



integra
for notes

Integra for Notes 4.7 Designer Edition

Designer's Manual

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Lotus Notes Integration for MS Office

www.integra4notes.com

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Preface

We thank you for being a user of Integra for Notes, the tools offering advanced reporting and bi-directional data integration between Lotus Notes™ and Microsoft Word™ and Excel™.

This manual is designed to assist users to create and define reports, import data or integrate their Lotus Notes data with Microsoft Word and Excel using Integra for Notes. Users who define reports, imports and exports are probably Notes developers or at least competent users of Lotus Notes and this manual assumes that you fall into this category.

In the event that you are a standard Lotus Notes user and wish to define your own less advanced reports taking data from Lotus Notes to Microsoft Excel or mail merge letters and labels to Microsoft Word, we recommend you consider using Integra Quick Reports, the companion product aimed at the Lotus Notes end-user. Details about Integra Quick Reports can be found at www.integra4notes.com/quickreports.

The process of running reports, exports and imports once they are defined using Integra for Notes is handled by a dedicated manual entitled Integra for Notes End-User Manual. Separate manuals are also available covering installation and configuration as well as upgrading from one version of Integra for Notes to another. All these manuals can be found on-line in PDF format at www.integra4notes.com/manuals.

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Every reasonable attempt has been made to ensure the accuracy of this user manual and that it reflects the operations of the product, however users of Integra for Notes are responsible for ensuring that the product and its documentation are suitable for the needs of that organization. No warranties in respect of this user manual are being made or can be assumed.

The product Integra for Notes may at times be referred to within this documentation by its shortened name of Integra. These products are not to be confused with any trademarked product that may exist with a similar name, whose rights are hereby recognized, and this is used only for ease of reference.

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About Shireburn Software

Shireburn Software Ltd is the author and distributor of the Integra family of products. The company is an IT Services company specializing in the development and implementation of collaborative solutions based on the Lotus Domino and Lotus Notes environments as well as other systems for financial and inventory management.

Established in 1983, the company has been active in the field of Lotus Notes development since 1993 and has considerable experience in the range of skills required covering business analysis, consultancy, creation of functional specifications, design, development, implementation and on-going support of such solutions.

Shireburn Software was a founding member of the Lotus Key Partner program in 1990, which then transitioned into the Lotus Business Partner program, where Shireburn was an Advanced member until the program was merged with the IBM PartnerWorld for Software program in which Shireburn is an Advanced member.



Shireburn Software Ltd has won various awards for its Integra range of products including:

- » Editors Choice Award by **Lotus Advisor Magazine** in 2007
- » Editors Choice Award by **Lotus Advisor Magazine** in 2006
- » Editors Choice Silver Award by **Lotus Advisor Magazine** in the Business Intelligence Category in 2005
- » Winner of the **e-Pro Magazine Apex Award** in the Portals and Content Management category in 2004
- » Finalist in the **e-Pro Magazine Apex Award** within the Reporting in 2003



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About this Manual

This user manual is divided into logical sections to provide assistance to users of Integra for Notes. The manual is divided into the following sections:

1. An Introduction to Integra for Notes
2. The Integra for Notes Database
3. Creating Integra Profiles
4. Creating a Word Template
5. Creating an Excel Template
6. Preparing a Database for Integra Web Access
7. General Features of Integra for Notes
8. Sample Integra Profiles
9. Help, Support & FAQ Resources

Various companion user manuals and documentation are available related to Integra including:

- » **Integra for Notes End-User Manual** - provides instruction to end-users on running Integra profiles for importing and exporting data as well as on the operation of *Integra Quick Reports* designed for end-user ad-hoc reporting to Excel.
- » **Integra for Notes Installation & Configuration Manual** - provides instruction on installation, configuration and deployment of Integra.
- » **Upgrading Integra for Notes** – this manual provides guidance on the procedure to upgrade your Integra for Notes environment.
- » **Advanced Documentation** - An on-line help database orientated towards advanced users provides advanced documentation related to the Integra classes and libraries.

All these manuals and documentation are available at www.integra4notes.com/manuals.

Conventions used in this Manual

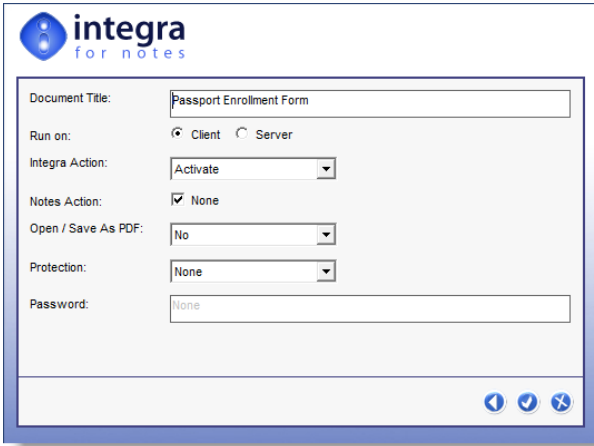
This user manual is designed to be a guide to the functionality of Integra for Notes. The keys required to be selected by a user are explained within this manual by the use of angled brackets. Therefore, an instruction to select the key called **Enter** will appear as follows: select <Enter>

Prompts given to the user to allow selection of one or more options are shown in a dialog box as follows:

Hot tips of particular interest to readers are displayed as follows:



If your profile has had its confidentiality restricted, only those users mentioned in the profile's confidentiality field will be able to see the profile.



1 An Introduction to Integra

Organizations using Lotus Notes possess a wealth of information within their Notes databases. However, for users to access that information and utilize it in familiar tools such as Microsoft Word™ and Microsoft Excel™ or to export the data into XML files for use in other processes presents some challenges.

At the same time, Lotus Notes' limitations in respect of reporting, data analysis and printing cry out for a tool to assist developers and users in utilizing their Lotus Notes data better. Reliance on printing data as presented in views is limiting for many applications where further detailed analysis is often required beyond the capabilities of views, as well as automated presentation, graphs and processing of reports.

In addition, organizations with data already contained in Excel, Word or text files continually seek solutions to automate the importation of this data directly into their Lotus Notes databases.

Integra for Notes is a self-contained Notes database, which provides for the creation of **Integra Profiles** defining the data content, layout and other aspects of how data from various Notes databases can be collected together and transferred to and from Word documents, Excel spreadsheets, text, PDF and XML files with the objective of better presentation, analysis and usage of the data.

Through the companion **Integra Quick Reports** product end-users are also able to generate reports to Microsoft Excel and mail merge letters and labels to Microsoft Word from any Lotus Notes database by defining the content, layout, sort and grouping (Excel only) as well as filtering of data through a simple 4 step wizard.



As a result, ad-hoc reporting by end-users can be achieved through Integra Quick Reports, while the more defined and challenging reporting and data importing requirements can be met through the creation of profiles in Integra for Notes which can then be run by the end-users.

Once generated to Word, Excel, PDF or XML files, the reports can be:

- » E-mailed out to intended recipients of the reports with e-mail address definition being able to be set programmatically in the profile
- » Saved as an attachment to a Notes document in the same or a different database
- » Saved to the file system
- » Printed

In addition to being able to generate reports which access data from fields on Notes documents, computed fields can be created using either the standard Lotus Notes formula language or LotusScript. These features include the capability to undertake lookups of data in 3rd party databases such as Oracle, MS-SQL, MS-Access etc.

In addition, advanced developers are able to utilize Integra events available in an Integra profile to undertake more complex LotusScript or formula language based data manipulation and calculations which will be executed at a particular point in the import or export process. Like Lotus Notes supports events for forms, views, fields, databases etc such as the QueryOpen event on a Notes form which executes any code contained therein whenever a form is opened, various Integra events can be executed such as the BeforeReadNotes event. This is executed immediately prior to each Notes document being exported. This can be used to undertake much more powerful lookups or calculations as each document is exported.

Reports and imports can be triggered manually by the user either through an action button/hotspot in an application or through the use of the Integra SmartIcon or alternatively Integra profiles can be set to run automatically on a scheduled basis, collating the required data into a predefined report layout and distributing the report.

1.1 Excel Based Reporting

Lotus Notes lacks reporting capabilities as commonly found in traditional applications. Notes provides views, which can be printed. However, Notes views are limited in their functionality. For instance, category totals can only be displayed at the top of a category and data cannot be displayed from multiple databases within a single view.



Excel Profile

Integra for Notes allows data in Notes databases to be collected together and pushed into a pre-formatted Excel spreadsheet. Under fully automated control, the data pushed to Excel can be placed into defined areas of a spreadsheet template which would already have additional formulas, formatting, color schemes etc, allowing the flexibility of reporting available in Excel to be extended seamlessly to Notes data. Charts, pivot tables, sorting, sub-totaling and all other such features of Excel can then be utilized.

1.2 Word Integration

At its simplest level Integra for Notes allows for the creation of a one-to-one relationship between data contained in a Notes document and a Word document. This would for instance allow client names and addresses from a Notes database to be merged with a Word document to create a personalized mail shot.



Word Profile

In addition, Integra for Notes provides facilities for data contained in various Notes documents to be collated and pushed into a single Word document. An example could be a collection of Notes documents each related to a client's sales orders being collated into an MS-Word document for generation of an invoice which is to be printed and emailed to the client.

1.3 Who will use Integra for Notes?

Integra for Notes will be used by any organization that wants to:

- » generate reports and data analysis from data based primarily in Lotus Notes databases in a format beyond that achievable by Notes itself using Word, Excel, XML or PDF output
- » distribute their outputted reports and analysis as an e-mail or by storing them in Notes documents or on the file system
- » control the printing of their Lotus Notes data with accuracy and dependability
- » generate mail merge output and label printing from their Lotus Notes data
- » migrate their Lotus Notes data to Word documents for inclusion in other document management systems
- » import data from Excel files or text files automatically generating Notes documents from the imported data
- » import Word documents into Notes documents as attachments, embedded objects or actually into a rich-text field
- » generate these exports and imports on a scheduled basis with automatic execution and distribution
- » provide these facilities to both Lotus Notes client users and web browser users
- » manipulate their data through the use of Lotus Notes formula language and/or LotusScript

All this can be achieved without needing to make any changes to the design of the current Lotus Notes databases.

1.4 Operational Details

As explained above, Integra for Notes provides automatic and built-in facilities for the exporting of any Notes view directly to Excel. While further details regarding the running of Integra profiles and of Quick Reports can be found in the *Integra End-User Manual* and the *Integra Quick Reports User Manual*, section 3 of this manual outlines the process regarding the creation of Integra profiles.

Specific exports to Excel, Word, XML, PDF and text files as well as importing of data can be configured through the creation of an Integra profile within the Integra database.

Integra profiles allow the user to:

- » Identify the type of profile – Word, Excel or xml/text file.
- » Identify the source Notes database and server from which the data is to be accessed.
- » Identify the Notes form and fields containing the data to be exported. Integra allows the creation of computed fields and supports multi-value and rich-text fields.
- » Identify any sorting, grouping (Excel only) and data filtering that should be applied to the report in the case of an export profile.
- » Identify what actions need to be taken on collection of the data. e.g., activate Word or Excel on the screen, save the document, print the document directly or allow the user this selection at runtime.
- » Identify any requirements for the conversion of output to a PDF file.
- » Identify any settings related emailing of the output
- » Identify saving options of the created document back as an attachment into a Notes document in a defined database.
- » Identify a timing schedule to allow unattended running of Integra profiles that import or export documents.
- » Setting of any options such as *AutoColumn* width of the Excel spreadsheet or the automatic running of an Excel or Word macro.
- » Identify advanced scripting and error handling functionality for collation from multiple documents/responses and databases, manipulation of data, advanced calculation and selection using event driven formula language or LotusScript.

Integra for Notes also provides facilities for the importation of data from Excel or delimited Text files into a Notes database using the same principles as those described above for exporting.

Another scenario for the use of Integra is where a company has a large number of Word documents stored on a file system and wants to automate their importation into a Notes database with each Word document resulting in the automated creation of a Notes document into which the Word document is either attached, embedded or indeed even imported directly into a rich-text field on the Notes form.

Creating document templates can be as easy as simply mapping the field between Lotus Notes and Word or Excel.

Advanced users with knowledge of formula language and LotusScript can benefit from a host of other advanced features, which underpin Integra's strengths in assisting you to manage your Notes data better.

Customization is achieved via event handlers accessible to the advanced user. No code or design changes in Integra are necessary. Event handlers written in LotusScript and Formula Language are evaluated at runtime.

Very handy sample profiles linked to databases found within Notes environments such as the Directory, Personal Address Book, Log.nsf etc. are also available and ready for use.

1.5 Security

Integra for Notes requires no code or locked script libraries to be added to your existing Notes databases thus reducing the security risk this would otherwise involve.

Integra for Notes preserves and respects the security of your databases only allowing users to access the data in accordance with their ACL and ECL settings and other security features of the database such as reader and author name fields as well as a comprehensive set of roles that control access to specific aspects of Integra's functionality.

Reader/Author name fields exist in the Integra profiles themselves allowing the selective deployment of Integra profiles to specific users.

Configuration of Word & Excel security features can be achieved from within the Integra document profile. This allows reports to be created from Notes data and modifications to the reports to be disallowed.

Integra for Notes does not by-pass any of Lotus Notes' own security. The only data that a user is able to export is data which is available to that user. If a user does not have access to a particular database or set of documents within the database, even if the user has access to an Integra profile linked to that database on attempting to run the Integra profile, the user will be denied access to the data.

Various user roles are available on the Integra database's ACL which allow controlled access to various features. For instance should you wish to allow a user to execute export profiles but not import profiles, do not allocate the [Import] role to that user.

2 The Integra for Notes Database

As defined in the introduction to this user manual, Integra for Notes has two levels of usage:

- » **Running of reports, data imports and export processes** – help about the execution of Integra profiles and the running of Integra Quick Reports is covered in the Integra for Notes – End-User Manual.
- » **Creation of Integra Profiles** – the creation of Integra profiles allow for the definition of the details of exporting and importing processes including the data content, layout, output options such as e-mailing, saving etc and other aspects.

This user manual is designed to guide the user in creating Integra profiles. For the use of Integra profiles from the end-user's perspective (in order to create Word, Excel, PDF, xml and Text files) please refer to the Integra for Notes End-User Manual..

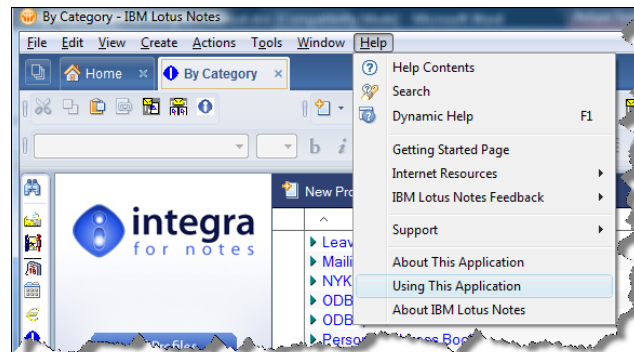
2.1 Launching the Integra Database

On launching the Integra database for the first time, the user will be presented with the *About* document for the database and will be presented with the following screen:

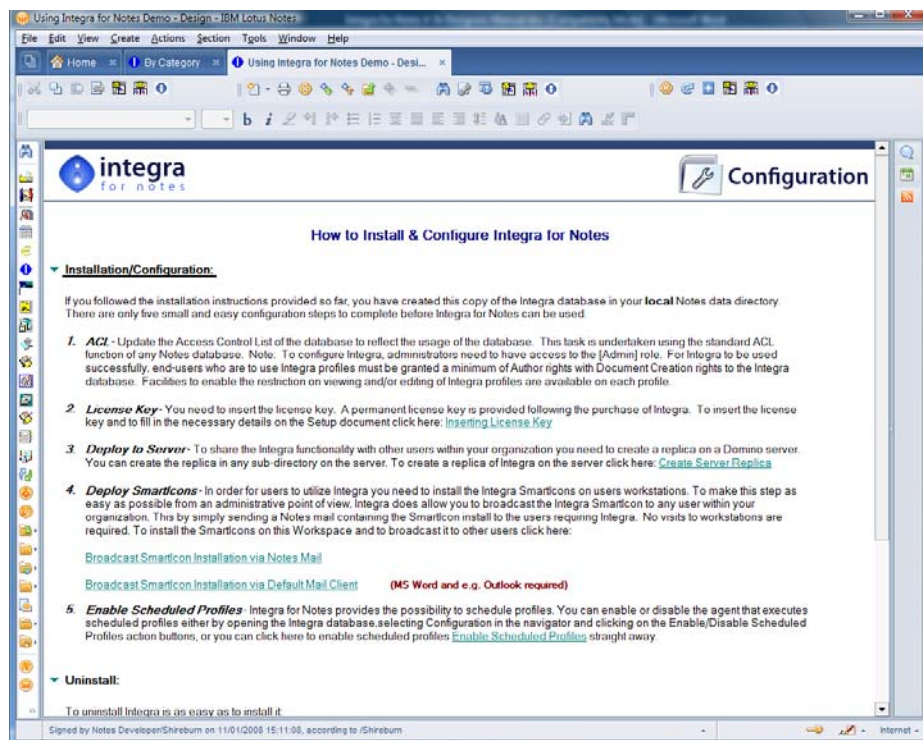


If the database is newly created, follow the step-by-step installation instructions outlined in the *Integra Installation & Configuration Manual*. It is important to follow the installation instructions carefully.

Alternatively, access the *Using This Database* option of the Help menu (*Using this Applications* in Lotus Notes 8) item as shown below.



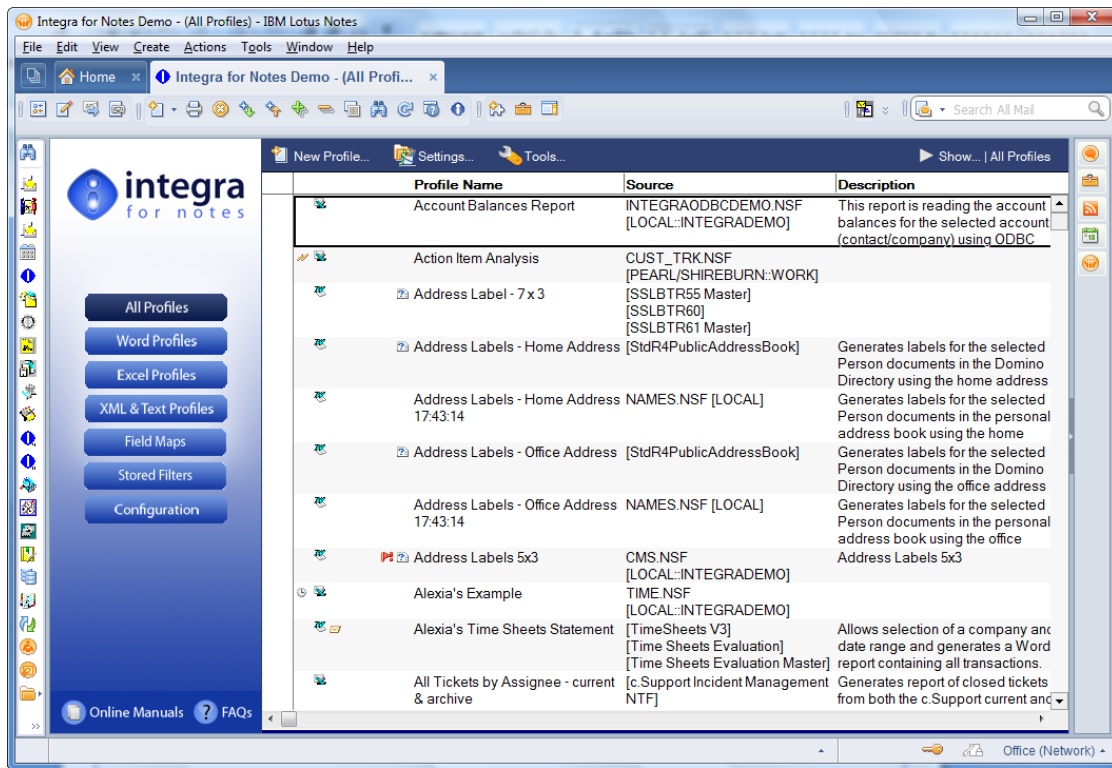
The *Using this Database* option will open the following screen:



This section of the document outlines some installation and configuration procedures and guides the user into areas such as the creation of their license key and the procedures for the deployment of the application to users.

The user is able to exit from either the *Using this Database document* or the *About* document by pressing the <ESC> key which will direct the process flow to the main views of Integra.

This will present the user with the main screen of Integra for Notes shown overleaf:



The user is presented with the *All Profiles* view which contains all the profiles available within the Integra database categorized by the profile category. The profile category is a field on the Integra profile document which allows grouping of profiles related to specific areas of operation and the display of these profiles by that category in the Integra database's views. See section 3.1.2 for more details on Categorizing Profiles. Expansion of each profile type using the standard Notes twistee will display the various available profiles.

Integra ships with a number of profiles linked to databases found within all Notes environments such as the , Personal Address Book, Log etc and these can be used for immediate benefit as well as to obtain a better understanding of Integra profile creation.

Buttons in the left hand navigator which are shown panel which are grayed out are not currently available to the user based on the Access Control List settings of the database. These buttons are controlled by a role in the ACL of the Integra database.

See the section on Security in the *Integra Installation & Configuration* manual to set the appropriate roles in the ACL of the Integra database.



2.2 Navigating the Integra Database

The main navigation method throughout the Integra database is the selection of the different views linked to the buttons in the left hand navigation pane. The currently selected view will be displayed in a button with a blue background whereas the other buttons will be slightly grayer. Access to some views is controlled. If no access is granted, the button will be almost faded out.

On opening the Integra database, a number of existent profiles will be displayed categorized by Category. These are the sample profiles delivered with Integra for Notes, which can be utilized to provide immediate value to an organization.

There are a number of views available to users. The actual views visible will depend on the access rights of the user, particularly the User Roles that the user has set in the Integra database's ACL. The main views displayed to the user consist of the following:

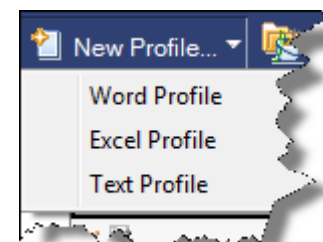
- » **All Profiles** – this view displays all types of profiles including Word, Excel and XML/Text profiles. While profiles are categorized by the profiles' *Category* field and then by profile type (i.e. Word, Excel, Text), the view also displays the title of the profile, their use (i.e. E for Export and I for Import), the source Notes database and the description. An icon shows whether the profile relates to Word or Excel.
- » **Word Profiles** - this view displays only Word profiles.
- » **Excel Profiles** - this view displays only Excel profiles.
- » **XML/Text Profiles** - this view displays only XML and Text file profiles.
- » **Configuration** – this view displays the Integra database's configuration document containing the license information, details of the Integra Log database, enablement of Scheduled profiles, Smarticon deployment and action button (all explained in a subsequent section of this manual). This view will only be available to users assigned the [Admin] role in the Access Control List of the Integra database.



Profiles can be accessed either from the view related to the specific profile type (e.g. Word, Excel or XML/Text) or alternatively through the All Profiles view. Profiles which are scheduled (see section 3.9 - *The Scheduling Tab*) will be identified with a clock icon to their left.

New profiles can also be created either through the respective views or the All Profiles view. All these views contain a *New Profile* action button. In the case of the button contained in the views of individual profile types such as the Word Profiles view, the button automatically results in a new Word profile being created.

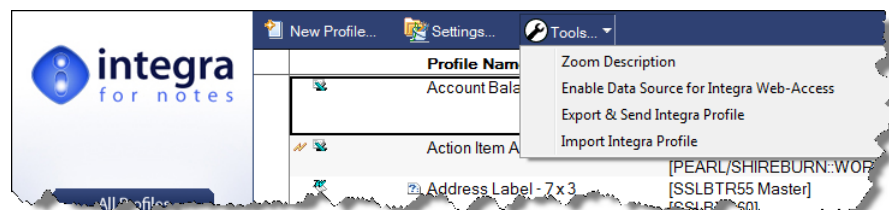
In the case of the button contained in the All Profiles view, this requests the user to identify the profile type (see alongside).



2.3 Integra Profile Tools Action Button

A number of tools or utilities are available via the main navigation views.

On selection of the *Tools* action button within an Integra profile, the user is presented with a number of options as shown alongside. These are further described in section 3.12 of this manual.

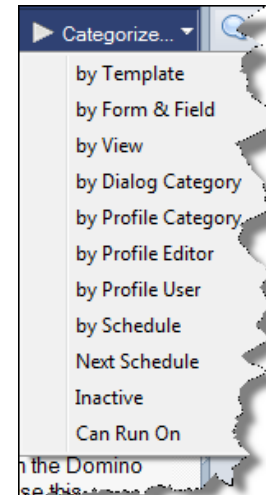


2.3.1 View Categorization

Each of the main views, that is the *All Profiles*, the *Word*, the *Excel* and the *Text* views provide facilities for view these in other display methods. In addition to being able to click on the *Profile Name* column in the view to sort by profile name Integra also provides facilities to allow the user to change the categorization of these views. This is done using the *Categorize* action button to the right side of the action bar. This action bar only shows the settings, which are currently not selected (i.e. those able to be selected)

The *All Profiles* view provides the following categorization options:

- » **By template** – Integra profiles can be linked to any database, which inherits its design from a specific template rather than being linked to a particular database. This option displays profiles by categorized by type (Excel, Text and Word) and then by the Template.
- » **By Form & Field** – this view is categorized by database file name and then each database is subcategorized as to the form used within the profile and the fields used. This categorization is particularly useful to enable a developer who is making modifications to a particular database to identify which fields from which forms are used within Integra profiles. This will enable the developer to make the required changes to the Integra profiles.
- » **By View** – this view only displays documents whose *Selection* field within the *Database Tab* identifies the profile as being linked to a specific view. These profiles are then listed categorized by the individual database file name they relate to and the view within that database.
- » **By Dialog Category** – the *Runtime Dialog Category* field on the Integra profile allows you to categorize your profiles into groupings that are used for displaying profiles related to a particular database within the Runtime Profile Dialog box which is displayed to end-users. (See section 3.1.3 of this document for an explanation of the *Runtime Dialog Category* field)
- » **By Profile Category** – the *Profile Category* field on the Integra profile allows you to categorize your profiles into groupings that reflect the best method of presentation in the Integra database. Profiles can be allocated to more than one category. (See section 3.1.2 of this document for an explanation of the *Dialog Category* field). This allows meaningful navigation through profiles in the Integra database
- » **By Profile Editor** – the *Profile Editor* field on the Integra profile identifies who is authorized to edit the profile. This view allows profiles to be listed in accordance with who can edit them or, in the event that a profile has a blank *Profile Editors* field, then the document will appear listed under the originator of the profile.
- » **By Profile User** – the *Confidentiality* field on the Integra profile identifies who is authorized to view and thus run the particular profile. This view allows profiles to be listed in accordance with the contents of the *Confidentiality* field and thus who can view and run the profile. In the event that a profile has a blank *Confidentiality* field, then the document will appear listed under the [ALL] category.
- » **By Schedule** – Integra allows profiles to be run automatically in accordance with a schedule. This view categorization shows profiles by type (Excel, Text and Word) and then by the method of the schedule (e.g. hourly, daily, weekly, monthly). Profiles scheduled to run at the same time can also be given different priorities for running and the documents are therefore listed in accordance with the priority field.
- » **By Next Schedule** – this view categorization shows profiles listed in the order in which they are next due to run.
- » **Inactive** – since an Integra profile can be decommissioned by making it *Inactive*, this categorization in the view provides facilities for viewing just those profiles which have had their *Active* field set to *No*.
- » **Can Run On** – displays available profiles based on the type of client they can run on i.e. Client, web browser and/or scheduled. This field is a multi-value field and therefore profiles may be shown under multiple categories.



The views of Word, Excel or Text profiles also allow categorization based on the following options:

- » **by Database Name** – displays profiles categorized by the database's file name. In the case of profiles set to work on a database based on its template (see section 3.2.2), then the template's name is shown rather than the name of any individual database's name.
- » **by Database Location** of the database - displays profiles categorized by server, by sub-directory and then showing the file name.
- » **by Database Title** – displays profiles categorized by the database's title. In the case of profiles set to work on a database based on its template (see section 3.2.2), then the template's name is shown rather than the name of any individual database's name.
- » **by Profile Editor** – displays profiles categorized by the name of the user, group or role that has been granted editing rights to the profile or who initially created the profile
- » **by Profile User** – displays profiles categorized by the name of the user, group or role that has been granted viewing/execution rights to the profile

by Database Name
by Database Location
by Database Title
by Profile Editor
by Profile User

2.4 What are Integra Profiles?

Integra for Notes provides facilities to map fields in a Notes database with a layout of a Word or Excel file and set various options. These options are defined within an Integra Profile.

Integra profiles are used to describe all the settings and properties of a particular link defining the fields to be used, the settings of the actions to be taken by Integra etc. An Integra profile needs to be set up for each different link.

Currently Integra supports Microsoft Word documents, Microsoft Excel spreadsheets, XML files and delimited Text files as well as output to a PDF file. Integra supports facilities for both exporting and importing of data. While exporting of data can be effected to Word, Excel, XML or Text files, importing can be effected through a profile from Excel or Text files. Integra also allows importing of complete Word documents into Notes. Bi-directional updating of Notes data with Word and Excel documents is also available through the supported Notes Field Exchange (FX) facility.

Profiles are divided into logical tabs which group together related properties that define the functioning of the profile. The availability of different tabs depends on the particular profile types in use.

The available tabs consist of:

- » **General** - General profile information
- » **Database** - The details of the Notes database accessed by the particular profile
- » **Field Selection** – allows selection of fields and computed fields
- » **Filtering & Sorting** – allows definition of any sorting requirements and filtering of data.
- » **Excel, Word or Text** – contains the details of the linked Word, Excel or XML/Text file
- » **Notes Action** - The details of actions to be taken by Notes such as e-mailing and saving of documents to Notes
- » **Scheduling** - The automated scheduled running of profiles
- » **Advanced** - An advanced tab, which provides an advanced user with the possibility to write event driven Formulas and LotusScript.

The properties of a Word profile are different from those of an Excel profile, which in turn is different from those required for a Text file. This section of the user manual will describe the tabs of each of the different profile types.

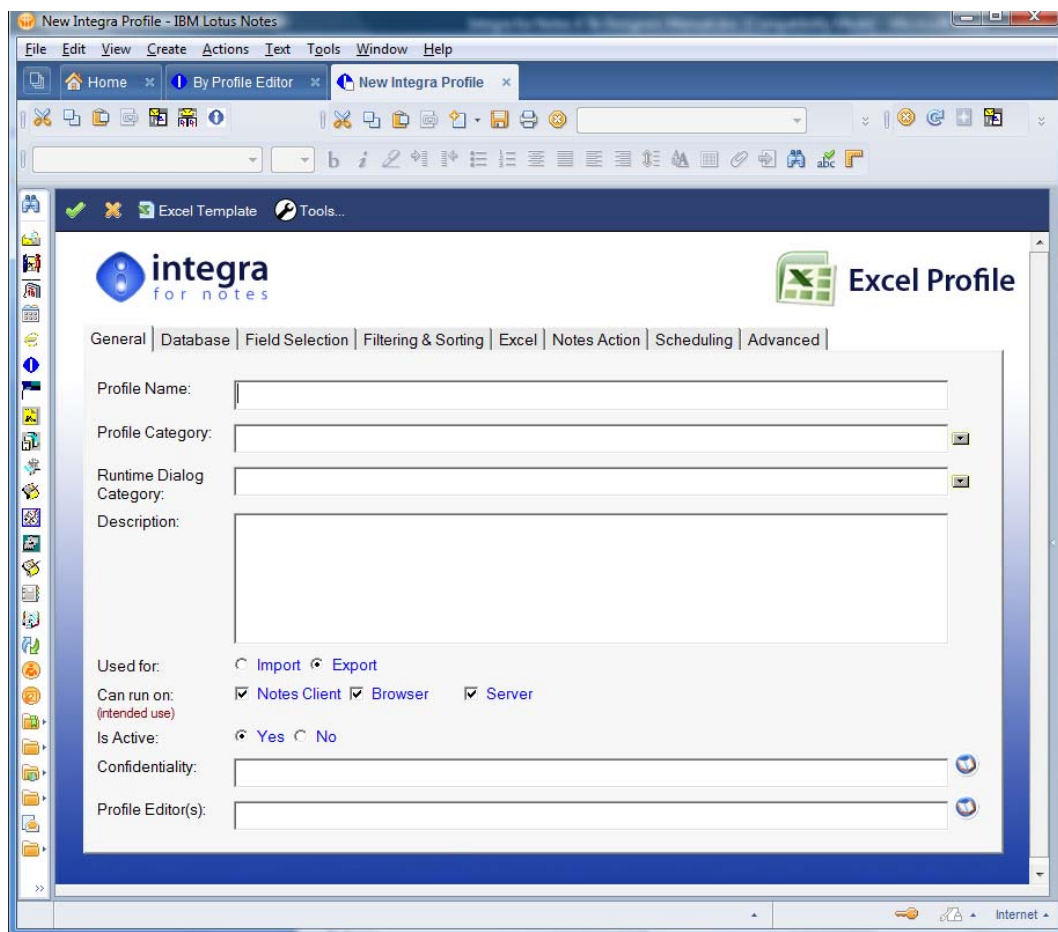
3 Creating Integra Profiles

This section of the user manual defines the available functionality and usage of Integra profiles and documents the profile creation process. All Integra profiles consist of tabs containing information related to a specific aspect of the functionality of the tab.

The data content of profiles vary slightly depending on whether the profile is to be used to generate or import a Word document as distinct from an Excel spreadsheet or XML/text file. The available tabs in these profiles are largely the same except for one tab, which is specific to the profile type. Word profiles have a *Word* tab while Excel and Text profiles have an *Excel* and *Text* tab respectively. These tabs contain specific properties relevant to the format of data being used.

The section of the user manual will describe each of the tabs in turn. The explanations of those tabs, which are common to all profile types, use a Word profile as an example.

On creation of a new Excel profile, Integra displays the following screen:



The options available within each tab of the Integra profile vary according to whether the profile is a Word, Excel or XML/Text profile. In addition, Export profiles have different options to Import profiles. All the permutations of settings are defined within this section of the user manual.

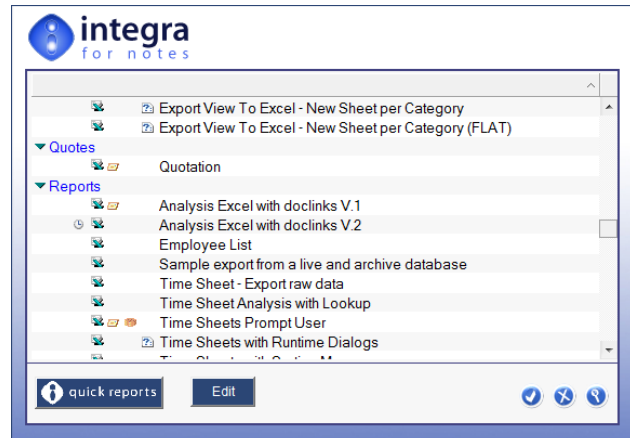
3.1 General Tab

The *General* tab of a profile identifies general details relating to the profile such as the name, category and description of the profile. The details of each field are identified. The General tab of Word, Excel and Text profiles are identical in their data content.

3.1.1 Profile Name field

Profile names are used to uniquely identify a profile. The name entered into this field is presented to the user whenever Integra is launched from a Notes database that contains profiles linked to the selected database. The list is displayed in the *Profile List Dialog* shown alongside:

When the document is saved, the name entered in the "Profile Name" field is validated to ensure that it is unique. If another profile is found having the same name, a message will be displayed informing the user and the save operation will not be completed. The user will then need to choose an alternative and unique name for the profile.



3.1.2 Profile Category

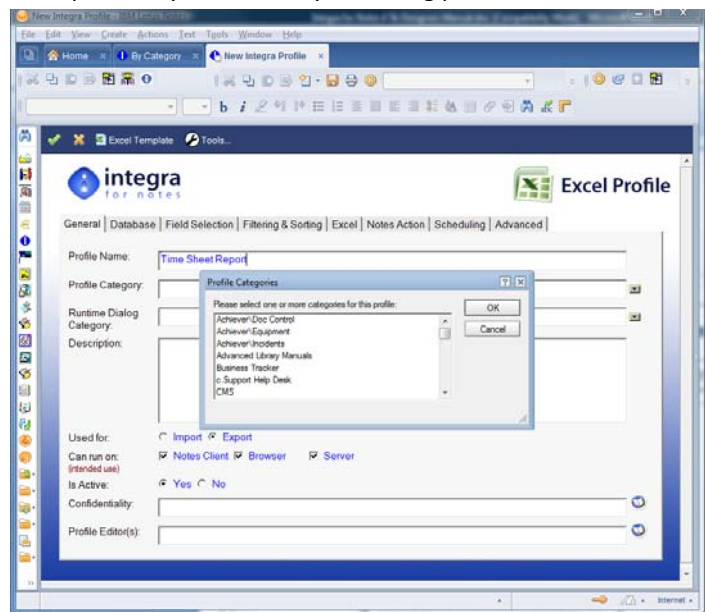
The *Profile Category* field allows allocation of a profile to one or more Categories which will be used for displaying the list of profiles in the Integra database. Views of profiles by category allow display of your profiles organized by Profile Category.

For instance, all management reports can be allocated to the *Management Reports* category resulting in them being displayed together independently from the database or template they relate to. By allocating profiles related to a specific application or a particular type of profile together, it is easier to find your profiles and navigate around your Integra database. This is particularly the case when a profile is linked to multiple versions of a design template.

The profile's category can either be typed directly into the *Profile Category* field or the arrow icon at the right hand side of the field can be used to display a list of the categories already in use as shown in the following screenshot:

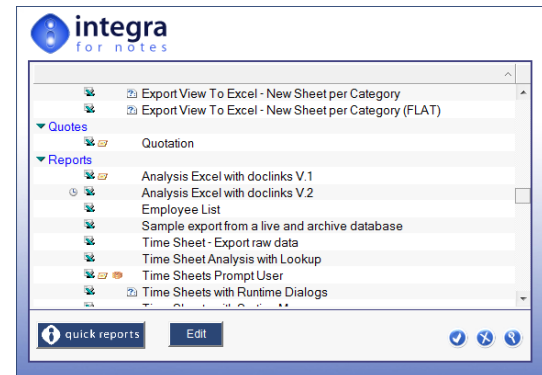
Multiple categories can be selected by clicking on each of the required categories in turn or, if manually entered, by separating the profile name by a comma.

So as to assist users in allocating profiles to categories without the need to manually update this field one profile at a time, a facility exists under the *Tools* action button the profile views which allows appending of a one or more categories to multiple selected profiles. See section 7.3.2.1 for further details on the *Categorize* action contained within the *Tools* Action Button.



3.1.3 Runtime Dialog Category

The *Runtime Dialog Category* field allows profiles to be categorized in an additional manner used when the profiles are listed at runtime execution of Integra in the Profile List Dialog (as distinct when they are viewed in the Integra database itself). This field again allows better organization and presentation of the profiles related to a particular database or template.



3.1.4 Description field

Each profile may optionally contain a description, which is entered in the "Description" field. It should be used to describe and document the use of the profile. The description is only displayed in the profile views. A "Zoom Description" action button is provided to enlarge the description editor to near full screen size allowing a user to enter a fairly broad description. The same action button is also provided within the profile views to zoom into the description without actually opening the profile.

3.1.5 Used For field

Integra profiles contain a *Used For* field. Since Integra supports both importing and exporting to and from Lotus Notes, this field is used to identify the direction of the transfer to be effected using this profile. The available options are of course **Import** or **Export**.

Import indicates that the profile is used to read data from one of the supported file-types and write the data into a Notes database (document), whilst an *Export* profile is used to extract data from a Notes database (document) and save it into one of the supported file-types.

In the case of the use of the imports option, this supports the importation of data from Excel or Text files usually reading each line from such files and creating a Notes document per line, as well as being able to be used for Word imports. A Word import will result in the selection of one or usually more Word documents and the creation of a Notes document for each Word document, attaching the Word document to each Notes document.

Therefore the selection of 50 Word documents will result in the creation of 50 Notes document each containing one of the Word documents. Meta Data from the Word documents' properties can be used to update specific fields on the Notes document as well as the other features of importation (see section 3.5.2.1 - *Importing Word document properties into Notes fields*.)

3.1.6 Can Run On field

This field allows a designer to defined an Integra profile as being set to run either on the Lotus Notes client, the web browser or scheduled (as well as combinations thereof) and when the Integra profile dialog box is displayed at runtime to the user, only those profiles set to run in that context will appear.

For instance if a profile is set to run on a web browser but not on the Notes client, when a user utilizes a Lotus Notes client and selects the Integra *SmartIcon*, that profile will not be displayed in the list of profiles able to be selected.

The *Can Run On* field allows any combination of the three execution environments to be selected.

A categorization method is also available in the *All Profiles* to display profiles by the *Can Run On* field.

3.1.7 *Is Active* field

Profiles can be *Active* or *Inactive*. An *Inactive* profile will not be presented to the user when Integra is launched. An inactive profile is only visible in the "All Profiles" view and is not available to be selected as one of the profiles to be used.

A profile should be set to *Inactive* when it is to be temporarily decommissioned to ensure that the profile is not used during this decommissioning.

3.1.8 Web Activity Log/Debug

This field allows a profile creator to specify whether or not activity logging and debugging is enabled in the case of profiles run from a web browser. When this field is enabled, execution of the profile by a user utilizing a web browser will result in the activity being logged in the Integra Log database defined within the Integra Configuration document. See section 3.14 of the *Integra Installation & Configuration Manual* related to the creation of an Integra Log database.

3.1.9 Confidentiality & Profile Editor fields

Since profiles may allow access to reports and exports of data that may be sensitive, an organization may wish to implement controls upon access to some or all profiles. The controls may involve limiting access to who is able to use particular profiles and/or limiting access to modifications made to the profile. These controls are over and above the ability to limit access to all Import profile or all Export profiles through the use of the [Export] and [Import] roles. For more details on setting the correct security refer to section 3.3 of the *Integra Installation & Configuration Manual*.

The *Confidential* and *Profile Editor* fields are Reader Name and Author Names fields respectively and allow selective access to individual profiles. When the fields are left blank then the access allowed to users will be that allocated in the Access Control List of the database. If however the fields contain the names of users, or groups from the Domino Directory or roles from the Integra database's ACL, then only the users identified in the fields or those users belonging to the groups identified in the fields will have access to the particular profile.

When the *Confidentiality* field is not blank then only the users, groups mentioned in the field and roles will be able to view and thus run the profile. When running Integra, this profile will not be listed in the list of available profiles for the database in question.

While all users allocated *Editor* level of access in the ACL of the Integra database will be able to edit profiles, the *Profile Editor* field can be used to delegate the authority to edit specific profiles to users who have been granted the recommended *Author* level of access to the database.

By default the *Profile Editor* field is blank, however, if the user who is creating a new Integra profile is adding any users, groups or roles to the *Confidentiality* or *Profile Editor* field, then Integra will add the current user's name and the user-role [Admin] to the *Profile Editor* field, if they are not already listed. The same applies when a user who is creating a new Integra profile has only *Author* access to the Integra database. This ensures that a user applying access control to a profile is not locking the profile for everyone including himself.

If these two fields are left blank, then anyone having the appropriate access to the Integra database may view and edit the profile.

To the right of the fields can be found an icon that allows presentation of the Address Book dialog to the user from which the names of users and groups can be selected for addition to the *Confidentiality* and the *Profile Editor* fields respectively.



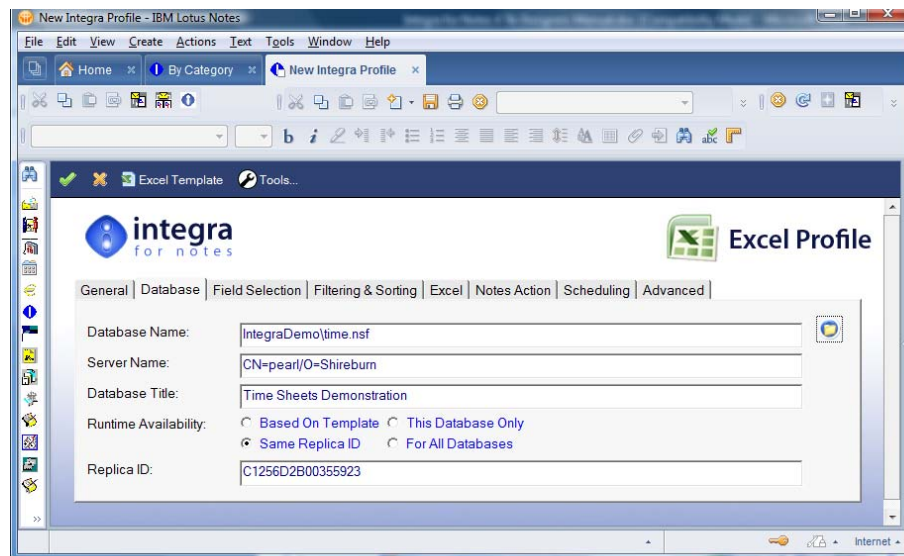


Since all users of Integra profiles need to have at least author rights to the Integra database, it is important to set the [Export] and [Import] roles as well as to utilize the two fields "Confidentiality" & "Profile Editor" to limit access to profiles in accordance with corporate policy.

Note that users or groups that are listed in the ACL of the Integra database having the user-role [admin] assigned, will also have full access to all profiles including those to which they are not specifically names in these Reader and Author Names fields.

3.2 Database Tab

A profile is linked to a specific Notes database or template. The Database Tab is used to identify the specific file that the profile is to be primarily linked to. Facilities for accessing data from additional files are also available and tackled elsewhere in this document (see section 3.3.6 - *Using the Lookup Wizard*). The Notes database may reside either on a local workstation or on any available Domino server. The user creating the profile must have a minimum of *Reader* access to the database to be linked and access to the server on which it resides. Integra fully preserves and respects the security systems in place within Notes.



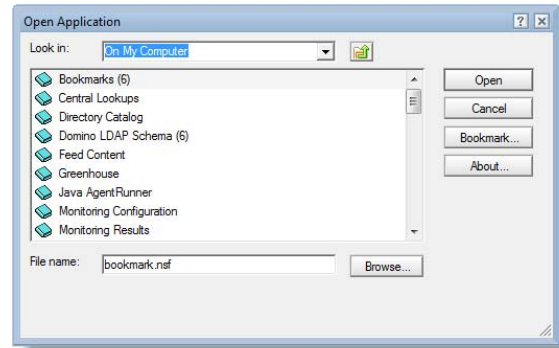
3.2.1 The Database Name, Server Name & Database Title fields

The source Notes database may be selected from a dialog by clicking the folder icon or may be entered manually. On selection of the icon, the user is presented with the standard Notes *Open Application* or *Database-Open* dialog box (pre-Notes 8) the functionality of which is identical to the usual operations in Notes.



When the Notes database is selected, Integra will immediately read the database filename, title, replica ID and template it is based upon as well as the design and the appropriate fields will automatically get populated. This may take a few seconds depending on the number of design elements in the source database and the performance of the server the database is residing on.

To easily select a database, it is best to use the provided folder icon. However, if the details are entered manually, the database name field must include the path and filename of the database (including file-extension). The database title is automatically computed in the Database Title, replica ID and template fields.



To create a profile document linking to a particular database, the user does not require *Designer* rights in the Access Control List of the database to which the link is being implemented but rather just *Reader* level rights.

3.2.2 Runtime Availability for

When a profile is created it is specifically linked to a Notes database, which acts as the main source of data to be transferred into Word, Excel or a text file or alternatively imported from text or Excel files. Because at times the linkage is to be made to a specific database such as a time sheet application while at other times it may be linked to a standard database such as the Domino Directory or the Catalog, Integra profiles can optionally be linked to one of the following using the *Runtime Availability* for field:

- » **Based on Template** – Once linked to a specific database, Integra will read the properties of that database to obtain the template name of the selected database and this profile will run only any database whose design is inherited from the same template.
This is particularly useful in the case of a profile linked to a Log database. The system will use this profile whenever the user selects Integra from any log file independently of its location and/or file name.
- » **Same Replica ID** – this option is the default setting and allows the profile to be run whenever the selected database is chosen independently of which server the database is running on.
This is particularly useful in the case of a profile link to a specific database a replica of which may be located on various servers. A user will typically want to run the Integra profile while being positioned on the database, which is on his home server.
- » **This Database Only** – this option allows linkage to only a specific database contained in a defined location. For instance if a replica of a database is contained on multiple servers however the reporting specifically needs to be run from a replica contained on a specific server and no other.

3.2.3 Replica ID field

In the case where the *Same Replica ID* option has been chosen, Integra will read the replica ID of the selected database and display it within this field.

3.2.4 Template Name field

In the case where the *Based on Template* option has been chosen, Integra will read the design template property of the database and store it within this field. Profiles can be linked to multiple templates and will result in being displayed as available profiles whenever a user runs Integra from within any database that is linked to one of the listed templates. This is particularly useful when different versions of a template may be used over time for a specific application allowing a profile to be available in each version if relevant.

The Template field is a multi-value field and allows a database to be linked to multiple templates. Separate multiple templates in this field with a comma or semi-colon. For instance:

Timesheets V3.0, Timesheets V3.1, Timesheets V3.2

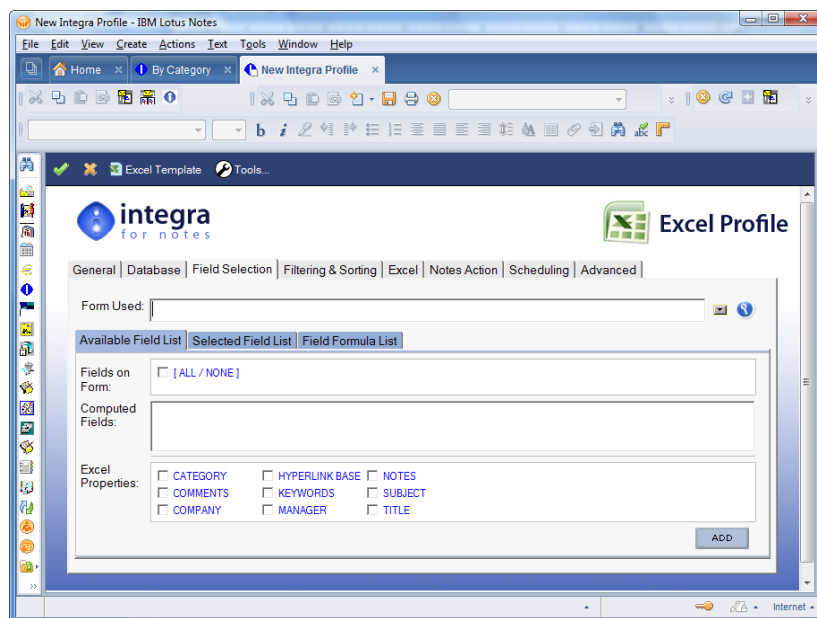
3.3 Field Selection Tab

The *Field Selection* tab is used to identify the fields to be imported or exported by this Integra profile.

The tab provides an easy means of selecting, adding, removing, renaming and sorting fields selected for the import or export process. In addition to being able to pass fields from the database, Integra provides facilities for the creation of **computed fields**, the values of which are derived at runtime through an associated formula attached to the computed field using the Notes formula language (see section 3.3.4) or alternatively, by using the LotusScript Callback features contained in the *Advanced Tab* (see section 3.10.4).

When selecting a Notes database used for a particular profile, Integra will read the database design providing a list of all available forms and fields within the Notes database. This will be done as long as the *Profile Creator* has a minimum of *Reader* rights to the database he is attempting to report from.

On creating a new Excel profile, when selecting the *Field Selection* tab the user is presented with the following screen:



The *Field Selection* tab consists of three sub-tabs logically dividing the areas of the field definition:

- » **Available Field List tab** - this sub-tab allows the user to identify the available fields for reporting or importing into, usually by selecting a form although computed fields are also supported, and then to select the fields you want to use for the particular profile and add them to the "Selected Field List". See instructions below.
- » **Selected Field List tab** - lists the fields which have been selected in the previous sub-tab and allows definition of their properties and the placing of the fields into any desired order.
- » **Field Formula List tab** - allows the setting of the formula to define the value of computed fields which will be evaluated at runtime.

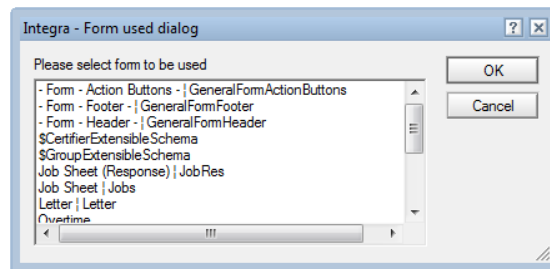
A Word or Excel Properties section is also found in the Field Selection tab. This is used to link values in Notes to the meta data properties of the Word or Excel file. Word and Excel files have meta data properties such as the Title, Subject, Author etc. These values can be used during an import to update values of fields in Lotus Notes documents or alternatively, in the case of an Integra export, can be set based upon values in Notes.

Further details about the Word or Excel properties are defined in section 3.3.3.1 below.

3.3.1 Selecting the Notes Form

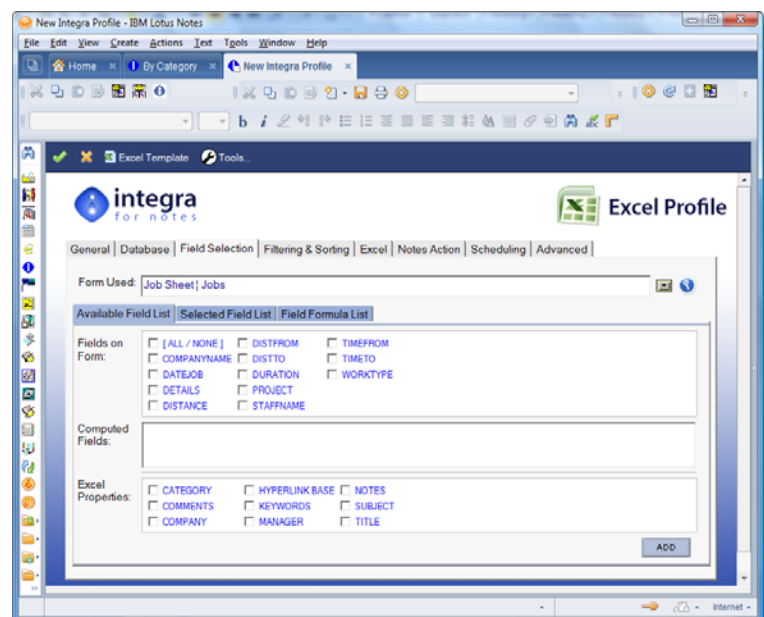
While it is perfectly possible for a user to manually enter the name of each field that they wish to export as a computed field, since fields are usually defined on a form or sub-form, Integra allows the user to select a form and identify the fields to be imported or exported through a point & click process.

The *Available Fields* tab of the *Notes Field* tab allows selection of the form or sub-forms containing the fields to be used. Clicking on the selection arrow will provide a list of the forms available in the source database as shown below:



The selected database may contain hidden forms or sub-forms. These hidden forms will only be displayed to the user if he has been granted the *Hidden* role in the Integra database's ACL.

When selecting one of the available forms or sub-forms, Integra will read the design of the particular form or sub-form to obtain the list of fields available within that form or sub-form and these fields will be displayed in alphabetic order.



Integra actually collects the data from each Notes document and does not rely on the form. The form is used in the profile purely to make selection of fields for users easier than through the manual entry of field names.

Integra can still access fields which are stored on the document through other processes such as

agents. These fields can be referenced by creating a formula field on the Integra profile (see section 3.3.3) and referencing the field name on the Notes document.

In addition, if a form contains one or more sub-forms, as long as the sub-form is not a conditional sub-form whose use is determined at runtime based on the values of the document in question, then the fields from the sub-form will be displayed in the Integra profile as though they were contained on the main form. These fields can be selected like any other fields.

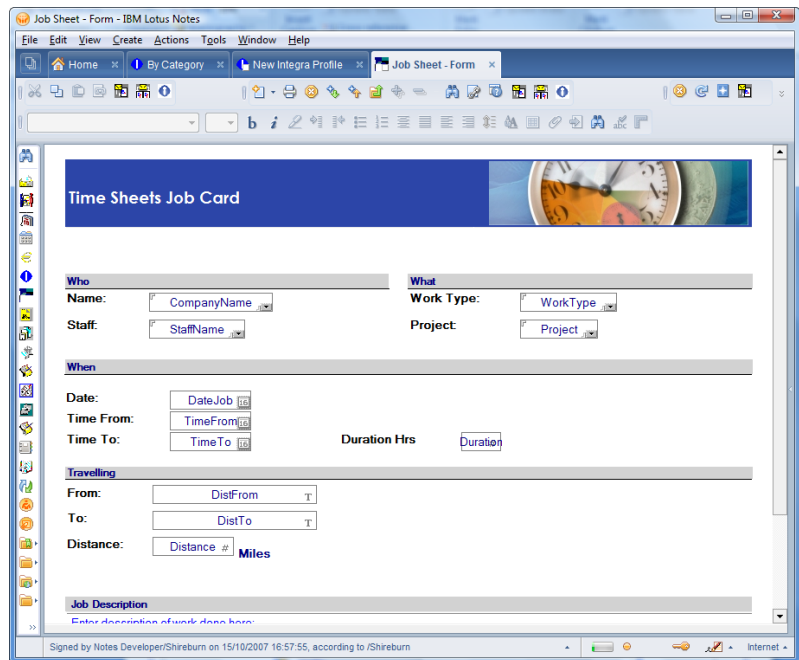
If a conditional sub-form is used, then the fields on this sub-form can be selected by changing the form selected to the conditional sub-form (this will display the fields from that sub-form) and then selecting the required fields from that sub-form or by creating a formula field in the Integra profile and directly referencing the field name as it is defined on the sub-form.

We would then recommend reverting to the main form to assist in the formula selection help and wizards.

Having selected a particular form or sub-form, the user is able to confirm that the selected form really is the one he intended to select by clicking on the magnifying glass icon. This will result in the presentation of the design of the form (even if the user does not have the Notes Designer client installed) and the identification of the field labels and fields names for this form.



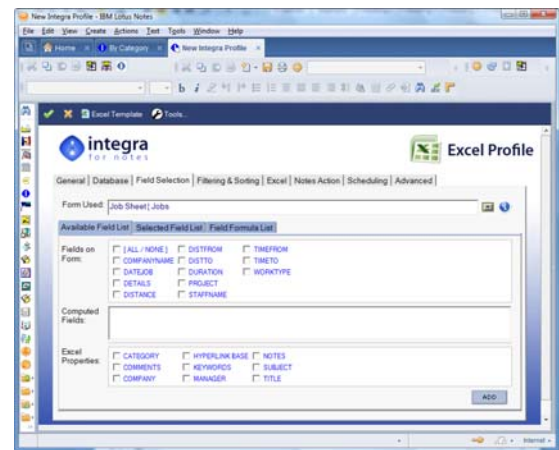
This allows the user to confirm the form being selected is the correct one and also allows confirmation of which fields are actually required and is particularly useful for complex forms with a large number of fields and/or complex field names.



3.3.2 Selecting the Notes Fields

Having selected a particular form or sub-form, Integra will display the complete list of fields available in that form from within the selected source database.

The user should identify the particular fields from the selected form which are to be utilized within the profile and transferred to the Word document, Excel spreadsheet, XML or Text file by clicking on the checkbox near each field. As outlined above, the form preview icon can be used to display a preview of the selected form to allow confirmation of the field names used.

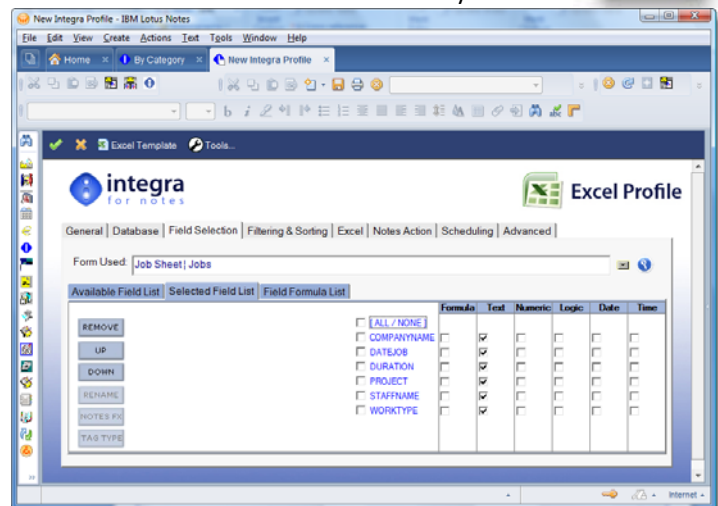


Select the individual fields required by clicking in the check box next to each field. All fields can be selected by choosing the *All/None* check box. The option to deselect all the fields can also be effected by once again selecting the *All/None* check box.

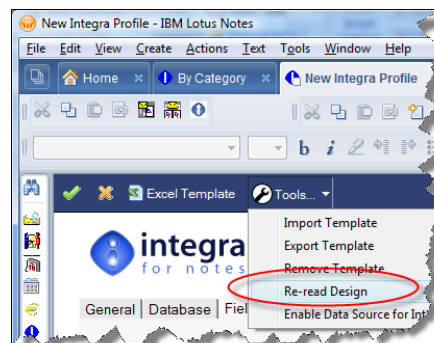
Once the required fields have been selected these need to be added to the *Selected Field List* section of the screen. This can be undertaken using the *Add* button. Once fields have been *Added* they will be

ADD

displayed in the *Selected Field List* tab of the screen as shown in the next screenshot. Note that on clicking the *Add* button, users will be positioned immediately in the *Selected Field List* tab.



When the design of the chosen Notes database linked to a particular profile has changed after the profile has been created, it might be necessary to re-read the database design to obtain the complete list of views, fields, forms and folders. To update a profile with the latest design information, ensure that the profile is in edit mode then click on the Tools action button and select *Re-read Design*.



Fields can be removed from the *Selected Fields List* section or their order of presentation in the list altered by using the *Remove*, *Up* or *Down* buttons.

To move one or more fields up or down the field list, select the fields to be moved and use the *Up* or *Down* buttons as is appropriate.

The order of presentation of the fields in the *Selected Field List* will influence the default column order of presentation in Excel when Integra creates the default template. Similarly the fields will be listed in this order in the Word template. Both Word and Excel will allow modification of the order of presentation of the data.



If the selected field is already list at the top of the *Selected Field List*, then clicking on the *Up* bottom will cease to have any effect.

Documents in Notes may contain data in fields, which are defined not just on a form but possibly also in various sub-forms. As a result, following selection of a form and the addition of the required fields from that form to the *Selected Field List*, Integra also allows the selection of another form (usually a sub-form) and the identification of the required fields from that sub-form. The addition is again carried out using the *Add* button.

Data Types

Once the fields have been added to the *Selected Fields List*, the user has the ability to define the data type for each field within one of the columns. By default, all field types are initially set to *Text*. While the data type of the field can be used for both import and export profiles, it is most important for import profiles. Define computed fields (as outlined in the next section) as being of type *Formula*.

The functionality relating to data types varies for Word, Excel and Text files.

- » **Data-types for Excel profiles** - When exporting data from Notes to Excel or importing data from Excel into Notes the data type from the source document is of no relevance. The data type will be created in the target document as received from the source document. Within Excel profiles, the main distinction is between *Formula* and *Non Formula* field types. However, selecting the correct field type (if known) can be of future value as Integra might handle additional data types in future releases.
- » **Data-types for Word profiles** - When exporting data from Notes to Word documents or Excel, the data type is converted depending on the data type found on the exported document (and the system settings, e.g. for dates). An exception exists for multi-value text fields, which will be converted into a single-value text string using the particular multi-value separator, defined within the profile. Therefore it is important for the export to Word documents to select a field type as otherwise the outcome might not be as expected. For Import profiles this is a different scenario as fields are created in Notes according to the setting and not according to what is found in Word or Excel.
- » **Data-types for Text profiles** - When exporting to or importing from delimited (ASCII) text files, the selected data type is of great relevance, as each data type is presented differently in these kinds of files.



Please note that if a user selects a Notes *Rich-Text* field while the transfer to Word will be effected as rich-text being that Word supports rich-text, since both Excel and text files do not support rich-text, in these cases the data is pushed to Excel or text as plain text.



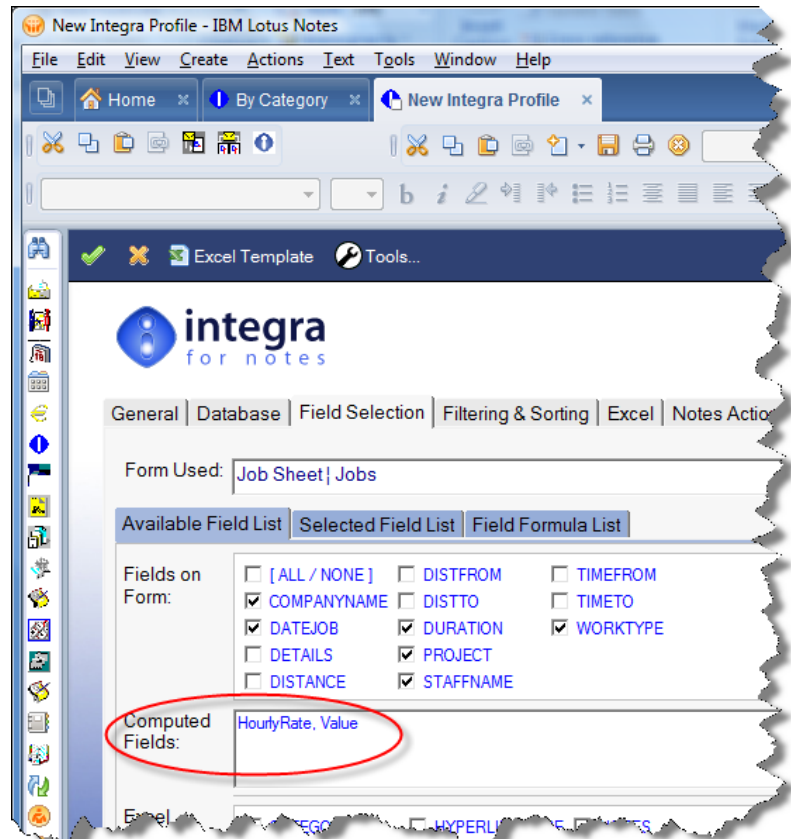
If a different formatting for fields or the export of multi-value fields of any type other than "Text" is required, you need to choose the "Formula" field-type and write a formula to convert the data into the desired text format: e.g. `@Text(DateField;"DOS0")`.

3.3.3 Addition of Computed Fields

Integra provides facilities for the creation of one or more computed fields and their addition into the *Selected Fields List* in much the same way as fields from a form or sub-form. . To create a computed field:

- » Enter the name of the computed field in the *Computed Fields* area (see screenshot alongside). Use a field name allowed by Notes, which is not already used in your list. If you want to add more than one computed field at a time, enter the name of each computed field followed by a comma.
- » Click on the *Add* button to add the computed field or fields to the *Selected Fields List*.
- » Note that Integra will identify the field's data type as being of type *Formula*.

Setting of the formula for the field is undertaken in the *Field Formula List* tab. See subsequent section on Setting a Formula for a Computed Field (section 3.3.4)



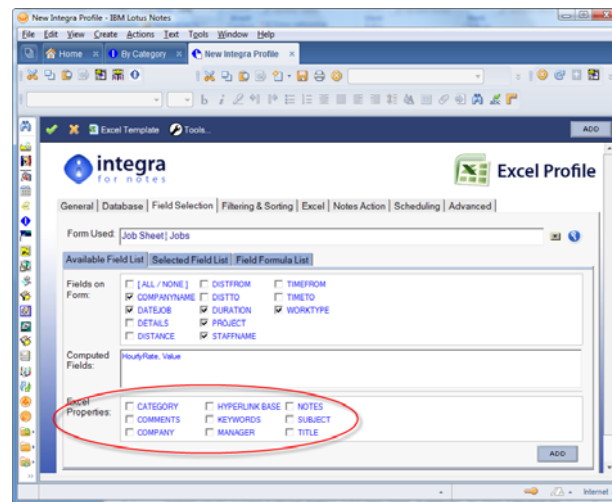
When the design of the chosen Notes database for a particular profile has changed after the profile has been created, it might be necessary to re-read the database design to obtain the complete list of views or folders. To update a profile with the latest design information click on the Tools action button and select *Re-Read Design*.

3.3.3.1 Word/Excel Properties

All Word and Excel files contain certain metadata which is accessible through the *File->Properties* menu option when using these programs. The screenshot below shows as an example the properties of this user manual document in Microsoft Word.

When creating a Word or Excel document through Integra, it may be convenient for these metadata properties to be updated automatically. While prior to Integra 4.1 this could be achieved by utilizing the Script Callback features contained within the *Advanced* tab, this functionality has been exposed directly within the Integra profile within Integra 4.x.

These properties are contained below the *Computed Field* definition area in the *Word properties* or the *Excel properties* area.

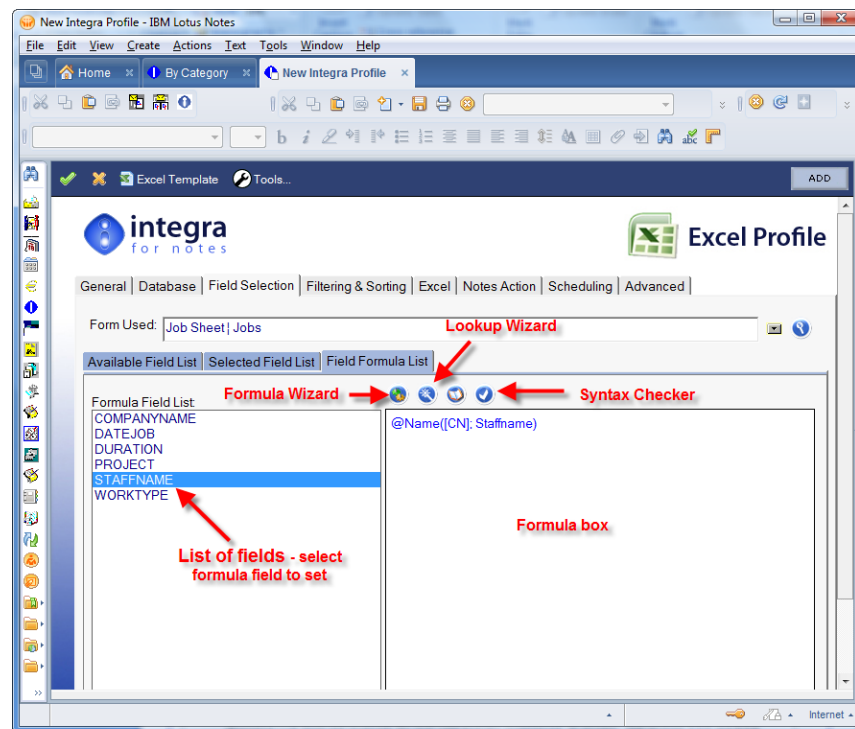


Since the actual properties available in a Word document are different to those on an Excel document, the available properties will vary according to the type of Integra profile being created. In either case, the setting of the values for the properties is the same.

- » Select the property or properties to be populated on the Word or Excel document by clicking the required properties in the list of available properties in the *Word Properties* or *Excel Properties* area on the Integra profile.
- » Click on the *Add* button so as to add these properties to the selected field list as you would with any field from the form or computed field.
- » The selected properties will appear in the selected field list as type *Formula* with their property name preceded by *WORD.PROPERTIES* or *EXCEL.PROPERTIES* depending on the document type. Please note however that these special fields will not actually appear on the Word document or Excel spreadsheet but will only be used to update the properties of the document.
- » Set the value of these fields as you would set a computed field from the *Field Formula List* tab. See the subsequent section for instructions on how to set a Computed Field.

3.3.4 Setting a Formula for a Computed Field

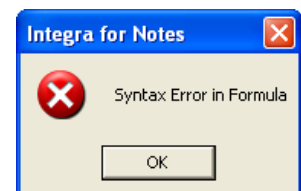
The setting of a formula for your computed fields is undertaken in the *Field Formula List* tab of the *Fields* tab and by making use of the Formula Builder. On entry into this tab the user is presented with the following screen.



To set the value of a formula for a computed field, select the computed field from the list of fields to the left side (as marked in the screenshot above).

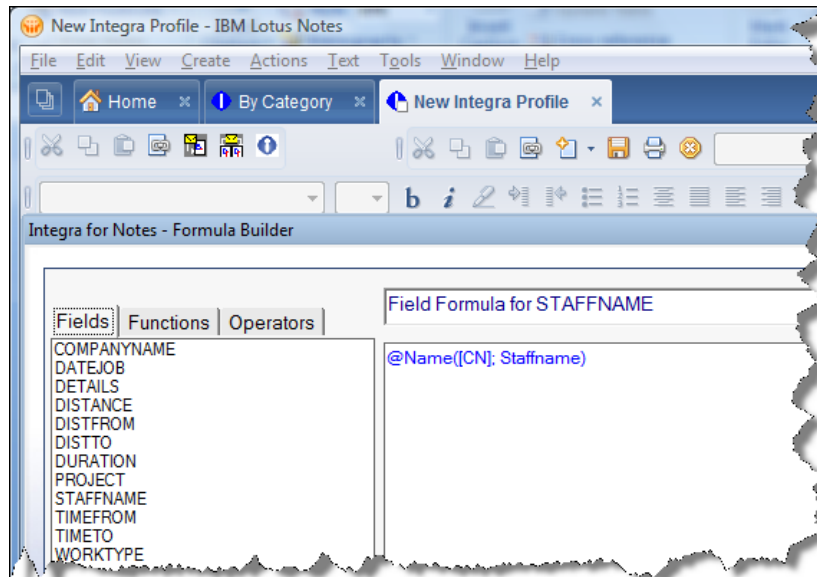
the space to the right side can be used to enter the value of the formula for the currently selected field. Any valid Lotus Notes formula can be utilized in the definition of the computed field including functions such as @IF, @DbLookup and @Dbcolumn for looking up data within the current or another Notes database as well as with ODBC lookups to external databases. Integra supports the concept of a *Formula Builder* and a *Lookup Wizard* to allow an easier means of creating such formulae especially for end-users and less experienced developers. See sections 3.3.5 and 3.3.6 regarding the use of the *Formula Builder* and the *Lookup Wizard* respectively. Access the *Lookup Wizard* through the wizard icon and the formula builder through its own distinctive icon.

Integra also offers a syntax checker which will confirm the validity of a formula entered. This syntax checker, which is executed when you click on the *Syntax Checker* icon to the right of the field selector, will return a dialog box indicating whether a formula is valid and, if invalid, the error message and its location will be identified.



3.3.5 Using the Formula Builder

In addition to the *Formula Entry* areas, and an identifier of the computed field for which the formula is being created, the Formula Builder presents a panel to the left side allowing access to various elements for the formula to be built.



This *Formula Builder* consist of the fields, functions and operators. Clicking on the appropriate heading of the *Formula Builder* pane will display these elements in turn.

- » **Fields** – this displays a list of the Available fields on the selected form. This list is not the list of formula fields but all the fields on the form as all fields on the form can be used within computations of formula fields. The availability of these fields acts as a useful reminder to the user to prompt them for the elements of the formula as it is being built in the *Formula Entry Area*.
- » **Functions** – clicking on the *Functions* heading will result in a list of the available functions being displayed in alphabetic order to the user. Clicking on a function and then the help icon will link the user to the Notes help related to this function (only applicable if a user has the Notes Developer Help database deployed on their workstation).
- » **Operators** – this option lists the available Boolean operators. These are listed categorized by type with the most popular comparison operators being listed first. The help option is also available for the currently selected operator.

Selecting a field, function or operator and then clicking on the *Append* button will result in the selected field, function or operator being appended at the end of the formula already contained in the *Formula Entry Area*.

APPEND

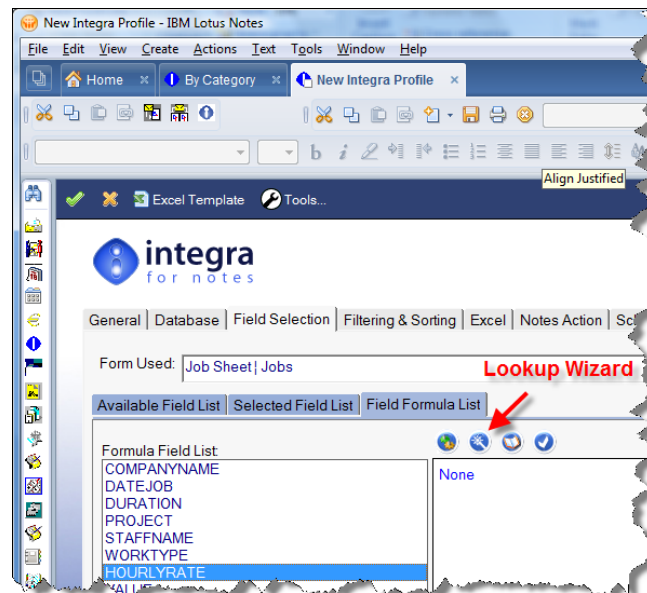
Sometimes a user may have entered a formula and wants to insert a function or field in the middle of the formula however double clicking cannot result in this function. In this case we recommend the user will click the *Copy to Clipboard* button which will copy the highlighted field, function or operator into the clipboard.

COPY TO CLIPBOARD

The user should then place his cursor at the insertion point where the field, function or operator is to be inserted and then use the Notes paste function icon or <Ctrl>+V.

3.3.6 Using the Lookup Wizard

The *Lookup Wizard* is accessed by selecting the *Magic Wand* icon as highlighted below.



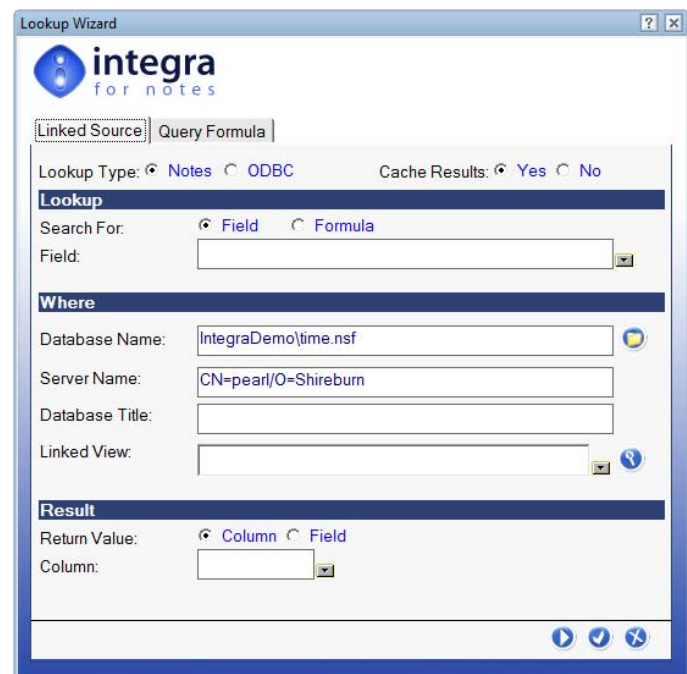
The objective of the *Lookup Wizard* is to provide a user with an easy means to lookup data in views contained in the same or other Lotus Notes databases or even within other ODBC compliant databases such as Microsoft SQL, Oracle, DB2, SAP, Microsoft Access etc.

The *Lookup Wizard* automates the building of a traditional Notes @DbLookup() function by allowing the user to enter the required parameters for the lookup without the user needing to know the exact syntax of the function. All this is done through a dialog box which divides the parameters into 3 sections:

- » **Lookup** – used to define what is looked up
- » **Where** - used to define where the lookup is to be effected. i.e. on which server, in which database and in which View. Defaults to the current database.
- » **Result** – defines the resultant data which is retrieved.

Integra's DbLookup function allows data to be retrieved either from a Lotus Notes database (the current one from which the main data is being exported or a different database) or alternatively from a 3rd party database such as Microsoft SQL, Oracle, DB2, SAP, Microsoft Access etc.

The parameters required for these two different types of lookups are themselves different and, depending on whether the *lookup Type* field is set to Notes or ODBC, the wizard will present different parameters.



The parameters of the @DbLookup function which are entered into the following fields in the *Lookup Wizard* dialog box:

- » **Lookup Type** – this field allows identification of whether the lookup is to be effected to a Lotus Notes database or into an ODBC source such as an Oracle, MS-SQL or Microsoft Access database. Selection of the ODBC choice will present the user with a different *Lookup Wizard* dialog box defined below.
- » **Cache Results** – this setting allows identification of whether the results of the lookup are retained in the workstation's memory or not. The implication of this setting is that while the use of Cache (setting of YES) will do a lookup to the defined view once and retain the result in memory for future use within the same session, a setting of NO re-reads the lookup each time and if data changes in the view since the first lookup, it is refreshed on each lookup.

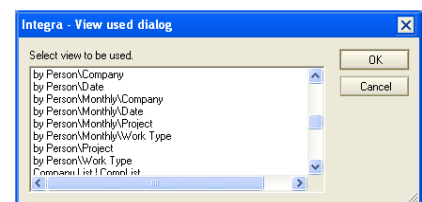
Lookup

- » **Search For** – this field defines whether you are searching for a value contained in an existing field or whether the lookup is based on the evaluation of a formula. If for instance you have a time sheets application where you want to lookup the name of the manager of a staff member in the Domino Directory (from the manager field), then the name of the member of staff would be the search key. Integra allows lookup of:
 - » **Field** - the contents of a specific field from the current form, for instance the field called Staffname which contains the name of the member of staff.
 - » **Formula** - a formula which derives a value which is then looked up. For instance Firstname+" "+LastName through which the values stored in the fields called *Firstname* and *LastName* are concatenated with an extra space in between and it is this evaluation which is then looked up.
- » **Field or Formula** – this allows selection of the specific field to be looked up or the formula, the evaluation of which will be looked up. This depends on the setting in the *Search For* field defined above. As the *Search For* field changes, so does the field label for this field to reflect the search method chosen.

Where

- » **Database Name** – this field allows identification of the database which is the object of the lookup. This value defaults to the currently selected source database but can be set to lookup on any other Notes database both on the current server or indeed on a different server. Selection of the database is done through the standard database selector icon. Once the database and server has been selected through the database selector icon, the path, server and title of the selected database are displayed in the appropriate fields of the dialog box.
- » **Server Name** – displays the name of the server. This field cannot be edited as it is set once the database is selected.
- » **Database Title** – displays the title of the selected database. This field cannot be edited as it is set once the database is selected.
- » **Linked View** – the view field allows selection of the view in which the lookup is to be undertaken. The selector arrow to the right of the field allows presentation of a list of the available views from the chosen database.

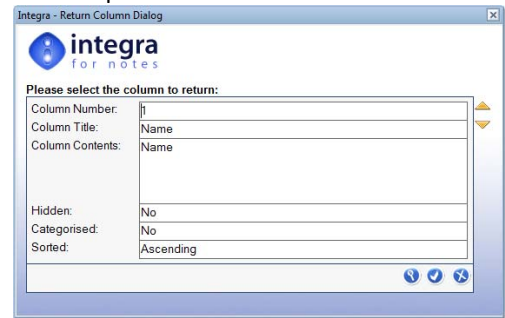
A preview is available on the view to ensure that the user has selected the correct view and to allow identification of the various column headings contained in the view.



Result

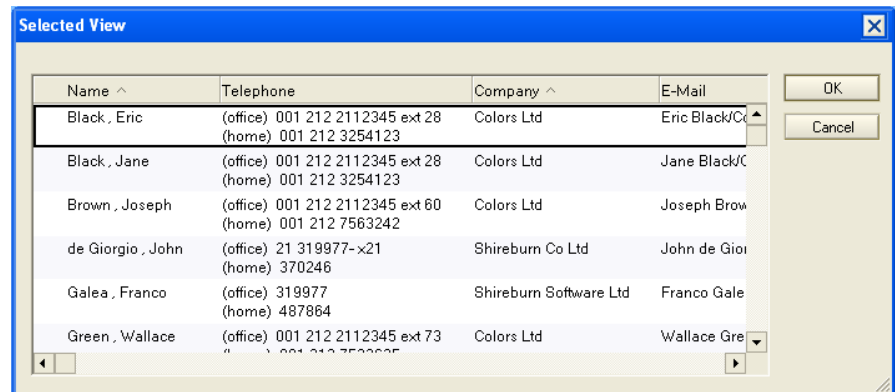
- » **Return Value** - this field allows definition of whether the lookup will result in the value of a specific column from the view being returned or the value of a field. While it is better to define a field as columns may change in order within a view with the inclusion of new columns in the view, sometimes the return value may be a computed value which is already displayed in the view.
- » **Column/Field** – this field defines the column number or field name which is to be returned. In the example above of the StaffName being the item looked up, then the Manager field from the person form would be the returned value. This could be expressed either as the number of the column in the looked up view if the required value is a column in the view, or specifically the name of a field on a form. The user will be invited to select the form that the field is stored on. In this example it would be the *Person* form.

Integra facilitates the selection of the appropriate column or field by allowing the clicking of the selection arrow to the right side of the field. In the event that the *Return Type* is a column then Integra will display a dialog box with the details of the selected view showing the settings of the columns in use as shown alongside:



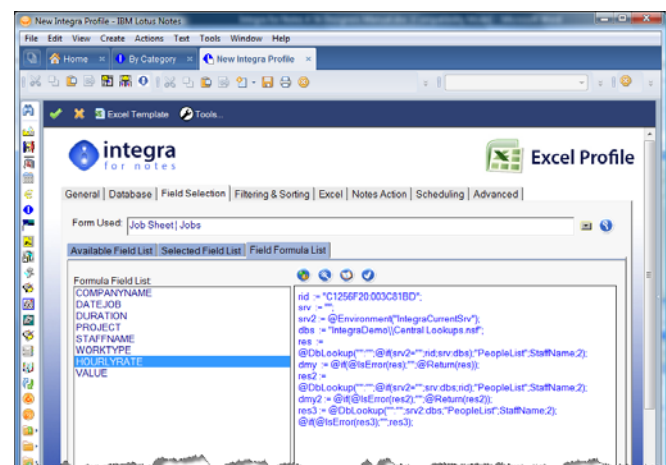
The dialog box will show the details of the first column in the view. The yellow arrows at the top right side allow movement from one column to the next and each time Integra will show the settings of the column such as the column number, title, actual formula for the contents of that column etc.

The user is also able to trigger a preview of the actual selected view showing the columns in use. This is done by selecting the *Preview* icon shown alongside. This results in the display of the selected view for validation and confirmation of the user's selection. The screenshot below shows an example from the People View of the Domino Directory.



Name ^	Telephone	Company ^	E-Mail
Black, Eric	(office) 001 212 2112345 ext 28 (home) 001 212 3254123	Colors Ltd	Eric Black/C
Black, Jane	(office) 001 212 2112345 ext 28 (home) 001 212 3254123	Colors Ltd	Jane Black/C
Brown, Joseph	(office) 001 212 2112345 ext 60 (home) 001 212 7563242	Colors Ltd	Joseph Brow
de Giorgio, John	(office) 21 319977-x21 (home) 370246	Shireburn Co Ltd	John de Gioi
Galea, Franco	(office) 319977 (home) 487864	Shireburn Software Ltd	Franco Gale
Green, Wallace	(office) 001 212 2112345 ext 73 (home) 001 212 3254123	Colors Ltd	Wallace Gre

Once the selection in the Lookup Wizard has been made, click on the Confirm icon. This will enter your @DBLookup selected formula into your formula as shown alongside.



ODBC Version of Lookup Wizard

The first field in the *Lookup Wizard* dialog box related to the lookup type, Notes or ODBC. In the event that ODBC is chosen, then a different *Lookup Wizard* dialog box is displayed as shown alongside. This dialog box allows definition of the parameters required for undertaking the ODBC version of the DbLookup function and they reflect the parameters of Lotus Notes' ODBC version of the DbLookup function. The parameters of the dialog box are as follows:

Lookup

- » **Search For** – defines whether you are searching for a value contained in an existing field or whether the lookup is based on the evaluation of a formula. If for instance you have a time sheets application where you want to lookup the name of the manager of a staff member in the Domino Directory (from the manager field), then the name of the member of staff would be the search key. Integra allows lookup of:
 - » **Field** - the contents of a specific field from the current form, for instance the field called Staffname which contains the name of the member of staff.
 - » **String** – this allows searching for a specific text string.
 - » **Formula** - a formula which derives a value which is then looked up. For instance Firstname+ " "+LastName through which the values stored in the fields called *Firstname* and *LastName* are concatenated with an extra space in between and it is this evaluation which is then looked up.
- » **Search Field/String/Formula** – this field stores the name of the field or the actual string or formula which is to be looked up, depending on the previous field in the wizard. As the *Search For* field changes, so does the field label for this field to reflect the search method chosen.



Where

- » **Data Source** - The name of the external data source being accessed. This name is specified as the dsn (data source name) in the Data Source Administrator or the odbc.ini file. A data source indicates the location of one or more database tables.
- » **User ID's** - The user IDs needed to connect to the external database. You may need up to two IDs, depending on the DBMS being accessed.
- » **Passwords** – The passwords required for the specified user IDs.
- » **Table** - The name of the database table being accessed.
- » **Searched Column** - The name of the column in which data will be searched through the lookup.

Result

- » **Column Returned** – this field allows definition of the column from which the returned data is to be selected. i.e. when you lookup the *Search Field* (e.g. employee name) in the *Searched Column* (e.g. the employee name in the source database), then the *Column Returned* identifies the field returned by the lookup (e.g. the hourly rate).
- » **Null Handling** - Specifies how null values are treated when data is retrieved (*Discard* or *Replace*).
- » **Replacement Value** – this field specifies a value that would be returned instead of a Null String
- » **Distinct** - String argument. Optional. Removes duplicate values from the list before returning data.
- » **Sort** - String argument. Sorts the list of returned values into either ascending or descending order.

For more details about specifying the parameters of an ODBC lookup it is suggested you refer to the Lotus Notes developer documentation related to the ODBC version of the Dblookup function.

3.3.7 Renaming of a Field

To rename a field previously added to the list, select the particular field (one at a time only) and click on the "Rename" action button.

RENAME



If a field being renamed is already included within the Word or Excel template stored in the Integra profile, remember to modify the reference to the newly renamed field.

3.3.8 Notes Field Exchange – FX

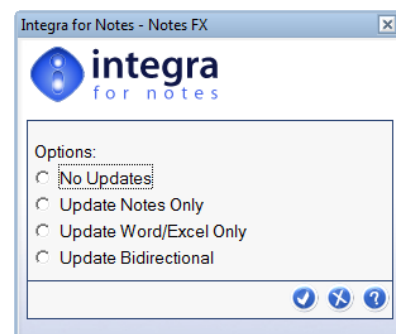
Integra for Notes supports the exchange of data between Lotus Notes fields and Word or Excel fields referred to in Lotus Notes as Notes Field Exchange or FX. Through this facility once data is pushed from Lotus Notes to an Excel spreadsheet or Word document, the data can be updated and manipulated and value from Word or more commonly Excel pushed back into the Lotus Notes database.

NOTES FX

An example scenario of this is the production of a quotation which takes client data from a Notes database, pushes it into a preformatted Excel spreadsheet and allows the user to fill in the products, quantities and prices. This process results in a total value of the proposal being calculated. When the Excel spreadsheet is stored into a Notes document, Notes FX could be used to update the total value into a field in the Notes document that has been created.

To achieve this, we need to create a computed field in the Integra profile to accommodate the total value of the quotation which has the same fieldname as that of the Notes field to be updated. Once we create this field and select it (using the check box to the left of the field name in the *Selected Field* list, we are then able to click on the Notes FX action button.

This will result in the following dialog box being displayed to the profile creator. This allows definition of the directionality of the FX updates with the available options having the following impact:



- » **No Updates** - will result in the removal of FX capabilities
- » **Update Notes only** – the data is pushed from Word or Excel one way to Notes only
- » **Update Word/Excel only** – results in the data being pushed from Notes to Word only
- » **Update Bidirectional** – ensures a 2 way updating from Excel/Word to Notes and back again. In this case, once the Excel/Word document is stored in Notes, once the spreadsheet is edited and for instance the total value is modified through other changes, then this will be pushed back to Notes. At the same time changes to the Notes data will be pushed to Excel.

Once the selected directionality of the Field Exchange is defined, Integra will change the field name entered by the profile creator by adding a suffix. The suffix added will depend on the directionality of the FX settings. These are defined in the table below:

FX Setting	Fieldname Suffix
No Updates	
Update Notes Only	.NFXNOTES
Update Word/Excel only	.NFXCOM
Update Bidirectional	.NFXBOTH

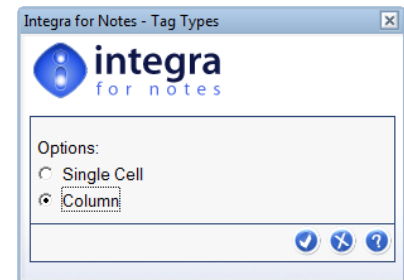
3.3.9 Exporting a Value to a Single Cell

While Excel spreadsheets using Integra usually require the exporting of columns of data for multiple rows, e.g. a list of sales effected will consist of a column for the date of the sale, another for the client, another for the value etc, there are situations in which a single value is to be exported once only. An example could be the name of the person issuing the report. This is not required to be displayed in every row of a particular column but rather just in one cell of the spreadsheet.

TAG TYPE

While this has been achieved in versions of Integra prior to 4.1 by ensuring that the name of the computed field starts with an underscore (a method which can still be used), this facility is now exposed in the profile's user interface in the *Selected Field* list. To set a computed field for single cell exporting, select the field or fields and click on the *Tag Type* button

This allows definition of the field as being a *Single Cell* or a *Column* export.



3.3.10 Rich Text Support

Integra supports the export of Notes Rich text into Word documents. Rich text is not supported for Excel or Text export because these file types do not support these.

To export a Notes Rich text field, the field needs to be added to the *Selected Field List* in the Integra profile as one would add any other field type. No further setting is necessary, as Integra validates at runtime whether a particular field in the *Selected Field List* is of type Rich text.

Integra supports the following Rich text elements: Text in any font, size and color, Text-lists, Tables, Images, OLE and URLs

Due to limitations in Word, Integra does NOT support: Doc-links, Bookmarks, and Images originating from the Notes design Image Resource. In-line bitmap images are also poorly supported by Word and images sometimes appear in gray scale.

Attachments and embedded objects contained in Notes documents are able to be programmatically accessed through Integra's *Advanced* Tab features and detached to the file system, embedded into Word documents, stored elsewhere etc. See the Integra web site for guidance.

3.4 Filtering & Sorting Tab

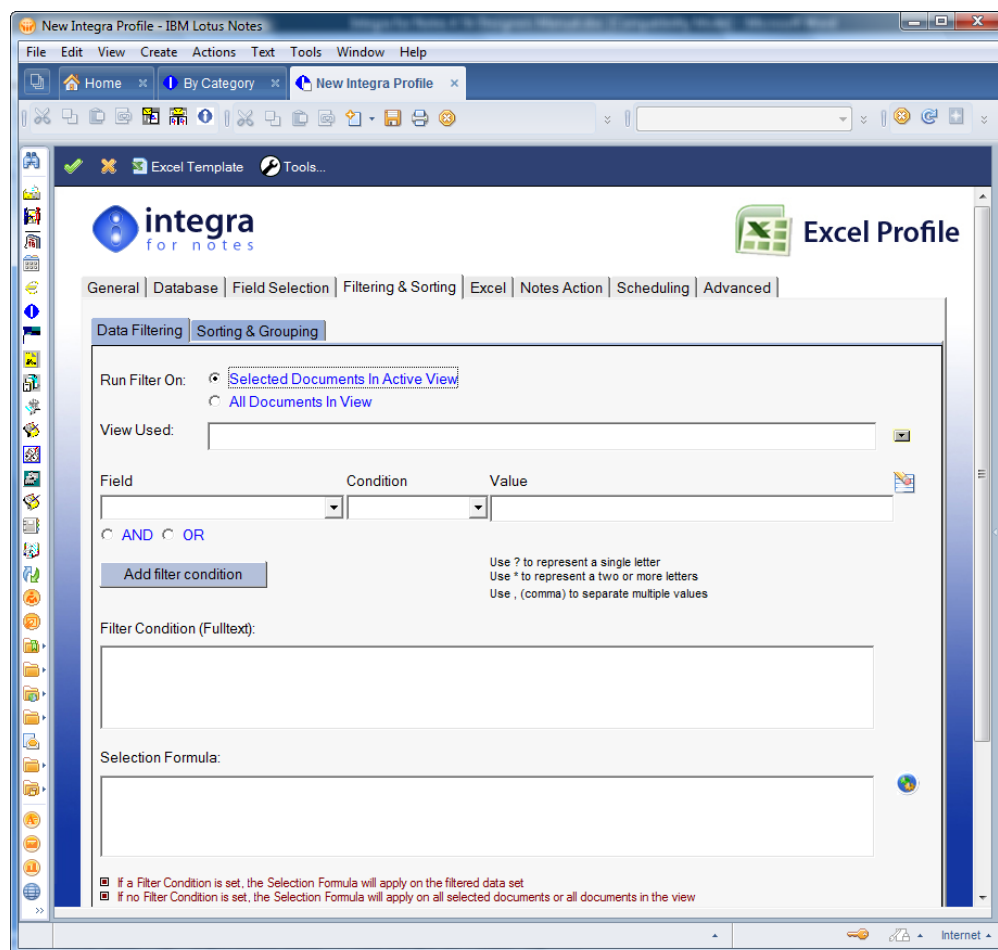
The *Filtering & Sorting* tab, which is only available for Integra export profiles, allows:

- » the setting of conditions that determine which data is exported
- » and just for Excel profiles, the order in which data is presented to Excel and any grouping or sub-totaling applied automatically to the Excel data

This aspect of the functionality for Integra for Notes allows improved control over the exported data without the need to set Lotus Notes selection formulae (although this remains as an option) or the need to utilize macros in Excel to determine the sorting and grouping order. All this can be effected through a simple point and click interface similar to the Lotus Notes rules dialog.

In addition, Integra for Notes 4.7 introduced the functionality of Stored Filters which allow the creation of a set of selection criteria which can be accessed dynamically by end-users when generating reports. For more details about Stored Filters refer to section 8 of this manual.

The *Filtering & Sorting* tab is itself divided into two sub-tabs, one for *Data Filtering* and the other, which is blank in the case of any profile types except Excel profiles, which is the *Sorting & Grouping* tab.



This section of the document outlines the functionality available in these two sub-tabs.

3.4.1 Data Filtering

The *Data Filtering* sub-tab of the *Filtering & Sorting* tab consists of 3 main areas:

- » **Run Filter On** – this option allows the user to specify whether the filter condition is to be applied only on the documents which have been previously selected by the user or on all documents within the current view.
- » **Condition** – this section allows identification of one or more fields and the value related to the condition using operators such as *Contains*, *Is Greater Than*, *Is Between* etc.
- » **Selection Formula** – this option allows the setting of a Lotus Notes formula using the same syntax as a View Selection Formula to define the data filter for exporting.

Each of these options are further explained in the sub-sections below.



The filtering capabilities available in the Filtering & Sorting Tab utilize the built in Lotus Notes full-text search query if a full-text index is available. If the Lotus Notes database from which you are reporting contains a full-text search index, the performance of this filtering will be significantly better than when performed on a database which does not have a full-text search.

If possible, we would recommend the creating of a full-text search on the source database.

When a full text search is performed on a Notes database, a maximum of 5,000 documents are returned by default. The Notes.ini variable *FT_MAX_SEARCH_RESULTS* can be modified to override this limit. This variable applies for indexed databases or databases that are not indexed but are running on the client. If a database is not full text indexed and is running on the server, you must set the *TEMP_INDEX_MAX_DOC* Notes.ini variable as well.

3.4.1.1 Run Filter On

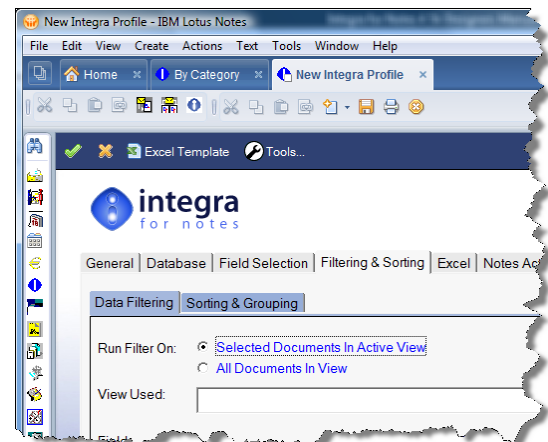
This option allows the user to specify whether the filter condition is to be applied only on the documents which have been previously selected by the user or on all documents within a particular view. The default setting is *Selected Documents in Active View*.

In the case that the *All Documents in View* option is chosen, then a new field will appear which allows the user to specify the particular view to be used. The view can be selected from the drop down list where the available views from the source database are listed.

The selected database may contain hidden views. These hidden views will only be listed if the user has been granted the *Hidden* role in the Integra database's ACL.

In the event that no filter has been set, the *Run Filter On* option still determines which documents are exported, namely just the selected documents or the view's complete contents.

When a filter is applied, if for instance a database contains 2,000 documents in the current view but the user has selected (through the selection bar in the view) 100 of these documents, then, in the case that the *Run Filter On* option has been set to *Selected Documents in Active View*, it will only be those documents from among the 100 selected documents that meet the set condition that will be exported.



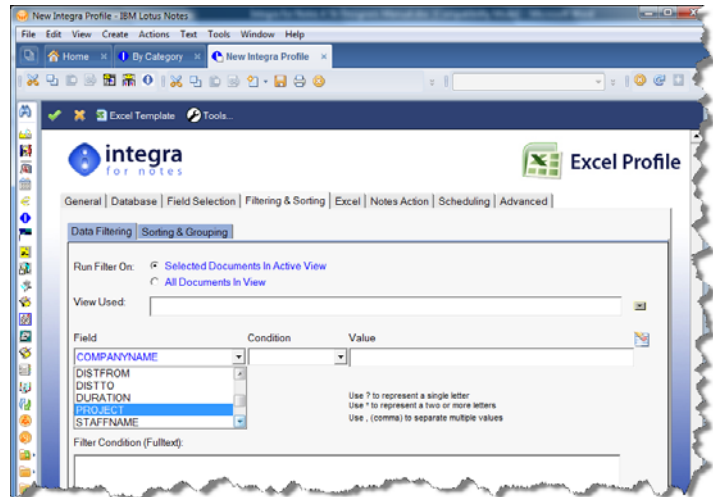
In the event that the *Run Filter On* option has been set to *Selected Documents in Active View*, however no documents have been selected by the user, then the condition will apply based on the value of the option called "Export all documents if none are selected" found in the *Filtering & Sorting* tab.

3.4.1.2 Condition

The Condition section allows the selection of one or more fields and the setting of a filtering condition to ensure that the data exported meets the set condition or conditions.

4 steps allow the user to set each filter condition:

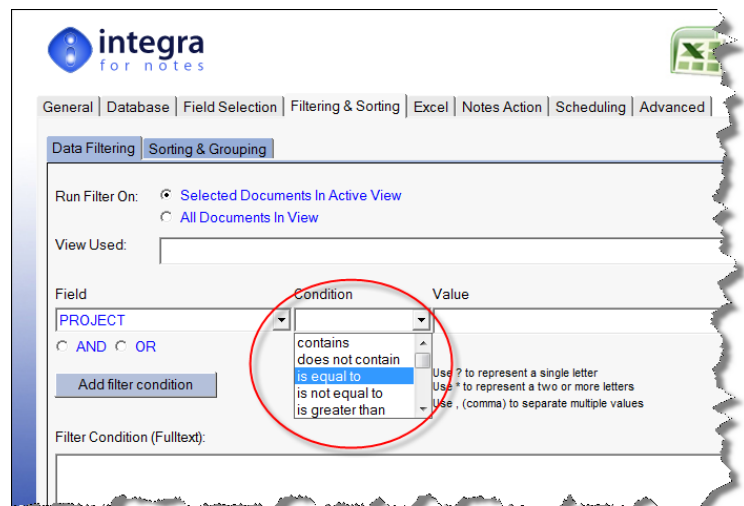
1. **Select field** - click on the arrow in the field drop-down menu button. The list displays the fields contained on the currently selected form as set in the *Field Selection* tab → *Available Field List*. Fields defined on a sub-form are fully supported for use in the condition. Changing the form in the *Available Field List* tab will allow selection of a different set of fields.



Please note that this filtering capability does not support setting of conditions based on the value of a computed field. For such a capability, utilize the *Selection Formula* field.

2. **Select the condition** – select the parameter to be used for the condition. The list of available conditions are:

- » contains
- » does not contain
- » Is equal to
- » Is not equal to
- » Is great than
- » Is less than
- » Is between
- » Is not between
- » Is on
- » Is after
- » Is before
- » Is not on



3. **Enter the value** – enter the value of the condition. For instance, if used with the condition *Contains*, the value may be Joe Doe. If used with the condition *is between*, then two data box values will appear and the user can enter the value. If the condition is set on a date field, then two dates are expected. There is no need to surround values with quotation marks. Just enter the value in the date format of your computer.



The filtering capabilities available in the Filtering & Sorting Tab utilize the built in Lotus Notes full-text search query. If the Lotus Notes database from which you are reporting contains a full-text search index, the performance of this filtering will be significantly better than when performed on a database which does not have a full-text search.

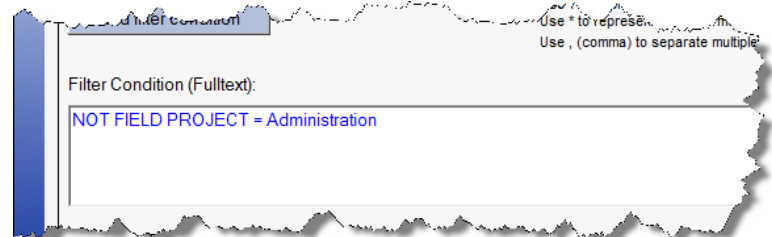
If possible, we would recommend the creating of a full-text search on the source database.

As indicated in the tab itself, wildcards can be used in values utilized for conditions. Use a ? to represent a single letter. Use a * to represent 2 or more letters. Multiple values can be separated by a comma.



Integra is unable to validate the data being entered. If a condition is set on a date field, the user must ensure that the value or values entered are in fact dates entered in the date format used on the user's workstation. Invalid values will not be rejected but will result in data not meeting the condition being reported.

4. **Click on Add Condition button** - Once the condition has been set, click on the *Add Condition* button. This will convert the condition entered into a Lotus Note's query statement which will be shown in the *Filter Conditions* box.




Once the first condition has been set, this condition can be combined with a second and subsequent conditions by ensuring that the AND or OR fields are set appropriately and then re-entering another condition. This allows the combining for instance of a date range condition with the value for a specific client account, member of staff or sales region

The use of the AND option will of course only result in the reporting of data which meets both the first AND the second condition while the use of the OR parameter will only require one of the conditions to be found to be true for the data to be exported.

For developers familiar with the Lotus Notes' search query language, direct entry of a query into the *Filter Condition* box is possible.

Removal of a Condition

Once a filter condition has been added and it appears in the *Filter Condition* box, its removal its can be undertaken by deleting the contents of the *Filter Condition* box. On the other hand, the setting of a condition which has not yet been added can be cleared by the use of the rubber icon. 

3.4.1.3 Selection Formula field

The *Selection Formula* field allows the definition of a Lotus Notes formula similar to a view selection formula which will apply on the data being exported. In the event that a selection formula is set in addition to filter condition(s), then the *Selection Formula* will apply on the filtered data set. If however no Filter Condition is set, the Selection Formula will apply on all selected documents or all documents in the view

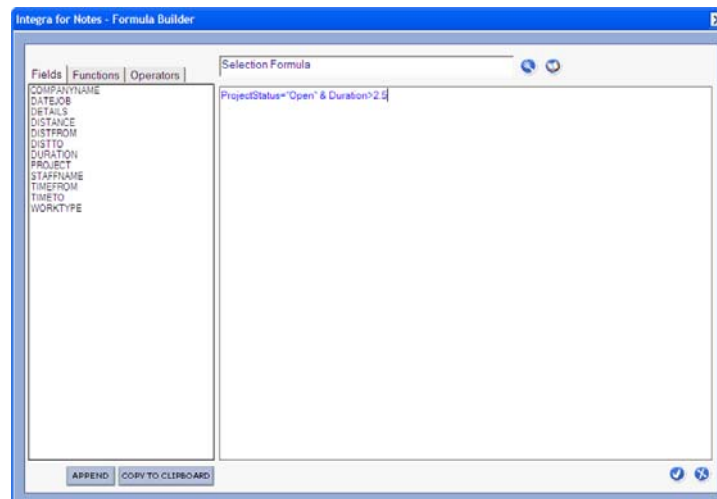
The syntax of the Selection Formula field is almost identical to that which would be used for any standard *View Selection* formula consisting of a valid Notes formula function with the exception that the SELECT statement at the beginning of a View's Selection formula is to be omitted.

An example *Selection Formula* for a profile which requires only documents with a field called *Final* set to *Yes* and a field called *Value* which is greater than 10,000 would be:

Final="Yes" & Value>10000

The syntax is also enhanced in that it is allowed to use any Notes Formula function available within the context of a Notes document. This includes for instance functions like @Dblookup or @dbcolum, which are not allowed within a view selection formula.

The building of a valid *Selection Formula* is able to be undertaken using the *formula builder* by clicking on the builder icon shown to the right side of the *Selection Formula* field. This will present the following *Formula Builder* dialog box.



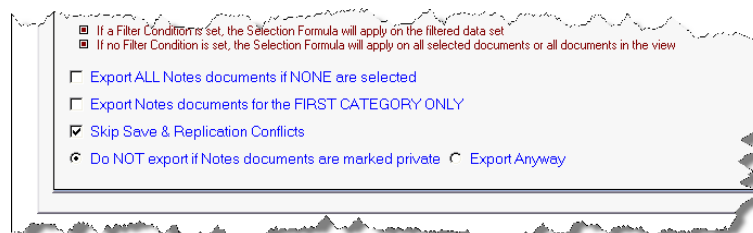
For an explanation of the *Formula Builder* functionality in Integra for Notes refer to section 3.3.5.



It should be noted that if both filtering options are used (full text filter + selection formula) that the selection formula runs on the result set of the full text filter condition. This is important to understand for optimizing performance

3.4.1.4 Filtering Options

A number of filtering options are also available.



These options provide the following functionality:

3.4.1.5 Export All Documents if None are Selected

By Default, an Integra profile will run only on those documents in a view which are selected. An option exists in the *Database Tab* which allows a specific view to be selected and for the profile to run on all the documents in that selected view.

However Integra allows the setting of an advanced option through which, if it finds that no document has been selected by the user in the current view, then all the documents in that view will be exported.

3.4.1.6 Export Notes Documents for the First Category Only

When exporting data from a categorized view and selecting a document for export which is contained in more than one category, by default Integra will export the fields from the selected document multiple times; once per category.

Should the profile creator want a document only to appear once in the export, then he should select the *Export Notes Documents for First Category Only* option.

3.4.1.7 Skip Save & Replication Conflicts

When this option is set, which is the default setting, any documents identified as being *Save* or *Replication Conflict* documents will be skipped and not exported. However, what ever the default behaviour is that is selected here, using advanced script, this can be overwritten. The CB_CONFLICT event (see section 3.10.3.7) will always be executed, but the default for whether Integra exports the document or not is determined with this flag

3.4.1.8 Do Not Export if Notes Documents are Marked Private

Some Notes applications make use of the form property "*Disable for printing/forwarding/copying to clipboard*". This option creates a field called \$KeepPrivate which is set to a value of "1" on any new document created with the particular form. When selecting this option Integra will check whether the \$KeepPrivate field exists and is set to "1" on each of the documents being processed and if it does then Integra will not export those particular documents. If you select the "*Export Anyway*" option, Integra will ignore an existing \$KeepPrivate field and export the documents to the Word, Excel or Text file.



The Notes "Disable for printing/forwarding/copying to clipboard" feature is not considered a security feature. It just makes it a bit more difficult to mistakenly make confidential information available to third parties. As in Notes, it is possible with Integra to circumvent the *Keep Private* feature.

3.4.2 Sorting & Grouping

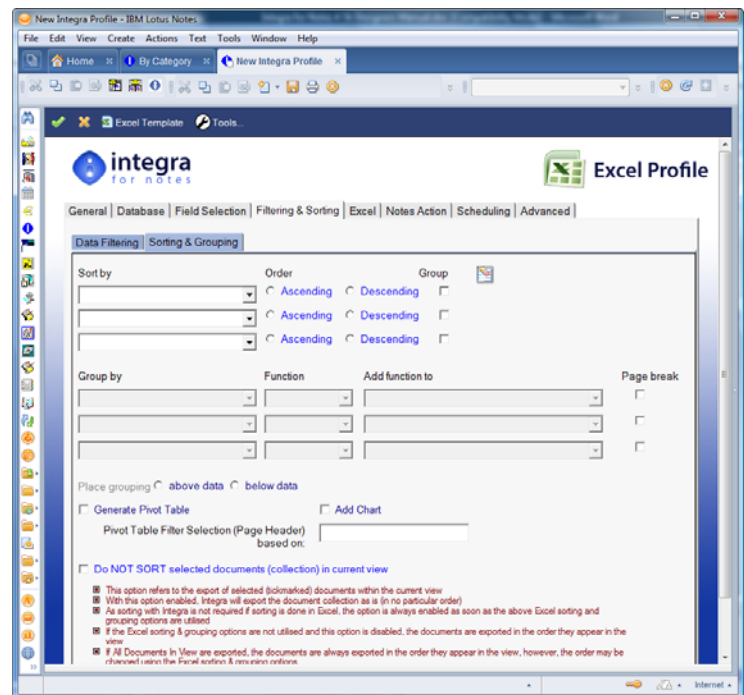
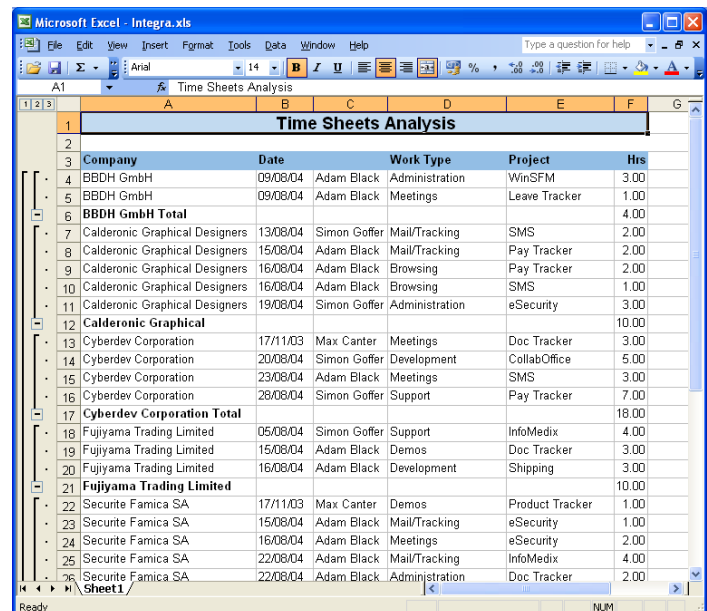
The *Sorting & Grouping* sub-tab found in the *Filtering & Sorting* tab is only available for Excel based export profiles and is left blank for other profile types. This area of functionality allows the Integra profile creator to determine the order of sorting and any grouping/sub-totaling as the data appears in the Excel spreadsheet. This new feature, introduced in Integra for Notes 4.1 avoids the need for the setting of macros in Excel to achieve sorting and grouping.

In the absence of the use of any settings for sorting and/or grouping, Integra will present the data in Excel in the order in which the data is displayed within the Lotus Notes view. When using the *"Selected Documents in Active View"* option, Integra will automatically sort the collected documents in order of the first non-categorized column of the active view.

Integra for Notes uses Excel's default three levels of sorting that are built into the product allowing recursive sorting to be undertaken, for instance By company name then within all data for the same company the data would be sorted by date. Three sets of fields can therefore be defined in the form.

The parameters for determining the sort order consist of the following:

- » **Sort by** – this drop down menu allows selection of the field on which the sorting is to be undertaken. Again, only fields from the currently selected form (set in the *Field Selection* tab) are displayed.
- » **Order** – this allows definition of whether the data is to be sorted on that field in ascending (the default) or descending order.
- » **Group** – this check box allows the data in Excel to utilize the *Data → Sub-total* command in Excel to group and categorize the data by the chosen field (see an example alongside of a spreadsheet categorized by Company Name with totals per company).

Company	Date	Work Type	Project	Hrs
BBDH GmbH	09/08/04	Adam Black	Administration	3.00
BBDH GmbH	09/08/04	Adam Black	Meetings	1.00
BBDH GmbH Total				4.00
Calderonic Graphical Designers	13/08/04	Simon Goffer	MailTracking	2.00
Calderonic Graphical Designers	15/08/04	Adam Black	MailTracking	2.00
Calderonic Graphical Designers	16/08/04	Adam Black	Browsing	2.00
Calderonic Graphical Designers	16/08/04	Adam Black	Browsing	1.00
Calderonic Graphical Designers	19/08/04	Simon Goffer	Administration	3.00
Calderonic Graphical				10.00
Cyberdev Corporation	17/11/03	Max Canter	Meetings	3.00
Cyberdev Corporation	20/08/04	Simon Goffer	Development	5.00
Cyberdev Corporation	23/08/04	Adam Black	Meetings	3.00
Cyberdev Corporation	28/08/04	Simon Goffer	Support	7.00
Cyberdev Corporation Total				18.00
Fujiyama Trading Limited	05/08/04	Simon Goffer	Support	4.00
Fujiyama Trading Limited	15/08/04	Adam Black	Demos	3.00
Fujiyama Trading Limited	16/08/04	Adam Black	Development	3.00
Fujiyama Trading Limited				10.00
Securite Famica SA	17/11/03	Max Canter	Demos	1.00
Securite Famica SA	15/08/04	Adam Black	MailTracking	1.00
Securite Famica SA	16/08/04	Adam Black	Meetings	2.00
Securite Famica SA	22/08/04	Adam Black	MailTracking	4.00
Securite Famica SA	22/08/04	Adam Black	Administration	2.00

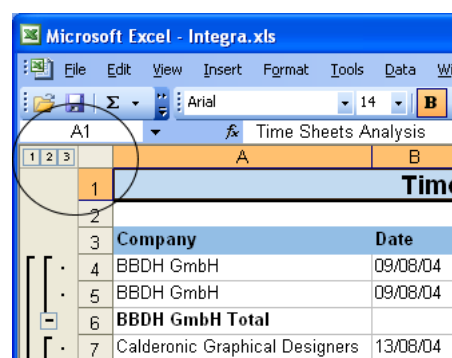
3.4.2.1 Grouping

Grouping, will allow the presentation of the data “categorized” under the field on which the data is grouped allowing collapsing and expanding of data per group in a manner somewhat similar to a Notes view, and optionally showing totals, averages or counts of the data per group.

Grouping can only be implemented if the data is also sorted in the same order as it is grouped,

The screenshot alongside shows an Integra generated Excel report generated from a time sheets Notes database which shows data grouped by *Company Name* with a total per *Company*. You will notice the minus signs in the left hand margin which allow collapsing of the data in that group (resulting for instance in presentation as in the screen shot alongside with collapsed group data. Once collapsed, the minus sign shows as a plus sign to allow expansion again.

In addition the 1 2 3 icons shown at the top left of the Excel spreadsheet (see alongside) allow display of all groups at each level. All this is standard Excel sub-total functionality which is just triggered by Integra.

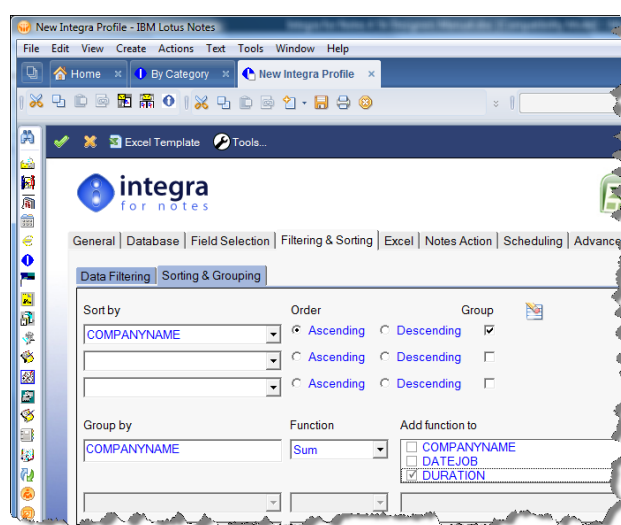


Function Calculations

When data is chosen to be grouped, as well as resulting in a format of presentation using the collapse and expand concept, the facility is available to allow various calculations such as totals and averages for each of the grouping levels.

These calculations trigger standard Excel functions. A particular function such as the Sum or Average function can be applied to multiple fields. Choose the fields on which the selected functions are to be used for that grouping level by clicking on the field or fields in the field list.

The available list of functions, selected using the drop-down menu alongside each of the three groups, consists of the following:



Function	Description
Sum	Total of the values in the column for that group or sub-group
Count	Number of entries
Average	Average of the values
Max	Largest value found
Min	Smallest value found
Product	Multiplies each of the values shown in that sub-group by each other. As an example, if 5 entries are found for the group in question, <i>Product</i> will multiple each of the 5 entries by each other to obtain one figure.
StdDev	Estimates the standard deviation based on a sample of the items
StdDevP	Calculates the standard deviation based on the entire population of data
Var	Estimates Variance based on a sample of the data in that group
VarP	Calculates Variance based on the entire population of data in that group

For further details about these functions, please refer to Microsoft Excel’s help.

Page Break

The *Page Break* check box near each grouping inserts a page break in Excel after each group. This allows printing of the report from Excel with each group automatically being on a different page. It is worth noting that this option only really makes sense when only one column is grouped. Excel produces undesirable effects when using multi-level grouping. This is an Excel issue.

Place Grouping

The *Place Grouping* option determines whether the answer from the function, for instance the total or average etc., should be placed *Above the Data* (i.e. prior to the data for that group) or *Below the Data* (i.e. after all entries for that group have been shown). Once again, these are all built-in Excel features for the Sub-total command which are triggered by Integra.

For further details about these grouping features found in Integra, please refer to the Excel help about the Data→Sub-total command.

3.4.3 Excel Pivot Tables

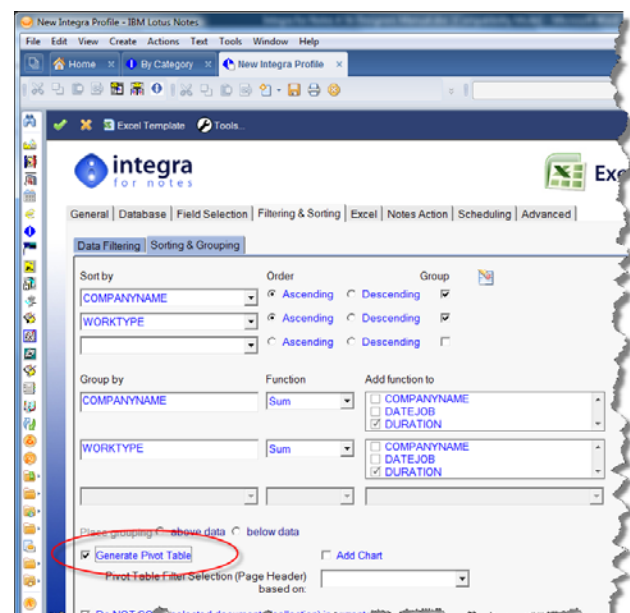
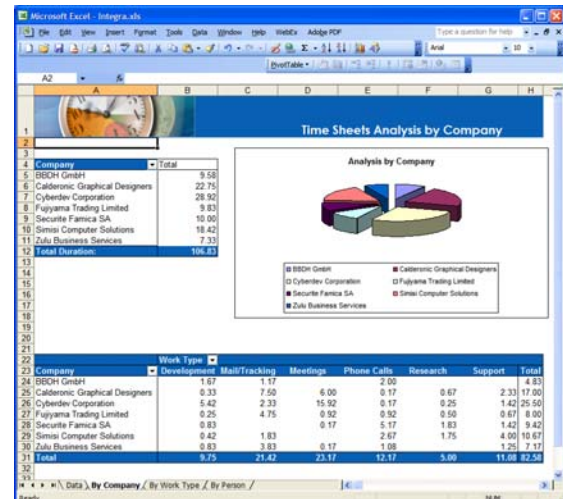
Pivot Tables are a standard feature of Microsoft Excel that enable very sophisticated analysis and cross-tabulation of data within an Excel spreadsheet enabling a user to create multidimensional data views by dragging and dropping column headings to move data around.

A pivot table is an excellent reporting tool that sorts and sums independently of the original data layout in the spreadsheet. The example shown at the bottom half of the screenshot alongside shows a summary of exported data contained in the *Data* worksheet shown with a unique list of *companies* down the rows and *work types* along the columns

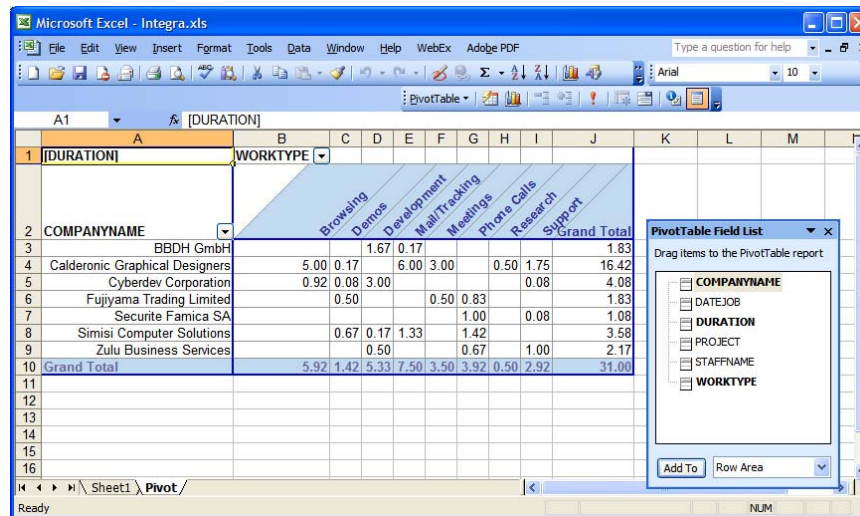
Integra for Notes, through its usage of Excel, is able to allow users to set up and use Excel Pivot Tables in the Excel template they create for a particular Integra profile, however in the past, all this work needed to be done in Excel and triggered using Macros in your Excel Template.

Integra for Notes exposes the set up of Pivot Tables directly within the Integra profile and allows the very easy set up of Pivot Tables from within the profile. The option is available within the *Sorting & Grouping* sub-tab contained within the *Filtering & Sorting* tab of an Excel profile and is available by selecting the *Generate Pivot Table* checkbox (see the example profile alongside).

Pivot Tables analyze data across a minimum of 2 data sets. The example shown in the screenshot above relates to an analysis of the *Company* and the *Work Type*. The facility requires that the data is grouped to the levels required for analysis. In the case of the example shown, the data would be grouped by *Company* and then by *Work Type*.



When running the Integra profile, Integra will automatically generate a second worksheet called *Pivot* containing a Pivot Table with the field used for the first sort level set for the rows and the second sorting field set for the columns. See the example below.



		Browsing	Demos	Development	Mail Tracking	Meetings	Phone Calls	Research	Support	Grand Total
1	[DURATION]									
2	COMPANYNAME									
3	BBDH GmbH		1.67	0.17						1.83
4	Calderonic Graphical Designers	5.00	0.17	6.00	3.00	0.50	1.75			16.42
5	Cyberdev Corporation	0.92	0.08	3.00			0.08			4.08
6	Fujiyama Trading Limited		0.50		0.50	0.83				1.83
7	Securite Famica SA				1.00		0.08			1.08
8	Simisi Computer Solutions	0.67	0.17	1.33	1.42					3.58
9	Zulu Business Services		0.50		0.67		1.00			2.17
10	Grand Total	5.92	1.42	5.33	7.50	3.50	3.92	0.50	2.92	31.00

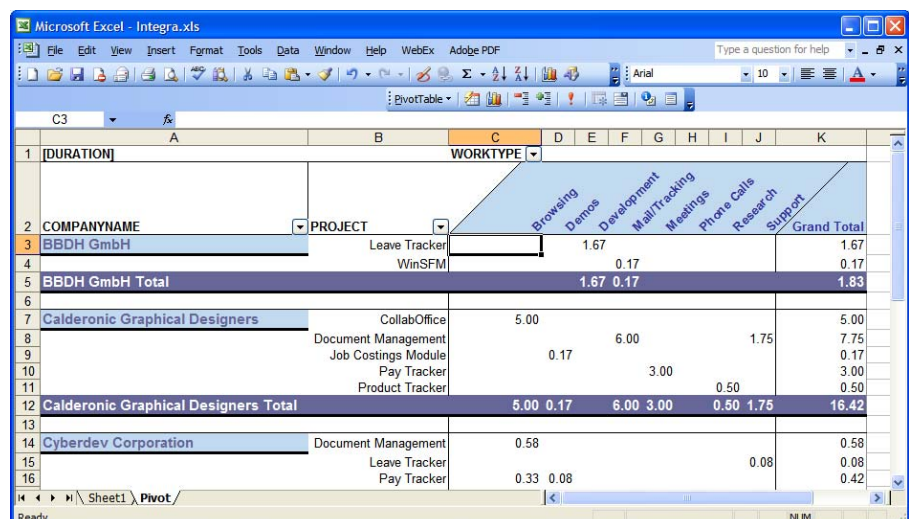
Once the Pivot Table is created, further touching up of the Pivot Table including greater depth of analysis would be perfectly possible.



For a detailed understanding of the operation of Pivot Tables in Excel, please refer to the Excel documentation

If the Generate Pivot Table option is selected, the user will also be able to set a value for the *Pivot Table Page Header* field and the Pivot Table will add the selected field to the Pivot Table header with a default value of *All*. This feature will allow a user to retain the *All* value for this header field, indicating that all the selected data will be included in the analysis, or the user will be able to select a value from this field and only display data meeting that filter condition. As an example, if the field called *Project* was set for the *Pivot Table Header*, then a list of available projects will be shown and, if one particular project is selected, then only the data related to that project will be displayed of course still showing the companies down the rows and the work types across the columns. If you are not familiar with Pivot Tables in Microsoft Excel, we strongly recommend you take a look at them.

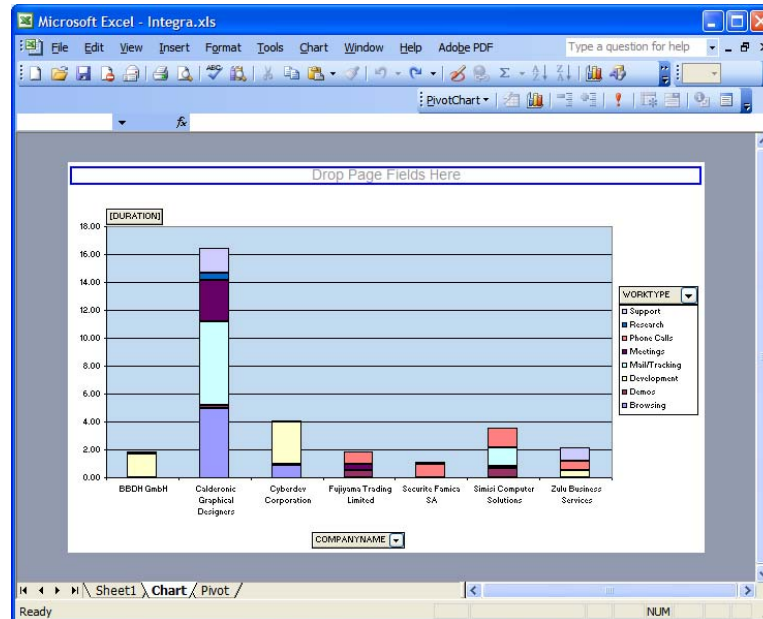
If the user chose to use 3 levels of sorting, then the Pivot Table analysis will show the first level further sub-divided by the second level down the rows and the third level will be shown across the columns. The screenshot below shows an example where the first level is set to the *Company* field, the second level is set to the *Project* field and the third level is set to the *Work Type* field.



			Browsing	Demos	Development	Mail Tracking	Meetings	Phone Calls	Research	Support	Grand Total
1	[DURATION]										
2	COMPANYNAME										
3	BBDH GmbH	Leave Tracker		1.67							1.67
4		WinSFM				0.17					0.17
5	BBDH GmbH Total			1.67	0.17						1.83
6											
7	Calderonic Graphical Designers	CollabOffice	5.00								5.00
8		Document Management			6.00		1.75				7.75
9		Job Costings Module	0.17								0.17
10		Pay Tracker			3.00						3.00
11		Product Tracker					0.50				0.50
12	Calderonic Graphical Designers Total		5.00	0.17	6.00	3.00	0.50	1.75			16.42
13											
14	Cyberdev Corporation	Document Management	0.58								0.58
15		Leave Tracker					0.08				0.08
16		Pay Tracker	0.33	0.08							0.42

3.4.4 Automated Charting

If the Generate Pivot Table option has been selected (see section 3.4.3), it is also possible to generate a default chart related to the data shown in the Pivot Table. The chart will be generated in a separate worksheet called chart and will use the chart type defined as the default chart for your Excel settings.



Modifications to the chart type, formatting etc is of course still possible unless the protection options have been set in the Integra profile.

3.4.4.1 Do Not Sort Documents in Current View.

A check box is also available at the bottom of this tab which enables Integra to be set not to sort the documents being exported to Excel. This feature is mainly used when no sorting options have been set in the Sorting & Grouping tab and sorting is to be undertaken using a macro in Excel. This is only relevant if the *Run On Selected Documents in Active View* is selected. Otherwise Integra does not need to sort, but uses the view's sort order.

In the absence of any sorting settings, Integra will sort the data being sent to Excel in the sort order of the Notes view. Because Lotus Notes views utilize a non-standard sorting algorithm, this involves Integra needing to implement that same algorithm to ensure the presentation of the data agrees with the method used in Notes. This involves a performance overhead. If a user is going to set a macro in Excel in any case to resort the data in accordance with some other criteria, then it is desirably to avoid this performance intensive resorting. This can be achieved by setting the *Do Not Sort Documents in Current View* option.

When the Integra profile is set to use sorting, this option is automatically selected however it can also be manually selected without any sorting being set. Some further explanations about the use of this feature are shown below the check box.

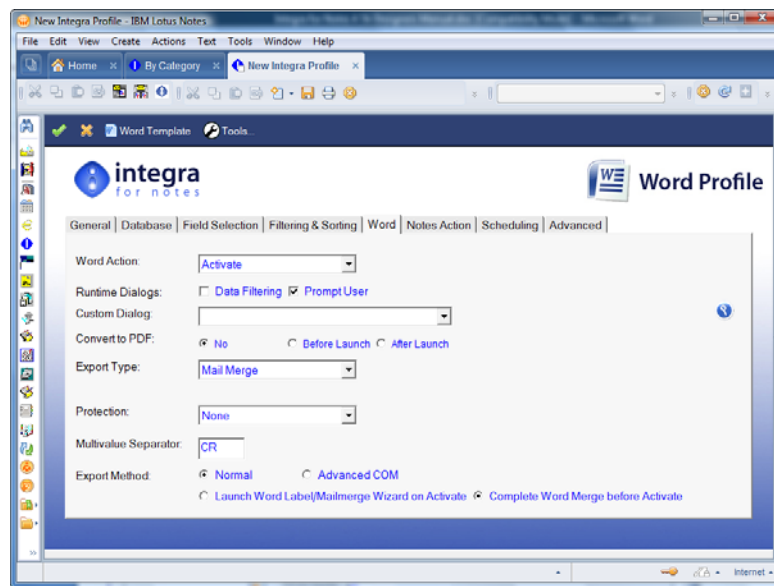
3.5 The Word Tab

The Word tab is only available for Word Document profiles and defines the actions to be taken by Word when the data is transferred to and from Notes and Word documents.

The content of the Word tab is different for Integra profiles used for exporting to Word as compared to profiles used for importing from Word.

3.5.1 Word Export

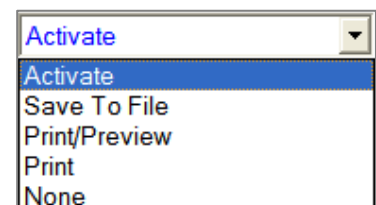
This section of the manual describes the data content of the Word Tab used for export.



3.5.1.1 Word Action

The *Word Action* field allows definition of what action is to be taken by Word on receiving the data from Integra and determines what Word will do following the integration. The available options are:

- » **Activate** - Integra will activate the Word application and bring Word and the created document active on the screen. This action allows the user to check and amend the created document before printing, sending or saving it back to Notes.
- » **Save To File** - This action will save the document straight into a file on the file system. Selecting this option will optionally allow identification of the file name and path as a part of the profile. If the filename has not been predefined within the profile, the user will be prompted with the standard Windows file save dialog box.
- » **Print/Preview** - This action is similar to the Activate action in that Word will be brought up on screen with the created document. However, it will be automatically activated in *Print Preview* mode. The user will not be able to amend anything other than the page settings before the document is printed.
- » **Print** - This action will send the Word document directly to the printer. The user will be prompted with the standard Word print dialog box for selection of various options.
- » **None** - When this option is selected, no Integra action will be executed. This option is only useful in conjunction with one of the Notes actions. e.g., you may want to email an exported Word document directly without any of the other Integra actions.

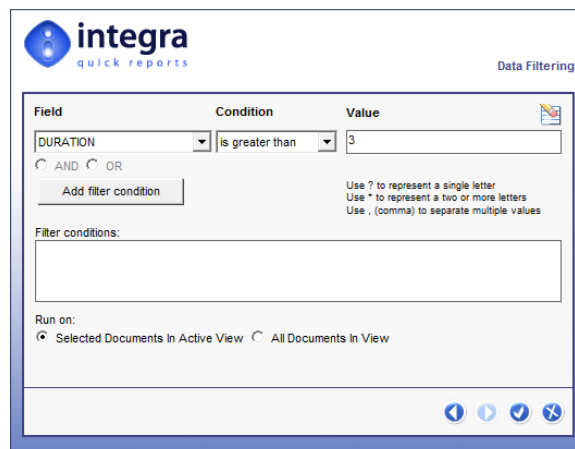
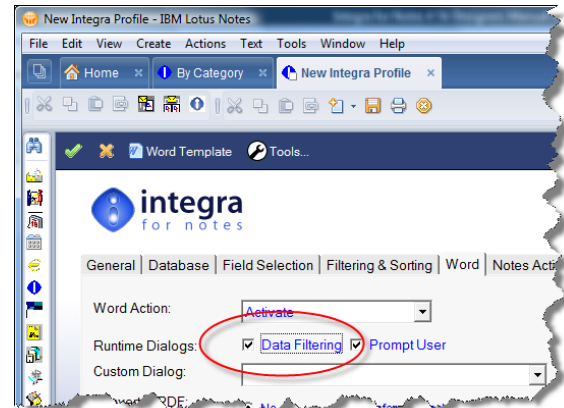


3.5.1.2 Runtime Dialogs

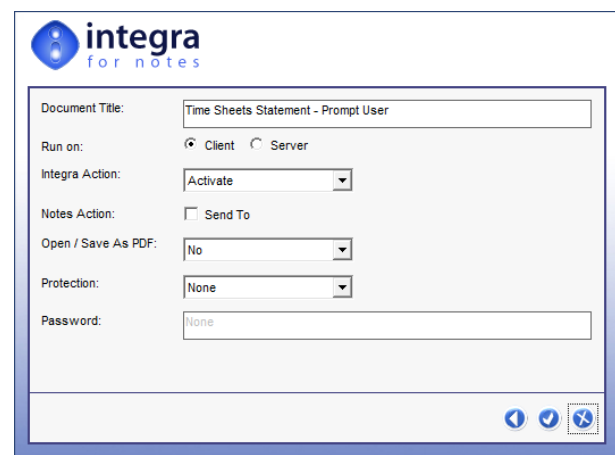
An Integra profile has been set in such a way that it can present the user at the time of running the profile with a one or two dialog boxes. As these appear only at the time of running a profile they are referred to as *Runtime Dialog* boxes.

Integra Word profiles support two types of *Runtime Dialog* Boxes:

- » **Data Filtering** – when the *Data Filtering* runtime dialog box is enabled, on execution of the Integra profile the user will be presented with a dialog box which allows the user to filter the data generated by the profile so as to meet one or more conditions. The capability provided is the same as that able to be set by the profile designer in the *Filtering* tab of the profile but the difference is that, whereas when set in the profile, the filtering condition(s) is fixed, a *Runtime Data Filtering* dialog box allows the end-user to set the filtering condition at the time of report execution.



- » **Prompt User** – selecting this option will result in the user being presented with the *Prompt User* dialog box at the time of executing the Integra profile. This dialog box presents the user at runtime with a set of choices such as PDF conversion, protection and possibly an e-mail option.



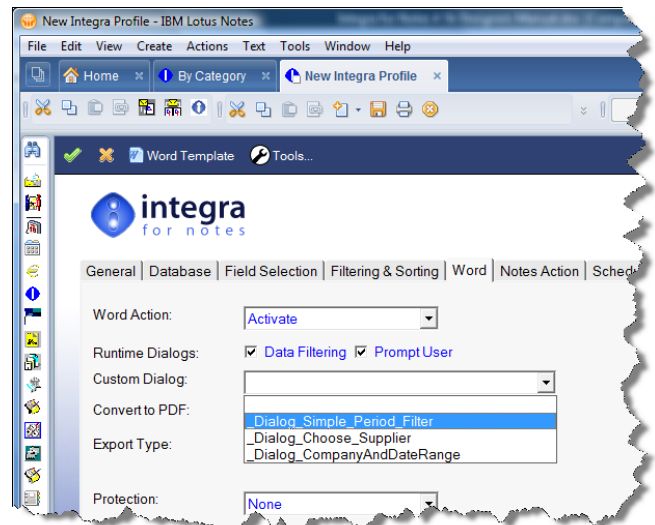
3.5.1.3 Custom Dialog

Integra for Notes has supported the presentation of custom dialog boxes to end-users at runtime since its early versions. This extremely useful feature allows the presentation at runtime of a dialog box to the end-user who runs a profile to allow collection of additional data or settings. An example may be the presentation of a list of companies to the user to allow selection of the company for which to generate a report or statement (see example alongside). Rather than fixing filtering conditions or allowing the user to set filtering conditions through the *Data Filtering Runtime* Dialog box (see section 3.5.1.2), this user allows a designer to create a custom-made dialog box to collect data at runtime from the user some or all of which may be used for the filtering of data.

In previous version of Integra for Notes, the triggering of runtime dialogs was achieved through the use of LotusScript in the *Advanced* tab of an Integra profile and thus required a profile designer to be familiar with using LotusScript. A form needed to be created and added to the design of the Integra database which is used to define the layout and content of the dialog box.

Integra for Notes 4.5 onwards allows a user to call-up a dialog box by setting the name of the form to be used for generating the dialog box in the new *Custom Dialog* field available in both the *Excel* and the *Word* tabs of an Integra profile, thus extending this functionality to users of a lower level of skill.

The form still needs to be added to the design and its name referenced in this field. The drop down menu in this field will list any form in the design of the Integra database whose name begins with *_Dialog_* (i.e. *_Dialog_Simple_Period_Filter*) and therefore if care is given to use form names for such dialog box which start with this name, then the user will be able to pick the form name to be used for the custom dialog box.



3.5.1.4 Document Filename Field

This field is available only when selecting the "Save To File" option in the Word Action field. This option is mainly used when using a file system structure to store (save) created Word Documents. Enter a complete path & filename for the Word Document or select from the file system by using the File Folder icon.



In the event that the *Save to File* Word Action is selected and the file name is left blank, then the user will be asked for the entry of the file name at runtime using the presentation of the standard Windows *File Save* dialog box.



Remember that Integra also provides a facility to write back the Word document created directly into the current or another Notes database. This option is useful to allow recording of generated reports.

To define the file name to be used when the file is stored back in Notes, enter the complete path and file name e.g. *c:\Data\Clients\ABCreport.doc*. The file extension is optional and, if missing, will be added by Integra

3.5.1.5 Convert to PDF

The convert to PDF option allows the data to be converted to a PDF file using one of the supported methods after being pushed to Word.

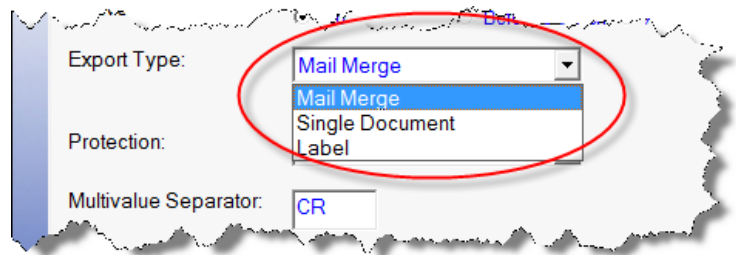
Three settings are available for this option:

- » **No** – no conversion to PDF is undertaken.
- » **Before Launch** – this option will convert the output to PDF before (and in fact instead of) launching Microsoft Word. When combined with the choice of the *Activate* setting for the *Word Action*, this will result in your PDF viewer being opened with the generated PDF document. This ensures a protection of the data.
- » **After Launch** – this option will launch Microsoft Word (when combined with the choice of the *Activate* setting for the *Word Action*) and will only convert to a PDF file for onward distribution or storage after the user has closed Word. This allows the user, within the limits of the protection options set (see section 3.5.1.5), to fill in and complete the Word document prior to it being converted to PDF and distributed.

3.5.1.6 Export Type

Integra supports three different types of exports of data from Notes to a Word document:

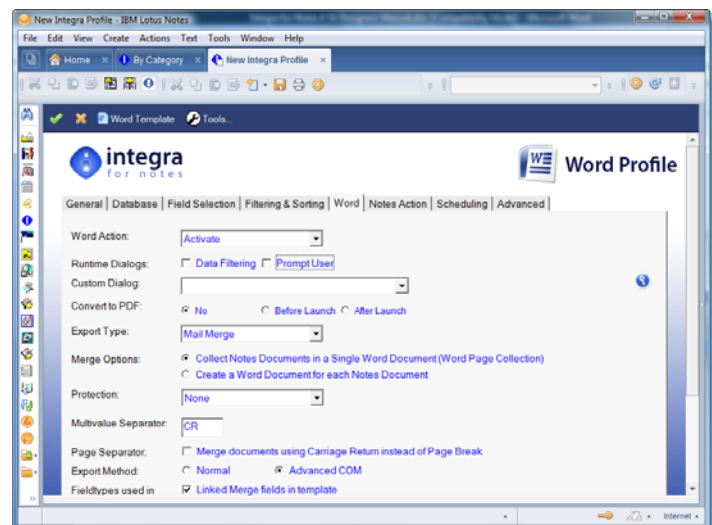
- » **Mail Merge** - The mail merge option, which is the default option, is used to collate data from various Notes documents into a series of outputs. Depending on the setting of the *Merge Options* field (see below), the data from the Notes documents may be placed into one large Word document or multiple single documents.
- » **Single Document** - This option is used when only one Notes document at a time is used to create a Word document. This can either be the currently highlighted document in the view or the currently opened (for reading or editing) Notes document.
- » **Label** - This option is used for Word templates designed to create labels. See the definition of the *Field Separator* field in section 3.5.1.7.



3.5.1.7 Merge Options

The *Merge Options* field is only presented when the *Export Type* field is set to *Mailmerge* and when the *Export Method* field (see section 3.5.1.11) is set to *Advanced COM*. This option allows definition of a setting which, in the event that multiple Lotus Notes documents have been selected, defines whether one mail merge document is created for all Notes documents or a series of individual Word documents.

Imagine that 15 contact forms from a Notes database are being selected for inclusion into a 1 page letter, setting this option to *Collect Notes Document in a Single Document* will result in a single Word document being created which will contain 15 pages, each page relating to the contact details from each Lotus Notes document.



In the event that the *Merge Options* field has been set to *Create a Word Document for each Notes document*, then 15 Word documents will be created, each of which may be saved to a series of Notes documents, e-mailed out to 15 addresses etc.

3.5.1.8 Protection Field

If a user is moving Notes data into a Word document, a requirement may arise to restrict the ability of the recipient of the reported data from modifying the data and claiming that that was the data generated by Integra.

Word provides different levels of protection within documents and therefore Integra provides the following four options within the *Protection* field.



- » **None** - The Word Document remains unprotected and the entire document can be altered.
- » **Allow Comments Only** - The user can only add comments to the Word Document. Comments are not visible on the document (except for the marker which indicates a comment to the user) and are not printed. This option delivers the highest level of protection.
- » **Allow Revisions Only** - The user can alter the document content, but the changes will be clearly indicated with different color and font properties. Text parts deleted by the user are not removed but stricken out (~~stricken-out~~).
- » **Allow Field-Editing only** – this option allows the user to modify only the value of the Form Fields within the Word document but not the surrounding text.

While by default Integra creates Integra fields as Merge Fields in Word, an option exists to create Form Fields, and, when used in conjunction with the *Allow Field Editing Only* option ensures that the user is only able to modify the contents of these fields and not the whole document. For further details about creating Form Fields refer to section 4.5.



3.5.1.9 The # of Labels Field

In the case where the document type selected is *Label*, and the export method (see section 3.5.1.11) is set to *Advanced COM*, Integra will prompt the user to identify the **total number of labels** to be posted on each page. Depending on the label types and sizes, rows and columns being used, the number of labels on each page will vary and the settings in Word must vary. Integra needs to know the number of labels to be generated into Word.

3.5.1.10 The Multi-value Separator Field

When Integra is faced with a Notes field, which is a multi-value field, Integra converts multi-value text fields into a single text string using the character entered into the Multi-value Separator field to separate the multiple values in the field.

You can use any character or character string to separate values. Use "CR" to separate values with a carriage return.



On the export, Integra is only normalizing multi-value text fields. For any other field type, Integra will only export the first value of the multi-value Notes field. You can use the formula field type to convert any multi-value field type into multi-value text fields - e.g. using a formula like `@Text(LinItemValues;"F,2")`.

3.5.1.11 Export Method

Integra for Notes offers various methods of importing and exporting of data between Lotus Notes and Microsoft Word/Excel. In the case of Word Exports, these are *Normal* and *Advanced COM* while in the case of Excel 2003 XML is also supported. The *Normal* method is the default method. This method offers the highest performance but the least functionality.

These methods are fully defined in the table below which identifies the pros and cons of each technology:

Technology	Pros	Cons
Normal	Significantly faster than <i>Advanced COM</i> particularly for large data sets. Speed improvements of over 10 times have been achieved in many circumstances and the speed improvement grows exponentially as the data set grows in size.	Although the advanced script events called <i>CB_BFORWRITECOM</i> and <i>CB_AFTERWRITECOM</i> are still supported, they are of limited use as the data is only written to Word at the end of the export (after last exported Notes document). It is not possible to use the events to access the COM application to make direct modifications to the so far exported data set.
Advanced COM	Allows ability to send individual Word documents per exported Notes document using the <i>Merge Options</i> field. Allows usage of Integra events.	Slower for large data sets than Normal CSV. The larger the data set, the slower the performance.

3.5.1.12 Launch Method

Integra *Mailmerge* profiles support the use of Microsoft Word's own label/Mailmerge wizard or the generation of the Word document completely by Integra. When setting Integra for a Mail Merge or Label setting and using the **Normal Export Method**, you can choose to launch the Word Label/Mail Merge wizard. The user is presented with Word's own wizard allowing one page of the mail merge to be viewed at one time with the mail merge data for that page being taken from the Word control file which would be created. The user is able to move from one page to the next using Word's mail merge *Forward* and *Back* buttons.



This Mailmerge wizard provides various advantages including:

- » **Greater performance** - A 500 letter mail merge is undertaken 10 times faster using the Label/Mail merge wizard
- » **Ability to modify layout** – once presented in the Word Wizard, the user is able to modify the text of the letter or labels, move the fields around, add formatting, graphics etc prior to continuing with the mail merge or label output and have all these changes in formatting and content automatically applied to all the letters in the mail merge.
- » **Preview** – the ability to preview the mail merge prior to concluding it.

3.5.2 Word Import

This section of the manual describes the data content of the Word Tab used for import.

Whereas Integra for Notes allows automation of the importation of data from Excel and text files, with the data from these files being imported and resulting in Notes documents containing the data, a requirement often arises for organizations to automatically import complete MS-Word documents into a Notes database.

This case arises for instance when an organization has hundreds or thousands of documents in Word stored on the file system and they wish to automatically import the data into Notes documents.

There are a number of scenarios of the objective for this type of importation:

- » **Rich text** - Import the actual rich formatted text of individual Word documents and place these as the content of a Notes rich-text field in individual Notes documents. This results in the text showing and not the Word document being stored as an attachment or embedded object.
- » **Attachment** –Attach the Word document into the rich-text field of the Notes document.
- » **Embedded Object** –Create the Word document as an embedded object within the rich-text field of the Notes document.

In addition to the import of the Word document content into a Rich text field of a new Notes document, Integra also allows the import of the Word document properties (such as the file name, title, author etc.) into Notes fields. This will be explained in the next section.

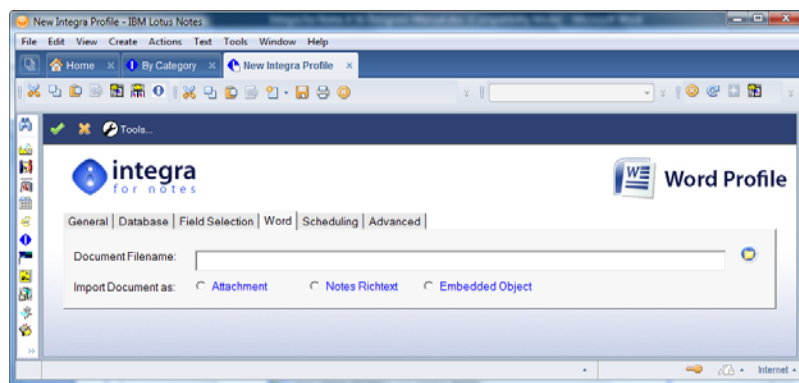
It is also possible to import Word mail merge fields into Notes form fields. To achieve this, create a computed field e.g. named LASTNAME in the Selected Field List and create a formula to it that computes to the name of the Word mailmerge field having following prefix "WORD.FIELDS.", e.g. "WORD.FIELDS.SURNAME"



With regards to the import using the *Import As Notes Rich text* option, the fidelity of the formatting of the Word document when imported into the Lotus Notes document is controlled by the limitations of the functionality provided by the Notes API.

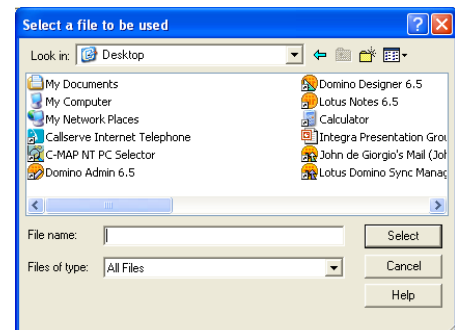
This may result in documents not being imported into Notes 100% exactly as shown in Word.

Selection of the Word Tab for Integra profiles of type *Import* results in the following screen shot:



The Document filename field allows identification of the name of the document to be imported into the Notes database. The lookup icon shown alongside provides for the Windows open file dialog box to allow selection of the file to be imported.

In the event that the filename field is left blank, at the time of running the Integra profile, the user will be presented with the standard Windows *File Open* dialog box shown below.

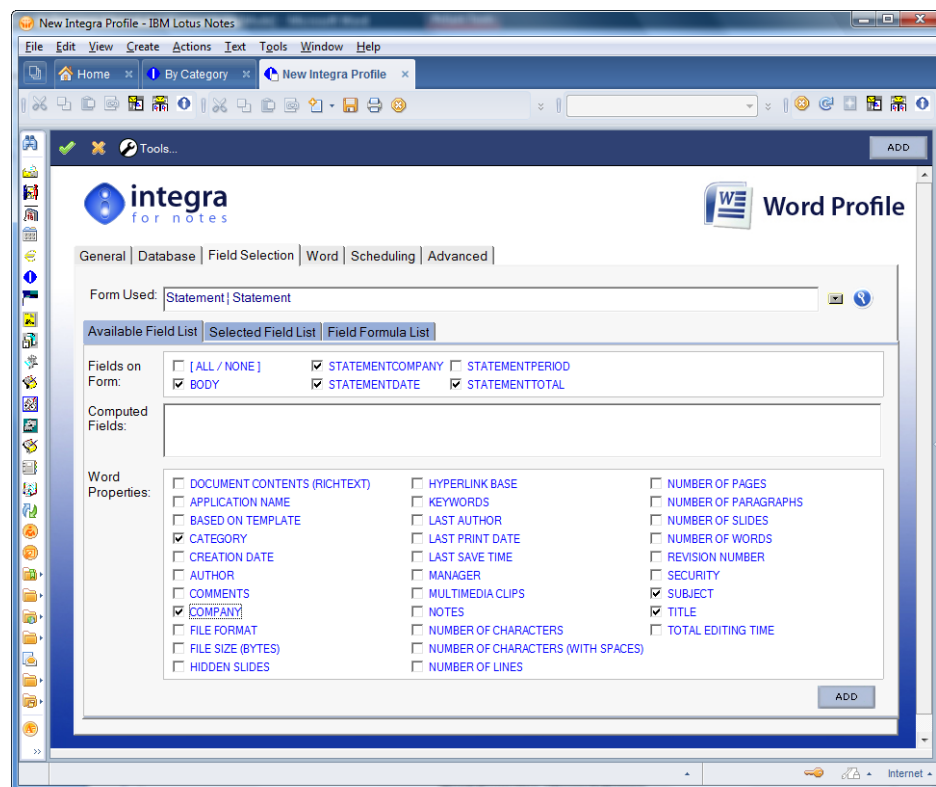


3.5.2.1 Importing Word document properties into Notes fields

When importing Word documents into Lotus Notes documents in a database, in addition to importing the actual document into a rich-text field using one of the available options of attachment, embedding or rich-text importing, a profile creator may wish to update fields in Notes based upon properties of the Word document. For instance, the title property or number of pages of the existing Word document may be required to be updated into a Title field on the Notes document.

To achieve this, the profile creator has 2 options:

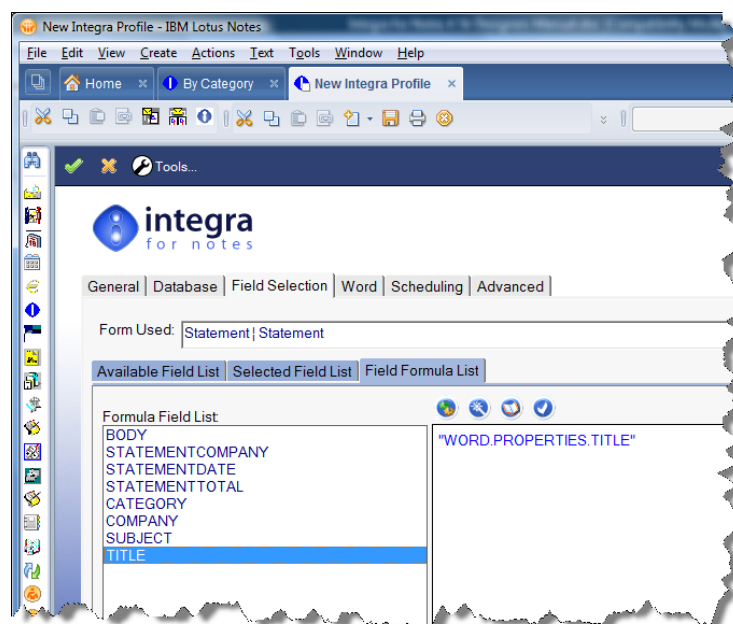
- » If the field name in the Notes database is the same as the property in the Word document, then just select the required property from the list of available properties towards the bottom of the *Available Field List* sub-tab of the *Database Tab*.



This will result in a computed field being created of the same name with a formula using a syntax that precedes the property's name with the Word.Properties. prefix:

Word.Properties.<PropertyName>

where <PropertyName> is replaced by the name of a valid Word property.



There are many accessible Word Properties that can be used and these are listed in the table overleaf. As an example, the Author property of a Word document can be updated into a field on the Notes form called *DocumentAuthor* by using the following formula for the *DocumentAuthor* field in the Integra profile:

Word.Properties.Author

- » If the field name of the Notes document that you wish to update from a property of the Word document is not the same as the property's name then set up a computed field with the name of the Notes document's field and define the formula manually.

For instance to update the Notes field called *Author* with the *LastAuthor* Word property set the following formula for the computed field called *Author*:

"Word.Properties.LastAuthor"

Note: as you enter a field formula you need to enter the text constant in quotes.

The following table shows the table of *Integra Text Constants* to be used to refer to the Word document properties:

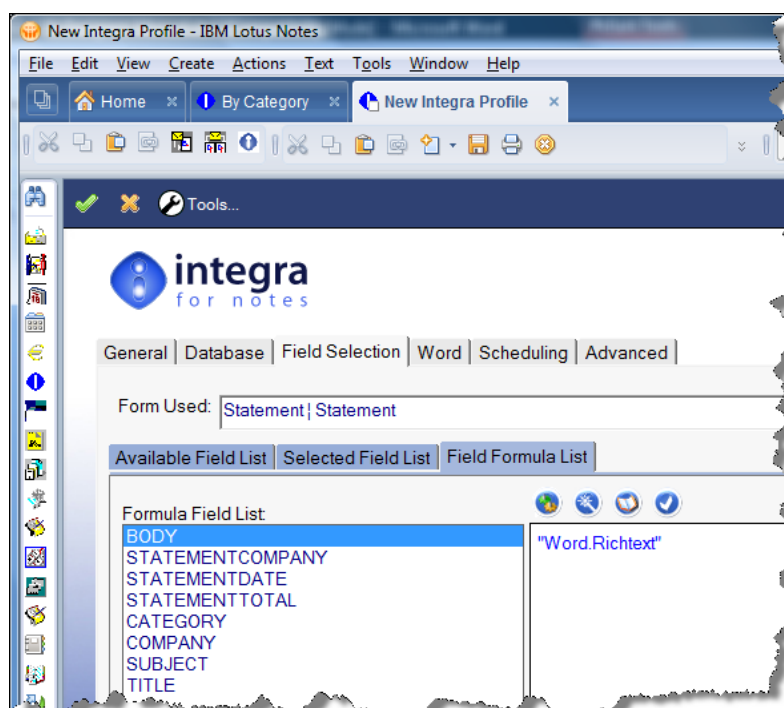
Word Property Constant (VB)	Constant Value	Integra Text Constant
WdPropertyAppName	9	"WORD.PROPERTIES.APPNAME"
WdPropertyAuthor	3	"WORD.PROPERTIES.AUTHOR"
WdPropertyBytes	22	"WORD.PROPERTIES.BYTES"
WdPropertyCategory	18	"WORD.PROPERTIES.CATEGORY"
WdPropertyCharacters	16	"WORD.PROPERTIES.CHARACTERS"
WdPropertyCharsWSpaces	30	"WORD.PROPERTIES.CHARSWSPACES"
WdPropertyComments	5	"WORD.PROPERTIES.COMMENTS"
WdPropertyCompany	21	"WORD.PROPERTIES.COMPANY"
WdPropertyFormat	19	"WORD.PROPERTIES.FORMAT"
WdPropertyHiddenSlides	27	"WORD.PROPERTIES.HIDDESLIDES"
WdPropertyHyperlinkBase	29	"WORD.PROPERTIES.HYPERLINKBSE"
WdPropertyKeywords	4	"WORD.PROPERTIES.KEYWORDS"

Word Property Constant (VB)	Constant Value	Integra Text Constant
WdPropertyLastAuthor	7	"WORD.PROPERTIES.LASTAUTHOR"
WdPropertyLines	3	"WORD.PROPERTIES.LINES"
WdPropertyManager	20	"WORD.PROPERTIES.MANAGER"
WdPropertyMMClips	28	"WORD.PROPERTIES.MMCLIPS"
WdPropertyNotes	26	"WORD.PROPERTIES.NOTES"
WdPropertyPages	14	"WORD.PROPERTIES.PAGES"
WdPropertyParas	24	"WORD.PROPERTIES.PARAS"
WdPropertyRevision	8	"WORD.PROPERTIES.REVISION"
WdPropertySecurity	17	"WORD.PROPERTIES.SECURITY"
WdPropertySlides	25	"WORD.PROPERTIES.SLIDES"
WdPropertySubject	2	"WORD.PROPERTIES.SUBJECT"
WdPropertyTemplate	6	"WORD.PROPERTIES.TEMPLATE"
WdPropertyTimeCreated	11	"WORD.PROPERTIES.CREATED"
WdPropertyTimeLastPrinted	10	"WORD.PROPERTIES.LASTPRINTED"
WdPropertyTimeLastSaved	12	"WORD.PROPERTIES.TIMELASTSAVED"
WdPropertyTitle	1	"WORD.PROPERTIES.TITLE"
WdPropertyVBATotalEdit	13	"WORD.PROPERTIES.VBATOTALEDIT"
WdPropertyWords	15	"WORD.PROPERTIES.WORDS"

Please refer to the Word documentation for further details on the Word document properties.

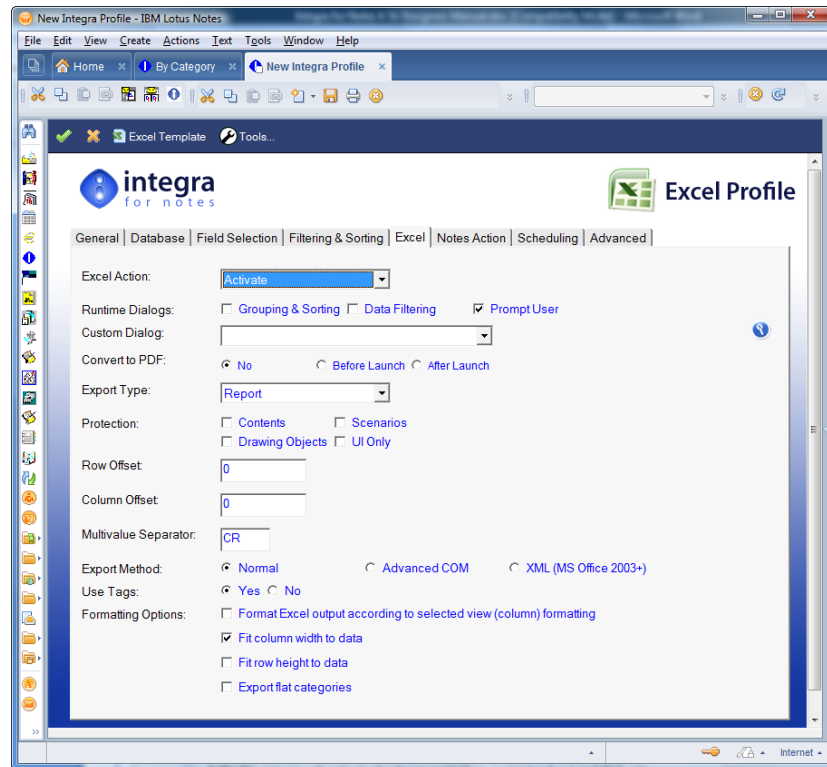
3.5.2.2 Importing Word document content into a Notes Rich text field

As you are able to refer to the Word document properties, you can also refer to the content of the Word document itself. Create a field of type *Formula* in the *Selected Field List* that shall contain the Word Rich text. Call it for instance "Body". The formula is again an Integra Text Constant called "Word.Richtext".



3.6 The Excel Tab

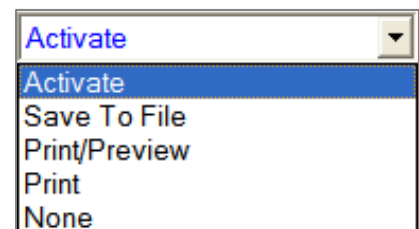
The Excel tab is only available in Excel profiles and defines the actions to be taken by Excel when the data is transferred from Notes to the Excel spreadsheet.



3.6.1 Excel Action

The *Excel Action* field allows definition of what action is to be taken by Excel on receiving the data from Integra and determines what Excel will do following the integration. The available options are:

- » **Activate** - Integra will activate the Excel application and bring Excel and the created spreadsheet active on the screen. This action allows the user to check and amend the created spreadsheet before printing; sending and/or saving it back to Notes.
- » **Save To File** - This action will save the document straight into a file on the file system. Selecting this option will optionally allow identification of the file name and path as a part of the profile. If the filename has not been predefined within the profile, the user will be prompted with the standard Windows File Save dialog box.
- » **Print/Preview** - This action is similar to the Activate action in that Excel will be brought up on screen with the created spreadsheet however it will be automatically activated in *Print Preview* mode. The user will not be able to amend anything other than the page settings before the document is printed.
- » **Print** - This action will send the Excel spreadsheet directly to the printer. The user will be prompted with the standard Excel print dialog box for selection of various options.
- » **None** - When this option is selected, no Integra action will be executed. This option is only useful in conjunction with one of the Notes actions. E.g., you may want to email an exported Excel spreadsheet directly without any of the other Integra actions.



3.6.1.1 Runtime Dialogs

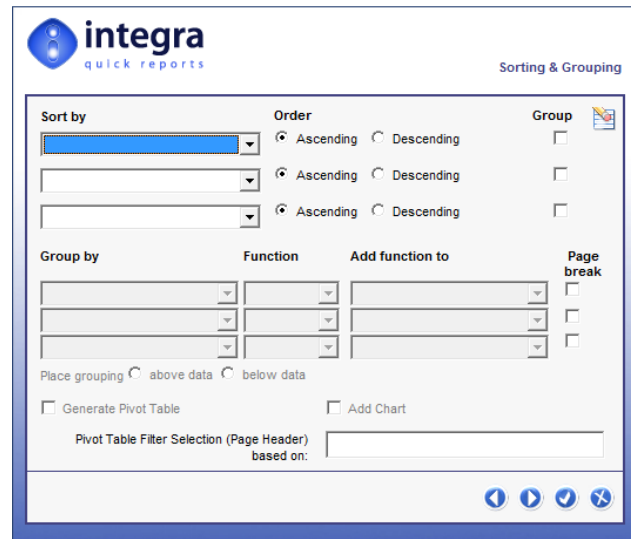
An Integra profile can be set in such a way that it can present the user at the time of running the profile with a number of dialog boxes. As these appear only at the time of running a profile they are referred to as *Runtime Dialog* boxes.

Integra Excel profiles support three types of *Runtime Dialog Boxes*:

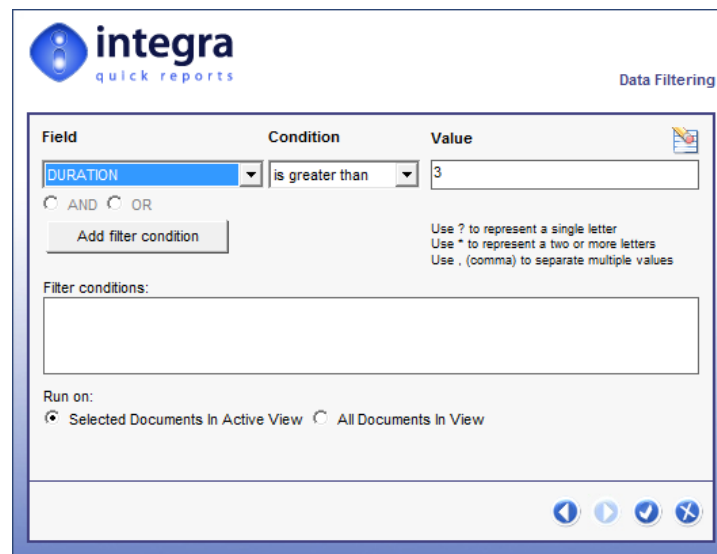
- » **Grouping & Sorting** - when the *Grouping & Sorting* runtime dialog box is enabled, on execution of the Integra profile the user will be presented with a dialog box which allows the user to determine the sort order of the data generated by the profile. The capability provided is the same as that able to be set by the profile designer in the *Grouping & Sorting* tab of the profile but the difference is that, whereas when set in the profile, the sort order is fixed, a *Runtime Grouping & Sorting* dialog box allows the end-user to set the sort order at the time of report execution.

The sort order set in the *Grouping & Sorting* tab of the profile will automatically be taken as the defaults for the runtime *Grouping & Sorting* dialog box.

This facility also allows setting of Pivot Tables and charts. For instructions on setting of Pivot Tables and charts in Integra see sections 3.4.3 and 3.4.4 respectively

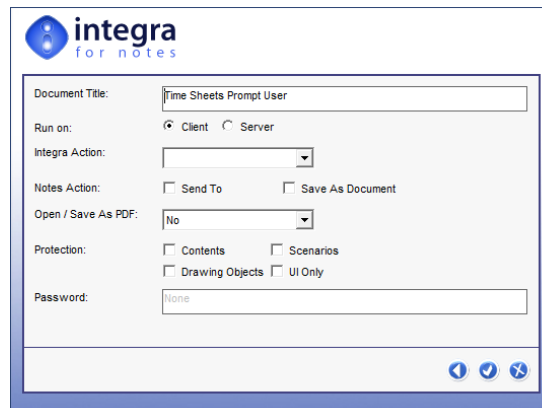


- » **Data Filtering** – when the *Data Filtering* runtime dialog box is enabled, on execution of the Integra profile the user will be presented with a dialog box which allows the user to filter the data generated by the profile so as to meet one or more conditions. The capability provided is the same as that able to be set by the profile designer in the *Filtering* tab of the profile but the difference is that, whereas when set in the profile, the filtering condition(s) is fixed, a *Runtime Data Filtering* dialog box allows the end-user to set the filtering condition at the time of report execution.



- » **Prompt User** – selecting this option will result in the user being presented with the *Prompt User* dialog box at the time of executing the Integra profile. This dialog box presents the user at runtime with a set of choices such as PDF conversion, protection and possibly an e-mail option.

»



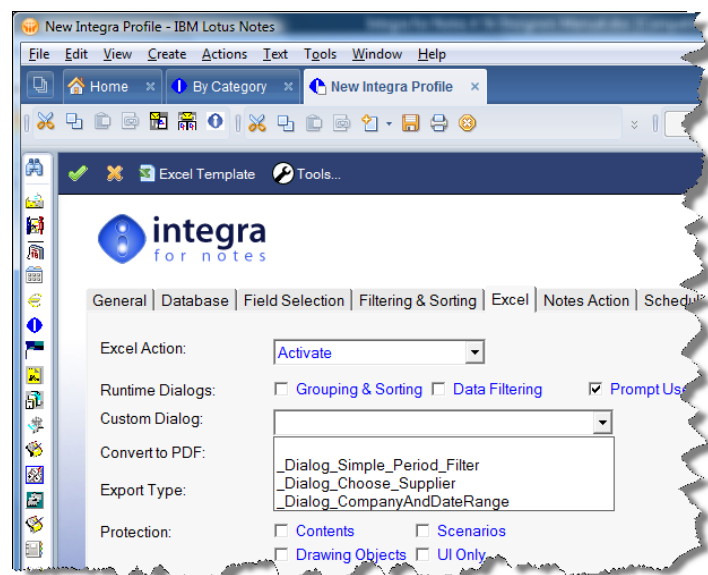
3.6.1.2 Custom Dialog

Integra for Notes has supported the presentation of custom dialog boxes to end-users at runtime since its early versions. This extremely useful feature allows the presentation at runtime of a dialog box to the end-user who runs a profile to allow collection of additional data or settings. An example may be the presentation of a list of companies to the user to allow selection of the company for which to generate a report or statement (see example alongside). Rather than fixing filtering conditions or allowing the user to set filtering conditions through the *Data Filtering* Runtime Dialog box (see section 3.5.1.2), this user allows a designer to create a custom-made dialog box to collect data at runtime from the user some or all of which may be used for the filtering of data.

In previous version of Integra for Notes, the triggering of runtime dialogs was achieved through the use of LotusScript in the *Advanced* tab of an Integra profile and thus required a profile designer to be familiar with using LotusScript. A form needed to be created and added to the design of the Integra database which is used to define the layout and content of the dialog box.

Integra for Notes 4.5 now allows a user to call-up a dialog box by setting the name of the form to be used for generating the dialog box in the new *Custom Dialog* field available in both the *Excel* and the *Word* tabs of an Integra profile, thus extending this functionality to users of a lower level of skill.

The form still needs to be added to the design and its name referenced in this field. The drop down menu in this field will list any form in the design of the Integra database whose name begins with `_Dialog_` (i.e. `_Dialog_Simple_Period_Filter`) and therefore if care is given to use form names for such dialog box which start with this name, then the user will be able to pick the form name to be used for the custom dialog box.



3.6.2 Spreadsheet Filename Field

This field is only available when selecting the "Save To File" option in the *Excel Action* field. This option is mainly used when using a file system structure to store (save) created Excel spreadsheets. Enter a complete path & filename for the Excel spreadsheet or select from the file system by using the File Folder icon.



In the event that the file name is left blank, the user will be requested for the entry of the file name at runtime using the presentation of the standard Windows *File Save* dialog box. File names should be entered in full including the path e.g. c:\data\clients\abc.doc



Remember that Integra also provides a facility to write back the Excel spreadsheet created directly into the current or another Notes database. This option is useful to allow recording of generated reports.

The default file name for this type of saving is defined in the *Database Tab* in the attachment prefix field.

3.6.2.1 Convert to PDF

The convert to PDF option allows the data to be converted to a PDF file using one of the supported methods after being pushed to Excel. Three settings are available for this option:

- » **No** – no conversion to PDF is undertaken.
- » **Before Launch** – this option will convert the output to PDF before (and in fact instead of) launching Microsoft Excel. When combined with the choice of the *Activate* setting for the *Excel Action*, this will result in your PDF viewer being opened with the generated PDF document. This ensures a protection of the data.
- » **After Launch** – this option will launch Microsoft Excel (when combined with the choice of the *Activate* setting for the *Excel Action*) and will only convert to a PDF file for onward distribution or storage after the user has closed Excel. This allows the user, within the limits of the protection options set (see section 3.6.4), to fill in and complete the Excel spreadsheet prior to it being converted to PDF and distributed.

3.6.3 Document Type Field

Integra supports two different types of exports of data from Notes to a Word document:

- » **Report** - The report option is the default option and is usually used to export selected Notes document into Excel rows within a single spreadsheet. In case the "All Documents in View" option is selected, one row is created for each Notes document in the selected view.
- » **Single Document** - This option is used when only one Notes document at a time is used to create an Excel spreadsheet. This can either be the currently highlighted document in the view or the currently opened (for reading or editing) Notes document. The idea is to allow, for instance, the creation of invoices in Excel using its calculation features with data taken principally from one Notes document.

3.6.4 Protection Field

If a user is exporting Notes data into an Excel spreadsheet, a requirement may arise to restrict the ability of the recipient of the reported data from modifying the data and claiming that that was the data generated by Integra.

Excel provides four different levels of protection within the spreadsheet. Unlike with Word, any, none or all of these protection methods can be used to protect a spreadsheet, and therefore the user is presented with a set of Checkboxes. The facility exists not to select any of the protection options.

Protection:	<input type="checkbox"/> Contents	<input type="checkbox"/> Scenarios
	<input type="checkbox"/> Drawing Objects	<input type="checkbox"/> UI Only

The available options provide the protection outlined overleaf:

- » **Contents** - All data cells in the Excel spreadsheet are protected against editing.
- » **Drawing Objects** - This option will protect all objects from being moved or resized (such as textboxes, pictures, charts,...).
- » **Scenarios** - This option will protect scenarios (forecasts) from being modified.
- » **UI Only** - If you select this option then the entire spreadsheet is protected with the exception of macros.

3.6.5 Row Offset & Column Offset Fields

When importing or exporting from or to an Excel spreadsheet the idea is usually to read or write data in a table format: an Excel row per Notes document and an Excel column per Notes field.

The facilities available in Integra for importing and exporting from Excel anticipate that the area into which or from which the data is to be sent to Excel is to be in a location other than one starting at cell A1. The spreadsheet to which data is to be exported may require the data to be positioned starting in column B and row 5 to accommodate predefined headings. The Row offset and Column offset fields allow the profile creator to define this displacement or offsetting of data.

The row offset is defaulted to 4 for export profiles and 0 for import profiles while the column offset is always defaulted to 0 (zero). Integra will read from or write to the defaulted row and column in Excel (Excel starts to count from row 1 and column 1 - represented as "A"). The offset value used in the profile will be added to the default offset of Excel, e.g. if the row offset in the profile is set to 4 and the column offset is set to 3, Integra will read from or write to row 5 and column 4 ("D") in Excel.

3.6.6 Multi-Value Separators

Integra fully supports the exporting of data contained in Notes multi-value text fields and is able to treat each element in the list as an individual item to be exported in accordance with the user's needs.

When Integra is faced with a Notes field which is a multi-value field, Integra converts multi-value text fields into a single text string using the character entered into the Multi-value Separator field to separate the multiple values in the field.

You can use any character or character string to separate values. Use "CR" to separate values with a carriage return.



On the export, Integra is only normalizing multi-value text fields. For any other field type, Integra will only export the first value of the multi-value Notes field. You can use the formula field type to convert any multi-value field type into multi-value text fields - e.g. using a formula like @Text(LinetItemValues;"F,2").

3.6.7 Export Method

Integra for Notes offers various methods of importing and exporting of data between Lotus Notes and Microsoft Excel. In the case of Excel Exports, these are *Normal* and *Advanced COM*. The *Normal* method is the default method. This method offers the highest performance but will not allow certain Integra events and other functionality to operate.

These methods are fully defined in the table below which identifies the pros and cons of each technology:

Technology	Pros	Cons
Normal – CSV	Significantly faster than COM particularly for large data sets. Speed improvements of over 10 times have been achieved in certain circumstances with speed improvements being greatest for the larger data sets.	Does not support the creation of column formulae in the Excel template to calculate column values based on an Excel formula (rather than an Integra formula). All formulae must be set in the Integra profile. Although the advanced script events called CB_BFORWRITECOM and CB_AFTERWRITECOM are still supported, they are of limited use as the data is only written to Excel at the end of the export (after last exported Notes document). It is not possible to use the events to access the COM application to make direct modifications to the so far exported data set.
Advanced COM	Allows building of formulae in Excel as well as in Integra. Allows usage of Integra events.	Slower for large data sets than Normal CSV.

3.6.8 Use Tags

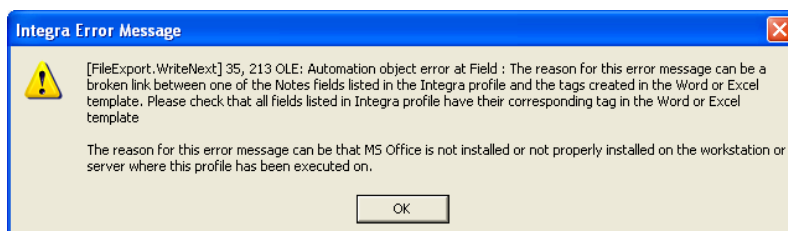
Excel has a built-in facility through which it is possible to access a named area of a spreadsheet by allocating a Tag name to this area. By default, Integra utilizes this facility to push data from fields defined in the Integra profile to tag's in Excel which have been identified as the intended location for that field.

The advantage to the profile creator is that the links between Integra Profile fields and columns in the Excel profile can be created based on these tags and even if the fields change order in the *Selected Field List* of the Integra profile or the order and positioning of the columns in the Excel spreadsheet are changed, the linkage is preserved via the *Tag* name.

Integra also offers the option to the user of creating a default spreadsheet listing each of the fields in the *Selected Field List* in the order they have been listed with a corresponding tagged column in Excel. This reduces the set up time for the Excel template and increases the accuracy of this process also ensures that few errors are made during the profile creation process.

To utilize this facility, the *Use Tags* field should be set to *Yes*.. When set to *Yes*, each field in the Integra profile must have a corresponding Tag in Excel for the contents of that field to be pushed to.

In the event of a mismatch between the naming or the number of fields in the Integra *Selected Field List* and the tags in the Excel spreadsheet an error message will be displayed similar to that below usually identifying the name of the field which is mismatched.



In cases where the *Use Tags* is set to "No", when Integra is reading from or writing to Excel, it will push the data from the first field listed in the Selected Field List into the first column (taking into account the setting of the *Column Offset* value in the Integra profile), the second field into the second column etc. rather than searching for the defined tag in Integra.



Because the use of Excel's tags is slightly slower than exporting data simply in order of the listed columns, when exporting large volumes of data to an Excel spreadsheet or where performance is suffering, we would recommend that the *Use Tags* field is set to *No*.

When the *Use Tag* field is set to *Yes*, on first creation of the Excel template in the profile, Integra will provide the profile creator with the opportunity to automatically create a Word or Excel file containing tags for each of the fields contained in the Integra *Selected Field List* (see sections 4 - *Creating and Word Template* and section 5 - *Creating an Excel Template*).

3.6.9 Formatting Options

The *Formatting Options* allow for the setting of certain specific format options related to the Excel data and presentation.



These are described below:

- » **Format Excel output according to selected view (column) formatting** – this option will, where possible and appropriate, format the Excel column that the data is pushed into in accordance with the formatting option that the field has in Lotus Notes. For instance, if a field in the Notes form from which it is extracted is formatted to 2 decimal places, the data will automatically be set to be formatted to 2 decimal places in Excel (unless overridden).
- » **Fit column width to data** – this option will automatically resize the column width of the columns in Excel to accommodate the data contained in the spreadsheet. This is done once the data is pushed from Lotus Notes to Excel.
- » **Fit row height to data** – this option will automatically resize the row heights of the rows in Excel to accommodate the data contained in the spreadsheet. This is done once the data is pushed from Lotus Notes to Excel.
- » **Export Flat Categories** - This option relates to the reporting of data from views which are categorized and by setting this option through the checkbox, the data will be exported ignoring the categorization structure of the data in the view.

3.7 The XML/Text Tab

The XML & Text tab is only available for profiles used to import or export data between Lotus Notes and Text for XML files. Text profiles are used to:

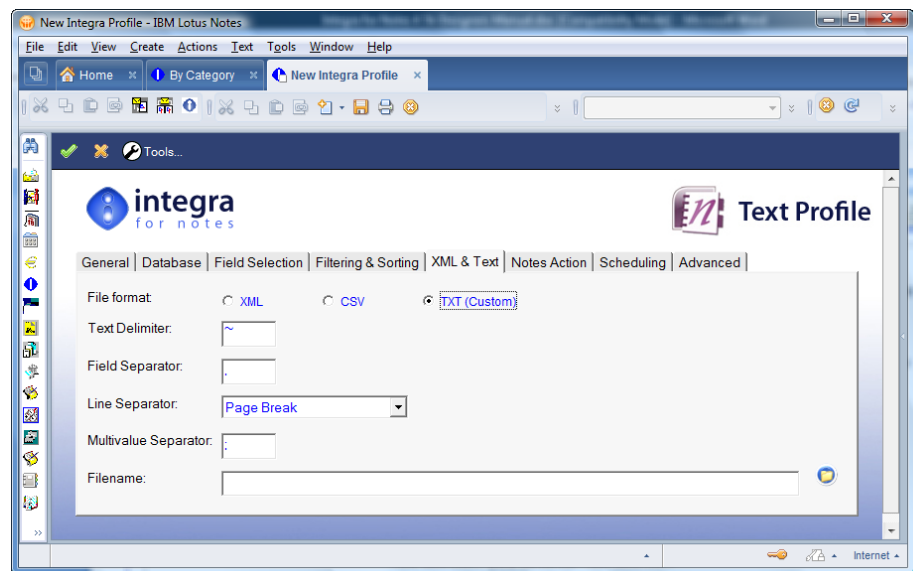
- » undertake exports of Notes data to a text, XML or CSV file
- » import delimited ASCII text files or CSV files into Notes.

The text tab is used to define the details of the import or export parameters. An Integra text export profile allows data to be generated to:

- » XML file
- » CSV file
- » TXT file – delimited text file

While the XML and CSV file have limited options that can be set, namely the separator used when multi-value fields are exported and the file name, TXT files have a few extra options such as the character used to delimit separate values in the delimited text file.

These options are defined in the sub-sections that follow.



3.7.1 The Text Delimiter Field

The *Text Delimiter* field is only available for selection when the *File Format* field is set to *TXT (Custom)*. Integra allows the particular character to be used as the delimiter of the text to be defined within the *text delimiter* field. The character that is used is to be enclosed in a text string. Delimiters are defined because different systems may require or provide a specific delimiter to be used.

The use of different delimiters is important because a text string could contain within the data itself any of the other characters normally used as delimiters. Taking the above example, the " (quote) as the text delimiter might not be the ideal text string delimiter because the text string could itself contain a " (quote). In this case, the Integra import procedure would cause a syntax error. A better choice for the text string delimiter could be the ~ (tilde) as it is very unlikely that the tilde is used anywhere within a text string as an element of the data.

A delimited text file has roughly the following format:

<field contents>[<field delimiter><field contents>]<document delimiter>

When the *<field contents>* is of type text, it is again delimited by a text string delimiter:

<text delimiter><field contents><text delimiter>

Assuming we have a Text profile with the following fields in the *Selected Field List*:

FirstName	Text
SurName	Text
BirthDate	Date
Married	Boolean (Logic)
Children	Numeric

And we use the following delimiters:

Text delimiter	" (quote)
Field delimiter	, (comma)
Document delimiter	CR (carriage return)

The delimited text file would look like this:

```
"John","Black",19631231,.T.,3 (CR)
"Tom","Smith",19650120,.F.,0 (CR)
```

3.7.2 The Field Separator Field

The field separator (or delimiter) is used to separate the fields. In the above example it is the , (comma). This is why these types of text files are also widely referred to as Comma Delimited Text files. The *Field Separator* field is only available for selection when the *File Format* field is set to *TXT (Custom)*. The *Field Separator* field is only available for selection when the *File Format* field is set to *TXT (Custom)*.

3.7.3 The Line Separator Field

The line separator (or delimiter) is used to separate records (or documents). Usually this would be a carriage return. As the carriage return cannot be entered into a Notes field, use CR instead. Integra will replace CR by a proper carriage return (chr(10) + chr(13)). The *Line Separator* field is only available for selection when the *File Format* field is set to *TXT (Custom)*.

3.7.4 The Multi-value Separator Field

The concept of the comma delimited text file does not support multi-value fields. However, Integra does support multi-value text fields.

If for an export profile the *Selected Field List* refers to a multi-value text field, then Integra will "implode" the text string with the separator defined within this field. If we take the above example and we add for instance a multi-value address field using the; (semicolon) as multi-value separator, the exported text file would look like this:

```
"John","Black","House; StreetName; Town; POC; Country",19632131,.T.,3 (CR)
```

In the case of an import profile, Integra will "explode" the address text string using the multi-value separator defined within this field.

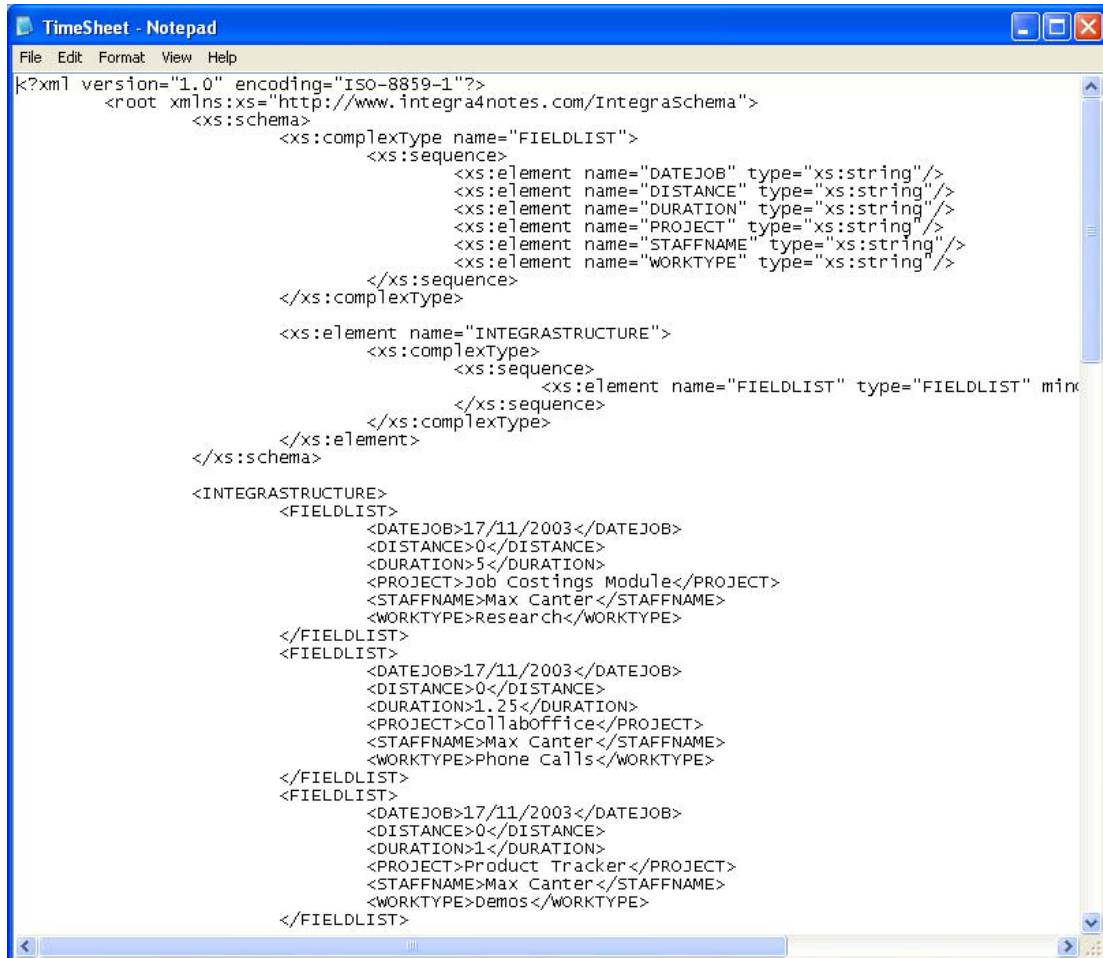
3.7.5 The Filename Field

This field is mandatory and defines the path and filename of the text file to be created (export) or read in (import). The entry must include the full file name e.g. c:\data\clients\abc.txt



3.7.5.1 A Sample XML file

The screen shot below demonstrates a typical file generated by Integra in XML format.



```
<?xml version="1.0" encoding="ISO-8859-1"?>
  <root xmlns:xs="http://www.integra4notes.com/IntegraSchema">
    <xs:schema>
      <xs:complexType name="FIELDLIST">
        <xs:sequence>
          <xs:element name="DATEJOB" type="xs:string"/>
          <xs:element name="DISTANCE" type="xs:string"/>
          <xs:element name="DURATION" type="xs:string"/>
          <xs:element name="PROJECT" type="xs:string"/>
          <xs:element name="STAFFNAME" type="xs:string"/>
          <xs:element name="WORKTYPE" type="xs:string"/>
        </xs:sequence>
      </xs:complexType>
      <xs:element name="INTEGRASTRUCTURE">
        <xs:complexType>
          <xs:sequence>
            <xs:element name="FIELDLIST" type="FIELDLIST" minOccurs="1" maxOccurs="3"/>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
    </xs:schema>
    <INTEGRASTRUCTURE>
      <FIELDLIST>
        <DATEJOB>17/11/2003</DATEJOB>
        <DISTANCE>0</DISTANCE>
        <DURATION>5</DURATION>
        <PROJECT>Job Costings Module</PROJECT>
        <STAFFNAME>Max Canter</STAFFNAME>
        <WORKTYPE>Research</WORKTYPE>
      </FIELDLIST>
      <FIELDLIST>
        <DATEJOB>17/11/2003</DATEJOB>
        <DISTANCE>0</DISTANCE>
        <DURATION>1.25</DURATION>
        <PROJECT>Collaboffice</PROJECT>
        <STAFFNAME>Max Canter</STAFFNAME>
        <WORKTYPE>Phone Calls</WORKTYPE>
      </FIELDLIST>
      <FIELDLIST>
        <DATEJOB>17/11/2003</DATEJOB>
        <DISTANCE>0</DISTANCE>
        <DURATION>1</DURATION>
        <PROJECT>Product Tracker</PROJECT>
        <STAFFNAME>Max Canter</STAFFNAME>
        <WORKTYPE>Demos</WORKTYPE>
      </FIELDLIST>
    </INTEGRASTRUCTURE>
  </root>
```

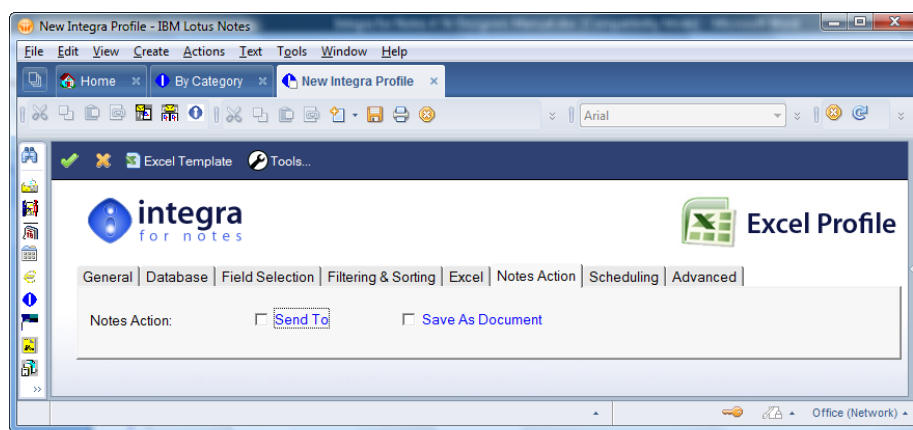
3.8 The Notes Action Tab

The Notes Action Tab is designed to allow identification of the actions to be taken by Notes in respect of the particular profile and offers the following two settings:

- » **Send To** – allows definition of settings for distribution of exported reports by e-mail
- » **Save As Document** – allows definition of the options to save the exported reports to a Notes database

The Notes Action tab is only available in Word and Excel export profiles. It is not available for any import profiles and nor for XML or Text profiles.

On selection of this tab, the user is presented with the following simple screen however, on selection of either or both of these available options, the screen will expand to identify a series of other options related to them.



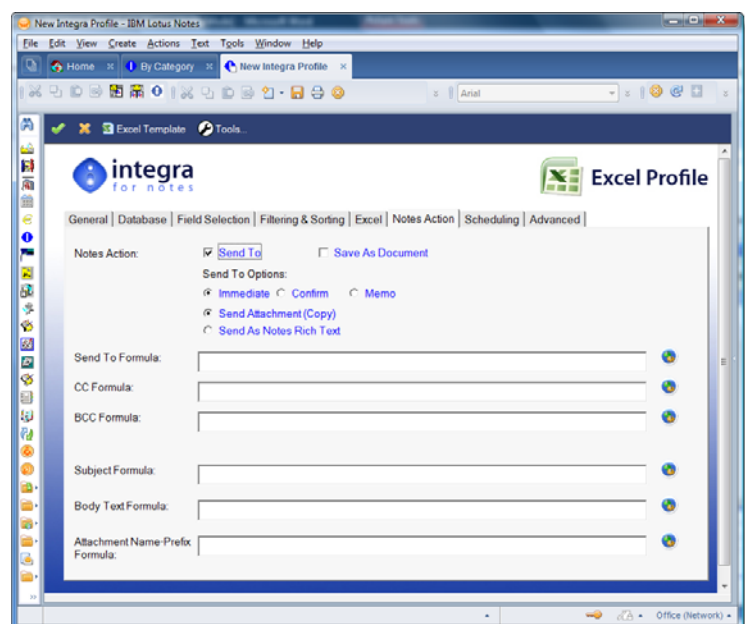
3.8.1 Send To

The *Send To* facility allows a profile to be set in such a manner that the resulting Word, Excel or text document created by the profile is emailed out to one or several email addresses. This is particularly useful in providing support for reporting and distribution of the report via email.

On selection of the *Send To* option, the screen expands (see below) to show a series of additional options related to this mailing, consisting of the definition method of mailing, the e-mail addresses and the message subject of the email.

3.8.1.1 Send To Options

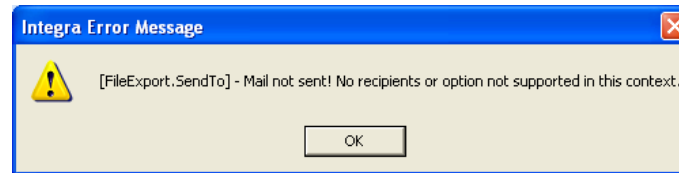
The *Send To* options allow you to determine the method used by Integra for e-mailing out the exported Word, Excel or Text document. Three options are available except for the case where a Word export has the *Document Type* field in the Word tab set to *Mail Merge* (see detailed description below).



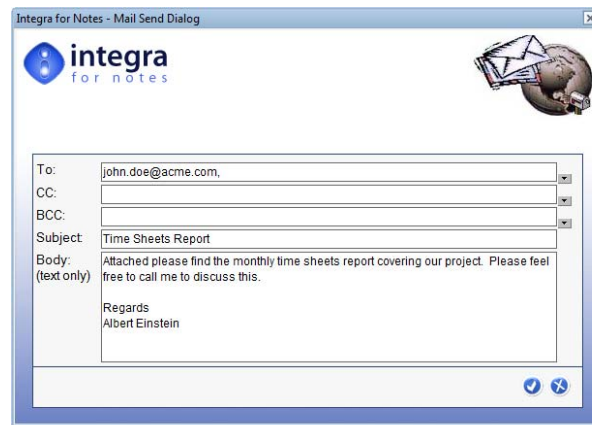
The three options result in the following method of e-mailing:

- » **Immediate** –when Integra generates the exported Word, Excel or Text document it will send the e-mail to the recipients listed within the Mail Addressee fields without asking for user confirmation at runtime.

However, In the event that the profile has been set for immediate mailing and no mail addressees have been defined, then the user will be presented with the following error message:



- » **Confirm** – if set to *Confirm*, at the time of attempting to e-mail the produced document, the user will be presented with a *Mail Send* dialog box to allow confirmation of the e-mail address or addresses to which the document is to be sent (see screenshot). The user also has the opportunity to add text into the body of the message.



The addressees of this dialog box will default to values set within the appropriate addressee fields in the Database Tab (see explanation below). If no values have been set to these fields in the Integra profile, then the dialog box will initially appear with no address information and it is possible for the user to cancel out of this dialog box and not send the document by e-mail.

The *Subject* field in the *Mail Send* dialog box will also default to any value set in the *Subject* field of the Integra profile.

Any text values entered into the *Body* field of the *Mail Send* dialog will be placed in the message of the outgoing e-mail prior to the Word, Excel or text file attachment. This feature only supports the entry of text.

- » **Memo** – when the *Memo* option is selected, the process of e-mailing the Word, Excel or text file generated by Integra will result in the standard Lotus Notes *Memo* form being presented to the user rather than the Integra *Mail Send* dialog box. Any values set for the *Mail Addressing* options, the *Subject* or the *Body* fields in the profile will automatically appear as defaults in the user's mail memo form.

This will allow the user to make use of all features available in the user's mail file including but not limited to *Delivery Options*, storage in folders, access to address books etc. as well as any other custom features available in the user's mail file.



When the Integra profile being executed is a Word profile and the *Document Type* field is set to *Mail Merge*, this results in an individual Word files being generated for each Notes document and each being e-mailed to the intended recipient. As a result a Word *Mail Merge* profile being run on a 1,000 Notes documents containing contact information will generate 1,000 individual Word document and each document would be e-mailed to the respective address of the contact. Resulting in 1,000 e-mails being generated.

In this scenario it is impractical for the *Method of Mailing* option to be set to anything but immediate otherwise a dialog box or memo will be displayed per Notes document.

As a result only the *Immediate* option would be available.

In addition, only the *Immediate* option is available for scheduled Integra profiles (see later explanation in section 3.8.1)

3.8.1.2 Attach, Rich Text or DocLink

This option allows definition of whether the output from the Integra profile, if being e-mailed, is:

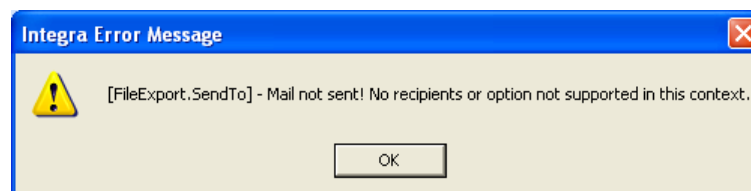
- » created and sent as an attachment to the outgoing e-mail
- » is re-imported in the *Body* field of the e-mail as a rich-text item within the e-mail
- » or, in the case the document is also saved to a Notes database(see section 3.8.2), whether a doclink to the saved document is sent in the e-mail. Note that the option called *Send Document Link to Saved Attachment* is only available as an option when the *Save As Document* option is selected.

- ☒ Send Attachment (Copy)
- ☐ Send As Notes Rich Text
- ☐ Send Document Link to Saved Attachment

3.8.1.3 Mail-Address Formulae

Only available when the *Send To* option on the Database Tab in an Integra is selected, these three available fields (*Send To Formula*, *Copy To Formula* and *Blind Copy To Formula*) allow identification of the email address or addresses to which the result of the profile will be submitted. Of course, the contents of the respective fields determine who the generated document is sent *To*, who it is *cc'ed* to and who it is *bcc'ed* to.

In the case when the *Send To* option has been set to *Immediate*, at least one of these fields is mandatory and although Integra allows the saving of a profile set to *Immediate* even if it has no mail address defined due to various advanced options that may be used to set this field using LotusScript, the following error message would be presented to a user if no address has been defined in a profile whose mail sending options have been set to *Immediate*:



If the *Send To* has been set to *Confirm* or *Memo*, then the fields can be left blank and at runtime, the user will be prompted with either the *Mail Send* dialog box or the *Memo* form to enter the address or addresses for the mail to be sent to.

The values of either or all of the *Mail Address* formulae can be set in any combination of three methods:

- » **Computed formula address** - the use of a formula calculates the email address to be used, typically linked to a field that contains the address. Any standard Notes formula can be used and placed within the *Mail Address Formula* fields.
- » **Fixed** – a fixed e-mail address could be used. Any valid e-mail address could be used whether in Notes or internet style. A fixed address can be selected from a standard Notes address book dialog box by clicking on the address book icon to the right of each of the *Mail Address Formulae* fields.. These options are explained below:
- » **Derived in real-time** – by leaving the *Mail Address Formula* field blank (option not available for *Immediate* mail option), Integra will request the e-mail address to be used at the time of running the Integra profile.

The paragraphs below further detail the functionality of these options:

- » **Using a formula** – enter a valid Notes formula into these fields to derive the email address to be used (use of @Commands are not permitted). For instance, if the selected document has a field called *ContactEmail*, which contains the email address of the contact, then just enter *ContactEmail* as the value of this field. Lookups can also be used to derive the value of the address. The *Formula Builder* and the *Lookup Wizard* are also available at this point through the icon to the right of the field. See section 3.3.5 and 3.3.6 for details on using the *Formula Builder* and the *Lookup Wizard*.

For instance the following formula looks up the value of a field called *Department* within a *DepartmentList* view in the current Notes database to determine the email address of the manager of the department, contained within the field *ManagerEmail*:

```
@DbLookup( "";"NoCache" ; "" ; "DepartmentList" ; Department ; "ManagerEMail" )
```

When a field is selected, this could be a multi-value field containing various email addresses.

- » **Using the Fixed Address** – enter a valid email address within quotation marks. Examples would be “Tom Smith/SmithCorp” or “tom.smith@smithcorp.com [mailto:](mailto:tom.smith@smithcorp.com)”. By clicking on the Address Book Icon (shown alongside), the user will also be able to select email addresses using the standard Lotus Notes Address Book dialog box. Multiple addresses can be used which would be separated by a comma and the whole string encapsulated within quotes.



```
“albert.einstein@brainy.com, fred.bloggs@anywhere.com”
```



Throughout the *Database Tab* most of the fields allow creation of a formula to define the required option. The *Formula Builder* icon to the right of each field and shown alongside here can be used to assist in the creation of this formula as part of the standard *Formula Builder* and *Lookup Builder* functionality available in Integra. See sections 3.3.5 and 3.3.6 for more details about using the *Formula Builder* and the *Lookup Builder*.

3.8.1.4 The Subject Field

When using the *Save As* option to save the created document within a Notes database, Integra provides facilities for you to update a specific field in the created Notes document with a chosen value.

The field called *Subject Field* in the Integra profile allows you to define the name of the field in the target document into which the this chosen value is to be written. The *Subject* Formula field explained below defines the chosen value to be used for this update. If developers have followed best practice and named their subject field as *Subject* in the target document, then this field would usually be called *Subject*.

3.8.1.5 The Subject Formula Field

The *Subject Formula* field allows you to define the contents to be written into the field defined above in the *Subject Field*. The *Subject Formula* field is used to store a formula, which will be evaluated at runtime, and that evaluated value will be used to populate the field defined in the field called *Subject Field* outlined above. The field can be populated using any valid Notes formula using @functions (@commands are not permitted). It is also possible to refer to any field on the current processed Notes (source) document.

An example would be as follows:

" Statement for the period ending "+statementperiod

Where *statementperiod* is the name of a field showing the end date of a statement.

It is also possible to enter a fixed subject text enclosed in quotes, for instance:

"Monthly Statement"

3.8.2 Save As...

The main objective of Integra for Notes is to produce a file in Word, Excel, Text or PDF format which contains data as defined within an Integra profile document. Once this file is created, it is often particularly useful to save a copy of that file to a Notes database.

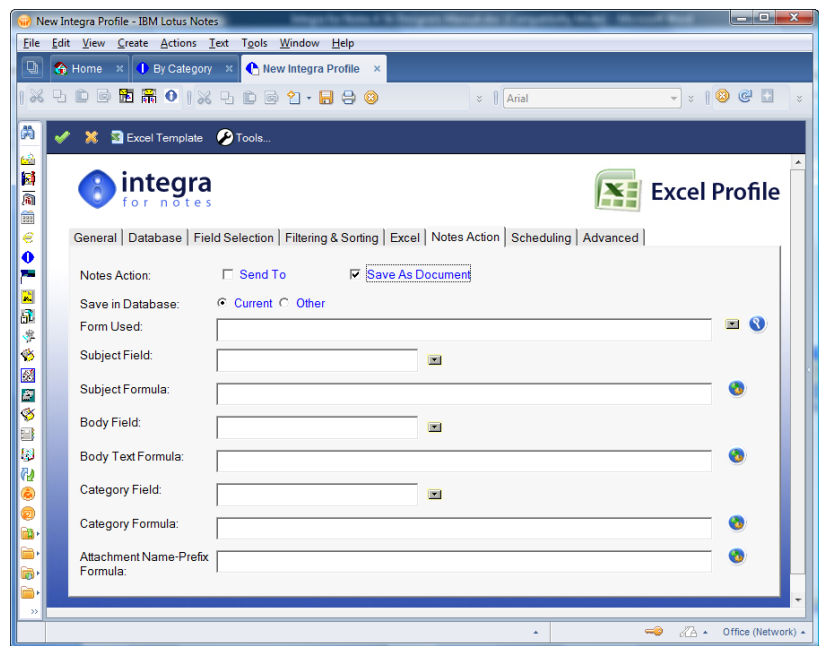
This can be used to good effect for instance when using Integra for Notes to produce a quotation for a client whose details are held in a CRM application and you wish the quotation to be recorded as a part of the client's details.

Integra for Notes provides facilities for these documents to be created in one of three formats:

- » As new documents within the same or a different Lotus Notes database
- » As responses within the same Lotus Notes database
- » As an attachment to the source document being reported on (only where *Document Type* field is set to *Single Document*).

On selection of the *Save As* field, the user will be presented with the options for the different document types as shown below.

The *Merge Options* field will only appear in the case of a Word profile which has its *Document Type* field set to *MailMerge* and which has its *Save As* field set to *Save As Document* (see description below).



Once the selection is made of the document type (Save As Document, Save As Response, Attach to Document), the available fields in this tab change to reflect the selection made. These are shown below and described overleaf:

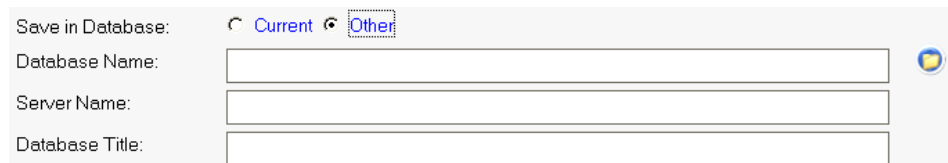
The available *Save As* options provide the following features:

- » **Save As Document** – Integra will create a new Notes document in the chosen Notes database (see the *Save In Database* field) which will be created as a Notes document of type *Document*.
- » **Save As Response** – Integra will create a new response document in the chosen Notes database which will be created as a Notes document of type *Response* and as a “child” of the Notes document from which Integra is exporting. It will therefore automatically contain the Unique Doc ID of the “parent” Notes document.
- » **Attach to Document** – this option will result in the created Word, Excel or Text file being stored as an attachment into a specified field within the Notes document currently being exported. The field into which the attachment is placed is defined in the field called *Body Field* on the same tab of the Integra profile.

Current or Other

In the event that the *Save as Document* option has been selected, the profile will require identification of whether the Notes document containing the attachment is to be created within the *Current* or an *Other* Database.

If set to *Other* the user is able to select the database on the current or a different server or even on a local workstation into which the created Notes document is to be created.



Form Used

The *Form Used* field allows identification of the name of the form to be used for the document to be created. This can either be entered directly into the field or the drop down arrow can be used to request a list of the fields in the database (see circled arrow in graphic).



Once the form has been selected, clicking on the magnifying glass icon alongside can effect confirmation that the correctly named form has been selected. On selecting this icon, the user will be presented with a blank sample of the selected form.



Subject

See definition of the *Subject* field outlined in the previous section *Send To*.

Subject Formula

See definition of the *Subject Formula* field outlined in the previous section *Send To*.

Body Field

The "*Body Field*" field allows definition of the name of the Rich Text field in the Notes document which is to receive the Word, Excel or Text file as an attachment. The name of the Rich Text field can be edited directly or selected from the list of fields available in the database by using the drop down arrow.

Category Field

When documents created by Integra are written back into the source Lotus Notes database, it is useful to be able to identify the created document within a categorized view. For instance, if a mail merge document has been created and sent to many customers, being able to see the document listed under each of the customers will be useful. However, it is undesirable to store a copy of the document per client.

The *Category* field is a multi-value field used to store a category text per processed Notes source document. In the example above, it would be the name of the client.

Its main use is for Word mail merge profiles, which use the *Save To...* document feature. When using the *Save To...* option for a Word mail merge profile, all created single Word documents are collected into one large Word document. The category field allows you to create a category for each of the collected Word documents or processed Notes source documents. The new created Notes (target) document, in which the collected Word document is being attached to, can then be viewed by these categories.

Category Formula Field

The *Category Formula* field allows the definition of the formula creating the category text for each processed Notes (source) document. All category text created during the export process will then be stored in the above *Category* field as multi-value text. The *Category Formula* field is used to store a formula, which will be evaluated at runtime. A valid formula can contain only @functions (@commands are not permitted). It is also possible to refer to any field on the current processed Notes (source) document. An example would be the following formula: @Trim(ContactName + " " + ContactSurname)

Attachment Name Prefix Formula

This feature is only available on Integra export profiles.

When generating a Word, Excel or Text file through an Export profile, Integra allows the setting of the file name to be used for the generated file when this file is e-mailed out using the *Sent To* options or saved to a Notes document using the *Save As* option.

The *Attachment Name Prefix Formula* field allows the entry of a Notes formula to programmatically set the value of the prefix to the file name. For instance, when this field has a value as set below:

"Quotation "

then the file created will be called Quotation_3425.XLS, where 3425 is an Integra generated random reference.

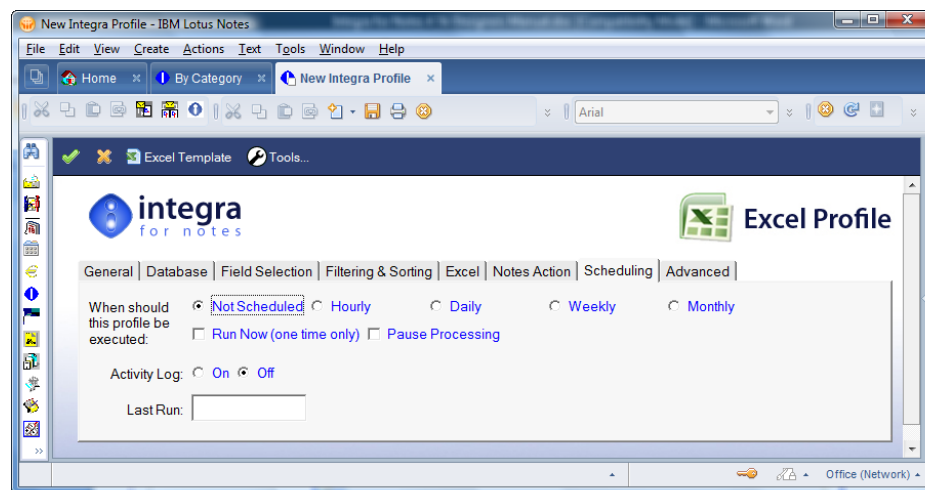
3.9 The Scheduling Tab

The *Scheduling* tab in an Integra profile provides facilities to set a profile to run unattended and automatically in accordance with a schedule as defined within the fields contained in the *Scheduling* tab. This schedule can be run either on a Windows based Domino server or even on a workstation.

Because the objective of a scheduled profile is for it to run unattended, it is important that the other settings of a scheduled profile do not contain options which require user intervention at runtime. For instance, a normal Integra profile can be set to export data to a Word or Excel file and to save the file. If the file name to be used for saving is omitted in the profile, when running the profile Integra will present the standard Windows *File Save* dialog box to the user to enter the file name. This type of user functionality cannot be included within a scheduled profile. Another example is the use of the *Custom* or *Memo* option for the *Send To* facility which e-mails the generated document to one or more users.

The scheduling settings of a profile can be set to any one of the following:

- » Not scheduled (default setting on creation).
- » Hourly
- » Daily
- » Weekly
- » Monthly



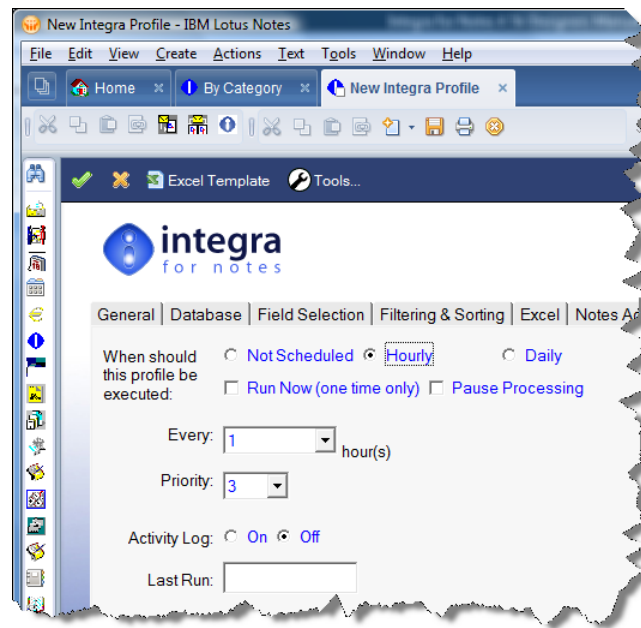
The fields needing to be set in the Integra profile related to scheduling will vary according to the scheduling frequency. The sub-sections below identify the data content for each of the settings for the particular frequency setting.

3.9.1 Not Scheduled

Obviously, Integra profiles with a scheduling frequency set to *Not Scheduled* will not run in an automated manner but will only be available for running through the standard Integra icon user interface.

3.9.2 Hourly

Once a profile is set for scheduling on an hourly basis, the form will display additional fields to the profile creator as shown below:



The functionality of these fields is as outlined below:

- » **Every n hours** – this field allows the frequency of the running of the schedule in hours.
- » **Priority** – Integra will allow multiple profiles to be set to run hourly, however Integra will only run one profile at a time. So as to allow control over the order of the running of profiles, a Scheduled profile can have its Priority field set and Integra will run time conflicting profiles in order of this priority field with profiles set to 1 being run first.
- » **Log (On/Off)** – if the Log field is set to On, then once a scheduled profile is run this will result in log entries being generated into an Integra agent log file. These entries will record all the running events of the scheduled profile. Log entries will be written into a file called IntegraLog.nsf which needs to be created using the standard Notes *Agent Log* template and which needs to be stored in the default data directory of the server(s) on which Integra is deployed.
- » **Last Run** – this field is automatically populated by the system to record the last date and time when the particular profile has been run in a scheduled mode.

In addition to the fields available on the form, the *Scheduling* tab of the Integra profile also displays *Possible Runtime Conflicts* as shown in the screen shot above. This note is provided to remind the profile creator that scheduled Integra profiles are restricted from providing facilities usually available in an Integra profile but which require some form of user intervention at runtime because of course there will be no user for scheduled profiles.

Examples of features that would conflict are:

- » Export Integra profiles that request the name of a file to be created
- » Export profiles that request a user to enter the e-mail address of the recipients of the output of an Integra profile
- » Import profiles that request the file name of an Excel spreadsheet to be imported using an Integra import profile.

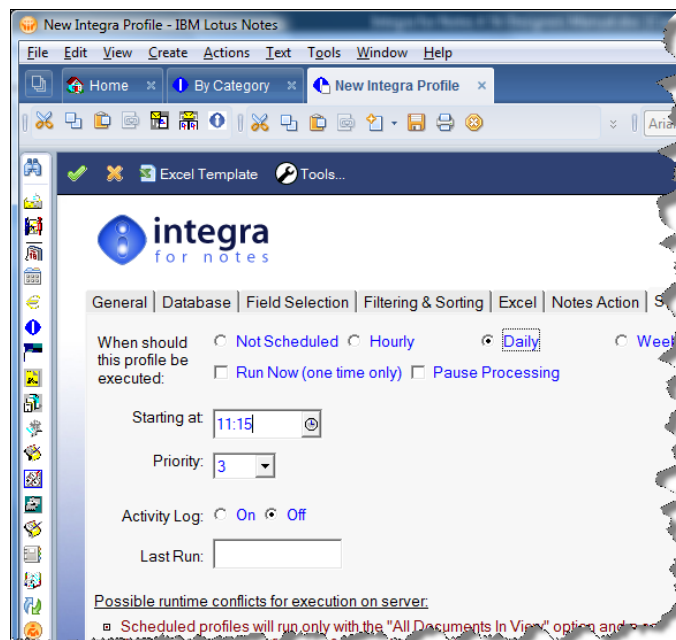
Some restrictions are imposed on scheduled profiles because:

- » Scheduled profiles will run only with the "All Documents In View" option and with a specific view or folder pre-selected.

- » If a file-path & name is not set within an export profile, Integra will create the file with the default name "IntegraExcel.xls" in the current directory (usually the Domino data directory)
- » Any Word or Excel action other than "Save To File", "Print" or "None" will be ignored. The Word or Excel document created will only be saved to file.
- » Word and Excel need to be installed on the Domino server or on a Lotus Notes client acting as an Integra server.

3.9.3 Daily

Integra profiles that are set to run daily allow identification of the time at which they are set to run. Again, the appropriate fields appear on the form based upon the scheduling method as shown below in the case of a Daily profile.



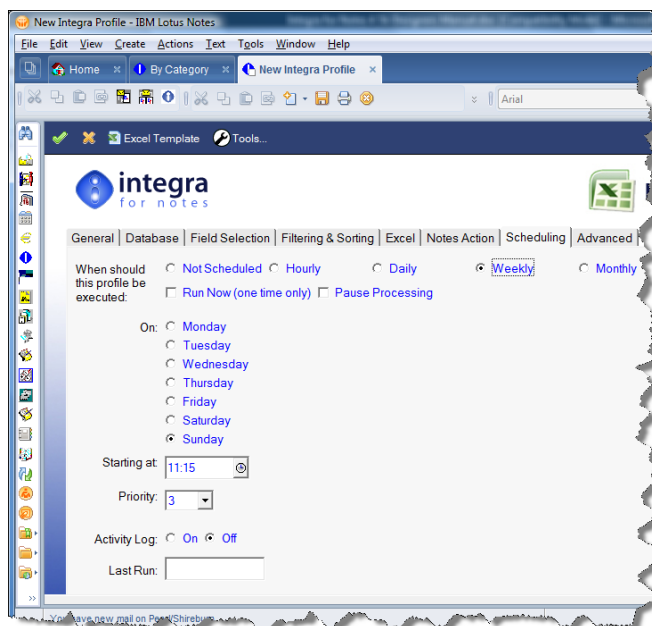
The only difference in the *Daily* schedule is the ability to define the *Start at* time. The system will attempt to start running this profile on a daily basis at the specified time. In the event that other scheduled Integra profiles are running at the same time, the setting of the *Priority* field will be used to determine the order of precedence of the running of the profiles.

The *Priority*, *Log* and *Last Run* fields all function as described above.

3.9.4 Weekly

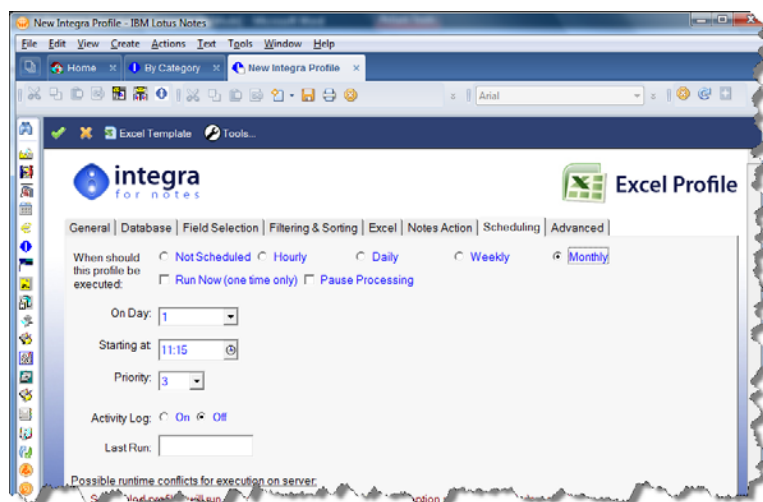
Integra profiles that are set to run *Weekly* allow identification of the day of the week as well as the time at which they are set to run. Again, the appropriate fields appear on the form based upon the scheduling method as shown overleaf in the case of a *Weekly* profile.

The *Priority*, *Log* and *Last Run* fields all function as described above.



3.9.5 Monthly

Integra profiles that are set to run *Monthly* allow identification of the date in the month as well as the time at which they are set to run. Again, the appropriate fields appear on the form based upon the scheduling method as shown overleaf in the case of a *Monthly* profile.



The *Priority*, *Log* and *Last Run* fields all function as described above.

Profiles which are set to run on the 31st of the month will be run not only on the 31st of any month but also on the last day of any month which does not contain 31 days.

For instance, on the 30th June of any year, being that this is the last day of the month, Integra will run any profile which is set to run on either the 30th or 31st. Similarly, on the 28th February in a year which is not a leap year, Integra will run any *Monthly* Integra profile which is set to run on the 28th, 29th, 30th and 31st.

3.9.6 Run Now

The *Run Now* facility has been provided to allow profile creators to test the running of their *Scheduled* Integra profiles more easily. Because of the differences in operation of *Scheduled* profiles and manually run profiles as well as the differences in the security settings required for both, it is not possible purely to confirm the correct operation of a manual profile and assume it will work on a scheduled basis. As a result, correct testing of a *Scheduled* profile should be done by using the *Scheduled* options.


On the other hand to keep waiting a minimum of an hour for the schedule to next run makes debugging tedious. Integra therefore includes the *Run Now* option which allows a profile to be run immediately on the next schedule. Depending on the frequency of the running of the agent which checks for scheduled profiles, usually 5 minutes, then this profile will run within 5 minutes. Please note that, despite the *Run Now* name for this feature, the profile will not run immediately but on the next scheduled profile cycle.

3.9.7 Pause Processing

When setting an Integra *Scheduled* profile to *Pause processing* the profile will no longer run on a scheduled basis but you will preserve the settings of the schedule. This allows a *Scheduled* profile to be switched off and on without removing the other settings.

3.9.8 Scheduling Configuration

All scheduled Integra profiles are executed by a single scheduled agent running on the Integra database. Once this agent has been enabled in the Integra database, it searches the Integra database for all profiles due to run.

	<p>This is a very important feature of Integra as with one Integra agent running to manage, schedule and run all the scheduled profiles, this results in only one agent thread being consumed on the Domino server. A company running 60 different scheduled profiles still uses one agent thread rather than 60 different agent threads.</p> <p>Domino servers are sensitive to having large numbers of simultaneously running agents and in fact even have administrator imposed limits on the number of simultaneous agents that can run.</p>
---	--

For the correct functioning of the scheduled profiles agent, the following items need to be set:

3.9.8.1 Trigger Integra Scheduled Profiles Agent

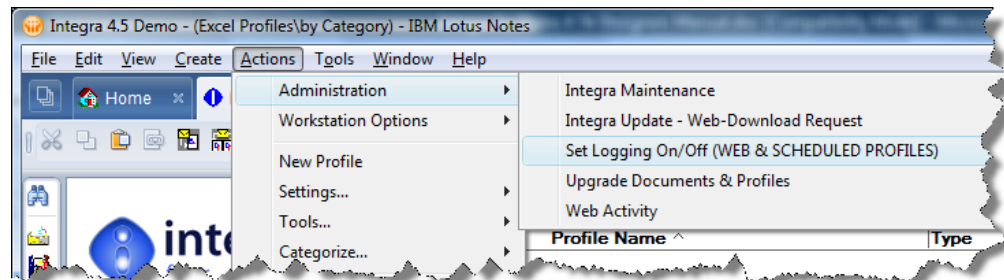
The Integra *Scheduled Profiles* agent needs to be triggered on the server. This can be done in one of two methods:

1. by selecting the *Enable Scheduled Profiles* action in the text of the *Using this Database* document under the *Help* menu item. This would usually be done at installation time.
2. by selecting the *Enable Scheduled Profiles* or the *Disable Scheduled Profiles* buttons in the *Scheduled Profiles* tab of the *Configuration* document (see screen shot alongside and further details in section 3.6 of the *Integra Installation & Configuration Manual*).



By default this agent is set to run every 5 minutes but of course this setting can be modified in the same manner that any agent's frequency can be changed in Lotus Domino.

The ability exists within Integra to log the running of the *Integra Scheduled Profiles* agent itself . This is activated by a user who has access to the [Admin] role through the Actions Menu where there is an agent called *Administration -> Set Logging On/Off (Web and Scheduled Profiles)*. See screenshot below.



3.9.8.2 Configure Agent Security

Since the agent which runs to check when profiles are due to run will run on the server which hosts the Integra database, and this agent will run with the ID of the server, this server must have the rights to run LotusScript agents.

This Integra agent is classified as a *Restricted Agent* and therefore the server must be entitled to run *Restricted Agents*.

Set this security feature within the *Security* tab of the *Server* document in the Domino directory where there are a set of options related to *Agent Restrictions* as shown alongside.

Agent Restrictions	Who can -
Run personal agents:	<input type="checkbox"/> [icon]
Run restricted LotusScript/Java agents:	<input type="checkbox"/> [icon]
Run unrestricted LotusScript/Java agents:	<input type="checkbox"/> [icon]

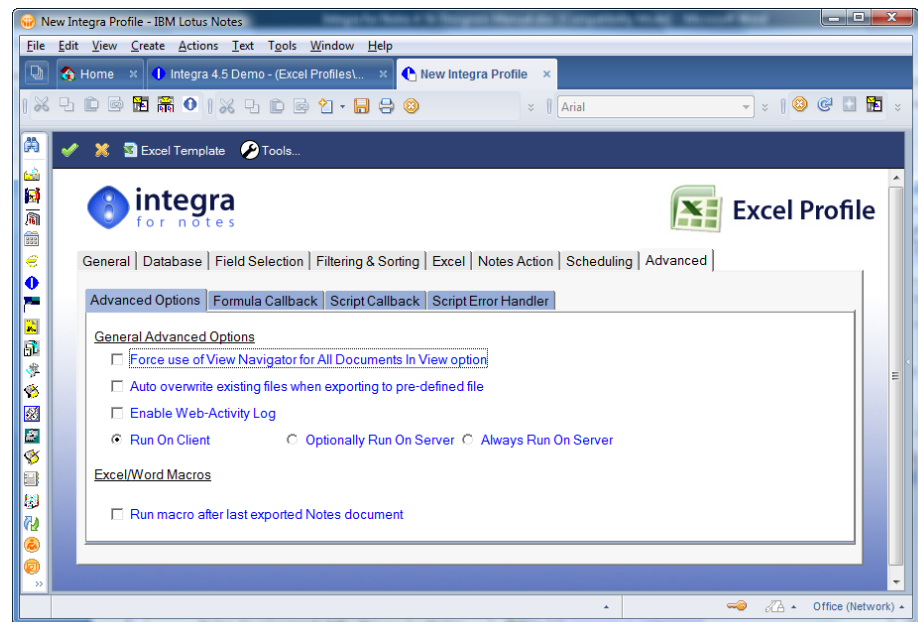
3.10 The Advanced Tab

The Advanced Tab provides facilities for the undertaking of more advanced manipulation of data through an Integra profile. The features of this tab range from the setting of a trigger for a macro in Word or Excel all the way to the most advanced manipulation of data through event driven LotusScript.

The *Advanced* tab is divided into 4 sub-tabs:

- » Advanced Options
- » Formula Callback
- » Script Callback
- » Script Error Handler

The objective of the *Advanced Options* sub-tab is to provide users with access to some high powered features without the need to have an Notes development skills. Integra for Notes directly exposes some features in the user interface which previously required the use of LotusScript to undertake the task. The triggering of a macro or the automatic overwriting of a file name are two such examples.



Section 3.3 of the Integra User Manual outlined the features available to users for the creation of profiles using the fields and computed fields available in the *Fields* tab of a profile. This functionality allows profiles to be defined, which will pass data contained in fields to Word, Excel and Text files. The section also explained how to set up computed fields, which are based on fields available within the Notes documents and using Notes functions.

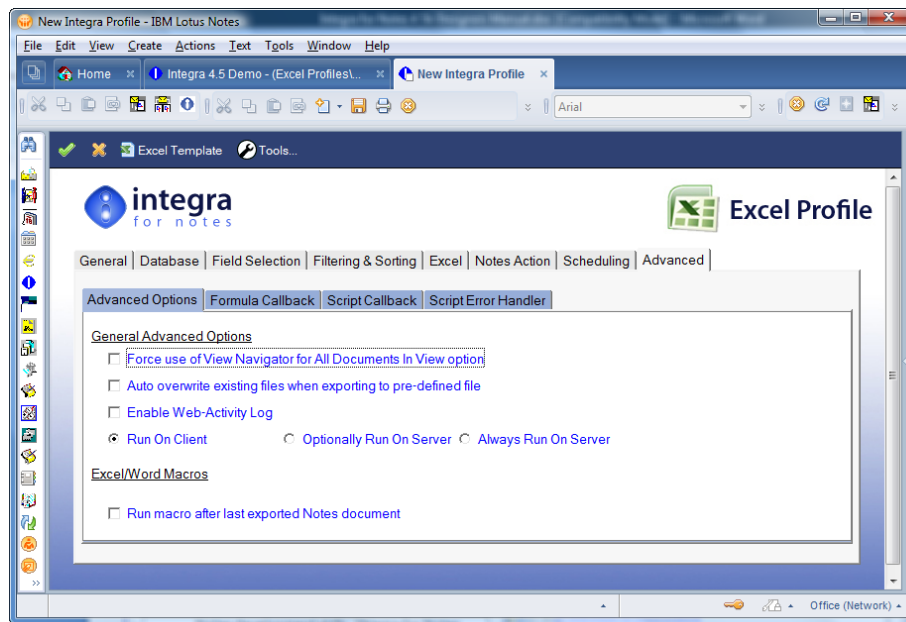
In addition to this level of functionality, Integra also provides an *Advanced Tab* containing functionality to extend the capabilities available to Integra profile creators.

The *Advanced* tab allows users with the skills of writing Notes Formulas and / or LotusScript to write Callback code to manipulate the data exported or imported by Integra on the occurrence of specific Callback events. Using the Callback features of Integra, a Notes programmer can manipulate the entire Integra process using the properties and methods of the supplied Integra runtime objects.

Each of these sub-tabs are defined in further detail in the following sections.

3.10.1 Advanced Options Sub-Tab - Excel

As described above, the *Advanced Options* sub-tab provides direct access through check boxes and other such means to facilities which previously required the profile creator to create LotusScript in the Script Callback sub-tab. The result of the inclusion of these facilities in the sub-tab is that a profile creator with no developer capabilities is able to undertake these tasks without the need to escalate the profile creation process to an experienced developer.



3.10.1.1 Force use of View Navigator for All Documents in View Option

Depending on other profile settings Integra for Notes will determine at runtime which one of the Notes view classes offers the best performance for the task. There are some situations however where it is required to force Integra to use the View Navigator class to loop through the documents in the view because it is the only class which will return all types of view entries including Categories and Category Totals.

If for instance you wish to export documents where processing of the category or the category total is required using the new CB_Category event (see section 3.10.3 regarding Integra Event Handling), then the designer would need to force use of the View Navigator.

3.10.1.2 Auto Overwrite Existing Files when Exporting to Pre-defined file

Integra can be set to save the exported Word, Excel or PDF file into a predefined file on the file system. In the event that the file with the chosen name already exists then the user will be asked to confirm whether they wish to overwrite the existing file.

The *Auto Overwrite Existing Files when Exporting to Pre-defined file* option allows Integra to automatically overwrite a file with the same name on export. This is particularly useful for *Scheduled* profiles which are designed to create an output report using the same file name each time they run.

3.10.1.3 Enable Web Activity Log

This option turns on logging when the report is run through a web browser.

3.10.1.4 Run on Client/Server

Although the Integra database being run by the user may be located on a Domino server, when executing profiles which are not scheduled or web based, these profiles will be executed on the Lotus Notes client of the user. This requires Word, Excel and possibly PDFWriter to be installed on that user's workstation

The *Run on Client/Server* option allows the profile creator to opt for the profile to be executed on the server. In this case, the profile will be triggered from the Lotus Notes client but will actually be executed on the Domino server using the Word, Excel and PDF writing capabilities of the Domino server and once generated, the Word, Excel, text or PDF file will be e-mailed, saved, stored, printed etc as usual. The profile will be executed the next time the scheduled profiles agent runs. This is set by default at 5 minutes.

This facility provides various advantages as follows:

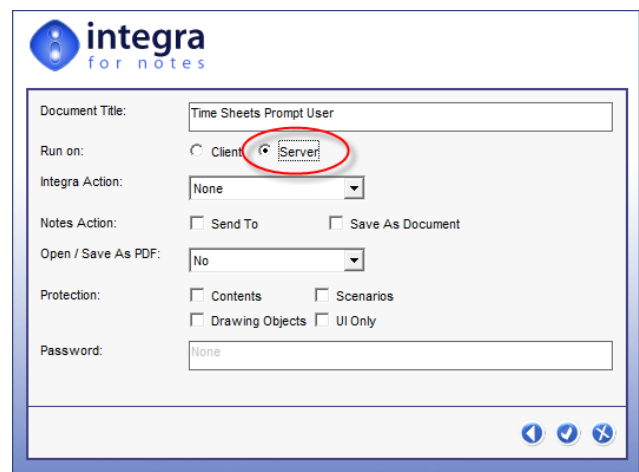
- » Allows a user who does not have Word, Excel and a PDF Writer installed to use Integra to generate Word, Excel and PDF files and have them stored, saved or distributed even back to him. On receipt of the file the user will still be able to view the documents by using a Word, Excel and PDF file viewer.
- » Users of OpenOffice or Star Office will be able to generate the reports from the server and then view and edit them in OpenOffice or Star Office.
- » Processing time is significantly reduced due to the removal of the network traffic involved in the process.
- » The user's workstation is freed up from processing the report and can be used for other tasks.

The available options are:

- » **Run on Client** – this is the default setting and sets the profile to be run on the client's workstation
- » **Optional Run on Server** – this provides the end user at runtime with the choice of where to run the profile, whether on the Client or the Server
- » **Always Run on Server** – this ensures that the profile is always run on the Domino server.

Advanced Excel Options

The Advanced Excel Options section of the *Advanced* tab collates a number of options specifically related to settings in Excel. This section is of course only available for Excel profiles and would be replaced by a set of Advanced Word options for a Word profile while Text profiles have no such advanced features.



3.10.1.5 Format Excel Export According to View Format

This option will carry forward the format settings of the particular view in use when running the Integra profile across to Excel. As a result, the column widths set in the view for any of the fields used in that view which are being exported will automatically be set to the same width in Excel.

Advanced Excel Options

- Method of Export: ☒ Normal ☐ Advanced COM ☐ XML (MS Office 2003+)
- ☐ Format Excel output according to selected view (column) formatting
 - ☐ Export flat categories
 - ☐ Fit column width to data
 - ☐ Fit row height to data

This is particularly relevant for profiles set to operate on generic databases.

3.10.2 Excel/Word Macros

The Excel/Word Macros section of this tab allows the setting of options related to the running of macros in Word or Excel. While when the Export Method field in the Excel or Word tab is set to *Normal* (see section 3.5.1.11) the only available option in the profile will be to select whether or not to run a macro, in which case the macro name can be set, when *Advanced COM or XML*, then macros can be set to run either after each exported document or at the end of the export process.

Excel/Word Macros

- ☐ Run macro after each exported Notes document
- ☐ Run macro after last exported Notes document

Running a macro after each exported document will allow a macro to be run after each line is exported to an Excel row or a new document created in Word and would allow various capabilities including the formatting of cell, the copying of data etc.

Excel/Word macros

- ☒ Run macro after last exported Notes document

3.10.3 Integra Event Handling

The *Formula Callback* and *Script Callback* tabs contained in the *Advanced* tab of an Integra profile (see section 3.10.4) are one of the product's most powerful aspects providing the Integra profile creator with the ability for a deep level of data manipulation.

If you are a Domino Designer, you will probably be familiar with the events available in the Notes environment. Events such as the *QueryOpen* event or the *QueryClose* event allow a developer to place some code (LotusScript or Notes formula language) in these events and, at the trigger point associated with that event, this code will be executed. Any code placed in the *QueryOpen* event is executed immediately that the particular Notes form in which it is placed is opened while the *QueryClose* event is executed on closing of the document.

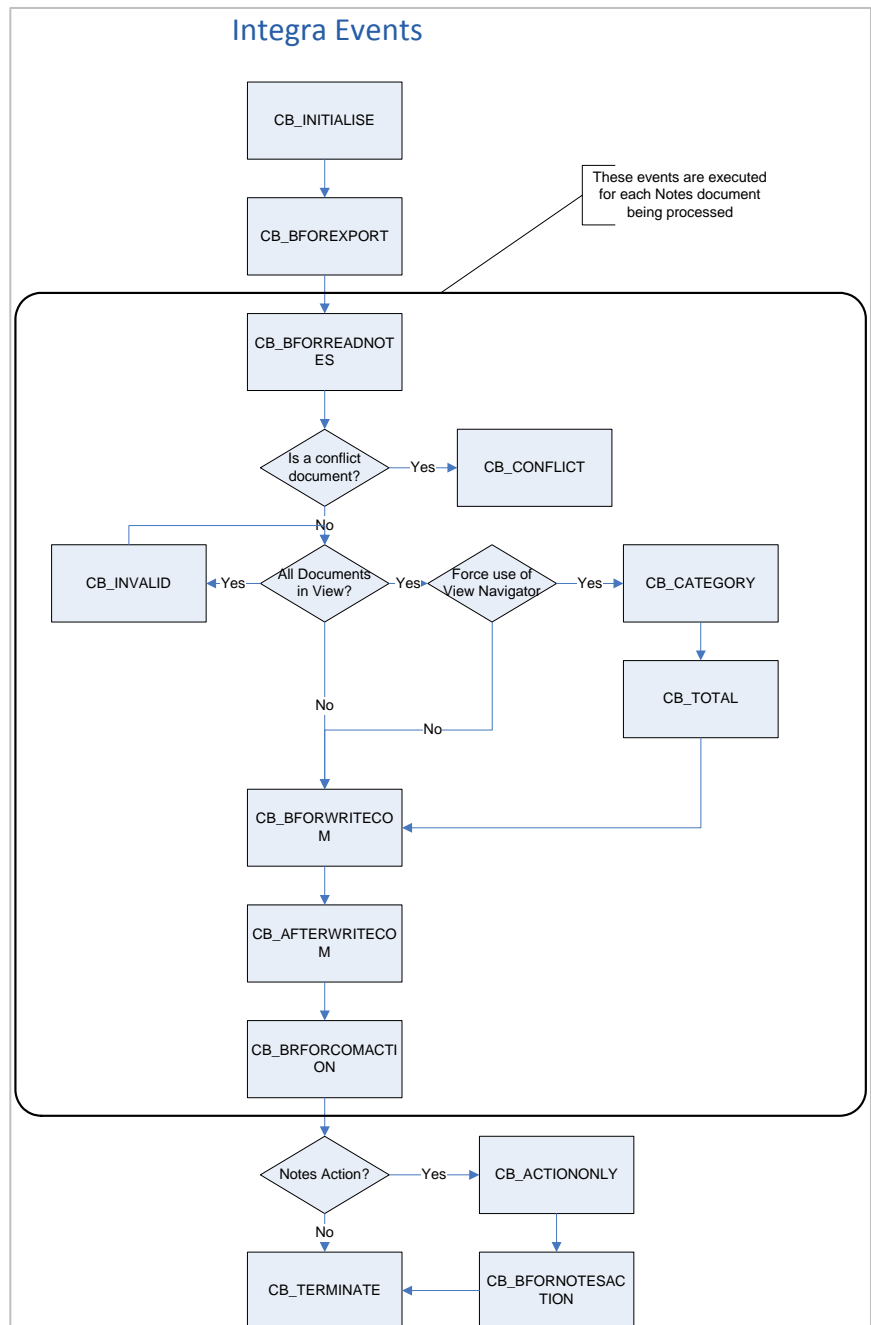
Integra for Notes contains a similar series of events associated with particular trigger points in the execution of an Integra profile. The diagram alongside outlines these events and the point at which each is executed.

Integra profiles can be executed prior to starting an export, or immediately prior to the import or export of each Notes document, prior to writing data to Word or Excel etc. Full details about these events and an explanation of the point in the processing of Integra at which each of these events runs are contained in the sub-sections of this section.

Integra Events can utilize either Lotus Notes formula language, in which case this is placed in the *Formula Call Back* tab, or using LotusScript, in which case the script should be placed in the *Script Callback* tab. Refer to the sections below

Certain events are only available for export profiles, such as the *CB_Export* event or the *CB_Category* event, while others are only available for import profiles.

As documented in sections 3.10.3 and 3.10.4 related to the *Formula Callback* and the *Script Callback* tabs, the user is able to click on the *Default action* button to create the initial code with the appropriate place holders for the programming code related to each event.



The sub-sections of this section of the document define the various events and provide a description of the processing point at which the event is executed.

3.10.3.1 CB_INITIALISE

The *initialize* event is executed after Integra initializes its internal objects. The user dialogs, which eventually come up in the beginning of the Integra runtime, are part of the initialization process. Therefore, the CB_INITIALISE callback event appears after the user has confirmed these dialogs.

This event may be used for presenting customized dialogs to the user at runtime, which will prompt the user for further information necessary for a particular import or export. e.g., a dialog box which requests a range of dates to filter the data being exported. It is here where you would insert the code to collect the information from the user, which information is then used in a subsequent event to filter out the documents not meeting the date range conditions set. This event is useful in both the Formula and the Script callback.

3.10.3.2 CB_ACTIONONLY

This event is event triggered after the existing event called CB_BFORCOMACTION and before CB_BFORNOTESACTION. After Integra gathers the exported data and pushes it to Word or Excel and activates these products on screen, the user has the capability to view and possibly modify the Word document or Excel spreadsheet after which he closes Word/Excel. The CB_ActionOnly event is executed at exactly that point and prior to the running of any code in the CB_BforComAction event which is where the options for *Send To...* and/or *Save As...* are executed. When the Activate or Print/Preview option is used, Integra processes the profile in 2 stages.

Stage1 includes the following events:

- » CB_INITIALISE
- » CB_BFOREXPORT
- » CB_BFORREADNOTES
- » CB_BFORWRITECOM
- » CB_AFTERWRITECOM
- » CB_BFORACTION
- » CB_TERMINATE (if no Notes Actions are defined and therefore Stage 2 is not required)

After these events of which some can occur multiple times, Integra activates Word or Excel and then waits for the user to complete and close the Excel or Word document.

As soon as this happens, the second processing stage kicks in. Stage 2 includes the following events:

- » CB_ACTIONONLY,
- » CB_BFORNOTESACTION,
- » CB_TERMINATE

Important at this point is that Integra has to reinstate its previous status with regards to the objects in memory (these are lost between Stage 1 & 2). Integra does this automatically for those objects which are important to its continued processing. However, some variables created by the profile developer (such as objects) cannot be reinstated. For this purpose Integra provides the CB_ACTIONONLY event to allow the profile developer to reinstate any variables that might have been lost between Stage 1 & 2 and which are required before the execution of the CB_BFORNOTESACTION event.

So CB_ACTIONONLY is practically a CB_INITIALISE event for Stage 2 of Integra's processing loop

3.10.3.3 CB_BFOREEXPORT

This event applies only to export profiles and is called after the CB_Initialise event but before the first document is exported and particularly importantly, before any filter which may apply to the profile is executed.

3.10.3.4 CB_INVALID

This event is triggered when an invalid view entry is processed. This applies only to profiles that are using the All Documents In View option (data filtering).

3.10.3.5 CB_CATEGORY

This event is triggered when a view category entry is processed in a categorized view. This applies only to profiles that are using the All Documents In View option in the *Data Filtering* tab and when the Use the NotesViewNavigator class option is selected (see section 3.10.1.1 - *Force use of View Navigator for All Documents in View Option*). This is the only method that returns view entries of type category and totals.

3.10.3.6 CB_TOTAL

This event is triggered when a view total or subtotal entry is processed. This applies only to profiles that are using the All Documents In View option (data filtering). To use this event, it is required that Integra is set to use the NotesViewNavigator class as this is the only one returning view entries of type category and totals (see section 3.10.1.1 - *Force use of View Navigator for All Documents in View Option*). This is the only method that returns view entries of type category and totals.

3.10.3.7 CB_CONFLICT

This event is triggered when a *Save or Replication Conflict* document or entry is processed.

3.10.3.8 CB_BFORREADNOTES

This event applies only to export profiles. The event occurs before Integra is reading the field contents from each of Notes documents into the internal objects. If 100 documents are being exported or imported, then this event runs once per document, i.e. 100 times. This event may be used to manipulate the data in the Notes back-end documents beforehand. Ultimately this can also be done in the Integra objects in the CB_BFORWRITECOM event, however, most programmers are familiar with Notes object classes and find it maybe easier to work on them.

This event is useful in both the Formula and the Script Callback.



There is no harm in changing the back-end documents, as they will not be saved to file. On the other hand, this is maybe exactly what you intend to do e.g. to flag them with a time-stamp when they have been exported the last time.

3.10.3.9 CB_BFORREADCOM

This event applies only to import profiles. The event occurs before Integra is reading the information from the next Excel or Text file row or Word document into its temporary object class properties. This event may be used to validate the data to be imported before reading in the data or to control whether reading should take place in the first place.

This event is mainly useful in the Script Callback.

3.10.3.10 CB_BFORWRITECOM

This event applies only to export profiles. The event occurs before Integra writes the collected data into the export file (Word document, Excel spreadsheet or Text file). As explained before, this event can be used to manipulate the Integra objects beforehand.

This event is mainly useful in the Script Callback.

3.10.3.11 CB_AFTERWRITECOM

This event applies only to export profiles. The event occurs after Integra writes the collected data into the export file (Word document, Excel spreadsheet or Text file).

3.10.3.12 CB_BFORWRITENOTES

This event applies only to import profiles. The event occurs immediately before Integra writes the information stored in its temporary object class properties (read from the import file) into the newly created Notes document. This event may be used to manipulate the object properties beforehand.

This event is mainly useful in the Script Callback.

3.10.3.13 CB_BFORCOMACTION

This event applies only to export. The event occurs before Integra is executing the COM (Integra) action, e.g. Activate, Preview or Print. This event may be used to manipulate the Word or Excel COM object (stored in the Integra objects) beforehand. An example could be to overwrite a selected *Save To File* action and actually use the COM object's *SaveAs()* method to create any other file type supported by Word or Excel. Alternatively, you could overwrite the Print action by sending the Word or Excel file to Acrobat's PDF-Writer.

This event is mainly useful in the Script Callback.

3.10.3.14 CB_BFORNOTESACTION

For export profiles, the event occurs before Integra sends an automated email attachment of the exported file and again before saving the attachment to a Notes document. This depends on the options selected in the profile or in the runtime dialog presented to the user. As shown in the above default Script Callback, the distinction between the two situations where this event can occur is by checking whether the Integra "stats" object's "savedoc" property is nothing. In which case the event has been occurred before Integra is sending a mail. Otherwise, Integra is about to save the Notes document where it attached the export file.

```
if not stats.savedoc is nothing then
  ' before save as...
else
  ' before send to
end if
```

For import profiles (Excel & Text profiles), the event occurs after the imported data is written into the newly created Notes document, but before it is actually saved to file. Here you can manipulate the Notes document before Integra saves it in the Notes (target) database.

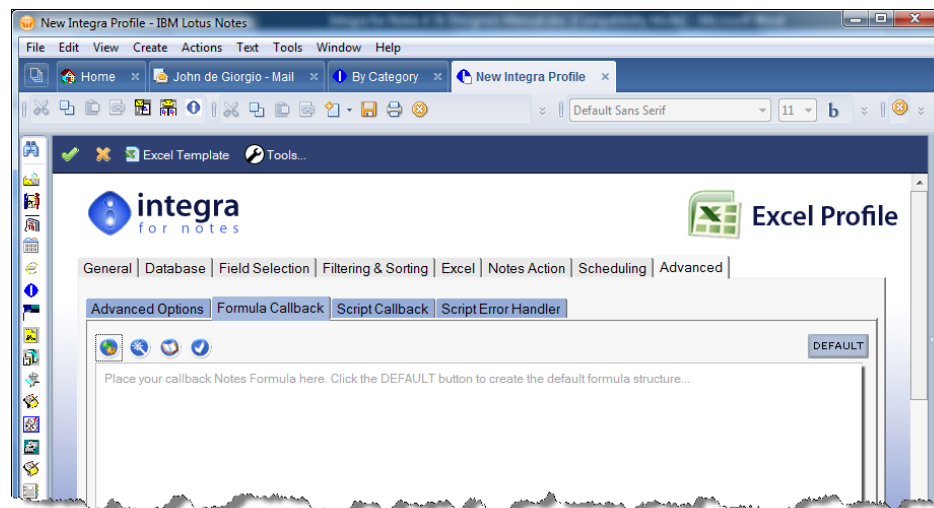
This event is mainly useful in the Script Callback.

3.10.3.15 CB_TERMINATE

This event occurs just before Integra removes all its runtime objects from memory and returns control to the user. This event is useful in both the Formula and the Script Callback.

3.10.4 Formula Callback

The *Formula Callback* field allows the users to write a formula using standard Notes Formula @functions and for this formula to be executed in one of Integra's events. The available events are explained in the previous section 3.10.2 – *Integra Events*.



On selecting the *Formula Callback* tab, the user is presented with the *Formula Builder* screen that has been explained in section 3.3.5. The same *Lookup Wizard* and *Syntax Checker* functionality explained in section 3.3.6 is also available.

The *Formula Callback* field can be left blank and no formula callbacks will be affected. On creation of a new profile, the Formula Callback field is in fact blank. In the event that formula code is to be placed in one or more Integra events, so as to avoid the user having to define these events each time, an option exists to create the *Default* code for formula events. This is effected by clicking on the *Default* button.

Default

The default structure is an event case segment (using the @IF function) to execute specific parts of the formula depending on the Integra event the formula is being called back from or evaluated with. The default structure looks like this:

```
statlist :=
"CB_BFORWRITECOM":"CB_BFORNOTESACTION":"CB_INITIALISE":"CB_TERMINATE":"CB_BFORCOMACTION":"C
B_BFORREADNOTES":"CB_NONE":"CB_NONE":"CB_AFTERWRITECOM":"CB_BFOREXPORT":"CB_NONE":"CB_INV
ALID":"CB_CATEGORY":"CB_TOTAL":"CB_CONFLICT":"CB_ACTIONONLY";
envstat := @texttonumber(@environment("FormulaCbStatus"));
status := @subset(@subset(statlist;envstat);-1);
```

```
@if(
  status="CB_INITIALISE";
  "",
  status="CB_ACTIONONLY";
  "",
  status="CB_BFOREXPORT";
  "",
  status="CB_INVALID";
  "",
  status="CB_CATEGORY";
  "",
  status="CB_TOTAL";
  "",
  status="CB_CONFLICT";
  "",
  status="CB_BFORREADNOTES";
  "",
  status="CB_BFORWRITECOM";
  "",
  status="CB_AFTERWRITECOM";
  "",
  status="CB_BFORCOMACTION";
  "",
  status="CB_BFORNOTESACTION";
  "",
  status="CB_TERMINATE";
  ""
)
```

Code requiring execution should be placed instead of the empty string ("") placeholders within the @IF function. If multiple lines of code need to be added the @Do() function should be used. For instance:

```
@if(
  status="CB_INITIALISE";
  "",
  status="CB_BFOREXPORT";
  "",
  status="CB_BFORREADNOTES";
  @Do(
    @SetField("Temporary_DateField";@Today);
    @SetField("Temporary_Text";"This is temporary text");
  );
  status="CB_BFORREADCOM";
```

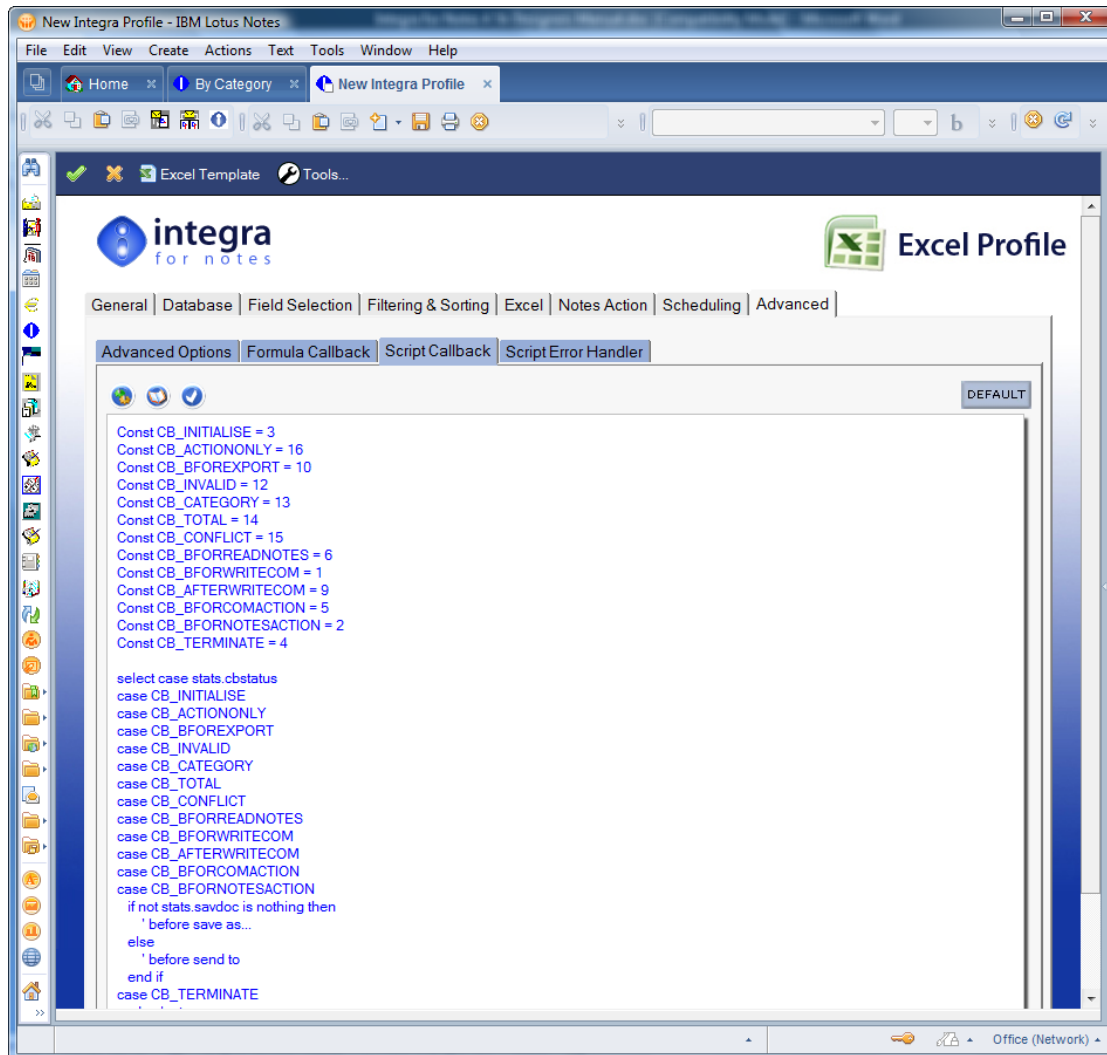


@commands() or not allowed in this context. In the event that both Formula Callback and Script Callback has been used within a profile, the Formula Callback is executed first.

For more details regarding Integra's events see section 3.10.2.

3.10.5 Script Callback

The *Script Callback* field allows the creation of event driven functionality using LotusScript and extends the capabilities of what can be achieved by an advanced developer through an Integra profile to anything that can be done in the Lotus Notes environment.



By default, the *Script Callback* field is blank and the *Script Callback* field may be left blank. In such a case, no actions will be taken.

In the event that LotusScript code is to be placed in one or more Integra events, so as to avoid the user having to define these events each time, an option exists to create the *Default* code for LotusScript events. This is effected by clicking on the *Default* button. The same *Lookup Wizard* and *Syntax Checker* functionality is also available.

Default

The default structure is an event case segment (using LotusScript) to execute specific parts of the script depending on the Integra event the script is being called back from or evaluated with.

The default structure looks like this:

```
Const CB_INITIALISE = 3
Const CB_ACTIONONLY = 16
Const CB_BFOREXPORT = 10
Const CB_INVALID = 12
Const CB_CATEGORY = 13
Const CB_TOTAL = 14
Const CB_CONFLICT = 15
Const CB_BFORREADNOTES = 6
Const CB_BFORWRITECOM = 1
Const CB_AFTERWRITECOM = 9
Const CB_BFORCOMACTION = 5
Const CB_BFORNOTESACTION = 2
Const CB_TERMINATE = 4
```

```
select case stats.cbstatus
case CB_INITIALISE
case CB_ACTIONONLY
case CB_BFOREXPORT
case CB_INVALID
case CB_CATEGORY
case CB_TOTAL
case CB_CONFLICT
case CB_BFORREADNOTES
case CB_BFORWRITECOM
case CB_AFTERWRITECOM
case CB_BFORCOMACTION
case CB_BFORNOTESACTION
    if not stats.savdoc is nothing then
        ' before save as...
    else
        ' before send to
    end if
case CB_TERMINATE
end select
```

For code to be executed at a particular point in the profile execution cycle, the profile designer needs to add the code within the context of the *Case* statement related to that point. For instance, if you wish to calculate the total of a particular field which is contained on the response documents related to that main document currently being exported, the appropriate code (specific to your requirement) would be added in the CB_BFORREADNOTES event.

The documentation of the Integra objects and methods is available on-line for advanced developers at www.integra4notes.com/manuals

3.10.6 The Script Error Handler Field:

Again, the Script Error Handler field is an optional field allowing the creation of LotusScript functions or subroutines to display error messages and abort the Integra process in the event of specific errors occurring.

By default the *Script Error Handler* field is blank. There is no default structure for the *Script Error Handler* as there is for the *Script Callback*, because there is only one event, the error event, when this code is executed. Whenever a runtime error occurs in the Integra runtime script libraries or in the scripts or formulae executed at runtime as stored in the Integra profile, Integra will execute any code stored in the *Script Error Handler* field.

There are three properties in the runtime object classes which are of prime importance when writing a *Script Error Handler*. These are the properties *.ErrorText*, *.IsError* and *.Continue*, which are the same for both the Integra import and the export object class. The following code is an example taken from the *Integra Profile Import* profile:

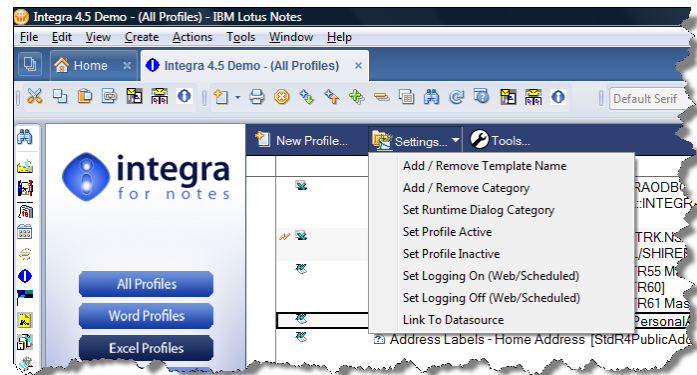
```
' by default Integra is opening the text file to be imported
' according to the filename field in the Integra profile.
' It does this in the initialization of the import process, however, in this case the filename
' is not defined at this time and therefore a runtime error will occur.
' This error handler checks whether any FileID has yet been
' given and that the error message indicates a missing filename
' (this as the Filename field in the profile has been left blank).
' If this is the case it ignores the error and continues with the import process
' which will then prompt the user with a file-open dialog.
```

```
if stats.FileID = -1 then
  if instr(import.errortext,"File does not exist") > 0 then
    import.errortext = ""
    import.iserror = false
    import.continue = true
  end if
else
  import.continue = false
end if
```

3.11 Integra Views Settings Action Button

A number of settings are able to be set on an Integra profile as described elsewhere within this manual. The facility is primarily available to allow some of these settings to be applied to multiple profiles simultaneously.

This can be achieved by using the *Settings* action button on the various views in the Integra database. Select the profiles to which to apply the new setting and then select the *Settings* action button at which point you will be presented with a menu of settings as shown in the screenshot alongside, each of which is described below.



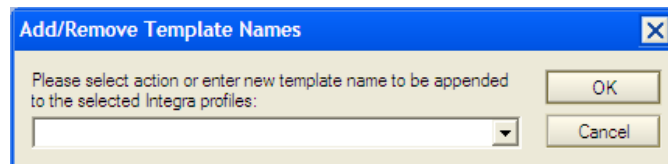
It is important to select the profiles to which you wish to apply the settings before selecting the *Settings* action button.

3.11.1 Add/Remove Template Name

Integra profiles are able to be linked to a template (see section 3.2.4). The *Add/Remove Template Names* facility allows the name of a template to be added to the selected profiles or the removal of all existing templates for the selected profiles.

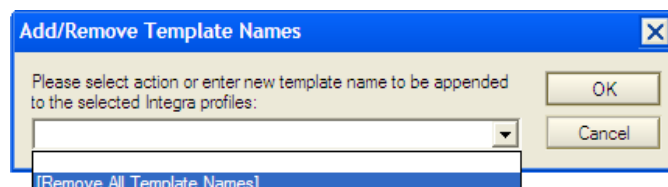
The *Template Name* field is a multi-value field and therefore if a template name is added to a profile already containing one or more template names, the new name will be added to those already recorded. Replacing a template name with another will require first the removal of the current templates following which a new template(s) can be added.

On selection of this option, the user is presented with a prompt box such as the one shown below:



To add a new template name, simply type in the name and click on *OK*.

To remove all existing template names for the selected profiles, click on the drop down menu arrow and choose the *Remove All Template names* option.



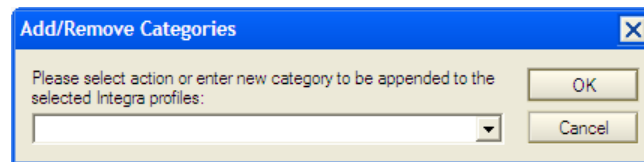
If a profile currently has more than one template and you wish to removal just one of these template names, you must remove them all and then add the ones that are still to be retained. These can be added in one go, separated by a comma or semi-colon.

3.11.2 Add/Remove Category

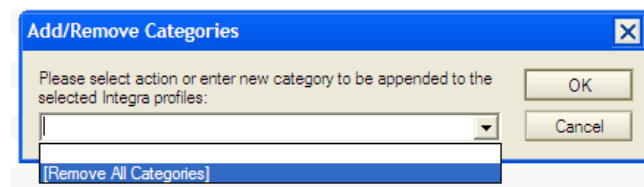
Integra profiles are able to be categorized so that, when users of the Integra database navigate through the database, they are able to see profiles of a similar category (see section 3.1.2 on Categories) The *Add/Remove Category* facility allows a category to be added to the selected profiles or the removal of all existing categories for the selected profiles.

The *Category* field is a multi-value field and therefore if a category is added to a profile already containing one or more categories, the new category will be added to those already recorded. Replacing a category with another will require first the removal of the current categories following which a new category(s) can be added.

On selection of this option, the user is presented with a prompt box such as the one shown below:



To add a new category, simply type in the category and click on *OK*. To remove all existing categories for the selected profiles, click on the drop down menu arrow and choose the *Remove All Categories* option.



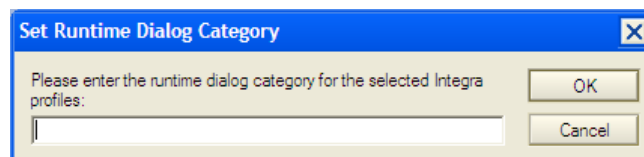
If a profile currently has more than one category and you wish to removal just one of these categories, you must remove them all and then add the ones that are still to be retained. These can be added in one go, separated by a comma or semi-colon.

3.11.3 Set Runtime Dialog Category

Integra profiles are also able to be categorized using a *Runtime Dialog Category* field so that, when end users run Integra, the profiles displayed in the *Profile Dialog Box* at runtime are categorized into some form of order. This *Runtime Dialog Category* is different to the *Profile Category* field as the *Runtime Dialog Category* relates to presentation at runtime to the end-user while the *Profile Category* is used for categorizing within the Integra database as seen by the profile designer. For more details about the *Runtime Dialog Category* see section 3.1.3)

The *Set Runtime Category* facility allows a category to be added to the selected profiles. Unlike the *Profile Category* which allows multiple categories to be added to a profile, the *Runtime Category* is a single value field only allowing a profile to be set to one runtime category.

On selection of this option, the user is presented with a prompt box such as the one shown below:



To add a new runtime dialog category, simply type in the category and click on *OK*.

3.11.4 Set Profile Active

An Integra profile can be flagged as being *Active* (the default setting) or *Inactive*. Inactive profiles are not able to be executed and would not be displayed in the *Profile Dialog Box* shown to end-users when executing the Integra SmartIcon. Once a profile is marked as *Inactive* it is only displayed in the All Profiles views and is shown with a cross next to it.



The Set Profiles Active option in the *Settings* action button will mark all the currently selected profiles as *Active*, changing their *Active* field to a value of *Yes*.

For more details about the *Active* field see section 3.1.7

3.11.5 Set Profile Inactive

The *Set Profiles Inactive* option in the *Settings* action button will mark all the currently selected profiles as *Inactive*, changing their *Active* field to a value of *No*.

3.11.6 Set Logging On (Web/Scheduled)

This option enables logging of the selected profiles when these are run through a web browser and/or scheduled. This facility sets the value of the field *Enable Web Activity Log* found in the *Advanced* tab of an Integra profile to *Yes* for all the selected profiles and avoids applying the setting at the level of each profile individually. For more information about logging of web/scheduled profiles see section 3.10.1.3 of this manual.

3.11.7 Set Logging Off (Web/Scheduled)

This option disables logging of the selected profiles when these are run through a web browser and/or scheduled. This facility sets the value of the field *Enable Web Activity Log* found in the *Advanced* tab of an Integra profile to *No* for all the selected profiles and avoids applying the setting at the level of each profile individually. For more information about logging of web/scheduled profiles see section 3.10.1.3 of this manual.

3.11.8 Link to Datasource

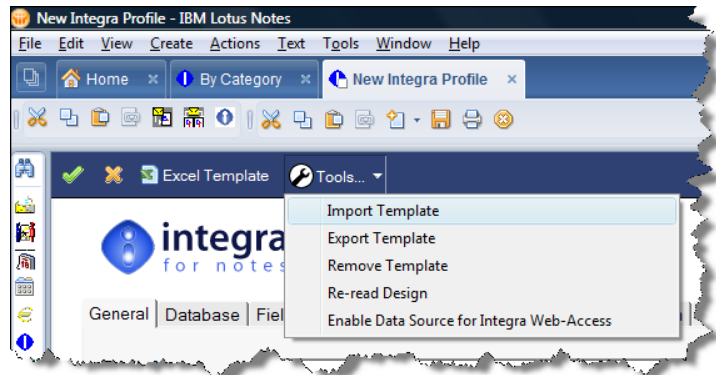
As described in section 3.2.1 of this *Designer Manual*, Integra profiles are linked to a specific database from which the reporting is to be effected or to which the importing is to be undertaken. This linkage can be based either on the replica ID, template etc (see section 3.2.2).

This facility allows selection of the database that the selected profiles are linked to be set en-masse for multiple profiles. On selection of this option the user will be presented the standard Database Open dialog to allow the choice of database for the linkage.

3.12 Integra Profile Tools Action Button

A number of tools or utilities are available within an Integra profile that, when run carry out specific tasks on the current profile. These options are available in the **Tools** action button within the Integra profile while a separate Tools action button is available on the view.

On selection of the *Tools* action button within an Integra profile, the user is presented with a number of options as described below.



3.12.1 Import Template

While the Word Template and Excel Template action buttons available in an Integra profile allow for the creation of a template into which the fields identified in the *Fields* tab of an Integra profile will be created, users may already have a Word or Excel template created from their usage prior to implementation of Integra.

A user is able to import such a template into the Integra profile and then manually create the links to the various fields from the Integra profile. For further details on manually creating fields see section 4.2.

This option therefore allows the reading in of an already prepared Word or Excel template into an Integra profile from the file system.

On selection of this option, the user is presented with the standard Windows file open dialog box to allow selection of the file.

3.12.2 Export Template

This option allows the saving of a Word or Excel template contained within Integra to the file system. On selection of this option, the user is presented with the standard Windows file open dialog box to allow identification of the folder and file name with which the file is exported.

3.12.3 Remove Template

In the event that a user wishes to remove an existing template from an Integra profile, often so that they can recreate it from scratch after major changes, this option removes the template currently stored in the profile.

3.12.4 Re-read Design

This option is only available when the profile is in edit mode, and will re-read the design elements of the form selected in the Database Tab and list all the fields currently available on the form. This is required when the design of a Notes database from which your Integra profile is set to export from or import into has been modified subsequent to the original creation of the Integra profile. This allows the opportunity to select a newly added or renamed field from the form into the Integra profile.

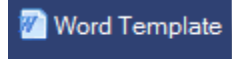
3.12.5 Enable Data Source for Integra Web Access

For Integra profiles to be able to run from a web browser to export data from that database, certain design elements need to be placed into the source database. These design elements are all open code and therefore the database is not a container for any closed code. To facilitate the creation of these design elements, this *Tools* action button provides a function which automatically pushes these design elements into the source database.

4 Creating a Word Template

The concept behind Integra for Notes' functionality is the provision of linkage between a Notes database and a Word document and through that the optional generation of a PDF file. The settings and properties of this linkage are contained within the Integra profile which governs each export of data. In addition, for exports to Word, a Word template needs to be prepared with the appropriate text and format and containing field tags which will act as placeholders for the fields to be received from Notes via Integra.

The creation of the Word document can be undertaken from within the particular Integra profile using the *Edit Template* action button. This button is used both for creating a new template as well as for editing an existing template.

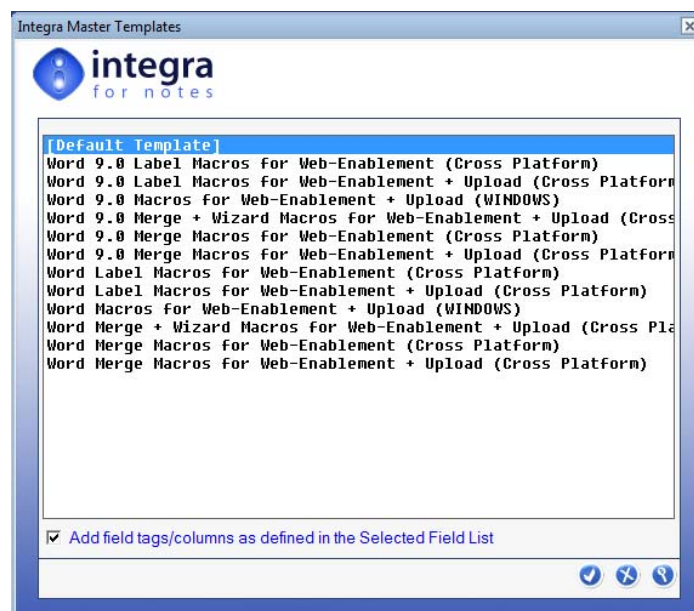


On selection of this action button, Integra will determine whether a Word document already exists in the profile and if one does then it will launch Word and bring up the template. The user will be able to modify the template and on exiting Word will be invited to save his changes and update them to the profile.

If the profile does not already contain a Word document, then Integra will detect this and allow the creation of the Word template for storage within the Integra profile. Integra for Notes provides the concept of *Masters Templates* from which templates for a specific profile can be created. These *Master Templates* allow definition of a layout, font, color scheme etc. and can be used repeatedly to make individual templates inside a profile. See section 4.6 for additional information about *Creating Master Word Templates* in the *Configuration* document.

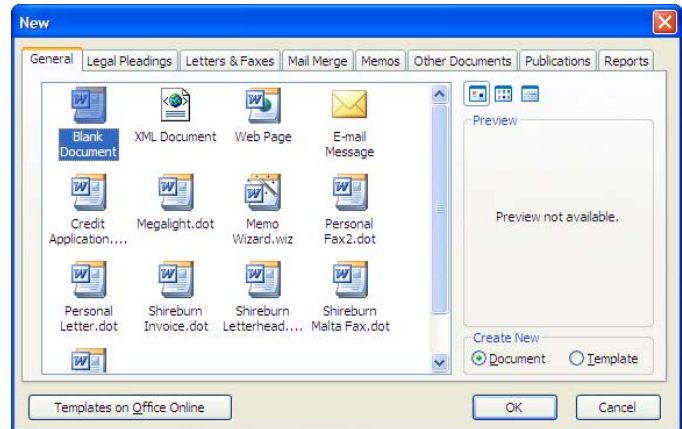
On utilization of the *Edit Template* action button, when no template has already been created the user will be presented with a dialog box from which to select the Master Template to be used to generate the Word template for the current profile. These Master Templates contain specific formatting, data content, macros etc that are automatically used as the basis for the creation of the template to be used for a specific Word profile. Integra ships with a number of templates, most used for web enabled usage.

The user can choose either the *Default Template* or one of the other templates to inherit their design and layout into the Word template which is about to be created. Section 4.6 of this manual explains how these Word *Master Templates* can be created in the *Configuration* document.



In the event that the user selects the *Default Template*, Word allows the identification of one of the standard Word templates available in the user's Word environment. If one of the Master Templates is used then Word will utilize this master template to create the template for the profile.

The Template Selection dialog box also allows identification of the option to *Add fields/Tags to Selected Template*. This setting which defaults on, will create the tags in Word or Excel to receive the data from the fields listed in the *Selected Field List*. If a Master Template is used together with this option then the fields from the *Selected Field List* will be created at the beginning of the template.



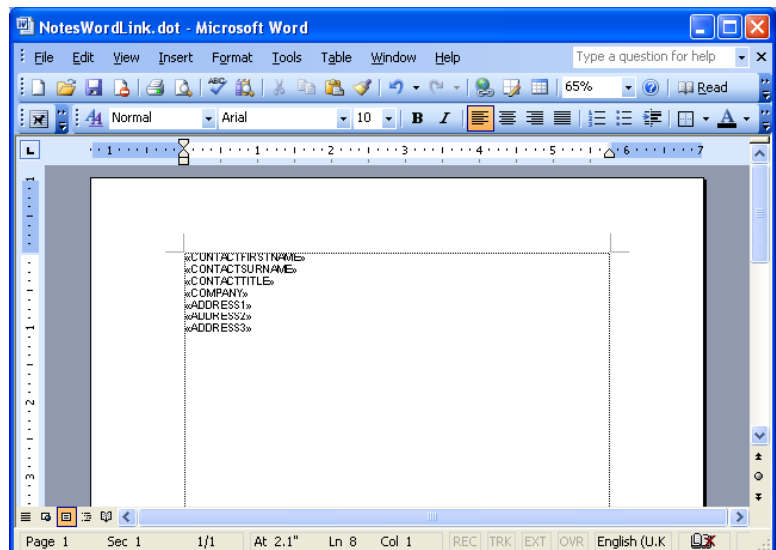
It is also possible to create the Master Template with the fields ready created. In that case it is useful not to select the *Add fields/Tags to Selected Template* option as the fields will already be in the document. Of course as with any Integra export, it is essential that the fields contained in the *Selected Field List* are available within the template in which Integra is required to push the Notes data.

Manual creation of the Field Tags is also possible using Word's *Insert – Field* option. Apart from being tedious this could however also result in typing errors and thus broken links between the fields in the *Selected Field List* and those in the Word document.

In the event that the Default Template option has been selected together with the *Add fields/Tags to Selected Template* for the automatic inclusion of the fields, the Word document would look like the following screen shot:

The tags are identified using MS-Word's convention for naming and displaying of tags. Where the tag <COMPANY> is shown, this value will be replaced at runtime by the actual value of the field defined in the Integra *Selected Field List* called *Company*.

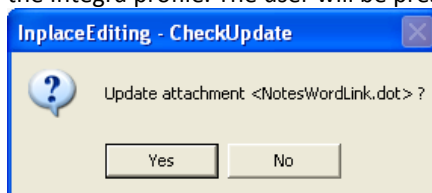
These tags can be cut and pasted around the Word document and the rest of the actual text, graphics etc. required in the document added.



Integra will only prompt the user to insert the fields into the Word document when clicking on the *Edit Template* action button when no Word template already exists. Once the document is created and the profile is updated, you will need to add/remove new tags manually.

Any changes to fields in the *Selected Field List* need to be reflected in the Word template. Running an Integra profile with fields in the *Selected Field List* not found in the template will cause an error.

After the document is completed, when the user closes the Word document or exits Word, Integra will prompt the user to update the Word template back into the Integra profile. The user will be presented with this option box:



On selecting the Yes option, Integra will automatically attach the Word document into the Integra profile. Selecting the No option will ignore the changes made to the template.

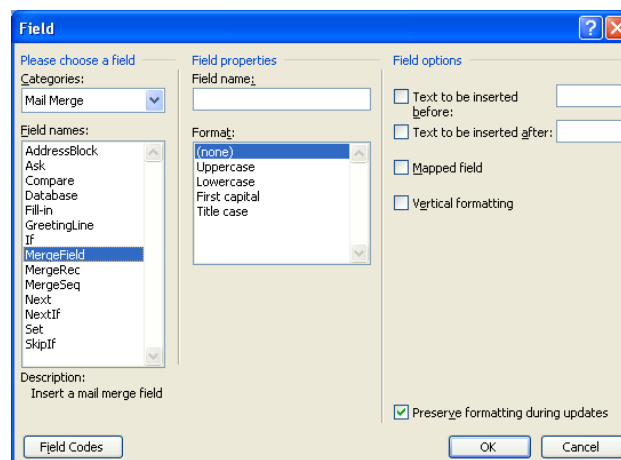
Editing an existing Word document within an Integra profile is undertaken in exactly the same manner using the *Edit Template* button.

4.1 Types of Word Tags supported by Integra

Integra supports the following two tag types for programmatic data exchange:

- » **Fields** – fields are part of the standard Mail Merge feature of Word. There are several types of fields categorized according to the functionality they provide. Integra supports only fields of type MERGEFIELD.

Although Word does distinguish fields from bookmarks, the MERGEFIELD is, from a functionality point of view, essentially nothing else than a bookmark, pointing to a defined place of data entry. A MERGEFIELD does not provide any functionality to control the data entry. It cannot be protected from being edited, unless the entire Word document is protected and the entire document cannot be protected, whilst leaving the tags of type MERGEFIELD editable.



- » **Form Fields** - are different from Fields in that they provide some functionality to actually control the data entry. Word Form Fields are typically used in a Word document where defined and validated data is to be entered including the ability to select from a drop down list.

One advantage of the use of Form Fields in a Word document created by Integra is that, when used in conjunction with one of protection option of the Integra profile, namely the *Allow Field Editing Only*, this would allow the Word document to be created and presented to the user on screen and to limit the user's ability to enter data only into Form Fields. See section 3.5.1.5 for more details about setting Word protection in an Integra profile.

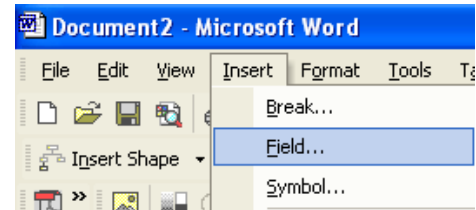


When Integra is creating the field tags automatically upon creating a new template, it is utilizing tags of type MERGEFIELD.

4.2 Creating Tags of Type *Field*

Although Integra provides facilities to automatically create the tags into the Word document based on the fields in the *Selected Field List* in an Integra profile, the facility to manually enter these fields is also required, if for no other reason to add a new tag into a previously prepared Word profile.

To manually insert a field or tag into Word, position the cursor at the place where the field is to appear and then utilize the *Insert* → *Field...* option on the Word menu.

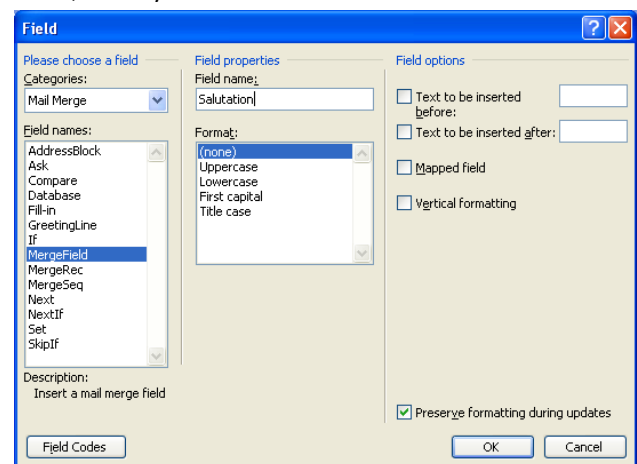


On selection of the field option, the user will be presented with a dialog box allowing the entry of fields into the Word document. The layout of the presented dialog varies depending on the version of Microsoft Word being utilized. This manual uses screenshots from the latest version of Microsoft Word, namely Word 2003. Please refer to Word's documentation for more details.

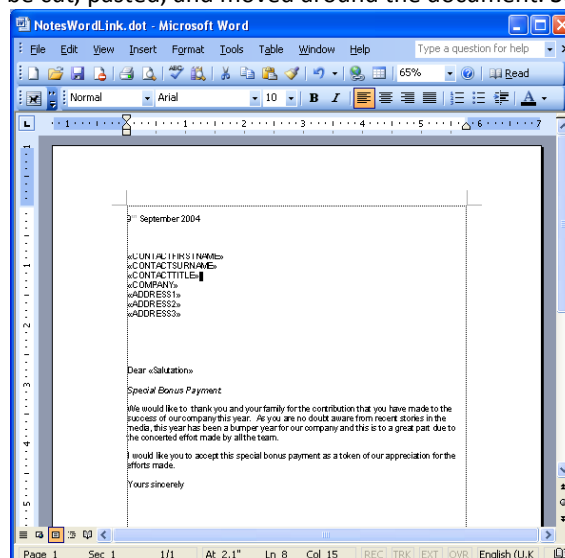
The dialog box identifies *Categories* in the top left column and *Field Names* in the left column. The user is required to highlight the *Mail Merge* category from the top drop down menu and then select the *MergeField* field name in the left hand column entitled *Field Names*.

A heading MERGEFIELD should then appear in the *Description* field within the middle of the dialog box.

The user should then enter the exact field name used in the Integra profile in the *Field Properties* section where there is a field called *Field Name*.



On selecting the *OK* button, Word will position the placeholder for the field into the text of the Word document at the point where the cursor was at the time of selecting the *Insert – Field* menu command. As with the automatically created fields/tags, this can then be cut, pasted, and moved around the document. See the example below:



Example of a Word template after moving the MERGEFIELDS automatically inserted by Integra into their desired position and adding some letter text to it.

4.3 Creating Tags of Type *FormField*

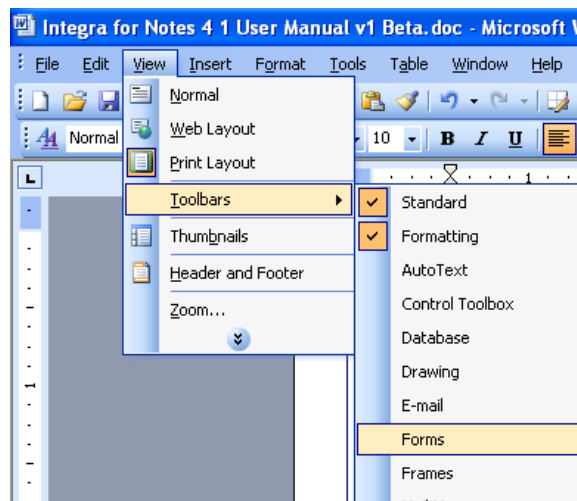
Although Integra provides facilities to automatically create the tags of type MERGEFIELD into the Word document, the facility to manually enter FORMFIELDS is also required for modifications.

To manually insert a FORMFIELD into Word, utilize either the *Insert* -> *Field* menu option or the Text Form Field icon in the Form Toolbar. To activate the Form Toolbar, utilize the *View* – *Toolbars* option on the Word menu. This will present the *Forms Toolbar* as shown below.

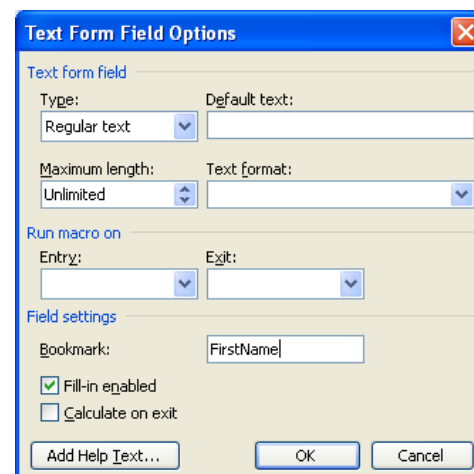
On clicking the **ab** icon, a FORMFIELD (gray placeholder) is inserted into the text of the Word document where the cursor was at the time of clicking the **ab** icon.



To change the properties of the FORMFIELD, right-click on the FORMFIELD and choose the Properties option.



In the upcoming dialog, change the Bookmark field to the name of the Notes field listed in the Integra profile you want to link the FORMFIELD to. You can change the *Type* of the FORMFIELD according to the linked Notes field, but it is not necessary. The default type *Regular text* will work in any case. The *Maximum length* field and the *Text format* field can be utilized when the *Fill-in enabled* option is selected. Otherwise, it has no effect to the result, as Integra is ignoring these properties. You can also enter a *Default text*, which will allow the easy identification of the FORMFIELD. The *Default text* should be the same as the Notes field name linked to the FORMFIELD.



4.4 Tag Names

The tags or fields used in Word need to be the same as those used in the Integra profile. Using the automated creation of the tags/fields assists in setting up the fields and ensuring accuracy.

In addition, it is possible for the inclusion into the Word document of the Integra *Reserved Tag Names*. The table below lists tag names reserved by Integra relevant to exporting to Word documents:

Reserved Tag	Description
_DocumentTitle	By default, the document title tag is set to the profile name. The tag (value) is created at runtime even if it is not part of the Selected Fields List; it is therefore not necessary to add it to the list. However, if a different document title is desired, this tag name can be added as a tag of type formula.
_DocumentDate	By default, the document date is set to today's date. The tag (value) is created at runtime even if it is not part of the Selected Fields List. It is therefore not necessary to add it to the list. However, if a different document date is desired, this tag name can be added as a tag of type formula. Integra will write the document date only into the Word document if the tag name exists also in the Word template. If the selected Word Action is "Prompt User", the user can modify the document date in the runtime dialog.



The *Reserved Tag Names* cannot be used within a Word profile of type *Label*.

4.5 Layouts for Label Formats

Integra allows creation of a Word profile of a *document type* called *Label*. To define a profile as being a label profile, set the value of the *Export Type* field on the *Word* tab to be *Label*.

Please note also that the *# of labels* field defines the total number of labels on each page and varies according to the types and layouts of labels being used.

The Word template also needs to be set up to utilize a label format and when Integra then generates the Default Word Template, this triggers the Microsoft Word Label Wizard.

Having selected the required fields to be generated onto the label and added these to the *Selected Field List* as one would for any Integra profile and having selected the Label option for the *Export Type* field found in the *Word* tab, on selection of the *Edit Template* action button and the selection of the Default Template, Integra will open a Word document and present the user with the *Envelope & Label Wizard* dialog box as shown alongside.

Click in the Labels tab of this dialog box to allow you to configure the settings for label printing.

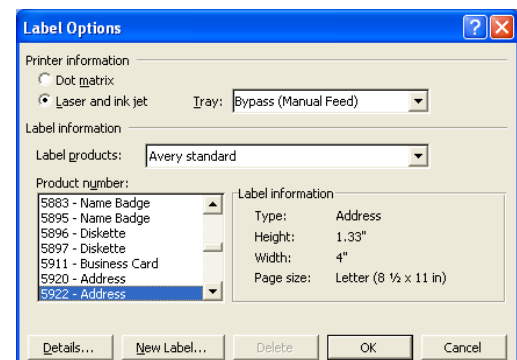
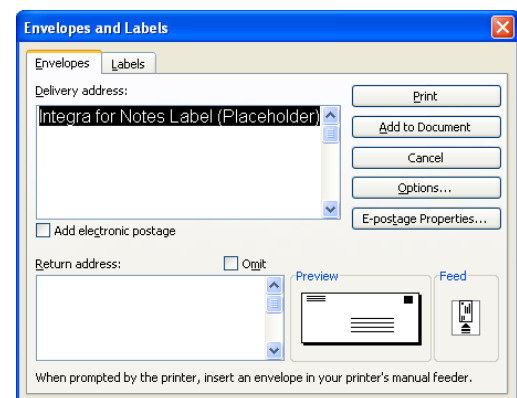
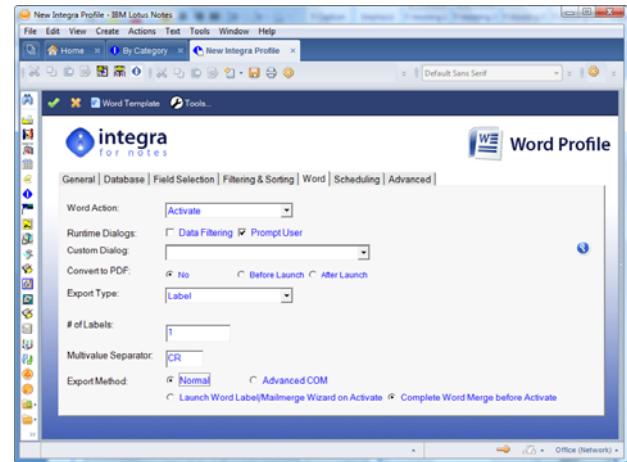
The *Options* button in this dialog box will allow you to select the label format that you would like to utilize taking into account the standard label formats supported by Word. These different formats offer a variety of heights, widths and number of columns of labels.

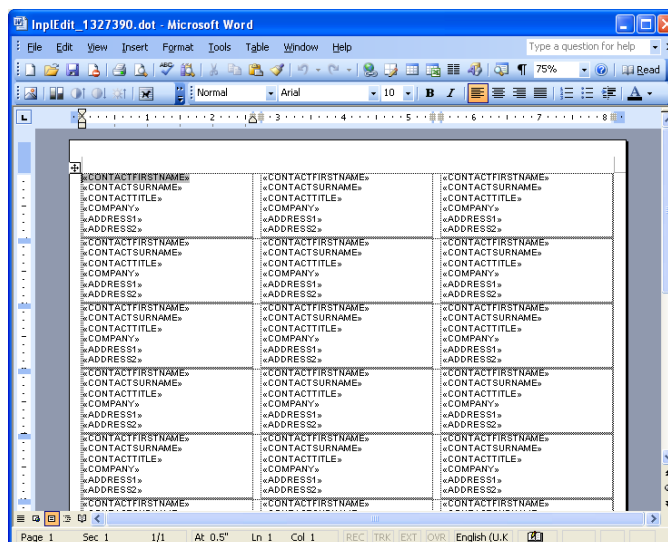
Selecting the *Options* button will present a list of the support label formats (see alongside).

The Wizard displays a list of available standard labels. If you are using these standard labels, select the format from the preset list.

The *New* button provides for the creation of custom labels.

The *Details* button also allows identification of the details of the label format as shown in the screen shot overleaf:





Please refer to Microsoft Word's documentation for additional information about the formatting options of Word labels.

You will then have the opportunity to confirm that you wish to update the attachment in the Integra profile. You will also notice that the *# of labels* field in the Word tab of the Integra profile will automatically have been updated to reflect the number of labels contained on each page for the label format that you have chosen.

4.6 Creating Word Master Templates

As described earlier in this section, when a Word profile is being created through the *Edit Template* action button, Integra will present the profile creator with an option to create the Word template from the *Default Template* or alternatively to utilize a *Master Template* as the basis from which the Word template will be created.

The benefit of this feature is that a set of *Master Templates* can be created using layouts, fonts, graphics and styles which confirm to your organization's needs and which can serve as the basis for the recurrent generation of profiles. Refer to earlier parts of section 4 for more details about creating the Word template from a *Master Template*.

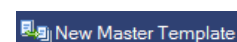
This section defines how *Master Templates* are created and store in Integra. *Master Templates* are managed from inside the *More Options* tab of the *Configuration* document.



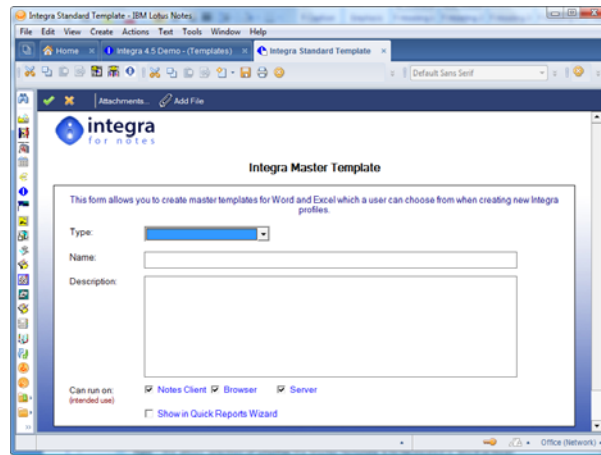
Selection of the *Folder* icon results in the display of a new view containing the existing *Master Templates*.



Selection of the *New Master Template* button allows generation of a new master template.

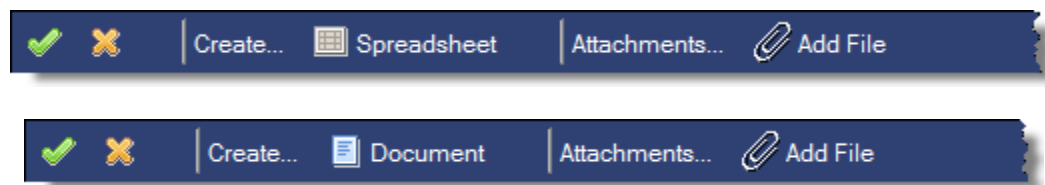


This process results in the creator being presented with the following screen:



The available fields in this screen have the following functions:

- » **Type** – this allows selection of whether the Master Template is to be created in Word or Excel
- » **Name** – the name of the Master Template which will be displayed to profile creators when creating an Integra template within a profile. The name should be meaningful to ensure ease of use.
- » **Description** – this field provides more detailed information about the function of the *Master Template*.
- » **Can Run On** – this allows limitation of the master template for use only in profiles accessed through a specific method. For instance, if you choose to define a master template to be used only for Web profiles, then selecting the Web Profile option for this field will result in this master template only being presented to the developer when they are creating a profile which can run on a web browser.
- » **Show in Quick Reports Wizard** – this option ensures that the master template is made available when creating a new Word based output in *Integra Quick Reports*.

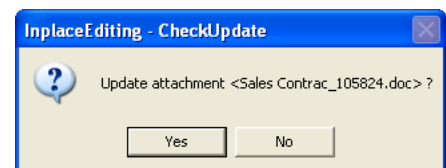


Having selected Excel Spreadsheet as the template type, you will be able to create a new spreadsheet by clicking on the *Spreadsheet* button. Similarly with Word. The *Add File* button allows the attachment of the appropriate type of file from one which is already created. It is important for the *Type*, *Name* and *Description* fields to be entered before creating the documents.

On creation of the Word document, a blank document will be created. At this point, you are able to enter the contents of the document as meets your needs for the specific *Master Template*.

Master Templates can also include Word's merge fields. The benefit of this is that if your profile creators are repetitively creating Integra profiles using the same set of fields and then modifying the contents, these fields can be created automatically in the *Master Template*. See section 4.2 for more details about manually creating tags in a Word document

On exiting from the Word document, the user will be given the opportunity to attach the Word template into the Integra *Master Template* document.



5 Creating an Excel Template

5.1 Introduction

The concept behind Integra for Notes' functionality is the provision of linkage between a Notes database and an Excel spreadsheet and, through that, the optional generation of a PDF file and distribution of the file. The settings and properties of this linkage are contained within the Integra profile which governs each export of data. In addition, for exports to Excel, an Excel template needs to be prepared with the appropriate layout and format and containing links between the fields defined in the *Selected Field List* of the Integra profile and the Excel columns or cells which act as placeholders for these fields to be received from Notes via Integra.

Integra for Notes provides 2 methods of exporting of data to Excel as defined within the *Export Method* field in the Integra profile's *Advanced* tab. See section 3.10.1.6 - Method of Export. These are:

- » **Normal** – provides fast export to Excel using a template which includes predefined formats, columns, cells, pivot tables, charts etc but does not support formulae being placed automatically by Integra into additional columns in the spreadsheet. Excel's tags are used to define placeholders for the data fields coming from or going to Notes.
- » **Advanced COM** – this option allows all the options of the normal export but also supports the creation of computed columns in the Excel template. Excel's tags are used to define placeholders for the data fields coming from or going to Notes.

While the *Normal* export method is faster than the *Advanced COM* method, the *Advanced COM* method allows greater functionality. For instance, the manipulation of Excel or Word objects as each row is being written to Excel can only be undertaken using the *Advanced COM* method.

This section of the profile creator's manual defines the process of setting Excel templates and creating the appropriate links between the fields defined in the Integra profile and the Excel template.

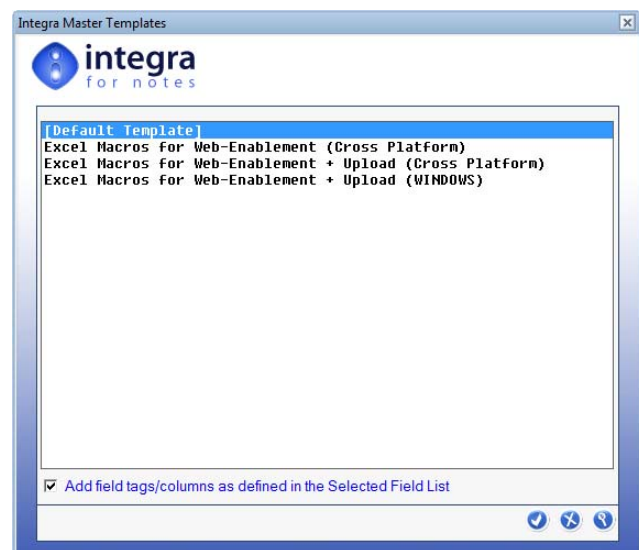
The creation of the Excel document can be undertaken from within the particular Integra profile using the *Edit Template* action button. This button is used both for creating a new template as well as for editing an existing template.



On selection of this action button, Integra will determine whether an Excel document already exists in the profile and if one does then it will launch Excel and bring up the template using tags or XML maps depending on the *Export Method* chosen for the profile.

The user will be able to modify the template and on exiting Excel will be invited to save his changes and update them to the profile.

If the profile does not already contain an Excel spreadsheet, then Integra will detect this and allow the creation of the Excel template. Integra for Notes supports a concept of *Masters Templates* from which templates for a specific profile can be created. These *Master Templates* allow definition of a layout, font, color scheme etc. and can be used repeatedly to make individual templates inside a profile. See section 5.3 for additional information about creating Excel Master Templates.



On utilization of the *Edit Template* action button, when no template has already been created, the user will be presented with a dialog box from which to select the *Master Template* to be used to generate the Excel template for the current profile or to allow use of the Default Template. Section 5.3 explains how these Excel *Master Templates* can be created in the *Configuration* document.

In the case that the Default Template is used then Excel creates a standard format Excel spreadsheet (see screenshot below). If a Master Template is used then Integra will utilize this master template to create the Excel template for the profile.

The Template Selection dialog box also allows identification of the option to *Add fields/Tags to Selected Template*. This setting which defaults on, will create the tags in the Excel columns and certain other tags to receive the data from the fields listed in the *Selected Field List*. If a Master Template is used together with this option then the fields from the *Selected Field List* will be created at the beginning of the template. This option has no effect on an export profile on which the *Export Method* is set to XML.

It is also possible to create the Master Template with the fields ready created. In that case it is useful not to select the *Add fields/Tags to Selected Template* option as the fields will already be in the spreadsheet. Of course as with any Integra export, it is essential that the fields contained in the *Selected Field List* are available within the template in which Integra is required to push the Notes data.

Manual creation of the Field Tags is also possible in Excel. Apart from being tedious this could however also result in typing errors and thus broken links between the fields in the *Selected Field List* and those in the Word document. For more help about this topic refer to section 5.2.2.1 - Adding an Excel Tag.



Integra will only prompt the user to insert the fields into the Excel spreadsheet when clicking on the *Edit Template* action button when no Excel spreadsheet already exists in the Integra profile. Once the document is created and the profile is updated, the user will need to manually add/remove new tags. See subsequent sections for complete explanation.

5.2 Linking to an Excel Template

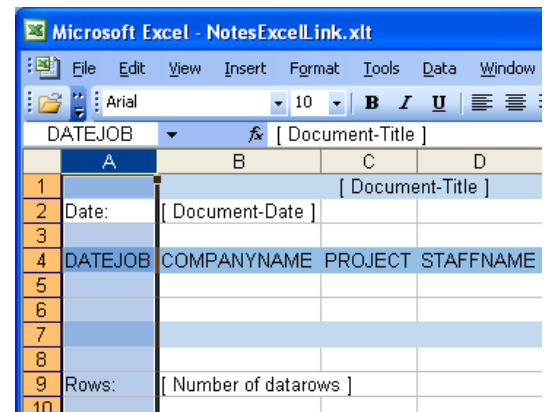
All Integra import Excel profiles as well as all export profiles apart from those defined to use the *XML Export method* in the *Advanced* tab of the profile utilize Microsoft Excel's tag capability to identify placeholders for fields.

As you will recall from earlier sections of this manual related to the identification of fields in the *Selected Field List* of Integra, we need to create an Excel template which is attached to the Integra profile which contains placeholders for these fields. These placeholders are referred to as Excel Tags and this section of the user manual defines how to utilize these tags.

The linkage of fields in the *Selected Field List* of Integra with a particular position in the spreadsheet is undertaken by allocating a tag of the exact same name to the particular column in which the selected field's data is to be located.

As an example from the screen shot alongside, the whole of Column A has had a tag name allocated to it called *DateJob* which is the name of the *DateJob* field in the Integra profile. On creation of the spreadsheet by Integra, cell A4 has this same name allocated as the default column title. The column title in cell A4 can be changed and has no effect on the linkage of the fields with the column. **The tag name should not however be changed unless the field is renamed in the profile.** For changing tag's in Excel refer to section 5.2.2 of this manual.

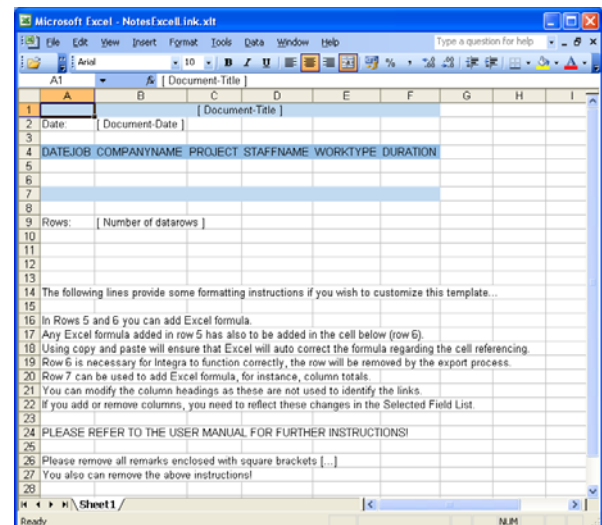
When the *DateJob* data is transferred from Integra to Excel, it will populate Column A expanding the number of rows used in Column A in accordance with the number of Notes documents being passed to Excel.



	A	B	C	D
1				[Document-Title]
2	Date:	[Document-Date]		
3				
4	DATEJOB	COMPANYNAME	PROJECT	STAFFNAME
5				
6				
7				
8				
9	Rows:	[Number of datarows]		
10				

When the Default Template has been selected for the Excel profile, Integra will create a default spreadsheet which will contain links to the various fields in the *Selected Field List* of the Integra profile as tags within the various columns of the Excel spreadsheet. Integra will create these tags in the order of the fields in the *Selected Field List* with the first field listed in the *Selected Field List* being linked to the first column, the second field to the second column etc. For ease of use, it is best to set the order of the fields in the *Selected Field List* to reflect how you wish them to be presented in Excel.

In addition to the column tags representing each of the fields, Integra will also create a number of predefined tags referred to as *Reserved tags*, which consistently contain particular information from the profile. These include the title of the spreadsheet (defaulting to the profile title), the date of the export and the number of data records exported. These reserved tags are defined in greater detail overleaf. In the event that the Yes option has been selected for the automatic inclusion of the fields as Excel tags, the Excel spreadsheet would look like the screen shot shown alongside:



	A	B	C	D	E	F	G	H	I
1									
2	Date:	[Document-Date]							
3									
4	DATEJOB	COMPANYNAME	PROJECT	STAFFNAME	WORKTYPE	DURATION			
5									
6									
7									
8									
9	Rows:	[Number of datarows]							
10									
11									
12									
13									
14	The following lines provide some formatting instructions if you wish to customize this template...								
15									
16	In Rows 5 and 6 you can add Excel formula.								
17	Any Excel formula added in row 5 has also to be added in the cell below (row 6).								
18	Using copy and paste will ensure that Excel will auto correct the formula regarding the cell referencing.								
19	Row 6 is necessary for Integra to function correctly, the row will be removed by the export process.								
20	Row 7 can be used to add Excel formula, for instance, column totals.								
21	You can modify the column headings as these are not used to identify the links.								
22	If you add or remove columns, you need to reflect these changes in the Selected Field List.								
23	PLEASE REFER TO THE USER MANUAL FOR FURTHER INSTRUCTIONS!								
24									
25	Please remove all remarks enclosed with square brackets [...]								
26									
27	You also can remove the above instructions!								
28									
29									

The blue row shown in row 4 of the screen shot above lists the field names as default titles to the columns. These can be modified to reflect better titles for the columns and are not used to affect the linkage between the Integra profile fields and the Excel columns as this is done using the tags system defined in section 5.2 of this manual.

The text in cells that are enclosed in square brackets are there purely for documentation of the spreadsheet and can be removed.

See subsequent sections 5.2.2 of this user manual as well as Excel's own documentation related to adding, modifying or deleting Excel tags.

"Single-Cell Tags" are also used for single data entries such as a customized document title. Refer to section 3.3.9 of this profile creator's manual to understand how to define a field as being a Single-Value field. In the case of an import profile using a Single-Cell tag, all Notes documents created will have the same value for the particular tag. In the case of an export profile, the Excel tag will contain the value according to the last exported Notes document. Integra will recognize Single-Cell tags by their tag name. All fields/tag names beginning with an "_" (underscore) are defined as being *Single-Cell*. To define a "Single-Cell" tag in the Excel spreadsheet select a single cell and give the cell a tag name that exists as one of the fields or tags in the *Selected Field List* in the Fields tab.

The default spreadsheet contains references to specific Integra *Reserved Tag* names such as the use of the `_DocumentDate` tag in cell B2. B2 has a tag name using the Integra Reserved Tag Name `_DocumentDate`. This tag name automatically passes the date of the document as defined within the Integra profile into the area of the Excel spreadsheet named using this tag name.

In addition, the `_DocumentTitle` and `_DataRows` *Reserved tags* have been automatically placed in cells A1 and B9 respectively. These tags are used to pass the content of the Integra profile's Title field and a counter of the number of documents passed from Notes to Excel.

The Excel spreadsheet has also been remarked with additional information such as

[Place for datarows – You can add your formulas here]

These remarks can be removed from the spreadsheet after it has been configured correctly.



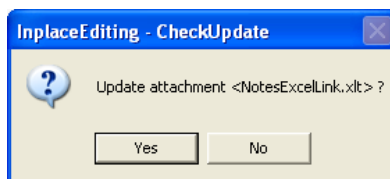
Ensure that the tag name coincides with the field name in the *Selected Field List* within the Fields tab.



Field or tag names can be any syntactically correct names as defined for Notes and Excel. Names have to start with a character "A" to "Z" or the "_" (underscore) and are not case sensitive. Names can be followed by any combination of characters, digits & "_" (underscore).

Although it would be syntactically correct to start a field name with the "_" (underscore), this **cannot** be used for naming "Column Tags" as this will conflict with Integra. Tag names beginning with the "_" (underscore) are reserved by Integra to identify user defined "Single-Cell Tags" and for reserved tag names used by Integra.

After the spreadsheet is completed, when the user closes the Excel spreadsheet or exits Excel, Integra will first prompt the user to save the template file (identified with a temporary file name) and then to update the Excel spreadsheet back into the Integra profile. The user will be presented with this option box:



On selecting the *Yes* option, Integra will automatically attach the Excel spreadsheet into the Integra profile. A selection of *No* will ignore the changes made to the template. Editing an existing Excel spreadsheet within an Integra profile is undertaken in exactly the same manner using the *Edit Template* button.

5.2.1 Tag Names

The tags or fields used in Excel need to be the same as those used in the Integra profile. Use of the automated creation of the tags/fields assists in setting up the fields and ensuring accuracy.

In addition, it is possible for the inclusion into the Excel spreadsheet of the Integra Reserved Excel tag names. These include the Document Title, the date of the document, the number of rows of data etc.



To link a Notes field of any name to an Excel single-cell tag it is necessary to create a computed field in the Integra profile. The computed field would take the name of the single-cell tag and the formula would evaluate to the Notes field to be linked. E.g., to link a Notes field *ProjectName* to a single-cell tag named *_ProjectName*, a computed field with the name *_ProjectName* has to be added to the profile's field list and the formula to the computed field is: *ProjectName*.

5.2.1.1 Reserved Tags

Integra has a number of predefined reserved tag names, which are used in export profiles. They can actually be of type "Column" or "Single-Cell". The following is a list of reserved tag names and their use (mandatory tags are marked with an *):

Tag Name	Description
_Column_x	<p>The <i>Column_x</i> tag name is only available when, in addition to the above note, the "All Documents In View" option is selected in the Database Tab.</p> <p>When using the <i>Column_x</i> tag names Integra will read the values to export from the view columns rather than from the selected Notes document fields. The x stands for any column number starting from 1 (one). Integra will write the column values only into the Excel spreadsheet if the tag name exists also in the Excel template.</p>
_DocumentTitle	By default, the document title tag is set to the profile name. The tag (value) is created at runtime even if it is not part of the Selected Fields List. It is therefore not necessary to add it to the list. However, if a different document title is desired, this tag name can be added as a tag of type formula.
_DocumentDate	By default, the document date is set to today's date. The tag (value) is created at runtime even if it is not part of the Selected Fields List. It is therefore not necessary to add it to the list. However, if a different document date is desired, this tag name can be added as a tag of type formula. Integra will write the document date only into the Excel spreadsheet if the tag name also exists in the Excel template. If the selected Excel Action is "Prompt User", the user can modify the document date in the runtime dialog.
_DataRows	This tag is mainly used for Excel exports and is reserved for use in the Excel template only. It cannot be added to the Selected Fields List. It is computed by Integra and will contain the number of Notes documents exported.
_ColumnHeader *	This tag is used for Excel exports and is reserved for use in the template only. It cannot be added to the Selected Fields List. In case of its existence in the Excel template, it is used by Integra to identify the area on the Excel spreadsheet above the <i>_DataBlock</i> . The tag as such has no functionality. However, if created in the Excel template, it can be used

Tag Name	Description
	to refer to it in macros created on the template.
_ColumnFooter *	<p>This tag is used for Excel exports and is reserved for use in the template only. It cannot be added to the Selected Fields List. In case of its existence in the Excel template, it is used by Integra to identify the area on the Excel spreadsheet below the _DataBlock. This area can be used e.g. for the row which displays the computed totals for particular columns in the _DataBlock.</p> <p>When inserting data rows into an Excel spreadsheet, Excel will copy the cell formats from the row above the row to be inserted. If you want to design a header (title) above the data rows (e.g. to be printed on each page) you would need to leave one blank line between the header area and the first data row containing the format for the data row cells. This to not copy the cell format of the header section into the data rows. However, once all data rows have been created in Excel the blank row will remain as last row between the _DataBlock and the _ColumnFooter.</p> <p>Defining the _ColumnFooter tag below the _DataBlock will allow Integra to automatically delete this extra row.</p>
_DataBlock *	<p>This tag is used for Excel exports and is reserved for use in the template only. It cannot be added to the Selected Fields List. It is used by Integra to identify the area of data rows on the Excel spreadsheet. If this tag has not been created on the template, Integra will create it anyway after exporting all Notes data. The tag as such has no functionality. However, it can be created in the Excel template to be referred to in macros created on the template.</p>

*Mandatory tags are marked with an **

5.2.2 Modifying Excel Tags

As described earlier, on first creation of an Excel spreadsheet within an Integra profile, Integra will automatically name each of the columns of the spreadsheet by the name of each of the fields in the *selected field list*. These will be created in the order in which the fields are listed in Integra's *Select Field List*. In addition, Integra will create the _DocumentTitle, _DocumentDate and _DataRows single cell tags respectively.

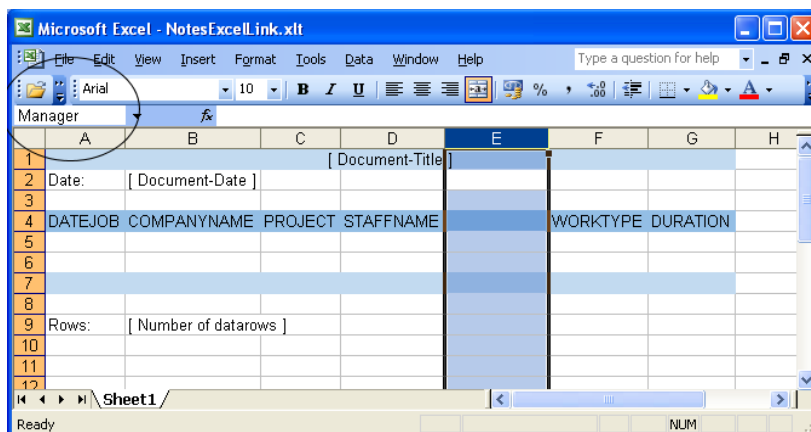
The situation will however no doubt arise when modifications to the positioning of these fields may be required or when additional fields are added to the Integra profile which need to be linked to the Excel spreadsheet. This section defines how such modifications are made within Excel. Although this functionality is purely Excel functionality and not Integra functionality, it is being described here for ease of reference of the Integra user.

The method used to modify an Excel tag to an Integra profile varies depending on whether the profile is an XML export profile or not. All import profiles as well as the *Normal* or *Advanced COM* export profiles utilize one method while *XML export profiles* to Excel 2003 uses a different method. Both methods are described in the sub-sections below.

5.2.2.1 Adding an Excel Tag

If a new field has been added to the Integra profile and this field is to be contained within a new column within the Integra spreadsheet under take the following steps:

- » Insert a new column at the point where you wish the new data column to be created to the immediate left.
- » Highlight the complete column by clicking on the Excel column heading
- » Click in the Name Box highlighted in red in the screen shot overleaf
- » Type in the name of the tag. Ensure you press enter after typing in the name otherwise it will not take effect.

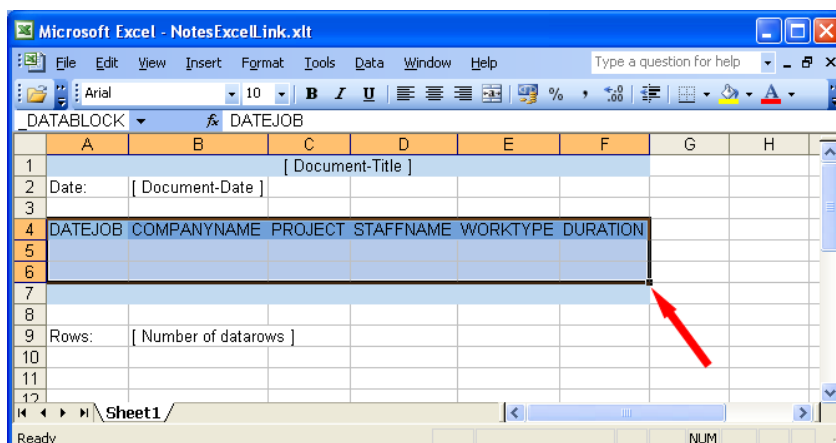
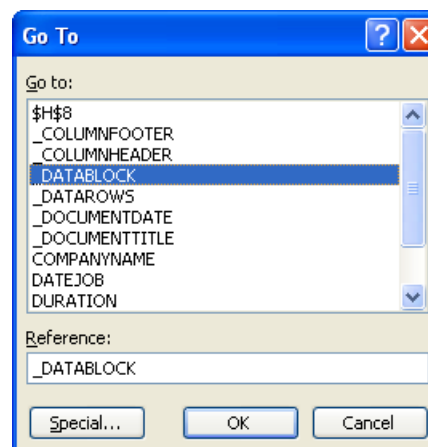


Integra identifies the area of the spreadsheet where the exported data is to be positioned (by default rows 5 and 6 which then expand) because the area is tagged together with the column headings as the `_DataBlock` tag. It is essential that the integrity of this data block area is preserved when modifying the default spreadsheet template.

As a result, if for instance a template has been created as shown in the example above using columns A to G however as an after-thought an additional field is to be placed into column H, then in addition to creating the new field in the Selected Field List of the Integra profile, it is essential that column H is tagged with the name of the newly added field and the `_DataBlock` area is expanded to include column H.

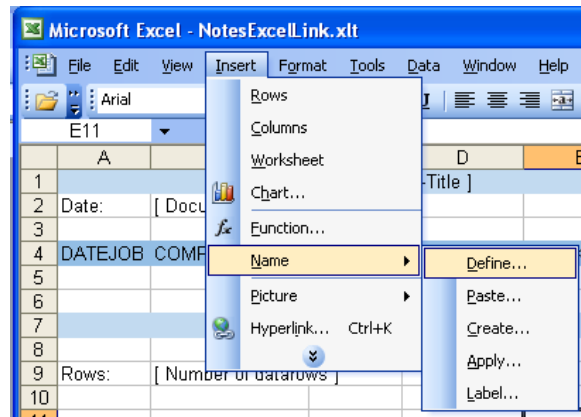
To do this following these instructions:

- » While positioned in the template, press <F5> to bring up Excel's *Goto* dialog box.
- » Select the `_DataBlock` tag and click on OK. This will display the spreadsheet area already tagged as the `_DataBlock` area. See screenshot below.
- » Position your mouse on the bottom right corner of the highlighted `_DataBlock` area (as shown with the red arrow in the screenshot) and drag this one column further to the right. Ensure that no additional row is also selected.

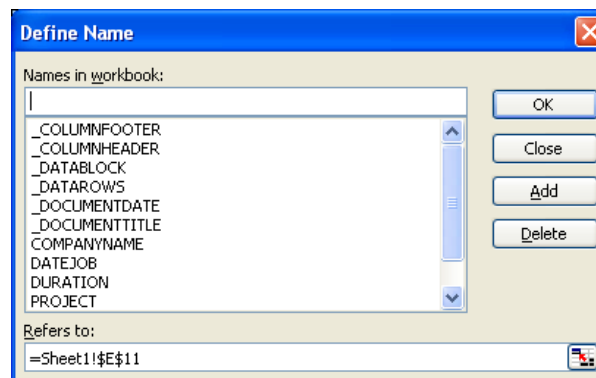


5.2.2.2 Removing an Excel Tag

To remove a tag from Excel, select the Insert -> Name -> Define command sequence as shown in the screenshot.



This will result in the following dialog box being displayed:



Scroll down the list of defined tag names and click on the tag required to be deleted. Once selected, select the Delete button in this dialog box.

5.2.2.3 Moving an Excel Tag

In the event that a specific field is defined to connect to a particular column in the spreadsheet and this field needs to be moved to a new column, the Tag for the current column needs to be deleted using the technique identified above and recreated in the new column.

5.2.3 Creating Formulas Directly in the Excel Spreadsheet

As explained in the section of this document relating to the creation of fields in an Integra profile computed fields can be created in the Integra profile and subsequently passed over into a suitably tagged column in the Excel spreadsheet. However, a user may also require/prefer the creation of formulas directly within the spreadsheet, which calculate additional values. An example could be the calculation of totals or averages based on the data transferred to Excel or the addition of a column with a formula based on the other values obtained from Notes.



Computed fields defined in the Integra profile which have no formula associated with them and then have an Excel formula in the appropriate column in the template will only function in Integra export profiles which utilize the *Advanced COM* export method defined within the *Advanced* tab.

In the case where a new column is to be added which is to have an Excel formula based on values in other cells/columns, Excel would still require the creation of a Tag for the column and the field still needs to be defined in the Integra profile with the same name as the Excel tag. The computation in the Integra profile for this field can be anything including a null string "", however this field must exist within the *Selected Fields* List in the Integra profile.

The Excel formula should then be placed in the appropriate column and copied into the 2 cells of that column below the column title.

5.3 Creating Excel Master Templates

As described earlier in this section, when an Excel profile is being created through the *Edit Template* action button, Integra will present the profile creator with an option to create the Excel template from the *Default Template* or alternatively to utilize a *Master Template* as the basis from which the Excel template will be created.

The benefit of this feature is that a set of *Master Templates* can be created using layouts, fonts, graphics and styles which confirm to your organization's needs and which can serve as the basis for the recurrent generation of profiles.

Refer to earlier parts of section 5 for more details about creating the Excel template from a *Master Template*.

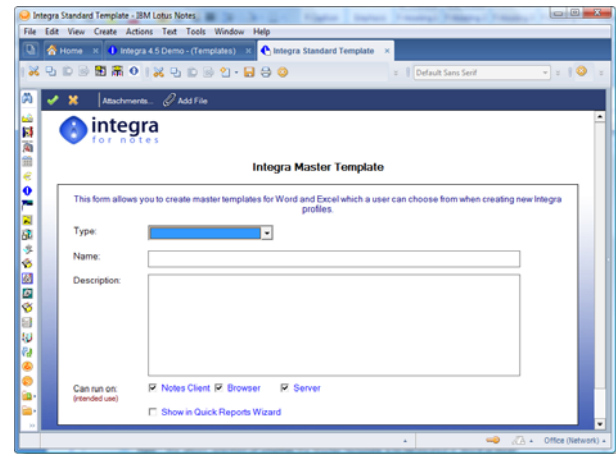
This section defines how *Master Templates* are created and store in Integra. *Master Templates* are managed from inside the *More Options* tab of the *Configuration* document and are relevant to templates created using Excel tags rather than XML Elements.

Selection of the *Folder* icon results in the ability to create a new *Master Template*.



This process results in the creator being presented with the following screen. The available fields in this screen have the following functions:

- » **Type** – this allows selection of whether the Master Template is to be created in Word or Excel. Select Excel at this point.
- » **Name** – the name of the Master Template which will be displayed to profile creators when creating an Integra template within a profile. The name should be meaningful to ensure ease of use.
- » **Description** – this field provides more detailed information about the function of the *Master Template*.
- » **Can Run On** – this allows limitation of the master template for use only in profiles accessed through a specific method. For instance, if you choose to define a master template to be used only for Web profiles, then selecting the Web Profile option for this field will result in this master template only being presented to the developer when they are creating a profile which can run on a web browser.
- » **Show in Quick Reports Wizard** – this option ensures that the master template is made available when creating a new Word based output in *Integra Quick Reports*.



Once the Type is set to *Excel Template* then a new Excel template can be created either by creating a new template using the *Spreadsheet* button or alternatively by attaching an existing template using the *Add File* button. A similar process is possible using the Word options.



On creation of the Excel document, a blank spreadsheet will be created. At this point, you are able to enter the contents of the document as meets your needs for the specific *Master Template*.

Master Templates can also include Excel tags. The benefit of this is that if your profile creators are repetitively creating Integra profiles using the same set of fields and then modifying the contents, these fields can be created automatically in the *Master Template*. See section 5.2.2.1 for more details about manually creating tags in an Excel spreadsheet

On exiting from the Excel spreadsheet, the user will be given the opportunity to attach the Excel template into the *Integra Master Template* document.

6 Preparing a Database for Integra Web Access

As described elsewhere, Integra for Notes profiles are able to be run by a user utilizing either a Lotus Notes client (5.x or 6.x) or alternatively a web browser (Internet Explorer only).

This section of the user manual describes the steps required to enable a Lotus Notes database to be accessed by Integra using a web browser. This section is divided into the following sub-sections:

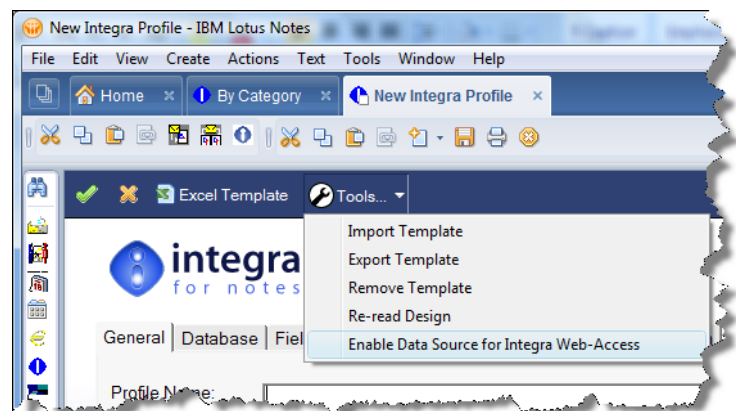
- 1 Enabling the Source Notes database for Integra Browser Access
- 2 Adding Integra Buttons to Notes Application

6.1 Enabling the Source Notes database for Integra Browser Access

For Integra profiles to be able to run from a web browser to export data from that database, certain design objects need to be placed into the source database. These design objects are all open code and therefore the database is not a container for any closed code.

To facilitate the creation of these design elements, the *Tools* action button available within each Integra profile provides a function called *Enable Data Source for Integra Web-Access*. This function automatically pushes these design elements into the source database. Open a profile to be able to access this Tool option.

As the design of the source Notes database from which the data is to be eventually exported is being effected, the user running this action requires to have a minimum of *Designer* rights to the source Notes database from which the data is to be exported.



After running this agent, the source Notes database defined in the Database Tab of the current Integra profile will contain the following new design elements:

Design Element	Name
Form	Integra4web
Sub-Form	Integra4web
Agent	Integra4web
Image Resources	IntegraWebBackground.jpg Integra_icon_ab

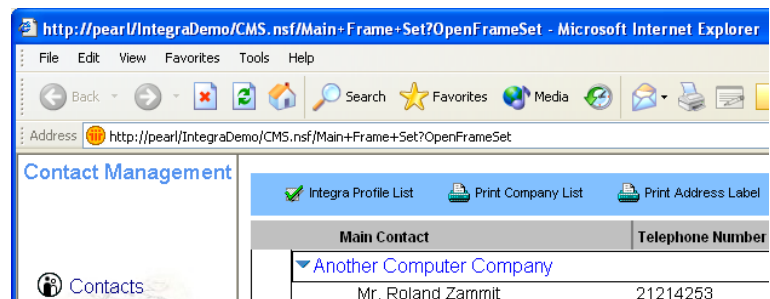
6.2 Adding Integra Buttons to a Notes Web Application

As discussed elsewhere within this manual, the execution of an Integra profile via a Lotus Notes client to import or export data from a specific Notes database is undertaken by clicking on the Integra SmartIcon or an Action Button or hotspot within a view or form.

In the case of web browser access to running an Integra export profile, while this also needs to be undertaken from inside the Notes database, SmartIcons are not available within the browser. Therefore the only option for the browser user is to run the Integra profiles from an action button, view applet or form in Notes.

So as to enable this functionality, the Notes developer needs to add the appropriate action buttons, traditional buttons or hotspot onto the views and/or forms from which the export is to be undertaken. Examples are shown in the screenshot alongside.

Action buttons or hot spots designed to run Integra profiles are essentially the same as those used for the Notes client with the appropriate modifications to cater for the web. The code required for these buttons is supplied as a part of the Integra solution and is completely open allowing inspection of the functionality.



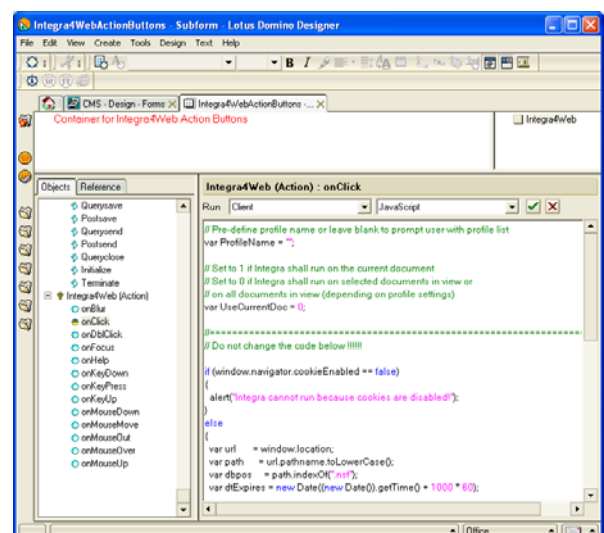
In addition, the action button runs in conjunction with a number of other design elements as described in the section above *Enabling the Source Notes database for Integra Browser Access* which are automatically inserted into the source Notes database. Although this process inserts the form, view and image resources required, no programmatic access is available to insert a shared action into a Notes database. As a result, the action button is contained on a sub-form and it is the sub-form which is inserted into the design of the source database. In essence the sub-form acts as a container for the action button.

The action button contained in this sub-form can then be copied by the users (<CTRL>-C) into the appropriate place r places. If the action button is going to be used in various places within the source database, best practice would suggest copying the action button into the *Shared Actions* section of the design from which it can be called from various forms and views.

As with running Integra from a Notes client, which provides the ability to either run a pre-named Integra profile or to present the user with a list of profiles linked to the currently selected Notes database, so an action button can be set to present the browser either with a specific profile or the profile dialog.

The Integra4Web action button is designed to be parameterized with only 2 changes ever being required to meet the different scenarios of its use. These two parameters are easily identified in the first few lines of the button code and a warning is provided not to alter any other elements of the code below a delimiting line. The parameters will be explained below and related to the code shown below:

» **Individual Profile or Profile Dialog Box** – the variable



called *ProfileName* defines the Integra profile to be executed when this button is used. The button will lookup a profile of that name in the Integra database currently set as the Active Database for Web Browsers and will execute this profile. If no profile of that name exists, the user will be warned.

If the *ProfileName* field is left blank (which is the default), this will result in the profile dialog box listing all available profiles for that source Notes database being displayed to the browser.

- » **Execute from View or Form** – the *UseCurrentDoc* field is used to define whether the profile is to execute on the currently selected document (which would be used from a form) or on all selected documents in the current view. Set *UseCurrentDoc* to 1 when executing from a form and 0 when executing from a view. The default is set to 0 to enable exporting from a view.

6.2.1 Button Code

Below is listed the code that needs to be added to a button or hotspot to launch an Integra profile.

```
// Pre-define profile name or leave blank to prompt user with profile list
var ProfileName = "";

// Set to 1 if Integra shall run on the current document
// Set to 0 if Integra shall run on selected documents in view or
// on all documents in view (depending on profile settings)
var UseCurrentDoc = 0;

//Error message displayed when cookies are disabled
//You can modify this to display different messages depending on the language
//selected by the user
var errmsg = "Integra for Notes cannot run because cookies are disabled!";

//=====
// Do not change the code below !!!!!

if (window.navigator.cookieEnabled == false)
{
    alert(errmsg);
}
else
{
    var url    = window.location;
    var path   = url.pathname.toLowerCase();
    var dbpos  = path.indexOf(".nsf");
    var dtExpires = new Date((new Date()).getTime() + 1000 * 60);
    var cCooking;

    cCooking = "IntegraProfileName=" + escape(ProfileName); // The name=value
    cCooking += "; expires=" + dtExpires.toGMTString();
    window.document.cookie = cCooking;

    cCooking = "IntegraCurrentDoc=" + UseCurrentDoc; // The name=value
    cCooking += "; expires=" + dtExpires.toGMTString();
    window.document.cookie = cCooking;

    path = path.substring(0,dbpos+5)+"Integra4WebSelectedDocuments?Openform";

    var wwidth = 550;
    var wheight = 325;

    var scr = window.screen;
    var top = (scr.width-wwidth)/2;
```

```
var left = (scr.height-wheight)/2;  
  
window.open(path, "", "width=" + wwidth + ",height=" + weight +  
    ",left=" + left + ",top=" + top +  
    ",toolbar=0,location=0,status=0,scrollbars=0,resizable=0,menubar=0,directories=0");  
}
```

6.3 Web Security

For web browsers to be able to execute Integra profiles from within source databases, of course the user must have the appropriate level of ACL to the source Notes database and it must be set and configured for web access.

6.3.1 Cookies

The only additional requirement from a security perspective is that the browser user who is executing Integra profile must have cookies enabled on their browser at least for the web site that hosts the Domino databases from which the Integra profiles are being executed. Refer to documentation related to the handling of cookies for your web browser.

6.3.2 Execution of Macros

Because the Excel spreadsheets or Word documents generated by Integra may have macros stored within them, the macro handling security settings of the user's browser will also determine whether or not these macros can be run.

7 Integra Field Maps

Integra Field Maps are used in the companion Integra Quick Reports product to allow end-users easier access to the data in their Notes applications for Excel reporting or Word Mail Merge letters and labels.

Integra Quick Reports is used by end-users to create and run their own ad-hoc reports to Excel as well as Word based mail merge letters and labels from their Lotus Notes applications. Users are able to use a simple 4 step wizard to define their output including a Data Selection step which allows them to select the columns of a view. At times users may wish to output data from their application which is not exposed in the appropriate view which however is stored on the Notes document. Integra Quick Reports has always allowed selection by the end-user of the fields from the form and lists the various fields for easy selection and even provides a preview of the form to ensure the user can select the appropriate data.

However, the large number of fields on a form and the cryptic field names often used for naming these fields can often intimidate the end-user and impair the ease of reporting. Integra Virtual Field Maps allow the definition of a number of virtual fields linked to a specific form which expose a selection of the fields to the end-user in Integra Quick Reports. See Integra Quick Reports screen alongside. The Virtual Field Map will often contain a limited selection of the fields actually available on the form and, by giving easily recognisable names, this allows selection of fields by the end-user to be effected much more easily. Integra's virtual fields also allows the developer to populate a virtual field with a formula, enabling a designer to pre-create a formula for a virtual field and make that available to the end-user as if it was an actual field on the form.

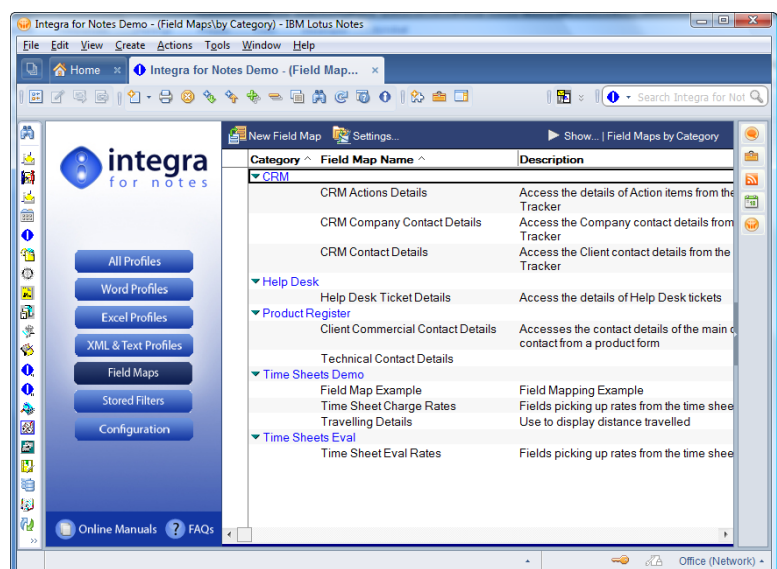


Although Virtual Fields are defined using the Designer Edition of Integra for Notes, their usage is made by end-users using Integra Quick Reports. Direct access to the physical form and the fields contained thereon is still available for the more adventurous user.

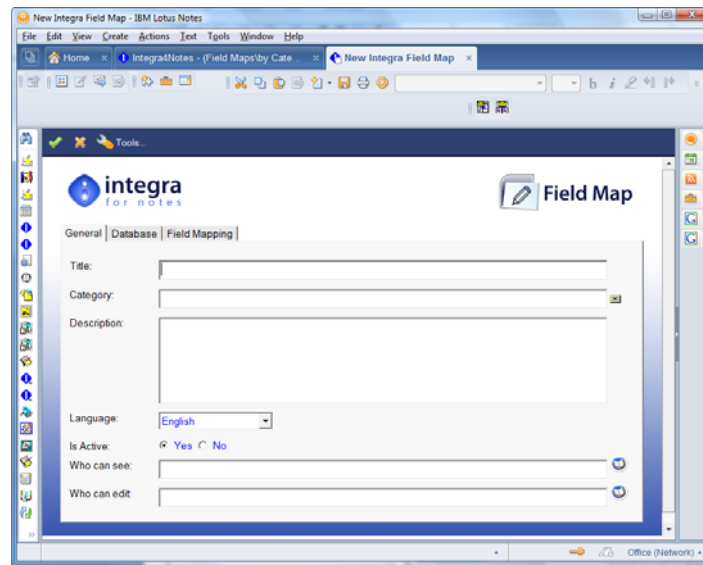
The Integra Virtual Field Mapping functionality thus provides additional data reach to end-users, abstracting the complexity of the design of the application from which the data is to be accessed by the end-user, thus significantly increasing the ease with which data can be exported to Word and Excel for ad-hoc reports.

Virtual Field Maps are created from within the **Field Maps** section of the main navigator inside the Integra for Notes database.

To create a new Field Map, select the **New Field Map** action button in the view.



The form used to manage a Field Map (see below) is divided into a number of tabs, each containing aspects of the functionality of this feature. Each of these tabs is defined in more detail below.



7.1 The General Tab

The General tab allows the definition of the name, description and display categories of the Field Map as well as providing some features to limit access to the particular profile. These are further defined in the sections below.

7.1.1 Title

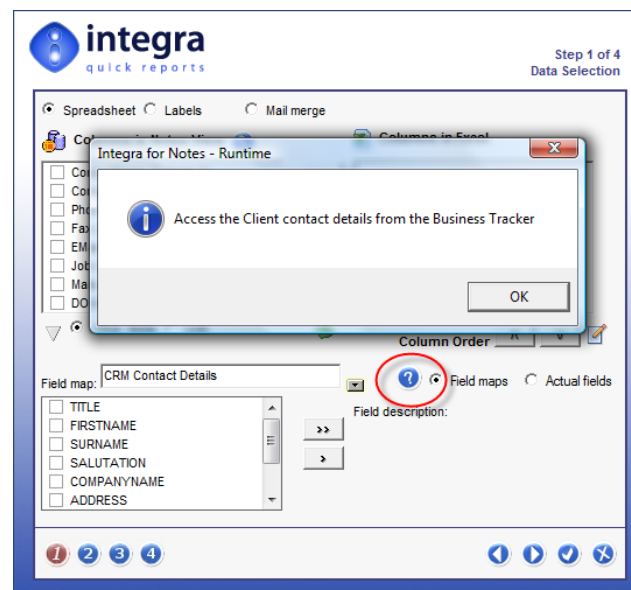
The *Title* field allows definition of the descriptive name of the Field Map which will then be shown to the end-user in Integra Quick Reports when the list of Field Maps available for the currently selected database is displayed. The *Title* field must be unique.

7.1.2 Category

When viewing the list of available Field Maps in the Integra database, one of the options is to display the Field Maps categorized by Category. This is in fact the default display option. Categories allow you to present the list of available Field Maps to the designer in a manner which groups Field Maps related to the same business process.

7.1.3 Description

The *Description* field allows the addition of a description to the Field Map which will allow designers to better understand the functionality of the particular Field Map. In addition, when using Field Maps in Quick Reports, the use of the Help Icon results in the display of the description related to the currently selected Field Map.



7.1.4 Language

The *Language* field allows setting of the Field Map so as to only be used by a user whose Lotus Notes language preference is set to the chosen language. This is particularly useful when an application developed in an English speaking country is deployed to non-English speaking countries. A Field Map can be created for each of the supported languages showing the field names in the language of that user. As a result for instance, users in Germany will be displayed a list of fields from the Field Map in German which in turn are mapped to the English-named physical fields.

In the event that a field map is set to a specific language, then if a user's language preferences have been set in Integra to a different language then the Field Map will not be displayed.

7.1.5 Is Active

Any Field Maps whose *Is Active* field is set to *No* will not appear to a user f Quick Reports.

7.1.6 Who Can See

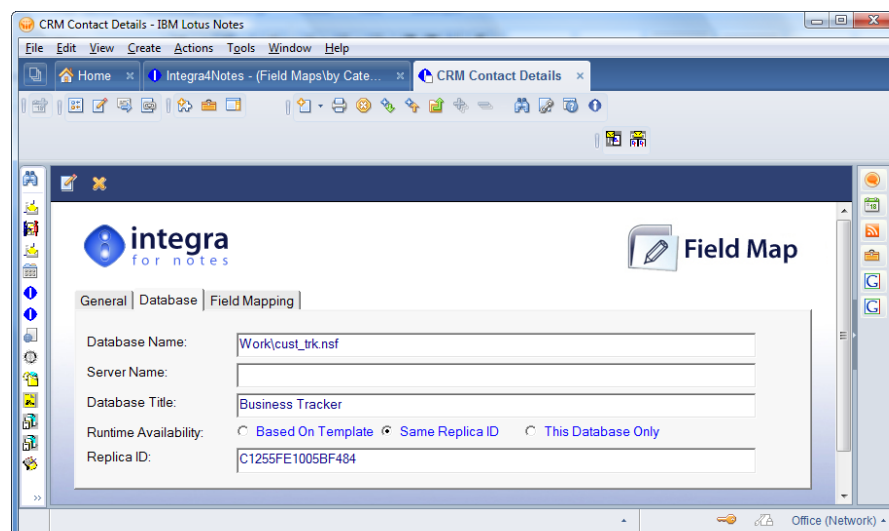
If the *Who Can See* field is left blank, then all users who can access Field Maps will see this Field Map (unless it is set to a different language version. On the other hand, the Field Map can be restricted to be able to be seen and used by specific users, groups or roles by adding the name of the user(s), group(s) or role(s) required. The *Who Can See* field is a Notes *Reader Names* field.

7.1.7 Who Can Edit

If the *Who Can Edit* field is left blank, then all users who can edit in Integra will be able to edit this Field Map. On the other hand, editing of the Field Map can be restricted to specific users, groups or roles by adding the name of the user(s), group(s) or role(s) required to this field. The *Who Can Edit* field is a Notes *Author Names* field.

7.2 Database Tab

The Database tab allows linkage of the Field Map to a specific database. When generating an Integra Quick Report from a particular database, any Field Maps linked to the database will be displayed (assuming the confidentiality and language preferences outlined in the previous section). The fields contained in this tab are defined in the sub-sections below.

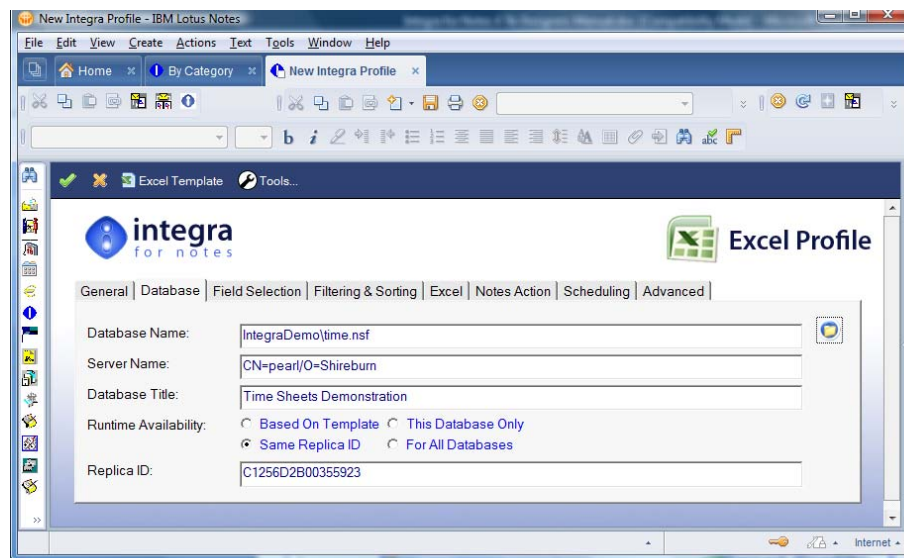


7.2.1 Database Name

Selection of the specific database to which the Field Map is associated is undertaken by clicking on the *Folder* icon and selecting the database, either from the Local Computer or from one of the available servers. Selection of the *Folder* icon will result in presentation of the standard *Choose Application* dialog (Open Database in versions of Lotus Notes prior to 8)



The user creating the Field Map must have a minimum of *Reader* access to the database to be linked and access to the server on which it resides. Selection of the database will automatically result in the *Server Name*, *Database Title*, *Runtime Availability* and the *Replica ID* fields being populated. This may take a few seconds depending on the number of design elements in the source database and the performance of the server the database is residing on.



7.2.2 Server Name

This field is automatically populated following the selection of the *Database Name* field as defined in section 7.2.1.

The *Server Name* field identifies the name of the server on which the selected application is located. If the database has been selected from the local computer rather than from a server, the *Server Name* field will be left blank.

7.2.3 Database Title

The *Database Title* field is automatically populated following the selection of the *Database Name* field as defined in section 7.2.1.

The *Database Title* field identifies the title of the selected.

7.2.4 Runtime Availability for

When a Field Map is created it is specifically linked to a Notes database. Because at times the linkage is to be made to a specific database such as a time sheet application while at other times it may be linked to a standard database such as the Domino Directory or the Catalog, Field Maps can be linked to one of the following using the *Runtime Availability* for field:

- » **Same Replica ID** – this option is the default setting. When a field map is set to a particular replica, the field map will be available on any database using that Replica ID. This means whether the database is local or on one server or another, the Field Map will still be available. The Replica ID is displayed when this option is selected having been read when the database was selected.
- » **Based on Template** – a standard Notes application may be deployed to various departments, sites and clients each with their own replica ID but inheriting their design from a single template. So as to avoid needing to create Field Maps for each Replica, it is possible to link a Field Map to a template. Whenever Integra Quick Reports runs, if the template name of the current database is the same as the template to which a Field Map is linked, then the Field Map will be displayed. The *Template Name* is displayed when this option is selected having been read when the database was selected. A Field Map can be connected to multiple templates.
- » **This Database Only** – this option allows linkage to only a specific database contained in a defined location. For instance if a replica of a database is contained on multiple servers however the reporting specifically needs to be run from a replica contained on a specific server and no other.
- » **For All Databases** – this allows a Field Map to be connected to every database.

7.2.5 Replica ID field

In the case where the *Same Replica ID* option has been chosen, Integra will read the replica ID of the selected database and display it within this field.

7.2.6 Template Name field

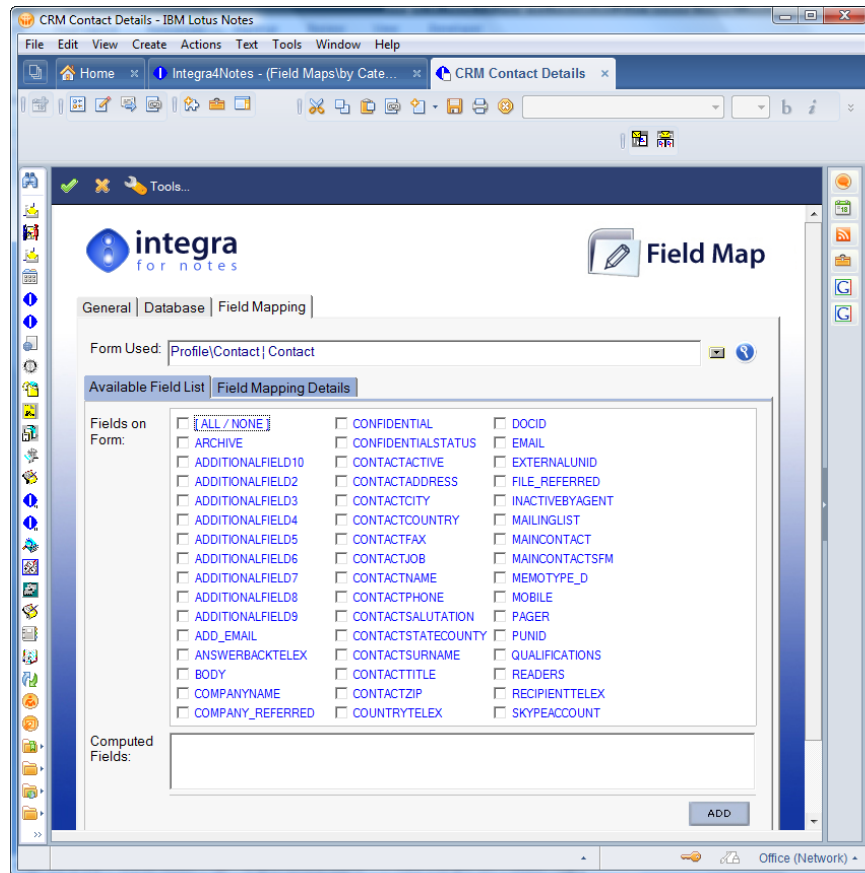
In the case where the *Based on Template* option has been chosen, Integra will read the design template property of the database and store it within this field. Field Maps can be linked to multiple templates and will result in being displayed as available Field Maps whenever a user runs Integra from within any database that is linked to one of the listed templates. This is particularly useful when different versions of a template may be used over time for a specific application allowing a profile to be available in each version if relevant.

The Template field is a multi-value field and allows a database to be linked to multiple templates. Separate multiple templates in this field with a comma or semi-colon. For instance:

Timesheets V3.0, Timesheets V3.1, Timesheets V3.2

7.3 Field Mappings

The *Field Mappings* tab allows create of the specific fields to be displayed in a Field Map. Much like the usage of the *Fields* tab in an Integra profile, *Field Maps* are linked to a specific form and allow selection of the fields to be included in the *Field Map*. This can include both physical/actual fields from the form as well as computed fields containing a formula.



The *Field Mappings* tab consists of two sub-tabs logically dividing the areas of the field definition:

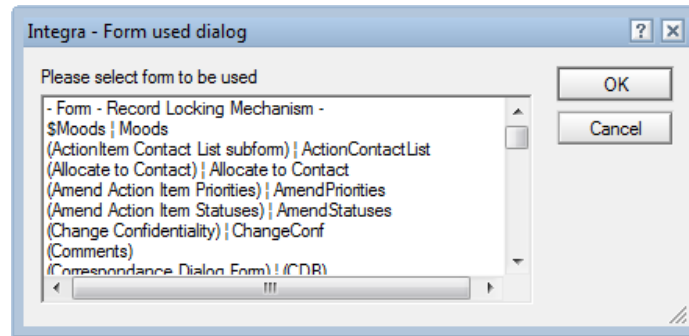
- » **Available Field List tab** - this sub-tab allows the user to identify the available fields for inclusion in the Field Map, usually by selecting a form although computed fields are also supported. See instructions below.
- » **Field Mapping Details tab** – lists the fields which have been selected in the previous sub-tab and allows definition of their properties and the placing of the fields into any desired order.

7.3.1 Selecting the Notes Form Used

While it is perfectly possible for a designer to manually enter the name of each field to be included in a Field Map, since fields are usually defined on a form or sub-form, Integra allows the user to select a form and identify the fields to be included in the Field Map through a point & click process.


The *Available Fields* sub-tab of the *Field Mappings* tab allows selection of the form or sub-forms containing the fields to be included. Clicking on the selection arrow will provide a list of the forms available in the source database as shown below:

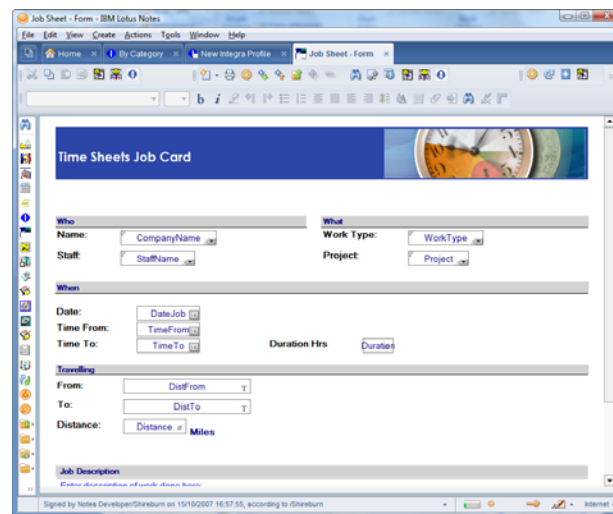




The selected database may contain hidden forms or sub-forms. These hidden forms will only be displayed to the user if he has been granted the *Hidden* role in the Integra database's ACL.

When selecting one of the available forms or sub-forms, Integra will read the design of the particular form or sub-form to obtain the list of fields available within that form or sub-form and these fields will be displayed in alphabetic order.

Having selected a particular form or sub-form, the user is able to confirm that the selected form really is the one he intended to select by clicking on the magnifying glass icon. This will result in the presentation of the design of the form (even if the user does not the Notes Designer client installed) and the identification of the field labels and fields names for this form. 



This allows the user to confirm the form being selected is the correct one and also allows confirmation of which fields are actually required and is particularly useful for complex forms with a large number of fields and/or complex field names.

7.3.2 Selecting the Notes Fields

Having selected a particular form or sub-form, Integra will display the complete list of fields available in that form from within the selected source database.

The user should identify the particular fields from the selected form which are to be utilized within the Field Map and by clicking on the checkbox near each field. As outlined above, the form preview icon can be used to display a preview of the selected form to allow confirmation of the field names used. All fields can be selected by choosing the *All/None* check box. The option to deselect all the fields can also be effected by once again selecting the *All/None* check box.

Once the required fields have been selected these need to be added to the *Field Mapping* tab of the screen. This can be undertaken using the *Add* button. Once fields have been *Added* they will be displayed in the *Field Mapping* tab of the screen. Note that on clicking the *Add* button, users will be positioned immediately in the *Field Mapping* tab. Fields can be removed from the *Selected Fields List* section or their order of presentation in the list altered by using the *Remove*, *Up* or *Down* buttons.

ADD

To move one or more fields up or down the field list, select the fields to be moved and use the *Up* or *Down* buttons as is appropriate.

REMOVE

UP

DOWN



If the selected field is already list at the top of the *Field Mapping* List, then clicking on the *Up* bottom will cease to have any effect.

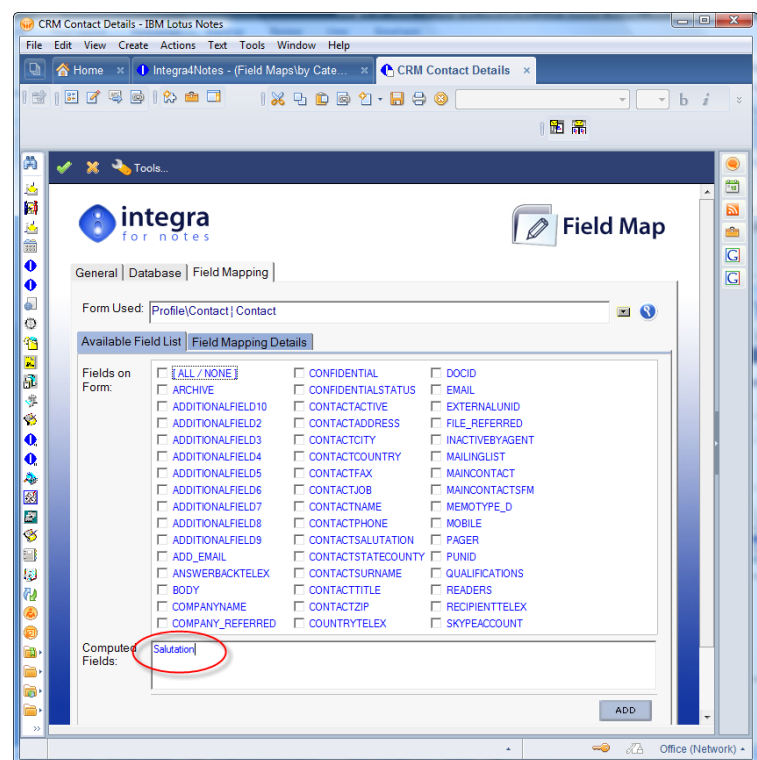
Documents in Notes may contain data in fields, which are defined not just on a form but possibly also in various sub-forms. As a result, following selection of a form and the addition of the required fields from that form to the *Selected Fields List*, Integra also allows the selection of another form (usually a sub-form) and the identification of the required fields from that sub-form. The addition is again carried out using the *Add* button.

7.3.3 Addition of Computed Fields

Integra provides facilities for the creation of one or more computed fields and their addition into the *Fields Mapping* list. This allows the simple selection of a field by an end-user behind which may be a complex formula, possibly including a lookup to another database.

To create a computed field:

- » Enter the name of the computed field in the *Computed Fields* area (see screenshot alongside). Use a field name allowed by Notes, which is not already used in your list. If you want to add more than one computed field at a time, enter the name of each computed field followed by a comma.
- » Click on the *Add* button to add the computed field or fields to the *Fields Mapping Details* tab.



7.3.4 Field Mappings Details Tab

Having added the fields selected from the *Available Field List* tab including both physical fields from the form and computed fields, these fields will be displayed in the *Field Mapping Details* tab.

7.3.4.1 Changing the order of presentation of the fields

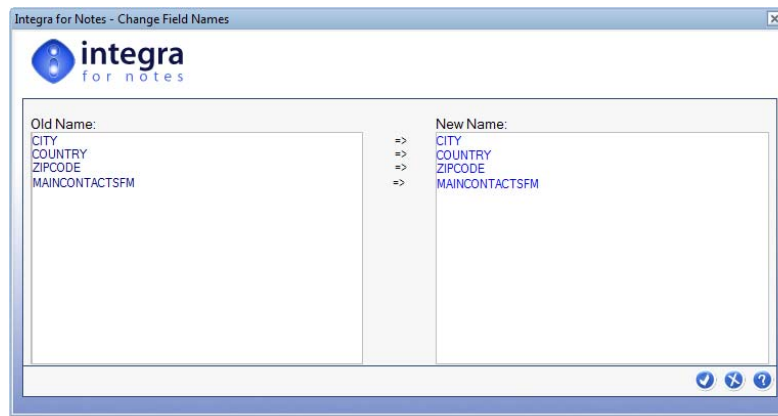
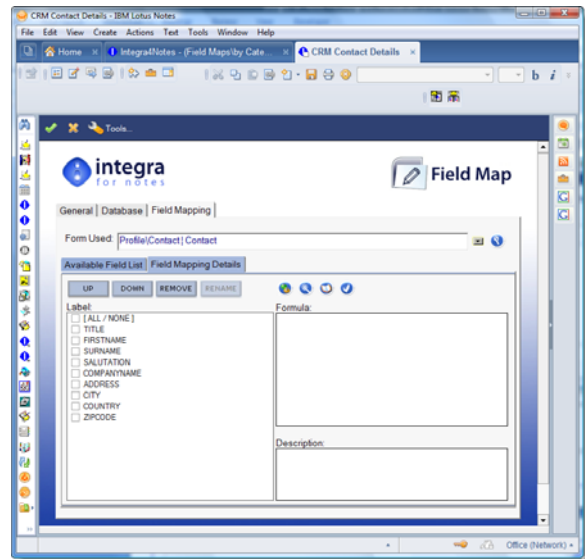
Select one or more fields in the checkbox and use the *Up* or *Down* buttons to change the order of presentation of these fields in the *Field Map*.

7.3.4.2 Removing a field from a Field Map

Remove a field by selecting the field's checkbox and clicking on the *Remove* button.

7.3.4.3 Renaming a field in a Field Map

Having included the fields in a Field Map using the standard names of these fields, a designer may wish to change the field names so as to make them more intuitive for the end-user when running Integra Quick Reports. Fields can be renamed by selecting the field's checkbox and clicking on the *Rename* button. More than one field can be renamed simultaneously.



On selection of the *Rename* button, the user will then be shown a dialog box with the current name of the selected fields in a panel on the left side and the new names on the right side. Rename the fields in the right hand panel then click on the *OK* icon.

7.3.4.4 Defining the formula for a computed field

To set the formula for a computed field, click on the field in the *Label* section and then enter standard Lotus Notes formula language in the *Formula* section. The Syntax Check, Lookup Wizard and Formula Window options available through the respective icons operate in exactly the same manner as that available when created computed fields in an Integra profile. For further details refer to sections 3.3.4, 3.3.5 and 3.3.6 of this user manual.

7.3.4.5 Defining a Description for a field

When a user of Integra Quick Reports selects a field in a field map, any description defined in the *Description* section will be displayed. This enables maximum assistance to be provided to the end-user in the selection of his fields.

8 Stored Filters

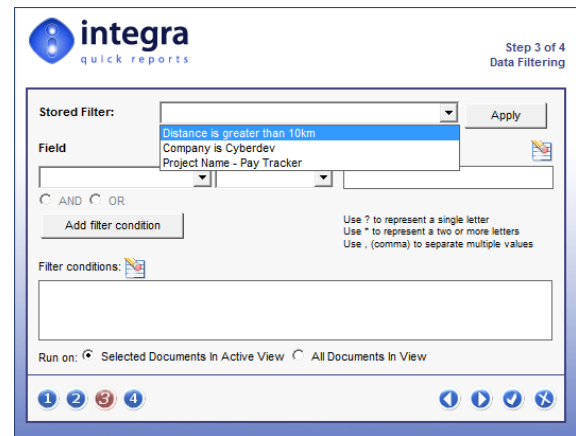
Stored Filters, introduced in Integra for Notes 4.7, allow a designer to package up data filtering conditions and to deploy these to non-technical end-users of both Integra for Notes and Integra Quick Reports.

Stored Filters will be created by a super user or designer using the Integra for Notes Designer Edition and are linked to a specific database or template in the same way that an Integra profile is linked and they are made available to the end-user in the *Data Filtering* step of the Integra wizard. Stored filters allow the complexity of complex selection criteria to be hidden away from the end-user.

When positioned in the *Data Filtering* step of the Integra wizard (see screenshot alongside) the end-user is able to click on the dropdown arrow to select from one of the available stored filters. Filters are able to be given descriptive names by the designer so as to ensure that the end-user is able to select the correct filter.

On selection of the required *Stored Filter*, the condition or conditions defined in that *Stored Filter* are applied to the Integra profile.

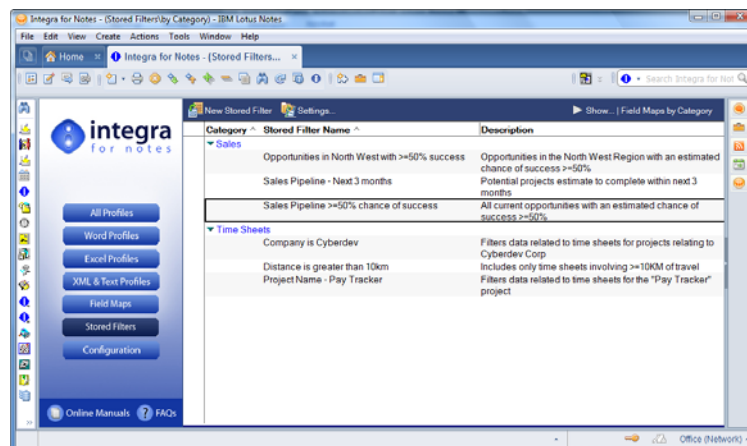
This section of the Designer manual will only address the process of creating these *Stored Filters*. For instructions about the usage of *Stored Filters* by end-users, refer to the *Integra for Notes End-User Manual* and the *Integra Quick Reports manual* both of which can be found at www.integra4notes.com/manuals.



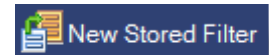
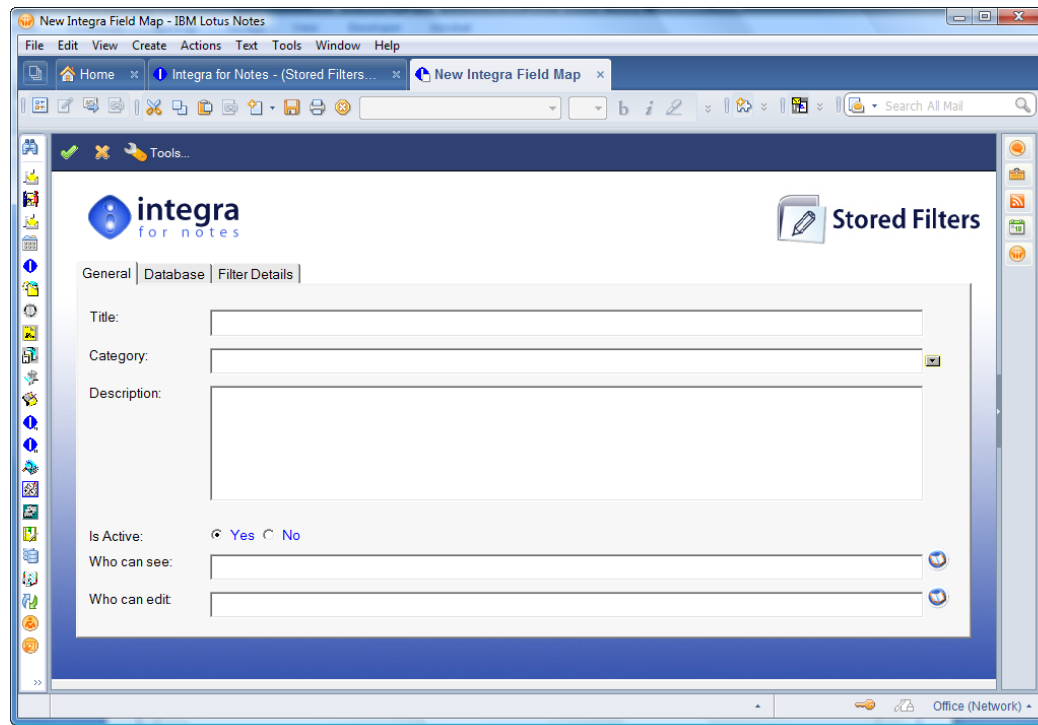
8.1 Accessing Stored Filters

Access to the *Stored Filters* functionality is available via the main Integra navigator. In the event that the *Stored Filters* button is greyed out, this signifies that the [Filters] role in the Integra database's ACL has not been allocated to the user. Refer to the *Security* section of the Integra Installation and Configuration manual for instructions on allocation of the appropriate rights.

On selection of the *Stored Filters* button, the user is presented with the main *Stored Filters* view (see below) listing any filters that may already have been created in the Integra database. Filters are shown categorized by *Category*.



Creation of a new *Stored Filters* is undertaken by clicking on the *New Stored Filter* action button. This will result in the creation of a new *Stored Filter* form.


Filters set in Integra will perform best when operating on a database which has a full-text search index created on it.

If the database does not currently have a full-text search index, we recommend that you request your administrator to create such an index.

8.2 The General Tab

The *General* tab contains fields which allow definition and description of the *Stored Filter*. The details of each field are described in the sub-sections of this manual below.

8.2.1 Title

The *Title* field is used to uniquely identify a *Stored Filter*. The name entered into this field is presented to the user whenever they select the *Stored Filter* field in the Integra *Data Filtering* wizard.

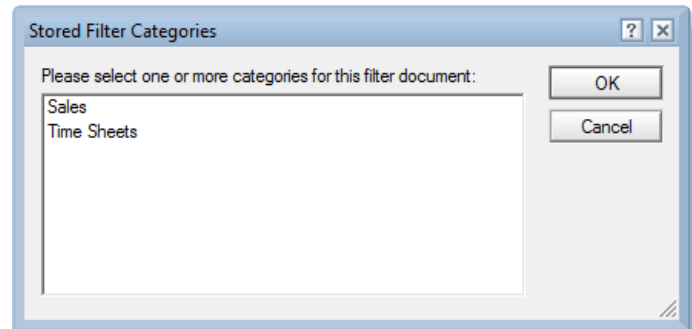
When the *Stored Filter* document is saved, the name entered in the *Title* field is validated to ensure that it is unique. If another *Stored Filter* document is found having the same name, a message will be displayed informing the user and the save operation will not be completed. The user will then need to choose an alternative and unique name for the *Stored Filter* document.

8.2.2 Category

The *Category* field allows allocation of a *Stored Filter* to one or more Categories which will be used for displaying the list of *Stored Filters* in the Integra database. Views of *Stored Filters* by category allow display of Filters organized by Category.

For instance, all filters related to Sales Opportunities can be allocated to the *Sales Opportunities* category resulting in them being displayed together independently from the database or template they relate to. By allocating *Stored Filters* related to a specific application or a particular type of filter together, it is easier to find filters and navigate around your Integra database. This is particularly the case when a filter is linked to multiple versions of a design template.

The category can either be typed directly into the *Category* field or the arrow icon at the right hand side of the field can be used to display a list of the categories already in use. Multiple categories can be selected by clicking on each of the required categories in turn or, if manually entered, by separating the category name by a comma.



8.2.3 Description field

Each *Stored Filter* document may optionally contain a description, which is entered in the "Description" field. It should be used to describe and document the use of the *Stored Filter*. The description is only displayed in the profile views.

8.2.4 Is Active field

Stored Filter can be *Active* or *Inactive*. An *Inactive Stored Filter* will not be presented to the user when Integra displays the available *Stored Filters*. A *Stored Filter* should be set to *Inactive* when it is to be temporarily decommissioned to ensure that the filter is not used.

8.2.5 Who Can See

The *Who Can Edit* field allows definition of a list of users, groups or roles who are able to see and thus use the particular *Stored Filter*. If this field is left blank then all users able to use *Stored Filters* will be able to see and use this filter. If however any value is added to this field then only the users, groups or roles included (as well as the original creator of the filter) will be able to see and use the filter.

8.2.6 Who Can Edit

The *Who Can Edit* field allows definition of a list of users, groups or roles who are able to edit the *Stored Filter*. If this field is left blank then all users with Editor rights in the Integra database will be able to edit *Stored Filters*. If however any value is added to this field then only the users, groups or roles included will be able to edit the filter.

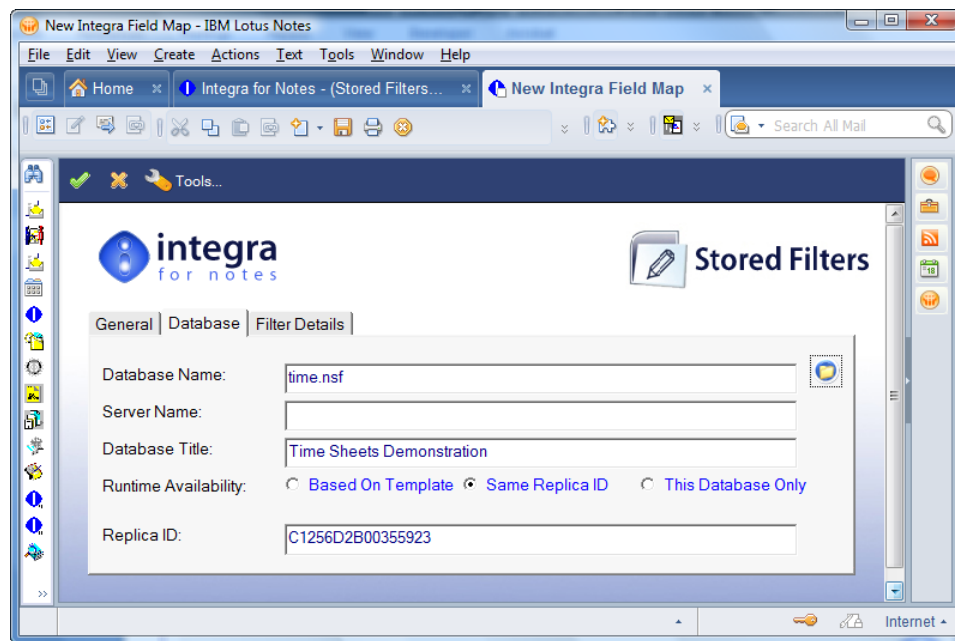
To the right of the fields can be found an icon that allows presentation of the Address Book dialog to the user from which the names of users and groups can be selected for addition to the *Who Can See* and the *Who Can Edit* fields respectively.



8.3 The Database Tab

The *Database* tab is used to link the usage of a particular *Stored Filter* to a specific database or databases which inherit their design from a chosen template. When a user is running Integra for Notes and utilizing the *Stored Filters* feature, only those *Stored Filters* linked to that particular database will be presented to the user. A *Stored Filter* can be linked either directly to a specific database or to a template design in which case the linkage is made with any database that inherits its design from the linked template.

The Notes database may reside either on a local workstation or on any available Domino server. The user creating the *Stored Filter* must have a minimum of *Reader* access to the database to be linked and access to the server on which it resides. Integra fully preserves and respects the security systems in place within Notes.



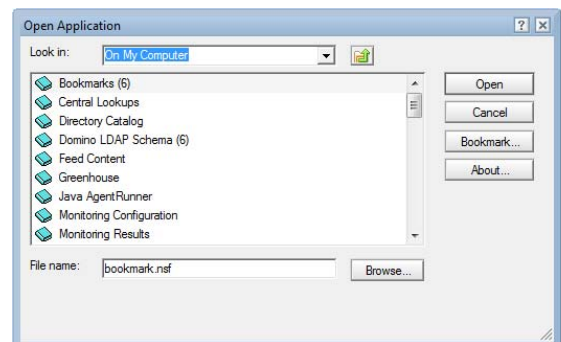
8.3.1 The Database Name, Server Name & Database Title fields

The source Notes database may be selected from a dialog by clicking the folder icon or may be entered manually. On selection of the icon, the user is presented with the standard Notes *Open Application* dialog box if using Lotus Notes 8 and above or, in the case of versions of Notes 7 and earlier, the *Database-Open* dialog box.



When the Notes database is selected, Integra will immediately read the database filename, title, replica ID and template it is based upon as well as the design and the appropriate fields will automatically get populated in the form. This may take a few seconds depending on the number of design elements in the source database and the performance of the server the database is residing on.

To easily select a database, it is best to use the provided folder icon. However, if the details are entered manually, the database name field must include the path and filename of the database (including file-extension). The database title is automatically computed in the Database Title, replica ID and template fields.





To create a *Stored Filter* document linking to a particular database, the user does not require *Designer* rights in the Access Control List of the database to which the link is being implemented but rather just *Reader* level rights.

8.3.2 Runtime Availability for

When a *Stored Filter* is created it is specifically linked to a Notes database, which ensures that, when the end-user utilizes the stored filters function in the *Data Filtering* wizard step when running either Integra for Notes or Integra Quick Reports, the user will only be presented with a list of those *Stored Filters* that are linked to the currently selected source database.

Because at times the linkage is to be made to a specific database such as a time sheet application while at other times it may be linked to a standard database such as the Domino Directory or the Catalog, Integra *Stored Filters* can optionally be linked to one of the following using the *Runtime Availability* for field:

- » **Based on Template** –. Once linked to a specific database, Integra will read the properties of that database to obtain the template name of the selected database and this *Stored Filter* will run only any database whose design is inherited from the same template.
This is particularly useful in the case of a *Stored Filter* linked to a databases of which there are multiple instances such as mail files all of which inherit their design from a specific template. Another example is where you have the same database design but multiple replicas such as where each country within an organization may have their own Help Desk application.
- » **Same Replica ID** – this option is the default setting and allows the *Stored Filter* to be run whenever the selected database is chosen independently of which server the database is running on.
This is particularly useful in the case of a *Stored Filter* linked to a specific database a replica of which may be located on various servers. A user will typically want to use the *Stored Filter* while being positioned on the database, which is on their own home server.
- » **This Database Only** – this option allows linkage to only a specific database contained in a defined location. For instance if a replica of a database is contained on multiple servers however the reporting specifically needs to be run from a replica contained on a specific server and no other.

8.3.3 Replica ID field

In the case where the *Same Replica ID* option has been chosen, Integra will read the replica ID of the selected database and display it within this field.

8.3.4 Template Name field

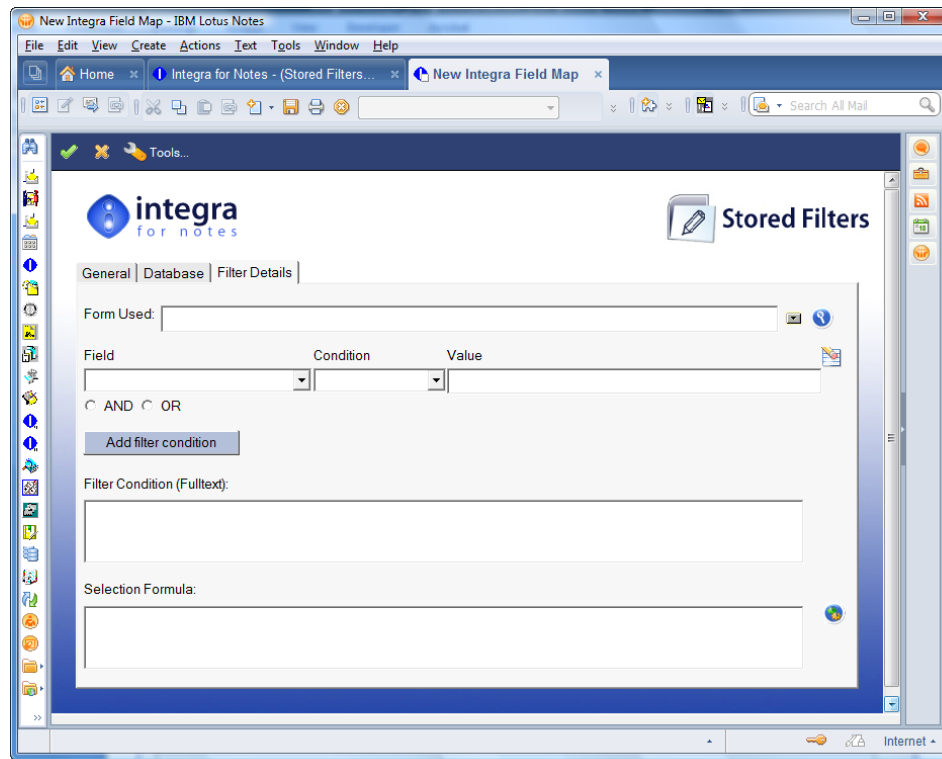
In the case where the *Based on Template* option has been chosen, Integra will read the design template property of the database and store it within this field. *Stored Filters* can be linked to multiple templates and will result in being displayed as available *Stored Filters* whenever a user runs Integra from within any database that is linked to one of the listed templates. This is particularly useful when different versions of a template may be used over time for a specific application allowing a profile to be available in each version if relevant.

The Template field is a multi-value field and allows a database to be linked to multiple templates. Separate multiple templates in this field with a comma or semi-colon. For instance:

Timesheets V3.0, Timesheets V3.1, Timesheets V3.2

8.4 The Filter Details Tab

The *Filter Details* tab allows the setting of the conditions/queries which will be applied whenever this *Stored Filter* is used and which thus determine the data being exported or reported on. The capabilities available at this point are identical to those available when using the *Filter* tab on an Integra profile (see section 3.4 - Filtering & Sorting Tab).



The *Filter Details* tab allows improved control over the exported data without the need to set Lotus Notes selection formulae (although this remains as an option). All this can be effected through a simple point and click interface similar to the Lotus Notes rules dialog.

Stored Filters allow the setting of conditions using one of 2 methods:

- » **Query** – using a drop down field and condition selection capability to set a query using the full-text query syntax
- » **Selection formula** – the setting of the condition using a standard @Select syntax used in selection formulae in Lotus Notes

8.4.1 Form Used

So as to ease setting of the query or of the selection formula, the user is able to select the form used so as the fields of the form are made available for easy selection in the *Form Used* field. While the selection formula method will allow direct typing of the fields making up the condition and therefore does not require the *Form Used* field to be filled, the query method requires the *Form Used* field.

The *Form Used* field allows selection of the form in the design of the selected Notes database which will then make the fields available on that form available to the user for selection as part of the filter condition. Clicking on the drop down arrow to the right of the field presents the user with a list of the available forms in the design of the previously selected database. This will present the user with a screen such as shown in the screen shot overleaf.

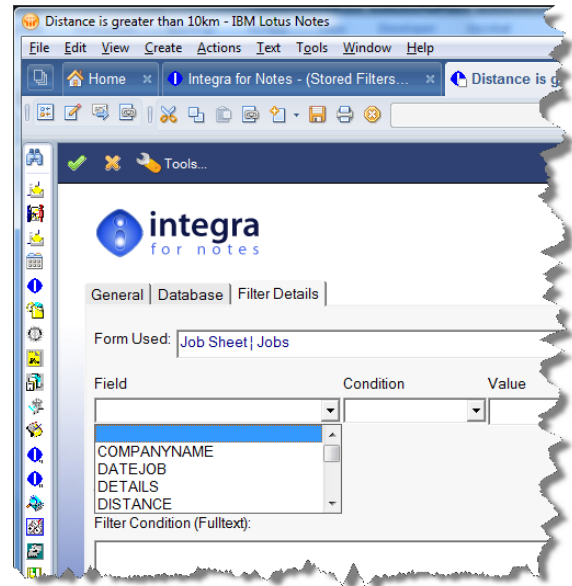
8.4.2.1 Select Field

The Condition section allows the selection of one or more fields and the setting of a filtering condition to ensure that the data exported meets the set condition or conditions.

When the user clicks on the drop-down arrow in the field called *Field* the list displays the fields contained on the currently selected form as set in the *Form Used* Field. Fields defined on a sub-form are fully supported for use in the condition. Changing the form in the *Form Used* Field will allow selection of a different set of fields.



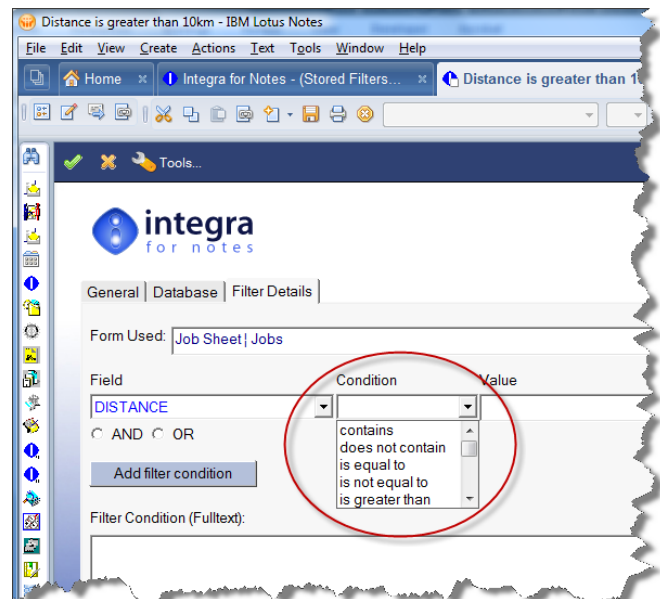
Please note that this filtering capability does not support setting of conditions based on the value of a computed field. For such a capability, utilize the *Selection Formula* field.



8.4.2.2 Select the condition

This step allows the selection of the condition to be used in the comparison of the field with the value about to be entered. Use of the drop-down arrow in the *Condition* field presents a list of the available conditions which are:

- » contains
- » does not contain
- » Is equal to
- » Is not equal to
- » Is great than
- » Is less than
- » Is between
- » Is not between
- » Is on
- » Is after
- » Is before
- » Is not on



8.4.2.3 Set the Value

Enter the value against which the condition is to be compared with the value of the selected field. Values are entered directly and not in quotation marks. So for instance, if one is setting the filter to only bring up values where the field called *Project* is equal to *Northpoint*, enter the value *Northpoint* rather than "*Northpoint*".

If used with the condition *is between*, then two data box values will appear and the user must enter two values. If the condition is set on a date field, then two dates are expected. There is no need to surround values with quotation marks. Just enter the value in the date format of your computer.



The filtering capabilities available in the Filtering & Sorting Tab utilize the built in Lotus Notes full-text search query if a full-text index is available. If the Lotus Notes database from which you are reporting contains a full-text search index, the performance of this filtering will be significantly better than when performed on a database which does not have a full-text search.

If possible, we would recommend the creating of a full-text search on the source database.

When a full text search is performed on a Notes database, a maximum of 5,000 documents are returned by default. The Notes.ini variable *FT_MAX_SEARCH_RESULTS* can be modified to override this limit. This variable applies for indexed databases or databases that are not indexed but are running on the client. If a database is not full text indexed and is running on the server, you must set the *TEMP_INDEX_MAX_DOC* Notes.ini variable as well.

Wildcards can be used in values utilized for conditions. Use a ? to represent a single letter. Use a * to represent 2 or more letters. Multiple values can be separated by a comma.



Integra is unable to validate the data being entered. If a condition is set on a date field, the user must ensure that the value or values entered are in fact dates entered in the date format used on the user's workstation. Invalid values will not be rejected but will result in data not meeting the condition being reported.

Once the condition has been set, it is essential that you click on the *Add Filter Condition* button. This will convert the condition entered into a Lotus Note's query statement which will be shown in the *Filter Conditions* box.

Add filter condition


Once the first condition has been set, this condition can be combined with a second and subsequent conditions by ensuring that the *AND* or *OR* fields are set appropriately and then re-entering another condition. This allows the combining for instance of a date range condition with the value for a specific client account, member of staff or sales region

The use of the *AND* option will of course only result in the reporting of data which meets both the first *AND* the second condition while the use of the *OR* parameter will only require one of the conditions to be found to be true for the data to be exported.

For developers familiar with the Lotus Notes' search query language, direct entry of a query into the *Filter Condition* box is also possible.



8.4.2.4 Removal of a Condition

Once a filter condition has been added and it appears in the *Filter Condition* box, its removal can be undertaken by deleting the contents of the *Filter Condition* box. On the other hand, the setting of a condition which has not yet been added can be cleared by the use of the rubber icon. 

8.4.3 Selection Formula field

The *Selection Formula* field allows the definition of a Lotus Notes formula similar to a view selection formula which will apply on the data being exported. In the event that a selection formula is set in addition to filter condition(s), then the *Selection Formula* will apply on the filtered data set. If however no Filter Condition is set, the Selection Formula will apply on all selected documents or all documents in the view

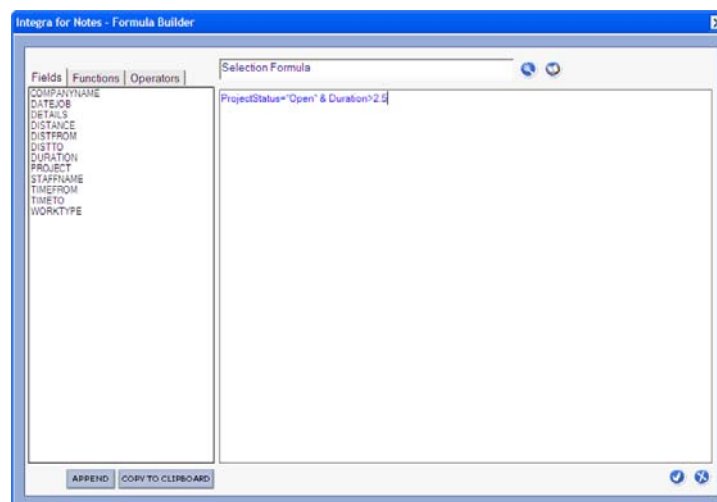
The syntax of the Selection Formula field is almost identical to that which would be used for any standard *View Selection* formula consisting of a valid Notes formula function with the exception that the SELECT statement at the beginning of a View's Selection formula is to be omitted.

An example *Selection Formula* for a profile which requires only documents with a field called *Final* set to *Yes* and a field called *Value* which is greater than 10,000 would be:

Final="Yes" & Value>10000

The syntax is also enhanced in that it is allowed to use any Notes Formula function available within the context of a Notes document. This includes for instance functions like @Dblookup or @dbccolumn, which are not allowed within a view selection formula.

The building of a valid *Selection Formula* is able to be undertaken using the *formula builder* by clicking on the builder icon shown to the right side of the *Selection Formula* field. This will present the following *Formula Builder* dialog box.



For an explanation of the *Formula Builder* functionality in Integra for Notes refer to section 3.3.5.



It should be noted that if both filtering options are used (query filter and selection formula) that the selection formula runs on the result set of the full text filter condition. This is important to understand for optimizing performance

9 General Features of Integra

This section of the manual outlines a number of general features of Integra not necessarily easily identified within the other sections of the user manual.

9.1 Importing & Exporting Integra Profiles

When an Integra database is being used for the development of Integra profiles by a service provider, a requirement sometimes exist to transfer an Integra profile from one company to another. This requirement may also arise when requiring support from Shireburn Software Ltd, the authors of Integra. While copying and pasting between two Integra databases functions correctly, this assumes a level of access to the other database and cross-certification between the two entities.

Integra provides a facility to export an Integra profile in a format which will survive the profile being transferred through an e-mail or via CD, flash memory stick or any other file based method. The recipient is then able to use an Integra profile import process to import the profile into their environment.



It is important to note that profiles should only be exported and imported between Integra databases which are of the same version.

This section of the document outlines how Integra profiles can be exported and imported from and to different Integra environments.

The Integra profile export process wraps the details of an Integra profile, including the attached Excel or Word template, into an attachment. Multiple profiles can be exported simultaneously which will result in multiple attachments being created. These attachments can then either be:

- » sent directly as a Lotus Notes mail to the intended recipient, surviving the transfer across SMTP mail systems on the Internet
- » stored on the file system and manually sent to the recipient either via an alternative e-mail system such as Microsoft Outlook or sent on CD or other such file based method.

On receipt of the e-mail or files containing the wrapped profile(s), the users is able to import them into their own installation of Integra for Notes. This can be achieved:

- » directly by running Integra while highlighting the incoming e-mail in the user's Lotus Notes mail file
- » or, in the case of someone not using Lotus Notes e-mail, following a manual detachment of the attached profile(s) to the file system, by importing them off the file system.

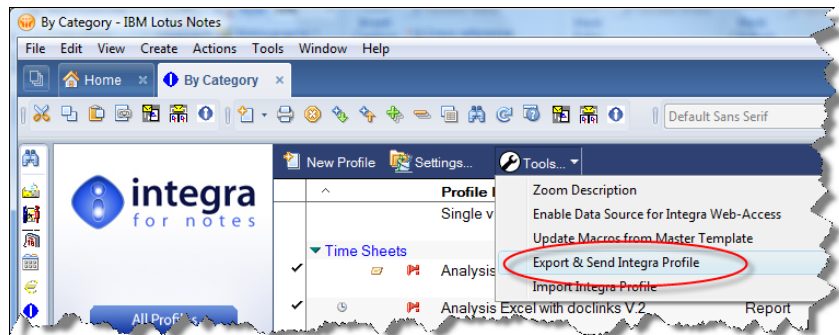
It is therefore a two-stage process with the service provider exporting a profile and the client importing a profile. This process can of course also be done in reverse to allow a client to send an incomplete profile or a malfunctioning profile to their services provide to complete or obtain support.

Integra itself is used to provide this functionality and two Text Integra profiles are supplied with Integra as standard profiles. These profiles are used for exporting the selected Integra Profile(s) and also for importing Integra profiles.

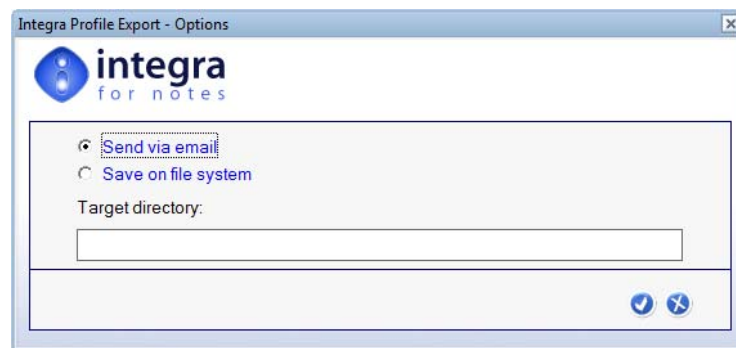
9.1.1 Exporting a profile

To export an Integra profile, undertake the following steps:

- » select the profile or profiles to be exported in one of your Integra views – multiple profiles can be selected.
- » Select the *Tools* action button on the view and select *Export & Send Integra Profile*

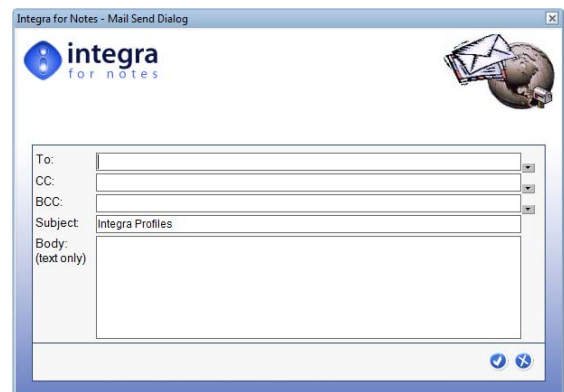


This will result in the dialog box shown below being displayed which allows identification of the method of export being either via e-mail or detaching to the file system for subsequent manual sending.



In the event that the e-mail option is selected then the user is presented with a dialog box that enables identification of the e-mail address to which the profile(s) are to be sent. Select the e-mail address or addresses of the people or groups to whom this profile is to be transmitted.

In the event that the file system option had been selected, then a folder icon appears allowing identification of the directory to where the file(s) are to be saved. On confirming execution, Integra will generate a series of files into the chosen directory.



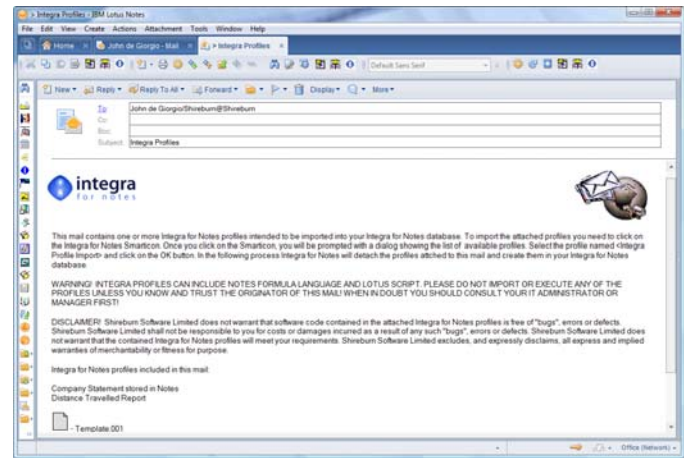
A file called IntegraProfiles.TXT will be created as well as a file called Template.000, Template.001 all the way to Template.nnn representing the number of files that were exported.

9.1.2 Importing a profile

Following the profile having been exported by the sender, the recipient of the profile will receive an e-mail containing the profile. This e-mail will contain explanations related to the functionality of the profile (see screen shot below).

For Users of Lotus Notes

Assuming that the user is using Lotus Notes mail, to import a profile, the user is able to highlight the e-mail in their Lotus Notes Mail in-box and then click the Integra SmartIcon, selecting the *Integra Profile Import* profile from the presented profile list. This will then result in the importation of the wrapped profile(s) received in the e-mail into the currently active Integra database.

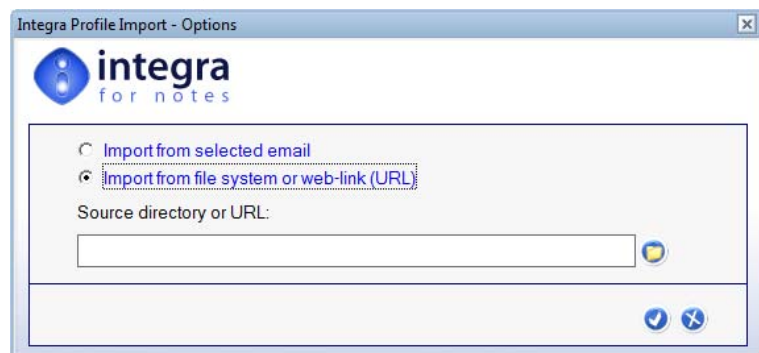


If the profile called *e Integra Profile Import R4* does not appear in the dialog box, this means that the mail template used in your environment has not been linked to this Integra profile. Follow the instructions found in section 7.1.2.1 - *Linking Import Profile to Mail File*

For Users of Other e-Mail Systems

Users of other mail systems apart from Lotus Notes should undertake the following steps:

- » detach the files attached to the incoming e-mail to a directory of their choice
- » open any Lotus Notes database (for instance the current Integra database)
- » click on the Integra SmartIcon at which point you will be presented with the Integra Profile Dialog Box.
- » Select the profile called *Integra Profile Import R4*. You will be presented with a similar dialog to the one explained on exporting.
- » Select the option called *Import from file system or web-link (url)*. This will display the folder icon.
- » Select the folder that contains the previously detached profiles or enter a url which contains profiles you are attempting to import.



9.2 Calling Integra from a Notes Database Action Button

A developer may want to further automate the process through which an end-user runs a particular Integra profile and rather than requiring the end-user to select the documents and then click on the Integra SmartIcon, a standard Lotus Notes action button could be made available on a particular Notes view or form which executes a pre-named Integra profile. This will allow the user to select the Action Button and Integra will execute the profile without providing a list of available profiles to be executed to the user.

This procedure allows a greater level of integration between a specific Notes application and the Integra environment. Please note that while this option can be utilized, it is not necessary to make such changes to your applications but rather it is optional.

To create an Action Button to run a profile for example called **Statement**, use the following code:

```
REM "Add the name of your chosen Integra profile into the next instruction" ;

@SetEnvironment("IntegraProfileName";"Statement");

olrid := @Environment("IntegraReplicaID");
srv := @Subset(@DbName;1);

@SetEnvironment("IntegraCurrentSrv";srv);
@SetEnvironment("IntegraCurrentDB";@Subset(@DbName;-1));
@SetEnvironment("IntegraUIView";@Subset(@ViewTitle;-1));
@SetEnvironment("IntegraUiDocID";@Text(@DocumentUniqueID));

@if(olrid="";
  @Return(@Prompt([OK];"Integra Runtime";"Integra not installed!"));
  @PostedCommand([FileOpenDBRepID];olrid;srv;"Structure Profiles";"";1;0)
);

@PostedCommand([OpenFrameset];"Preselected Profiles");
@PostedCommand([OpenView];"Structure Profiles";"";0);
@PostedCommand([FileCloseWindow]);
@PostedCommand([FileCloseWindow])
```

If you would like to set up a Notes Action Button which, rather than launching a specific Integra profile, instead launches the Integra Profiles dialog box listing all the profiles available for that database, then the code in the SmartIcon can be copied directly into the action button. The code would look like this:

```
olrid := @Environment("IntegraReplicaID");
srv := @Subset(@DbName;1);

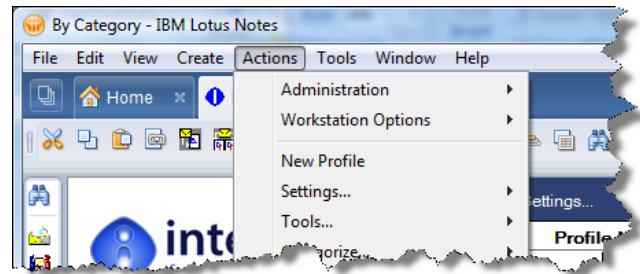
@SetEnvironment("IntegraCurrentSrv";srv);
@SetEnvironment("IntegraCurrentDB";
@Subset(@DbName;-1));
@SetEnvironment("IntegraUIView";
@Subset(@ViewTitle;-1));
@SetEnvironment("IntegraUiDocID";
@Text(@DocumentUniqueID));
```

```
@If(olrid="";  
  @Return(@Prompt([Ok];"Integra Runtime";"Integra not installed!"));  
  @PostedCommand([FileOpenDBRepID];olrid;srv;"Structure Profiles";"";1;0)  
);  
@PostedCommand([OpenFrameset];"Integra Runtime");  
@PostedCommand([OpenView];"Structure Profiles";"";0);  
@PostedCommand([FileCloseWindow]);  
@PostedCommand([FileCloseWindow])
```

9.3 Various Integra Actions

Various agents are available from the *Actions* menu option when positioned within the Integra database. Selecting the *Actions* menu will present you with a number of options shown in the screenshot alongside.

The *Actions* menu is divided into two main sections, as described below, of which the *Administration* agents are only visible to a user who has been allocated the [Admin] role.

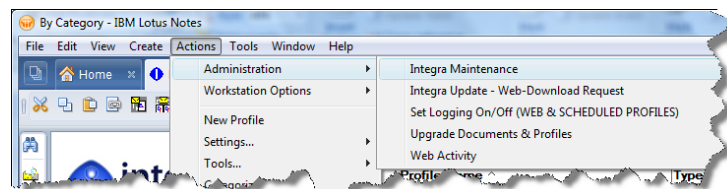


- » **Administration** – a set of agents only available to users who have access to the [Admin] role which provide the administrator of the Integra database with facilities for enabling and disabling server based aspects of Integra's use such as server based logging etc.
- » **Workstation Options** – these agents allow the user on a workstation to undertake specific tasks that effect the operation of that workstation

The various options are defined within the sub-sections below.

9.3.1 Administration

The various *Administration* agents collect a number of administrative functions related to the Domino server. These tasks effect all users and profiles being run on that server. The *Administration* option is only available to users allocated the [Admin] role in the Access Control List of the Integra database.



9.3.1.1 Integra Maintenance

The Integra Maintenance agent runs a reconciliation of the Integra database and resets any maintenance flags. This agent should be run whenever you experience difficulties in running profiles which are writing Rich-text data.

9.3.1.2 Integra Update – Web-Download Request

Integra provides the functionality to allow users to check for and obtain the latest version of the Integra template. This process will submit the license key and current version of your Integra environment to the Integra web site and, if the version being used is older than the latest published and your support & maintenance agreement is up to date, will e-mail a link to the new version of the software enabling its download.



On selecting this option the user is requested confirmation the e-mail address to which the link is to be sent.

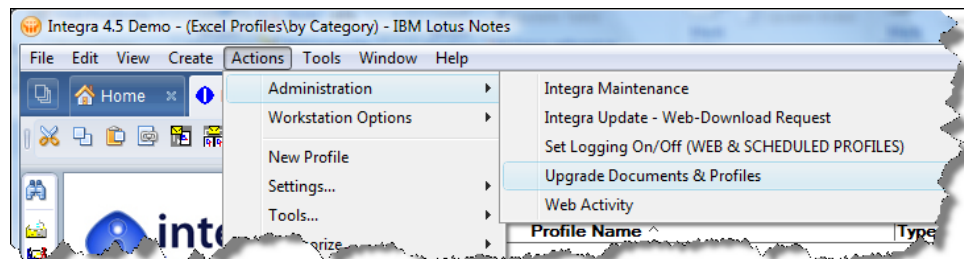
9.3.1.3 Set Logging On/Off (Web & Scheduled Profiles)

All *Scheduled* Integra Profiles are run by a single agent which determines which of the Integra profiles are next due to run. This avoids the requirement for an agent to be run per scheduled profile. The *Set Logging On/Off (Web and Scheduled Profiles)* action turns on logging activities for the agent that runs all the scheduled profiles. When this action is executed, Integra's Scheduled Profiles Agent will log its own activities to the Integra Log database.

This setting does not effect the logging of activity related to individual profiles which is done via the Workstation Options action in the case of profiles running on a Notes workstation or for web browser run profiles, in the Web Activity Log field on the General Tab of a profiles.

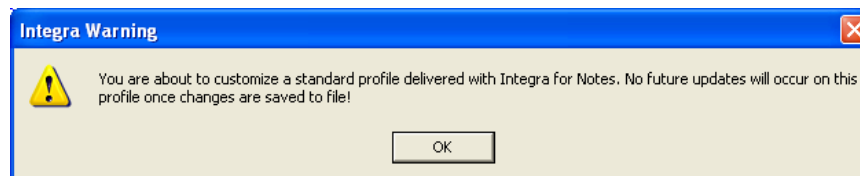
9.3.1.4 Upgrade Documents & Profiles

The *Upgrade Documents & Profiles* action will automatically update the system messages and other internal documents within the Integra database. In addition, it will upgrade those of the existing standard profiles that ship with Integra which have not been modified by the user. Standard profiles which have been modified have their name changed with the addition of *Custom* to their name.



The Integra database ships with a number of example profiles which organizations will find useful. As new versions of Integra are shipped, new profiles may be added and some of the previously shipped profiles may be improved. This agent will upgrade the existing profiles as well as adding any new profiles. However, Integra is able to determine whether a standard profile has been modified following shipping and been customized and these customized profiles will not be upgraded.

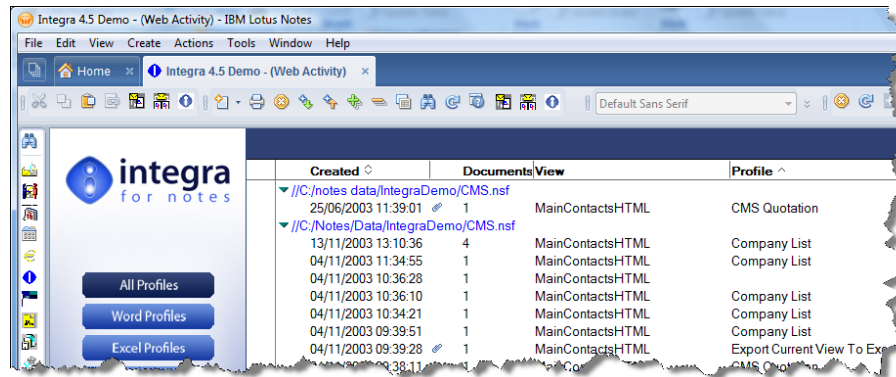
It is for this reason that on attempting to edit a standard profile, the user is advised that the profile is a standard one.



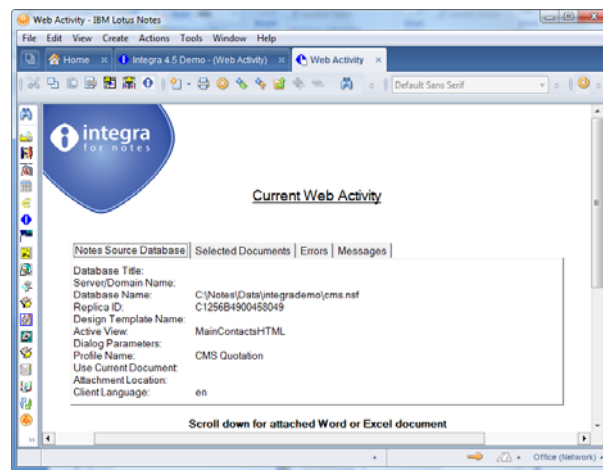
It is recommended that if you wish to customize a standard profile, you should copy the profile and customize the copy ensuring that the standard profile is updated.

9.3.1.5 Web Activity

Selection of the *Web Activity* action will present the administrator with a Notes view of showing the recent running of Integra profiles from a web browser. This view is categorized by database file name and lists the running of each profile in date order.

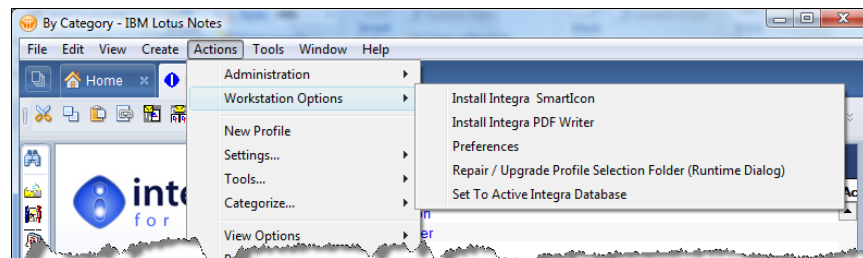


Opening any of the documents in this view will provide details about a specific profile run including the profile run, number of documents etc. A *Selected Documents* tab even identifies the Unique Doc ID of the documents exported.



9.3.2 Workstation Options

Various actions are available to the end user running the Notes client and these are collectively grouped under the Actions menu within the section called *Workstation Options*.

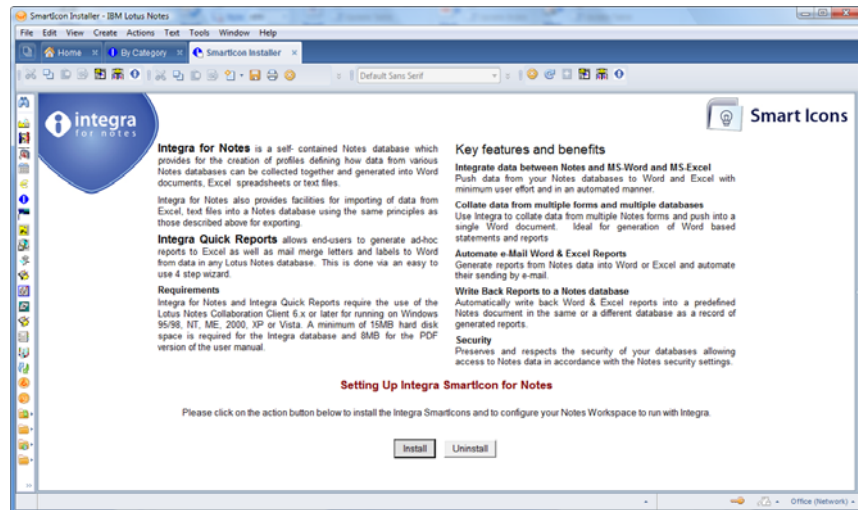


9.3.2.1 Install Integra SmartIcon

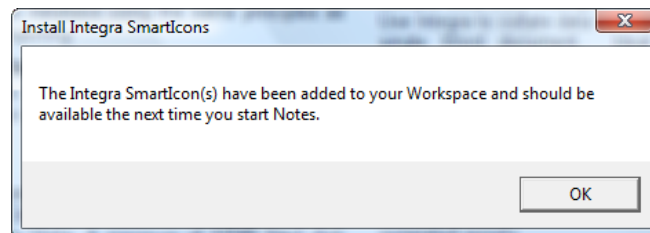
While the standard procedure for deploying the Integra SmartIcon to users' desktops is by using the facility which sends an e-mail to users with an install button, this procedure will not work for users who are not utilizing Lotus Notes mail.

In this case, users can use the *Install Integra SmartIcon* option to manually deploy the SmartIcon. It is also convenient when an individual user reinstalls their Notes environment to just run this option rather than waiting for a deployment e-mail from the user's administration team. Users need to select the Integra for Notes database and click on *Actions -> Workstation Options -> Install Integra SmartIcons* shown in the screen shot below:

This process will bring up the same document which is usually e-mailed out to users to whom Integra is to be deployed.



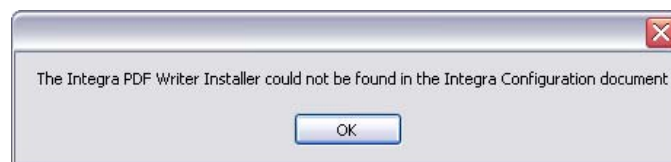
The user should click on the *Install* button which will commence the installation and provide confirmation on successful conclusion.



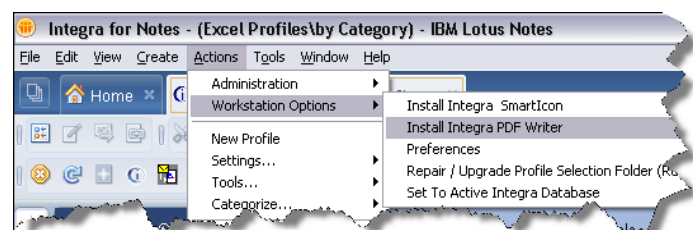
9.3.2.2 Install Integra PDF Writer

Integra PDF Writer is an in-built and free of charge PDF writer designed specifically to work with Integra for Notes. While other ODF Writing options can be utilized (see Integra Installation & Configuration Manual), the Integra PDF Writer can be installed directly from within the Integra database. Users of Integra for Notes are able to deploy the Integra PDF Writer to all users licensed for Integra for Notes.

For users to install the Integra PDF Writer, this option must have been previously configured by the administrator in the *PDF* tab of the *Configuration* page and the Integra PDF Writer installation program attached into this document. In the event that the user attempts to install the Integra PDF Writer prior to it having been configured, they will be presented with an error message as shown below:



Once the Integra PDF Writer software has been attached into the *Configuration* page, end-users will be able to install the software on their workstations. To install the Integra PDF Writer on the workstation, open the Integra database and then run *Actions -> Workstation Options -> Install Integra PDF Writer* from the main Lotus Notes menu.



You will be presented with a page with an *Install* and an *Uninstall* button. Select *Install* and follow the installation wizard.

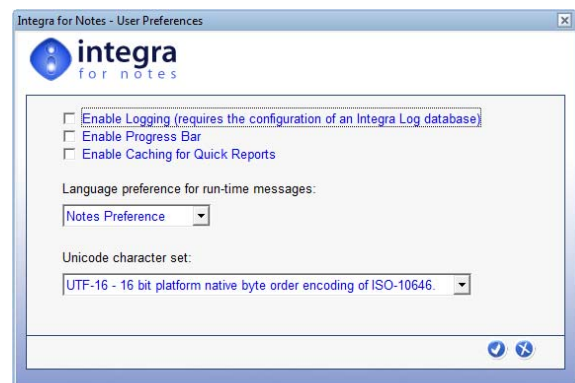


9.3.2.3 Preferences

The *Preferences* option in the Workstation options menu found under *Actions -> Workstation Options -> Preferences* enables the end user to set certain preferences relevant to their own usage of Integra. These preferences are set locally on that user's own PC.

Enable Logging

When workstation logging is enabled, the running of each and every profile by a user on that workstation using a Lotus Notes client will result in detailed listing of log events into the Integra Log database.



This facility requires a log database to be created and configured. See the *Configuration* section of the *Integra Installation & Configuration Manual* to obtain more information about configuring the *Integra Log* database.

Each call, collection of data, starting and stopping of a profile and all their detail will be logged to the database as well as shown on the Notes *Status Bar* during running. This should be used for testing and debugging purposes.

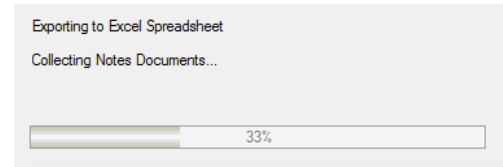


The logging of activities related to a profile is a very extensive process and consumes significant resources, most especially if the Integra Log database is stored on a slow Domino server or one with poor connectivity.

Ensure that when logging is no longer required that this feature is disabled so as to reduce the impact on performance.

Enable Progress Bar

When running various tasks in Integra, both as a profile creator as well as an end-user, Integra informs the user about the progress achieved using a progress bar. However when running over remote communications, the user may prefer to disable the progress bar to improve performance and reduce screen activity. This is effected by deselecting the Progress Bar. This effects only the running of profiles on that particular workstation.



Set Caching for Quick Reports

The *Set Caching for Quick Reports* option is only relevant to users who have implemented the Integra Quick Reports product.

The *Integra Quick Reports Cache* retains the settings, details and options of the last *Quick Report* generated by a user and will, if this feature is enabled and if the user is generating a *Quick Report* from the same view, remember the settings previously used and suggest these as defaults for the next *Quick Report*.

9.3.2.4 Repair/Upgrade Profile Selection Folder

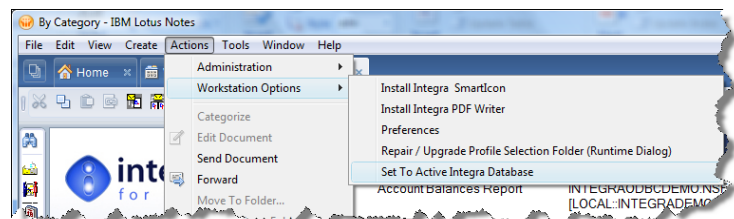
The *Profile Selection Folder* is used to present a customized view of the profiles available to a user based on his access rights and other properties. At times, this folder can become unsynchronized and running this option from the *Workstation Options* menu will repair the damaged folder.

9.3.2.5 Set to Active Integra Database

The Integra for Notes license allows the deployment of an unlimited number of instances of the Integra for Notes database on the same server. This is a particularly useful feature for larger organizations, or those that are divided functionally and want separation of the Integra functionality into different Integra databases (copies as distinct to replicas). This feature is also useful in allowing deployment of separate development, test and live Integra databases

Whereas different users can set different databases as their current Integra database through this feature, the individual user's SmartIcons however point to only one Integra database at a time.

A user who has multiple Integra databases available can activate the particular Integra database he wishes to use by opening it, and then selecting the *Actions* menu option, which will present the user with the option to *Set to Active Integra Database*.



On selection of this option confirmation of the correct setting of this function will be provided to the user through message box.

9.4 Logging - Debugging Support

As Integra's runtime code is protected and the code is within the self-contained Integra database, it is not possible to debug Integra in the usual way with the Notes debugger. However, Integra provides another powerful means to debug the runtime execution of an Integra profile by logging activities to an Integra Log database.

For debugging to be implemented, the user needs to:

- » create an Integra log database. Refer to the *Integra Installation & Configuration Manual* to obtain more information about the Integra Log.
- » enable logging using the Actions → *Workstation Options* → *Preferences* option in the actions menu (see section 9.3.2.3).

9.4.1 Creating an Integra Log Database

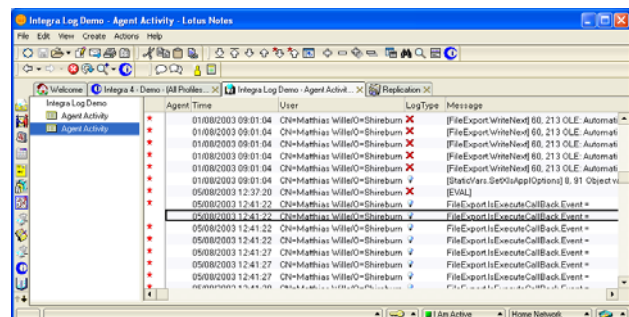
Integra allows the user or developer who is creating Integra profiles to create an Integra log database to collect runtime information about Integra execution. This is created through the *Configuration* document and instructions for the creation and configuration of the Integra log database can be found in the *Integra Installation & Configuration Manual* – section 3.14.

9.4.2 What Information is Being Logged?

All functions in the Integra runtime agents and libraries are coded in such a way that they will post a message into the log file every time they are executed. All functions are also error trapped and will therefore post either specific Integra messages or Notes standard error messages into the log database when a runtime error occurs whenever the logging setting has been enabled (see section 9.3.2.3).

Each log entry contains information about the following:

- Database running Integra the profile
- The date and time that message was created
- The user running the Integra profile
- The type of message defined by a column icon (the blue bulb for normal log entries and a red X for runtime errors)
- The message explaining what has been executed, respectively a runtime error message including the error code and line number where the error occurred



A typical runtime log would look like this:

9.4.3 Enabling and Disabling Integra Logging

To enable or disable the Integra Logging mode, select the Integra database on the workspace or open it from the bookmarks. From the menu, select *Actions* → *Workstation Options* → *Preferences* to enable and disable logging. See section 9.3.2.3.



As logging mode creates a message for every function executed at runtime, it has a considerable impact on Integra's performance and should only be used for debugging.

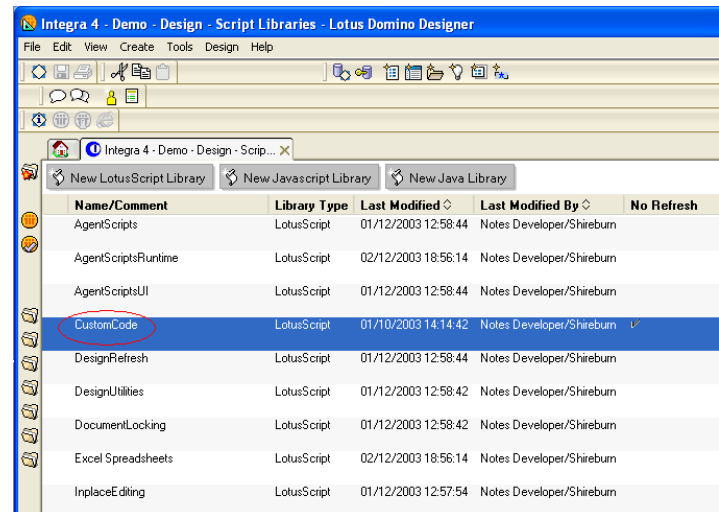
9.5 Incorporating Custom Libraries

The design of the Integra for Notes database is protected and cannot be modified however, since a requirement may exist for an advanced user to utilize their corporate script libraries or to alter and enhance the functionality of Integra, Shireburn has provided a facility through which such customization can be undertaken.

One of the script libraries contained within Integra for Notes is called **CustomCode**. This library is blank, unprotected and is not refreshed when you refresh the Integra database from the Integra template. A developer with Designer rights to the Integra database is able to place his own functionality within the *CustomCode* script library and call this code from within Integra profiles.

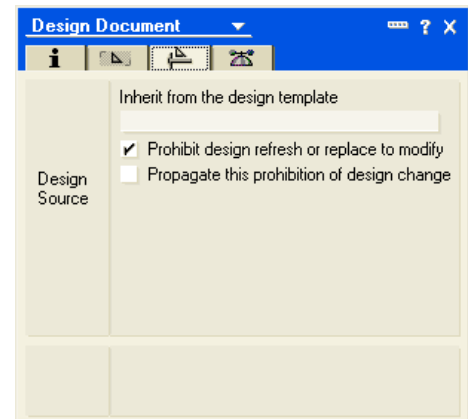
This will allow the development of Integra profiles that can utilize custom Script Libraries that may be utilized as standards within that organization and the inclusion of LSX or DLL calls in the advanced Script Callback.

The following screenshot shows the *CustomCode* library in the Lotus Domino Designer:



The *CustomCode* Script-Library is essentially a blank library, which does not contain any code. However, it is included in all Integra runtime libraries. Changes to *CustomCode* Script-Library therefore effects all runtime libraries in that any new public procedure, public function, any functionality provided with included LSXs or DLLs will be immediately available in the Script Callback procedure.

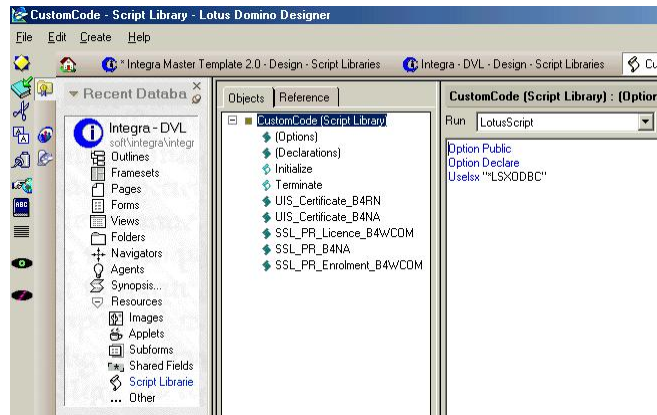
If the *CustomCode* library is utilized, it is necessary to protect it from being overwritten with the next maintenance update of Integra. To protect the *CustomCode* library, select the library in the Designer and open the design property through a right mouse click. In the Design Tab of the property box, tick mark the *Prohibit design refresh or replace to modify* option.



Note that the *CustomCode* library is loaded every time an Integra profile is executed. The declaration section and the Initialize event (procedure) should therefore contain only necessary code so as not to effect the runtime performance of Integra profiles.

The best practice is to create customized initialize procedures (e.g. Sub myInitialize) called only within profiles, which will utilize the code within the *CustomCode* library.

The screenshot below shows an example of a customized *CustomCode* library utilizing the standard Notes LSX for ODBC connections (Uselsx "LSXODBC"). The custom procedures contain the code to link to an ODBC source.



In addition to the fact that the *CustomCode* library can be utilized to include LSXs and DLLs, the *CustomCode* library is particularly useful to store re-usable or large code snippets for utilization in the Script Callback of the Advanced Tab in the Integra profile.

Extracting code from the Script Callback and placing it into the *CustomCode* library will minimize the LotusScript compile at runtime and therefore drastically enhances the performance. The reduced Callback script is also easier to read and therefore easier to maintain.

9.6 Minimum Requirements

Integra for Notes requires the use of the Lotus Notes Collaboration Client 6.x, 7.x or 8.x running on IBM supported Microsoft Windows platforms, currently Windows 2000, XP and Vista. As new versions of Notes and Domino are released, compatibility issues may arise which would be addressed by the release of new versions of Integra for Notes which clients covered by a valid maintenance agreement will be entitled to receive.

A minimum of 25MB hard disk space is required for the Integra database.

While the Integra for Notes databases may be hosted on a Domino 6.x, 7.x or 8.x server or a local workstation running Lotus Notes 6.x, 7.x or 8.x, Integra is able to access data from databases stored on other Domino server versions as well as those databases which are accessible through Lotus Notes' ODBC look ups or native LSX supported drivers, such as Oracle, MS-SQL, etc.

The execution of Integra Word and Excel export profiles through a Web browser requires the use of Internet Explorer 5.5 and above or Firefox 1.5 and above and the databases need to be hosted on Lotus Domino 6.x, 7.x or 8.x server running http on Domino on any IBM supported OS including Windows, Linux and AS/400. Should an Integra profile be created which uses some of the advanced features of Integra which use Microsoft's COM technology, such profiles will only run if the Domino server is running on a Microsoft Windows platform.

The running of Integra on a *Scheduled* basis always requires the use of an IBM supported Microsoft Windows version of Domino or Notes. Microsoft Word and Excel may need to be installed on that server, depending on the features of Integra profiles used. Should an Integra profile be created which uses some of the advanced features of Integra which use Microsoft's COM technology, such profiles will only run if Microsoft Word and Excel are installed on the server

For organizations wishing to run advanced scheduled profiles but not wishing to deploy Word and Excel on their Domino server, an option exists for the deployment of the Integra database on a Lotus Notes client installed on a Windows workstation and the setting of this database for local scheduled execution of Integra profiles.

Integration is supported with all versions of Word and Excel from Office 2000 onwards. Office 2007 requires Integra 4.5 and above.

Integra for Notes' Excel profiles using the XML export method will only function on Excel 2003 and above as prior versions of Excel do not support this capability.

10 The Sample Integra Profiles

Integra for Notes ships with a number of sample profiles which can be used immediately to provide value to your organization as well as the allow you to dissect the profiles as a means of better understanding Integra for Notes.

These profiles are designed to operate with certain standard databases in use in all Lotus Notes environments such as the Domino Directory, Log, personal address book. If your organization utilizes customized versions of these standard databases, then these profiles must be re-linked to the template names in use in your organization. See section 3.2.2 and 7.3.2.3 for instructions on how to link one or more profiles to a template.

The table below lists and describes the sample profiles provided with Integra for Notes.

Profile Name	Type	Description
Letter	Word Export	Sample mail merge letter linked to Domino directory
Address labels – Home Address	Word Export	Sample labels linked to person document in Domino Directory accessing home address details.
Address labels – Office Address	Word Export	Sample labels linked to person document in Domino Directory accessing office address details.
Word -> Notes Migration (Attach)	Word Import	Sample Word document importation into standard document library database attaching documents into body field.
Word -> Notes Migration (Embed)	Word Import	Sample Word document importation into standard document library database embedding documents into body field.
Word -> Notes Migration (Richtext)	Word Import	Sample Word document importation into standard document library database importing the Word text into body field.
Telephone List	Excel Export	Generates Excel spreadsheet with telephone details of selected people from the people view of the Domino Directory.
Export Contacts	Excel Export	Generates list of contacts from a Personal Address Book to an Excel spreadsheet.
Export Contact details for update	Excel Export	Generates list of contacts from a Personal Address Book to an Excel spreadsheet including the Unique Doc ID to allow modifications and re-importation using Import / Update Contact Details import profile.
Import Contacts	Excel Import	Enables importing of data from an Excel spreadsheet into the Notes personal address book.
Export Contact details for update	Excel Import	Enables importing of data from an Excel spreadsheet into the Notes personal address book following updating. Uses Unique Doc ID to identify existing documents.
Integra Profile Export R4	Text Export	Generates an outgoing e-mail containing all the definition of an existing Integra 4.1 profile to enable the sending of a profile to an external organization. The Integra Profile Import profile can be used to import profiles from a mail file
Integra Profile Import 4	Text Import	Allows importation of a wrapped Integra 4.1 profile received in a Notes mail file and its storage within the Integra database.
Trading Invoice Sample	Excel Export	Allows generation of an Excel based invoice from the contact form of the address box.

11 Help, Support and FAQ Resources

Integra for Notes has been designed to make its operation as simple as possible. In addition, a range of resources is available to you to allow you to maximize the investment you have made in Integra for Notes.

11.1 Documentation

This Integra for Notes Designer's Manual is obviously a prime resource as is the Integra for Notes End-user Manual. Shireburn Software Ltd has taken the trouble of documenting all the steps, features and facilities available within Integra for Notes. An electronic version of this manual and all other manuals can also be found at www.integra4notes.com/manuals.

A separate ***Integra Installation & Configuration Manual*** and an ***Upgrading to Integra for Notes Manual*** are also found at the same page on the web site.

Advanced Developers documentation listing the details of all the Integra objects and classes can also be found on the following page www.integra4notes.com/manuals.

11.2 FAQ's

The Integra web site also contains a set of FAQ's, which can be found at www.integra4notes.com/faq. As Shireburn is asked to provide support to its users we shall continue to build up this resource to provide the maximum benefit to our user base.



In addition, while your usual support channels through your Integra partner can be made use of, Shireburn also provides a support service directly related to Integra for Notes. This can be reached by e-mailing support@integra4notes.com

11.3 Support Services

Users covered by a valid maintenance and support agreement are entitled to receive support in the operation of the Integra for Notes application itself on a free of charge basis. This support service relates to the functioning of Integra itself and does not extend to assisting clients in building profiles to meet their specific business need. Shireburn Software and many of its partners do however offer a **consultancy service** at a charge for assisting customers in custom profile building, training and other such support services. These services are not covered by the maintenance agreement.

To bring items of support to our attention kindly send the details of your issue together with all the relevant information such as the version of Lotus Notes/Domino, Word and Excel being used e-mail to support@shireburn.com.

11.4 Consulting Services

Shireburn Software, the authors of Integra for Notes, is also in a position to assist its clients with the provision of services related to the creation of Integra profiles designed to meet the needs of that client. This service leverages Shireburn's intimate knowledge and experience of Integra allowing quicker development services for the more challenging requirements.

Consulting packs of different hours of duration are available for purchase on-line at www.integra4notes.com/purchase. For further details contact sales@integra4notes.com.