	The department printer configured.
UM group	The user group (name) this user is assigned to on the XPR server.

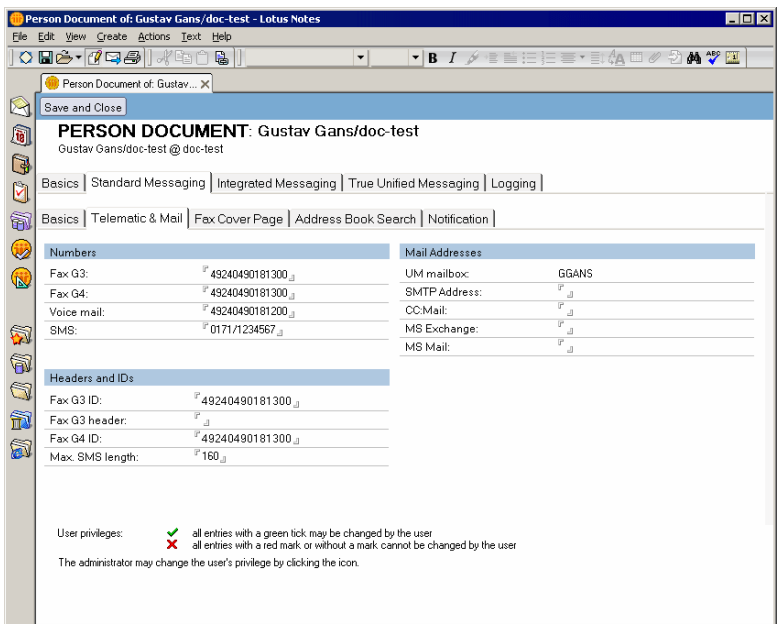
Security section:

Option	Description
UM password	The password for access via the XPR client. Via the **...Change Password** link the password can be modified.
UM PIN	The password (a set of digits) for access via the voice mail menu. Via the **...Change PIN** link the PIN can be modified. When an XPR user is created, he/she is assigned a default PIN for accessing the Telematic APL, which he/she needs to change upon the initial login. If this user is a IBM/Lotus Notes user and a IBM/Lotus Notes administrator changes this user's PIN before the user changes the PIN himself/herself, the user need not change the PIN upon the initial login.
Windows account	In this field the name of a Windows user account can be entered. Thus it is possible to use this user account for login to the XPR system as well (single-sign-on). For further information on login via the Windows user account please refer to the *Server Administration* manual.

Send Options section:

Option	Description
Privileges denied	In this field you may determine for which message types (**fax**, **fax-on-demand**, **SMS** or **voice mail**) the send privilege is to be denied.
Send as memo	In this field you may determine for which message types (**fax**, **fax-on-demand**, **SMS** or **voice mail**) the IBM/Lotus Notes memo format is to be used. This selection is only possible for messages that are sent internally within IBM/Lotus Notes. External messages are sent in a default form via the IBM/Lotus Notes Gateway.

Telematic & Mail tab



Numbers section:

The calling numbers that are assigned to the different telephone-based services have to be entered here.

Option	Description
Fax G3	The calling number for Fax G3 messages.
Fax G4	The calling number for Fax G4 messages.
Voicemail	The calling number for voice mails.
SMS	The calling number used for SMS messages.

NOTE:
Multiple entries in a field are separated by semicolon, for example `49240490181300;49240490181301`.

Headers and IDs section:

Option	Description
Fax G3 ID	The Fax G3 identification is the calling number of the fax device and will be sent to the counterpart during the transmission. It should be identical with the Fax G3 calling number.
Fax G3 header	This text is inserted in the headline of a fax message and generally contains a reference to the originator of the fax message.
Fax G4 ID	The Fax G4 identification is the calling number of the fax device and will be sent to the counterpart during transmission. In comparison to Fax G3 there is no header in Fax G4 but the identification may also contain letters. It is a combination of both fields for Fax Group 3.
Max. SMS length	Indicates the maximum number of characters that may be used in an SMS message. Default is 160 characters.

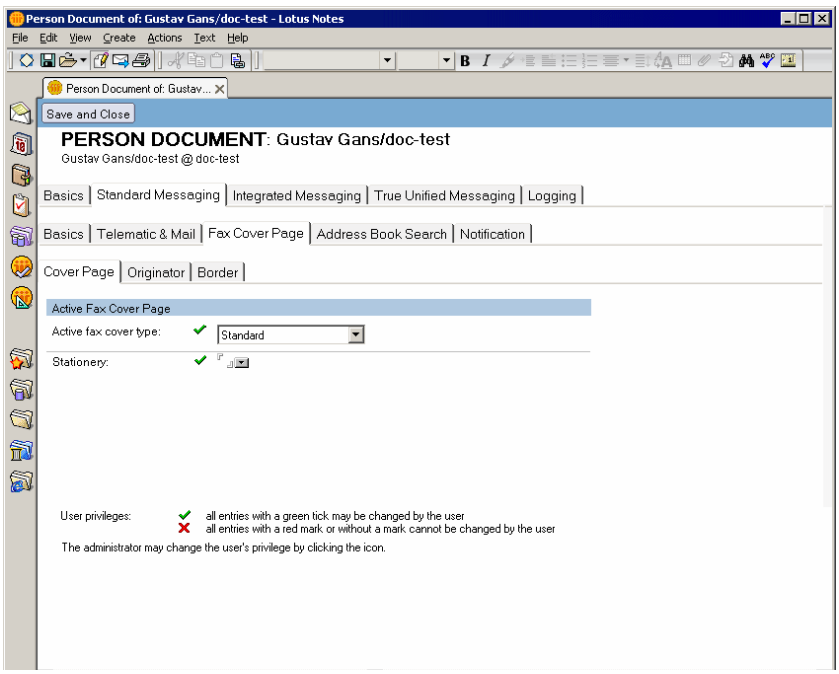
Mail Addresses section:

Option	Description
UM mailbox	The name of the XPR mailbox.
SMTP Address	The address of an internet mail server.
MS Exchange	The address of the Microsoft Exchange mail account.

Fax Cover Page tab

Information required for the transmission of fax messages by means of the XPR send form can be configured in this tab. The send form makes all possibilities of the XPR server available for the user. It enables searching for a fax number by means of the recipient's name. If possible, originator and recipient information is entered automatically in the corresponding fields on the cover page. The XPR send form itself can be used as a cover page or else it can be used in connection with a XPR cover page or another IBM/Lotus Notes form.

NOTE: Installation and usage of the XPR fax covers is described in Chapter E, "Using Fax Templates in IBM/Lotus Notes".

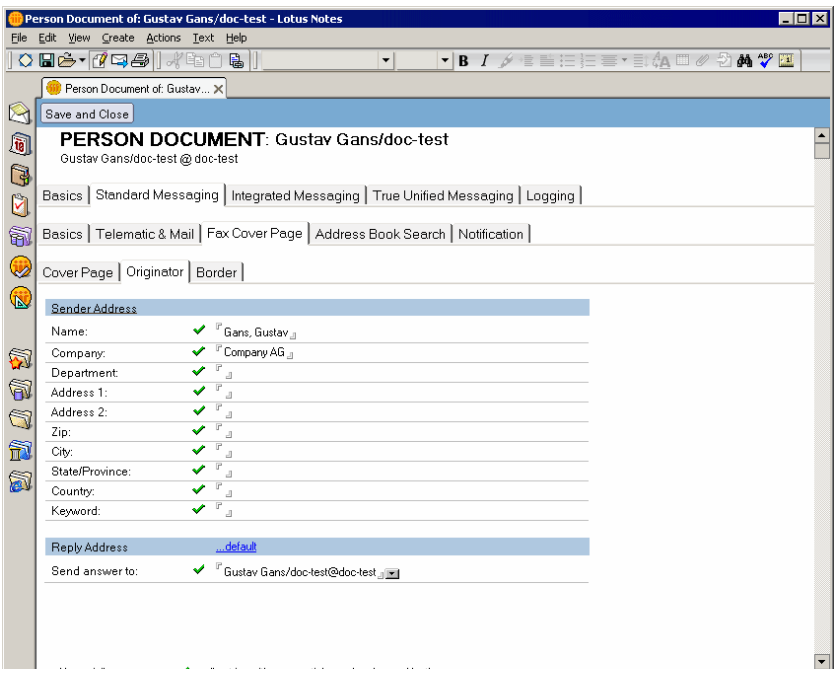


Active Fax Cover Page section:

Option	Description
Active fax cover type	Here you can select if the user shall deploy **no fax cover page**, the **default fax cover page** (see IBM/Lotus Notes Gateway configuration dialog on Section A.1.6, "Fax Cover Pages Tab", on page 122) or a **IBM/Lotus Notes fax cover page**.
Template	Setting the usable templates according to the type of cover page selected. The final selection of the template occurs with sending a fax message.

Originator tab

The following fields store user information set in the corresponding fields by the XPR send form and thus being available for the cover page. Fields: **Name, Company, Department, Address line 1, Address line 2, Zip, City,State, Country and Keyword**.

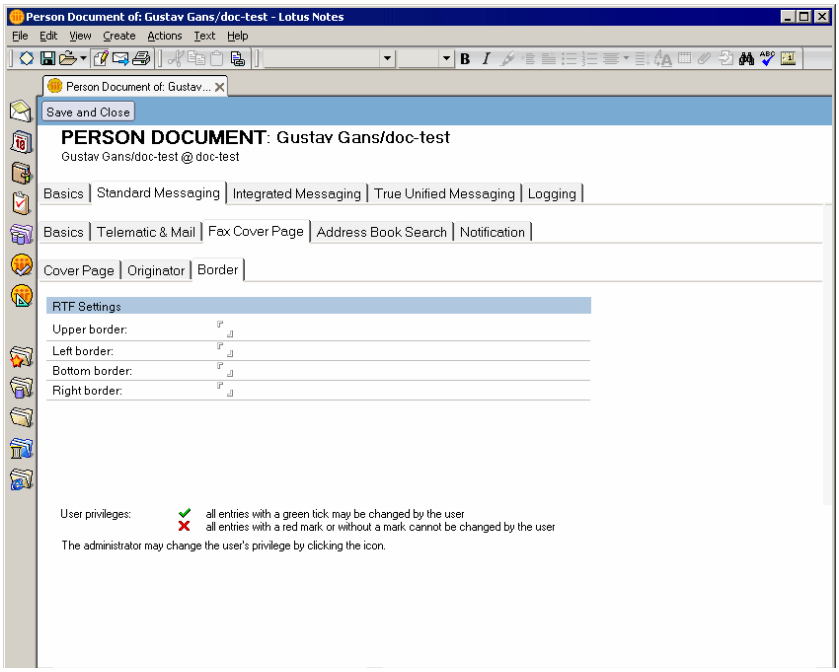


Reply Address area:

Option	Description
Send Reply to	If the transmission report or the error report is to be sent to another address than to the originator.

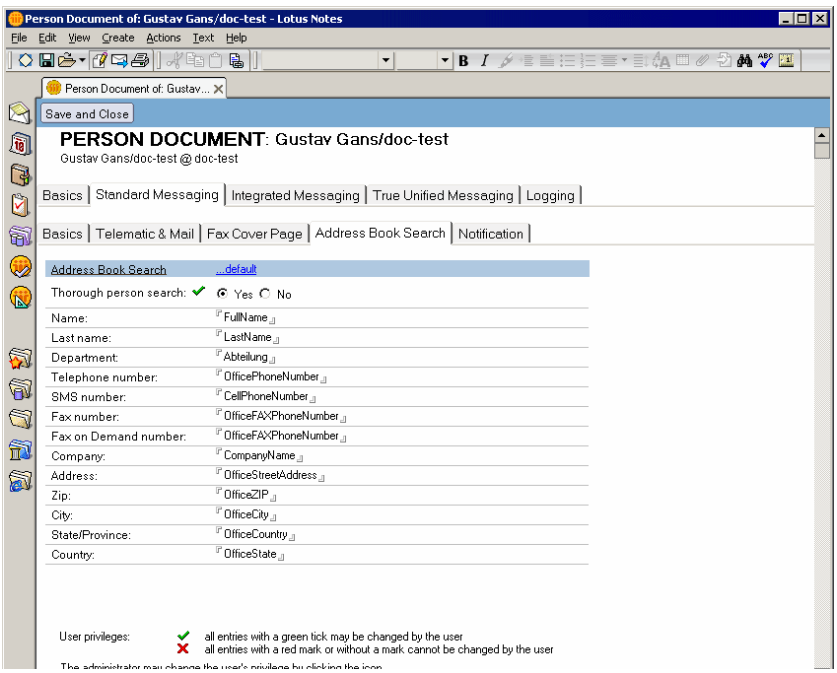
Border tab

In this tab you can perform settings for the exact arrangement of the rendered fax message. Fields: **Upper Border, Left Border, Lower Border** and **Right Border**. All values are given a pixel.



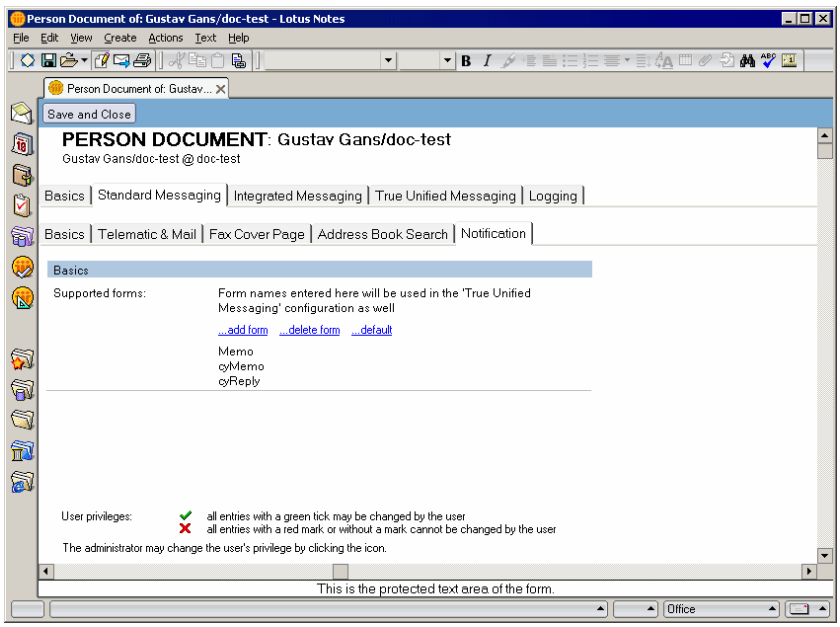
Address Book Search tab

The search option of the XPR send form looks for the name specified in the **To:** address field in all configured, public address books known to the local IBM/Lotus Notes client. This takes effect when leaving the field. As soon as an adequate person document is found, the information needed for the send form will be retrieved by searching the corresponding list of the field names. If the document contains the corresponding field and if a field value exists the next information will be searched in the document. The different field names of each configuration option are separated by a semicolon.



Default values can be loaded via the **Add Default** button. The default values can be used for extracting the information required from the Domino address book (`names.nsf`). Fields: **Name, Last name, Department, Telephone number, SMS number, Fax number, Fax on Demand number, Company, Address, Zip, City, State/Province, and Country**.

Notification tab

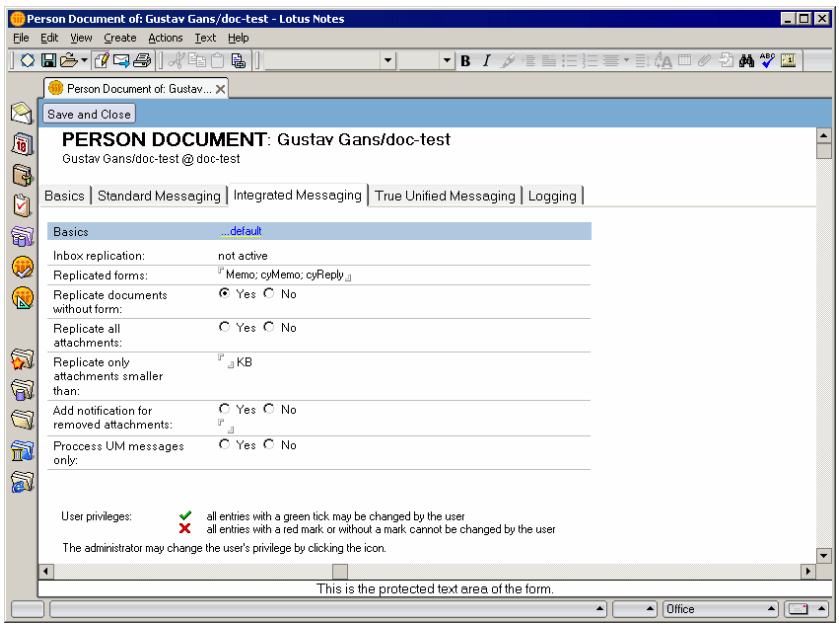


Basics section:

Option	Description
Supported forms	Here you can set the IBM/Lotus Notes forms to which a response is to occur in the form of a notification when a new message comes in (e-mail, fax, voice mail etc.). Notification can take place as MWI (Message Waiting Indication) or with an SMS to a mobile phone. Prerequisite for using the notification function is that it is activated for the corresponding user in the Web Assistant (see the Web Assistant manual).

Integrated Messaging tab

NOTE: This tab is only displayed if the **Integrated Messaging Feature is activated** in the IBM/Lotus Notes Gateway configuration dialog (see Section A.1.3, “Administration Tab”, on page 117).



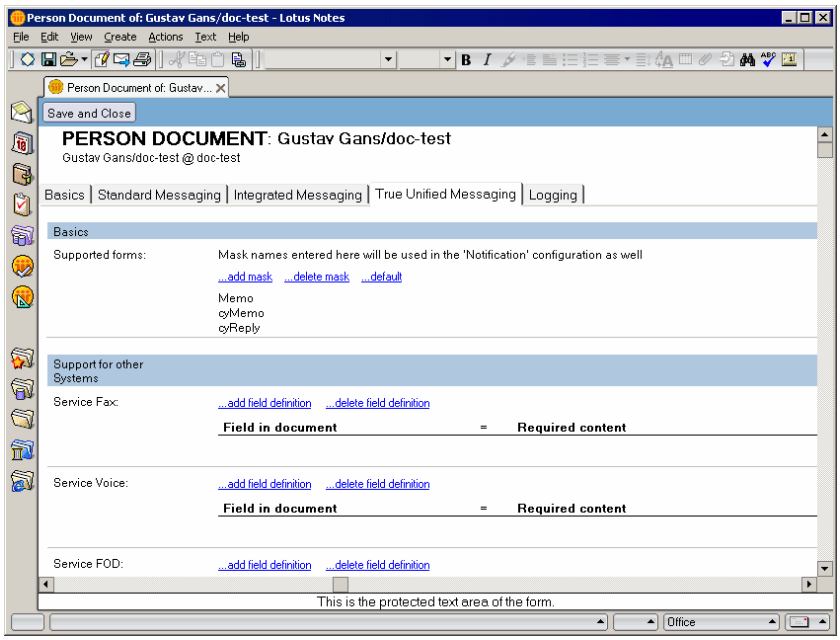
Basics section:

Option	Description
Inbox replication	Shows whether the inbox replication is **enabled** or **disabled** for this user data record (see also Section B.1.2, “Main Window”, on page 130).
Replicated forms	All Notes forms listed here are allowed for replication if the feature “Integrated Messaging” is activated. This setting concerns the XPR dispatcher agent functionality in the user's mail database. Only documents containing one of the listed form names in the 'form' field are replicated to the XPR server. Via the **Add Default** button the default values can be loaded. The default values are: **Memo**, **cyMemo**, **cyReply**.
Replicate documents without form	Via this option you can set whether documents are replicated to the XPR server with or without form.
Replicate all attachments:	This option configures whether attachments are replicated. If you select **No** here, further settings can be made via the following options.
Replicate only attachments smaller than:	You can realize a restriction of the attachment size via this option. Enter the maximum size for attachments in kB.

Option	Description
Add notification for removed attachments:	Via this option you can decide whether to inform the user about an attachment having been removed, e.g. because of its size. If you select **Yes** here, the notification text **must** be entered in the entry field below, as the user would not receive any notification otherwise.
Process UM messages only:	If you select **Yes** here, only UM messages are processed here.

True Unified Messaging tab

In this tab you can perform settings for the support of foreign systems such as fax server, voice server etc. In the **Basics** area enter the IBM/Lotus Notes forms that the system is to respond to and under **Support for other Systems** you can set parameters for processing a message from a foreign system.



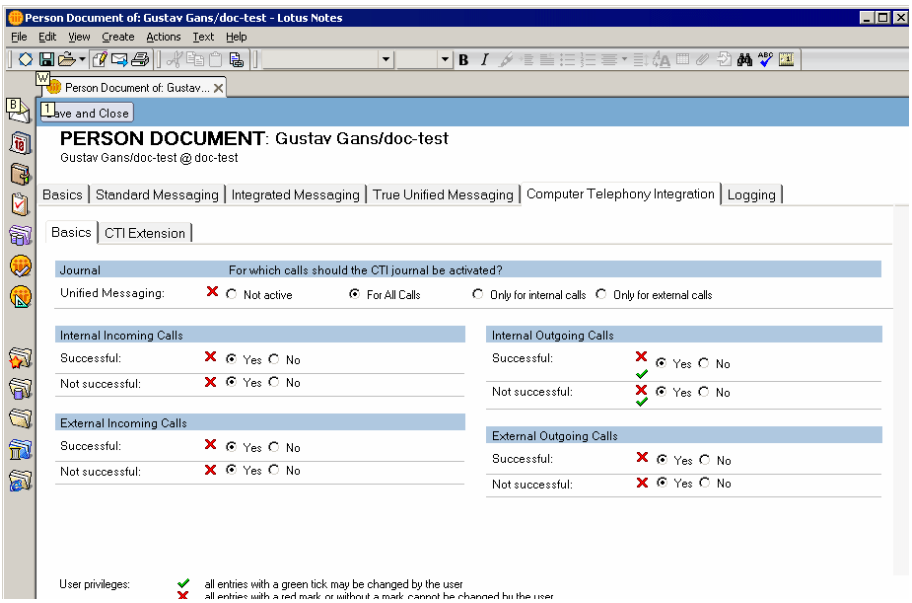
Example: Fax Legacy Support

If fax messages are to be processed by other fax message systems, a field definition must be entered in the **Fax Service** option so that the document coming in from the foreign system can be identified as a fax message. Select the **...Add field definition** option for this purpose and in the following window enter e.g. “ServiceType” in the **Field Name** entry field and e.g. “Fax“ in the **Required content** field. Thus every document that comes in from a foreign system and contains the “Fax“ value in the **ServiceType** field is recognized as fax message and processed. Several field definitions may be entered.

Computer Telephony Integration tab

NOTE: This tab is only displayed if the **CTI Feature is activated** in the IBM/Lotus Notes Gateway configuration dialog (see Section A.1.10, “CTI Parameters Tab”, on page 127).

Basics tab



Journal section:

The XPR server is capable of logging all activities of a local telephone. This information can be transmitted to the user mail database.

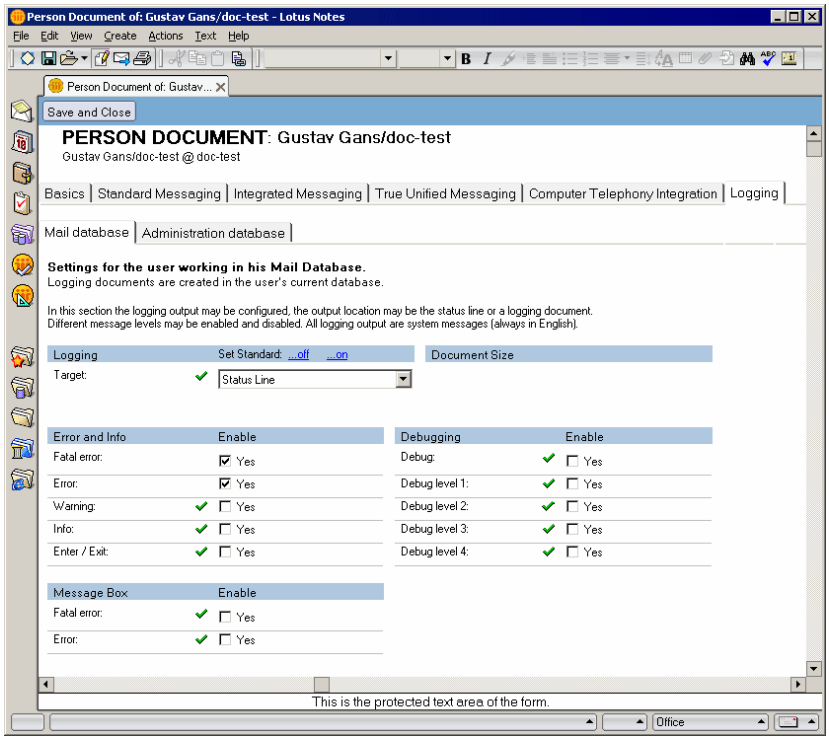
In the header section of the tab, you can activate and deactivate the transfer of call information with the **Not active** option.

According to the settings chosen, further settings for the information to convey can be configured in the following fields.

Option	Description
Incoming calls	Successful: **Yes /No** Not successful: **Yes /No**
Outgoing calls	Successful: **Yes /No** Not successful: **Yes /No**

Logging tab

The logging options that can be set in this tab refer to all user-relevant activities. These take place in the user mailbox on the one hand and in the administration database on the other hand.



Logging section:

Option	Description
Target	• **Document in Database** A logging document is created that is stored in the administration database. • **Status Line** Logging output is logged in the status line. No logging document is created.
Document type	If **Document in Database** has been selected as the target, you may determine here if a logging document is to be created per **Action** or **per Person**. **One document type** can also be defined for all logging documents.

Via the option **Set Standard** all entry fields can be preset with default settings. The link **...from** performs default logging. The **error messages** (**Fatal Error** and **Error**) are logged in the status line. The link **...to** performs default logging The **Error messages**, **Warnings** and **Infos** are logged in a logging document.

In the **Error and Info** area you can determine for which error and info types a logging entry shall be created.

Option	Description
Fatal errors	A fatal error that normally finishes the execution of a program. Logging this error type cannot be **deactivated**.
Error	An error during the execution of the program that does, however, not lead to its immediate closing. Logging this error type cannot be **deactivated**.
Warning	A critical program situation that does not directly lead to an error but could cause an error later on. Warnings can be hints for following errors.
Info	Normal program states are logged.
Enter/Exit	Logs the program stack. For example, if you invoke a subfunction, an invocation message is logged. This logging option may be used to localize a faulty program location.

Message Box section:

In this area you can set which error types are to be displayed in a message window. The message window then shows a system message in English.

The **Document Size** area can only be configured when you have set **Document in Database** as output target.

Option	Description
Number of items	Each logging entry is inserted as a rich text field in the logging document. Here you can set how many rich text fields the logging document shall have. If all fields are filled in, the first one is deleted in used anew.
Bytes per item	Number of bytes to be used per logging entry. The smallest size of a byte is 500 byte.
History capacity	Shows the minimum and maximum capacity of the logging document in kilobyte, before old reports are overwritten.

In the **Debugging** area you can determine four levels of debug outputs.

B.1.2.5 Prevent Deletion of the Person Document by a User

To prevent a user from deleting their person document, several lines of code must be added to the template. Proceed as follows:

1. Open the mail template that is used as template for the user mail databases and the delivered mail template `umMail.ntf` in the designer.
2. In `umMail.ntf` open the **Database Script** in the **Other > Database Resources** folder and here the **Querydocumentdelete** object.
3. Copy the following piece of code to the clipboard:

```
Call cyFEC_Event_DbScript_QueryDocumentDelete ( Source,
bCancelOperation )

If bCancelOperation Then

continue=False

Exit Sub

End If
```

4. Open the **Database Script** in the **Other > Database resources** folder and here the **Querydocumentdelete** object.
5. Search the following text in this script:

```
Main:
```

6. Copy the code from the clipboard below this line so that the code looks like this:

```
Main:

Call cyFEC_Event_DbScript_QueryDocumentDelete ( Source,
bCancelOperation )

If bCancelOperation Then

continue=False

Exit Sub

End If
```

7. Save the modification and update the design of the user mail databases.

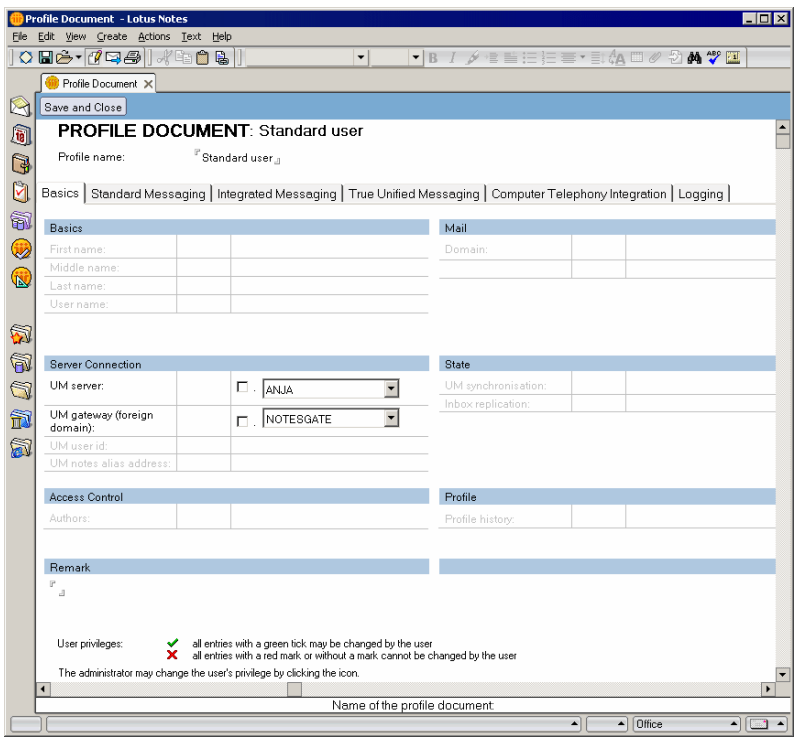
If a user now tries to delete their person document, they receive an error message in the status line of the IBM/Lotus Notes client.

B.1.2.6 The Profile Document

Global Unified Messaging settings can be made in the profile document. These can be applied to one or several person documents.

NOTE:
The person document is not directly related to the profile document. Modifications at the profile document are not automatically assumed by the person document. In this case, the modified profile document needs to be applied to the person document again (see also Section B.1.2.4, “The Person Document”, on page 142).

Most of the fields that have been described in Section B.1.2.4, “The Person Document”, on page 142 are available here as well. Fields that are not editable are filled with values during the **Domino Directory Synchronization** (see Section 4.2.4.1, “Administration Database for the supported IBM/Lotus Notes Versions”, on page 68).



C Design Elements of the XPR Mail Template

C.1 XPR Mail Template for the supported Versions of IBM/Lotus Notes

C.1.1 General Considerations

The mail template for the supported versions of IBM/Lotus Notes is stored on the XPR server in the folder <XPR *Install*>`\res\LnApl\TemplatesR6`, <*XPR Install*>`\res\LnApl\TemplatesR7` respectively <XPR *Install*>`\res\LnApl\TemplatesR8` etc. **after** the IBM/Lotus Notes Gateway installation.

NOTE: If you use IBM Notes 9.0 Social Edition (Basic Configuration) and IBM Domino 9.0 Social Edition, use the mail templates for Lotus Notes 8.

This folder contains **one** multilingual mail template entitled **ummail.ntf** including all design elements for all available languages. This template is merged with a multilingual IBM/Lotus Notes mail template.

NOTE: All licensed languages can be used as long as they exist also in the Notes mail template. The language can be selected during the later design update.

The user mail database can inherit a language from the complete template. The following languages are available at the moment:

- German
- English
- French
- Italian
- Spanish
- Dutch
- Portuguese (Portugal)
- Portuguese (Brazil)
- Russian
- Turkish

Names:

File name	ummail.ntf
Database name	Mail Tmpl 6.0, Mail Tmpl 7.0
Template name	umMail_Tmpl_6.0_R6, umMail_Tmpl_7.0_R7, umMail_Tmpl_8.0_R8

The single design elements of the mail template are described in detail in the following paragraphs.

C.1.2 Script Libraries

The mail template for the supported versions of IBM/Lotus Notes contains script libraries representing the basis for all other mail templates used with IBM/Lotus Notes.

Name	Function	Miscellaneous
cyBec (Backend Classes)		
	• Unified Messaging Backend features that are used e.g. for server agents.	• Requires script library **cyLog** • Requires script library **cyCfg** • Must always be installed.
cyFec (Frontend Classes)		
	• Unified Messaging Frontend features that are uses for agents with graphic user interface.	• Requires script library **cyLog** • Requires script library **cyCfg** • Requires script library **cyRes** • Requires script library **cyBec** • Must always be installed.
cyCfg (Configuration Library)		
	• Access to configurations in the administration database. • The features are used to identify configuration settings or modify them on the user side.	• Requires script library **cyLog** • Requires script library **cyRes** • Use the **cyAllUmPerson** view if it exists. • Use the **cyUmPersonAsMemo** view if it exists. • Must always be installed.
cyDoc (Document Library)		
	• Unified Messaging extensions to the IBM/Lotus Notes documents such as **Memo** and **Reply** that are used within the Unified Messaging documents **cyMemo**, **cyReply**, **cyFax**, **cyVoice**, **cyFaxReply** etc.	• Requires script library **cyLog** • Requires script library **cyCfg** • Requires script library **cyRes** • Requires script library **cyUtl** • Requires form **Control Master** • Requires form **Control Slave** • Requires subforms **Fax Viewer Control** and **Wave Player Control** • Requires subforms **Recipient Info** and **UM Message Dialog**

Name	Function	Miscellaneous
cyLog (Logging Library)		
	• Class for selected output of errors, warnings and information on system level. Can be used to write program run protocols into documents. • All messages that are logged via the logging class are system messages in English.	• Must always be installed.
cyRes (Response Strings)		
	• Collection of messages for the user that are translated into all available languages.	• Must always be installed.
cyUtl (Utilities Library)		
	• Collection of basic tools that can be used at different locations.	• Requires script library **cyLog** • Requires script library **cyCfg** • Requires script library **cyRes** • Requires form **cyChooseDatabase** • Must always be installed.

C.1.3 Forms

The Unified Messaging forms are based on the two main forms **cyMemo** and **cyReply**.

All other forms such as **cyFax** or **cyVoiceReply** set their specific parameters in **QueryOpen** during creation and then open the document with the form **cyMemo** or **cyReply**.

Name	Function	Miscellaneous
Unified Messaging Memo `alias` cyMemo		
	• Creates documents and displays them. Their look (fax, SMS, voice mail, etc) is stored in the document or is determined during the creation of the document. • The form is the Unified Messaging representation of the IBM/Lotus Notes memo form. • E.g. entering of Unified Messaging configurations and the address and phone number search. • Shows fax and voicemail in the opened document in a separate ActiveX control. • Contains special buttons e.g. for the playback of voicemails on a local user telephone.	• Requires subforms **mrsFaxViewer**, **mrsWavePlayer** and **mrsWavePlayerShallow**, if fax messages are to be displayed e.g. voice mails played back via sound card. • Requires subform **cyRecipient** • Requires subform **cyDelOptionSubform** • Requires script library **cyFec** • Requires script library **cyDoc** • Requires script library **cyLog** • Requires script library **cyCfg** • Requires script library **cyRes** • Requires script library **cyBec** • Requires script library **cyUtl**
Unified Messaging Reply `alias` cyReply		
	• Creates reply documents and displays them. Their look (fax reply, SMS reply, voice mail reply, etc) is stored in the document or is determined during the creation of the document. • The form is the Unified Messaging representation of the IBM/Lotus Notes reply form. • Additional features see **Unified Messaging Memo (cyMemo)**.	• See **Unified Messaging Memo (cyMemo)**.
Unified Messaging\Fax `alias` cyFax		
	• Is required for the creation of fax messages. The fax document is created as **cyMemo** and sent via the XPR server.	• Requires form **cyMemo** and the design elements mentioned there.
Unified Messaging\Fax-on-Demand `alias` cyFod		
	• Is required for the creation of a fax-on-demand document. The fax-on-demand document is created as **cyMemo** and sent via the XPR server.	• Requires form **cyMemo** and the design elements mentioned there.

Name	Function	Miscellaneous
Unified Messaging\SMS `alias` cySms		
	• Is required for the creation of SMS messages. The SMS document is created as **cyMemo** and sent via the XPR server.	• Requires form **cyMemo** and the design elements mentioned there.
Unified Messaging\Voicemail `alias` cyVoice		
	• Is required for the creation of a voice mail. The voicemail document is created as **cyMemo** and sent via the XPR server.	• Requires form **cyMemo** and the design elements mentioned there.
Unified Messaging\Fax Reply `alias` cyFaxReply		
	• Is required for the creation of a fax reply document. The document is created as **cyReply** and sent via the XPR server.	• Requires form **cyReply** and the design elements mentioned there.
Unified Messaging Reply\Fax-on-Demand `alias` cyFodReply		
	• Is required for the creation of a fax-on-demand reply. The document is created as **cyReply** and sent via the XPR server.	• Requires form **cyReply** and the design elements mentioned there.
Unified Messaging\SMS Reply `alias` cySmsReply		
	• Is required for the creation of an SMS reply message. The document is created as **cyReply** and sent via the XPR server.	• Requires form **cyReply** and the design elements mentioned there.
Unified Messaging\Voicemail Reply `alias` cyVoiceReply		
	• Is required for the creation of a voice mail reply. The document is created as **cyReply** and sent via the XPR server.	• Requires form **cyReply** and the design elements mentioned there.
cyUmPerson `alias` cyUmPerson		
	• The form serves to open the person document in the administration database by double-clicking the copy in the user's mail database. • Opening the copy is diverted to opening the original in the administration database as long as a connection exists. • It is not possible to open the copy itself.	• Requires the agent **cyUmSettings** and the design elements mentioned there.

Name	Function	Miscellaneous
(cyChooseDatabase) `alias` cyChooseDatabase		
	• Form for a dialog box wherein a database may be selected. It is required to open the person document in the administration database. • If there is no copy in the mail database and thus the location in the administration database is unknown, the database can be selected manually here.	• - / -
(cyLogDoc) `alias` cyLogDoc		
	• This form is used to view logging output documents. Logging output documents are generated when the logging has been configured to write the output in a document. The documents are displayed in the **cyLogging** view and can be opened with the form **cyLogDoc** there.	• - / -
(ControlSlave) `alias` cyControlSlave		
	• This form is used to provide a **$REF field** for the **cyMemo** document.	• Is required for fax and voice functionality. • Works with installed ActiveX-Controls only.
cySimpleDialer `alias` cySimpleDialer		
	• This form is used OpenScape Xpressions to use the SimpleDialer in a mail template.	• Requires the **cyDialerAgent** agent.

C.1.4 Views

Name	Function	Miscellaneous
(cyUnifiedMessaging) `alias` cyUnifiedMessaging		
	• The view shows the copy of the person document, in exceptional cases also some older copies that could not be deleted. • From this view it is possible to modify the person document in the administration database, but only to the extent the user privileges and settings by the system administrator permit. • The user can switch logging on and off via this view.	• Requires the agent **cyUmSettings** and the design elements mentioned there. • Requires the extended outline **NotesMailOutline**.
(cyLogging) `alias` cyLogging		
	• This view displays all logging documents that have been generated by activated logging in the mail database. • The documents can be opened and removed.	• The form **cyLogDoc** is required for opening. • This view requires the extended outline **NotesMailOutline**.
(cyAllUmPerson) `alias` cyAllUmPerson		
	• Via this view copies of person documents that can be used or possibly deleted are searched in the mail database.	• This view must always be installed. If it does not exist, the search is performed via **Database search**.
(cyUmPersonAsMemo) `alias` cyUmPersonAsMemo		
	• Via this view copies of person documents are searched in the mail database that have been sent via mail to the administration database and that have not been transformed automatically into a person document by the running dispatcher **cyDispatcher** agent. • The mail is converted to a person document and used or possibly removed.	• This view must always be installed.
(UM Debug View) `alias` cyDebug		
	• Is required for debugging.	• This view must always be installed.
cyJournals		
	• Displays fax message delivery reports.	• This view must be installed for sending and receiving fax messages.

C.1.5 Agents

Name	Function	Miscellaneous
cyDispatcher `alias` mrsDisp		
	• In the context of Unified Messaging functionality the agent transforms the person documents coming in from the administration database via mail back into a person document. • If this step is skipped, the user can see the mail in his inbox. However, it disappears as soon as he accesses his configuration in the person document.	• Requires script library **cyBec** • See also feature description of the XPR dispatcher agent in Section C.1.9, “Design Elements for IM and TUM Functions”, on page 172.
(cyUmLoggingOff) `alias` cyUmLoggingOff		
	• The agent switches logging off for a user in a document. The agent is called via the **cyUnifiedMessaging** view.	• Requires script library **cyCfg** • Requires script library **cyUtl**
(cyUmLoggingOn) `alias` cyUmLoggingOn		
	• The agent switches logging on for a user in a document. The agent is called via the **cyUnifiedMessaging** view.	• Requires script library **cyCfg** • Requires script library **cyUtl**
(cyUmSettings) alias cyUmSettings		
	• The agent opens the original person document in the administration database. • The user can modify the configurations activated in this document. • For finding the administration database a copy of the person document (also in mail format) must be available in the mail database of a user. The user will otherwise be prompted to specify the memory location of the administration database. • If the connection to the administration database is interrupted, the configurations cannot be modified or viewed. In this case the system works with a copy of the person document, e.g. if the user is away on business with his/her notebook.	• Requires script library **cyCfg** • Requires script library **cyUtl** • Requires script library **cyRes** • Requires form **cyChooseDatabase** • Requires additional design elements from the administration database.
(Reset UM Parameters) `alias` cyUMReset		
	• Is required for debugging.	• Should always be installed as well.

Name	Function	Miscellaneous
(Document Dump) `alias` cyDump		
	• Is required for debugging.	• Should always be installed as well.
Dialer Agent `alias` cyDialerAgent		
	• With OpenScape Xpressions this agent is used for the SimpleDialer.	• Requires form **cySimpleDialer**.

C.1.6 Outlines

Name	Function	Miscellaneous
NotesMailOutline `alias` MailOutline		
	• Advanced IBM/Lotus Notes outline (MailOutLine) with an additional folder **Unified Messaging** under **Tools**. • Here the two views **cyUnifiedMessaging** and **cyLogging** can be viewed.	• The default IBM/Lotus Notes outline can be exchanged for this extended outline or manually supplemented with the contained parameters.

C.1.7 Subforms

Name	Function	Miscellaneous
(Browser Control) `alias` cyBrowser		
	• ActiveX Control for browser display for the forms **cyMemo** and **cyReply**.	• Is currently not used.
(Fax Viewer Control) `alias` cyFaxViewer		
	• ActiveX Control for fax display for the forms **cyMemo** and **cyReply**.	• - / -
(Wave Player Control) `alias` cyWavePlayerShallow		
	• ActiveX Control for wave playback feature for the forms **cyMemo** and **cyReply**.	• - / -
cyDelOptionSubform `alias` cyDelOptionSubform		
	• Subform for additional Unified Messaging options for the forms **cyMemo** and **cyReply**.	• Derived from the Notes default form **DelOptionSubform**.
(Recipient Info) `alias` cyRecipient		
	• The subform shows recipient information.	• Is currently only used for fax.

Name	Function	Miscellaneous
(UM Message Dialog) `alias` cyMessageDlg		
	• Display box for dialog with the user.	• - / -

C.1.8 Shared Actions

Name	Function	Miscellaneous
Cycos New Fax		
	• Calls the **cyMemo** form in the fax generation version.	• - / -
Cycos New FoD		
	• Calls the **cyMemo** form in the Fax-on-Demand generation version.	• - / -
Cycos New SMS		
	• Calls the **cyMemo** form in the SMS generation version.	• - / -
Cycos New Voice		
	• Calls the **cyMemo** form in the voice mail generation version.	• - / -
Cycos Forward Fax		
	• Calls the **cyMemo** form in the fax forward version.	• - / -
Cycos Forward FoD		
	• Calls the **cyMemo** form in the Fax-on-Demand forward version.	• - / -
Cycos Forward SMS		
	• Calls the **cyMemo** form in the SMS forward version.	• - / -
Cycos Forward Voice		
	• Calls the **cyMemo** form in the voice mail forward version.	• - / -
Cycos Reply Fax		
	• Calls the **cyReply** form in the fax reply version.	• - / -
Cycos Reply FoD		
	• Calls the **cyReply** form in the Fax-on-Demand reply version.	• - / -
Cycos Reply SMS		
	• Calls the **cyReply** form in the SMS reply version.	• - / -
Cycos Reply Voice		
	• Calls the **cyReply** form in the voice mail reply version.	• - / -
Cycos Reply All Fax		
	• Calls the **cyReply** form in the fax reply version.	• Reply to all originators.

Name	Function	Miscellaneous
Cycos Reply All FoD		
	• Calls the **cyReply** form in the Fax-on-Demand reply version.	• Reply to all originators.
Cycos Reply All SMS		
	• Calls the **cyReply** form in the SMS reply version.	• Reply to all originators.
Cycos Reply All Voice		
	• Calls the **cyReply** form in the voice mail reply version.	• Reply to all originators.
Cycos History Reply Fax		
	• Calls the **cyReply** form in the fax reply version.	• The content of the received message is sent as well.
Cycos History Reply FoD		
	• Calls the **cyReply** form in the Fax-on-Demand reply version.	• The content of the received message is sent as well.
Cycos History Reply SMS		
	• Calls the **cyReply** form in the SMS reply version.	• The content of the received message is sent as well.
Cycos History Reply Voice		
	• Calls the **cyReply** form in the voice mail reply version.	• The content of the received message is sent as well.
Cycos History Reply All Fax		
	• Calls the **cyReply** form in the fax reply version.	• Reply to all originators. The content of the received message is sent as well.
Cycos History Reply All FoD		
	• Calls the **cyReply** form in the Fax-on-Demand reply version.	• Reply to all originators. The content of the received message is sent as well.

Name	Function	Miscellaneous
Cycos History Reply All SMS		
	• Calls the **cyReply** form in the SMS reply version.	• Reply to all originators. The content of the received message is sent as well.
Cycos History Reply All Voice		
	• Calls the **cyReply** form in the voice mail reply version.	• Reply to all originators. The content of the received message is sent as well.

C.1.9 Design Elements for IM and TUM Functions

Using *IM* and *TUM* requires additional design elements. Furthermore, design elements already available in the IBM/Lotus Notes default mail template must be modified, so that the features can be used.

C.1.9.1 Default Form Memo

The default form **Memo** must be modified for IM and TUM features. The changes are necessary so that message status changes (e.g. from unread to read), etc. can be communicated to the XPR system because the message status must also be changed there.

IMPORTANT: If you modify a mail template showing **company-specific modifications** already, you **must** manually integrate the values listed in the following table in the template.

In case of a mail template that exclusively contains IBM/Lotus Notes default design elements you can copy the memo form over the existing one.

Object	Event	Added
Memo (form)	(Globals) Memo Options	Use "cyFec"
Memo (form)	Queryopen as 1. instruction	Call cyFEC_Event_Form_QueryOpen(Source, Mode, IsNewDoc)
Memo (form)	Postopen as 1. instruction	Call cyFEC_Event_Form_PostOpen

To manually integrate the values listed in the table above to the mail template showing **company-specific modifications** - based on Section 4.4.3.4, “Basic Steps” procedures - proceed as follows:

1. Open the following mail templates in the Lotus Domino Designer client:
   - **companymail.ntf**
   - **UmMailEN.ntf**
2. Open the Message (Memo) Element inside the **FORM** folder of the **UMMailEN.ntf** and add the following script code to the corresponding Message (Memo) Element inside **FORM** folder of the file **companymail.ntf**:

```
- FORM Message (Memo)

Object: (Globals)Memo

Event: Options

   Use "cyFec"

Object: Memo (Form)

Event: Queryopen

   Call cyFEC_Event_Form_QueryOpen(Source, Mode,
   IsNewDoc)

Object: Memo (Form)

Event: Postopen

   Call cyFEC_Event_Form_PostOpen
```

3. Save the modifications performed in the **companymail.ntf** file.

C.1.9.2 Default Design Element ($Inbox)

A number of modifications must be made to this standard IBM/Lotus Notes design element to transfer status changes from documents in the IBM/Lotus Notes inbox to the XPR server and to be able to display the actual 'Read/Unread' status for documents which were replicated to the XPR system.

Among other graphic elements, a column must be inserted displaying whether the message has been read or not via a symbol (open or closed envelope). This displays the status both in XPR and in IBM/Lotus Notes.

A message shown without an envelope icon is a message which is not replicated with the XPR system. This can be configured via the mask used in the messages (XPR administration database).

IMPORTANT: The default design element **($Inbox)** in **FOLDERS** folder of the file **companymail.ntf** must be modified manually! Therefore you need to enter the parameters described in the following section manually in the design element.

Do not copy the complete design element to the mail template you wish to create.

Object	Event	Added
Add additional column at second position: **Column value formula:** @If (! @IsAvailable (MRS_ORIGINALID); 0; @If (MRS_Read = "True"; 125; 122)) **Important information on the design of the new column:** Width=2, Display values as icons = Yes		

The default shared action **RemoveFromFolder** must be exchanged for the modified shared action **CycosRemoveFromFolder**.

C.1.9.3 Default design element Database Script

To ensure that documents deleted in the inbox are also deleted in the XPR system the above IBM/Lotus Notes events are used. Thus it is necessary to modify this default IBM/Lotus Notes design element manually with the IBM/Lotus Domino Designer client.

NOTE: Since it is not possible to copy the design element **Database Script** itself, the following modifications must be made manually.

Object	Event	Added
<Template name> (Database Script)	Options	`Use "cyFec"`

<Template name> (Database Script)	Querydocumentdelete	In the lower part next to the instruction
		`If Not(profiledoc Is Nothing) Then Delete profiledoc`
		the instruction
		`If (Not bCancelOperation) Then Call cyFEC_Event_DbScript_PostDocumentDelete(Source)`
		needs to be inserted.

To manually integrate the values listed in the table above to the mail template showing **company-specific modifications** - based on Section 4.4.3.4, “Basic Steps” procedures - proceed as follows:

1. Open the mail template **companymail.ntf** in the Lotus Domino Designer client.
2. In the **companymail.ntf** file, go to the **Other > Database Resources** folder and open the **Database Script**.
3. In the **Database Script**, add the following code to the **Options** event.

   ```
   Use "cyFec"
   ```

4. In the **Database Script**, locate the **Querydocumentdelete** event, and:
   1. Search for the following instruction:

      ```
      If Not(profiledoc Is Nothing) Then Delete profiledoc
      ```

   2. In the lower part next to this instruction, add the following code:

      ```
      Call cyFEC_Event_DbScript_QueryDocumentDelete (
      Source, bCancelOperation )

      If bCancelOperation Then

      continue=False

      Exit Sub

      End If

      If (Not bCancelOperation) Then Call
      cyFEC_Event_DbScript_PostDocumentDelete(Source)
      ```

5. Save the modifications.

C.1.9.4 cyDispatcher Agent Settings

The settings of the cyDispatcher agent must be, also, modified for IM and TUM features.

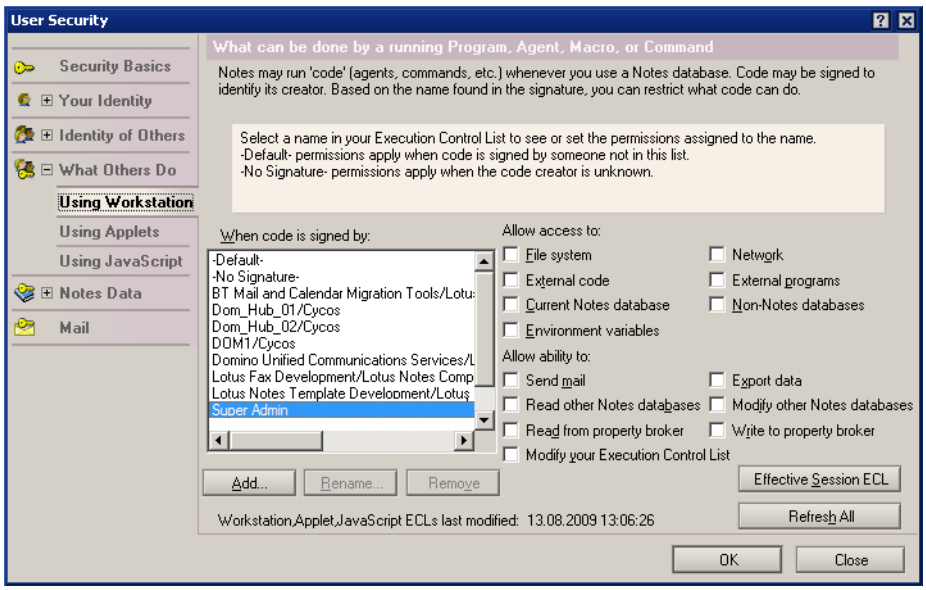
1. Open the created mail template **companymail.ntf** - based on Section 4.4.3.4, "Basic Steps" procedures - in the Lotus Domino Designer client.
2. Change to the **Agents** view and open the **cyDispatcher** Agent with a double-click.
3. Configure a schedule (e.g., **Periodically: daily**) and click on the **Schedule** button. Select the option **Any Server** under **Where the Agent Runs - Run on**. Finish this dialog by clicking **OK** and reset the schedule to **On event - Before new mail arrives**.
4. On **Security** tab set the agent to **Run on Behalf of** the Xpressions Connector user.
5. Set the runtime security level to level **"3. Allow restricted operations with full administrator rights".**
6. Save your settings.

NOTE: Please note that possibly the security settings of the IBM/Lotus Domino server must be adapted so that the agent can be executed.
You must also ensure that the agent runs in the security context of a IBM/Lotus Notes user ID, which contains the appropriate access privileges.

IMPORTANT: The **cyDispatcher** agent must be signed in the server context or executed, since otherwise no replication of messages and message states is possible.

C.1.9.5 Minimum Security for the Signer of the Notes Template

To ensure that the Notes client can execute all commands, scripts and agents developed for TUM and IM you need to check the security settings of the Notes client under **File** > **Security** > **User Security** > **What Others Do**.



The signer of the Notes Template must activate the following check boxes:

- Allow access to:
  - File system
  - Network
  - External code
  - External programs
  - Current Notes database
  - Non-Notes databases
  - Environment variables
- Allow ability to:
  - Send mail
  - Export data
  - Read other Notes databases
  - Modify other Notes databases
  - Modify your Execution Control List

If you do not set the above options, the Notes clients will show the **Notes Security Alert** dialog and ask for permission to execute them.

C.1.9.6 Steps to manually create a UM Mail template

To manually create a UM Mail template, you need to use the mail templates for the supported versions of the IBM/Lotus Notes, which are stored in the setup directory of the XPR server in the folders <XPR Install>`\res\LnApl\TemplatesR6`, <XPR Install>`\res\LnApl\TemplatesR7`, or <XPR Install>`\res\LnApl\TemplatesR8` etc., respectively, after the IBM/Lotus Notes Gateway is installed.

NOTE: You need to create a separate UM Mail template for each desired language.

Proceed as follows:

1. Copy the mail template extension **umMail.ntf** to the data directory of the local Lotus Notes Client (default: `C:\Program Files\lotus\notes\data`).
2. Create a language-reduced mail template extension on the Lotus Domino server. Therefore you need to create a new database on the Lotus Domino server and apply the locally stored mail template extension **Mail Tmpl X.x** as template for the new database. **X.x.** represents the template version.
3. Go to **Application** - **New** menu
4. Name the new template file **UmMailEN.ntf** for English, for example.
5. Select the umMail.ntf as New database template. Confirm with OK.
6. Select the desired template language on the next screen. e.g English. Confirm with OK.
7. On database properties activate the Database file is a master template and enter a name for the template (e.g. UmMailEN)
8. Deactivate the option Inherit design from master template
9. Create a new database template in your local work environment. Name the database template e.g. companymail. Select the entry Empty as the template for the new database. Confirm with OK.
10. Open the Properties dialog of the created template (in this example the file companymail.ntf) and change to the Design tab.
11. Activate the Inherit design from master template option and enter StdR86Mail as template name.
12. Activate the Database file is a master template option and enter Companymail as template name. Close the Properties dialog.

13. Select the template in your work environment and update the design with File > Database > Refresh design.
14. After the design update has been completed, open the companymail.ntf template in the Lotus Domino Designer client.
15. In the Designer client, open the mail template extension **UmMailEN.ntf** you have created in addition to the companymail.ntf template.

C.2 Installation of the IBM/Lotus Notes Client Components

You find the setup files of the IBM/Lotus Notes client components on the XPR installation medium in the `XpressionsInstall\AddOn\Client\LotusNotes` directory. The following folders are filed there:

- Folder `ActiveX`:

  The installation files for the ActiveX components can be found here.

- Folder `LnFax`:

  The installation files for the client component XPR fax can be found here.

- Folder `LnConfPlugin`:

  Here you find the installation files for the conference plugin.

C.3 Installation of the ActiveX Components

The ActiveX components are used for viewing fax messages and for the playback of voice mails (in WAV format or via the telephone) under IBM/Lotus Notes.

Therefore, you have to install the files `CycosFaxView.ocx` and `CycosWav.ocx` during the setup. The installation program stores these files in the folder `C:\Programs\Common Files\Siemens\Controls` by default.

NOTE:
Section E.7, “Configurable Parameters in setup.ini Files”, on page 226 describes how to configure the installation options.

If you work in a terminal server environment, you need to unregister and subsequently register the OCX files by executing the following steps.

1. Open a Microsoft command prompt with administrator privileges.
   - Execute the following substeps on Windows 7 for this purpose:
     a) Open **Start** > **All Programs** > **Accessories**.
     b) Rightclick the menu option **Command Prompt**.
     c) Select **Run as administrator**.
     d) In the **User Account Control** dialog, answer the question **Do you want to allow the following program to make changes to this computer?** with a click on **Yes**.
   - Execute the following substeps on Windows XP for this purpose:

a) Open **Start** > **Programs** > **Accessories**.

b) Rightclick the menu option **Command Prompt**.

c) Select **Run as...**.

d) Select the account with administrator privileges that should execute the command prompt.

e) Enter a password if required.

f) Click on **OK**.

2. In this command prompt, enter two commands according the ensuing pattern for the files `CycosWav.ocx` and `CycosFaxView.ocx` to unregister them:

   ```
   regsrv32 /u "<path>\CycosWav.ocx"
   regsrv32 /u "<path>\CycosFaxView.ocx"
   ```

   Examples:

```
regsrv32 /u "C:\Programs\Common Files\Siemens\Controls\CycosWav.ocx"
regsrv32 /u "C:\Programs\Common Files\Siemens\Controls\CycosFaxView.ocx"
```

3. Now you need to register both files again:

   ```
   regsrv32 "<path>\CycosWav.ocx"
   regsrv32 "<path>\CycosFaxView.ocx"
   ```

   Examples:

```
regsrv32 "C:\Programs\Common Files\Siemens\Controls\CycosWav.ocx"
regsrv32 "C:\Programs\Common Files\Siemens\Controls\CycosFaxView.ocx"
```

C.4 XPR Fax Installation

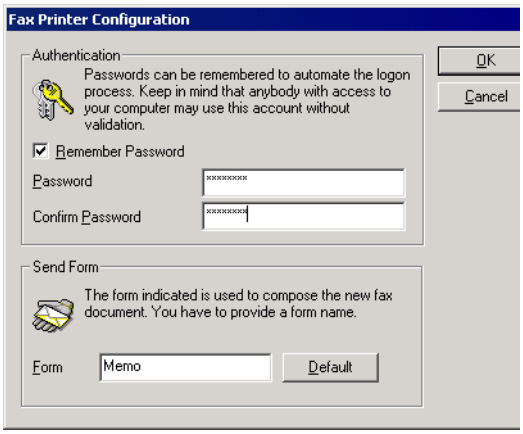
The XPR fax printer driver is used to send fax messages from other applications via IBM/Lotus Notes. The printer driver has to be installed on each workstation.

You find the setup program on the XPR setup medium in the path `XpressionsInstall\AddOn\Client\LotusNotes\LnFax`. The setup installs two new printer drivers on the user workstation (Fax G3/G4). The printer driver creates documents in Tiff format, calls the IBM/Lotus Notes client after having created a fax document and opens a configurable mask via the fax document **file attachment**.

NOTE: Section E.7, “Configurable Parameters in setup.ini Files”, on page 226 describes how to configure the installation options.

The mask to be used by the IBM/Lotus Notes client can be selected from the newly added **XPRfax** menu item in the **Actions** menu. The IBM/Lotus Notes password also has to be entered in this dialog so that the printer driver is capable of creating a document via the IBM/Lotus Notes API.

Furthermore, you should activate the option **Don’t prompt for a password from other Notes-based programs File > Tools > User ID**. By this means, the password is not queried when the IBM/Lotus Notes client is already running.



You have to enter the IBM/Lotus Notes user password in the **Authentication** area. It is used for opening the IBM/Lotus Notes client. If you activate the option **Remember Password** you do not have to enter your password at the start of the IBM/Lotus Notes client via the fax printer driver.

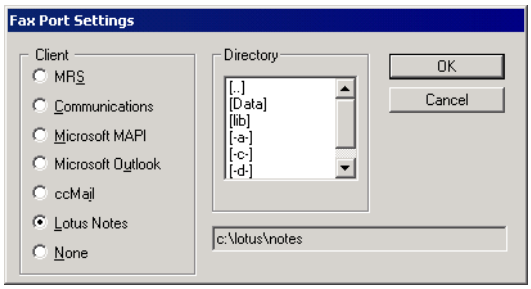
You can select the fax template you want to use in the **Send Form** area. If the advanced mail templates are installed, you have to enter **cyMemo** here. Click the **Default** button to have the server default form entered (see also Section A.1.9, “Mail Forms Tab”, on page 126).

C.4.1 Configuration of the Printer Driver

After a successful installation of MRS Fax, the printer driver **Tiff Fax G3 TurboBits Printer** has been added to the system. Normally, the printer driver is readily configured after the installation so that no changes are required.

If you want to change the settings of the printer driver proceed as follows:

1. Open the window with the view of the printers installed (**Start > Settings > Printer**).
2. Right-click on the entry **Tiff Fax G3 TurboBits Printer** and select the **Properties** menu item.
3. The properties of the printer driver are shown.
4. Move to the **Ports** tab and select the printer driver from the list. Press the **Configure Port...** button.



5. Select the option **Lotus Notes** in the **Client** area.
6. Configure the path to the files `CycosExt.dll` and `CycosMenu.dll` in the **Directory** area. These files are by default installed in the Directory `C:\Lotus\Notes`.

File name	Explanation
`CycosExt.dll`	This file calls the IBM/Lotus Notes client with user name and password from the `Notes.ini`.
`CycosMenu.dll`	Expands the **Actions** menu in the IBM/Lotus Notes client by the **MRS Fax** entry. Via this entry the fax printer driver can be configured. See also Section C.4, “XPR Fax Installation”, on page 183

7. Confirm your entries with **OK**.

D Installing and Integrating optiClient 130

IMPORTANT: The present optiClient 130 version already contains program modules the functions of which have not been completely tested yet. Therefore they remain inactive after the optiClient 130 standard installation. Activation of these modules at a later date is **exclusively permitted for testing purposes**.

The scope of optiClient 130 features as well as the function performance depend on the communication system at which optiClient 130 is operated and on the optiClient 130 modules configured on the user-PC.

optiClient 130 configuration modifications performed at runtime will not be saved in the configuration files until the program has been properly shut down.

Among configuration modifications particularly concerned you find: information about newly added, removed or modified contacts as well as information about newly added, removed or modified modules.

D.1 Requirements for the Integration into IBM/Lotus Notes

To set up the IBM/Lotus Notes integration, a IBM/Lotus Notes client must already be installed on the user computer. If such a client does not exist, the IBM/Lotus Notes integration is not available during the optiClient 130 setup.

The existence of a IBM/Lotus Notes client is checked on the basis of the following key in the Windows registry:

`HKLM\Software\Wow6432Node\Lotus\Notes`

This key is searched for the value `Path`. If this value exists, the optiClient 130 setup assumes an installed IBM/Lotus Notes client.

D.2 Concept of the Integration into IBM/Lotus Notes

The IBM/Lotus Notes integration expands the IBM/Lotus Notes client by optiClient 130 functions and makes these features available to the IBM/ Lotus Notes user.

The following functions are added to the IBM/Lotus Notes client:

- Initiating a call
- Phone number resolution based on IBM/Lotus Notes address books

You find additional information in the OpenScape Xpressions optiClient 130 manual.

D.3 Installing optiClient 130

This section contains information about the following topics:

D.3.1 General Installation Information

D.3.1.1 Quality of Service (QoS)

Voice information transmission is considered a time-critical service in data networks. This means that the quality of such a voice transmission depends very much on the load conditions in the respective network.

Three network parameters in particular influence the voice information transmission in a network:

- The average delay by the network (Delay)
- The temporal delay change (Jitter)
- The loss of voice information within the network (Loss)

The extent of negative influence by these three factors during a voice transmission depends mostly on the average and temporal load in the network.

To optimize transmission of voice information via a data network, optiClient 130 can use the Windows QoS-packet scheduler. If this service is used, voice information is higher prioritized in the network than normal data information. The result is in most cases a significant increase in voice quality.

Selected QoS Methods

QoS comprises different methods to ensure specific quality characteristics in a transmission. Since the IP-protocol is meanwhile first choice for voice information transmission, we will in the following only deal with the QoS mechanisms realized by this selected protocol.

With transmitting voice information via data-networks it is important to ensure a sufficient, constant transmission bandwidth for the entire duration of the transmission.

If several applications operate via the IP-protocol at the same time, the available transmission bandwidth of a transmission network is divided among these applications. Under specific conditions it may happen that e.g. not all applications receive the same transmission bandwidth. Especially with applications that receive a low transmission bandwidth, data may be transferred with massive delays. If this is the case with an application transmitting voice information, a poor voice quality is the result.

To avoid the suppression of voice traffic by classic data traffic in such a way or similar, voice traffic can be higher prioritized in the IP-protocol. These specifications are made on Layer 2 and 3 of the OSI 7-Layer model:

- The three bits are used in the 802.1p field on Layer 2. This field is part of 802.1Q-Tag.
- On Layer 3 the six bits of the DiffServ Code Point (DSCP) field in the IP protocol header are used.

If these IP protocol mechanisms are used, it must be ensured that the network infrastructure used evaluates and converts the prioritization information into an actual transmission prioritization. Beyond that it is important that sufficient bandwidth is available in the prioritization classes each.

You will find further information on DiffServ Code Point and 802.1p/Q in the following standards:

- *RFC 2474- Definition of the Differentiated Services Field in the IPv4 and IPv6 Headers* of the IETF (http://www.rfc-editor.org/)
- *RFC 2475- An Architecture for Differentiated Services* of the IETF (http://www.rfc-editor.org/)
- *802.1Q - Virtual LANs* of the IEEE (http://www.ieee.org/)

General QoS Activation Steps

NOTE:
QoS mechanisms should only be configured if optiClient 130 is used as softphone, thus directly operated at a PBX, the provider module used in optiClient 130 supports QoS mechanisms and the network infrastructure used evaluates QoS information.

IMPORTANT:
It is not possible to use QoS and VPN together with a SIP connection of optiClient 130.

To activate QoS mechanisms in an optiClient 130 environment , perform the following settings:

- In the optiClient 130 provider module used, QoS must be activated for usage.
- The *QoS Scheduler* service must be installed and configured on the relevant PC.
- An unused QoS service for controlling the network traffic must be deactivated on the relevant user-PC.

D.3.1.2 General optiClient 130 Installation Steps

optiClient 130 is set up via the following steps:

IMPORTANT:
Perform the following installation steps in the indicated sequence. Otherwise the installation may be corrupt and lead to optiClient 130 malfunctions.

- **Installation and configuration of the QoS packet scheduler on the user PC**

  The QoS packet scheduler ensures optimum quality for the transmission of voice information via the local network (cf. Section D.3.2, “Configuring the QoS Service”, on page 189).

- **Installation of the optiClient 130 software on the user PC**

  In this step the basic installation of the optiClient 130 on the user PC is performed. All available optiClient 130 modules will be installed in this process. However, only those required for connecting the optiClient 130 to an XPR server will be automatically activated.

- **If required, configuration of communication system parameters**

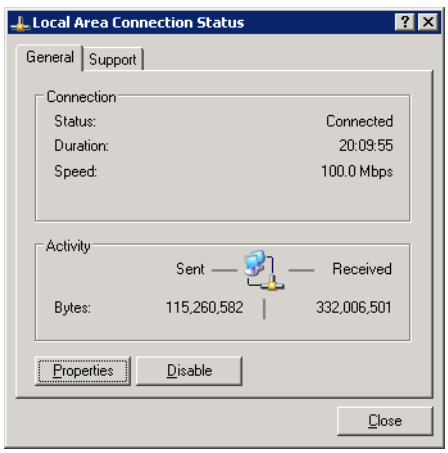
  Individual settings may have to be performed for specific communication systems. If optiClient 130 is e.g. directly operated at a HiPath 4000, so-called AMOs must be configured on the HiPath 4000.

D.3.2 Configuring the QoS Service

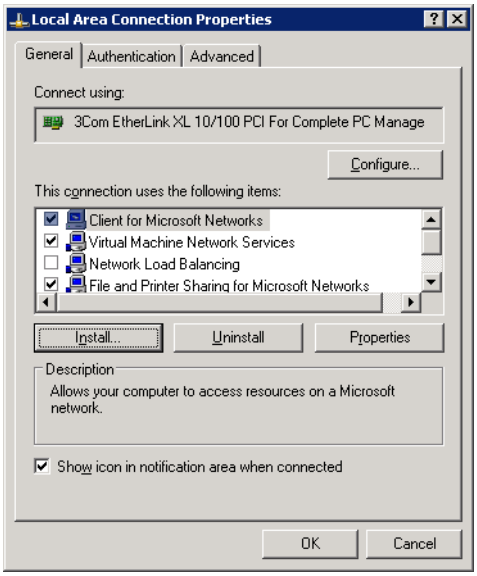
NOTE:
Only configure the QoS packet scheduler, if optiClient 130 is used as softphone, thus directly operated at a PBX, QoS mechanisms are supported by the provider module used in optiClient 130 and the network infrastructure used evaluates QoS information

For using QoS mechanisms the QoS packet scheduler must be installed and correctly configured on the user-PC. How to proceed:

1. Under Windows open **Start > Settings > Control Panel > Network Connections > Local Area Connection**. The following dialog pops up:

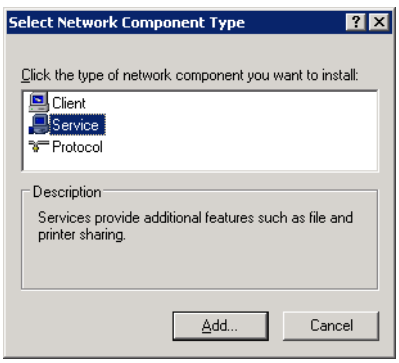


2. Select the **Properties** button. The following dialog pops up:

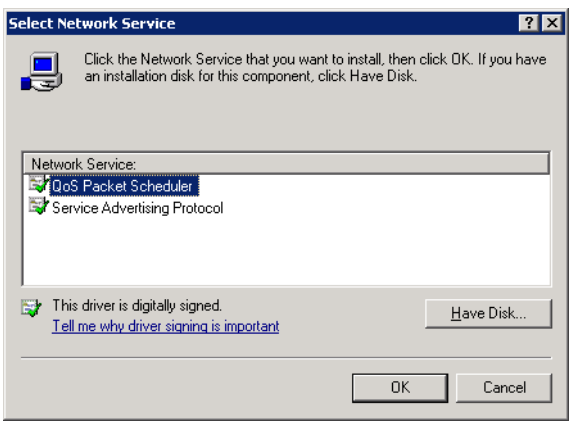


If the QoS packet scheduler is already contained in the list of elements used, please continue with step 7 on page 191.

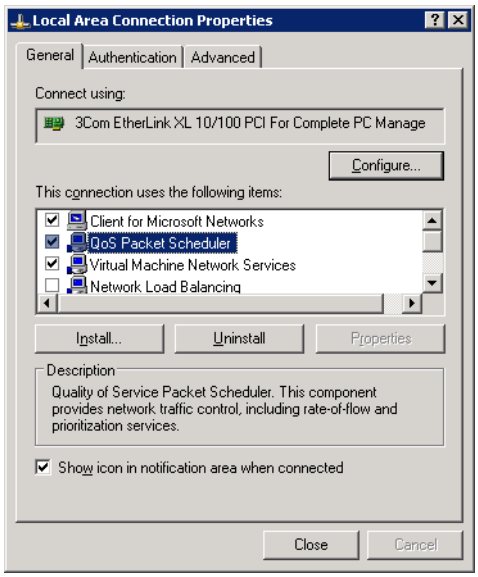
3. Click the **Install** button. Up comes this dialog:



4. In the list select the **Service** entry and click on **Add...**. The following dialog opens:



5. Select the **QoS Packet Scheduler** entry and click the **OK** button. Up comes this dialog:

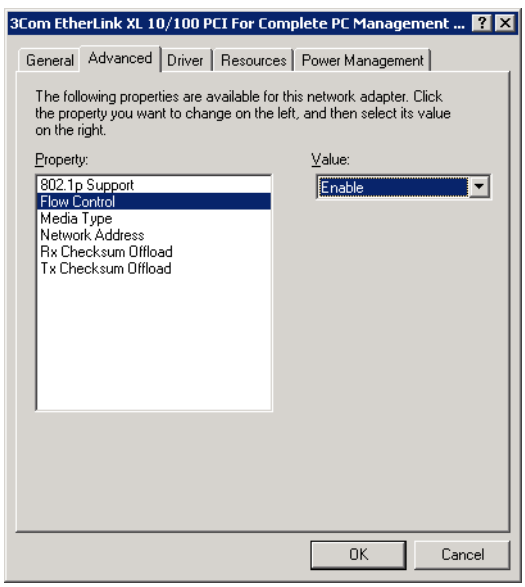


6. Verify that a tick precedes the **QoS Packet Scheduler** entry in the list of elements used. Click the **Close** button.

7. In the **General** tab select the **Properties** button again. The **Local Area Connection Properties** dialog opens.

8. Select the **Configure** button. The properties dialog appears for the network card installed.

9. Switch to the **Advanced** tab. Up comes this dialog:



10. Make sure that the two properties **802.1p Support** and **FlowControl** are set to value **Enable** each.

11. Copy the performed settings with the **OK** button.
12. Close the **Local Area Connection Properties** dialog with the **OK** button.
13. Then close the **Local Area Connection Status** dialog with the **Close** button.

The QoS packet scheduler configuration on the user PC is thus successfully completed.

D.3.3 Performing the Installation

Before you install optiClient 130, please heed the following important notes:

- optiClient 130 only supports the operating systems specified in the release notice
- You must close IBM/Lotus Notes to install optiClient 130.

During the optiClient 130 basic setup, the Message Service Provider (MSP) is automatically installed on the user PC. It is required for connecting an XPR server.

optiClient 130 is installed with a setup wizard, which guides you through the single installation steps.

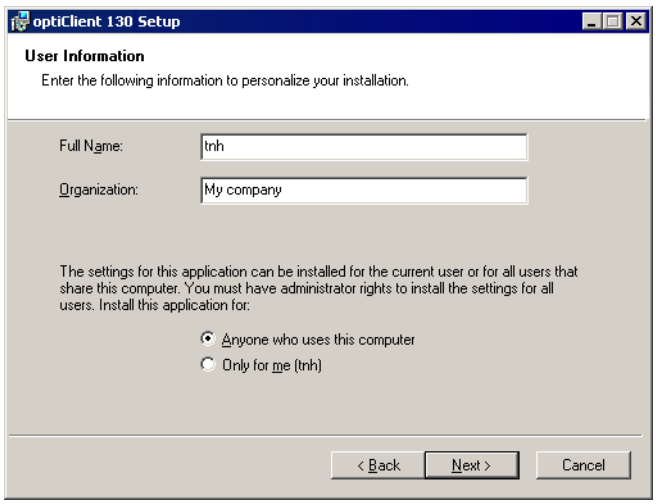
How to install optiClient 130:

1. Start the `setup.exe` in the `XpressionsInstall\AddOn\Client\OptiClientExtensions\OptiClient` directory of the XPR installation medium.

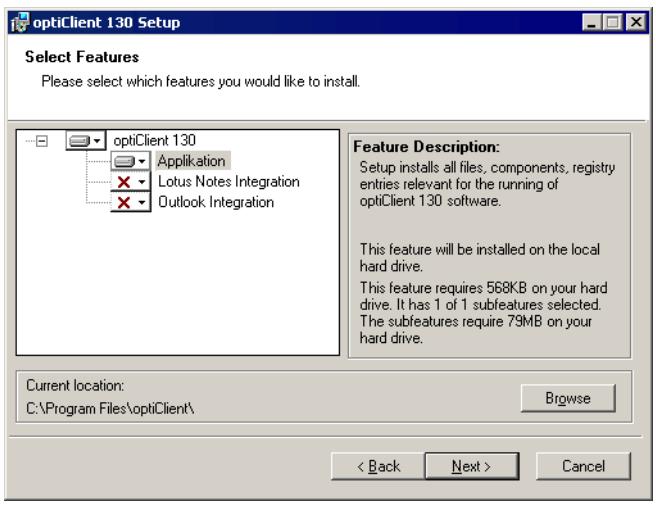
   If a version of the optiClient 130 is already installed on the user PC, the setup program queries whether this version is to be updated with optiClient 130. If you continue the installation at this point, the following modifications will be the result:

   - the **Server Connection Provider** is set as default provider.
   - the available color patterns are replaced with the optiClient 130 versions.
   - the available online helps are replaced with the optiClient 130 versions.
   - support of the program languages German, English, French, Italian, Spanish, Dutch, Portuguese and Brazilian

   All existing user settings will be maintained during the update.
2. The setup procedure is being prepared and a welcome dialog appears.
3. Confirm this dialog with the **Next** button. Up comes this dialog:



4. Enter the appropriate information in the **Full Name** and **Organization** fields. Select the options **Anyone who uses this computer** or **Only for me...**. Then click **Next**. Up comes this dialog:



5. Set here the features to be installed or copy the presettings.

   All listed languages are generally installed for the user interface. The following languages are currently available:

   - German
   - English
   - French
   - Italian
   - Spanish
   - Dutch
   - Portuguese

- Brazilian
- Turkish
- Russian

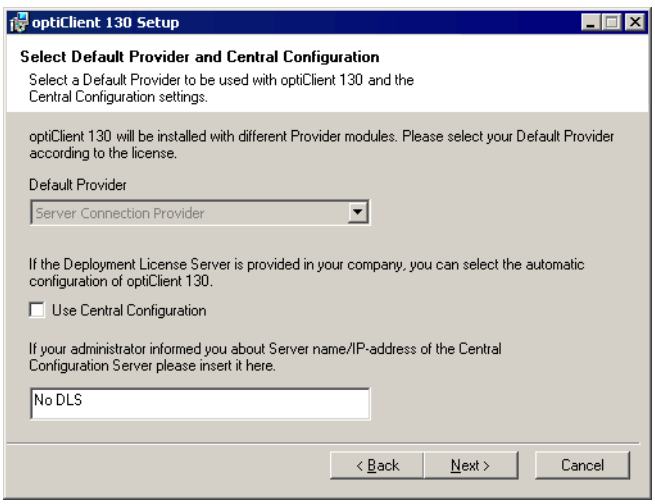
The following components are offered for installation:

- **Application**
  This option installs optiClient 130 with its basic scope of functions.
- **Lotus Notes Integration**
  This option installs additional components on the user PC required for integrating optiClient 130 into IBM/Lotus Notes Client.

NOTE: This installation option is only displayed if the setup finds a IBM/ Lotus Notes client on the user-PC. You find additional information in the OpenScape Xpressions optiClient 130 manual.

- **Outlook Integration**
  This option installs additional components on the user PC required for integrating optiClient 130 into a local Outlook client.

6. Set the **Location** via the **Browse** button or copy the default. Click the **Continue** button. Up comes this dialog:



7. If you want to use an available central configuration, select the **Use Central Configuration** option. In case you select this setting you also need to specify the server name respectively the IP address of the central configuration server.

   IMPORTANT:
   A central configuration via DLS is not supported with connection to an XPR server.

   NOTE:
   The manual selection of the default provider is always deactivated. During the optiClient 130 installation the *Server Connection Provider* is always configured as default provider.

   Click the **Continue** button.

8. Confirm the installation readiness message with the **Next** button. The installation is being performed. If the Microsoft .NET Framework is not installed yet, this setup is performed first. On a 64-bit operating system Microsoft .NET Framework must be installed manually. For this purpose, download the NetFx64.exe file from the following internet page:

   http://www.microsoft.com/downloads/details.aspx?familyid=B44A0000-ACF8-4FA1-AFFB-40E78D788B00&displaylang=en

   Subsequently, the actual optiClient 130 installation follows.

9. Confirm the success message with the **Finish** button.

The optiClient 130 installation is thus complete.

Installed program shortcuts

During the installation a shortcut is defined for optiClient 130 under **Start > Programs**.

Furthermore, the following shortcut icon for starting optiClient 130 appears on the desktop.

D.4 Modifying, repairing and uninstalling optiClient 130

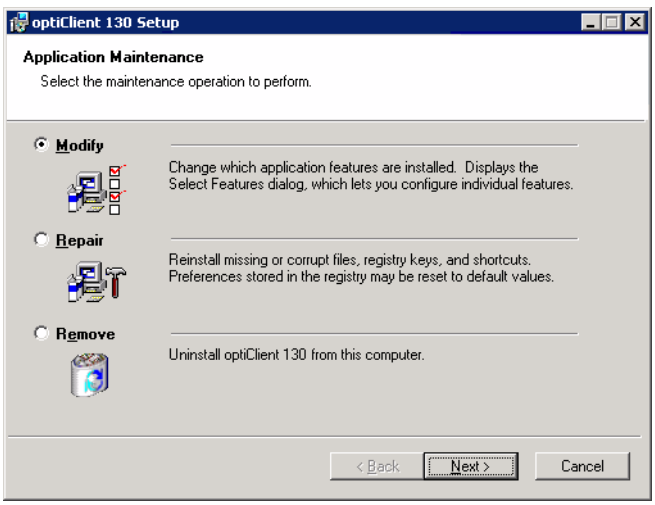
This section provides information on the following topics:

D.4.1 Modifying an existing optiClient 130 Installation

If you want to change a setting for an optiClient 130 installation that is only accessible during the installation, you need to employ the optiClient 130 setup wizard for this modification.

Proceed as follows:

1. Start the `setup.exe` in the `XpressionsInstall\AddOn\Client\OptiClientExtensions\OptiClient` directory of the XPR installation medium.
2. Confirm the welcome dialog with **Next**. Up comes this dialog:



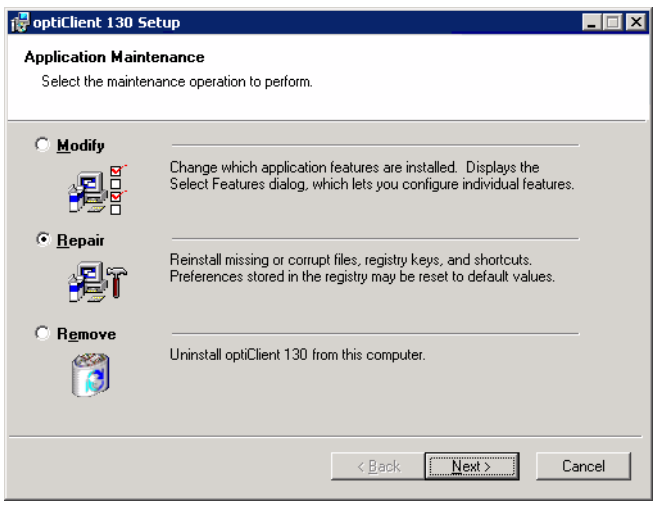
3. Select the **Modify** option and click on **Next**.
4. The installation wizard subsequently leads you through the installation modification (cf. Section D.3, “Installing optiClient 130”, on page 186).

D.4.2 Repairing an existing optiClient 130 Installation

The setup wizard provides a repair function for the case that optiClient 130 program files get damaged, are deleted or become corrupt.

How to repair an existing installation:

1. Start the `setup.exe` in the `XpressionsInstall\AddOn\Client\OptiClientExtensions\OptiClient` directory of the XPR installation medium.
2. Confirm the welcome dialog with **Next**. Up comes this dialog:



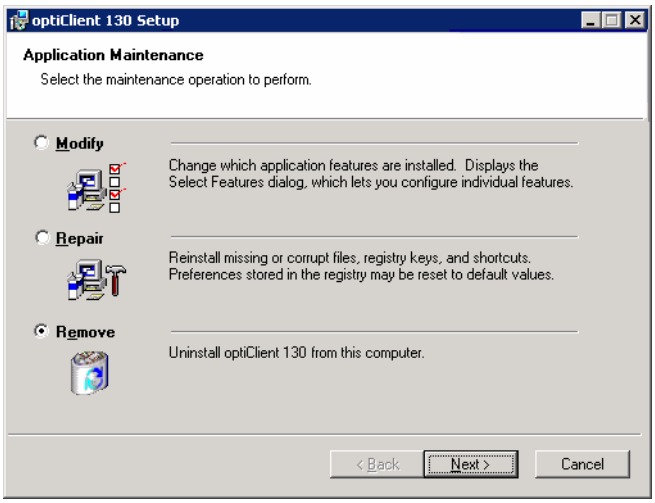
3. In the application maintenance select the **Repair** option.
4. The installation wizard subsequently leads you through the restoration of the damaged optiClient 130 installation.

D.4.3 Uninstalling a optiClient 130 Setup

If you want to remove optiClient 130 from the user-PC, do so by means of the optiClient 130 setup wizard.

Proceed as follows:

1. Start the `setup.exe` in the `XpressionsInstall\AddOn\Client\OptiClientExtensions\OptiClient` directory of the XPR installation medium.
2. Confirm the welcome dialog with **Next**. Up comes this dialog:



3. In the application maintenance select the **Remove** option.
4. The installation wizard subsequently leads you through the optiClient 130 uninstallation.

D.5 Integrating optiClient 130 into IBM/Lotus Notes

This is described in chapter *Settings for the Lotus Notes Integration* in the *Administrator Documentation and Operating Instructions* OpenScape Xpressions optiClient 130.

D.6 Integrating the optiClient 130 View

IMPORTANT: Please familiarize yourself with the IBM/Lotus Notes integration function, before you execute the following procedures. You find appropriate information in the *Administration Manual and User Instructions* for optiClient 130.

On the optiClient 130 installation source, in the `Administration` directory, you find the IBM/Lotus Notes database `cyPhone.nsf`, which contains the view `$CyUsers`. This view is required for phone number resolution in the IBM/Lotus Notes integration.

This section describes:

- how a provided view is copied to a IBM/Lotus Notes address book
- how location information of the delivered view is set.

NOTE: Performing the following procedures requires a IBM/Lotus Domino Designer client as well as sufficient privileges on the address books to be modified.

D.6.1 Copying a View to an Address Book

So that the phone numbers can be normalized in the view, they must be copied to the address book. Here, proceedings depend on whether the target is a server address book or a user address book.

D.6.1.1 Copying a View to a central Server Address Book

How to copy the view to a central server address book (Domino Directory):

1. Start the IBM/Lotus Domino Designer client and log on with a sufficiently privileged user ID.
2. Open the `cyPhone.nsf` database from the `Administration` directory on the optiClient 130 installation source.

3. Open the central server address book that you would like to use.
4. Copy the **$CyUsers** view from the **View** folder of the `cyPhone.nsf` database to the **View** folder of the server address book.

NOTE: If required, you can rename the *$cyUSERS* view. Which view optiClient 130 uses to access a selected IBM/Lotus Notes address book is specified by the settings for the relevant address book in the IBM/Lotus Notes provider.

---

5. Verify that the location information of the view have already been configured (cf. Section D.7, “Setting Location Information”, on page 202).

Copying the view to the central server address book is thus complete.

D.6.1.2 Copying the View to a local User Address Book

You need the IBM/Lotus Domino Designer client to copy the view to a user address book. Proceed as follows:

1. Open the `cyPhone.nsf` database in the IBM/Lotus Domino Designer client.
2. Make a copy of the `pernames.ntf` design.
3. Copy the view `$cyUsers` from the `cyPhone.nsf` database to the just created copy of the design `pernames.ntf`.

NOTE: If required, you can rename the *$cyUSERS* view. Which view optiClient 130 uses to access a selected IBM/Lotus Notes address book is specified by the settings for the relevant address book in the IBM/Lotus Notes provider.

---

4. Verify that the location information of the view have already been configured (cf. Section D.7, “Setting Location Information”, on page 202).
5. Expand the corresponding user address books using the **Replace Design** function. Proceed as follows:
   a) Open the user address book to which you want to assign the new design.
   b) Select the menu option **File** > **Database** > **Replace Design**.
   c) Select the server that provides the new design.

d) Select the new design and click on **Replace**.

NOTE: You find detailed information about assigning a new design to a database in the IBM/Lotus Notes documentation.

D.7 Setting Location Information

The view's location information determines how phone numbers of a IBM/Lotus Notes address book are normalized. The location information needs to describe, in which format the phone numbers were entered in the address book. Do external phone numbers have e.g. a *0* for an external line prefix? Or, how is the national prefix structured?

How to set a view's location information:

1. Open the view, the location information of which you would like to set, in the IBM/Lotus Domino Designer client.
2. In the view select the **Phone** column. The script will then be displayed.
3. Adapt the different items of the script's location information. You find these items at the beginning of the script.

NOTE: You find recommended settings for the location information of different countries in Section D.8, “Recommended Location Information”, on page 203).

---

4. Close the view.

You have thus successfully configured the location information.

D.8 Recommended Location Information

In the following you find recommended settings for the location information of the countries:

- Germany
- France
- Italy
- Austria
- Switzerland

Individual settings that result from the location's phone number are given in pointed brackets.

D.8.1 Germany

ExternalPrefix	*<Prefix>*
NationalPrefix	**0**
InternationalPrefix	**00**
InternalLength	*<Extension length>*
SubscriberCode	*<Subscriber code>*
AreaCode	*<Area code>*
CountryCode	**49**

D.8.2 Austria

ExternalPrefix	*<Prefix>*
NationalPrefix	**0**
InternationalPrefix	**00**
InternalLength	*<Extension length>*
SubscriberCode	*<Subscriber code>*
AreaCode	*<Area code>*
CountryCode	**43**

D.8.3 Switzerland

ExternalPrefix	*<Prefix>*
NationalPrefix	**0**
InternationalPrefix	**00**
InternalLength	*<Extension length>*
SubscriberCode	*<Subscriber code>*
AreaCode	*<Area code>*
CountryCode	**41**

D.8.4 France

ExternalPrefix	*<Prefix>*
NationalPrefix	**0**
InternationalPrefix	**00**
InternalLength	*<Extension length>*
SubscriberCode	*<Area code><Subscriber code>*
AreaCode	**No entry**
CountryCode	**33**

D.8.5 Italy

ExternalPrefix	*<Prefix>*
NationalPrefix	No entry
InternationalPrefix	**00**
InternalLength	*<Extension length>*
SubscriberCode	*<Area code><Subscriber code>*
AreaCode	**No entry**
CountryCode	**39**

E Miscellaneous

E.1 Using Fax Templates in IBM/Lotus Notes

This chapter describes the configuration of fax template usage. There are generally the following options to configure fax templates:

- XPR fax templates (cf. Section E.1.1, “Using XPR Fax Templates”)
- IBM/Lotus Notes forms as fax template (cf. Section E.1.2, “Using IBM/Lotus Notes Forms as Fax Template”)

If only one fax template is to be used for all fax messages of all users, only one XPR fax template or IBM/Lotus Notes form needs to be created, which is then specified in the LnAPL configuration dialog.

If several fax templates are to be used, several XPR fax templates or IBM/Lotus Notes forms must be created, which are then provided via the administration database and from which a user may select a template when creating a fax message.

E.1.1 Using XPR Fax Templates

In this scenario, fax templates are created in the *Communications* client program. Messages are converted into the fax format on the XPR server.

E.1.1.1 A single XPR Fax Template as global Fax Template

In this case only one fax template used for all outgoing fax messages is available in the entire system. How to configure the use of a single XPR fax template as global fax template:

1. Create an XPR fax template using the *Communications* client program. You find information about this in the OpenScape Xpressions *Communications* manual.
2. Enter the XPR fax template name in the LnAPL configuration dialog on the **Fax cover sheets** tab in the **Default MRS fax stationery** field (cf. Section E.1.3, “Configuring a global Fax Template”, on page 208). The name of the XPR fax template must match the one assigned in Communications. Then save the LnAPL configuration.

E.1.1.2 Several XPR Fax Templates as Fax Templates for Selection

This enables users to choose a template for their messages from an assortment of fax templates.

Proceed as follows:

1. Create the required number of XPR fax templates using the Communications client program. You find information about this in the OpenScape Xpressions *Communications* manual. The templates thus created are automatically provided in the person documents or in a profile document via the gateway.
2. Enter the corresponding XPR fax templates in the users' person documents or in a corresponding user profile (cf. Section E.1.4, “Configuring Fax Templates via Person Documents or User Profiles”, on page 208).

E.1.2 Using IBM/Lotus Notes Forms as Fax Template

IMPORTANT: To use IBM/Lotus Notes forms as fax template, the NDL converter must have been configured and be operable (cf. Section E.2, “NDL Converter”, on page 212).

Fax templates based on IBM/Lotus Notes forms exclusively support the fields listed in the table in Section E.1.5, “Creating your own Fax Templates”, on page 210, step 2. For example, it is not possible to specify the total number of pages, since this information cannot be provided by IBM/Lotus Notes when the fax message is converted by the NDL converter.

When a user creates a fax message with the *cyMemo* form, the name of the form to be used as fax template is automatically entered in the `MRS_Fax_Form` field, which is a component of this form and thus also of the message. Which fax template this is will be determined via the user's person document respectively via a corresponding user profile (cf. Section E.1.4, “Configuring Fax Templates via Person Documents or User Profiles”, on page 208), or via the LnAPL configuration. If a user has several fax templates at his/her disposal, he/she can select the desired template when creating the message.

When the message is edited in the XPR server, the LNApl first checks whether in the administration database or, in case of the corresponding configuration, in the conversion database a form is available the name of which matches the entry in the `MRS_Fax_Form` field of the message. If the Apl finds such a form, the NDL converter converts the message into this fax format using this form, so that the layout of the form is copied.

During the conversion by means of the NDL converter the administration database must be opened on the IBM/Lotus Domino server. Depending on the database's size and the number of fax messages to be converted, the network may be loaded to a relatively high extent. As alternative to using the administration database, the conversion database `MrsCnv.nsf` may be used as well. This database must be available on the client that is installed on the XPR server computer and receive the IBM/Lotus Notes fax templates. So that the conversion database can be used instead of the administration database, the following key in the Windows registry of the XPR server computer must be set to `1`:

```
HKLM\SOFTWARE\Wow6432Node\PP-COM\MRS\LNApl\Import and
Export\RenderInConversionDB
```

NOTE: If you want to use the conversion database, please also store the IBM/Lotus Notes forms to be used as fax template in the administration database just the same, so that the system can use them as fallback.

E.1.2.1 A single IBM/Lotus Notes Form as global Fax Form

In this case only one IBM/Lotus Notes form used as fax template for all outgoing fax messages is available in the entire system. How to configure this form:

1. Create a IBM/Lotus Notes form to serve as fax template.

   The form available in the administration database `mrsFaxLayout` may be used as example. Please also note on this Section E.1.5, “Creating your own Fax Templates”, on page 210 and the IBM/Lotus Notes documentation.

2. Store the created IBM/Lotus Notes form in the administration database on the IBM/Lotus Domino server and in the conversion database `MrsConv.nsf` on the XPR server computer.

3. Verify that the NDL converter has been configured and is operable (cf. Section E.2, “NDL Converter”, on page 212).

4. Enter the form's name in the LnAPL configuration dialog on the **Fax Cover Sheets** tab in the **Default fax form (Lotus Notes)** and save the configuration (cf. Section E.1.3, “Configuring a global Fax Template”, on page 208).

E.1.2.2 Several IBM/Lotus Notes Forms as Fax Templates for selection

This enables users to choose a template for their messages from an assortment of fax templates.

Proceed as follows:

1. Create the required IBM/Lotus Notes forms to serve as fax templates. Please also read Section E.1.5, “Creating your own Fax Templates”, on page 210 on this as well as the corresponding chapters in the IBM/Lotus Notes documentation.

   The form available in the administration database `mrsFaxLayout` may be used as example.

2. Store the created IBM/Lotus Notes forms in the administration database on the IBM/Lotus Domino server and in the conversion database `MrsConv.nsf` on the XPR server computer.

3. Verify that the NDL converter has been configured and is operable (cf. Section E.2, “NDL Converter”, on page 212).

4. Enter the corresponding IBM/Lotus Notes forms in the users' person documents or in a corresponding user profile (cf. Section E.1.4, “Configuring Fax Templates via Person Documents or User Profiles”, on page 208).

E.1.3 Configuring a global Fax Template

When using a global fax template, all outgoing fax messages of all users copy the layout of this fax template. In the following we will describe the configuration of a global fax template via the LNApl configuration dialog. Proceed as follows:

1. Open the LNApl configuration dialog in the XPR monitor.

2. Open the **Fax Cover Sheets** tab.

3. If you want to use a fax template that you have created using the *Communications* client program, enter the name of this template in the **Default MRS fax stationery** field. In doing so ensure that the entered name matches the one you have specified in *Communications*. You find information about creating fax templates with *Communications* in the OpenScape Xpressions *Communications* manual.

   If you want to use a IBM/Lotus Notes form as fax template, enter the name of this form in the **Default fax form (Lotus Notes)** field.

4. Click **OK**.

E.1.4 Configuring Fax Templates via Person Documents or User Profiles

Which fax templates a user may use is determined via the user's person document or via a corresponding user profile document.

Configuring a fax template via person document

Proceed as follows:

1. Open the administration database and in there the **User Maintenance** portion.
2. Doubleclick the entry of the user whom you want to assign fax templates. The person document for this user opens.
3. Open the tab **Standard Messaging** -> **Fax Cover Page** and click on **Edit Document**.
4. If you want to use XPR fax templates, select the **Standard** entry from the **Active fax cover type** pull-down menu. Then click on the downward arrow next to the **Stationery** field. A dialog opens. Select the XPR fax templates that the user may use and click on **OK**.

   If you use IBM/Lotus Notes forms as fax templates, select the **Notes form** entry from the **Active fax cover type** pull-down menu. Subsequently, enter under **Notes form** the name of the IBM/Lotus Notes form to be used as fax template.
5. Click on **Save and Close**.
6. Repeat steps 2 to 5 for each user whom you want to provide a fax template.

Configuring a fax template via user profile

This type of configuration requires an existing user profile (cf. Section B.1.2.6, “The Profile Document”, on page 160).

How to configure a fax template via a user profile:

1. Open the administration database and in there the **Profile Maintenance** portion.
2. Doubleclick the entry of the user profile via which you want to provide a fax template.
3. Open the tab **Standard Messaging** -> **Fax Cover Page** and click on **Edit Document**.
4. If you want to use XPR fax templates, select the **Standard** entry from the **Active fax cover type** pull-down menu. Then click on the downward arrow next to the **Stationery** field. A dialog opens. Select the XPR fax templates that the user may use and click on **OK**.

   If you use IBM/Lotus Notes forms as fax templates, select the **Notes form** entry from the **Active fax cover type** pull-down menu. Subsequently, enter under **Notes form** the name of the IBM/Lotus Notes form to be used as fax template.
5. Enter under **Notes form** the name of the IBM/Lotus Notes form to be used as fax template.

6. Click on **Save and Close**.

E.1.5 Creating your own Fax Templates

XPR is able to fill fax templates with useful information and prefix a message with a fax cover page. Information concerning the originator and the recipient are automatically inserted in the corresponding fields of the cover page.

Originator information is automatically read out of the person document of the sending user, where it is maintained on the tab **Standard Messaging** -> **Fax Cover Page** -> **Originator**. Information about the originator is copied from the contact data in IBM/Lotus Notes or can be entered or supplemented by the sending user when creating the fax message.

You can use the form provided by XPR or you can use this form together with a XPR fax cover page or an individual IBM/Lotus Notes form.

If IBM/Lotus Notes forms are to be used, the form (mrsFaxForm) can be used as default or it is possible to use an individual form. The NDL converter is used to allow using IBM/Lotus Notes forms as fax cover page. Please refer to Section E.2, “NDL Converter”, on page 212.

NOTE: The table in step 2 shows all fields that can be automatically filled in. Further fields are **not** intended.

To design your own fax template please proceed as follows:

1. Firstly, create a IBM/Lotus Notes form that defines the layout and contains the fields necessary to display information.

   NOTE: The administration database contains the form `MrsFaxLayout`, which you can use as visual aid.

   ---

2. The form-field values must correspond to the field names XPR inserts into messages:

Originator	Recipient
MRS_NAME	MRS_NAME_REC[@ToNumber(MRS_USER_INDEX)]
MRS_COMPANY	MRS_COMPANY_REC[@ToNumber(MRS_USER_INDEX)]
MRS_DEPARTMENT	MRS_DEPARTMENT_REC[@ToNumber(MRS_USER_INDEX)]
MRS_ADDRESS1	MRS_ADDRESS1_REC[@ToNumber(MRS_USER_INDEX)]
MRS_ADDRESS2	MRS_ADDRESS2_REC[@ToNumber(MRS_USER_INDEX)]
MRS_ZIP	MRS_ZIP_REC[@ToNumber(MRS_USER_INDEX)]
MRS_CITY	MRS_CITY_REC[@ToNumber(MRS_USER_INDEX)]

Originator	Recipient
MRS_STATE	MRS_STATE_REC[@ToNumber(MRS_USER_INDEX)]
MRS_COUNTRY	MRS_COUNTRY_REC[@ToNumber(MRS_USER_INDEX)]
MRS_PHONE	MRS_PHONE_REC[@ToNumber(MRS_USER_INDEX)]
MRS_FAXG3	MRS_FAX_REC[@ToNumber(MRS_USER_INDEX)]
MRS_FAXG4	MRS_FAX_REC[@ToNumber(MRS_USER_INDEX)]

The formula in square brackets must be entered into the individual fields exactly as shown here together with the brackets. This formula is inevitable in order to be able to create a personal cover page for each recipient in case several recipients are entered.

3. Save the new form and add it to the administration database.

E.2 NDL Converter

The NDL Converter uses the local XPR database converter so all masks to be printed should be copied to this database. Before starting we recommend to test the print process since often, in addition to the masks, other design elements e.g. Script Libraries or Shared Fields must be copied to the XPR converter database as well.

IMPORTANT: The NDL Converter cannot be used when you use fax stationery that contains text fields (see the *Communications* user manual). In this case IBM/Lotus Notes fax stationery must be used or the text export filter employed, so that the XPR server MTA adopts the conversion.

Further configuration parameters are described in Section F.1.1.5, “Import and Export”, on page 246.

E.2.1 Installation

- Copy the XPR converter database (MrsCnv.nsf) to the local notes\data directory.
- Activate the NDL Converter in the Lotus Notes APL configuration (see Section A.1.7, “Export Tab”, on page 123).

E.2.1.1 Evading the Password Query

If the IBM/Lotus Domino Server needs to be accessed during the print process, a password query is usually performed. In order to have this query answered automatically by the APL use the following tools:

- SrvCycosMenu.dll
- `SrvCycosExt.dll`

Both files need to be copied to the binary directory of the local IBM/Lotus Notes client (default: `Lotus\Notes`). Furthermore the following entries must be made in the local `notes.ini`:

- `ExtMgr_Addins=SrvCycosExt.dll`
- `AddinMenus=SrvCycosMenu.dll`

After starting the IBM/Lotus Notes client a “non”-IBM/Lotus Notes password dialog appears. When you have entered the password it can be saved by activating the corresponding check box.

Shut down the IBM/Lotus Notes client and start it again. A password query must not appear anymore.

E.3 Integration in a IBM/Lotus Domino Cluster Environment

The IBM/Lotus Notes connectors are linked by means of a foreign domain. If a connector is to be integrated in a cluster environment, the mail database of this foreign domain must be available on all cluster servers under the same name.

NOTE: No settings need to be performed in the LnAPL configuration dialog for the Domino cluster support, since the APL receives all cluster-relevant information via the IBM/Lotus Notes client.

There are two options to ensure a trouble-free failover:

Defining the foreign domain and its mail database by the connector

A failover case is simulated for each potential failover domino server. The connector consequently links to each domino server once and defines in this process the foreign domain and the associating mail database. In this scenario, the operation of the IBM/Lotus Notes connector requires the user ID used by the connector to have the **NetModifier** and **Author Access** privilege for the global name and address book. In the failover case the user ID can then define the foreign domain and modify the path in the global name and address book. The simulated failover cases increase the effort after the installation and replication of the foreign domain mail database to the single domino servers must still be ensured.

The foreign domain mail database is cluster-replicated

The foreign domain mail database is configured via the cluster manager for replication to the other domino servers in the cluster. The replication is event-controlled, so that the database is always replicated when a new message arrives. This ensures the data records of the replications to be identical on the single domino servers in the cluster in a failover case. This scenario does not require any extended privileges for operating the Lotus Notes connector.

IMPORTANT: If the mail database of the foreign domain is to be cluster-replicated, its name must end in `.nsf` (e.g. notesgat.nsf), since in the cluster manager only databases with this suffix can be selected.

To utilize the cluster functionality of Lotus Notes connectors, the following prerequisites must be met:

- The cluster mechanism of the Domino cluster must function without problems. Check carefully that the failover settings for mail routing are correct. For information on this please refer to the IBM/Lotus Domino documentation.
- The IBM/Lotus Notes connectors must work correctly.

- The user ID of the Lotus Notes connectors must have the “Author Access” user privilege and the “NetModifier” role.
- On each server in the Domino cluster a replica of the administration database must exist (this database must be “clustered”).

E.3.1 Failover Functionality

If the domino server, on which the foreign domain is configured, fails or cannot be reached, the Lotus Notes connector automatically attempts to link up with another domino server in the cluster. This case is called failover.

If the connection to another domino server is successful, the connector attempts to open the foreign domain database on the new domino server under the name it knows. If the connector does not find this database, it will attempt to define it with this name. In addition the connector will attempt to enter the new path to the foreign domain database in the document of the foreign domain in the global name and address book.

NOTE: In case of a failover it is not obvious which of the foreign domains is used by which domino MTA or which foreign domain document is actually used to locate the storage location of the foreign domain mail database. One of the influential factors can be a document that affects the mail routing on the basis on costs. Another influence can be the load balancing used by IBM/Lotus Notes.

The error messages that occur in the XPR monitor in the failover case can mostly be ascribed to this and ignored.

For these steps the LnAPL user ID needs the setup user rights described in Section 3.3.2, “User ID for the IBM/Lotus Notes Gateway”, on page 34. After this process has been completed, the original LnAPL functionality has been reestablished.

The connection to this Domino server remains until the next failover.

E.4 Fax Systems by other Manufacturers (Legacy Fax Support)

The XPR system is able to interpret and process fax messages that originate from fax systems by other manufacturers. At the moment, the products “Fax Sr.” and “LightningFAX” are supported. In these products, incoming fax messages are saved in a user’s IBM/Lotus Notes mailbox. The Lotus Notes Unified Messaging APL (LnUmApl) can retrieve fax messages from the user’s IBM/Lotus Notes mailbox and send them to the XPR server for further processing, e.g. via TUI.

After installing the XPR server, you must make the following modifications to the Lotus Notes APL in order to support the use of legacy fax messages:

1. Open the Windows registry editor.
2. Insert the following values in the `HKLM\Software\Wow6432Node\PP-COM\LnApl\Globals` path:
   a) **Value name:** FaxLegacySupport, Data type: REG_DWORD, VALUE: 1 (enabled), 0 (disabled).
   b) **Value name:** FaxLegacySupportNumberLocalize, Data type: REG_DWORD, VALUE: 1 (enabled), 0 (disabled).
   c) **Value name:** FaxLegacySupportForeignDomain, Data type: REG_SZ.
   d) **Value:** The name of the foreign domain the legacy fax system uses for data transmission must be entered here.
3. Start the LnAPL.

When the LnAPL is started, an address of the format `NVS:FAXG3.LN` will be created that can be used to send fax messages from the XPR system via the Lotus Notes APL to the legacy fax system (this will use the legacy fax system’s foreign domain).

E.5 Prevent Assist Mails for Fax and Voicemails

If a IBM/Lotus Notes user has enabled the absence assistant, each incoming message is answered by an automatically created reply message (a so-called **assist mail)**.

If the user makes use of the Unified Messaging services fax and/or voice mail, these messages are answered with an assist mail sent as fax or voice mail as well.

This behavior might cause great transmission costs (e.g. telephone charges). Therefore we recommend to prevent sending assist mails for received fax and voice mail messages and save them in a backup database.

Perform the following steps:

1. Create a **mail database** on the IBM/Lotus Domino server that is to be used as backup database for the assist mails.
2. Start the Windows registry editor (RegEdit) and change to the path `HKLM\Software\Wow6432Node\PP-COM\MRS\LNApl\Globals`.
3. Create **five new registry keys** according to the following pattern in this folder:

Name	Type	Value
BlockAssistMailToServiceList	REG_DWORD	1
BlockAssistMail_Services	REG_SZ	@VOICE;@FAXG3;@FAXG4
BlockAssistMail_MandatoryFields	REG_SZ	Form=Memo;$AssistMail=1
BlockAssistMail_OptionalFields	REG_SZ	DoNotIgnoreMe=0
BlockAssistMail_BackupDatabase	REG_SZ	<Name of Backup Database>

4. Close the registry editor. The installation process is completed now.

NOTE:
All registry keys mentioned above and their possible values are described in Section F.1.1.1, “Globals”, on page 234 et seq.

E.6 Upgrading Lotus Notes R5.x to supported Versions of IBM/Lotus Notes

This section describes how an existing Lotus Notes connection to a Lotus Notes system of version R5.x is upgraded to a IBM/Lotus Notes system of a supported version.

The following components must be edited during an upgrade:

- **Lotus Notes environment (Domino server and Notes clients)**

  The upgrading process must be performed as described in the manual at the respective stage.

  IMPORTANT: In the following sections we assume that the Lotus Notes environment upgrade from R5.x to a supported version has been performed correctly.

- **XPR Server**

  To upgrade the XPR server software you need the installation medium of the XPR version 4.0 or higher. Perform the upgrade as described in the *Server Installation* manual.

- **Administration database**

  An administration database operated under Lotus Notes R5.x must be upgraded with the design elements of the template for a supported version of IBM/Lotus Notes. We recommend to generate a backup of the administration database before the upgrade process.

- **Unified Messaging mail templates**

  During a change to a supported version of IBM/Lotus Notes new mail templates **must** be created and assigned to the mail databases of the Lotus Notes users, since the mail templates for Lotus Notes version R5.x are **not compatible** with the new template structure of the supported versions.

  How to create a Unified Messaging mail template for a supported IBM/Lotus Notes version is described in Section 4.4.3, “Mail Template Extensions for Lotus Notes R6.x”, on page 89.

E.6.1 Procedure

1. Generate a backup of the administration database used so far.
2. Update your XPR setup to version 7.
3. Upgrade your Lotus Notes environment (Domino server and all associated Lotus Notes clients) to a supported version.

IMPORTANT: Make sure to upgrade the Lotus Notes client on which the XPR server is installed as well.

---

4. How to upgrade the design of the administration database used so far:

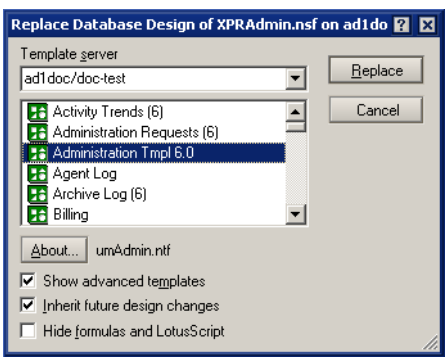
   a) Copy the `umAdmin.ntf` template file from the XPR server installation directory (`res\LnApl\TemplatesR6`) to the `Data` directory of the Lotus Domino server. This is the folder `\Lotus\Domino\Data` for a default installation.

   b) Start a Lotus Notes client or the Lotus Notes administrator client and log in with administrative access privileges.

   c) Open the administration database used so far for Lotus Notes R5.x.

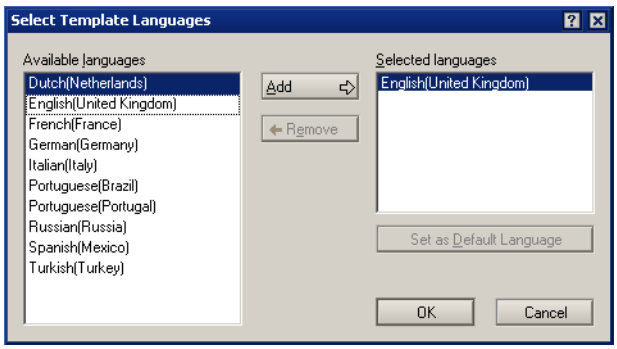
   d) Select the menu item **File > Database > Change template...** from the main menu.

   e) You must select the Domino server the template file `umadmin.ntf` has been copied to as **template server**. The database template of the administration database is an advanced template, thus the check box **Show advanced templates** must be selected in the dialog.



   f) Dial the template file `umadmin.ntf` and click **Replace**.

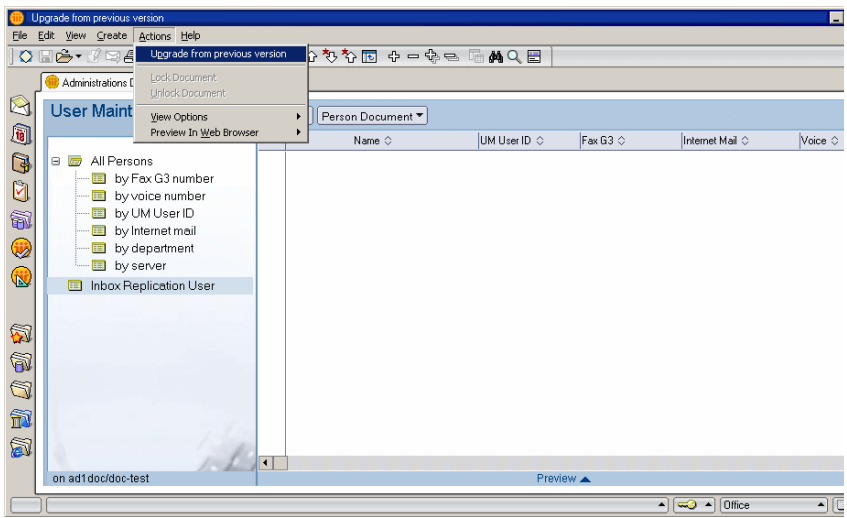
   g) In the following dialog you are queried which languages are to be used for the database.



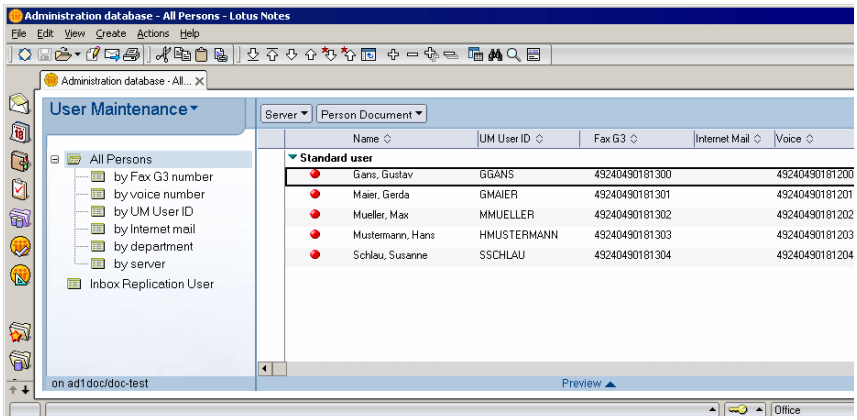
h) Select one or several languages and confirm your selection by clicking the **OK** button.

i) Confirm the following note dialog with **OK**.

j) After a successful design upgrade you need to reopen the administration database.



k) The user data records are still available in the database after the upgrade, but are not displayed. In order to display the data records again, select the **Upgrade from previous version** function in the **Actions** menu and confirm the following dialog with **OK**.



l) After a successfully accomplished process, all user data records are displayed. The administration database upgrade is thus complete.

5. Create one or several new mail templates for the users and assign the mail template to the users' mail database (see description in Section 4.4.3, “Mail Template Extensions for Lotus Notes R6.x”, on page 89).

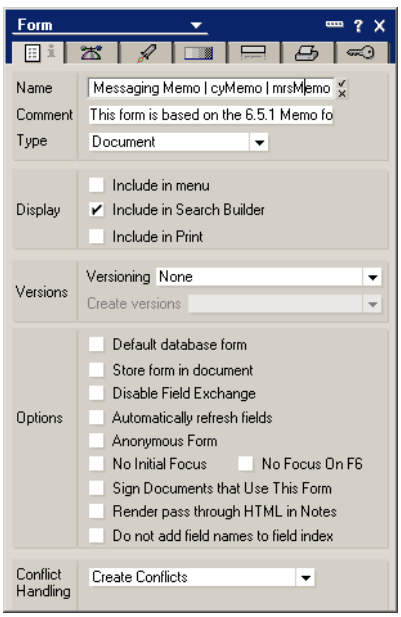
E.6.2 Possible Problems after an Upgrade

E.6.2.1 Old Messages cannot be represented any more

Old messages that are in the inbox after an update can no longer be displayed with the new template for a supported IBM/Lotus Notes version, since the messages were displayed with an R5.x template with the `mrsMemo` form. An mail template of a supported IBM/Lotus Notes version uses the new `cyMemo` format to display messages.

How to correct this behavior:

1. Open the mail template for a supported IBM/Lotus Notes version in the Lotus IBM/Domino designer client.
2. Switch to the **Forms** folder and open the **cyMemo** form with a doubleclick.
3. Rightclick the header area of the **cyMemo** form and select from the appearing menu the **Form Properties** option.



4. Insert the `| mrsMemo` entry after `Unified Messaging Memo | cyMemo` in the **Name** field.
5. Close the **Properties** dialog of the form. The form modification is thus complete.
6. Save the modification performed and close the designer client.
7. Assign the modified mail template to the users' mail databases (see Section 4.4.3.9, “Assigning created Mail Template”, on page 108).

E.6.3 Mixed Operation of the Lotus Notes Clients

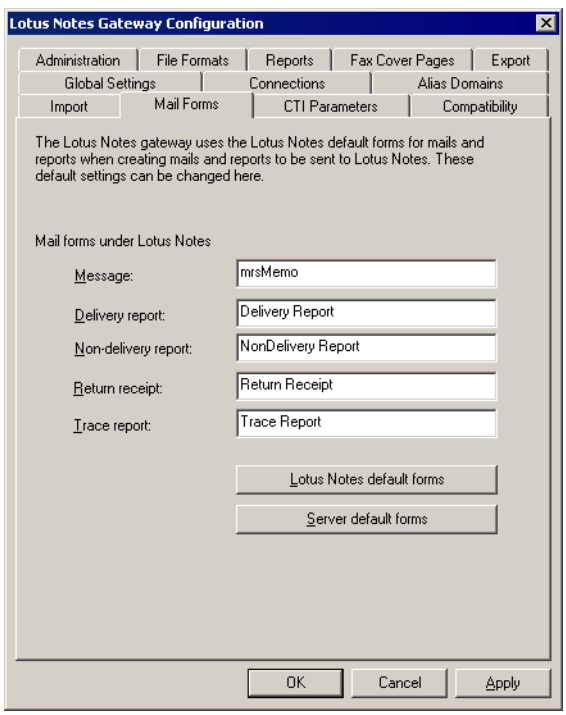
IMPORTANT: Mixed operation is only planned for a transition period as short as possible, since the administration databases are not compatible.

Make sure that the change to the newer version is completed as soon as possible.

If you operate clients of a supported version and of version R5.x at the same time in your Lotus Notes environment for a transition period, you must perform the following changes at the configuration of your Lotus Notes connection:

1. The mail template for a supported Lotus Notes version must be modified in such a way that it can read messages created with a mail template of version R5.x (see Section E.6.2.1, “Old Messages cannot be represented any more”, on page 222).

2. In the **Mail Forms** tab of the IBM/Lotus Notes Gateway configuration dialog (see Section A.1.9, “Mail Forms Tab”, on page 126), the form for **Messages** must be changed to **mrsMemo**.



3. Using **Integrated Messaging** and/or **True Unified Messaging**, the **mrsMemo** form must in the administration database be added to the **Replicated** or **Supported** forms (see page 154 and page 155).

E.6.4 Inserting User-Specific Data Fields in a Message

The Lotus Notes APL enables the insertion of user-specific data fields in messages sent from the XPR server to Lotus Notes. These fields can be used for further processing by other applications.

E.6.4.1 Functionality

The type, name and value of a Lotus Notes data field is defined in the PMF properties. These PMF properties are enclosed as attachment in each PMF message that is received by the XPR server and forwarded to the Lotus Notes APL for dispatch.

By adding registry values that contain user-specific Lotus Notes data field names it is possible to additionally insert different data field types supported by Lotus Notes in a Lotus Notes message and to evaluate them.

E.6.4.2 Procedure

1. Open the **Windows registry editor** on the XPR server computer and change to the path `HKLM\SOFTWARE\Wow6432Node\PP-COM\MRS\LnApl\Globals`.
2. Enter the following registry value:
   - Value: "`CustomProperty_Token`"
   - Content: "`LN_FIELD_`"

   By this registry value a PMF property with the value `LN_FIELD_COMPANYNAME` would be converted into a Notes data field (Text) named **COMPANYNAME** and added to the Lotus Notes messages.
3. To create an AUTHOR data field you need to add the following registry value:
   - Value: "`CustomProperty_TokenAuthor`"
   - Content: "`AUTHOR_`"

   By this registry value a PMF property with the value `LN_FIELD_AUTHOR_AuthorOfDocument` would be converted into a Notes data field (Author) named **AuthorOfDocument** and added to the Lotus Notes messages.

4. To create a READER data field you need to add the following registry value:

   - Value: "`CustomProperty_TokenReader`"
   - Content: "`READER_`"

   By this registry value a PMF property with the value `LN_FIELD_Reader_ReaderOfDocument` would be converted into a Notes data field named **ReaderOfDocument** and added to the Lotus Notes messages.

5. With the following registry value you define a separator used if a CustomProperty field has several values.

   - Value: "`CustomProperty_MultivalueDelimiter`"
   - Content: "`,`"

   A CustomProperty value `Joe User, Bill Smith` is converted into a **Text List** Notes data field, which displays two separate values.

E.7 Configurable Parameters in setup.ini Files

This section describes configurable parameters in the `Properties` section of `setup.ini` files.

NOTE: Each of the parameters described in this section is allocated with a **default value** in an MSI file. This default value is valid until the corresponding parameter exists in the appropriate `setup.ini` file. In the `setup.ini` file, each of these parameters has been assigned a **sample value**, but this assignment is commented out. It is therefore invalid. If you do not wish to use the default value from the MSI file, remove the semicolon from the beginning of the line to turn the corresponding comment in the `setup.ini` file into an invalid line and change the sample value if required.

INSTALLFG4

Default	0
Possible values	0 or 1
Files	...\AddOn\Client\LotusNotes\LnFax\...\setup.ini

If INSTALLFG4 is set to 1, the Fax G4 printer driver is installed, otherwise the Fax G3 printer driver.

DISABLEAU

Default	0
Possible values	0 or 1
Files	...\AddOn\Client\LotusNotes\ActiveX\setup.ini ...\AddOn\Client\LotusNotes\LnConfPlugin\setup.ini ...\AddOn\Client\LotusNotes\LnFax\...\setup.ini

DISABLEAU stands for Disable Automatic Update. The automatic update, also called Update Service or SmartUpdate, is an application that monitors the system and queries the XPR server for new versions of specific applications via the MSP. If new versions are available, they are downloaded and installed.

You can see the application as taskbar icon.

Value 0 activates the automatic update, value 1 deactivates it.

INSTALLAPPLET

Default	1
Possible values	0 or 1
Files	...\AddOn\Client\LotusNotes\LnFax\...\setup.ini

If value 1 is set, the `notes.ini` file of the client is edited during the setup in such a way that the client loads the `cycosext.dll` file. The `cycosext.dll` file effects creating a login dialog in which you can store your login password.

CUSTOMNOTESINIPATH

Default	-
Possible values	<mapped path to the notes.ini file>, for example N:\notes.ini
Files	...\AddOn\Client\LotusNotes\LnConfPlugin\setup.ini ...\AddOn\Client\LotusNotes\LnFax\...\setup.ini

In terminal server environments or when deploying multi-user Notes clients, i. e. every user uses his/her own `notes.ini` file, the usual `notes.ini` file must not be used. The path of the usual `notes.ini` file is stored in the Notes section of the registry. Instead, the user-specific `notes.ini` file must be deployed via the following procedure.

Every user has the `notes.ini` file in another directory. For example, user 1 has the file `C:\Documents and Settings\<user1>\<path1>\notes.ini` and user 2 has the file `C:\Documents and Settings\<user2>\<path2>\notes.ini`. All users must now map **the same drive name** to their directory. I. e. user 1 maps drive `N:\` to the directory `C:\Documents and Settings\<user1>\<path1>` and user 2 maps drive `N:\` to the directory `C:\Documents and Settings\<user2>\<path2>`. The CUSTOMNOTESINIPATH parameter must be assigned the path of the `notes.ini` file in the mapped drive, in the example thus `N:\notes.ini`. Every time a user logs in an application starts, looking for the file that CUSTOMNOTESINIPATH specifies and registering the necessary DLL files, if this has not been done yet.

NOTE:
When using multi-user Notes clients you need not only deploy CUSTOMNOTESINIPATH but also set NOTESMULTIUSER to 1.

NOTESMULTIUSER

Default	0
Possible values	0 or 1
Files	...\AddOn\Client\LotusNotes\LnConfPlugin\setup.ini ...\AddOn\Client\LotusNotes\LnFax\...\setup.ini

In case of multi-user Notes clients, the NOTESMULTIUSER parameter must be set to value 1. This is necessary because, unlike terminal server environments, multi-user Notes clients are not automatically recognized during the installation.

This parameter must otherwise remain set to 0.

NOTE: When using multi-user Notes clients you need not only set NOTES-MULTIUSER to 1 but also deploy CUSTOMNOTESINIPATH.

E.8 Installation of a Notes Client on a Citrix Metaframe Server

In the following paragraphs you will find a short explanation of the required steps for the installation of a IBM/Lotus Notes clients on a Citrix Metaframe server.

IMPORTANT: Citrix Metaframe server support starts with IBM/Lotus Notes version 6.0.2. Previous versions are **not** supported.

NOTE: At this stage we would like to point to the Redbooks by IBM, publicly accessible under http://www.redbooks.ibm.com/. These books provide, among other things, very detailed information about the installation of IBM/Lotus Notes on Citrix Metaframe servers.

E.8.1 Procedure for Notes 6

1. Log in directly at the Citrix server as administrator (**not** via a remote connection) and make sure that no other users are logged in at the moment.
2. Create a folder named `r6clienttemplate` on the server. Share the folder and use `r6clienttemplate` as share name. Assign read privileges to the group **Everyone** and assign full privileges to the administrators.
3. Connect with the share you have created above by using your assigned default home directory. If your home directory is for example `H:`, connect as follows:

   ```
   NET USE H: \\TERMSSERVER\R6CLIENTTEMPLATE ...
   ```

4. Open the control panel and double-click the **software** icon.
5. Click **Add new programs** and then **CD or floppy disk**.
6. Click **Continue**.
7. Start the Lotus Notes 6 installation program `setup.exe` from the CD-ROM.
8. In the first installation dialog click **Next**.
9. Click **Continue**.
10. Accept the license agreement and click **Next**.
11. Enter the company name in the user name field and in the organization name field. Do not enter a user name, since the content of these fields is visible for all users.
12. Mark the **Single User Installation** option and click **Next**.

13. Enter an installation folder that corresponds to your environment (e.g.: C:\Program Files\Lotus\Notes).
14. Change the path for the data directory to H:\notes\data and click **Next**.
15. For the feature selection make sure that the following features are **not** selected:
    - Modem files,
    - Client - Shared connection
    - Domino Enterprise Connection Service (DECS)

    Then click **Next**.
16. Click **Install**.
17. Click **Finish**.
18. Open the Windows Explorer and move the `C:\WINDOWS\Notes.ini` file to the `H:\notes\data` directory.
19. Open the just moved file with a text editor and add the following entry below the line `[Notes]`:

    ```
    Directory=H:\notes\data
    ```
20. Create a desktop shortcut to Lotus Notes for all users:
    a) In the Windows Explorer select the menu option **File > New > Shortcut**.
    b) As storage location enter `C:\Programs\Lotus Notes\Notes.exe`.
    c) As shortcut name enter **Lotus Notes 6** and click **Finish**.
21. Open the properties of the shortcut you have just created and open the **Shortcut** tab.
22. In the **Target** field enter the following text:

    ```
    "C:\Programs\Lotus Notes\Notes.exe" =H:\notes\data\Notes.ini
    ```

    NOTE: Please note the blank between the quotation mark (") and the equal sign.
23. In the **Start in:** field enter the following and click on **Apply**:

    ```
    H:\notes\data
    ```
24. Copy the content of the directory `r6clienttemplate`, i.e. `notes` directory in this directory into the home directory of the single users. This can be automated via the following script:

```
if not exist h:\notes md h:\notes
if not exist h:\notes\data md h:\notes\data
if not exist h:\notes\data\notes.ini xcopy /s
"\\FILESERRER\r6clienttemplate\notes\data\*.*"
"h:\notes\data"
```

NOTE: Please note the blank between the quotation marks in the last line!

25. Configure all Notes clients of the users respectively.

F Function Reference

F.1 Registry Entries

F.1.1 IBM/Lotus Notes Gateway (LnAPL)

The Lotus Notes APL is completely compatible to all registry structures of the earlier versions. Old settings are read and then saved in the new format. Subsequently, the old settings will be deleted. The actual version of the registry structure is detected by the Lotus Notes APL.

The following values are specified under the key:
`HKLM\SOFTWARE\Wow6432Node\PP-COM\MRS\LNApl`

AdditionalMappings [REG_MULTI_SZ]

Default:	–
Possible values:	<*correlation database field*>,<*mrs property name*>,<*notes field name*>

Contains a list of additional database fields that is to be replicated between the XPR correlation database and the administration database in IBM/Lotus Notes. Each line represents a database field to be replicated and contains three values separated by commas.

DlgSessions [REG_DWORD]

Default:	16

For future dialog service expansions.

Registry Version [REG_DWORD]

Default:	–

The actual version information of the Lotus Notes APL registry entry structure is contained here and this is also used to update the old structure. Variables should never be modified manually. This could lead to registry entries not being found.

F.1.1.1 Globals

The following values are specified under the key:
`HKLM\SOFTWARE\Wow6432Node\PP-COM\MRS\LNApl\Globals`

AutomaticResending Message[REG_DWORD]

Default:	0
Possible values:	0 or 1

IMPORTANT: Should only be used in a TUM scenario. Activation in a scenario with inbox replication is only supported project-specifically.

In XPR this key activates the retransmission function (*1*). Messages that could not be transferred to IBM/Lotus Notes because the Notes user's mail quota has been exceeded in IBM/Lotus Notes are then sent again.

This message retransmission is managed via further keys:

- REG_DWORD "RepeatStrategyX1" (default = twice),
- REG_DWORD "RepeatStrategyT1" (default = 30 sec.),
- REG_DWORD "RepeatStrategyX2" (default = twice),
- REG_DWORD "RepeatStrategyT2" (default = 300 sec.),
- REG_DWORD "RepeatStrategyX3" (default = twice),
- REG_DWORD "RepeatStrategyT3" (default = 36000 sec.),
- REG_SZ "FilterNonDeliveryReportText" (Standard = "Database disc quota exceeded")

The key RepeatStrategyX*n* determines the number of retransmission attempts until the next strategy is used. The key RepeatStrategyT*n* determines the period between two attempts of a strategy.

Example:

With the default settings (see above), two transfer attempts are first executed in a 30-second interval. Then, two more transfer attempts are carried out in a 300-second interval. Finally, another two transfer attempts are performed in a 36000-second interval. Not until all these attempts have been executed, the originator receives an error message.

The key FilterNonDeliveryReportText includes the text that the FailureReason field must contain for the function to be carried out.

BlockAssistMail_BackupDatabase [REG_SZ]

Default:	–
Possible values:	<Name of Backup Database>

If a backup database has been established that is to store prevented assist mails, its name is indicated here.

BlockAssistMail_MandatoryFields [REG_SZ]

Default:	Form=Memo;$AssistMail=1
Possible values:	Form=Memo;$AssistMail=1

In this key the fields are entered that a message must contain in order to be identified as an assist mail.

BlockAssistMail_OptionalFields [REG_SZ]

Default:	Form DoNotIgnoreMe=0

In this key additional fields can be entered that are used to identify an assist mail.

EnableHardReconnect [REG_DWORD]

Default:	0

This value determines whether the Lotus Notes APL performs a “hard” reconnection to the IBM/Lotus Domino server (*1*) if the connection has been lost and the normal reconnect failed ten times.

BlockAssistMail_Services [REG_SZ]

Default:	@VOICE;@FAXG3;@FAXG4
Possible values:	@VOICE;@FAXG3;@FAXG4

Indicates the XPR services for which sending assist mails is to be prevented.

BlockAssistMailToServiceList [REG_DWORD]

Default:	0
Possible values:	0 or 1

Enables or disables the prevention of assist mails for incoming fax and voice mails.

EnableNotesResponseTracking [REG_DWORD]

Default:	1

This flag specifies whether additional information to IBM/Lotus Notes Mail is inserted into messages from XPR to IBM/Lotus Notes (*1*), so that in the case of a reply, the reply references can be created. The additional information is

inserted into the subject and is readable by the user. If this value is set to *0*, the Lotus Notes APL does not create the additional information; thus the reply context would be lost for an **original XPR > Notes > Notes Return Reply**.

The reply reference in the other direction **Original Notes -> XPR -> XPR Return reply** is always administrated, since the XPR does not need any additional information for this. I.e., in the IBM/Lotus Notes client the reply contexts are always displayed correctly.

EnforceDomino5 [REG_SZ]

Default:	Key must be defined manually!
Possible values:	0 or 1

If this key exists and is set to *1*, the LnAPL behaves, independent from the actual Domino version, as if it were connected to a Domino 5 server. This is useful when the user mailbox replication of Lotus Notes 5 clients to a Domino 6 server does not work.

If this key does not exist or its value is *0*, the LnAPL behaves according to the actual Domino version.

NotesDomain [REG_SZ]

Default:	–

Name of the IBM/Lotus Notes domain in which the Lotus Notes APL operates. Simultaneous communication is possible between several IBM/Lotus Notes servers. These must, however, all belong to the IBM/Lotus Notes domain determined here.

PNABServers [REG_MULTI_SZ]

Default:	–
Example:	Notes/Cycos NotesDev/Cycos

List of the IBM/Lotus Domino servers within the domain that have been provided with a copy of the names and address book. The Lotus Notes APL requires information from the names and address book for the start. If several servers are entered in these fields, the Lotus Notes APL receives all necessary information even if only one server is in operation.

Tag [REG_SZ]

Default:	0

Internal use only. Do not alter manually.

SilentDestinations [REG_MULTI_SZ]

Default:	–

A list of the originator addresses that do not receive reports.

NonFaxDefaulDeliveryReport [REG_SZ]

Default:	C
Possible values:	N, B, C or T

This key configures the default delivery report used by the LnAPL for non-fax messages, for example voice messages.

- N: None
- B: Only on failure
- C: Confirm
- T: Message route (Trace): IBM/Lotus Domino sends a report containing all server computers the message has been routed via. This report contains as well the information whether the message has been delivered.

F.1.1.2 IBM/Lotus Notes Administration

The following values are specified under the key:
`HKLM\SOFTWARE\Wow6432Node\PP-COM\MRS\LNAp1\Notes Administration`

AddressBookReplication_LegacyDeleteMode [REG_DWORD]

Default:	0
Possible values:	0 or 1

This value determines whether user data records that have been deleted in the administration database are also to be deleted in the user database. For the default value 0 the Lotus Notes APL does not delete user data records on the XPR server that have been deleted in the administration database. The value 1 enables this feature.

AdministrationDatabase [REG_SZ]

This value contains the name of the administration database and can be assigned freely. The name must not conflict with an existing database name on the IBM/Lotus Domino server. If in addition to the database name a path (e.g. `XPR\MRSADMIN.NSF`) is entered, this will then be interpreted as the path relative to the data directory of the IBM/Lotus Notes server unless a drive letter or backslash is contained within the path. Paths which contain drive letters or leading backslashes are not allowed (e.g. `E:\XPR\MRSADMIN.NSF` or `\XPR\MRSADMIN.NSF`).

AdministrationServer [REG_SZ]

Default:	–
Example:	Juggernaut/HGC/DE

Hierarchical name of the IBM/Lotus Domino server the administration database and the gateway domain are to be created on or are already. Non hierarchical names (e.g. Jaggernaut) are illegal.

EnableAdministrationDatabase [REG_DWORD]

Default:	1
Possible values:	0 or 1

Via this value the use of the administration database by the Lotus Notes APL can be prevented (*0*). By default the Lotus Notes APL uses the administration database (*1*).

EnableAdministrationDatabaseReplicas [REG_DWORD]

Default:	1
Possible values:	0 or 1

This flag determines whether the IBM/Lotus Notes database works explicitly with the indicated administration database (*0*) or if a replication can be accepted defined under the value `PNAB servers` of the IBM/Lotus Notes server (*1*). If this flag is deleted, all Lotus Notes APL features based on the administration database cease to apply during operation in case the IBM/ Lotus Domino server is not available. If this flag is set and the administration database is replicated between the servers, the Lotus Notes APL would switch during the running operation to another Domino server.

EnableAutomaticUserDBSync [REG_DWORD]

Default:	–
Possible values:	0 or 1

If this flag is set, the Lotus Notes APL will synchronize users of the administration database with the user database. Various services of the XPR server require a user entry in the user database (e.g. voice mail). This flag must be activated if these services are to be available under IBM/Lotus Notes without the need for manual administration of two databases.

EnableIntegratedMessaging [REG_DWORD]

Default:	0
Possible values:	0 or 1

This key is used for activating Integrated Messaging for the Lotus Notes APL (*1*). When you open the LN APL configuration dialog in the XPR monitor and activate the **Use Integrated Messaging** checkbox on the **Administration** tab, this key becomes active.

EnableNotesBasedConfig [REG_DWORD]

Default:	–
Possible values:	0 or 1

If this flag is set, the Lotus Notes APL registry entries can be created via the administration database under IBM/Lotus Notes. The Lotus Notes APL is informed of any configuration modifications by periodical checking of the configuration documents in the administration database. If the flag is deleted, the configuration of the Lotus Notes APL can only be accomplished via the XPR monitor configuration interface. **This function has not been implemented yet.**

EnableRestrictedAccess [REG_DWORD]

Default:	0
Possible values:	0 or 1

If this flag is set, only users registered in the administration database are allowed to access the IBM/Lotus Notes Gateway. Messages from other users will be deleted without a report being generated.

IntegratedMessagingDatabase [REG_SZ]

Default:	–

This value contains the name of the Lotus Notes APL Integrated Messaging database, and can be freely assigned. The name must not conflict with an existing database name on the IBM/Lotus Domino server. If in addition to the database name a path (e.g. `XPR\MRSADMIN.NSF`) is entered, this will then be interpreted as the path relative to the data directory of the IBM/Lotus Notes server unless a drive letter or backslash is contained within the path. Paths which contain drive letters or leading backslashes are illegal (e.g. `E:\XPR\MRSINT.NSF` or `\XPR\MRSIMSG.NSF`).

Inbox replications from IBM/Lotus Notes to the XPR server are contained in this database.

IntegratedMessagingMRSPollIntervall [REG_DWORD]

Default:	–
Possible values:	5 - 256 seconds

Time interval in seconds between two checks for new messages in the XPR Integrated Messaging database. In an operational mode, a value of 60 seconds is sufficient.

IntegratedMessagingPollDelay [REG_DWORD]

Default:	5
Possible values:	Seconds

Time interval in seconds between two checks for new messages in the IBM/Lotus Notes XPR Integrated Messaging database.

IntegratedMessagingPollDelayHard [REG_DWORD]

Default:	–
Possible values:	Seconds

Time interval in seconds between two checks for new messages in the IBM/Lotus Notes XPR Integrated Messaging database. The database is opened and scanned for controlling. If the value is not set or set to *0*, this type of database check is switched off.

IntegratedMessagingReconnectDelay [REG_DWORD]

Default:	15
Possible values:	up to 15 seconds

Time interval in seconds between reconnection attempts. Default is a maximum of 15 and the value entered for IntegratedMessagingPollDelay [REG_DWORD]. Thus 15 seconds if IntegratedMessagingPollDelay [REG_DWORD] is smaller than 15, otherwise the value entered for IntegratedMessagingPollDelay [REG_DWORD].

OriginatorReplace [REG_DWORD]

Default:	1
Possible values:	0 or 1

NOTE: For Lotus Notes 6.x only.

Value *1*, then the originator address of a voicemail (normally the originator's phone number) is replaced by the originator's Lotus Notes address and respectively displayed in the inbox. To switch this behavior off the parameter must be set to *0*. The received message will then contain the default field **from:** with the received number and another field **FromDomain** with the foreign domain address.

This key only takes effects on voice mails, not on the inbox replication for mail and fax messages.

OriginatorReplace_ReplyTo [REG_DWORD]

Default:	0
Possible values:	0 or 1

NOTE: For Lotus Notes 6.x only.

In case of *1* the **ReplyTo** field is added to the message, which contains the address of the foreign domain. In this case the principal field contains the Lotus Notes name of the originator, as it is displayed in the inbox and during the message opening. The receipt will then be sent to the foreign domain, so that the MWI will be switched off there.

This key only takes effects on voice mails, not on the inbox replication for mail and fax messages.

PrincipalOverride [REG_DWORD]

Default:	–
Possible values:	0 or 1

When set to *0*, the Lotus Notes APL ignores the principal field in messages sent from IBM/Lotus Notes to the XPR server. If this value is set to *1*, the APL sets the originator of the message to the user contained in the principal field.

ShootYourselfInFoot [REG_DWORD]

Default:	1
Possible values:	0 or 1

This flag activates a compatibility mode which maintains the mail document properties transfer. This way IBM/Lotus Notes user information can be sent to XPR systems that are connected via Remote System Link. This is also possible if XPR servers are not able to replicate user data. If this flag is deleted then only the One Time Override Properties (see above) will be transmitted. This flag can only be set in the registry entries.

SyncButtonConfDoc [REG_DWORD]

Default:	0
Possible values:	0 or 1

This flag activates the **Save Configuration** button in the configuration document which will be sent to the user after the configuration has been modified.

SendProfileDocByMail [REG_DWORD]

Default:	0
Possible values:	0 or 1

In case of *1* it is possible to send a user profile document by mail. In case of *0* a user document is directly copied to the user mailbox.

IMPORTANT:
This key should only be activated if the synchronization in the administration database takes even in case of deactivated template logs too long.

DisableAutoPreferredDelivery [REG_DWORD]

Default:	0
Possible values:	0 or 1

In case of *0* the preferred delivery is set to MAILBOX for IM users and to LN for TUM users. In case of *1* the preferred delivery is not automatically set depending on the IBM/Lotus Notes integration (IM or TUM).

IMPORTANT: This key should only be activated is special scenarios, for example, if XPR users are administered by IBM/Lotus Notes. In the default setting, which is in most usage scenarios the most suitable solution, this key is deactivated to avoid routing problems.

F.1.1.3 IBM/Lotus Notes Mail Forms

The following values are specified under the key:
`HKLM\SOFTWARE\Wow6432Node\PP-COM\MRS\LNApl\Notes Mail Forms`

They influence the IBM/Lotus Notes forms for documents and reports.

Delivery Report Form [REG_SZ]

If a form is to be used for delivery other than that of the standard IBM/Lotus Notes form, then its name will be entered here. IBM/Lotus Notes administrators are responsible for ensuring that the alternative mail form is placed in the user's mail database. Since the mail databases are normally configured to automatically inherit its design from a mail form, it is sufficient to insert the alternative form into the template.

Memo Form [REG_SZ]

If a form is to be used for messages other than that of the standard IBM/Lotus Notes form, then its name would be entered here. IBM/Lotus Notes administrators are responsible for ensuring that the alternative mail form is placed in the user's mail database. Since the mail databases are normally configured to automatically inherit its design from a mail form, it is sufficient to insert the alternative form into the template.

Return Receipt Form [REG_SZ]

If a form is to be used for return receipt other than that of the standard IBM/Lotus Notes form, then its name will be entered here. IBM/Lotus Notes administrators are responsible for ensuring that the alternative mail form is placed in the user's mail database. Since the mail databases are normally configured to automatically inherit its design from a mail form, it is sufficient to insert the alternative form into the template.

Trace Report Form [REG_SZ]

If a form is to be used for trace reports other than that of the standard IBM/Lotus Notes form, then its name would be entered here. IBM/Lotus Notes administrators are responsible for ensuring that the alternative mail form is placed in the user's mail database. Since the mail databases are normally configured to automatically inherit its design from a mail form, it is sufficient to insert the alternative form into the template.

F.1.1.4 IBM/Lotus Notes Reports

The following values are specified under the key:
`HKLM\SOFTWARE\Wow6432Node\PP-COM\MRS\LNApl\Notes Reports`

EnableDefaultFaxDeliveryConfirmation [REG_DWORD]

Default:	1
Possible values:	*0*: The options set by the IBM/Lotus Notes user will not be modified. *1*: The Lotus Notes APL requests a delivery report unless otherwise specified by the user. *2*: The Lotus Notes APL always requests a delivery report, even when the user has explicitly switched off reporting.

Even if the IBM/Lotus Notes user does not require a delivery report for a fax, this value specifies whether the Lotus Notes APL request a delivery report from the XPR or not.

EnableDefaultMailDeliveryConfirmation [REG_DWORD]

Default:	0
Possible values:	*0*: The options set by the IBM/Lotus Notes user will not be modified. *1*: The Lotus Notes APL requests a delivery report unless otherwise specified by the user. *2*: The Lotus Notes APL always requests a delivery report, even when the user has explicitly switched off reporting.

This value defines if the Lotus Notes APL requests a delivery report for mail documents (except fax) from XPR, even if the IBM/Lotus Notes has not requested one in his delivery options.

RemoveCostInfoFieldFromReports [REG_DWORD]

Default:	0
Possible values:	*0*: the field *Costinfo* is displayed in the send report. *1*: the field *Costinfo* is **not** displayed in the send report.

This key controls whether information on the charged costs are to be displayed in the send report. Therefore the field *Costinfo* is hidden or displayed.

F.1.1.5 Import and Export

The following values are specified under the key:
`HKLM\SOFTWARE\Wow6432Node\PP-COM\MRS\LNApl\Import and Export`

DefaultFaxcover [REG_SZ]

Default:	“ “

This value allows the setting of default XPR stationary for all IBM/Lotus Notes users. If a fax cover is defined for the user in the administration database, this setting will be used.

DefaultFaxlogo [REG_SZ]

Default:	“ “

This value allows the setting of a default XPR fax logo for all IBM/Lotus Notes users. If a fax logo is defined for the user in the administration database, this setting will be used.

DefaultNotesFaxForm [REG_SZ]

Default:	“ “

This value allows the setting of a default Notes fax form for all IBM/Lotus Notes users. If a fax form is defined for the user in the administration database, this setting will be used.

DisableCorrelDefaultFaxStationary [REG_DWORD]

Default:	0
Possible values:	0 or 1

This key disables the synchronization of fax templates between the CorrelDB and the administration database (1). Deactivate the synchronization if you want to assign several fax templates in the user document. Without synchronization the fax templates in the user document are not assigned as default template in the CorrelDB, so that the user may choose the fax template when sending the fax.

EnableExport [REG_DWORD]

Default:	2
Possible values:	*0*: No Export *1*: Export for e-mail, no export for fax *2*: Export for fax, no export for e-mail *3*: Export for e-mail and fax

This value regulates whether a further representation of the document body (e.g RTF) is to be created with mail from IBM/Lotus Notes to the XPR. All Edit Level Export Filters from IBM/Lotus Notes can be used. This feature can be activated separately for e-mails and fax messages.

EnableRTFImport [REG_DWORD]

Default:	0
Possible values:	0 or 1

This flag determines whether messages from XPR to IBM/Lotus Notes with a preexisting RTF representation of the message contents is to be imported to the body field (1), or if the body field is created from the text representation of the message content.

EnableTiffPatch [REG_DWORD]

Default:	1
Possible values:	0 or 1

This flag activates the TIFF Patch that enables the IBM/Lotus Notes viewer to display asymmetrical TIFF files.

ExportLibrary [REG_SZ]

This string determines which IBM/Lotus Notes Edit Level Export Filter is to be used to create an additional representation of the document body (e.g. for outgoing fax messages). The entry syntax is `<export library name>, <extension>`. The first part `<export library name>` is the name of the export filter shown by the IBM/Lotus Notes client when an export at the document level is required. The exports are described in the IBM/Lotus Notes initialization file (Notes.ini). All entries with the name EDITEXPxxx describe the Edit Level export filter. The first value (found in the comma separated entry list EDITEXP xxx) is the name of the filter and can be used as `<export library name>`. Following the fourth entry in the EDITEXPxxx list, are the file extensions required by the various filters. Since more than one file format is possible, the file extension must be selected and entered in `<extension>`. All file extensions must be preceded by a dot. **Example: MicrosoftWord RTF, RTF**

This is the correct setting for the Rich Text Export filter and the extension RTF.

NDLConversion_AgentPrintMode [REG_DWORD]

Default:	1
Possible values:	0 or 1

IMPORTANT: *NDLConversion_AgentPrintMode* is active by default, *NDLConversion_FormPrintMode* is inactive by default.

IMPORTANT: *NDLConversion_FormPrintMode* should be preferred to the *NDLConversion_AgentPrintMode*, since it is saver and more optimized. Use *NDLConversion_AgentPrintMode* only if the deployment of *NDLConversion_FormPrintMode* causes problems.

There are three ways to access the printing feature:

- Menu option **Action > Print**
  If the registry key *NDLConversion_AgentPrintMode* is active and the registry key *NDLConversion_FormPrintMode* is inactive, the Lotus Notes APL does not use the default print feature of the IBM/Lotus Notes clients for the NDL conversion but the agent **PrintNDLConv**, which is found in the XPR converter database (see Section E.2.1, “Installation”, on page 212). Furthermore, the shortcut to the **File** menu must be set to value **A** for English Notes clients respectively **K** for German Notes clients, and the shortcut to the **File > Print** menu option to value **P** (see Section A.1.7, “Export Tab”, on page 123).

  IMPORTANT:
  NDLConversion_AgentPrintMode is only compatible with Notes Client 6.x. In contrast, *NDLConversion_FormPrintMode* is compatible with Notes Client 6.x and higher.

- Menu option **File > Print**
  Is only possible if the registry key *NDLConversion_FormPrintMode* is deactivated (see Section F.1.1.5, “Import and Export”, on page 246).

- By opening the document
  Is only possible if the registry key *NDLConversion_FormPrintMode* is active (see Section F.1.1.5, “Import and Export”, on page 246). In this case the values set in the **Shortcut for ’File menu’** and **Shortcut for ’Print’** combo boxes are irrelevant (see Section A.1.7, “Export Tab”, on page 123).

NDLConversion_FormPrintMode [REG_DWORD]

Default:	0
Possible values:	0 or 1

IMPORTANT: If the key *NDLConversion_FormPrintMode* is set to value 1, the XPR conversion database (`MrsCnv.nsf`) must be copied from the <XPR_*Install*>`\res\LnApl` to the <*LN_Install*>`\notes\data` directory on the XPR computer.

IMPORTANT: *NDLConversion_FormPrintMode* is compatible with Notes Clients 6.x and higher. In contrast, *NDLConversion_AgentPrintMode* is only compatible with Notes Client 6.x.

IMPORTANT: *NDLConversion_FormPrintMode* should be preferred to the *NDLConversion_AgentPrintMode*, since it is saver and more optimized. Use *NDLConversion_AgentPrintMode* only if the deployment of *NDLConversion_FormPrintMode* causes problems.

IMPORTANT: If *NDLConversion_ShowPrintDialog* has been activated, *NDLConversion_FormPrintMode* must be activated also.

There are three ways to access the printing feature:

- By opening the document
  Is only possible if the registry key *NDLConversion_FormPrintMode* is active. In this case the values set in the **Shortcut for 'File menu'** and **Shortcut for 'Print'** combo boxes are irrelevant (see Section A.1.7, "Export Tab", on page 123). This key can be used in combination with the *NDLKeepNotesClientOpened* key and disables the *NDLConversion_AgentPrintMode* key.

  If the key *NDLConversion_FormPrintMode* is set to value 1, the documents opened by the LnAPL from the XPR conversion database (`MrsCnv.nsf`) are immediately printed via the *PostOpen* event of the Notes API. Consequently, you need not start the print agent or have the document printed via the **File** > **Print** command.

- Menu option **File > Print**
  Is only possible if the registry key *NDLConversion_FormPrintMode* is deactivated.

- Menu option **Action > Print**
  Is only possible if the registry key *NDLConversion_AgentPrintMode* is active and the registry key *NDLConversion_FormPrintMode* is deactivated.

NDLConversion_ShowPrintDialog [REG_DWORD]

Default:	0
Possible values:	0 or 1

The registry key *NDLConversion_ShowPrintDialog* serves in versions of Lotus R8 for opening the Lotus Notes print dialog mandatorily in full mode.

IMPORTANT: If you use a version of Lotus R8, activate the registry key *NDLConversion_ShowPrintDialog* and the registry key *NDLConversion_FormPrintMode* also.

IMPORTANT: If you activate the registry key *NDLConversion_ShowPrintDialog* and use a Windows version that deploys User Interface Privilge Isolation (UIPI) (for example Windows Server 2008) for the computer on which the LnAPL operates, you need to execute the following steps. This enables the LnAPL to reach the Lotus Notes client in Session0.
Session0 isolation is a security feature of Windows Server 2008, Windows Vista and Windows 7 for isolating system processes and potentially dangerous applications. See `http://en.wikipedia.org/wiki/Shatter_attack` for further general Session0 details.

NOTE: A local system account must be used for the NDL conversion (see step 6 on page 250).

---

1. Select **Start** > **Run**.
2. Enter `services.msc` for opening the Services window.
3. Rightclick the entry **XPR Lotus Notes APL(LnApl)**.
4. Select the menu option **Properties**.
5. Click on the **Log On** tab.
6. Activate the radio button **Local System Account**.
7. Activate the **Allow service to interact with desktop** checkbox.
8. Click on **OK**.
9. Select **Start** > **Run**.

10. Enter `regedit`.
11. If the following registry key does not exist yet, create it:

```
HKLM\SOFTWARE\Wow6432Node\PP-COM\MRS\LNApl\Import and Export\
NDLConversion_ShowPrintDialog
```

12. Set *NDLConversion_ShowPrintDialog* to 1.
13. Set *NDLConversion_FormPrintMode* to 1.

The following steps are optional. You need to execute them only if you do not want the error messages created by the interaction between LnAPL and Session0.

14. Open the service management opened in step 2 on page 250.
15. Rightclick the entry **Interactive Service Detection** and select **Stop**.
16. Rightclick the same entry and select **Properties**.
17. Set the **Startup Type** field to **Disabled**.
18. Click on **OK**.
19. Reboot the computer.

NDLRemoveMrsCnvIcon [REG_DWORD]

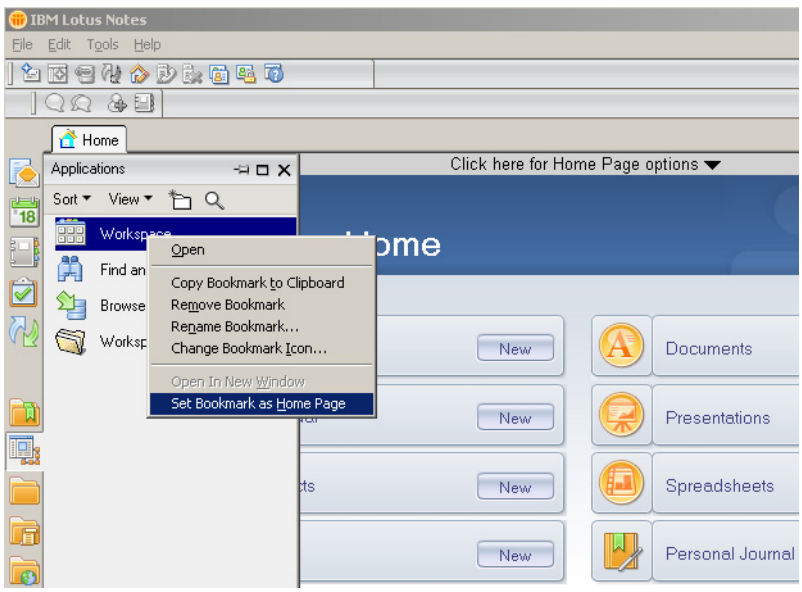
Default:	0
Possible values:	0 (deactivated) or 1 (activated)

If you use the XPR conversion database (`MrsCnv.nsf`) instead of the administration database for NDL conversion as mentioned in Section E.1.2, “Using IBM/Lotus Notes Forms as Fax Template”, on page 206, an icon for the XPR conversion database is created in the workspace of the IBM/Lotus Notes client during the NDL conversion process / print job, if it has not been created yet. This database icon stores the printer settings including e. g. the print orientation (portrait mode/landscape mode) for this database overwriting the default printer’s settings in the Microsoft Windows control panel.

If you want to reset all printer settings stored in this icon, i. e. remove the icon, after each NDL conversion process / print job, activate the registry key *NDLRemoveMrsCnvIcon* by setting it to 1.

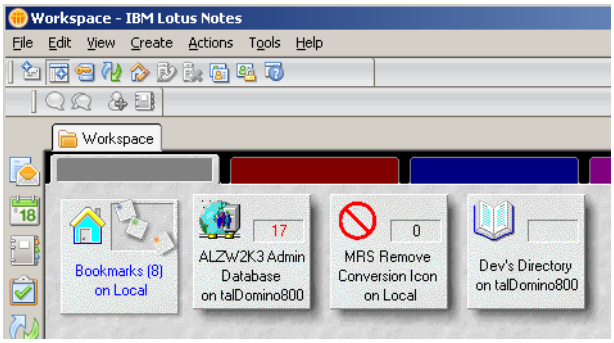
The prerequisites to use the activated registry key *NDLRemoveMrsCnvIcon* are as follows:

- The NDL conversion already has been configured and is working on the XPR server.
- Click the **Home** tab in the IBM/Lotus Notes client on the XPR server computer. Click the **Workspace** entry in the navigator with the right mouse button and select the **Set Bookmark as Home Page** option.



Bookmark is the `bookmark.nsf` database containing mails, the calendar etc.

Homepage is the page that is shown first when you open a database in the IBM/Lotus Notes client.



- The XPR conversion database (`MrsCnv.nsf`) and the database file `MrsReset.nsf` have been copied from the <XPR_*Install*>`\res\LnApl` to the <*LN_Install*>`\notes\data` directory on the XPR server computer.

  All database printer settings of a IBM/Lotus Notes database are stored in the icon of that database in the workspace of the IBM/Lotus Notes client. The `MrsReset.nsf` database file is responsible for finding and removing the icon created for the XPR conversion database icon in the workspace. The LnAPL opens this database and confirms all pop-up messages to remove the icon from the workspace.

Check whether the registry key *NdlWaitPrintEndSleep* must be modified.

NdlWaitPrintEndSleep [REG_DWORD]

Default:	5000
Possible values:	Integer values bigger than 5000

The registry key *NdlWaitPrintEndSleep* (in ms) increases the print job waiting time, i. e. the time before the print job is started. This might be used in the case that it is not possible to remove the icon (see registry key *NDLRemoveMrsCnvIcon*) in the workspace because the `MrsReset.nsf` database is still opened.

NdlExporter [REG_DWORD]

Default:	0
Possible values:	0 or 1

This flag activates the NDL converter

NDLKeepNotesClientOpened [REG_DWORD]

Default:	1
Possible values:	0 or 1

In the normal case the IBM/Lotus Notes client is opened and subsequently closed again for each NDL conversion. If this key is set to value 1, the IBM/Lotus Notes client stays open after the NDL conversion. This program entity

is then used for all NDL conversions that follow. In this way a program entity is among other things ensured to be exclusively used for the NDL conversion by the LnAPL.

NdlMCFile [REG_DWORD]

Default:	65

This flag determines the shortcut keys for opening the file menu when using the NDL converter. The letters A to Z are used in the entry field. (A= *65*, *Z=90*).

NdlMCPrint [REG_DWORD]

Default:	65

This flag determines the shortcut keys for printing out of the IBM/Lotus Notes client when using the NDL converter. The letters A to Z are used in the entry field. (A= *65*, *Z=90*).

OutboundFileFormats [REG_SZ]

Default:	–
Possible values:	AS7,TXT,FG3,FG4,WAV,BIN

List of the file formats that are to be transported to IBM/Lotus Notes. Important is that at least one text format, one graphic format, one audio format, and a binary format is entered here. Necessary format conversions are processed by the XPR server. Manual manipulation is not critical since non-valid entries will be ignored. If you wish to use a fax resolution of 100 x 200, set `OutboudFileFormats` to value `FG4`.

RenderInConversionDB [REG_DWORD]

Default:	0
Possible values:	0 or 1

If messages contain the `MRS_FAX_FORM` field, they are not rendered in the administration database but in the conversion database. The LnAPL tries to find the form from the `MRS_FAX_FORM` field in the administration database. If it finds the form and the form is not available in the conversion database, the form is copied from the administration database to the local conversion database. If the form exists in the conversion database, but the administration database contains a newer version, the form in the conversion database will be updated.

The value of the `FORM` field is reset to the `MRS_FAX_FORM` field value. Subsequently, the form is printed via the NDL Converter routine.

F.1.1.6 RTF Adjustments

The following values are specified under the key:
`HKLM\SOFTWARE\Wow6432Node\PP-COM\MRS\LNApl\Import and Export\RTF Adjustments`

All values defined in this subsection are only active when the “Microsoft Word RTF” Export filter is used for the export from IBM/Lotus Notes. If another export filter is used then the settings are without any effect.

DocBottomMargin [REG_DWORD]

Default:	-1
Possible values:	-1…32680

This value determines the bottom margin of exported RTF documents (unit of measure: twips - 1440 twips = 1 inch). If this value is not defined or equal to *-1* decimal, the settings from the IBM/Lotus Notes RTF export filter will not be modified (1440 twips).

NOTE:
These registry settings would only be used if no other settings were found in the administration database under IBM/Lotus Notes for the originator of the document or if the document itself contains no settings.

DocLeftMargin [REG_DWORD]

Default:	-1
Possible values:	-1…32680

This value determines the left margin of exported RTF documents (unit of measure: twips - 1440 twips = 1 inch). If this value is not defined or equal to *-1* decimal, the settings from the IBM/Lotus Notes RTF export filter will not be modified (1080 twips).

NOTE: These registry settings would only be used if no other settings were found in the administration database under IBM/Lotus Notes for the originator of the document or if the document itself contains no settings.

DocRightMargin [REG_DWORD]

Default:	-1
Possible values:	-1…32680

This value determines the right margin of exported RTF documents (unit of measure: twips - 1440 twips = 1 inch). If this value is not defined or equal to *-1* decimal, the settings from the IBM/Lotus Notes RTF export filter will not be modified (1440 twips).

NOTE: These registry settings would only be used if no other settings were found in the administration database under IBM/Lotus Notes for the originator of the document or if the document itself contains no settings.

DocTopMargin [REG_DWORD]

Default:	-1
Possible values:	-1…32680

This value determines the top margin of exported RTF documents (unit of measure: twips - 1440 twips = 1 inch). If this value is not defined or equal to *-1* decimal, the settings from the IBM/Lotus Notes RTF export filter will not be modified (1440 twips).

NOTE: These registry settings would only be used if no other settings were found in the administration database under IBM/Lotus Notes for the originator of the document or if the document itself contains no settings.

F.1.1.7 Notes Routing

The following values are specified under the key:
`HKLM\SOFTWARE\Wow6432Node\PP-COM\MRS\LNApl\Notes Routing`

PostMaster [REG_SZ]

This field contains the hierarchical IBM/Lotus Notes user name of the user who has been designated as postmaster. The postmaster can be configured in the registry as well as in the administration database. If the postmaster is configured in the registry as well as in the administration database, then the settings will be taken from the administration database. The **Postmaster** field is only of importance when the Lotus Notes APL is configured in a way that non-deliverable documents are routed to the postmaster (see below).

RouteErrorHandling [REG_DWORD]

Default:	0
Possible values:	0 or 1

This flag determines the behavior of Lotus Notes APL when a IBM/Lotus Notes based routing is active and the document cannot be delivered. If the flag is set to 0, the Lotus Notes APL generates an error report. If the flag is set to 1, the document is sent to the postmaster. When no postmaster is configured or incorrectly configured, an error report is generated.

F.1.1.8 Replication

The following values are specified under the key:
`HKLM\SOFTWARE\Wow6432Node\PP-COM\MRS\LNApl\Replication`

AddressUpdateID [REG_DWORD]

This value is internally used by the Lotus Notes APL to tag the actual replication (IBM/Lotus Notes to XPR). When the Lotus Notes APL is shut down the value is written so that not all XPR users need to be replicated again at the next start.
Do not modify!

AddressUpdateRatio [REG_DWORD]

This value is used internally by the Lotus Notes APL and determines the interval of the address book replication.
Do not modify!

DocumentUpdateID [REG_DWORD]

This value is used internally by the Lotus Notes APL to note the state of the Inbox replication for Integrated Messaging.
Do not modify!

DocumentUpdateRatio [REG_DWORD]

This value is used internally by the Lotus Notes APL and determines the interval of the Inbox replication.
Do not modify!

ReplicationTag [REG_BINARY]

This value is internally used by the Lotus Notes APL to tag the actual replication (IBM/Lotus Notes to XPR). When the Lotus Notes APL is shut down the value is written so that not all IBM/Lotus Notes users need to be replicated again at the next start.
Do not modify!

F.1.1.9 Computer Telephony Integration (CTI)

The following values are specified under the key:
`HKLM\SOFTWARE\Wow6432Node\PP-COM\MRS\LNApl\CTI`

CtiDialButtonLogDoc [REG_DWORD]

Default:	–
Possible values:	0 or 1

This value determines whether a Dial button is to be integrated (*1*) or not (*0*) in the Rich-Text body of a CTI journal message. A prerequisite of the Dialer is the integration of the “mrsDialAgent” in the mail file of the user.

EnableCti [REG_DWORD]

Default:	–
Possible values:	0 or 1

This value determines whether a CTI journal replication is active (*1*) or not (*0*).

PhoneOutputSuppressNonAudio [REG_DWORD]

Default:	1
Possible values:	0 or 1

This value determines whether the non-audio components in messages addressed to the service PHONE from IBM/Lotus Notes are to be deleted (1) or not (0). If a Text-to-Speech module is installed on the XPR server, it could be desirable to transmit also the non-audio components.

VoiceConnectProtocol [REG_SZ]

Default:	“ “
Possible values:	

This value determines which XPR protocol is to be used to establish a voice connection via telephone from IBM/Lotus Notes. XPR uses an outgoing E script. A call connection is internally established by sending a mail to the E script (`NVS:DIALER/<external dialing number>`).

The string `DIALER` is inserted into the VoiceConnectProtocol which corresponds to the logical script name. The establishment of the voice connection is triggered by the user from IBM/Lotus Notes by sending a mail on the pseudo service `VOICECONNECT` to the Lotus Notes APL. The subject of the mail must contain the internal dialing number in a normalized international form.

Example: Subject = `49240412345`
Mail is sent to `4921198765@VOICECONNECT@GWDOMAIN`

A telephone connection is established between the two extensions. If the connection results in a failure an error report is sent to the mail database of the initiator.

NOTE:
You can install alias domains for the `VOICECONNECT` service.

F.1.1.10 Notes Connections

The following values are specified under the key:
`HKLM\SOFTWARE\Wow6432Node\PP-COM\MRS\LNApl\`
Notes Connections

An additional key with the name of the external domain, via which the connection with the IBM/Lotus Domino server is to be established, is created in the “Notes Connections” key for each connection with a IBM/Lotus Domino server. The following Values are entered for each connection listed under the keys.

AliasDomains [SERVICE] [REG_MULTI_SZ]

Default:	
Possible values:	Legal is “John Public @ 02404111222 @ FAXG3”. Or “John Public @ 02404111222 @ FAXG3 @ NOTESGATE”, if NOTESGATE is the gateway domain. With the configuration NOTESGATE\AliasDomainsFaxG3=OTHERGATE the addressing “John Public @ 02404111222 @ OTHERGATE” or “John Public @ 02404111222 @ OTHERGATE @ NOTEGATE” is also legal and equivalent to the first addressing. By default the alias domains FAXG3, FAXG4, SMS and VOICE are installed for the corresponding services. The alias domains must be unambiguous for all gateway domains. Alias domains are not entered in the Windows registry under the obsolete value *GatewayDomains*. The deinstallation of standard alias domains (alias domains that correspond to a XPR service e.g. FAXG3 or VOICE) can only be performed automatically, if they are entered as alias domain in the registry. Example: AliasDomainsFAXG3=FAXG3

List of alias domains for the service [SERVICE]. [SERVICE] corresponds to a XPR service ID (e.g. FAXG3, FAXG4, VOICE).

Syntax:

```
<alias1>
...
<aliasN>
```

Meaning: The list `<alias1>` to `<aliasN>` are stand-in domains for the service `[SERVICE]`, addressed via the gateway domain of the key containing this value. With the address conversion the Lotus Notes APL adapts the alias domain to the corresponding basic address.

Enabled [REG_DWORD]

Default:	–
Possible values:	0 or 1

This connection is enabled (*1*) or disabled (*0*).

EnableMRSPrivilegeCheck [REG_DWORD]

Default:	–
Possible values:	0 or 1

The XPR server (1) executes privilege checks on this logical line.

GatewayDatabase [REG_SZ]

Mail database of the gateway domain.

Gatewayerver [REG_SZ]

The name of the IBM/Lotus Domino server administering the foreign domain.

OutLink [REG_SZ]

This field contains the name of the mail router mailbox from the IBM/Lotus Domino server (mail.box).

PollDelay [REG_DWORD]

Default:	5
Possible values:	Seconds

Time interval in seconds of the IBM/Lotus Notes XPR mail database check for new messages.

PollDelayHard [REG_DWORD]

Default:	–
Possible values:	Seconds

Time interval in seconds between two checks of the domain mail database for new messages. The database is opened and scanned for checking. If the value is not set or set to *0*, this type of database check is switched off.

ReconnectDelay [REG_DWORD]

Default:	–
Possible values:	Seconds

Time interval in seconds between two reconnection attempts. Default is the maximum of 15 and PollDelay. That equates to 15 seconds if the Poll delay is less that 15 seconds, otherwise the PollDelay default value.

SuppressForeignDomainModificationACLErrors [REG_DWORD]

Default:	0
Possible values:	0 or 1

If you have switched to restricted privileges for operating, it is still possible to perform modifications to foreign or alias domains via the GUI, but these modifications will not be correctly executed. For these settings you need privileges like for performing a setup. In such a case errors will be reported with each start that follows. You can use this value to suppress these errors.

See also Section 3.4.2, “Installation with restricted User Privileges”, on page 52.

UpdateOptions [REG_DWORD]

Default:	0
Possible values:	*0*: No change of the existing configuration (NOP). *1*: Create mail database and domain document (CREATE). *2*: Delete domain with all aliases and mail databases (DELETE).

This value determines how the Lotus Notes APL is to proceed with the `GatewayServer` and `GatewayDatabase` values.

F.1.2 Lotus Notes Unified Messaging Gateway (LnUmAPL)

ServerList [REG_Multi_SZ]

Default:	16
Possible values:	Juggernaut/HGC/DE

Hierarchical name of the IBM/Lotus Domino server where the mail databases of the Unified Messaging user are contained. Non hierarchical names (e.g. Jaggernaut) are illegal.

F.1.2.1 Globals

DominoClusterSupport [REG_DWORD]

Default:	0
Possible values:	0 or 1

Activates (1) or deactivates the support for IBM/Lotus Domino cluster.

F.1.2.2 MailDbAccess

DbSearchCutOffDays [REG_DWORD]

Default:	0 (switched off)
Possible values:	Number of days

Prevents the search for documents for the number of days set.

F.1.3 IBM/Lotus Notes Client Component

F.1.3.1 Fax Viewer

The following entries are generated for the ActiveX component fax viewer in the

```
HKCU\Software\Cycos AG\COM\FaxViewer
```

key:

FaxFillCol [REG_BINARY]

Default:	00 00 00 00
Possible values:	1st number pair = value for red 2nd number pair = value for green 3rd number pair = value for blue 4th number pair = without significance (00 00 00 00 = black)

This value contains the selected color of the objects that are to be used in the fax. The color is stored binary coded according to the RGB color model.

FaxGrid [REG_DWORD]

Default:	0
Possible values:	0 = faded out 1 = faded in

This value determines if gird lines are faded out or faded in a fax message.

FaxLineCol [REG_BINARY]

Default:	00 00 00 00
Possible values:	1st number pair = value for red 2nd number pair = value for green 3rd number pair = value for blue 4th number pair = without significance (00 00 00 00 = black)

This value contains the line color selected in the fax message. The color is stored binary coded according to the RGB color model.

FaxLogoFnt [REG_BINARY]

Default:	*Binary coded font Courier New*

This value indicates which font possesses the entries of the variables used in the fax message.

FaxPrintMode [REG_DWORD]

Default:	1
Possible values:	1 = Optimum fit (attempt to optimally print out a fax message on DIN A4 sheets). 0 = Fit fax to print page (the entire fax message is always put out on one print page).

This value determines which representation form is set for printing a fax message.

FaxTxtFnt [REG_BINARY]

Default:	*Binary coded font Courier New*

This value indicates which font the entries of text objects used in the fax message possesses.

FaxTxtFntCol [REG_Binary]

Default:	00 00 00 00
Possible values:	1st number pair = value for red 2nd number pair = value for green 3rd number pair = value for blue 4th number pair = without significance (00 00 00 00 = black)

This value contains the text object selected in the fax message. The color is stored binary coded according to the RGB color model.

FaxZm [REG_DWORD]

Default:	0
Possible values:	0...100

Value for the currently set zoom factor. The value is specified as diminution value between 0 and 100%.

FaxZoom [REG_DWORD]

Default:	0
Possible values:	0 = Function is switched off, for example when another zoom factor (see FaxZm) has been selected. 1 = Display entire fax in the window 2 = Fit fax optimally to window size

Value for the set adjustment required for fax representation in the current window.

LeftFaxMargin [REG_DWORD]

Default:	10

Value indication for the width of the left margin of a fax hardcopy. The value is specified in millimeter from the left border.

RightFaxMargin [REG_DWORD]

Default:	0
Possible values:	

Value indication for the width of the right margin of a printed fax. The value is specified in millimeter from the left border.

F.1.3.2 Wave Player

The following entries are generated for the ActiveX component wave player in the key

```
HKCU\Software\Cycos AG\COM\WavePlayer
```

key:

AppendSource [REG_DWORD]

Default:	0
Possible values:	0 = New annotation 1 = Attach voice mail annotation to existing recording

Value for the current switch setting of the button for re-recording or attaching a voice annotation.

LocalPhone [REG_SZ]

In this value the number of the telephone is entered that you would like to use temporarily as output device for your voice mails.

MonitoringSucceededFromPhone [REG_DWORD]

Default:	–
Possible values:	0 = Unsuccessful 1 = Successful

Value for the message stating whether or not the monitoring access performed last has been successful.

PlayVoiceDeviceIndex [REG_DWORD]

Default:	–
Possible values:	0 = On the telephone defined as "local" 1 = On the own telephone

Value for the definition of voicemail playback

VoiceMailFormat [REG_DWORD]

Default:	1
Possible values:	0 = µ-Law 1 = A-Law

Value for the set voice format: A-law or µ-law.

F.1.3.3 CTI-LSX

The following entry is generated for the client component CTI-LSX in the

```
HKCU\Software\Cycos AG\CtiLsx
```

key:

NotesIniPath [REG_SZ]

Default:	*C:\Lotus\Notes\notes.ini*

This value contains the path to the notes.ini file.

F.1.3.4 MRS Fax

The following entries are generated for the MRS Fax client component in the

```
HKCU\Software\Cycos AG\Lotus Fax Extension
```

key:

ClientTag [REG_SZ]

This value stores the password of the IBM/Lotus Notes user in cryptic form.

NotesIniPath [REG_SZ]

Default:	*C:\Lotus\Notes\notes.ini*

This value contains the path to the `notes.ini` file.

NotesSendForm [REG_SZ]

Default:	*Memo*

This value indicates which fax send form is used.

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