INTOGRATE AX – Mail

Lotus Notes Integration Kit

Version 2.2

INTO GRATE

INTOINT

1. Introduction

1.1 Integration of Microsoft Dynamics AX Mail with Lotus Notes

The standard version of Microsoft Dynamics AX only supports Microsoft Outlook as mail and calendar client. "INTOGRATE AX – Mail" enables the use of e-mail in Lotus Notes from Dynamics AX.

To avoid unnecessary changes to the Microsoft Dynamics AX application, the term Outlook is used in the Microsoft Dynamics AX Application in stead of Lotus Notes in some places.

"INTOGRATE AX – Mail" is used in the same way as the Microsoft Outlook integration in Microsoft Dynamics AX. Further information about the mail possibilities can be found in the Dynamics AX documentation from Microsoft Business Solutions.

1.2 Disclaimer

To prevent side-effects in your existing Microsoft Dynamics AX application, any changes to your Microsoft Dynamics AX installation should be verified by the authority responsible for your Microsoft Dynamics AX application (normally your Microsoft Dynamics AX vendor). This includes hot fixes, patches, upgrades etc.

1.3 Target audience

This manual can be used by system administrators, developers as well as Microsoft Dynamics AX users.

Microsoft Dynamics AX developers can find additional information in Appendix A where adjustments to the standard Microsoft Dynamics AX are described.

1.4 Terminology

In the following sections, elements of Microsoft Dynamics AX, references to menus, etc. are referred to as described in the below table:

<KEY>	Refers to a key on the keyboard. For example, <ENTER> means that you must press the Enter key.
Windows Start menu Start	The Windows Start menu is typically located at the bottom left corner of the screen.
'Menu\sub-menu\menu item'	Refers to a menu selection. For example, *'File\Open'* means that you must click *'Open'* in the *'File'* menu.
"c:\Lotus\Notes"	Refers to a path to either a file or a directory. Notice that the style resembles that of a menu selection.
DynamicsAxElement	Microsoft Dynamics AX elements are referred to in italics, e.g. the code unit *SysInetMail*.
[button]	Refers to a button on the screen. For example, [OK] refers to a button with the text 'OK'.

1.5 Components

The Integration Kit consists of three overall components:

- The Integration Kit. This component handles the underlying communication between Lotus Notes and Microsoft Dynamics AX.
- Microsoft Dynamics AX Component which handles the overall communication between Microsoft Dynamics AX and the Integration Kit.
- Mail component used for sending e-mails and reports from Microsoft Dynamics AX.

1.5.1 Integration Kit

The Integration Kit mainly consists of one file: erp2ln.dll.

This file handles all communication between Microsoft Dynamics AX and Lotus Notes.

The Integration Kit can also be used for other types of integration. For example, it is also used for integration between Lotus Notes and Microsoft Dynamics XAL or Microsoft Dynamics NAV.

1.5.2 Microsoft Dynamics AX INTOGRATE SDK

In Microsoft Dynamics AX, a single class called *AX2LN* works as the connection between the Integration Kit and the rest of Microsoft Dynamics AX. This class is a general class defining all Microsoft Dynamics AX interfaces to and from Lotus Notes.

Only a fraction of these interfaces are used in the mail integration.

1.5.3 Microsoft Dynamics AX Mail component

This component is used by Dynamics AX when an e-mail is to be sent. It replaces the part normally used for Microsoft Outlook. This way, no major operation is needed when switching from Outlook to Lotus Notes.

The component is present as a class called *SysInetMail*.

Kommentar [AHH1]: Hvad er det? Ikke nævnt i afsnittet, det danner overskrift til.

2. Program installation

The Integration Kit should normally be installed from a workstation where Lotus Notes and Microsoft Dynamics AX clients are installed. All descriptions and tasks are based on the assumption that they are carried out from a local workstation.

2.1 Before you start

2.1.1 System requirements

The following software is necessary:

- Microsoft Windows Workstation/Server 98, NT, 2000 or XP.
- Lotus Notes client version 5.02c or newer[1].
- Microsoft Dynamics AX 4.0, AX 2009 or newer..

2.2 Check list

Before you begin the installation of the Integration Kit, Intoint recommends that you carry out the following points. They may prevent potential problems not related to the Integration Kit itself.

- Start your local Lotus Notes client and log on with you password if required. If any errors occur at this stage, make sure that you solve them before you use the integration kit.
- Since Microsoft Dynamics AX uses the local Lotus Notes client for e.g. sending e-mails, the user will be prompted for a password for Lotus Notes when starting Microsoft Dynamics AX regardless of whether the Lotus Notes client has been started or not. This can be changed so that the entering of a password is not necessary if the Lotus Notes client has already been started. Start your Lotus Notes client and select the menu *'File\Tools\User ID'*. Mark 'Don't prompt for a password from other Notes-based programs..'. Close the dialog box by clicking [OK]. After this, the user will not be prompted for a Lotus Notes password when starting Microsoft Dynamics AX. (However, this requires Lotus Notes to be running in the background and the user to be logged on to Lotus Notes).
- Intoint recommends that you disable visible notification in Lotus Notes. This can be done from the menu *'File\Preferences\User preferences..'*. Select the 'Mail and News' icon on the left side of the dialog box. Deselect 'Visible Notification' in the 'Receiving' section. This change is advantageous because Lotus Notes is locked when a message indicating that new mail has arrived is being displayed. The Integration Kit can thus not access Lotus Notes as long as the message is shown.
- Start Microsoft Dynamics AX to make sure that you have a valid user name and password for Microsoft Dynamics AX. Do not forget to close Microsoft Dynamics AX before you continue with the installation.
- Make sure that you have the necessary permissions on the local computer to modify the Microsoft Dynamics AX bin directory.
- Note: The label files mut be installed on the AOS server.

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[1] Most features work in older versions of Lotus Notes. However, the e-mail functionality in the CRM module will be limited.

2.3　Installation of the integration Kit

Insert the CD named "INTOGRATE AX - Mail" into your CD-ROM drive. If the installation program does not start automatically, double-click "setup.exe" in the root of the CD (Click 'Run' in the Windows Start menu and type "D:\setup.exe" if the CD-ROM drive is the D-drive).

Follow the installation guidelines on the screen. For a detailed description of the installation process, see the section "Manual installation" in the whitepaper "Technical Guidance - INTOGRATE AX.pdf".

2.4　License file

To use INTOGRATE a license file (erp2ln.lic) must be installed.

This file can be obtained either by purchasing a license for INTOGRATE or by downloading a demo version from our website (http://www.intograte.com).

The license file must be copied to the directory where the product was installed (the directory where "erp2ln.dll" is located). Note: The license file contains information about the version of "INTOGRATE AX – Mail" installed. Updating "INTOGRATE AX – Mail" requires a new license file and vice versa.

> **Kommentar [AHH2]:** Mener i her, at man skal bruge ny licensfil for at gå tilbage til en ældre version? Altså 'downgrade'? Ellers giver vice versa ingen mening her.

2.5　Installation of Microsoft Dynamics AX elements

Start Windows Explorer and find the directory where the Microsoft Dynamics AX client is installed (this directory contains bin, share, std, etc.).

Open the sub-directory "bin\INTOGRATE\Axapta\4.0".(for AX 4.0), "bin\INTOGRATE\Axapta\5.0" (for AX 2009) or "bin\INTOGRATE\Axapta\6.0" (for AX 2012) This folder contains the files to be used for the installation of the Dynamics AX part (xpo files).

Start the Microsoft Dynamics AX client. Press [CTRL]+[D] to open the AOT. Then select the menu 'Command\Import'.

The files to be imported are (in the specified order):

1. I2I_LN.xpo
2. I2I_Mail.xpo

To ensure cross-references in Microsoft Dynamics AX it might be necessary to recompile both projects after the import. Open the projects one by one and highlight the project name, e.g. '*I2I_LN*'. Press the F7 key to compile.

3. Setting up Microsoft Dynamics AX and Lotus Notes

This section describes the configuration and setup of Microsoft Dynamics AX and the Lotus Notes client.

3.1   Microsoft Dynamics AX

As "INTOGRATE AX – Mail" fully replaces the corresponding Microsoft Outlook functionality, there is no need for any special setup in Microsoft Dynamics AX to be able to use the application.

"INTOGRATE AX – Mail" is supplied with 2 Microsoft Dynamics AX forms to further configure "INTOGRATE AX – Mail" if needed:

- I2I_SettingsMail
- I2I_UserSettingsMail

The "I2I_SettingsMail" form contains the global settings for "INTOGRATE AX – Mail" and lets you select the default e-mail program for the Microsoft Dynamics AX users. The options are:

- Default: The settings must be made for every user (employee)
- Lotus Notes: All users use Lotus Notes as e-mail program
- Microsoft Outlook: Standard Microsoft Dynamics AX - Microsoft Outlook Integration.

Select "Lotus Notes" to use "INTOGRATE AX – Mail" if all / most users use Lotus Notes.

"INTOGRATE AX – Mail" also allows you to use both Outlook and Lotus Notes e-mail clients for different users at the same time. The form "I2I_UserSettingsMail" lists all users (employees).

To change the e-mail program for a user, select the user in the list and click the "General" tab. The e-mail program options are:

- Default: Uses the setting in the global settings (I2I_SettingsMail).
- Lotus Notes: Uses Lotus Notes as the e-mail program
- Microsoft Outlook: Standard Microsoft Dynamics AX - Microsoft Outlook Integration.

3.2   Lotus Notes

The "INTOGRATE" product line is designed to eliminate the need for modifications in Lotus Notes. "INTOGRATE" uses the current settings in the Lotus Notes client to handle the integration.

4. Getting started

This section describes how to quickly start using the mail integration between Lotus Notes and Microsoft Dynamics AX.
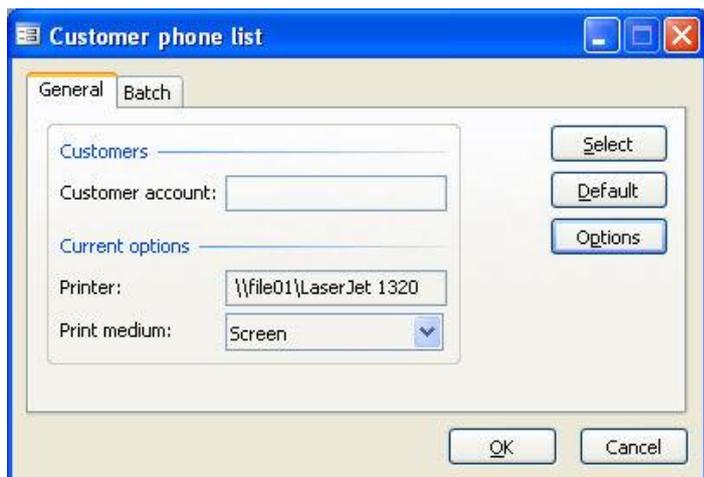
Before continuing make sure that you are familiar with the basic mail-functionality in Microsoft Dynamics AX – described in the Microsoft Dynamics AX documentation.

4.1   Example 1: Sending a report

This example shows how to send a report from Microsoft Dynamics AX.

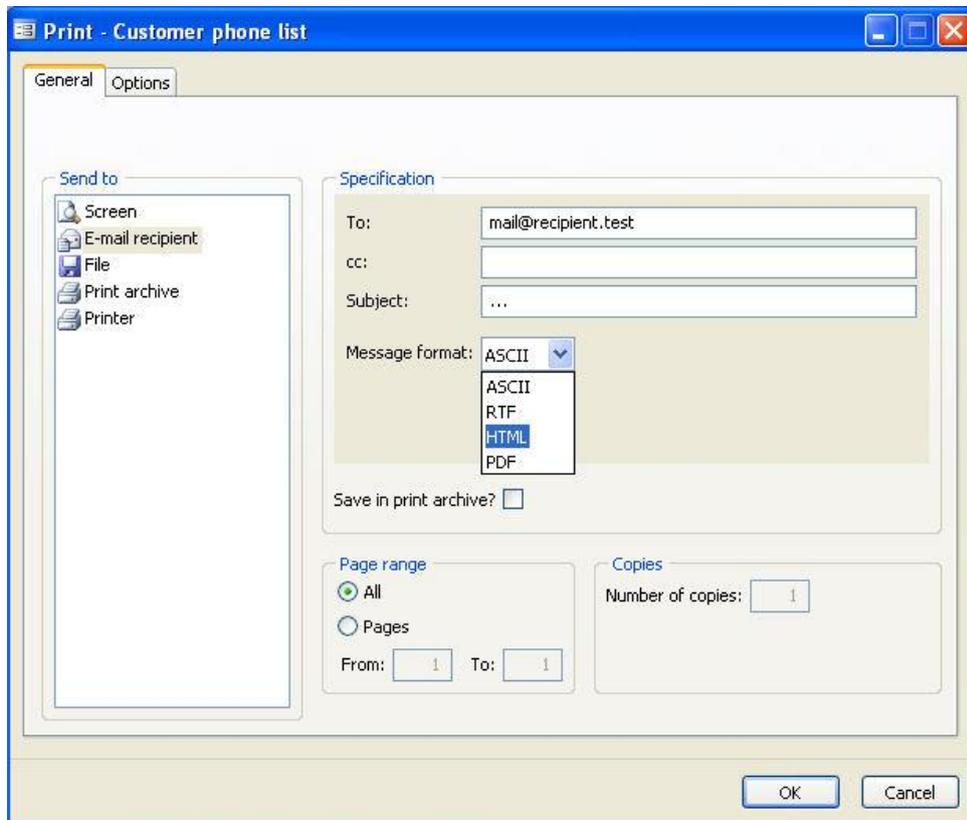Before you send a report as an e-mail, try printing it to the screen. This will ensure that Microsoft Dynamics AX has been correctly set up for normal use.

In Microsoft Dynamics AX select 'Accounts receivable\Reports\Base data\Customers phone list'. This will open the selection window.

To send the report attached to an e-mail press [Options] to change the settings. The following dialog box will appear:

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Select "E-mail recipient" in the "Send To" menu on the left. Fill in the "To" and "Subject" fields (as a minimum) and press [OK]. Press [OK] in the "Customer Phone List" dialog box to run the report.

When the report has been run, a new e-mail will be open and ready for dispatch in Lotus Notes. The "Send To" field of the e-mail will list the recipient specified in Microsoft Dynamics AX and the actual report will be attached to the e-mail. Opening the new e-mail before sending it enables the user to add text to the e-mail.

4.2   Example 2: Sending an e-mail to a customer/contact person

To send an e-mail to a customer or a contact person select "Accounts receivable\Customers" in Microsoft Dynamics AX. Select a customer. To select a contact person for the selected customer press the button "Setup\Contact person".

For both customers and contact persons, open the "Contact information" tab and press the e-mail icon to the right of the "E-mail" field (make sure an e-mail address is specified).

A new Lotus Notes mail will open with the e-mail address of the customer/contact person in the "Send To" field.

Appendix A. Adjustments to Microsoft Dynamics AX

The below table describes all the elements in Microsoft Dynamics AX which are modified or added as part of "INTOGRATE AX – Mail" (adjustments are described in relation to the standard Microsoft Dynamics AX Mail module).

All modifications made to existing elements in Microsoft Dynamics AX are commented in the following manner:

// INTOGRATE AX: START
.... code modifications
// INTOGRATE AX: END

Modifications to local and global variables are not described in the code, but can be seen in the text versions of the import files. These can be found on the INTOGRATE CD or in the installation directory.

New elements

Object type	Object – method	Project
Class	AX2LN	I2I_LN
Class	AX2LN_addon	I2I_LN
Table	I2I_Settings	I2I_Mail
Table	I2I_UserSettings	I2I_Mail
Table	I2I_LNDraftMail	I2I_Mail
BaseEnums	I2I_MailSystem	I2I_Mail
BaseEnums	I2I_DefaultNoYes	I2I_Mail
ExtendedDataTypes	I2I_LNUserId	I2I_Mail
ExtendedDataTypes	I2I_LNUNID	I2I_Mail
ExtendedDataTypes	I2I_LNServer	I2I_Mail
ExtendedDataTypes	I2I_LNDatabase	I2I_Mail
Forms	I2I_SettingsMail	I2I_Mail
Forms	I2I_UserSettingsMail	I2I_Mail

Adjustments of existing elements

Object type	Object – method	Project
Class	SysInetMail	I2I_Mail

Appendix B.   Lotus Notes user identification help

Lotus Notes user id

You can use the following procedure to get information about a user's Lotus Notes id:
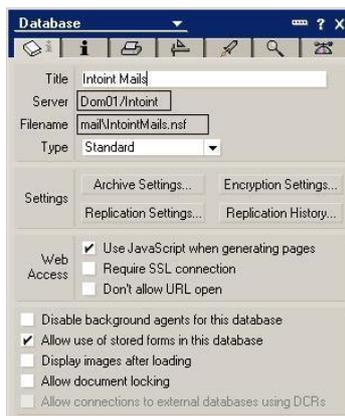
- Start your Lotus Notes client.
- Press <CTRL>+<M> to create a new memo.
- Enter the following in the 'Subject' field: @Username
- Press <SHIFT>+<F9> to update the subject field.
- Now the user's id can be copy-pasted to Microsoft Dynamics AX.

Lotus Notes Server and mail database

The following procedure can be used for getting information about the user's mail server and database:

- Start your Lotus Notes client.
- Press <CTRL>+<M> to open a mail window.
- Select 'Database' in the 'File' menu and then 'Properties'. The following dialog box will appear:
- The text in the field 'Server" (in this case "Dom01/Intoint") must be entered into the field 'Lotus Notes Server' in Microsoft Dynamics AX.
- The text in the field 'Filename' (in this case "mail\IntointMails.nsf") must be entered into the field 'Lotus Notes mail file' in Microsoft Dynamics AX.

This procedure can also be used for finding the server name and the file name of the contact person database. In stead of opening your mailbox you must open the address book. Here, the database must be found in Lotus Notes Workspace, though (i.e. <CTRL>+<M> cannot be used).

Appendix C.   INTOGRATE in a Terminal/Citrix environment

To install INTOGRATE in a Terminal/Citrix environment the following software must be installed on the server:

- Lotus Notes client (R5 or later)
- AX client

A common setup for AX would be to install a local AX client on the Terminal/Citrix-server (to optimize for speed).

The usual way of deploying Lotus Notes client on Terminal/Citrix is described in the following Redpaper from IBM (see chapter 5.4.3 or 5.4.4 depending on your version of Lotus Notes):

http://www.redbooks.ibm.com/abstracts/redp3629.html

More specific details about installing Lotus Notes on a Terminal/Citrix server should be obtained from your Lotus Notes vendor.

In this scenario the Lotus Notes client is installed in "C:\Program Files\Lotus\Notes" and each user's data-directory is "H:\Notes\Data" (containing both the data files and the notes.ini file).

When AX and Lotus Notes are ready for use, INTOGRATE can be installed.

The procedure is as follows:

1. Install INTOGRATE either by running the installation program or by using the manual procedure described in section 2.
2. Configure the system environment PATH to include "H:\Notes\Data".
3. Install INTOGRATE in AX by importing the XPO-files.

When running INTOGRATE on Terminal/Citrix, make sure the following settings are enabled in erp2ln.ini (the same directory that contains the ERP2LN.DLL file):

    DisableNotesSetupDialog=1
    DisableRegistryCheck=1
    DisableRegistryAutoFix=1

These settings will prohibit INTOGRATE from modifying the Windows registry on the server.

A few hints:

- Make sure there is only one notes.ini for each user (sometimes there is a notes.ini elsewhere in the system/user environment path)
- Make sure you have the latest version of INTOGRATE (at the time of writing the current version is 1.6.0.343).
- Try to add the Lotus Notes binary directory to the system PATH (e.g. "C:\Program Files\Lotus\Notes"). This might solve some issues with the Lotus Notes setup.

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Appendix D.   Manual installation of the Integration Kit

It is possible to install the Integration Kit without using the installation program. This may be advantageous if the installation is to be carried out in a large environment and the files are to be distributed to multiple workstations or an advanced installation is involved e.g. a Citrix-based network.

Unpacking files

If the installation kit is packed into one file, it must first be unpacked. This is done by starting "INTOGRATE AX - CRM x.x.x.x.exe" and selecting the drive in which the files are to be unpacked. The destination of the files must be a local drive or a network drive.

Copying files

When the files have been unpacked they must be distributed to the relevant directories.

The following files must be copied to "…\Microsoft Dynamics AX\40\Client\Bin" (for AX 4.0) or "…\Microsoft Dynamics AX\50\Client\Bin" (for AX 2009) (they can be found in "data\files" in the installation directory).

- ERP2LN.DLL
- ERP2LN_ADDON.DLL
- ERP2LN.INI (optional)
- I2ICOMP.OCX

Setup of PATH

For the integration to work properly Lotus Notes' binary files and notes.ini must be located in the system variable "PATH". In our example, both the binary files and notes.ini are located in "C:\LOTUS\NOTES". If this is different in your installation, use your settings instead.

Setting up the PATH in newer versions of the integration kit is most likely not necessary. The location of the Lotus Notes binary-directory and notes.ini can usually be found in the Windows registry. Based on the registry the integration kit will automatically retrieve the correct locations. Note: in environments where users cannot edit the registry on the local computer you must add the Lotus Notes binary directory to the PATH as described above.

If you plan to start Lotus Notes with a direct path to a notes.ini (ex. "notes.exe =m:\notes\notes.ini") the registry must also be set up accordingly.

When the integration kit starts up, the location of the binary directory and notes.ini are read from the following key in the registry:

HKEY_CLASSES_ROOT\CLSID\{29131502-2EED-1069-BF5D-00DD011186B7}\LocalServer32

An example value could be:

(Default)="C:\Program Files\lotus\notes\notes.exe =m:\notes\notes.ini" /Automation

The reason why notes.ini must be set in this registry is that Lotus Notes can be started from several locations that do not use the shortcut with a direct path to notes.ini. An example of this is when a user clicks on a mailto-link on an internet page. The browser will use the registry to start Lotus Notes, and not a shortcut on the desktop or in the programs menu.

Check PATH configuration

To check if PATH has been correctly set up, you must start an MS-DOS prompt. In MS-DOS, type "Path" and press return. The operating system will now present a list of the directories in the current setup separated by semi-colons. Check that both the directory for the binary files and the one for notes.ini are included in the list separated by semi-colons.

Setup of PATH in Windows 9x

If the path to the binary files or notes.ini is missing, Autoexec.bat must be modified in the following way:
1. Start the text editor in an MS-DOS prompt by typing "EDIT C:\AUTOEXEC.BAT".
2. Find the line that begins with "PATH="
3. If the line exists, add the following: ";C:\LOTUS\NOTES". Example of correct PATH:

   PATH=C:\WINDOWS;C:\WINDOWS\COMMAND; C:\LOTUS\NOTES;

4. If the PATH line does not exist, then add the following at the end of AUTOEXEC.BAT:

   PATH=%PATH%;C:\LOTUS\NOTES;

5. Save the changes by selecting 'Save' in the 'File' menu.
6. Close the text editor by selecting the menu 'File' and the item 'Exit'.
7. Exit the MS-DOS command prompt by typing "EXIT" and pressing return.
8. Restart you computer and check the "PATH" settings by means of the procedure described in the section 'Check PATH configuration'.

Setup of PATH in Windows NT/2000

1. Right-click 'My computer' on your desktop and select 'Properties'.
2. Select the 'Advanced' tab and click the button 'Environment Variables…'.
3. Under 'System Variables', select the line that includes the word "Path".
4. Click 'Edit' and check if the path to "C:\LOTUS\NOTES" is there. If not then add it at the end of the line (remember to insert a semi-colon before you add the directory name to the path).
5. Save the settings by clicking the [OK] button in the three following dialog boxes.

Setup of the Windows registration database

The component 2ICOMP.OCX must be registered in the Windows registration database. This is done as follows:

1. Click the Windows start button and select the menu item 'Run…'.
2. Enter the following in the textbox and click the [OK] button:

   regsvr32 "c:\Navision\Microsoft Dynamics AX Client\bin\I2ICOMP.OCX"

3. A box with the text "DLLRegisterServer in x:\...... succeeded" will appear. This indicates that the component is correctly installed.

It is possible to run this part of the user installation without user interaction. Use the parameter "/s" on regsvr32.exe. Example:

regsvr32 "c:\Navision\Microsoft Dynamics AX\40\Client\Bin \I2ICOMP.OCX" /s
or
regsvr32 "c:\Navision\Microsoft Dynamics AX\50\Client\Bin \I2ICOMP.OCX" /s

Appendix E.   Troubleshooting

Checklist

1. Check if you can send an email from your Lotus Notes client. Try starting your Lotus Notes client and pressing <CTRL>+<M> to create a new memo. If this does not work, check the settings in your location document (check that a mail server and a mail file have been specified).

2. Check if the path to the binary files in Lotus Notes and notes.ini are located in the system variable PATH. See Appendix D for help with this.
3. Check that there is an individual notes.ini file for all users. The Integration Kit reads information about the user's mail settings. This requires a notes.ini for each user in e.g. a Citrix-environment.
4. If you have a Lotus Notes client version 6 or you recently upgraded your Lotus Notes client 5 to a 6 the dll 'nlsxbe.dll' might have to be reregistered. Do this by opening the Windows start-menu, select Run and enter the following (without the single quotes): 'regsvr32 c:\lotus\notes\nlsxbe.dll'. Remember to replace the path 'c:\lotus\notes' with the path to your Lotus Notes client.
5. If both Lotus Notes 5 and 6 (or 7) are installed, this can cause problems. The Integration Kit uses a COM-object which is registered by Lotus Notes on installation. If Notes 6 is installed afterwards it will overwrite part of Notes 5's registration. Try to reinstall Lotus Notes 5 to see if the problem disappears. As a rule of thumb, the Notes client installed last must be the one to be used for the Integration Kit.
6. Check that the correct Microsoft Dynamics AX client is being used on start-up. The Integration Kit depends on it being the correct client since Integration Kit-files are located in the bin-directory of the client.
7. Check if there is more than one notes.ini. The notes.ini which is active and is being used by the Integration Kit can be found by selecting the Windows Start menu and clicking run. Enter notes.ini and click [OK] (if this does not find a notes.ini file, then see the section on the setup of PATH on page 12). You can also search the local workstation for notes.ini-files. The Ini file may be located in a network drive. If the active notes.ini is the wrong one, errors may occur in Microsoft Dynamics AX when a synchronisation job is being run. The error symptom is a constantly reappearing message saying that the user in Microsoft Dynamics AX is not identical with the user in Lotus Notes (the username is found in notes.ini).
8. If Microsoft Dynamics AX says that "ERP2LN.DLL" cannot be found, make sure that the 'alt. bin directory' in the Microsoft Dynamics AX configuration is set up to point to the Microsoft Dynamics AX client's bin-directory.
9. If you use the distribution program 'Snow', you must be aware that the internal function 'RegisterDLL' does not work properly in all Windows versions. Use Windows' own version 'regsvr32.exe' in stead (use the parameter /s for running it 'silently').
10. Windows will cause an error when you register smmDrop2.ocx and smmWrap.ocx in Windows 9x. It has been reported that the ocx-files mentioned must be registered from the Microsoft Dynamics AX client's bin-directory. Therefore, you must copy the file regsvr32.exe to the bin-directory before executing it. This is not an error in the Integration Kit.

Appendix F.   Configuration - ERP2LN.INI

Logging system

INTOGRATE has the option to write detailed error messages, warnings and information to a log file, helping to identify most issues.

This is configured using INTOGRATE's configuration file "ERP2LN.INI".

"ERP2LN.INI" is located in the same directory as "ERP2LN.DLL". The exact location depends on the installed INTOGRATE product (typically "C:\Program Files\INTOGRATE Navision").

It is possible to select the level of detail to write to the log file. This is controlled by the "FileLogLevel" setting. Possible values are as follows:

0	Nothing is logged
1	Errors
2	Information
4	Debug
8	Trace/Debug (will cause a severe reduction of performance)

To enable several levels simply add the numbers together. For instance to enable "Errors" and "Information", FileLogLevel must be set to 3 (1 + 2). To enable full logging use the value 15.

Procedure to change "ERP2LN.INI" (lines beginning with semicolon are considered comments and will not be processed by INTOGRATE):

Open "ERP2LN.INI" in Windows Notepad (or similar text editor).

Search for the word FileLogLevel (this will locate the section where the file log level is set, showing examples of use etc.).

Add a new line

FileLogLevel=XX

where XX is the level of details to log (use 15 to enable full logging).

Save and close the file.

Restart Navision to activate the changes.

The log file has a default location of "C:\Documents and Settings\<username>\Local Settings\Temp\ERP2LN" where "<username>" is the currently logged on Windows user.

This can be changed in "ERP2LN.INI" by setting the LogDirectory to an alternative location (using the same procedure as with FileLogLevel).