

# ***INTOGRATE AX – CRM***

***Lotus Notes Integration Kit***

***Version 2.2***



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# 1. Introduction

## 1.1 Integration of Microsoft Dynamics AX CRM with Lotus Notes

With the CRM module for Microsoft Dynamics AX, close integration between a company's business management functions and the sales process can be achieved.

In connection with the management of activities in the CRM system, it is essential that appointments and tasks can be synchronized with the user's calendar. Likewise, the possibility of using the e-mail system for sending e-mails from the CRM system is important.

The standard version of Microsoft Dynamics AX CRM supports only Microsoft Outlook as e-mail and calendar client. "INTOGRATE AX – CRM" enables the use of the e-mail, calendar and contact person facilities in Lotus Notes.

For further help with the CRM part of Microsoft Dynamics AX see the Microsoft Dynamics AX documentation.

In Dynamics AX Microsoft refers to the mail and calendar system with the term "Outlook".

To limit the amount of modifications needed when installing INTOGRATE in Dynamics AX, many of these labels has been left unchanged. So, in general, when a label shows "Outlook" the functionality will be valid for Lotus Notes.

## 1.2 Target group

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 the INTOGRATION AX – Developer manual and in Appendix A where adjustments to the standard Microsoft Dynamics AX CRM module are described.

## 1.3 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 	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.
<i>DynamicsAxElement</i>	Microsoft Dynamics AX elements are referred to in italics, e.g. the class <i>SysInetMail</i> .
[button]	Refers to a button on the screen. For example, [OK] refers to a button with the text 'OK'.

## **1.4 Components**

“INTOGRATE AX – CRM” is comprised by four main 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.
- CRM component which handles the business logic in connection with the CRM part of Microsoft Dynamics AX.

### **1.4.1 Integration Kit**

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

This file handles all communication between 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 CONCORDE XAL or Microsoft Dynamics Nav.

### **1.4.2 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.

### **1.4.3 Microsoft Dynamics AX Mail component**

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

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

### **1.4.4 Microsoft Dynamics AX CRM component**

The CRM part of Microsoft Dynamics AX consists of several elements. It handles e.g. the synchronisation of tasks, appointments and contact persons between Lotus Notes and Microsoft Dynamics AX. It also includes an extended e-mail functionality which enables the user to send documents from the Document Management system to both individuals and groups.

“INTOGRATE AX – CRM” includes both new elements and adjustments to existing ones. Appendix A contains detailed descriptions of all the affected elements in Microsoft Dynamics AX.

## **1.5 Dynamics AX version**

INTOGRATE supports Axapta and Dynamics AX in several versions. This manual describes the usage of INTOGRATE on Dynamics AX 2012.

Contact **Intoint** or visit [www.intograte.com/download](http://www.intograte.com/download) for manual for Dynamics AX 2009.

## ***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, XP or Windows 7.
- Lotus Notes client version 5.02c or newer<sup>1</sup>.
- Microsoft Dynamics AX 4.0, AX 2009, AX 2012 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 to 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. (Note: 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 and 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 must be installed on the AOS server.

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<sup>1</sup> Most features work in older versions of Lotus Notes. However, the e-mail functionality of the CRM module will be limited.

## ***2.3 Installation of the integration Kit***

Insert the CD named "INTOGRATE AX - CRM" into the 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 – CRM" installed. Updating "INTOGRATE AX – CRM" requires a new license file and vice versa.

## ***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\6.0" (or "bin\INTOGRATE\Axapta\5.0" if you use AX2009). This folder contains the files to be used for the installation of the Microsoft Dynamics AX part (xpo files).

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

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

1. I2I\_LN.xpo
2. I2I\_Mail.xpo
3. I2I\_CRM.xpo

An overview of the existing design elements which will be modified can be found in Appendix A.

To ensure cross-references in Microsoft Dynamics AX, recompiling both projects after the import may be necessary. 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 Lotus Notes.

## 3.1 Microsoft Dynamics AX

To make the installation and upgrade of “INTOGRATE” and Microsoft Dynamics AX more seamless, the “INTOGRATE” setup functionality has been isolated from the standard Microsoft Outlook setup functionality. This means that a couple of new tables and forms have been introduced as part of “INTOGRATE AX – CRM” to specify the system and user settings.

### 3.1.1 Global settings

Open the global setup form from the menu item “Home \ Setup \ Lotus Notes Settings”.

The global settings contain some overall parameters and some default parameters which can be changed for the individual user. Description of fields and buttons:

Tab	Field	Description
Setup	Default Mail System	Select “Lotus Notes” in the combo box. This is the default setting for all Microsoft Dynamics AX users. This setting can be changed for the individual user (see later).
Setup	Advanced journalization	Select this, if the optional advanced journalization module has been implemented
Journalization	Delete Mail after Journalization	A Lotus Notes e-mail can be journalized in Microsoft Dynamics AX in various ways. This setting determines if the e-mail in Lotus Notes is to be deleted after journalization.
Journalization	Confirmation mail deletion	If “Delete Mail after Journalization” is selected this setting determines if the user is presented with a confirmation dialog box before the e-mail is deleted in Lotus Notes.
Journalization	Save copy of sent e-mails	To automatically save (journalize) a copy of e-mails sent from the Document attachment module check this box.
Buttons / Initialization	Initialize contact sync..	All synchronization between Lotus Notes and Microsoft Dynamics AX CRM regarding contact persons is controlled by a table in Microsoft Dynamics AX. This table contains information about e.g. the date and time of the last synchronisation, contact persons that need synchronization (or not), etc.  The table is generic and will grow as users perform synchronizations. To initialize the synchronization of contact persons, use this function to delete all entries in the table.
	Initialize activity sync..	As with the contact person initialization (see above) this function deletes all information about previous synchronizations, synchronization settings, etc.

### 3.1.2 *User settings*

In order for a user to make use of the Lotus Notes integration, some information about the user's Lotus Notes setup must be supplied. To perform this setup, open the "Lotus Notes user setting" form by clicking "Home \ Setup \ Lotus Notes user settings".

The form contains a list of all users enabled for "INTOGRATE Dynamics AX – CRM".

To enable a new user, press [CTRL+N]. A blank 'user' will appear. Fill in the fields as specified below:

Tab	Field	Description
General	Worker	The employee whose settings are being prepared.
	Lotus Notes User Id	The fully qualified Lotus Notes user name for the selected employee. I.e. CN=John Scott/OU=Sales/O=Acme  See Appendix B for help on this issue.
	Mail System	The user's mail system. For further information see section "Global settings" If set to "default", the global settings choice is used.
	Synchronize private appointments	Specifies if private Appointments from either Lotus Notes or Microsoft Dynamics AX should be kept synchronized.
	Synchronize private tasks	Specifies if private Tasks from either Lotus Notes or Microsoft Dynamics AX should be kept synchronized.
	Days before	As part of the synchronization of appointments and tasks, the user must specify a start date in the synchronization form. Tasks and appointments before this start date will not be synchronized. This is to limit the searches in Microsoft Dynamics AX and Lotus Notes.  The default start date, presented to the user in the synchronization form, is calculated as today minus the number of days specified in "Days before".
	Days after	Same concept as "Days before" but just handling the default end date presented to the user.
	Mail server	Enter the name of the server where the user's mail file is located in the 'Mail server' field. This information can be retrieved by selecting the function "Load settings from Lotus Notes"
	Mail database	The 'Mail database' must be the path to the mail file, e.g. "mail\wf.nsf". The path must be relative to the "Lotus\Domino\Data" (root) directory on the server specified.  This information can also be retrieved as

		described above.
	Contact person server	Enter the name of the server where the user's personal or group address book is located in the 'Contacts server' field (the address book can both be the local address book in the Notes client or a common address book on a server).  See Appendix B for help on this issue.
	Contact person database	In 'Contacts database', fill in the relative path to the address book. The path must point to the "Lotus\Notes\Data" directory in the server specified.  See Appendix B for help on this issue.
Journalization	Save copy of sent emails	This field overloads a similar field in the global setting. See "Global settings" for a description of the field.
	Save e-mail links	If checked, a link to the original e-mail in Lotus Notes will be added to the "Document" section of all e-mails journalized.  This option cannot be selected together with "Delete mail after journalize" as there will be no e-mails to link to.
	Save attachments from sent e-mail	If checked, all attachments in journalized e-mails will be added to the "Document" section as separate entries.
	Delete mail after journalize	Possible values: <b>'Default':</b> Uses the selection from "Global settings".  <b>'Yes':</b> E-mails journalized from Lotus Notes will be deleted in Lotus Notes after journalization.  <b>'No':</b> No e-mails will be deleted after journalization.
	Show delete confirmation	If "Delete mail after journalization" is checked, the user will be presented with a confirmation dialog box, prior to the deletion of the e-mail in Lotus Notes.
	Advanced journalization	These entries will be visible if "Advanced journalization" has been selected in the global Lotus Notes Settings.  These parameters is only relevant if the journalization module has been acquired and installed. They will not be described here.

### **3.1.3 Other settings**

“INTOGRATE AX – CRM” uses as much functionality from the standard Microsoft Dynamics AX as possible. This means that some Microsoft Dynamics AX settings are still active and can be used to change the behaviour of the application. These settings are mostly about default values in the standard application and other things like this.

To change or verify these settings open “Organization administration \ Setup \ Microsoft Outlook synchronization”.

Here different general parameters can be setup for how the synchronization with Lotus Notes should be handled and for which data that shall be synchronized (through the “Microsoft Outlook Mapping”).

Refer to the Dynamics AX standard documentation for further information on this.

## 4. Getting started

This section describes how to quickly start using the integration between Lotus Notes and Microsoft Dynamics AX.

It is based on the assumption that you have some knowledge of Microsoft Dynamics AX and that a user has been set up to synchronize with Lotus Notes. If you want to use more than the e-mail part, you must have user rights to the CRM part of Microsoft Dynamics AX.

During the next few sections Intoint recommends that you keep Lotus Notes running in the background.

### 4.1 Sending e-mails

This example is about sending a report from Microsoft Dynamics AX. Before you send reports 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.

Select "Accounts payable \ Reports \ Vendors \ Vendor phone list". The standard report form will open. If desired, limit the number of vendors in the query form by clicking 'Select'.

To send the report as an e-mail click [Destinations]. The dialog below will appear. Select "E-mail recipient" in the "Send to" pane on the left to open the specifications form for e-mails (se figure).

The screenshot shows a dialog box titled "Print destination settings - Print destination settings (1)". On the left, there is a tree view with the following items: "Print archive", "Screen", "Printer", "File", and "E-mail". The "E-mail" item is selected. To the right of the tree view, there are several input fields and options:

- "Save in print archive?" with an unchecked checkbox.
- "To:" field containing "test@intoint.com".
- "Cc:" field containing "fln@intoint.com".
- "Subject:" field containing "Vendor phone list".
- "File format:" dropdown menu set to "PDF".
- "Image file format:" dropdown menu set to "BMP".
- "Page range" section with two radio buttons: "All" (selected) and "Pages". Below these are "From:" and "To:" fields, both containing "0".
- "Copies" section with a "Number of copies:" field containing "1".

At the bottom right of the dialog, there are two buttons: "OK" and "Cancel".

Specify the receiver(s) and enter a subject for the e-mail. Select the report format (e.g. PDF, Rich text, etc.) and press [OK] twice to send the report as an e-mail.

Verify that the e-mail reached its recipient(s) and contained the correct report as an attachment.

## 4.2 Synchronisation of to-dos and appointments

“INTOGRATE AX - CRM” enables you to automatically synchronize your appointments and tasks in Lotus Notes and Microsoft Dynamics AX. When you create new activities you must be aware that from Microsoft Dynamics AX CRM, only tasks and appointments will be transferred to Lotus Notes.

In Dynamics AX the synchronisation of appointments and tasks is handled from one central form and it must be handled manually. Note: In earlier versions of Microsoft Dynamics AX, appointments and tasks were automatically updated in Lotus Notes when changes occurred in Microsoft Dynamics AX.

Start Microsoft Dynamics AX and select “Home \ Common \ My activities”. This will show all activities for the user logged into Microsoft Dynamics AX.

The screenshot shows the 'My activities' view in Microsoft Dynamics AX. The left sidebar contains a navigation menu with categories like Home, Accounts payable, Accounts receivable, General ledger, Budgeting, Cost accounting, and Fixed assets. The main area displays a table of activities with columns for Date, Purpose, Priority, Category, and Type. The selected activity is a 'Sales Meeting' on 23-11-2011. Below the table, the details for 'DAT-000033 : Sales Meeting' are shown, including fields for Closed, Responsible (Flemming P. Nielsen), Start time (16:58), End date (23-11-2011), and End time (17:35). Notes are also visible: 'Body Dette er s3 linie 2 og endnu en linie'.

Date	Purpose	Priority	Category	Type
01-07-2002	Quotation expire	Normal	Task	
01-08-2002	Gather input for product ca...	Normal	Task	
01-08-2002	Final layout of product pre...	Normal	Task	
14-10-2002	Project document - Municip...	Normal	Task	
23-11-2011	Sales Meeting	Normal	Appointment	

On the individual activities the “Synchronization” part shows information regarding the synchronization with Lotus Notes.

The screenshot shows the 'Synchronization' section of the activity details form for 'DAT-000033 : Sales Meeting'. The section is highlighted in yellow and contains the following information:

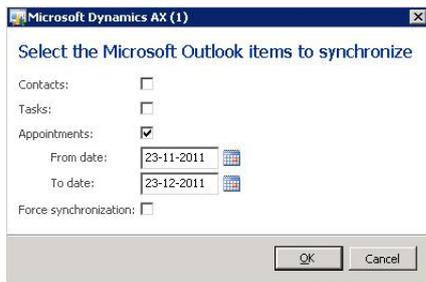
- Keep synchronized:
- Last date/time edited: 13-12-2011 13:54:43
- Source application: Lotus Notes

The form also displays other details such as Identification (Activity number: DAT-000033, Category: Appointment, Purpose: Sales Meeting), Recurring (Master appointment: , Recurrence state: Not recurring), Personnel (Responsibility: Flemming P. Nielsen), and Description (Notes: Remember last sales budget.).

The field “Keep synchronized” is checked by default and indicates that this appointment should be kept synchronized with Lotus Notes. Remove this mark if you do not want the appointment to be synchronized with Lotus Notes.

To synchronize the newly created appointment to Lotus Notes, select “Home \ Periodic \ Microsoft outlook Synchronization \ Synchronize”.

The “Synchronize” form will appear:

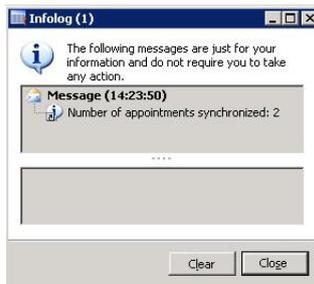


All synchronization of tasks, appointments and contact persons (see later) is handled from this form. Select “Appointments” and make sure that the date interval (“From date” – “To date”) includes the date specified for the newly created appointment. Press [OK] to start the synchronization.

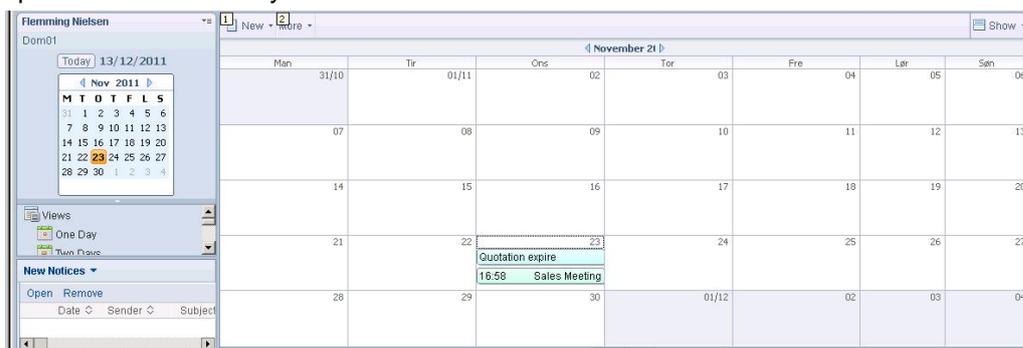
The synchronization run will find all appointments belonging to the user currently logged on to Microsoft Dynamics AX which have been modified since the last synchronization run and are within the specified date range. The resulting collection of appointments will be pushed to Lotus Notes.

The synchronization functionality will then search the same date range in Lotus Notes to find any appointments modified and pull them into Microsoft Dynamics AX.

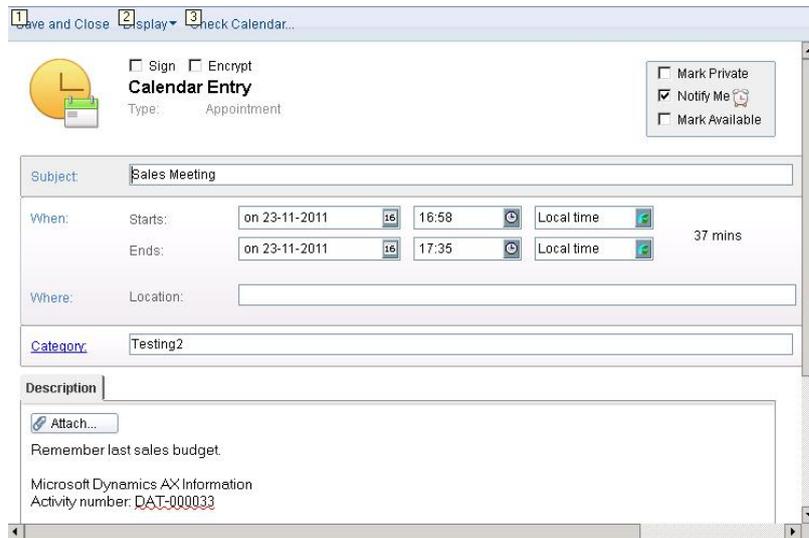
After synchronization an info box will show the result:



The appointment will look more or less like this in Lotus Notes depending on which fields were specified in Microsoft Dynamics AX:



The details of the appointment will look like this:



The synchronization of tasks is carried in the same manner as appointments.

Remark: recurring appointments are not supported in INTOGRATE – CRM.

### 4.3 Synchronising contacts

In order to synchronize contact persons, a contact server and database must be specified in the user settings (see section 3.1.2 for help on this subject).

The synchronization of contact persons between Microsoft Dynamics AX and Lotus Notes is slightly more complex than with appointments and tasks. This is mainly due to new and enhanced features in Microsoft Dynamics AX. These features are standard features for the Outlook integration as well and will only be described briefly in this document.

A contact person can only be synchronized with Lotus Notes from Microsoft Dynamics AX if the contact person exists in “My contacts”. “My contacts” is a table containing a list of contact person references between Microsoft Dynamics AX and Lotus Notes.

Open “My contacts” from “Home \ Periodic \ Microsoft Outlook synchronization \ My contacts”. Refer to the standard documentation for Dynamics AX for further information on “My contacts” and how to populate this list.

The below table briefly describes some of the Lotus Notes relevant fields.

Tab	Field	Description
	Contact ID	Contact Person ID in Microsoft Dynamics AX
	Name	Name of contact person
	Synchronization type	Synchronization type for contact person: <b>‘View only’:</b> A contact person will be pushed to Lotus Notes. Changes in Lotus Notes will not be

		<p>synchronized to Microsoft Dynamics AX.</p> <p><b>'Edit':</b> A contact person will be synchronized both ways, i.e. Microsoft Dynamics AX to Lotus Notes and Lotus Notes to Microsoft Dynamics AX. In case of conflicts the modifications in Microsoft Dynamics AX will take precedence.</p> <p><b>'Check out' (only for pre AX 2012 versions):</b> A contact person will be pulled from Lotus Notes and will be non-editable in Microsoft Dynamics AX.</p>
Synchronization details	Lotus Notes Universal ID	Contact person ID in Lotus Notes
	Last synchronization...	Date and time for the last synchronization for the contact person selected.
Buttons	Add contacts \ Add contacts from Microsoft Outlook	Opens the selection form which allows you to select not previously synchronized contact persons in Lotus Notes for synchronization with Microsoft Dynamics AX.
	Add contacts \ Add contacts from Microsoft Dynamics	Lets you to select contact persons from Microsoft Dynamics AX and adds them to "My contacts".
	Synchronize	Synchronizes all contact persons in "My contacts".

To test the synchronization, add a contact person from Microsoft Dynamics AX to "My contacts" by opening the "My contacts" form and pressing the "Add contacts \ Add contacts from Microsoft Dynamics" button.

When the contact person is added to "My contacts" press the "Synchronize" button or open the "Synchronize" form (see section about to-do's and appointments).

Verify that the contact person is correctly added to/updated in Lotus Notes.

# ***Appendix A Adjustments in Microsoft Dynamics AX***

The below table describes all the elements in Microsoft Dynamics AX 2012 which are changed by "INTOGRATE Dynamics AX – CRM" (the description of changes is based on the standard CRM module). The elements are categorized by the Microsoft Dynamics AX project they belong to.

## ***Changes to existing elements – I2I\_Mail***

Object type	Object	Method/field
Class	SysInetMail	Adjusted methods: - ClassDeclaration - closeProfile - logoff - logon - mailAddress - mapiStatus - new - numberProfiles - ok - openProfile - profile - readMail - sendmailAttach - status

## ***Changes to existing elements - I2I\_CRM***

Object type	Object	Code from Intoint
Class	SmmUtility	- saveCopyOfSentEmails
Class	smmOutlookEmail	- constructEmail
Class	SmmOutlookSyncSelectionForm	- ClassDeclaration - Init
Class	SmmOutlookSync	- synchronizeObjects
Form	smmDocuments	- Addition of Drag&Drop ocx to form. - Changed SortOrder in datasource docuref.init
Form	smmOutlookSynchronization	- ClassDeclaration - Init
Menu	Home	Added 'Lotus Notes' setups to 'Setup'.

# Appendix B. Lotus Notes user identification help

## Lotus Notes user id

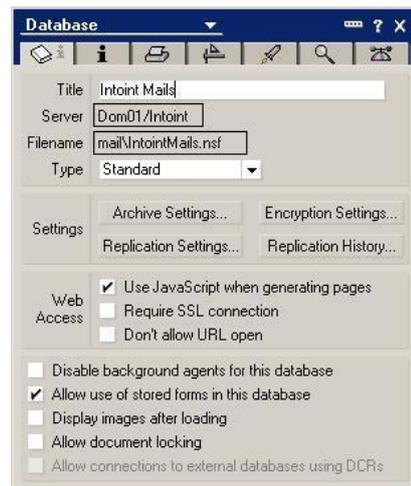
You can use the following procedure to get information about a user's Lotus Notes id:

- 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

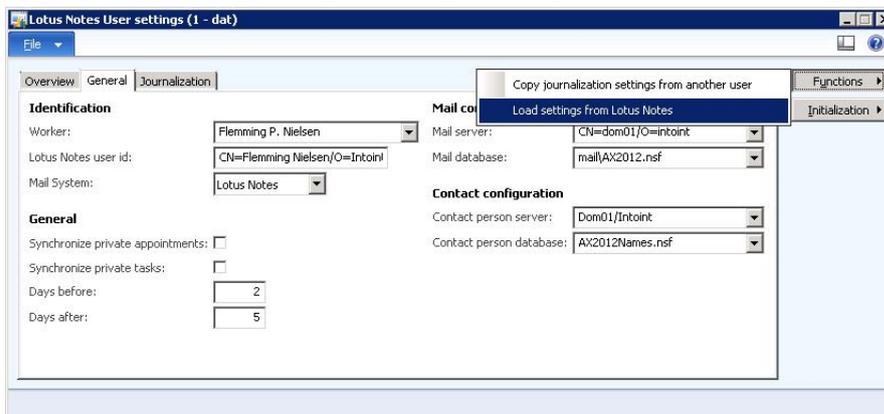
The following procedure can be used for getting information about the user's mail server and database:

- 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).

On the newer versions of INTOGRATE it is also possible to retrieve all the above information from the "Lotus Notes User settings" form, by selecting Functions \ Load settings from Lotus Notes:



# ***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.

# ***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" (or "...\\Microsoft Dynamics AX\\50\\Client\\Bin" if you use AX2009) (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 your 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 18). 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\\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).