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Horizon

Horizon Enterprise Fiscal Management Control User's Guide

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Reader comments

Any comments or suggestions regarding this publication are welcomed and should be forwarded to the attention of

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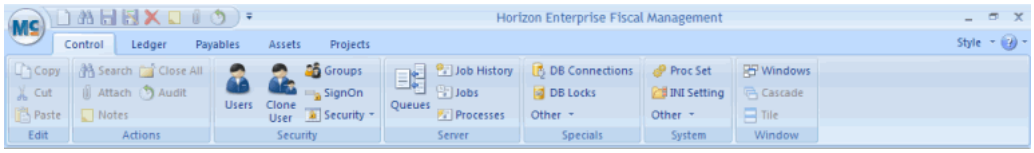
Ribbon Navigation

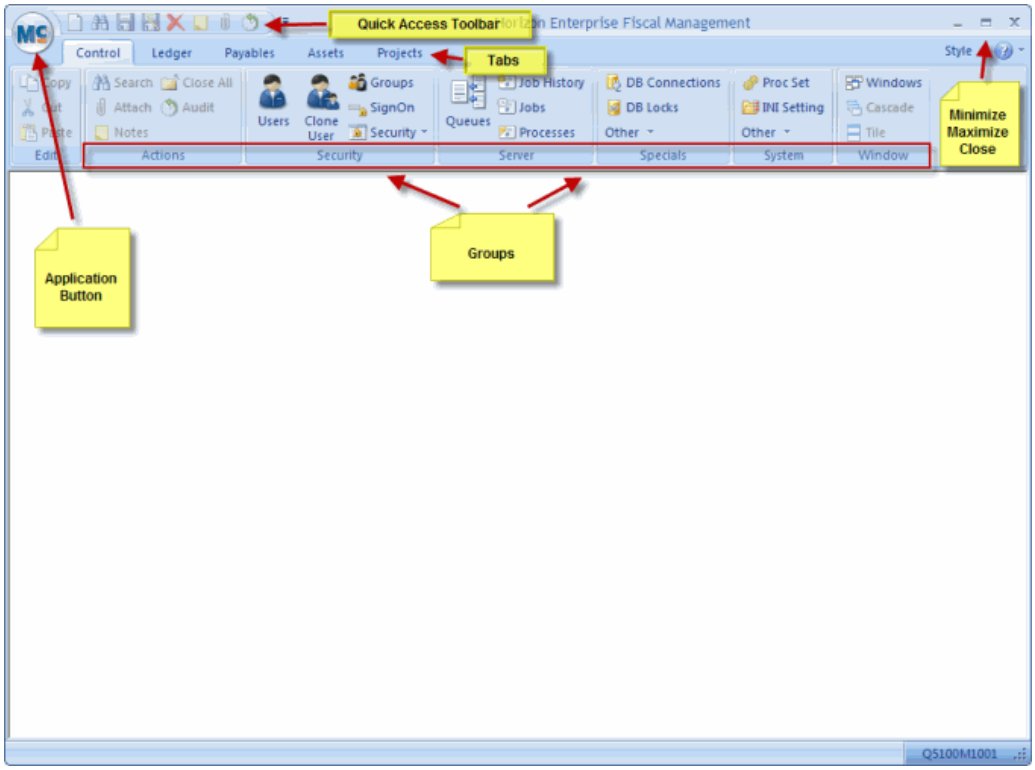
HEFM applications use a Ribbon navigation, which is a new user interface element that replaces the traditional menu and toolbar structure. The Ribbon organizes the features of an application into a series of Tabs at the top of a window. Each Tab contains a collection of Groups that help a user easily find and access application dialog boxes. To provide further assistance in navigation, icons provide a visual representation of the different functionality a user can access within a Group.



The Application Window - Ribbon Display

Horizon Enterprise Fiscal Management software uses a Windows operating system, and most operations happen in the Application window.

You leave the application when you close the application window. If this happens, you must start the application again by double clicking on its application icon on the desktop or selecting it from the Programs in the Windows Start menu. You do not have to sign on again, provided that you have not also closed the **SignOn** window.



HEFM applications use a navigation Ribbon, which replaces traditional menus and toolbars. The different areas within the application window using the **Ribbon** navigation are listed below.

Application Button

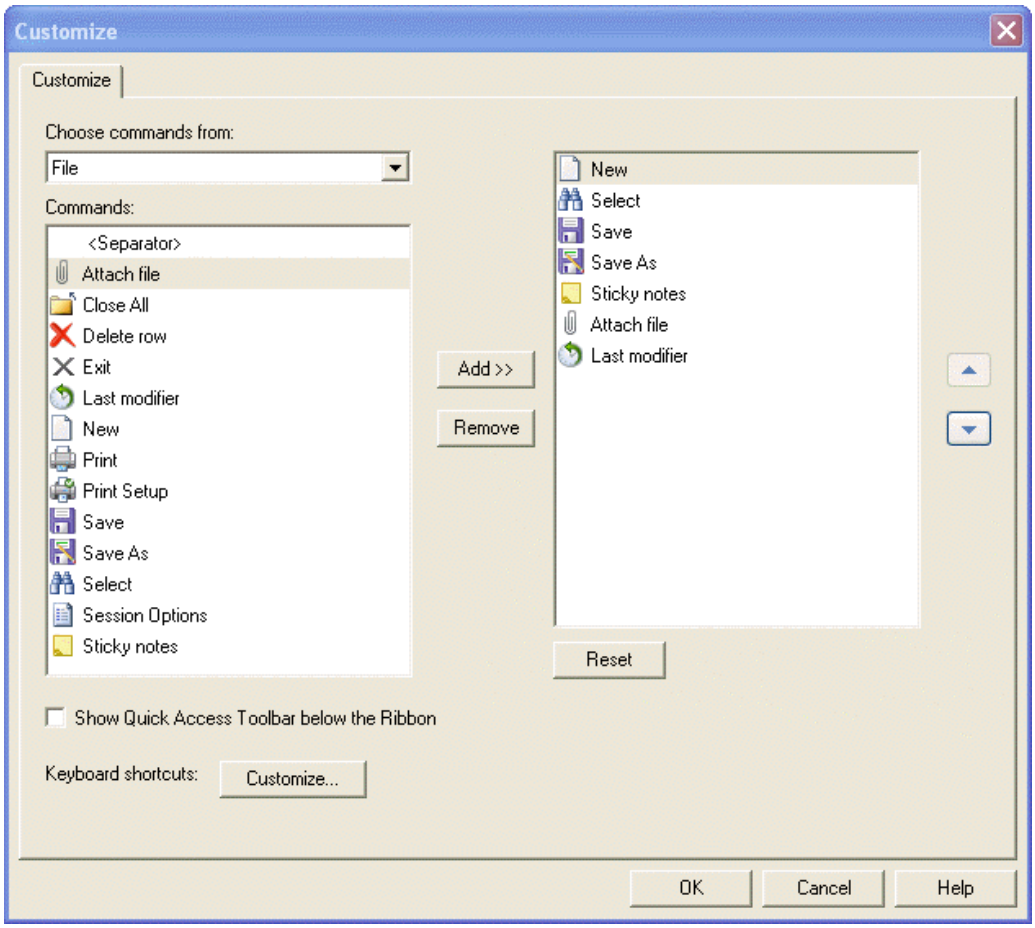
The Application Button, in the upper left corner of the window, opens the Application Menu, which allows you to perform actions typically performed using the File and Edit menus of the non-ribbon navigation (e.g., Print Setup, Session Options, Exit, Save, Save As, etc.).

Quick Access Toolbar

The Quick Access Toolbar is a customizable toolbar that, by default, appears in the top left corner of the Ribbon next to the Application Button. It allows you to easily access key commands, such as Save, Save As, New, Attach File, etc.

To customize the Quick Access Toolbar:

1. Right-click anywhere inside the toolbar and click **Customize Quick Access Toolbar**. The Customize dialog window appears.



2. In the Commands list, click a command and then click the **Add** button. You may also remove an existing command by clicking the command in the list on the right and then clicking the **Remove** button. If you need the command to appear in a particular order, click the **Up** or **Down** arrow keys to resort the commands.

3. Click **OK**. The command is then appended to the toolbar.

The Quick Access Toolbar can also be placed below the Ribbon:

-- Click the drop-down arrow of the toolbar and select **Show Below the Ribbon**.

-- Right-click anywhere in the toolbar and select **Show Quick Access Toolbar Below the Ribbon**.

-- On the Customize dialog window, click the **Show Quick Access Toolbar below the Ribbon** check box.

Note: Placing the Quick Access Toolbar below the Ribbon takes up extra screen real estate.

Title bar

The area of the window with the name of the Horizon Enterprise Fiscal Management application that you are using.

Minimize, Maximize, and Close Buttons

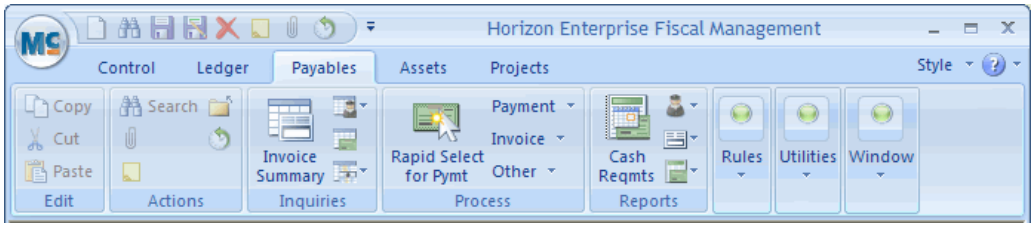
Minimize - This button minimizes the Application window so that it is a button on the Windows 2000 task bar, or an icon on the desktop (Windows 3.x).

Maximize - This button maximizes the Application window so that it fills the entire screen.

Close - Closes the Application window and exits the application, but this does not close the SignOn window. You may start another application without having to sign on again (provided that the SignOn window is still opened or minimized), or close the SignOn window to completely exit all Financials applications.

Resizing the Ribbon

The Ribbon is not specifically sized to any display resolution. If you change the display resolution or manually resize the application window, the layout of the Groups, Buttons, and Split-buttons will adjust accordingly. In the image below, the application window has been manually resized. Notice the appearance in some of the Groups. The buttons and split-buttons are now displayed in a drop-down list.



Minimizing the Ribbon

To minimize the Ribbon:

If you do not want to view the Groups in the Ribbon, you can hide or minimize them. There are a couple of ways to minimize the Ribbon:

1. Right-click any of the Tabs or anywhere within the Tab region and select **Minimize the Ribbon**.

2. Right-click any of the Groups or anywhere within the Group region and select **Minimize the Ribbon**.

To restore the Ribbon:

To restore a Ribbon that has been minimized, right-click any of the Tabs or anywhere in the Tab region and select **Minimize the Ribbon**. A check mark should appear next to “Minimize the Ribbon” to indicate that the Ribbon is currently minimized.

Data Area

The Data Area holds the windows and dialog boxes that receive and display your instructions and information.

--You may minimize the dialog boxes in the data area.

--You may also minimize the application window so that it appears in the Windows 2000/NT task bar.

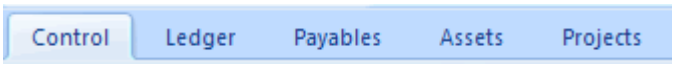
--The standard Windows Minimize, Maximize and Close buttons are available in many of the dialog boxes that appear in the data area, and in the application window.

Remember . . .

You leave an application when you close the application window. If this happens, you must start the application again by double clicking on its application icon on the desktop or selecting it from the Programs in the Windows Start menu.

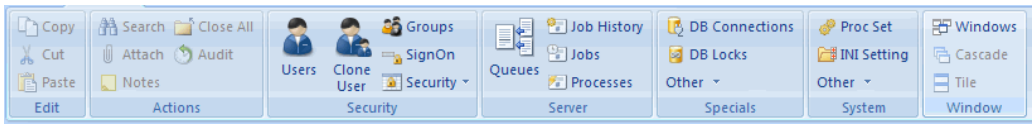
Ribbon Tabs

Each **Tab** in the Horizon Enterprise Fiscal Management system is an HEFM application tab. Each HEFM application tab contains Groups with frequently-performed actions within the application, such as the options on the Edit Group and the Actions Group. The Groups under each application tab contain buttons and sub-buttons specific to each HEFM application.



Ribbon Groups

Each Tab contains **Groups**, which categorize different application functionality. Unlike traditional non-Ribbon menus, Groups can provide visual representations through the use of icons and labels, making it easier to find a specific report or rule, for instance.



Edit Group

The **Edit** group allows you to Cut, Copy, and Paste data within dialog boxes.

For quick movement around a keyboard, each item in the Edit group has Shortcut Keys:

Ctrl + **X** = Cut

Ctrl + **C** = Copy

Ctrl + **V** = Paste

With the Ribbon navigation, you do not have to remember the shortcut keystrokes. Simply press and release the **Alt** key on your keyboard to access the Key Tips.

Clipboard Group

The **Clipboard** group on the Home tab allows you to Cut, Copy, and Paste data within dialog boxes.

For quick movement around a keyboard, each item in the Clipboard group has Shortcut Keys:

Ctrl + **X** = Cut

Ctrl + **C** = Copy

Ctrl + **V** = Paste

With the Ribbon navigation, you do not have to remember the shortcut keystrokes. Simply press and release the **Alt** key on your keyboard to access the Key Tips.

Actions Group

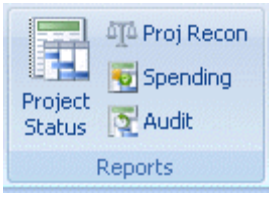
The Actions group allows you to Search, Attach files, Close all dialog windows in the Application Window, etc.

For quick movement around a keyboard, each item in the Actions group has Shortcut Keys. With the Ribbon navigation, you do not have to remember the shortcut keystrokes. Simply press and release the **Alt** key on your keyboard to access the Key Tips.

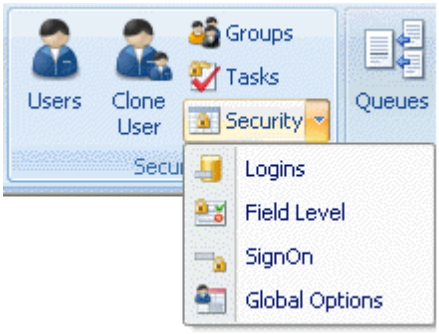
Ribbon Buttons

Each Group can contain **Buttons**, **Split-buttons**, and **Menus**:

-- **Buttons** – a button may be a large, labeled icon or it may be a normal-sized labeled icon. It may not even have an icon. Clicking a button will open the associated dialog window.



-- **Split-buttons** – a split-button is similar to a button in that it will open the associated dialog window. Split-buttons can also be large or normal sized. However, a split-button also contains a drop-down list of similar functionality. The items in the drop-down list are called **Buttons**.



-- **Menus** – a menu looks like a split-button, but does not launch a dialog window when you click it. You can only click on the Buttons in a menu's drop-down list.

Ribbon Style

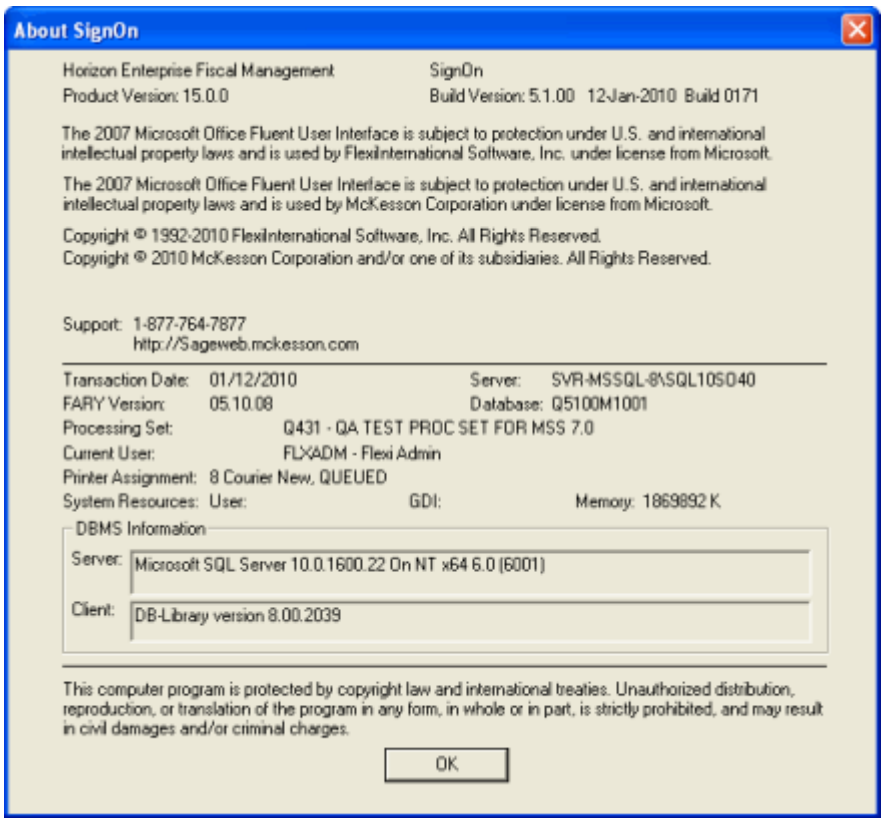
Along the Tab region is a **Style** drop-down list that contains different color scheme options for the Ribbon and dialog box title bars.

Help Icon

Access online Help files using either the **Help** icon  or by pressing **F1** directly on a dialog window.

Help About

Opens the dialog window that has specifications about your software. You can access this dialog window by clicking the **Help** icon  and then selecting **About Horizon Enterprise Fiscal Management**.



Key Tips

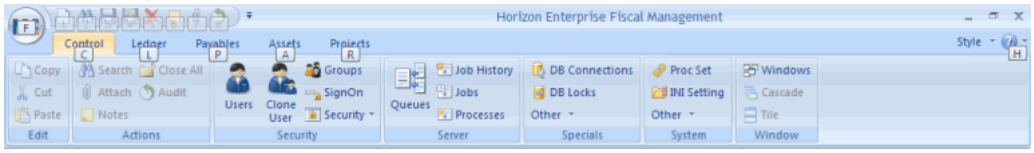
If you want to access a particular Ribbon tab, button functionality (e.g., Cut, Copy, Paste), or even a dialog window, you can use Key Tips, which are shortcut keys on the Ribbon. However, unlike shortcut keys, you do not have to remember the associated keystrokes (e.g. Ctrl + C =

Copy). The only key you need to know is the **Alt** key. Once you press the **Alt** key on your keyboard, the Key Tips appear on the Ribbon.

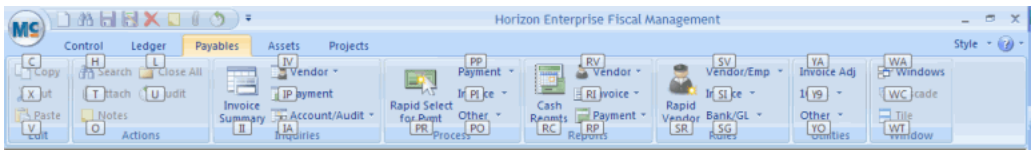
Here is how it works. Suppose you want to copy a row of data in a spreadsheet:

1. Highlight the row of data on the dialog window.

2. Press and release the **Alt** key. Notice the letters under each tab and the numbers in the Quick Access Toolbar.



3. Select the letter of the application you want to copy data from. For this example, we will select the letter **P** for "Payables." Notice the letters that appear in each group. Each button and split-button contain a letter combination for shortcut access.

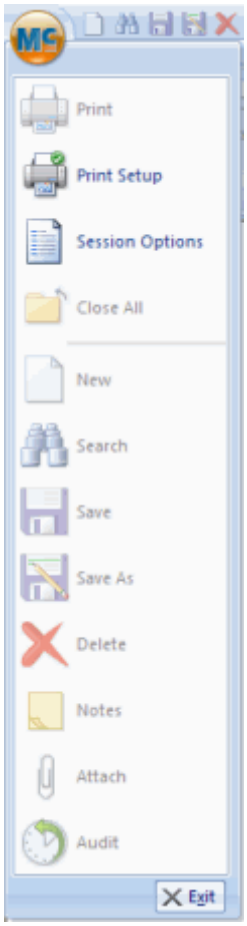


4. Press the letter **C** on your keyboard and place your cursor on a new row in the spreadsheet.

To paste the copied row into a new row: **Alt** + **P** (Payables) + **V** (Paste). Again, the only keystoke you need to remember is the **Alt** key. All other keystrokes appear in the Ribbon.

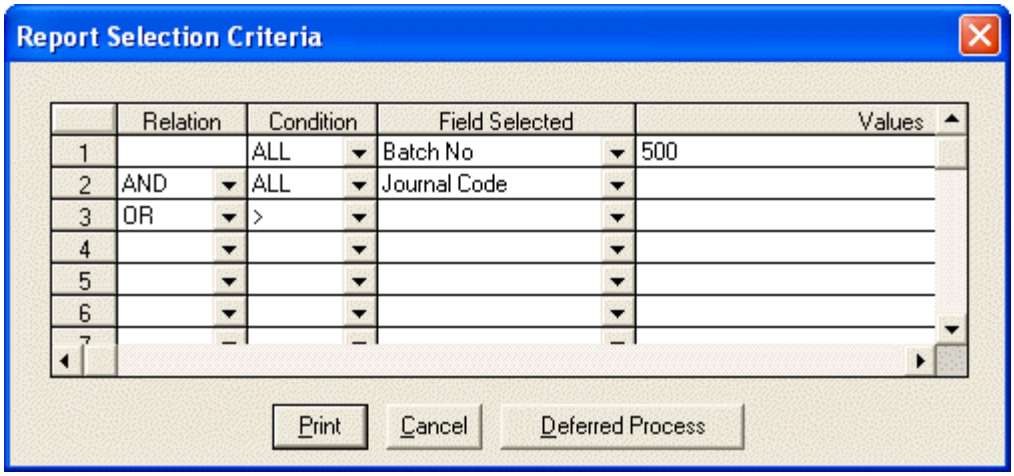
Application Menu

The Application Menu is opened by clicking the Application Button.



Application Menu - Print

Allows you to print a report based on the current view. The Report Selection Criteria dialog box opens allowing you to customize the fields and values you would like to view on the report.



Application Menu - Print Setup

Opens the Print Setup dialog box where you can select the printer name, paper size and source, and print layout (portrait or landscape).

Application Menu - Close All

Closes all dialog windows in the Application Window.

This option is also available from the Actions Group.

Application Menu - New

Clears search criteria from a dialog box so that you can begin a new inquiry. The prompt to destroy changes, unless you choose to add, change, or discard them, appears if you select this button before you click Save or Save As.

Application Menu - Search

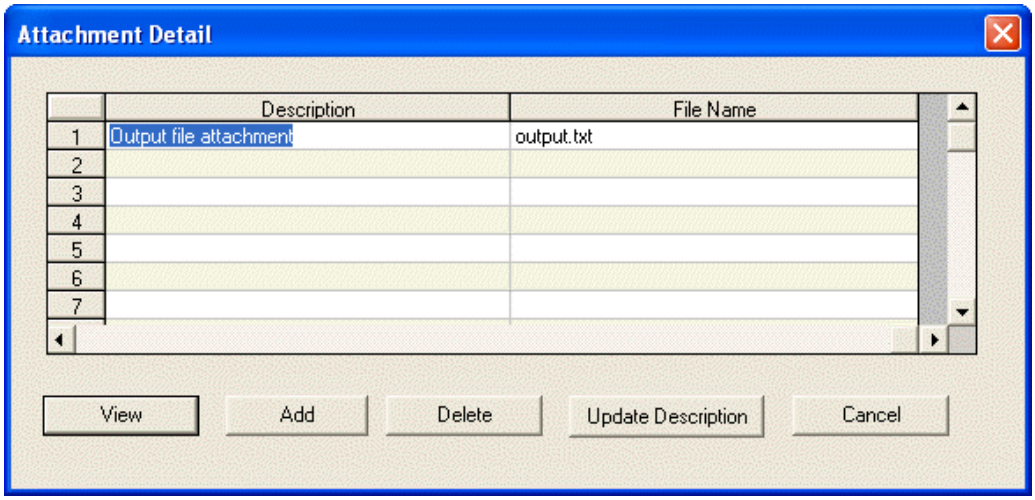
Opens a search window for looking up batches, invoices, vendors, rules, etc.

Application Menu - Delete

Deletes a record.

Application Menu - Attach

Allows you to attach a file to certain records. The Attachment Detail dialog box opens where you can add files, view existing attachments, delete attachments, or update the description of an existing attachment.



Application Menu - Audit

Opens the Last Modifier dialog window where you can identify the user who most recently added or changed a record.

Exit Button

The Exit button on the Application Menu closes the entire application.

Save Button

The first time you create a new record, you will need to click the **Save** button to save the record to the database. If you make any changes to an existing record (e.g., change bank information for a Vendor Code, change the Batch Amount on Batch Creation, etc.), you will need to click the **Save** button to save those *new* changes for the *existing* record.

When a record has been saved successfully, you will receive a message indicating "Record has been saved." Click **OK** to close the message and allow the application to proceed. If you try to save a record without completing the required yellow fields, the required fields will turn **red**.

NOTE: The **Save** and **Save As** buttons replace the "Add Row" and "Change Row" buttons. The documentation may still reflect "Add Row" and "Change Row" verbiage.

Save As Button

Use the **Save As** button to save changes to an *existing* record and thus create a *new* record. Basically you are taking existing data and giving it a new record name. For example, if you bring up an existing Vendor Code on the Rapid Vendor Setup dialog window in Payables and change the Vendor Code, you will create a new record.

NOTE: The **Save** and **Save As** buttons replace the "Add Row" and "Change Row" buttons. The documentation may still reflect "Add Row" and "Change Row" verbiage.

Navigation Conventions and Techniques

Display Settings

The Display setting in the INI file determines how the application will display: ribbon or menu.

[Display]

;Allow user to choose “ribbon” or “menu” display

FrameDisplayMode = ribbon

If no value or an invalid value is specified, the code will assume “ribbon.”

Online Help

Although F1 help is available for topics in all applications, the default Help file that launches is for the Control application. For example, you may notice when you click the Help icon while in Payables that the Control Help file launches. We recommend you open a dialog window for the application in which you need help and then press **F1**. This will launch the context sensitive help for the correct application. You can then use the Contents, Index, and Search tabs to find additional help topics if need be.

Index opens the Index tab of the help file, which lists all topics that were added to the Online Help index.

Search opens the Search tab of the help file where you can type a keyword to look up topics associated with that keyword.

About identifies important information about the application, its database, and the server. Take a few moments to familiarize yourself with the information provided in this screen.

F1 Context Sensitive Help

When you have a dialog box opened on the Application Window, you can press the **F1** key to launch the Help topic that is specific to that particular dialog window. If no topic is available for the specific dialog box, a general application Help topic.

Conventions Used in Help

There is usually more than one way to edit something in Windows applications. For example, to copy something you can do any of the following:

a. Click on Edit, Copy.

b. Press Alt–E to select Edit, and then type C to select copy.

c. Press Ctrl+C.

d. Click on the Copy button in the toolbar.

e. Right click on selected text and select Copy in the shortcut menu using the mouse or keyboard.

Help does not document these different ways to select commands. The following conventions are used instead:

1. The verb “select” or “click” is used when there is more than one way to choose something, or if you need to take an action. Usually it is something that can be chosen with the mouse or keyboard, such as Edit, Copy, an item in a drop-down list, or a hypertext button or icon.

2. The verb “select” or “press” is used to indicate a command key on the keyboard, such as Ctrl, Shift, or Alt. These keys are usually held down while you press another key on the keyboard or click with the mouse.

3. The verb “type” indicates the letters, numbers, and symbols on the keyboard…and is used most frequently for entering information.

4. The verb “close” indicates that an open dialog window should be closed in any of the standard Windows methods, such as with the OK button, Close button in the title bar, or File, Close selection from the menu bar.

5. “Scroll” indicates using the scroll bar with the mouse or keyboard.

6. The directions for opening primary dialog windows assume that the dialog window opens from the menu bar. For example, “Select System, Setup” are the directions to open the System Setup dialog window by choosing System in the menu bar, and then Setup in the submenu.

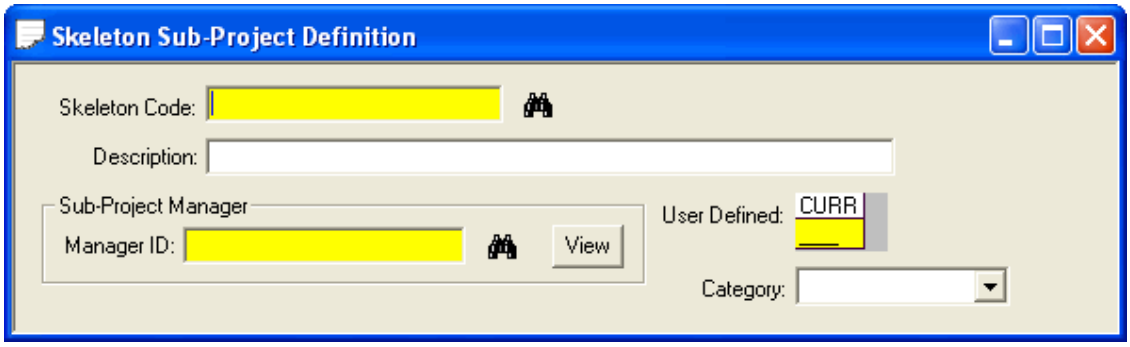
Dialog Boxes

The Data Area of the application window is where one or more dialog boxes may be opened, and/or minimized. Dialog boxes have information and opportunities:

The information in a dialog box can come from you, from an application, or from other sources. It can take almost any form — a single entry, a list or a table. It can appear in a data entry field or as part of a drop-down list.

The opportunities in a dialog box take the form of options and action buttons.

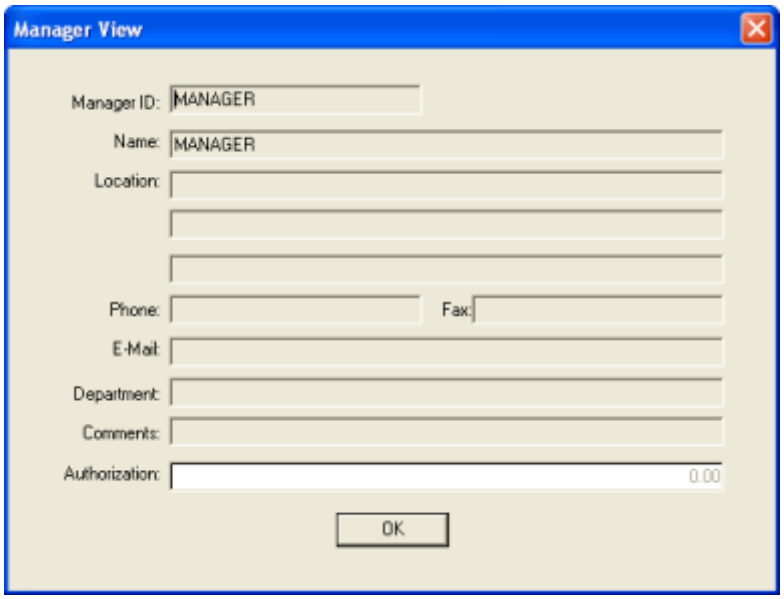
A data entry field accepts data of a pre-defined, limited length. The addition or selection of data in any data entry field with a yellow background is required before an application can update your database. In the example below, Control does not add or change Security Group information in the processing set's database until you have completed the shaded Security Group Code field.



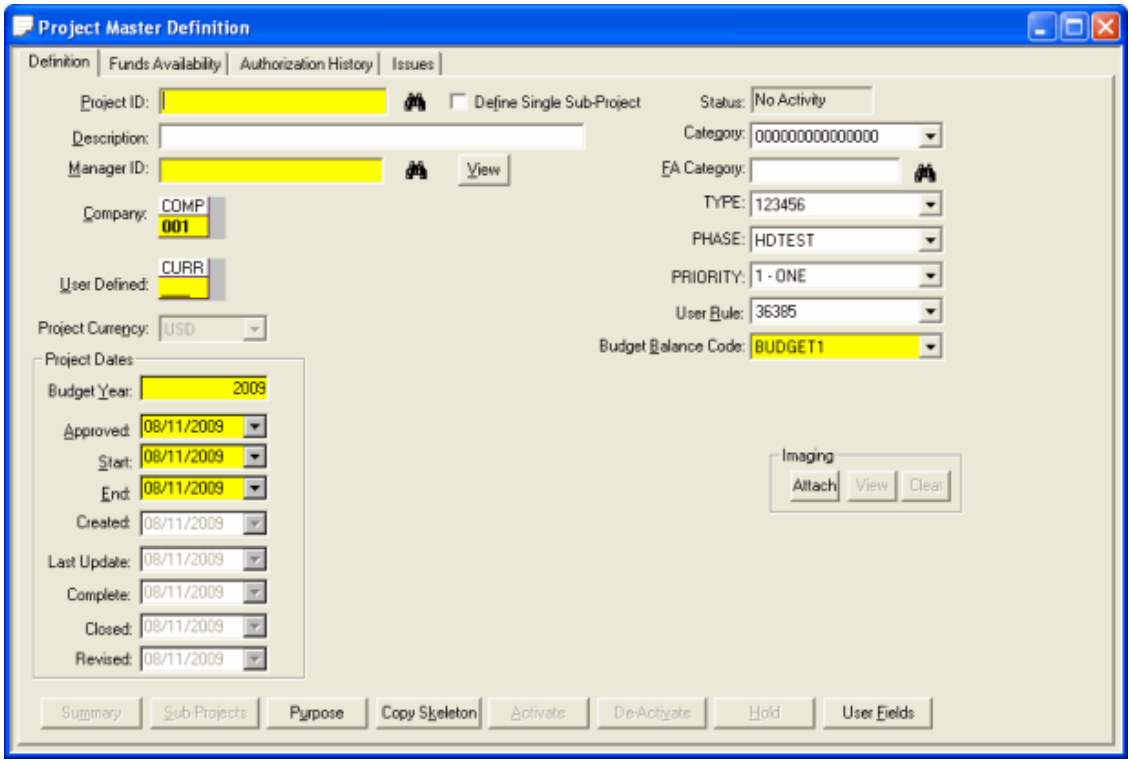
A data entry field accepts data of a pre-defined, limited length. The addition or selection of data in any data entry field with a colored or shaded background is required before the system can update your database. In the example above, the system cannot add, change, or delete Skeleton Definition information until you complete the shaded Skeleton Code, Manager ID, and User Defined fields.

A drop-down list presents you with a choice of data entries previously defined by your Administrator. You must select one of the entries on the list. In many cases, the system displays a "default" entry. To view the other entries on the list, select the arrow to the right of the field.

An action button allows you to access related dialog windows or perform a task. For example, if you select the **View** button on the Skeleton Sub-Project Definition window, the related Manager View appears.



Here is a far more elaborate example:



In addition to the number of data entry fields, nine with shaded backgrounds, the Project Master Definition dialog window contains:

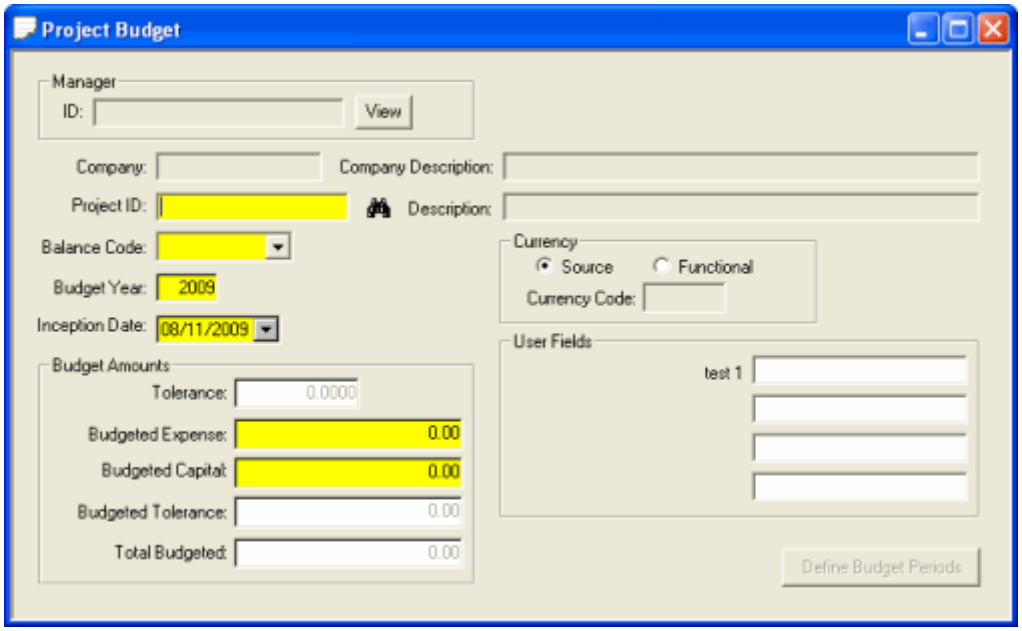
-- Required drop-down lists, indicating the presence of a list of data choices. If the background is shaded, it is a required field, and you must select an item from the list or the system will not permit you to continue.

-- A check box to define a single sub-project.

-- Action buttons (e.g., Purpose, User Fields) that provide access to related dialog windows.

The Project Budget dialog window exhibits another data management tool, which the system uses extensively.

Radio buttons - circular options always come in groups. You can only click one at a time, but you must activate one.



Assignment Dialog Boxes

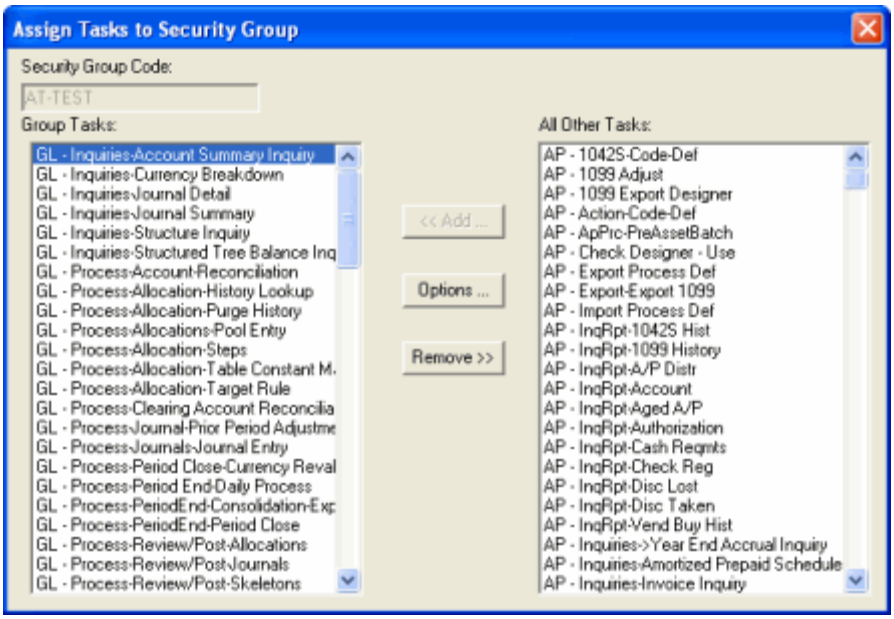
Assignment dialog boxes have two list boxes. One, usually on the left, has the items assigned to function, and the other list box, usually on the right, lists all the possible items that have not been assigned. An item cannot be in both lists.

Use assignment dialog boxes to:

1. Assemble processing sets
2. Designate members of Security Groups
3. Assign tasks to users in Security Groups

4. Assign procedures to application modules

In the Control application, look at the **Assign Tasks to Security Group** dialog box below.



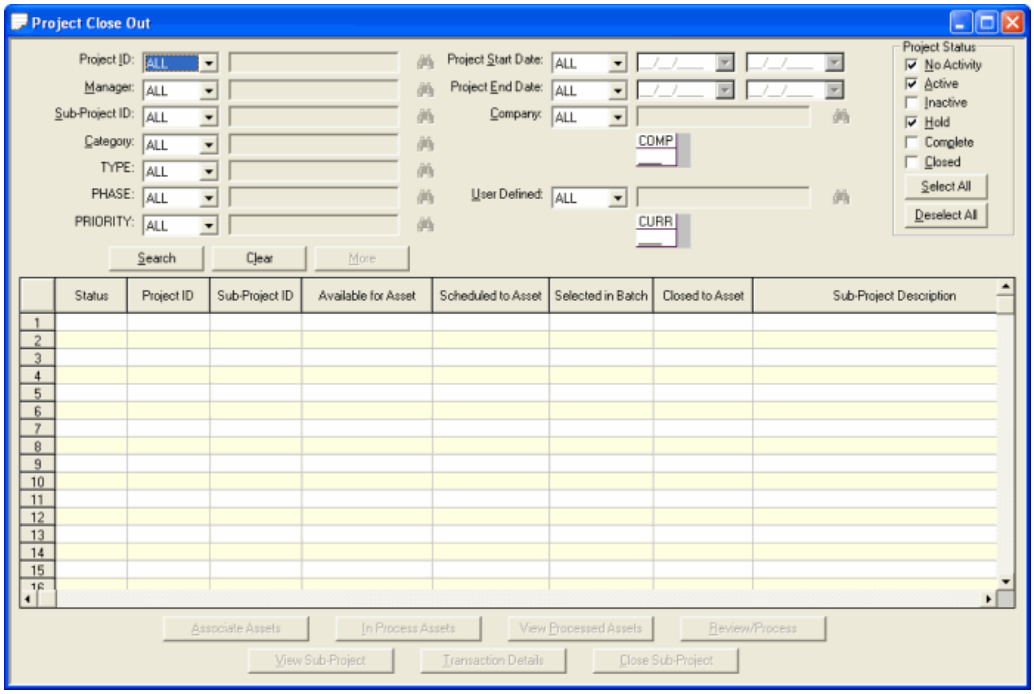
The list box on the right side lists the processing tasks in each Financial Management module that is part of the current processing set.

Select a task on the right and select the **Add** button to move the task to the Group Tasks list box on the left.

Select a task in the Group Tasks list box on the left and select the **Remove** button to move the task from Group Tasks on the left back to the All Other Tasks list on the right. This removes the selected task from the tasks that are assigned to the group.

Detail Dialog Window

Another type of dialog window accepts large amounts of information. The Close Out dialog window is an example.



Scrolling arrows in the right-hand corners of the data table help you move quickly from row to row of detail. Scrolling arrows in each corner at the bottom of the data table move you from one column to the next if the dialog window cannot display all columns at once.

Spreadsheet Dialog Windows

In Assets, you use spreadsheet-style dialog windows that consist of columns and rows to enter line items.

If all the data in a column is not visible, you can resize the column. In the following example, the data in the Component Id column is cut off. To view this data, you would place the cursor on the border that divides the column from the column to the right—the Description column—until the cursor turns into a double-sided arrow. You would then drag the border to the right until you uncover all of the hidden data in the Component ID column.

Standard Windows Selection Techniques

Use one of the following two techniques to click on a selected (highlighted) group to remove a user's assignment to a group.

a. Click on the first group and then Shift+click on a second group to select a contiguous block of groups between the two selected groups.

or

b. Click on the first group and then Ctrl+click on any other group to select a noncontiguous group. Keep the Ctrl key down and continue to click on additional noncontiguous groups until all the groups you want are selected.

Hot Keys/Accelerator Keys

Hot Keys or Accelerator Keys are shortcut keys on the keyboard (usually a combination of a letter key pressed at the same time as the **Alt** or **Ctrl** accelerator keys) that allow you to optimize the speed at which you are working on a particular dialog window or performing a particular operation. For experienced users or users that perform repetitive tasks, hot keys provide a quicker way to accomplish a function. Other users may prefer using their mouse instead of a series of keyboard strokes. Examples of hot keys are:

Copy	**Ctrl** + **C**
New	**Ctrl** + **N**
Paste	**Ctrl** + **V**

Message Pads

Financials uses message pads to ask questions to record your answers, and to provide status information about processing. For example, when you add information to the security database, Financials validates the data and displays the message "Row has been added." In this example, the message notifies you that it has completed adding a user.

Other messages give you a choice of actions. The Closing Warning is an important message that Financials issues when you change information in an existing record and try to close the dialog box without updating the data record. Instead of closing the box, the Message Pad opens with four action buttons:

1. The **Add** button adds a new record to the database.

2. The **Change** button uses the information you entered in the dialog box to change an existing data record.

3. The **Discard** button erases the data you entered and returns you to the source dialog box.

4. The **Cancel** button closes the Message Pad and returns you to the dialog box, leaving data in the dialog box intact.

.

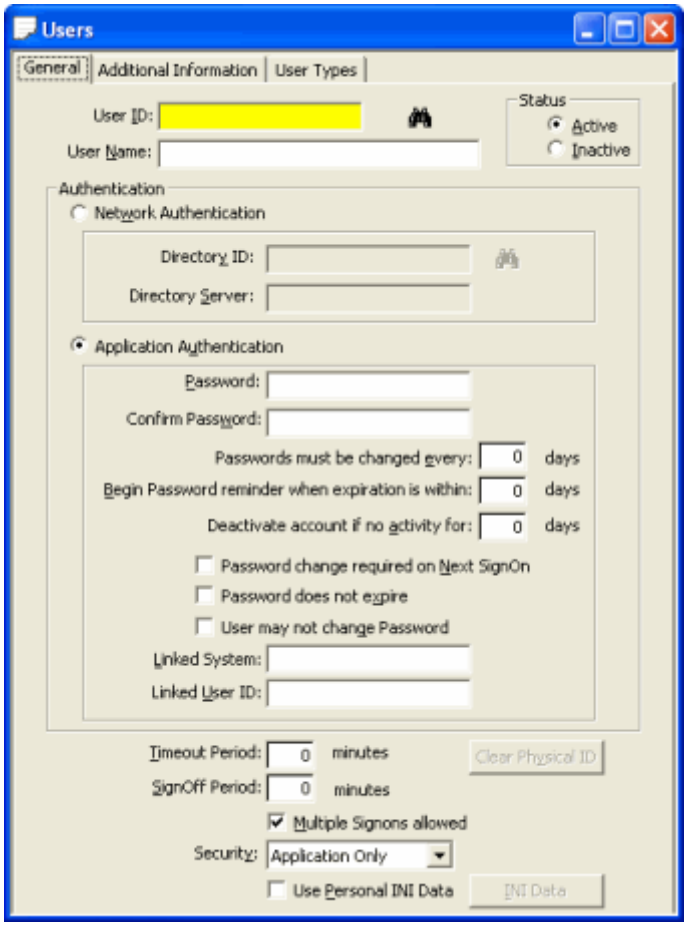
Data Search and Retrieval

Your database contains considerable information related to your Financials system, processing sets, application modules, users and procedures. It is important to access the right data when you need it, without having to search through every piece of information.

This information is stored in the form of records — rows and fields in tables. Financials Search procedures allow you to specify the precise criteria to find and list just those records that match your criteria. You may then select a matching item to quickly enter information in the field of a dialog box.

Basic Search Techniques

Notice the binoculars to the right of the User ID field in the following Users dialog box. The binoculars mean that the system can search the database and open a dialog box with a list of User IDs.



Alert! If you place your cursor in any field of a dialog window and select the Look-Up button on the toolbar, the selection dialog box that appears lists items for the primary field of the dialog window only.

On the other hand, when you double-click your cursor in any field with a binocular symbol, for example in the Manager field on the Project Search dialog window below, the resulting search box lists alternatives just for that field.

To conduct a basic search, take the following steps:

1. From the **Projects** tab, in the **Rules** group, select **Project** and then **Project Definition**.

2. Select the Look Up button next to the Project ID field. The Project Search dialog window appears where you can select the Search button to see a spreadsheet list of identifying codes representing all active projects.

3. Select the appropriate code and click **OK**. The system returns you to the Project Master Definition dialog window and enters appropriate data in the fields.

4. If a search dialog window cannot display an entire list within its data area, scroll bars and a scroll button appear along the right side of the box. In addition, the search boxes display only a limited number of items. If the list exceeds that limit, a More button appears at the bottom of the box. You can use this button to access the next "page" of the list.

Tip: Before you initiate a search, select the **New** icon to clear the fields of the dialog window. You can then select the Look-Up button to access the search box.

Tip: If you already know the value of the "key" code, you can enter it directly in the field and select the Look-Up button. The system automatically retrieves data associated with the code and populates the applicable fields in the dialog window.

This basic search function is one of your standard tools. From time to time, however, you will need to conduct more specific searches of the database.

To conduct a defined search, take the following steps:

1.

1. From the **Projects** tab, in the **Rules** group, select **Project** and then **Sub-Project Definition**.

2. Select the Look-Up button on the toolbar. The Project Search dialog window appears.

3. Enter an "**M**" in front of a % sign in the **Manager** field and then click **Search**. The system displays the manager codes beginning with an "M".

Search Boxes

The dialog window in the illustration below is a search dialog window. This is an invaluable aid that you use when you need to find and retrieve specific information in order to enter data in a field.

Search Tips

1. You can type just a letter in any search field (you do not need to include the %), and click on the Look Up button to perform a defined search directly from the dialog box.

2. Putting a letter between two % signs finds that letter anywhere in the text, and entering % followed by a letter finds the letter at the end of the text. If you are entering the search criteria in a field in the original dialog box (e.g., Users dialog window in Control), you do not need to type the ending %, as this is added automatically when the appropriate Select dialog box opens.

3. Remember, the search feature is case-sensitive. You may need to do two searches for the same letter, one in upper case and the other as lower case, to find a match.

4. You can also type exact information in a look up field (User ID in the Users dialog box) and press **Enter** to see the detailed information (e.g., User Name and Password).

Entering Dates

At numerous points throughout the application, you are required to enter a date. In many cases, the system inserts a default date, which is usually the Default Transaction Date that you entered when you signed-on to Assets. However, you can insert a new date either by typing over the default date or by using the Calendar function to insert a new date.

Date Formats

Your Control Administrator will assign a date format to your processing set. All the dates that you enter in the Assets application must be in this Control-defined date format.

For example, suppose that your Assets Administrator has defined the mm/dd/yyyy format as the date format for the processing set you are working with. This means that if you are entering a date value for March 13, 2002, you must enter 3-13-2002.

About Date Fields

The following screen snapshot is a typical example of a date field in the Assets application.

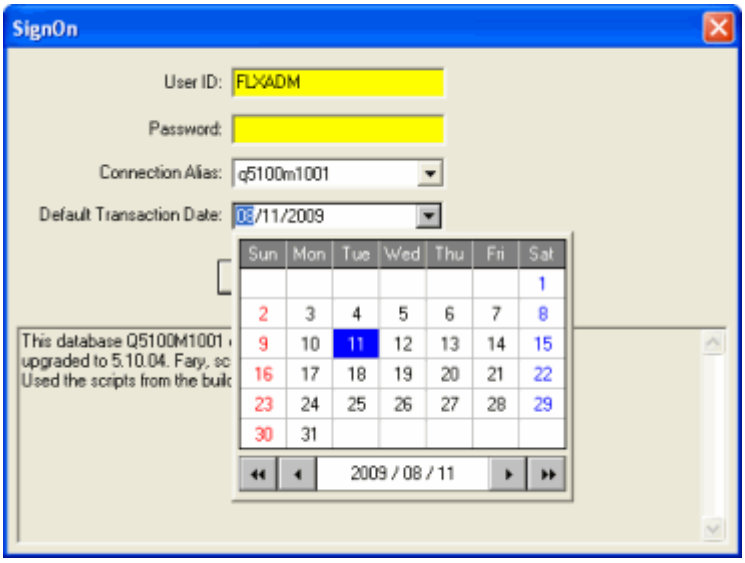
As you can see, the date has separate month, day, and year areas. In the above example, these areas are separated by slashes. If you place your cursor in the month, day, or year area of a date field, you can increase the value in the area by pressing the “up arrow” (↑) on your keyboard, or by clicking the “up triangle” on the right of the field. You can also decrease the value in the area by pressing the “down arrow” (↓) on your keyboard, or by clicking the “down triangle” on the right of the field.

Tip: The horizontal arrows on your keyboard move you between a date field's month, date, and year areas.

Instead of manually entering or revising a date, you can use Calendar feature.

Entering Dates from a Calendar

Dates may be entered in any date field by opening a calendar and selecting a date. Instead of double clicking to open the calendar, you must select the drop-down button in the date field or click the spacebar.



Use the keyboard or the mouse as indicated below to select the month, day and year:

Mouse

--Click on a single arrow button to move forward and backward a month.

--Click on a double arrow button to move forward and backward a year.

--Double click on a day (complete month, day and year are displayed between the arrow buttons in the calendar) to enter it in the Date field and close the calendar.

Keyboard

--Select the Page Up and Page Down keys to move forward and backward a month.

--Select the Up, Down, Left and Right cursor movement keys to move through the days in the displayed month.

--Select Home to move to the first day of the month.

--Select End to move to the last day of the month.

--Moving down or right from the last day of the month moves to the next month, and year if the month is December.

--Moving up or left from the first day of the month moves to the previous month, and year if the month is January.

--Select Enter to enter the selected date (it is displayed between the arrow buttons in the calendar) in the Date field and close the calendar.

Calendar Boxes

At various points throughout the application**,** a calendar date is required. In most cases, the system inserts a "default" date. This is the Default Transaction Date you enter when you sign on to the system. However, you can override the default date when it appears by inserting a new date in the data entry field or by using the Calendar function.

Sticky Notes Icon

Use the **Sticky Notes** icon to attach or view supporting information (such as your comments) about a record. Sticky Notes help you maintain records on various items in the system (such as a journal) for reporting purposes.

Sticky Notes

Sticky Notes allow you to capture notes for data records. When you have a dialog window open for a data record in one of the applications, you can view or add notes to that data record by selecting the yellow Sticky Notes icon in the application toolbar.

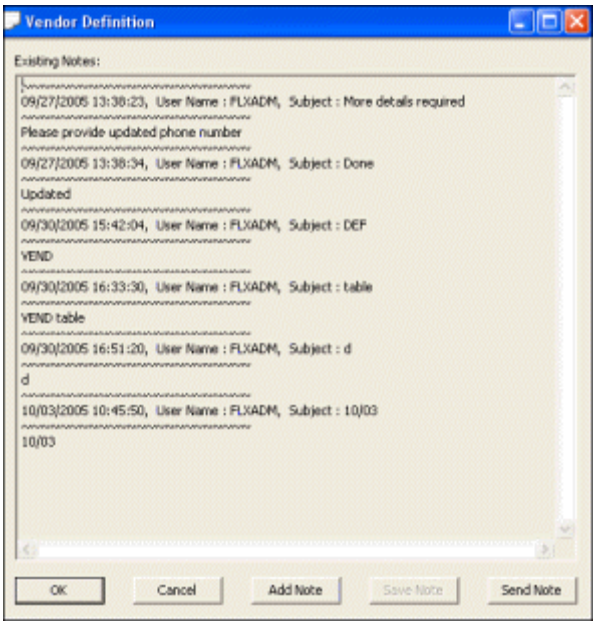
Now, you can add multiple, individual sticky notes to data records to ensure accurate reporting and to further document the justification for a business event. Additional functionality includes the ability to add a subject to the note, as well as system tracking of the date and time the note was entered.

Administrators must enable Sticky Notes functionality in the following ways from the Control application:

1. Activate the Sticky Notes icon, so that the icon will be available for certain data records in the other applications.

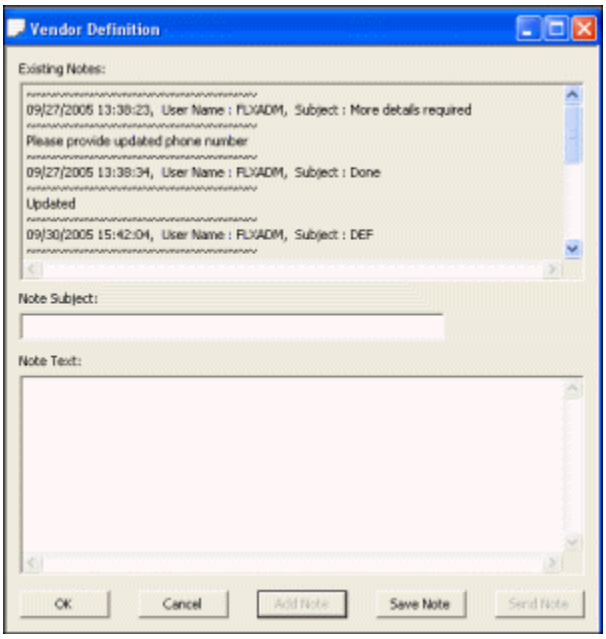
2. Assign authorized users to a security group, as well as the Sticky Notes task, and specific Sticky Notes operations, to those authorized users This is done from the Security Groups window, under the Security menu.

A red check mark on the Sticky Note icon indicates there are existing notes entered for the record. When you select the icon, a dialog window will open and display the notes. The Sticky Notes window will have the same title as the data record screen.

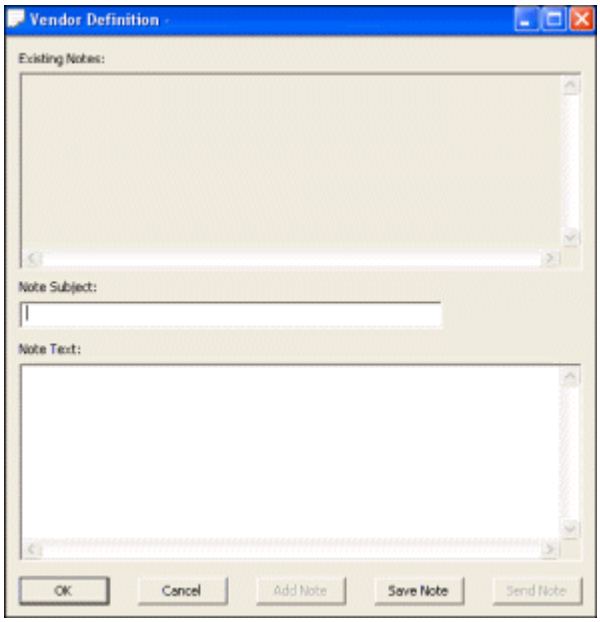


Important: Notes that have already been entered for the data record are read-only. You cannot edit or delete them. This is a new security measure for reporting purposes. All new notes are recorded individually.

You choose the Add Note button to enter a new note.



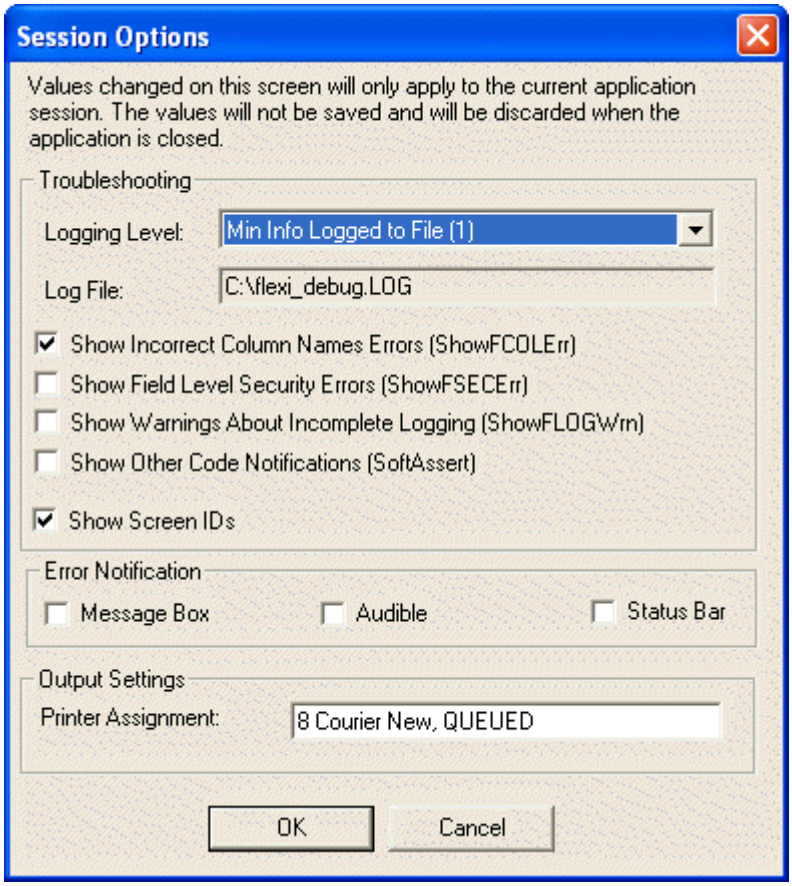
This dialog window is similar to the one that appears when a user opens Sticky Notes for a record for the first time. In the latter case, the top text box would be empty.



Session Options

Opens the Session Options dialog window where you can change different settings for the current application. The values you select on this window are not saved and are discarded as soon as you close the application session.

Session Options can be opened from either the **File** menu in non-Ribbon navigation or from the **Application Menu** on the Ribbon.



Error Messages and Warnings

Data Entry Errors

Most of the errors that you encounter are the result of incorrect, invalid or inadequate user input.

If your data is incorrect or incomplete—or if you do not make a required selection—the system red flags the data entry field changing its background color to red. You must enter valid information in a field with a red background, **TAB** to the next field, and close the dialog box, to update the field and remove the red background. Speak to your supervisor or call the hotline if the red background remains and you continue to have difficulty.

In some cases, an audio message, a high-pitched ping, may indicate that you have reached the limit of the field's capacity, or that the field cannot accept the type of data that you are attempting to enter. Speak to your supervisor or call the hotline if you continue to have difficulty.

Processing Errors

Administrators deal with a variety of error messages that result from installation and processing snags. The table that follows provides explanations of many of these messages.

Masked database errors are database errors that do not match one of the global errors or warnings in the following table. There are more than 100,000 native errors possible with all of the database and operating system combinations. The database layer retrieves a native error and its text, if the database is available, and is masked as follows:

Database Warnings -32700 to –32600

Database Errors -32500 to –32400

Field Sec -32300 to –32000

All Flexi DB Layer messages are in the range from –32700 to –32000.

Database Error Messages

Invalid Port ID, check the entry for 'Port' in the FLEXI.INI

–32402

Unable to validate your Port ID.

Invalid database DLL, check the entry for 'DBDLL' in the FLEXI.INI

–32403

You have entered an invalid database .DLL in the FLEXI.INI file.

Invalid database name!

–32404

You have entered an invalid database name in the FLEXI.INI file.

Invalid user ID/password combination

–32405

You have not entered a valid User ID.

Invalid user ID/password combination

–32406

You have not entered a valid password.

Invalid user ID/password combination

–32407

The Database SignOn ID in the SignOn Security dialog box is not valid, or the User ID is not a valid Database ID if the selected Database Connection Method is Stay connected as User ID.

Invalid user ID/password combination

–32408

The password for the specified Database ID is not valid.

Invalid processing set!

–32409

The code representing the processing set identified during SignOn is not valid.

Invalid transaction date!

–32410

The date assigned to a transaction is not a valid date.

Could not initialize database layer!

–32411

Could not start the database layer.

User ID is locked, please contact your system administrator

–32412

User ID is disabled. The Administrator must clear the Disabled check box in the Users dialog box for the specified User ID.

Invalid Public ID, please check the entry for 'SignOn' in the [Resource DLL] section of the FLEXI.INI file.

–32413

Check the FLEXI.INI file to be sure that signon setting in the [Resource DLL] section is correct (e.g., Signon=fsneng.dll)

No database cursors available for use!

–32420

Cursors are pointers that must be declared, opened, closed and released. There are no cursors for one of many reasons (e.g., open but not declared).

Cursor is NULL

–32430

There is no value for a database cursor.

Invalid server name!

–32440

The name of the server identified in the FLEXI.INI file is wrong.

Database LOGIN failed! And the Data Dictionary (FARY) data has encryption enabled. Check the entry for 'Signon' in the[ResourceDLL] section of the FLEXI.INI

–32450

Should be using FSNENG.DLL

SQL statement is NULL!

–32460

The result of a SQL statement is null.

Error opening file

–32470

An error occurred when attempted to open a file.

Error invalid FlxComm object:

–32480

Attempt to employ an invalid object failed.

Error invalid Data Dictionary (FARY) knowledge:

–32490

Attempt to signon failed due to a problem with the Data Dictionary (FARY) knowledge database.

Application Error!

–32499

Attempt to use application failed.

Database Warning Messages

Note: Warnings are notification of a problem, but they do not stop the program from running.

Table has calculated columns!

–32601

Indicates a problem with calculated values in a table.

Where clause is empty!

–32610

Program has a where clause that does not have a value.

Row not Changed

–32620

The row has not been changed, usually appears when a user select the Change Row button when there is nothing to change.

Column key is NULL!

–32630

There is a null value in a key column.

Row Already Exists

–32640

The row that you are trying to add already exists.

There are no more rows!

–32650

The program is at the end of the rows in a table.

Row not Found

–32660

A particular row cannot be found.

Stored procedure not found!

–32661

Unable to find a designated stored procedure.

Table or view not found

–32662

Unable to find a table or view in a database.

This row has dependent(s), it cannot be deleted.

–32663

Tried to delete a row, but was not able to do so as the row is in a hierarchy and has one or more dependents.

No row selected!

–32670

No row has been selected.

Row not locked!

–32680

Attempt to unlock a row failed because the row was not locked.

Row not found in Data Dictionary (FARY) data!

–32681

The Data Dictionary (FARY) table does not reference a specific row.

View not found in Data Dictionary (FARY) data!

–32682

The Data Dictionary (FARY) table does not reference a specific view.

Column not found in Data Dictionary (FARY) data!

–32683

The Data Dictionary (FARY) table does not reference a specific column.

Key not found in Data Dictionary (FARY) data!

–32684

The Data Dictionary (FARY) table does not reference a specific key.

Ref not found in Data Dictionary (FARY) data!

–32685

The Data Dictionary (FARY) Table does not contain a particular reference.

Struct not found in Data Dictionary (FARY) data!

–32686

Data Dictionary (FARY) table does not contain a reference to a structure.

No Data Dictionary (FARY) rows found!

–32687

(FlexiDB knowledge database error)

No FTAB rows found!

–32688

(FlexiDB knowledge database error)

No FCOL rows found!

–32689

(FlexiDB knowledge database error)

No FCTB rows found!

–32690

(FlexiDB knowledge database error)

No FKEY rows found!

–32691

(FlexiDB knowledge database error)

No FKEC rows found!

–32692

(FlexiDB knowledge database error)

No FREF rows found!

–32693

(FlexiDB knowledge database error)

No FKEC rows found!

–32694

(FlexiDB knowledge database error)

No FAPT rows found!

–32695

(FlexiDB knowledge database error)

Custom stored procedures not available!

–32696

The library of custom stored procedures is not available. A procedure is missing that the code is trying to call.

Standard stored procedure DLL not available!

–32697

The DLLs associated with the library of stored procedures are not available.

Standard stored procedure library not available!

– 32698

The library of standard stored procedures is not available.

Rule Error Messages

Was not found in table	–32010	Information required by a rule was not found in a table.
Was found in table	–32020	Information required by a rule was found in a table.
Must be greater than	–32030	Rule specifies that a number must be greater than a specified value.
Cannot be greater than	–32040	Rule specifies that a number cannot be greater than a specified value.
Must be less than	–32050	Rule specifies that a number must be less than a specified value.
Cannot be less than	–32060	Rule specifies that a number cannot be less than a specified value.
Must be equal to	–32070	Rule specifies that a number must be equal to a specified value.
Cannot be equal to	–32080	Rule specifies that a number cannot be equal to a specified value.
Must exist in list	–32090	Rule specifies that a value must be in a list.
Cannot be in list	–32100	Rule specifies that a value cannot be in a list.
Must be in range	–32110	Rule specifies that a value must be within a specified range.
Cannot be in range	–32120	Rule specifies that a value cannot be within a specified range.
Has no access	–32130	Rule validates user's access and returns this error when a user does not have access.
Has read–only access	–32140	Rule validates a user's access and returns this error when a user tries to exceed their read–only access.
Column has been initialized	–32150	Rule indicates that a column is initialized.
The value for the column has changed	–32160	Rule indicates the change in a column's value.
A Null value was entered for column	–32170	Rule indicates that a null value was entered for a column.

Chapter 2 Deferred Processing

Deferred Processing

This Help Sequence contains the following topics:

Introduction to Deferred Processing

Control applications can process information immediately on the user's PC or — in many cases — defer processing until a later time, on a network server.

For example, if a Ledger user selects a journal and the **Process Screen** or **Process Report** button, the posting procedures occur right there on the user's PC. On the other hand, if the user selects the **Deferred Process** button, the **Batch Processing** dialog box opens to allow the user to process the posting procedures on the network“server” instead of the user“client” PC. The user specifies a queue on the server, which is a line of processing jobs waiting for the server to perform the processing. The user may also specify a date a time that the job should be sent to the queue. This deferred processing mode dramatically increases the efficiency of the user's PC.

The components of deferred processing that are set up in Control are:

1. **Processes** are the application procedures and application reports that can be deferred for processing on the server.

2. **Queues** are the alternative scheduling modes that are available for each process.

Grocery shopping is an everyday analogy that may clarify these terms. The queues are the lines at the cash registers where you check out your job's processes. A grocery cart is the job, and the items in it are the processes. Like registers, each queue has a name or number, and more than one register or queue can check out jobs at the same time. When one of your jobs is sent to a queue, it is sent to a line or queue that has been configured to check out or process whatever is in line immediately or at a specified time. You may also specify when a job should get in line (be sent to a queue).

Use Control to:

1. specify each of the queues that are available to a processing set;

2. assign a default queue to each application procedure and report process that can be deferred;

3. access up-to-the-instant information about the deferred processing jobs from Control, similar to the **Pending Transactions** pane of the **SignOn** dialog box that stays open after signing on; and

4. schedule “tasks” by setting parameters to govern the way items in a queue are scheduled and processed.

Deferred Processing Alert!

Deferred Processing can run from a server, or from the client workstations of your users. The use of FLEXI.INI files and the nature of their settings change based on where deferred processing runs. See Deferred Processing on a client.

Processes

Many procedures and reports can be deferred for processing on the server.

Each of these is a separate application **process**—a process which has been rigorously defined and which carries a Process Code. The following list identifies just a few of these processes from Ledger and Payables.

FGLP415 Journals

FGLP450 Journal Import

FGLP508 Journal Skeletons

FGLP718 Allocations

FGLP963 Repost a Period

FAPP463 Invoices

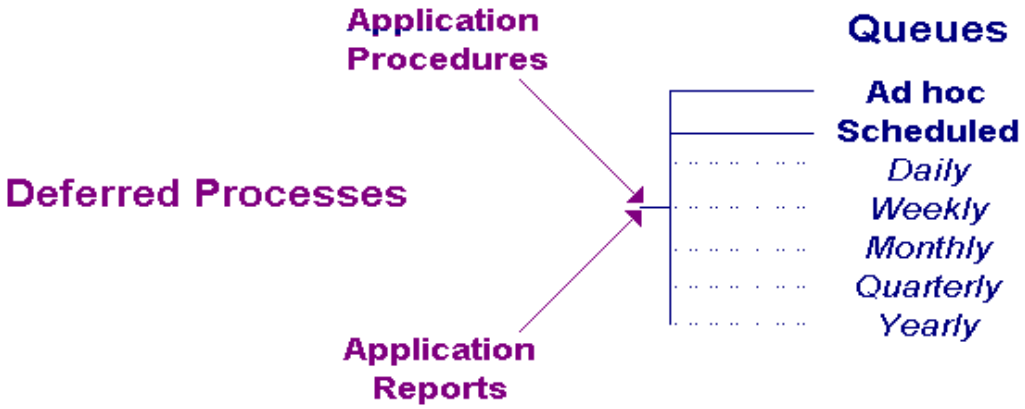
FAPP490 Skeleton Invoices

FAPP500 Payment Selection

FAPP518 Payment Processing

Deferred Processing Concepts

Each process that can be deferred is assigned to a particular queue. A queue is a set of parameters used to schedule processing tasks. One queue is distinguished from another by the nature of its parameters.



Tip to See All Processes

Queues

When an application defers a process, it assigns the process to a queue with the appropriate scheduling parameters.

There are two primary queue types:

1. **Ad Hoc**: Reports and procedures that are part of an ad hoc queue are processed “on-the-fly” after the Starting Time and Starting Date entered by the user in the **Batch Processing** dialog box.

2. **Scheduled**: The parameters governing a scheduled queue specify processing intervals: after each interval, the application checks the queue to see if there is information to be processed. Intervals can be of any length — from minutes to months to years.

Queue Set Up

The Control Administrator is responsible for three key steps that allow the processing setmodules to defer certain of their processes:

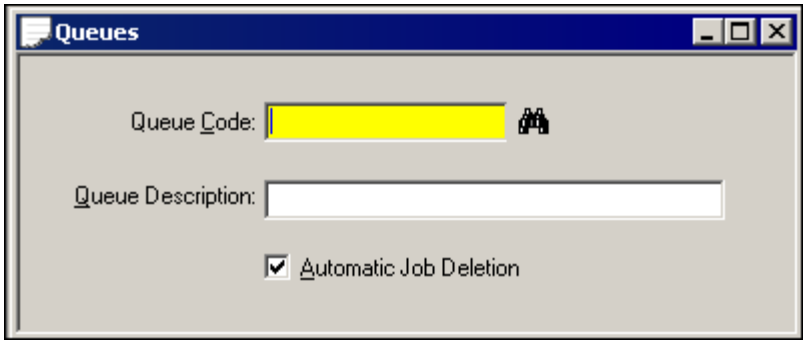
1. Queue Definition establishes the identities of the processing setad hoc and scheduled queues. This is done in Control.

2. Queue Assignments assigns a default queue to each process that can be deferred. Users can override the default assigned queue. This is also done in Control.

3. Queue Parameters: With a Dialog Boxes NT operating system, use a command line in fbtc32.exe to define the queueparameters and to link individual processes to the queue. If you have a UNIX operating system, then youdevelop a comparable UNIX script. This is not done in Control.

Defining a Queue - The Queues Dialog Box

An application's processes and reports can be deferred **only** after you have formally defined the processing set's queues. Select **Server**, **Queues** from to open the **Queues** dialog box.



Queue Code

A code that identifies a type of queue.

Because deferred processing requires Ad Hoc queues, you **must** define this category. Examples of other Queue Codes are Weekly, Monthly, and Posting. Size: 10, alphanumeric.

The value for this field is stored in the PipeCode column of the **PIPM** table. Type: Char (8)

Required Field

Queue Description

A brief description of the queuepurpose. Size: 32, alphanumeric. The value for this field is stored in the PipeDesc column of **PIPM** table. Type: Char (30)

Automatic Job Deletion

If activated, this feature removes a job when processing is complete. If you do not select this feature, the application attempts to repeat the job later on. The value for this field is stored in the PipeAutoDel column of **PIPM** table. Type: Small Integer (2)

Queue Definitions

The batch program for Deferred Processing uses queues that you define to organize and carry out its work. This approach permits the batch processing of items such as daily reports and month-end adjustments on a recurring basis.

Most organizations define queue categories that are similar to the following for comprehensive and efficient processing:

ADHOC

Executes and deletes reports and transactions on the fly. This is the fbtc32.exe default queue.

DAILY

Processes reports and transactions at the end of each day.

WEEKLY

Processes reports and transactions at the end of each week.

MONTHLY

Processes reports and transactions at the end of each month.

QUARTERLY

Processes reports and transactions at the end of the quarter.

YEARLY

Processes reports and transactions at the end of the year.

To Define a Queue

Step/Action

1. Select **Server**, **Queues** to open the **Queues** dialog box.

2. Type a **Queue Code**. Required.

3. Add a brief Queue Description.

4. Select the **Automatic Job Deletion** check box if you want to delete the jobs in this queue after processing.

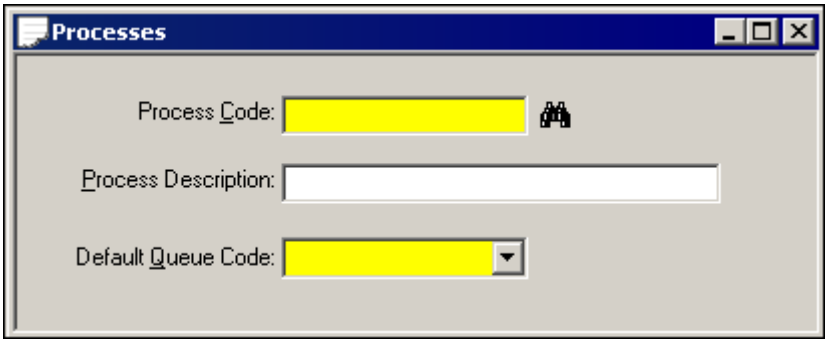
5. Select the **Add Data** button. Select the **OK** button to close the Message Pad when, “Row has been Added,” appears.

The standard Control software that processes transactions in each queue is installed during the final steps of system implementation. See the **Control Installation Guide** for more information.

Assigning Processes to Queues - the Processes Dialog Box

After defining the processing set's queues are defined, you are ready to match each process that can defer its transactions to an appropriate queue.

Keep in mind that Ad hoc queues add transactions to the very next processing sequence. As a default, Control places each qualified process in the Ad hoc category. Select **Server**, **Processes** to open the **Processes** dialog box.



Warning about working with Processes

Email Queue Processing

HEFM applications send emails for project funds validation errors, as well as for transmitting ACH remittance information to vendors. Rather than sending the email directly to the email server during business processing, the emails are added to an outgoing email queue where the server process sends the emails.

Some of the advantages of this approach are:

-- Only the server machine needs to be configured for connection to the email server.

-- The process can run to completion without having to wait for the emails to be sent to the email server.

-- The database commit for the business logic will also commit the email queue entries, thereby ensuring that the emails and business changes are committed at the same time.

-- If the email server is unavailable, the emails wait in the queue until it is possible to send them.

-- A record of the emails sent will be kept in the database.

The emails will be written to database tables (EMHD, EMAT, and EMTL) and a recurring process will be set up (by default in the new “EMAIL” pipe), which will check for unsent email and will therefore send it. The process itself will not generate any SignOn reports. All feedback will come via emails to the “from” address for each given email.

Warning about working with Processes! ! !

Do NOT add any processes! The processes that you need for Control are already created. Adding new ones may result in problems with deferred processes. ONLY programmers or developers should add new processes.

Process Code

A code that identifies a process. You **should not** enter a new code: the code must be part of the processing setdatabase.

You can enter an existing code manually or use Controlsearch procedures to select a code from a list of active processes.

The value for this field is stored in the BatchTypeCode column of **BTCH** table. Type: Char (8)

Required Field

Process Description

A brief description of the process.

You can use the description that appears when you select the process or enter a new description. Size: 30, alphanumeric.

The value for this field is stored in the BatchTypeDesc column of **BTCH** table. Type: Char (30)

Default Queue Code

A drop-down list of codes which identify the available queues. You **must** make a selection.

The value for this field is stored in the PipeCode column of **BTCH** table, and is a foreign key that references the **PIPM** table. Type: Char (8)

Required Field

To Assign a Process to a Queue

Step/Action

1. Select **Server**, **Processes** to open the **Processes** dialog box.

2. Type an existing **Process Code** or use the **LookUp** button to retrieve a code from the **Processes Select** search dialog box. **Required.**

3. Type a brief Process Description.

4. Select a queue to handle this process in the **Default Queue Code** field. **Required.**

5. Select the **Add Data** button. Select the **OK** button to close the Message Pad when, “Row has been Added,” appears.

Command Lines

Setting up and maintaining Deferred Processing requires the use of Command Lines. The components of the Command Line are the same in both UNIX and an NT environments.

The full Deferred Processing Command Line has the following parameters:

fbtc32.exe [n] i=<id> p=<password> s=<proc set> [d=<trans date>] [w=<where clause> r=<report> q=<queue>] <Queue> [Debug]

The operators in the Command Line indicate:

< > Required Data provided by the user

[ ] Optional Data provided by the user

The three parameters in the square brackets [**w**, **r** and **q**] always appear together. All three parameters are required in Command Lines governing Unattended processing. Please read more about these command line parameters in the next topic.

This is an example of a command line and its parameters:

fbtc32.exe Ø i=FLXBATCH p=BatchPass s=CORP d=1997Ø123 w=3ØØ1 r=FGLP4ØØ q=WEEKLY WEEKLY Debug

Command Line Parameters

These are general explanations for the parameters in a command line. The parameters are case sensitive.

fbtc32.exe A code that identifies the Deferred Processing “executable.” In almost every case, the executable will be fbtc32.

Required

[n] A number specifying the length of the delay in minutes between runs that are governed by this Command Line. “Ø” indicates that the process will run once and then will exit.

i=<id> A unique code that you assign as the user ID for deferred processing.

Required

p=<Password> A unique code that you assign as the user password for deferred processing.

Required

s=<proc set> The name of the processing set that uses this deferred process.

Required

[d=<trans date>] A yyyymmdd transaction date: the default is TodayDate.

[w=<where clause> r=<report> q=<queue>] A “where” clause locates the job(s) to be processed. It can contain one or more parameters. The Where clause must be in the correct format. Run a test job using regular processing to identify this format. When the job is complete, study the Cover page of the resulting report: the correct format of the Where clause will appear in the Parameters section of the Cover page.

The “report” is a code that identifies the reporting function associated with the Unattended processing of jobs in this queue. This Report Code will appear in the upper left-hand corner of any report generated during a Server-centered processing event.

The “queue” is a code that youuse if the queue is to process in a Unattended mode. This code is usually the same code as the code in the <Queue> field.

The where clause is required only for unattended processing. It is an optional parameter in other command modes. Whenever you use a where clause, you must also indicate a report and queue along with it.

<Queue> The identifying code of the queue category that is the subject of the Command Line.

[Debug] A code indicating that the batch will print processing information.

Deferred Processing Modes

This section examines the set up requirements and Command Line parameters for three deferred processing modes: Manual, Automatic and Unattended. Although most of the points in the following discussion apply to deferred processing in both a UNIX and Dialog Boxes NT environment, the section highlights any important differences.

The three modes include:

1. **Manual Mode** is On-Demand processing, by the server, of a batch or report that is requested by a user. The batch is then processed on the server, but only after a person initiates the serveractivity. See Manual Mode Command Line for the command line parameters.

2. **Automatic**: Scheduled processing, by the server, of a batch or report is also requested by the user. However, the serveractivity begins automatically, according to a schedule that you have defined. See Automatic Mode Command Line for the command line parameters.

3. **Unattended**: Events are initiated and processed on the server without being requested by a user. You can manually initiate an unattended process or add it to the serverschedule. See Unattended Mode Command Line for the command line parameters.

Setup Procedures

You need to setup Command Line shortcut icons in Dialog Boxes NT, and review key INI file settings to setup deferred processing.

Command Line Icons — Dialog Boxes NT

Command Lines are stored on the server and form the core of fbtc32.exe deferred processing. Command Lines store the specific commands required to customize deferred processing for your company.

In Dialog Boxes NT, you can set up shortcut icons on the server for different Command Lines. Double clicking on a shortcut icon runs its Command Line. The Command Lines run directly in other environments.

INI File Settings

INI files require a 32-bit section for deferred processing.

To Set Up a Command Line Icon for Deferred Processing

Step/Action

1. Open Windows 2000/NT.

2. Right Click anywhere on the desktop to open the shortcut menu.

3. Select New, Shortcut from the shortcut menu. The Create Shortcut dialog box opens.

4. Type cmd\k and a space in the Command Line field. This tells Control to keep the shortcut icon on your desktop after you sign off.

5. Also type the path and parameters of the Deferred Processing function in the Command Line field, after the text entered in Step 4.

6. Select the Next button to open the dialog box.

7. Type a name for the shortcut icon.

8. Select the Finish button. The shortcut icon appears on your desktop.

INI Files for Deferred Processing

The location for deferred processing may be a server or a client PC. Both need FLEXI.INI 32-bit settings to handle deferred processing.

Deferred Processing on a Server

The server must have its own FLEXI.INI file when deferred processing runs on a Batch Server. Be sure that you add the appropriate values (enclosed by **< >** in the following example) under the [**FlexiWare32]** section of the FLEXI.INI file. These include:

[FlexiWare32]

database=<database name>

SysEnvType=S

Server=<server name>

Port=<port #>

Tip: The Batch server may or may not be the same as the Database server.

Batch Server and Database Server

The Server Name that you enter **may or may not** be the same as the Server Name specified in a user's FLEXI.INI file. It may be different if the Batch server is on the Database server — it should be whatever is needed to connect to the local database.

The serverFLEXI.INI file should reside in the directory containing the FBTC32 files. Applications will look first in this directory when searching for .INI settings and then in:

1. the current directory.

2. Windows 2000: the Windows system directory.

3. Windows NT: the 32-bit Windows system directory (SYSTEM32).

4. Windows NT: the 16-bit Windows system directory (SYSTEM).

5. the Windows directory.

6. directories listed in the PATH environment variable.

Deferred Processing on a Client

If Deferred Processing happens on Client workstations instead of a Server, then the Client's **FLEXI.INI** file requires 32-bit settings. These settings are located in the **[FlexiWare32]** section of the FLEXI.INI file. **The FLEXI.INI file also has the standard [FlexiWare32] section**.

Be sure that you add the appropriate values (enclosed by **< >** in the following example) under the [**FlexiWare32]** section of the FLEXI.INI file. These required settings are:

[FlexiWare32]

Database=< database name>

SysEnvType=< one letter designation for the operating system>

Server=< server name>

Port=< port #>

DBDLL=<DLL file name.ext for current version of Control >

Database

The name of your companydatabase.

SysEnvType

The system environment type: O (Oracle) or M (MS SQL).

Server

The name of the Server.

Port

Ports uniquely identify a user's PC. A Port assignment method is specified in the Setup of the System processing set.

DBDLL

The name of the database DLL file required for the version Control that you are using. It is specified in the **About** dialog box (select **Help**, **About** in a Control application to open this dialog box).

DBQualifier

Database Access Code. Only required for Oracle. Oracle requires that a period follow this code. This is true for the FlexiWare32 section too.

DBTableSpace

The space necessary for Oracle to generate the Processing Set's data.

Manual Mode Command Line

The Manual Mode has five processing steps:

1. A user at a client PC selects a **Deferred Process** button within the application module, or uses the **Print** button to assign a report to a queue.

2. When asked to select the queue, the user specifies a queue such as ADHOC.

3. The application places the batch in the serverPIPQ table.

4. The System Administrator sets up a Command Line to process jobs in queues of this type.

5. The server processes all jobs in the queue — including the userbatch.

The Manual Command Line has the following parameters:

fbtc32.exe Ø i=FLXBATCH p=BatchPass s=ACCOUNT d=97Ø331 ADHOC Debug

Automatic Mode Command Line

The Automatic Mode has these processing steps:

1. As a key preliminary step, the System Administrator uses a tool such as **SQL Enterprise Manager,** the **Dialog Boxes NT Scheduler** or **Crontab** to construct a processing schedule linking tasks to queues. The schedule includes the Command Line.

2. The user at a client PC selects the Deferred Process button to process a batch or report within an application module.

3. When asked to select a queue, the user specifies a queue (such as WEEKLY) that has been included in the schedule.

4. The application places the batch in the serverPIPQ table.

5. The server processes the jobs in this queue according to the schedule.

The Automatic Command Line has **two** formats:

1. The first sets “Ø” as the delay parameter. This Automatic Command Line has the following parameters:

fbtc32.exe Ø i=FLXBATCH p=BatchPass s=ACCOUNT WEEKLY

2. The second format of the Automatic Command Line specifies the size of the delay between runs. Preparing a Command Line with this format does **not** require Step 0.

fbtc32.exe 5 i=FLXBATCH p=BatchPass s=ACCOUNT ADHOC

In this example, “5” indicates there will be a five-minute delay between runs governed by this Command Line.

Unattended Mode Command Line

The deferred processing of transactions and reports in the Unattended mode takes place without the client PC. A Unattended event can be either Manual in response to the System Administrator's participation, or as part of a Automatic procedure.

The Unattended Command Line **must** have the **w**, **r**, and **q** parameters:

fbtc32.exe Ø i=FLXBATCH p=BatchPass d=97Ø4Ø6 s=CORP w=\"315\" r=fglp415 q=ADHOC ADHOC

Examples of Unattended Command Lines

See the following topics to view examples that illustrate the construction of Command Lines for Unattended processing:

Processing Ledger journals from dialog box FGLP415

Creating an Export File contain Ledger consolidation data

Importing a File Containing Ledger Journal Information

Processing Ledger journals from dialog box FGLP415

This is an example of an Unattended Command Line for Processing Ledger Journals.

fbtc32.exe Ø i=FLXBATCH p=BatchPass s=2000 w=\"315\" r=FGLP415 q=ADHOC ADHOC

In this example:

fbtc32.exe is the executable function.

Ø indicates that the system will exit after one run..

i=FLXBATCH indicates the user ID code for deferred processing.

p=BatchPass is the user password for deferred processing.

s=2000 is the processing set.

w=\"315\" is a simple Where clause directing the system to process Journal Batch #315.

r=FGLP415 identifies a specific Ledger process (journal posting) and its associated report.

q=ADHOC indicates the type of queue into which the Unattended batch is to be placed.

ADHOC repeats the q=ADHOC parameter above, ensuring that event will be handled on the server without delay.

Creating an Export File contain Ledger consolidation data

This is an example of an Unattended Command Line for Exporting Ledger Consolidation data.

fbtc32.exe Ø i=FLXBATCH p=BatchPass s=CORP w=D:\EXPORT\CONSOL1.FFL r=FGLP925 q=ADHOC ADHOC

In this example:

fbtc32.exe is the executable function.

Ø indicates that the system will exit after one run.

i=FLXBATCH indicates the user ID code for deferred processing.

p=BatchPass is the user password for deferred processing.

s=CORP is the processing set.

w=D:\EXPORT\CONSOL1.FFL is a Where clause identifying a new export file that Ledger is to create, and its location (d:\export\consol1).

r=FGLP925 identifies the Ledger process that will create the Export file, and its associated report.

q=ADHOC specifies the type of queue into which the Unattended batch is to be placed.

ADHOC confirms the queue specification.

Importing a File Containing Ledger Journal Information

This is an example of an Unattended Command Line for Importing Ledger Journal information.

fbtc32.exe Ø i=FLXBATCH p=BatchPass s=CORP w=D:\ IMPORT\JANJRNL.FFL r=FGLP450 q=ADHOC ADHOC

In this example:

fbtc32.exe is the executable function.

Ø indicates that the system will exit after one run.

i=FLXBATCH indicates the user ID code for deferred processing.

p=BatchPass is the user password for deferred processing.

s=CORP is the processing set.

w=D:\IMPORT\JANJRNL.FFL is a Where clause identifying the file that Ledger is to import, and its location.

r=FGLP950 identifies the Ledger process that will import the file, and its associated report.

q=ADHOC specifies the type of queue into which the Unattended batch is to be placed.

ADHOC confirms the queue designation.

Deferred Processing Set Up for MS SQL 8.0

1. Run setup.exe from the CD. Choose Server (Batch) Code as a product you want to install. When prompted for a directory select a directory on your database server, where you will execute the server code from (e.g. d:\f43batch). Installation program will create a subdirectory called ntint and extract binary files into this directory on the specified location. Server code may reside on an application server different from the database server. For more information on multi-tier implementation, please contact your representative.

2. In the ntint subdirectory there will be a flexi.in1 file. Rename the file to flexi.ini and make the appropriate changes, as in the following example:

[Flexiware32]

FlxRoot=D:\batch\ntint (directory where BatchCode resides)

Database=Q4XM8002 (Working database)

Server=SQL.SVR.2 (Name of server database resides in)

Port=3232 (Must be unique, cannot be used by any other user)

DBDLL=FLXMSS32

3. In order for SQL 7.0 to properly identify the path in which the Batch Code resides create a DOS batch file (.BAT) file. In Enterprise manager we will call to execute the BAT file which will launch the Batch Code:

--Open notepad

--Create the following statement and save with the extension .bat:

D:

CD \batch\NTINT

D:\batch\NTINT\FBTC32 0 I=FLXADM P=FLXADM S=FSSJILL ADHOC Debug

i. I=User ID of Super User

ii. P=Password of Super User

iii. S=Processing Set Name

iv. ADHOC = Name of PIPE CODE set up in Control

Debug is an **optional** parameter to help troubleshoot execution of the code

4. Open SQL 8.0 Enterprise Manager.

5. Click on the Server where Server (Batch) Code Resides.

6. Click on Management. Click on SQL Server Agent.

7. **Right Click** on Jobs. Click on New Jobs. The following dialog box will appear.GENERAL TAB:

--Fill out the Name = FLXBATCH or any other name.

--Category = leave at (Uncategorized)

--Owner = a username that have permissions execute the job on the server to identify who owns the job.

--Description = (any description)

--Enabled = if it is checked the job will be an active server job and executed according to the scheduler, if it is not checked the job will not be invoked by the scheduler.

--Select local server as a target. It is irrelevant for Server Code, since the server/database information is read from flexi.ini file.

8. Click on the STEPS TAB:

--Step Name = Create a step name consistent with the process

--Type = Operating System Command (CmdExec)

--Exit Code = 0

--Command = Path of BAT file

--Click on Apply

9. Click on **ADVANCED TAB**:

--On success action = Quit the job reporting success

--Retry attempts = 0

--On failure action = Quit the job reporting failure

--Output file = full path name to the file where any of the standard output (output that would normally appear in a terminal window) produced by Server Code is recorded.

--Click Apply

10. The **STEPS** dialog box should look as follows. Click Apply:

11. Click on the SCHEDULES TAB.

12. Click on **New Schedule Button**.--Name = FLXBATCH--Schedule Type = Recurring

--Click on CHANGE BUTTON

--Enter the appropriate setting. This will execute Server (Batch) Code. If a job or many jobs reside in the PIPQ Table, then Batch Code will execute each job submitted in the order that they were submitted.

--Click OK, Click OK again.

13. The **SCHEDULES** dialog box should look as follows. Click OK.

14. Click the NOTIFICATIONS TAB:

--Fill out according to the clients needs.

Crontab Command Lines in UNIX

If your system employs a UNIX operating system, youuse Crontab to define the parameters of a Deferred Processing schedule.

Crontab has three components:

1. The Crontab Command determines the use of the schedule.

2. The Crontab File contains the scheduleparameters and a Crontab Command.

3. The Cron executable is code that carries out the Crontab Command, according to the specifications of the Crontab File.

The Crontab Command

A Crontab Command has four switches that do the following:

1. crontab [file]. Creates (or replaces) a Crontab File that will schedule the Deferred Processing events **of a particular user**.

Note: The name that you assign to the file should be the username or ID.

2. **crontab -e**. Edits the Crontab File…or creates an "empty" file to edit if a Crontab File for the user does not exist. When editing is complete, the file is copied into the user'Crontab Directory as the current Crontab File.

3. **crontab -l**. "Lists" the Crontab File.

4. **crontab -r**. Removes the Crontab File from the Crontab Directory.

The Crontab File

The Crontab File command line has the following six parameters that **must be separated by spaces or tabs**.

Minute This field specifies a **minute** within the hour. The integer values are from Ø-59, inclusive.

Hour This field specifies an **hour** within the day. The integer values are from Ø-23, inclusive.

Monthday This field specifies a **day** within the month. The integer values are from 1-31, inclusive. (See also **weekday**.)

Month This field specifies a **month** within the year. The integer values are from 1-12, inclusive.

Weekday This field specifies a **day** within the week. The integer values are Ø-6 (Ø = Sunday). (See also **monthday**)

Command Executes a transaction according to the first five parameters. Also see The Command Parameter .

A Command Line can have asterisks (*), commas (,) and hyphens (-) as shown in the following formats.

Remember: A space or a tab must separate values for parameters.

Min	Hr	Mthday	Mth	Wkday	Command	
3	3	23	4	4	job	
3	3	23	4	4	job	3:03 AM on the 23rd of April if the 23rd is a Wednesday.
3	3	23	4	Ø-6	job	3:03 AM on the 23rd of April, any weekday.
*	*	23	4	Ø-6	job	Each minute of every hour on April 23, each day of the week.
3	3,5	*	*	*	job	3:03 AM or 5:03 AM, on every day of every week, all weekdays.

The Command Parameter

The Command parameter at the end of the Command Line is a string executed by the shell at the specified times. Cron invokes the command from the userHome directory with the Posix shell:

/user/bin/sh

Cron provides a default environment for each shell. The environment includes definitions of:

HOME=userhome-directory

LOGNAME=userin-if

PATH=/user/bin:/usr/sbin:
SHELL=/user/bin/sh

Environment Variable

EDITOR determines the editor to be invoked when the –e option is specified.

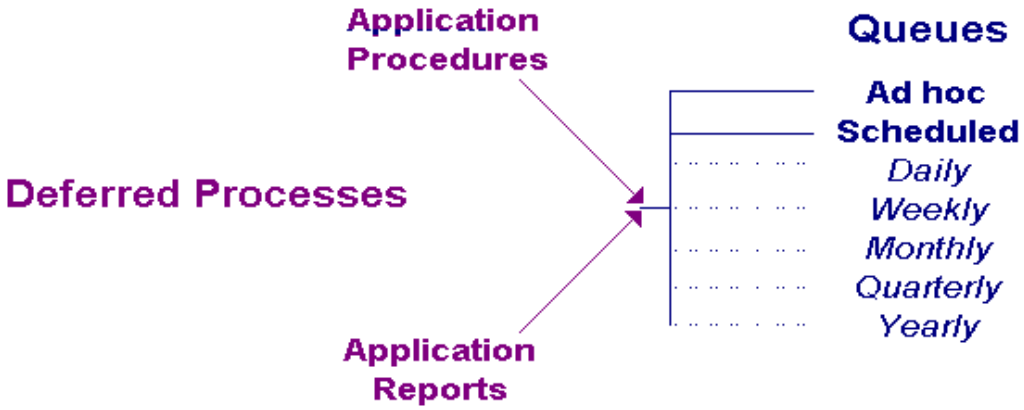
Be careful!

If you do not redirect standard output and error data from a command, the information will be lost.

For additional information on the use of crontab, run **man crontab** from the Unix command line.

Scheduling

Look again at the relationship between processes and queues:



As Administrator, you can use a tool such as the **SQL Enterprise Manager** to set up a scheduling structure. SQL Enterprise Manager allows you to define the scheduling “tasks” that provide ad hoc and scheduled queues with these additional types of processing parameters:

1. On-Demand transactions or reports are processed without delay.

2. One-Time transactions or reports are processed once, on a specified date, at a specified time.

3. Recurring transactions and reports are processed according to a well-defined pattern over a specified period.

In a Dialog Boxes NT environment, you can use the Control Panel**Schedule** functions to set up a scheduling structure. In a Unix environment, youuse the **Crontab Scheduler**.

The specific steps required to develop a schedule using one of these tools depends on the nature of the scheduling product and its release…and on the version of the software with which you are working.

Jobs Dialog Box

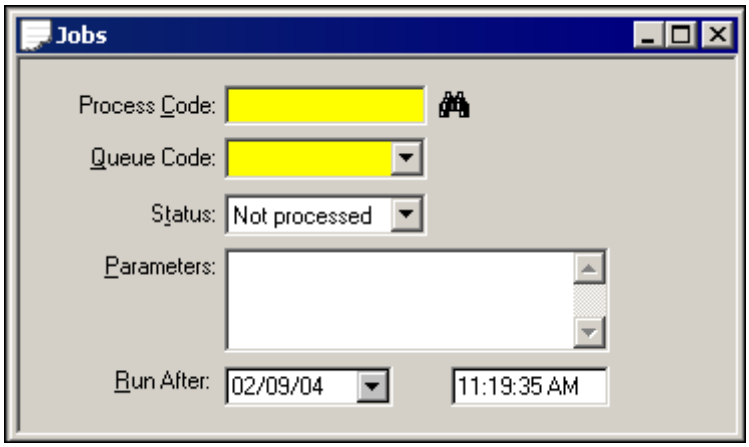
Control**Jobs** dialog box provides you with information about each of the “jobs” that is handling deferred transactions.

A job consists of transactions that are

1. generated by the same application process

2. subject to the same schedule.

Select **Server**, **Jobs** to open the **Jobs** dialog box.



Process Code

A code which identifies the process. You can use the search procedures to select a code. The value for this field is stored in the BatchTypeCode column of **PIPQ** table, and it is a foreign key that references the **BTCH** table. Type: Char (8)

Queue Code

The code that identifies the queue that is associated with this process. This is a display field. The value for this field is stored in the PipeCode column of **PIPQ** table, and it is a foreign key that references the **PIPM** table. Type: Char (8)

Status

A display field which indicates the status of the job. Status messages include:

--Not processed

--In-process

--Processed

--To be deleted.

The value for this field is stored in the BatchStatus column of **PIPQ** table. Type: Small Integer (2) Not processed=Ø, In-process=1, Processed=2, To be deleted=3

Parameters

A field containing SQL messages and/or reference numbers. The value for this field is stored in the BatchParam column of **PIPQ** table. Type: Text (16)

Run After

Fields youuse to specify a Starting Date and Starting Time. Control will not run jobs **before** this point. This is when Control will send jobs to a queue for processing.

1. Select the month, day or year in the spinner box, and then Click on the up or down triangle to change the value.

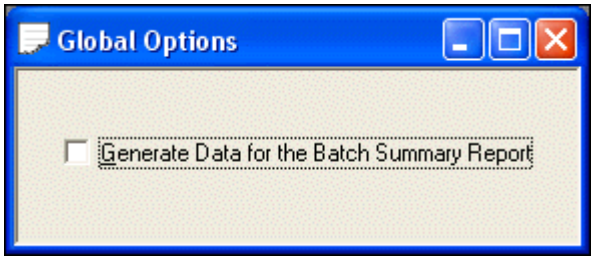
2. Select the hour, min, second, or AM/PM in the spinner box, and then Click on the up or down triangle to change the value.

To retrieve a Status Report on a particular job, enter a **Process Code** and specify a Starting Date and Time in the **Run After** fields. Control then provides you with current information about the job.

The value for this field is stored in the BatchDateTime column of **PIPQ** table. Type: Datetime (8)

Global Options

You can set a flag to generate data for batch summary reports. Use the **Global Options** dialog window to set this flag. You can open this dialog from the **Security** menu.

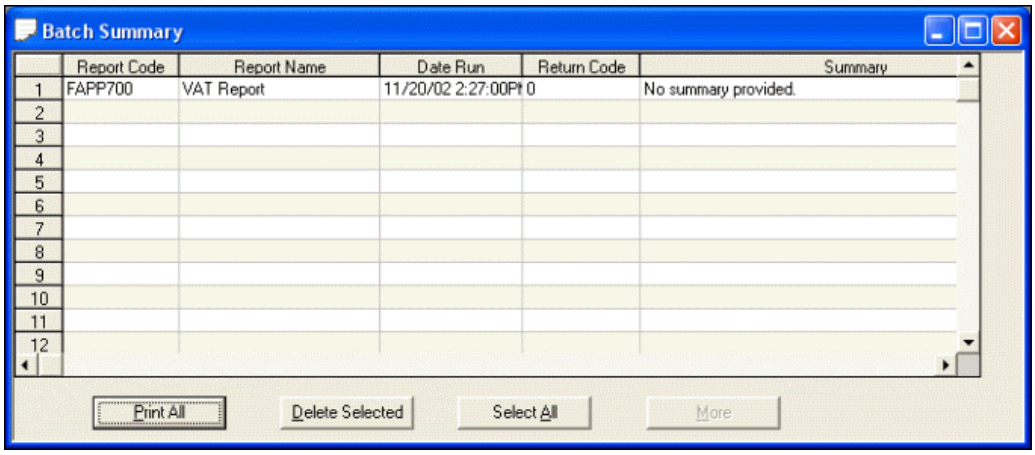


Batch Summaries

The **Batch Summary** dialog window displays results for processes run in “batch” mode by the current signed-in user. The displayed results include the **report code**, **report name**, **date run**,

return code, and **summary**. Setting the global options flag enables you to generate data for the summary.

You can open the Batch Summary dialog from the **Server** menu.



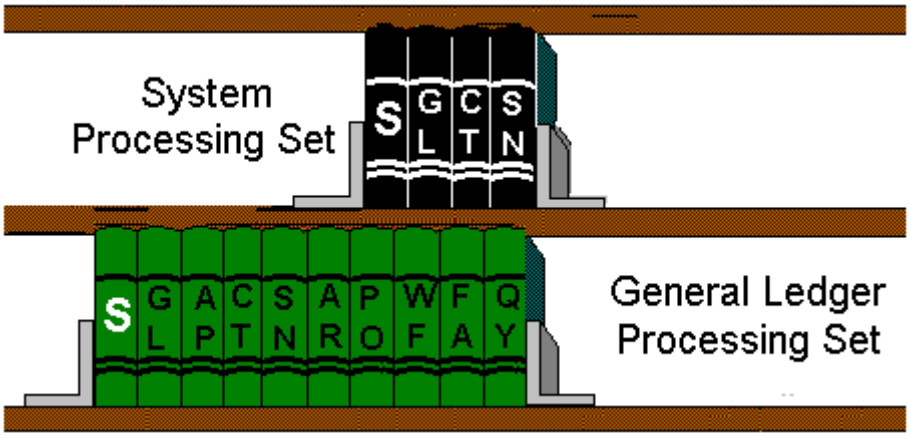
Chapter 3 Processing Sets

Processing Sets

This Help Sequence contains the following topics:

Introduction to Processing Sets

Using books on a bookshelf as an analogy, assume that each shelf has the books required for one processing set. Every Control installation has at least two processing sets, the System processing set and an **Application's** processing set.



The System processing set is set up during installation, and has the processing specifications and defaults that are common to each application.

Some basic Application processing sets may have been created during installation, but additional features or Application processing sets are usually created after installation. The Application processing sets that are created after installation are usually customized for your company and how people will use the application. A full-fledged Applications processing set has many components.

The Administrator creates an Application processing set in four steps:

1. Identifying the applications included in a new processing.

2. Creating a processing set header.

3. Setting options for the processing set.

4. Specifying the currency, and date and time formats for the processing set.

To Access a Processing Set

Signing on connects an application module such as Control, Ledger, or Payables, etc, to a processing set.

You can connect any application and a specific processing set as long as that processing set has that application in its definition, which is the first step in creating a processing set.

Step / Action

1. Start an application module, such as Control, Ledger, Payables, etc. The SignOn dialog box opens.

2. Type your User ID.

3. Type your User Password.

4. Type the name of the Processing Set.

5. Select the OK button.

The application's Window opens if the connection between the application and the processing set is valid.

On the other hand, if the processing set has not been entered correctly (or was not created properly), then an error message appears stating that the processing set is invalid.

When you sign on successfully — and your application is connected to a processing set — you can connect any other valid application just by double clicking on its icon.

Tip: The error message appears most often when the name of a processing set is not typed correctly. Remember that these names are case sensitive.

Application Processing Set Components

Each Control processing set, except System, has some or all of the following components:

1. **Identifiers**. Codes and descriptions that identify the processing set.

2. **Database**. A database that is devoted to the processing set. The Database Administrator defines this database.

3. **Company Information**. Identifying and descriptive data about your company or division. This common data is available to each application module and is defined in your Ledger module.

4. **System Procedures**. Common procedures that determine how transaction data is entered, formatted, processed, stored, and retrieved.

5. **Protected Application Data**. Information developed by one application and available to other applications on a limited, restricted basis. This information includes financial records and results.

6. **Shared Application Data**. Information that is developed for a specific application but which is freely available to all other applications. This information includes identifying data such as currency designations; structural material such as a Chart-of-Accounts; and reference material such as vendor lists.

7. **Application Tasks**. Procedures that determine how an application carries out its activities.

8. **Viewed Tables**. Tables that are shared with another processing set. A viewed table can contain rules, procedures or data.

9. **Application INI File Settings**. Application INI file settings can be assigned to groups of users so that these settings are centrally maintained. The Control Administrator can also override the group settings for individual users.

10. **Security Procedures**. Procedures governing user or workstation access to information; the use of internal validation criteria; and the parameters of each task.

11. **Security Assignments**. User and task assignments to Security Groups.

The processing set is also the source of the numerous defaults—data and settings—that are standard elements of the associated applications. The Administrator is responsible for defining each of the processing sets **except** System.

Creating a Processing Set

Creating a new processing set has four steps:

Step 1 Processing Set Identity

Step 2 Processing Set Header

Step 3 Processing Set Options

Step 4 International Settings

Completing these steps creates a bare-bones processing set with some descriptive and procedural information. Add the rest of the processing components, such as Users, Security Groups, and Deferred Processing to create a full-fledged application processing set.

Identify Applications in a Processing Set

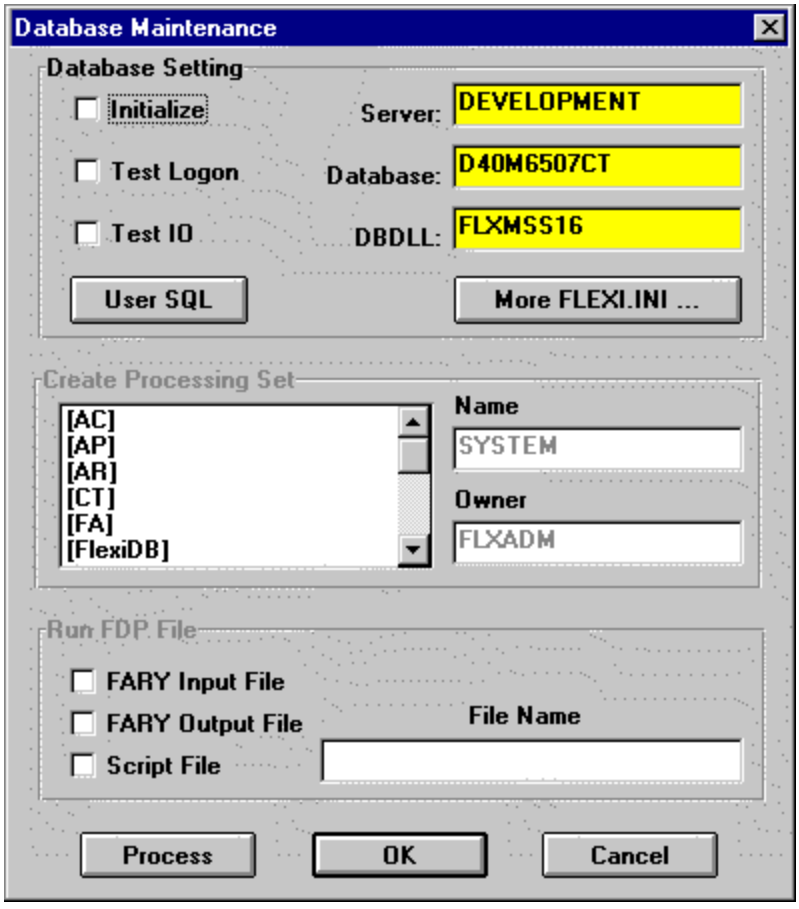
The first step identifies one or more application(s) in the new processing set. It is also the most important, because what tasks and processes are available for you to work with in an application depends completely upon this identification.

1. Double click on the Control icon to open the SignOn dialog box.

2. Complete the access codes of the Control SignOn dialog box, but be sure to type the name of your System processing set in the Processing Set field.

3. Select the DB Maint button to open the Database Maintenance dialog box. Now you can identify an Application Processing Set.

If a message appears stating that the CREAPROC.LOG cannot be created, then you will not be able to identify which applications belong in the processing set. Your network ID must have permission to create files in the directory with program files before you can continue. Contact your Network Administrator to correct this problem.



The Database Maintenance dialog box is also used to encrypt passwords in the database.

To Identify Applications in a Processing Set

These steps begin in the Database Maintenance dialog box.

Step / Action

1. Select one application in the Create Processing Set group box to be part of the new processing set. This step makes the Name and Owner fields available. Usually, CT should be the first application so that you can maintain the processing set. **Required**.

2. Type the Name of the new processing set. **Required**.

3. The Owner field defaults to the User ID that was entered in the Control SignOn dialog box. Although you can type anything here, the FLX_PRS_OWNER column in the PRSM table is always the User ID from the Control SignOn dialog box. To add multiple applications in one step, see Tip to Create Multiple Processing Sets. **Required**.

4. Select the Process button at the bottom of the Database Maintenance dialog box. The Database Log dialog box opens with the following message if the application was successfully added to the processing set: “[Application abbreviation] Create Processing Script [processing set name] for [user name] Successful.”

WARNING

5. Select the **OK** button to close the Database Log dialog box.

6. From the list in the field on the left, select those additional application modules whose tasks you want to manage with this processing set. DO NOT include [SYS].

7. Repeat Steps 4 and 5 to add other applications to the same processing set. Repeat Steps 1 through 6 to create another new processing set.

8. Select the **OK** button to close the Database Maintenance dialog box and return to the Control SignOn dialog box.

9. Select the **OK** button to sign on to Control to be ready for Step 2 in creating a Processing Set.

Warning

You must have permission to create files in the same directory as your Control databases to do this. The following error appears in the Database Log dialog box, “Unable to open log file:

CREAPROC.LOG," if you don't have this permission. An error message also appears after selecting the DB Maint button in the Control SignOn dialog box if you do not have this permission. **You will not be able to identify which applications belong in the processing set.**

Be Careful ! ! !

You are allowed to create a processing set header WITHOUT having first identified it with applications. Be sure that you have successfully completed Step 1 before going to Step 2.

Tip to Create Multiple Processing Sets

You can add multiple applications in one step, beginning with Step 4 in To Identify an Application Processing Set:

1. From the Create Processing Set list box on the left, select those additional application modules you want to include with this processing set. DO NOT include [SYS]. The standard Windows selection keystrokes apply to select multiple application modules:

Click on the first item and then Shift+Click on a second item to select a contiguous block of items (everything between the first and second items).

Click on the first item and then Ctrl+Click on the next item to select a noncontiguous item. Keep the Ctrl key down and continue to Click on additional, noncontiguous items until all the ones that you want are selected.

2. The selected items are highlighted.

3. Select the Process button at the bottom of the **Database Maintenance** dialog box. The Database Log dialog box opens with the following message if the application was successfully added to the processing set: "[Application abbreviation] Create Processing Script [processing set name] for [user name] Successful," for each application module that you select, one at a time — be sure to give the system enough time to add each module.

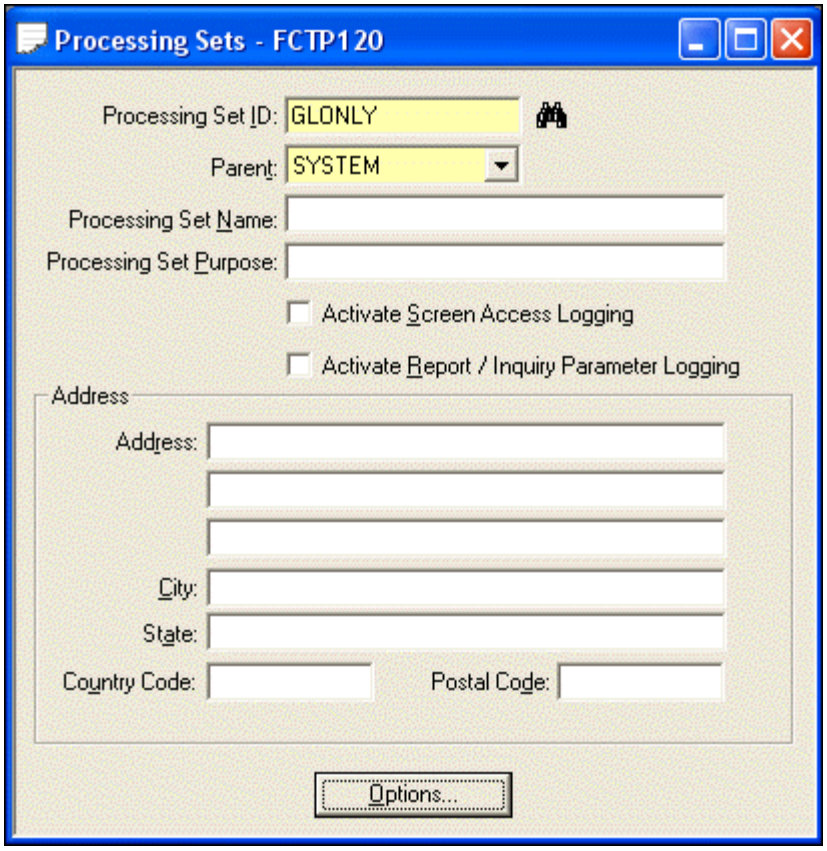
4. Select the OK button to close the Database Log dialog box as it appears for each application that you selected. The **Database Maintenance** dialog box appears after closing the last Database Log dialog box.

5. Select the **OK** button to close the **Database Maintenance** dialog box and return to the SignOn dialog box.

6. Select the OK button to sign on to Control to be ready for Step 2 in creating a Processing Set.

The Processing Sets Dialog Box

Step 2 creates a “header” that describes the processing set. Select System, Processing Sets to open the Processing Sets dialog box to enter the Processing Set's header information.



Processing Set ID

The identifying code that you entered in the Name field of the Database Maintenance dialog box when you defined the processing set. The value for this field is stored in the ProcSetCode column of the PRSM table. Type: Char (8). It is also stored in the ProcSetChild column of the PRSC table.

Required Field

Parent

A drop-down list of active processing sets. Because of their hierarchical nature, any active processing set can be a “parent.” Hierarchical means that the options and settings of the parent are passed down to all children, unless a child defines their own options and settings.

This is the Processing Set ID of the parent processing set. The value for this field is stored in the ProcSetParent column of the PRSC table. Type: Char (8)

Required Field

Processing Set Name

A descriptive name that you assign to the processing set. The value for this field is stored in the ProcSetName column of the PRSM table. Type: Char (30)

Processing Set Purpose

A brief description of this processing setpurpose. The value for this field is stored in the ProcSetPurp column of the PRSM table. Type: Char (30)

Activate Screen Access Logging

Selecting this checkbox allows the system to log users who access the Processing Set box.

Activate Report/Inquiry Parameter Logging

Selecting this checkbox allows the system to log users who have run reports and the parameters the users chose.

Address group box

Address fields you can use if the processing setfunctions are centered in a particular location. These are all memo fields.

The values for these fields are stored in the following columns of the PRSM table.

Address (first blank text box)

StrtLn1

Type: Char (30)

Address (second blank text box)

StrtLn2

Type: Char (30)

Address (third blank text box)

StrtLn2

Type: Char (30)

City

LocGovt

Type: Char (30)

State

StatGovt

Type: Char (30)

Country Code

CountryCode

Type: Char (4) This is not from the CTRY table.

Postal Code

PostCode

Type: Char (15)

Options button

Opens the **Processing Sets Options** dialog box.

To Create a Processing Set Header

Step / Action

1. Select System, Processing Set to open the Processing Sets dialog box.

2. Select or LookUp the name specified when you defined the processing set (Step 1) in the Processing Set field. **Required**.

3. Select the new processing setParent from the drop-down list. **Required**.

4. Type a Processing Set Name.

5. Type the Processing Set Purpose.

6. If appropriate, enter Address information.

7. Select the appropriate checkbox if you want to log users who access this dialog box or who run reports.

8. Select the Add Data button and then select the OK button to close the Message Pad when, “Row has been Added,” appears.

9. These steps provide the processing set with additional identifying information and confirm its link to the parent that you specified during SignOn.

Processing Sets Options Dialog Box

Step 3 specifies the options for a processing set. The Processing Sets Options dialog box is opened from the Processing Sets dialog box.

Step / Action

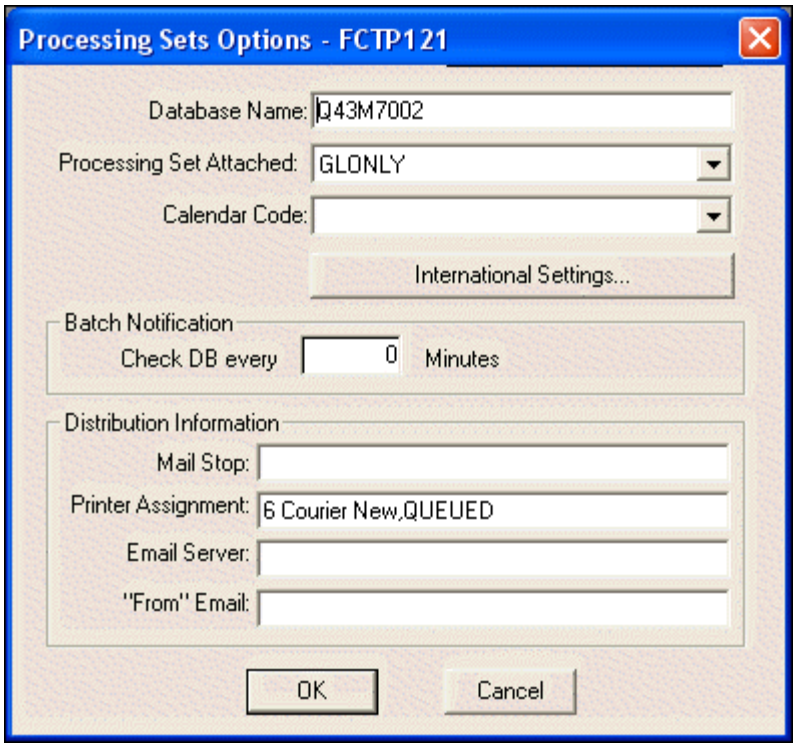
1. Select System, Processing Sets to open the **Processing Sets** dialog box.

2. Place your cursor in the Processing Set ID field, and select the Look Up button to open the Processing Set Select search dialog box.

3. Select the appropriate processing set from the list.

4. Select the OK button to close the Processing Set Select search dialog box and return to the Processing Sets dialog box with complete Header information for the selected processing set.

5. Select the Options button to open the Processing Sets Options dialog box.



Database Name

The name of the processing setdatabase. This is a memo field as this information is **not** functional. The value for this field is stored in the ProcSetDB column of the PRSO table. Type: Char (60)

Processing Set Attached

A drop-down list of the newly defined processing set, and its parent, which is specified in the Processing Sets dialog box. The parent processing set is the default selection in this combo box. The “parent” is the processing set specified in the **SignOn** dialog box before opening the Database Maintenance dialog box to define a new processing set in Step 1. System is the most frequent parent processing set, but you may have others.

Processing sets are hierarchies, with a parentsettings passed down to its children. Children may override the parentsettings for themselves (and their children) by selecting the new name here. Leaving the parent processing set selected changes the settings for the parent and all of its children, not just the new processing set you just defined (which is a child).

The value for this field is stored in the ProcSetCode column of the PRSO table. Type: Char (8)

Calendar Code

A drop-down list of calendar years and periods.

The items in this list are defined in the Ledger application and may not be available to you at this time. The value for this field is stored in the CalCode column of the PRSO table. It is a foreign key to the CALR table. Type: Char (6)

International Settings button

Opens the **International Settings** dialog box for further specifications.

Batch Notification group box

This group box has the setting to notify users when their batch processing is complete.

Check DB Every _ Mins

The frequency at which the system should check the database for new reports or completed processes. This must be more than Ø for a message to appear in the status bar when there are one or more unviewed reports in the **SignOn** window. The message disappears when a report is printed or a batch process is completed.

The value for this field is stored in the DBHitTime column of the PRSO table. Type: Integer (4)

Mail Stop

An address or e-mail address for the processing set. This may be instructions telling users what to enter for their own options. This is a memo field, as this information is ***not*** functional.

The value for this field is stored in the MailStop column of the PRSO table. Type: Char (60)

Printer Assignment

This field specifies the Processing Setprinting defaults for the Type Font and Size and the Report Processing Mode. The Processing Set defaults are used unless different ones are specified when the Administrator creates the User, or unless the User specifies their own in the **Options** dialog box that is available from the **SignOn** dialog box.

The value for this field is stored in the PrtAssgmt column of the PRSO table. Type: Char (30)

Email Server

The server from which e-mail notification messages are sent. You must complete this field if you set up e-mail notification for funds availability thresholds.

"From" Email

The address that will appear in the "From" field in an e-mail notification message. You must complete this field if you set up e-mail notification for funds availability thresholds.

OK button

Incorporates these additional specifications and returns you to the Processing Sets dialog box.

Cancel button

Returns you to the Processing Sets dialog box without adding or changing any additional specifications.

To Specify Processing Set Options

Step / Action

1. Select System, Processing Sets to open the **Processing Sets** dialog box.

2. Place your cursor in the Processing Set ID field, and select the Look up button in the toolbar to open the Processing Set Select search dialog box.

3. Select the appropriate processing set from the list.

4. Select the OK button to close the Processing Set Select search dialog box and return to the **Processing Sets** dialog box with complete Header information for the selected processing set.

5. Select the Options button to open the **Processing Sets Options** dialog box.

6. Confirm the Database Name that Control displays or enter a new name to correctly identify the processing setdatabase.

7. From the Processing Set Attached drop-down list, select this processing setparent (Only if you want to edit the options for the parent and all of its children — otherwise select the processing set that was in Processing Sets dialog box).

In many instances, it is recommended that you attach a processing set to it self when defining multiple processing sets in one database. If a processing set has children, you may choose the parent processing set if all of the children should have the same optional features.

8. If available, select a **Calendar Code** representing the structure of the calendar that the processing set is to use.

Important: Failing to do this causes processing problems in Ledger.

9. Type a number in the **Check DB Every ___ Mins** field (or use the arrow buttons to the right to increase or decrease the number of minutes) if you want users to know when their batches finish processing or reports are done printing.

10. Type a location code, e-mail address, etc., in the Mail Stop field. Remember, this is only a memo field.

11. Type a report processing mode, and a type size and font in the **Printer Assignment** field.

12. If you set up e-mail notification, enter an Email Server and “From” Email address.

13. Review your information.

14. Select the OK button to add these features and settings to the processing set.

International Settings Overview

The last step in creating a Processing Set specifies “international” settings that include **date** and **time** formats, and currency.

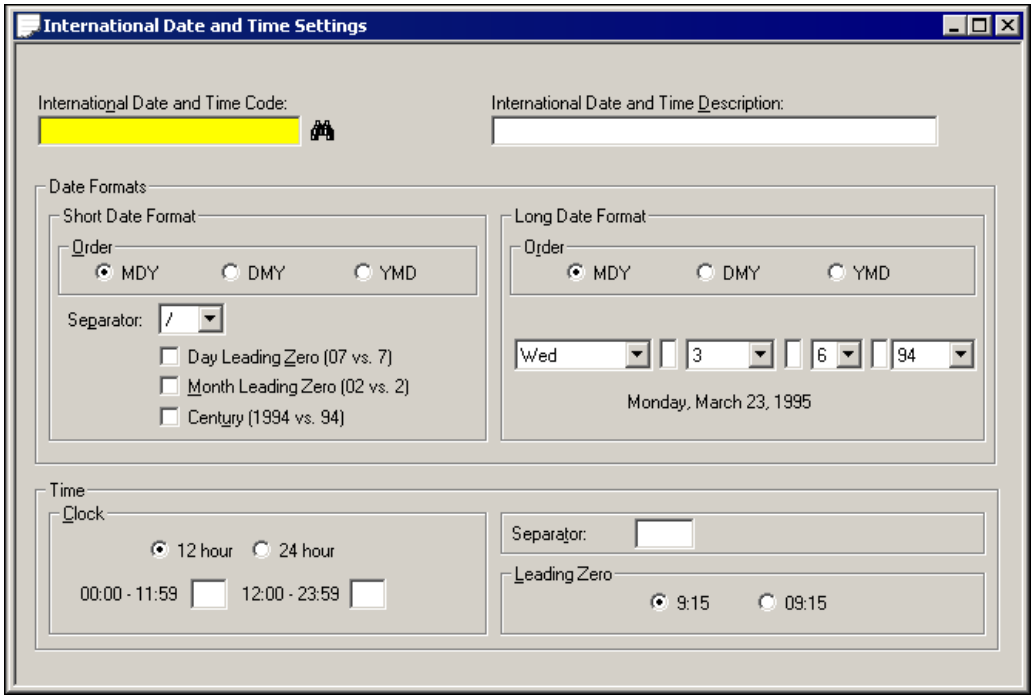
Creating the date and time formats is a two-step process. The date and time formats are first created and named in the International Date and Time Settings dialog box. This name is then selected in the International Settings dialog box.

Step 1 - The International Date and Time Settings

Step 2 - The International Settings

The International Date and Time Settings Dialog Box

Select System, International Settings to open the International Date and Time Settings dialog box. Use this dialog box to create an International Date Time code and specify its date and time formats.



International Date and Time Code

An eight-digit code for the date and time formats. This code is available in the International Settings dialog box. The value for this field is stored in IntlDatetimeCod column of the INTL table. Type: Char (8)

International Date and Time Description

A 50 digit description of the purpose or use of the International Date and Time code. The value for this field is stored in IntlDatetimeDes column of the INTL table. Type: Char (60)

Date Formats group box

Group box with the short and long date format settings.

Short Date Format group box

Settings for the structure, content and order of a short date format, which is always numeric.

Order

Options to indicate the order of year (Y), month (M) and day (D). One of these radio buttons **must be** selected.

--MDY - Month-Day-Year order

--DMY - Day-Month-Year order

--YMD - Year-Month-Day order

The value for this field is stored in DateOrder column of the **INTL** table for the Short Date Format, and in the DateLorder column for the Long Date Format. Type: Small Integer (2) MDY=Ø, DMY=1, YMD=2

Separator

The delimiter that separates the date segments. Dashes (-) or slashes (/) are used with numeric dates. The value for this field is stored in DateSep column of the **INTL** table. Type: Small Integer (2)

Day Leading Zero

Adds a "Ø" to the left of single-digit dates. The value for this field is stored in DateDayLead column of the **INTL** table. Type: Small Integer (2) Deselected=Ø, Selected=1

Month Leading Zero

Adds a "Ø" to the left of single-digit months. The value for this field is stored in DateMonLead column of the **INTL** table. Type: Small Integer (2) Deselected=Ø, Selected=1

Century

Displays the full century designation (19XX). The value for this field is stored in DateCen column of the **INTL** table. Type: Small Integer (2) Deselected=Ø, Selected=1

Long Date Format Group Box

Settings for the structure, content and order of a long date format.

Week Day

A drop-down list of two day-of-the-week formats: full (Wednesday) and abbreviated (Wed). The value for this field is stored in DateLdayLit column of the **INTL** table. Type: Small Integer (2) Wed=Ø, Wednesday=1

First Blank text box

This text box specifies what should appear between the Week Day and the Month in the long date format. Usually it should be formatted with a comma, but it may also be a space.

Month

A drop-down list of month formats: full alpha (March); abbreviated alpha (Mar); full numeric (03); or abbreviated numeric (3). The value for this field is stored in DateLmonLit column of the **INTL** table. Type: Small Integer (2) 3=Ø, Ø3=1, Mar=2, March=3

Second Blank text box

This text box specifies what should appear between the Month and the Numeric Day in the long date format. Usually it is a space. The value for this field is stored in DateLsep2 column of the **INTL** table. Type: Char (1)

Numeric Day

This drop-down list specifies whether single-digit days should include a leading zero (06) or not (6). The value for this field is stored in DateLdayLead column of the **INTL** table. Type: Small Integer (2) 6=Ø, Ø6=1

Third Blank text box

This text box specifies what should appear between the Numeric Day and the Year in the long date format. Usually it is a comma. The value for this field is stored in DateLsep3 column of the **INTL** table. Type: Char (1)

Year

A drop-down list of year formats: full (1994) or abbreviated (94). The value for this field is stored in DateLcen column of the **INTL** table. Type: Small Integer (2) 94=Ø, 1994=1

Clock Group Box

Options to specify the length of the time span, and hour notation.

12 hour

Assigns a 12-hour clock to the processing set and its applications. If you activate this option, you **must** complete the **AM** and **PM** notation fields. The value for this field is stored in TimeFormat column of the **INTL** table. Type: Small Integer (2) 12 hour=Ø

24 hour

Assigns a 24-hour clock to the processing set and its applications. The value for this field is stored in TimeFormat column of the INTL table. Type: Small Integer (2) 24 hour=1

AM/PM Notation

Indicates AM and PM designations for a 12 hour clock. The value for the AM field is stored in TimeAMLit column, and the value for the PM field is stored in the TimePMLit column of the INTL table. Type: Small Integer (2)

Separator

Indicates a delimiter that separates hours and minutes. In the example, the Administrator has selected a colon (:) to separate hours and minutes. The value for this field is stored in TimeSep column of the INTL table. Type: Char (1)

Leading Zero Options

Specifies the use of a “Ø” before a single-digit hour.

9:15 Selecting this radio button means that a "Ø" does not precede a single-digit hour.

09:15 Selecting this ration button inserts a “Ø” before a single-digit hour.

The value for this field is stored in TimeHourLead column of the INTL table. Type: Small Integer (2) 9:15=Ø 09:15=1

To Create or Change International Date and Time Formats

Step / Action

1. Select the System International Settings to open the **International Date and Time Settings** dialog box.

2. Type up to an eight-digit name (no spaces) in the International Date and Time Code field.

3. Type up to a 50-digit description in the International Date and Time Description field.

4. Select a radio button in the Order group box for the Short Date Format.

5. Select a Separator for the short date.

6. Select one or more check boxes to format your short date with leading zeros or to display the two or four digits for the year.

7. Select a radio button in the Order group box for the Long Date Format.

8. Select appropriate formats for day-of-the-week, month, day, and year. Use the blank boxes between them as spaces or commas (or slashes or hyphens), depending upon the selected format of the Long Date.

9. Select a 12-hour or 24-hour Clock.

10. If you have activated the 12-hour clock option, then indicate AM and PM notation.

11. Indicate an hour/minute Separator.

12. Indicate whether a Leading Zero will precede the hour notation.

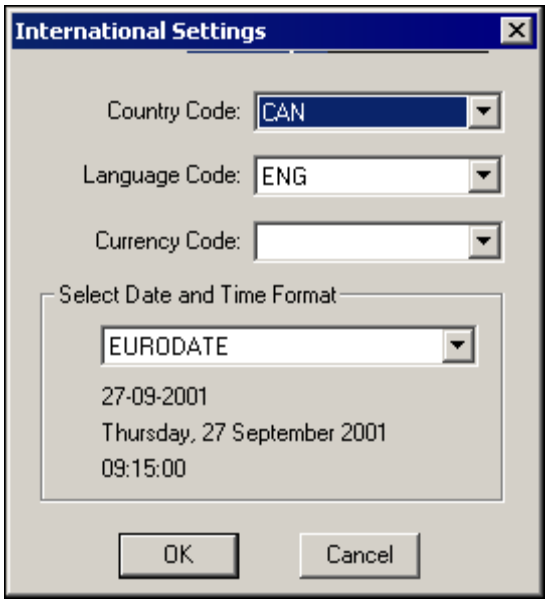
13. Review your choices and settings.

14. Select the Add Row button and then select the OK button to close the Message Pad when, “Row has been Added,” appears.

15. If necessary, repeat Steps 2 through 18 to create additional Date and Time codes that are required in this processing set.

The International Settings Dialog Box

Select the International Settings button in the **Processing Sets Options** dialog box to open the International Settings dialog box.



Country Code

A drop-down list of principal countries that you specified as part of the set up of the Control system (Chapter 4). This is a memo selection — it has no functional impact on the processing set.

The value for this field is stored in CountryCode column of the PRSI table, and is a foreign key that references the CTRY table. Type: Char (4)

Language Code

A drop-down list of languages that you specified during the set up of the Control system. This is also a memo selection — it has no functional impact on the processing set.

The value for this field is stored in LangCode column of the PRSI table, and is a foreign key that references the **LANG** table. Type: Char (4)

Currency Code

A drop-down list of codes representing international currencies. One of these currencies **must** eventually serve as the processing set“Home Currency” — its principal business currency.

The Currency Codes are defined by the Ledger Administrator during the implementation of the Ledger application. As a result, they **may not be available** to you when you first define the processing set, so you must remember to specify them later.

The value for this field is stored in CurrCode column of the **PRSI** table, and is a foreign key that references the **CURM** table. Type: Char (4)

Required Field

Select Date Time Format Group Box

This group box has a drop-down list with the codes that have been defined in the **International Date and Time Settings** dialog box. Selecting an International Date and Time code in the drop#down list displays that code's short date, long date and time formats under the drop-down list box.

The value for this field is stored in IntlDatetimeCod column of the **PRSI** table, and is a foreign key that references the **INTL** table. Type: Char (8)

Required Field

OK button

Adds the new or changed settings to the processing set and returns you to the **Processing Sets Options** dialog box.

Cancel button

Returns you to the **Processing Sets Options** dialog box without adding new or changed international settings to the processing set.

Important! ! !

The selection of the Currency Code specifying the processing setdefault currency is an essential step. Be sure that your Ledger Administrator provides you with this key specification. Failure to complete this currency setting will cause processing problems in Ledger.

To Add International Settings to a Processing Set

Step / Action

1. Select the International Settings button on the Processing Sets Options dialog box to open the International Settings dialog box.

2. Select a Country Code from the drop-down list.

3. Select a Languages Code from the drop-down list.

4. Select a Currency Code from the drop-down list. Important!

5. Select an International Date and Time code from the drop-down list in the Select Date Time Format group box. Check the displayed formats to be sure that the formats are correct for the processing set. Review the international settings.

6. Select the OK button to save the international settings and return to the Processing Sets Options dialog box,

OR

Select the Cancel button to return to the Processing Sets Options dialog box without saving the new or changed settings.

Using New Processing Sets

You may SignOn to Control using the new processing set and the AdministratorUser ID after completing the four steps required to create a processing set. The menu functions should be available, ready for you to “flesh out” your bare bones processing set with users, security groups, tasks and auto numbering.

Sharing Tables between Processing Sets

The following illustrates that the Control system can use multiple Applications processing sets …and that these processing sets can share their information.

Control's Views function allows one processing set to share “tables” with another processing.

Users from one processing set are given the ability to view and edit another processing set's values. A user, no longer views their own records when viewing assigned tables — only those records that belong to the other processing set.

A practical example of using this feature is to have separate processing sets for Accounts Payable and Accounts Receivable, but allows both, to use and maintain the same Vendor information in a view. This view function enables both processing sets to work with the vendor tables.

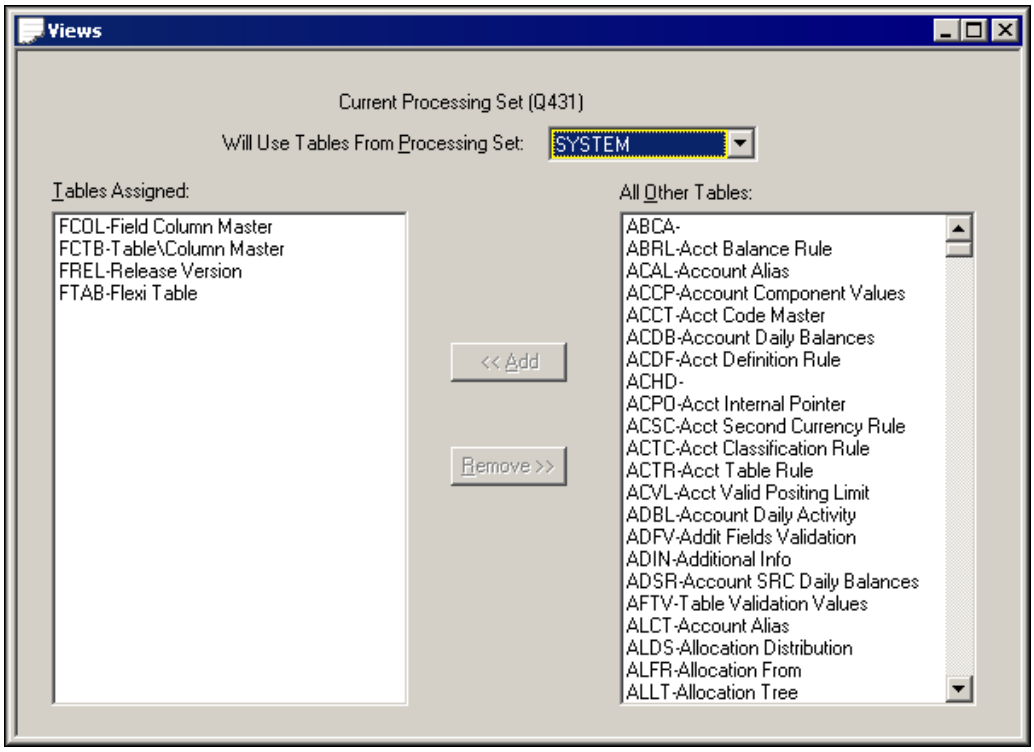
Be Very Careful! ! !

The Views function connects two processing sets by sharing table(s). When the structure or data of a shared table is updated in one processing set, **it is updated in the other processing set as well**.

When you are creating a View, be sure to thoroughly test the full impact of the connection on each processing set **before** allowing users to work with it.

The Views Dialog Box

The Views assignment dialog box specifies the tables from different processing sets that a view shares. Select System, Views to open this dialog box.



Current Processing Set

The name of the target processing set which will share the tables of the source processing set.

This is the processing set which you specified when you signed on. Control displays the processing setname between the ( ) brackets.

The value for this field is stored in FlxPrsOwner column of the VPHY table. Type: Char (8)

Will Use Tables From Processing Set

A drop-down list of the active processing sets that can serve as sources. The value for this field is stored in ProcSetCode column of the VPHY table, and is a foreign key that references the PRSM table. Type: Char (8)

Tables Assigned

A list of the tables that will be shared between the source and target processing sets. The value for this field is stored in ViewCode column of the VPHY table. Type: Char (4)

All Other Tables

A list of the tables in the source processing set which are **not** being shared. The value for this field from the ViewCode column of the VMST table, and is a foreign key that references the **VMST** table. Type: Char (8)

Add button

Moves a selected table from the All Other Tables field to the Tables Assigned field. This step deletes the tablecode and name from the list of All Other Tables.

Remove button

Moves a selected table from the Tables Assigned field to the All Other Tables field.

To Share Tables between Processing Sets

Step / Action

1. Select System, Views to open the Views dialog box.

2. Verify that the processing set which is identified in the Current Processing Set is the correct “target” of table assignments.

3. From the **Will Use Tables From Processing Set** list, select the processing set that will be the source of shared tables. When you make this selection, Control lists the source processing set's tables in the All Other Tables list box.

4. Select a table to be shared between the two processing sets.

5. Select the << Add button. Control moves the table's code and name from the All Other Tasks list to the Tables Assigned list.

6. Select any other tables that you want the processing sets to share.

7. Close the Views dialog box.

INI Data Groups

Group INI data specifies users who are part of a group and an application's INI file settings so that an INI file does not have to be stored and maintained on each user's PC for each application. The Group INI data is stored in the **STKN** table. Starting an application reads the INI information from the **STKN** table for that processing set's INI Data Group, unless it is overridden by Personal INI data for a specific User ID. See Chapter 6 for information about Personal INI data.

Note: INI Data Groups are not required. The system has default INI settings that it uses. These INI Data Groups are intended to allow clients to override the system defaults with their custom preferences.

The folder that has the application files also has IN1 files, which are the master copies of each application's INI files. The following is a list of the application IN1 files for Control:

--fap000.in1 fgl000.in1

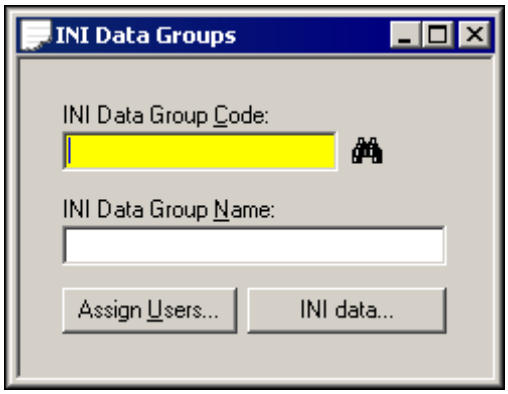
--flexiwf.in1 flximgvw.in1

--fpo000.in1 fpr000.in1

It is recommended that Administrators use Notepad to open the IN1 file for an application. Then copy and paste the IN1 file from Notepad into the Edit Processing Set INI Data dialog box instead of typing all of the application's INI file settings. Edit the IN1 to specify the settings that you want. This leaves a valid master copy on the server and avoids makes typographical errors while entering the settings.

Note: See Chapter 3 of the Installation Guide if the master INI files are not available on your network.

The INI Data Groups Dialog Box



INI Data Group Code

A unique code which represents the INI settings for an application group. The maximum is 8 characters. The value for this field is stored in the IniGrpCode column of the INIG table. Type: Char (8)

Required Field

INI Data Group Name

An optional, descriptive name for the INI Data group. The value for this field is stored in the IniDesc column of the INIG table. Type: VarChar (30)

Assign Users button

This button is available after adding or selecting an INI Data group. It opens the Assign Users to INI Group dialog box.

INI data… button

This button is available after adding the INI Data group. It opens the Edit Processing Set INI Data dialog box.

To Create an INI Data Group

Step / Action

1. Select System, INI Groups to open the **INI Data Groups** dialog box.

2. Type a unique INI Data Group Code that represents an application's INI file. **Required**.

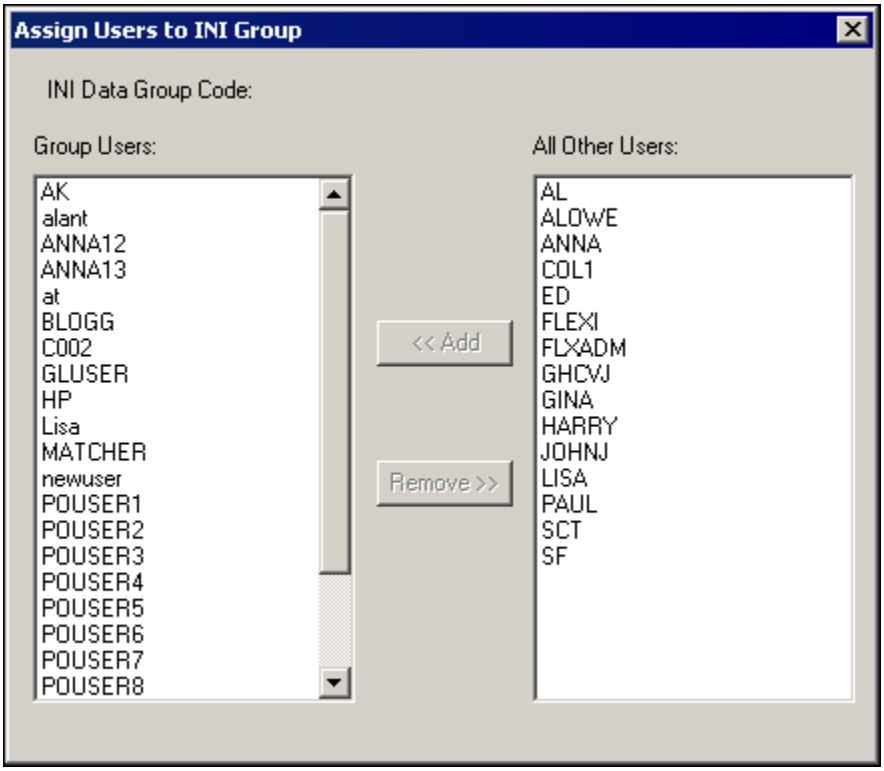
3. Type an optional, descriptive INI Data Group Name.

4. Select the Add Data button on the Control toolbar to add the INI Data Group.

Assign Users to INI Group Dialog Box

You can assign users after you have defined an INI Data Group. The users assigned to an INI Data Group use the same application INI file settings.

This assignment dialog box functions the same as other assignment dialog boxes to add and remove users. You must first create Users before you can assign them to an INI Data Group



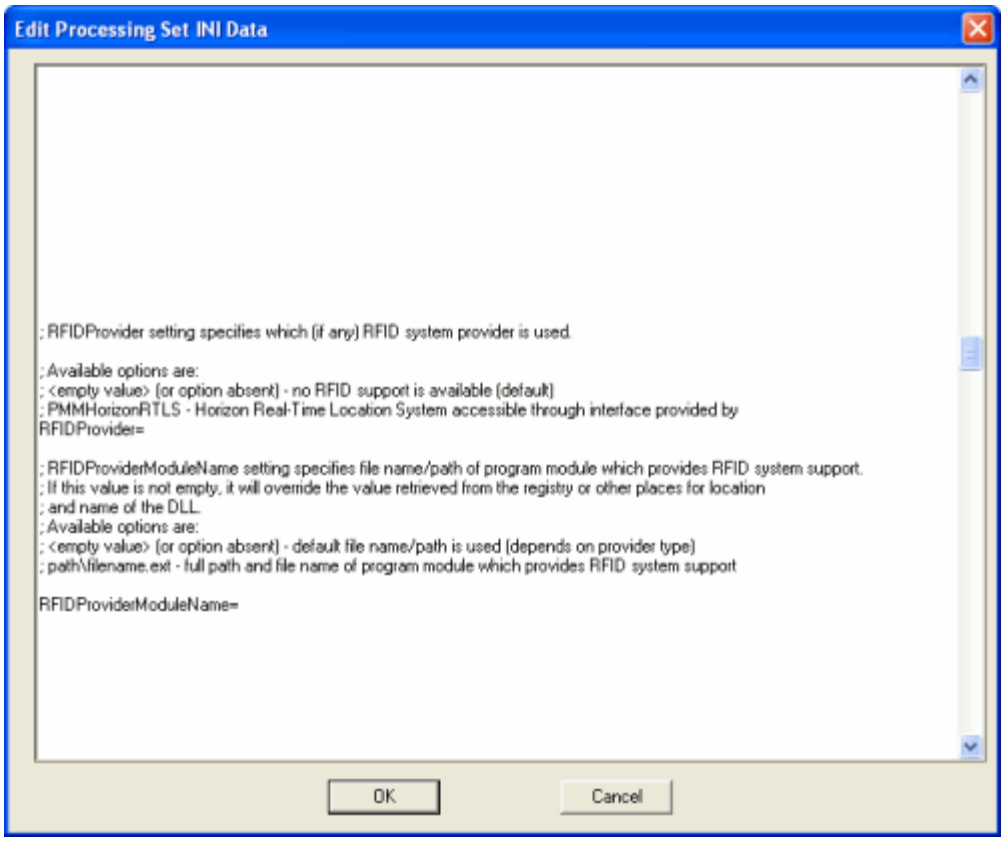
INI Data Group Code

This is a display field showing the name of the INI Data Group. The value for this field is stored in the IniGrpCode column of the INIG table. Type: Char (8)

RFID Provider Settings

The INI settings in Control provide the ability to set various defaults that will be used throughout the Application Suite. The Radio Frequency Identification (RFID) tag allows you to track the physical location of assets through an RFID system. The RFID tags are normally attached to the asset during Receiving. Additionally, you can view the physical location of a pre-asset through the RFID Asset Location Map. To enable RFID buttons and fields in Assets,

you will need to set up the RFID system in Control's INI settings. The image below is an example of RFID coding that has been set up through the INI Data Group.



Group Users

A list of those users that you have assigned to the INI Data Group. These users store the INI Data Group Code at the top in the IniGrpCode column of the USRC table. Type: Char (8)

All Other Users

A list of all users that are part of the processing set. The value for this field is from the USRC table.

<< Add button

Transfers a User from the All Other Users list box to the Group Users list box. This action assigns the user to the INI Data Group.

Remove >> button

Deletes a User from the Group Users list box and transfers it back to the All Other Users list box. This action removes the user from the INI Data Group.

To Assign Users to an INI Data Group

Step / Action

1. Select System, INI Groups to open the INI Data Groups dialog box.

2. Select or create the INI Data Group to which you want to assign users.

3. Select the Assign Users button to open the Assign Users to INI Group dialog box.

4. Scroll, if necessary, in the All Other Users list box to select one or more users who you want to assign to the INI Data Group. (Ctrl+Click selects noncontiguous users, Shift+Click selects contiguous users).

5. Select the <<Add button. The selected users appear in the Group Users list box, and no longer appear in the All Other Users list box.

6. Repeat Steps 4 and 5 until all the users that you want assigned to this INI Data Group appear in the Group Users list box.

7. Close the Assign Users to INI Group dialog box to return to the INI Data Groups dialog box.

Edit Processing Set INI Data Dialog Box

It is recommended that you copy settings from an ".in1" file into your group .ini and edit the settings for your group.

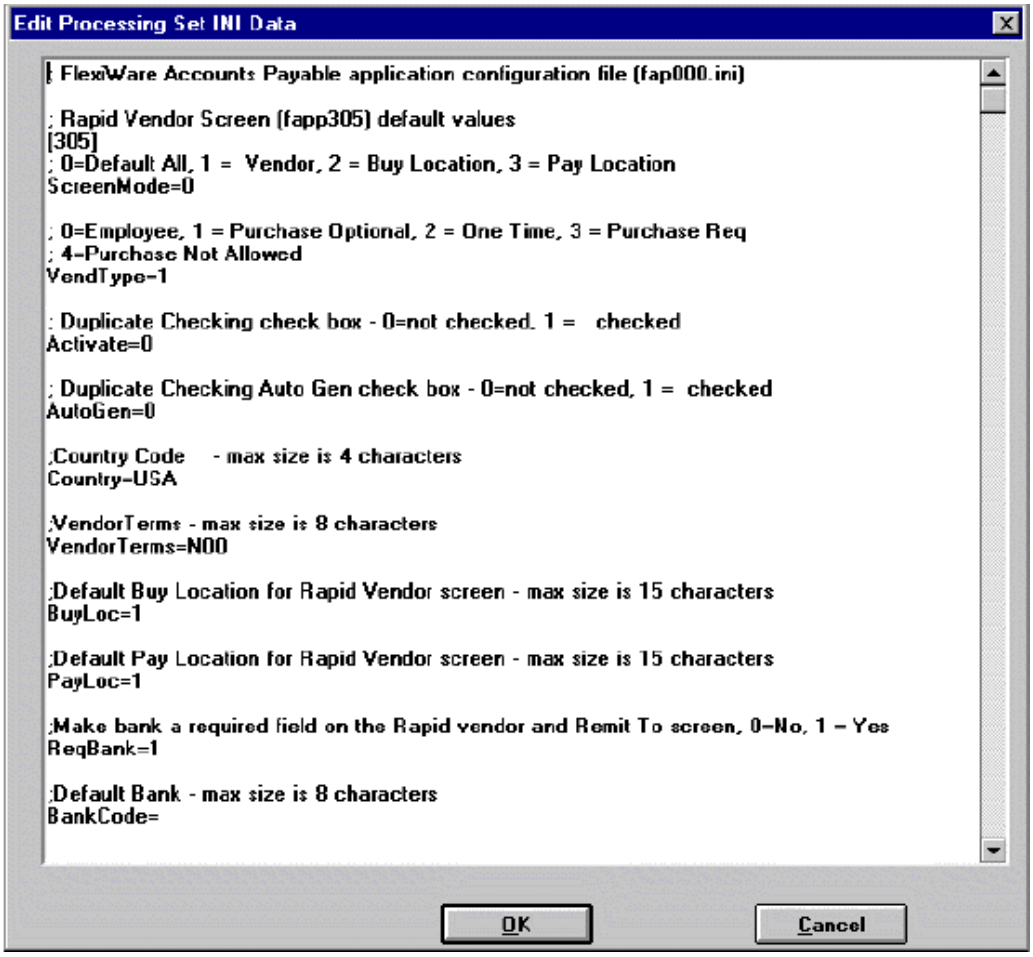
An example of settings you should copy to the "Defaults" area of your group .ini—if theynot already featured there—are for determining how many rows the system will add to a spreadsheet:

SpreadInitialRows=20. This setting defines how many rows should exist in a spreadsheet control before the system loads data into the spreadsheet.

SpreadMoreRows=500. This setting defines how many rows are read into the spreadsheet control when the system loads information from the database. This applies to the first time the system loads data into the spreadsheet and when the user selects the More button.

SpreadAddRows=500. This is the number of blank rows the system adds to the spreadsheet control when a user switches to "spreadsheet" mode. This allows the user to enter or paste new data into the new rows.

The following sample Edit Processing Set INI Data dialog window shows the fap000.in1 file text entry.



Text area

This is a large text box with scroll bars. Standard Windows cursor movement and selection techniques apply, including using CTRL+C to copy selected text to the Clipboard, CTRL+V to paste the contents of the Clipboard, and CTRL+X to delete selected text.

OK button

The button saves the text, closes the **Edit Processing Set INI Data** dialog box, and returns to the **INI Data Groups** dialog box.

Cancel button

This button closes the **Edit Processing Set INI Data** dialog box, and returns to the **INI Data Groups** dialog box WITHOUT SAVING THE TEXT OR CHANGES TO IT.

To Edit Processing Set INI Data

Step / Action

1. Select System, INI Groups to open the **INI Data Groups** dialog box.

2. Select or create the INI Data Group for which you want to create INI Group data.

3. 0Select the INI data … button at the bottom of the INI Data Groups dialog box. The Edit Processing Set **INI Data** dialog box opens.

4. RIGHT-Click on the Start button in the Windows Task Bar at the bottom of the screen, and select **Explore**. The Windows Explorer dialog box opens.

5. Double click on the IN1 file for the application you want from your server. The following are the possible file names:

--fap000.in1

--ffx000.in1

--fgl000.in1

--flexiwf.in1

--flximgvw.in1

--fpo000.in1

--fpr000.in1

--flxglobal.in1

The file opens in the Notepad dialog box.

6. Click to the left of the first character in the dialog box.

7. Scroll down until you can see the last character in the dialog box.

8. SHIFT-Click to the right of the last character. This should select the entire block of text.

9. Press CTRL+C on the keyboard to copy the selected text to the Clipboard.

10. Close Notepad.

11. Click in the Edit Processing Set INI Data dialog box, and then Press CTRL+V on the keyboard to paste the text from the Clipboard into this dialog box.

12. Edit the INI data text for this group.

13. Select the OK button to close the Edit Processing Set INI Data dialog box and save the group's INI data.

Chapter 4 Security

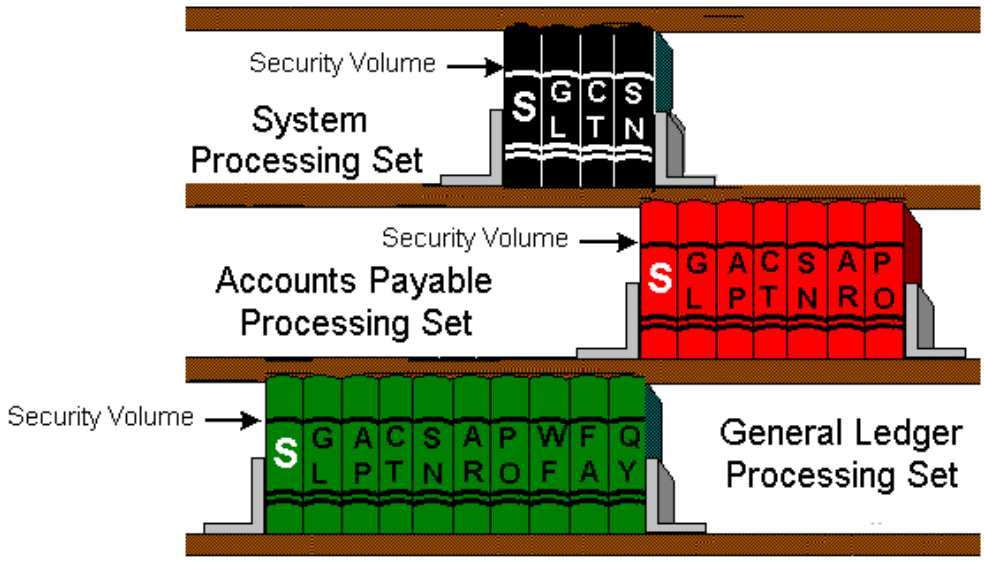
Security

This Help Sequence contains the following topics:

Introduction to Security
SignOn Overview
Features of the SignOn Security Dialog Box
SignOn DLL
Interface with a SignOn DLL
Setting Up SignOn Security Recommendations
Super Users
Users
User Report
Personal INI Data
Additional User Information
User Types
Processing Set and User Type Assignments
Create a User
Tasks
Security Groups
Security Group Definition
Assigning Users to a Security Group
Assigning Tasks to a Security Group
Security Options
Cloning Users
Encrypting the Database
Field Level Security
DB Login Management
Security Assignment Reporting
Network Authentication
Application Authentication

Introduction to Security

Using books on a bookshelf as an analogy, assume that each shelf has the books required for one processing set. The shelf for each processing set always has one Security book. The Security book controls who can sign on using the processing set, who can open which applications, and what these authorized and validated people are allowed to do in the application(s).



Control's security controls who can:

1. open a processing set's application(s),

2. use a processing set's data, and

3. complete specific tasks from the complete set of all tasks in a processing set.

This Help Sequence examines the steps to:

1. create and maintain Users who may sign on using one or more processing sets.

2. provide the processing set's **users**—employees and other qualified individuals—with an appropriate level of security that allows access to the programs and tasks necessary for specific job functions by:

Defining Control's Security Groups

Assigning tasks to a Security Group

Assigning Users to a Security Group

Monitoring the ongoing security of the processing set

Setting the connection criteria.

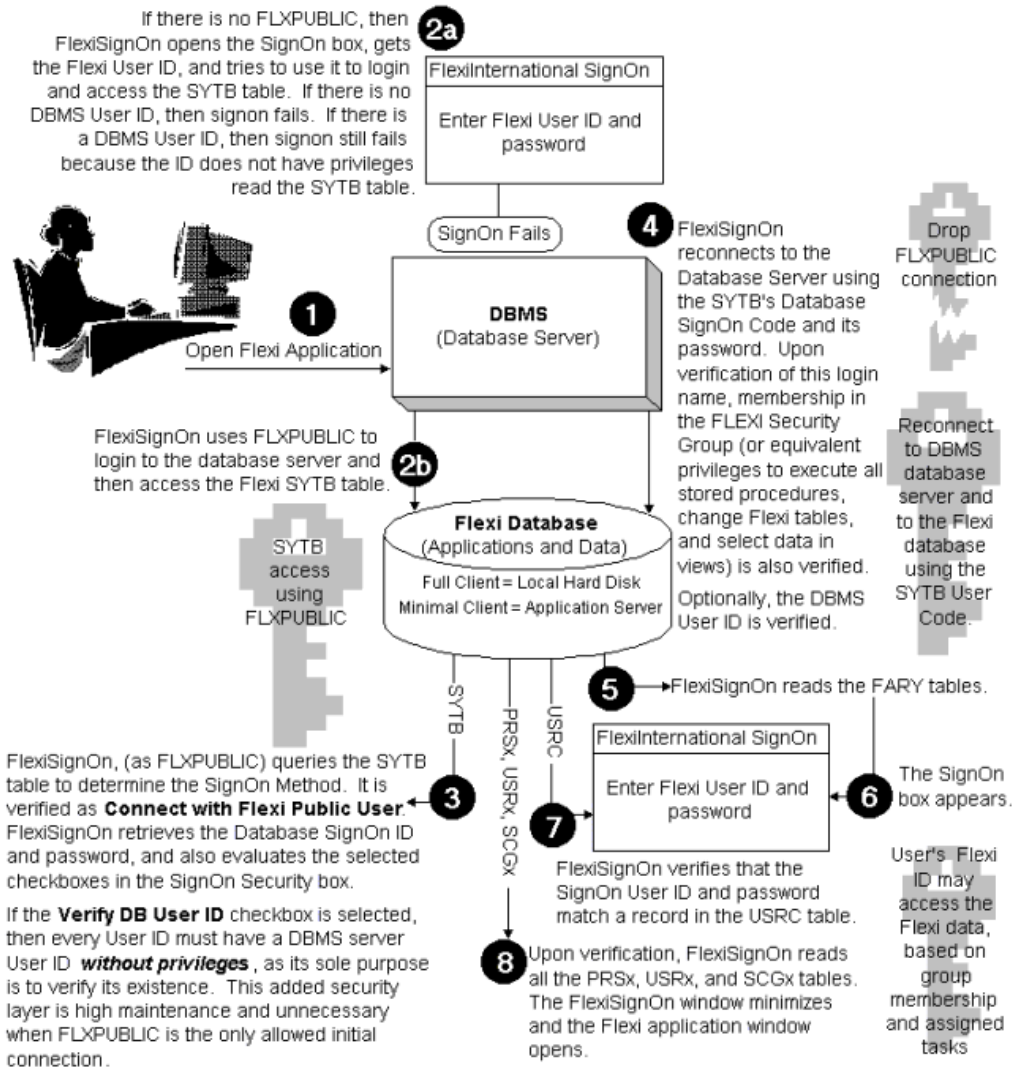
Encrypting the database.

SignOn Security Overview

The SignOn application starts before any other Control application to be sure that only authorized users can work with the database and use the appropriate Control applications.

The public database connection provides users with the necessary access through the front-end GUI of an application. SignOn fails if there is no FLXPUBLIC. When FLXPUBLIC exists, everyone accesses the database through an application's GUI, and performs just those tasks assigned to the group or groups to which their User ID belongs.

The Verify DB User ID parameter requires two identical IDs and passwords to increase security by having two functions maintain identical names and passwords. This method does not allow direct access to the database, controls front-end access with the system's group and task features, and has the maximum security.



Features of the SignOn Security Dialog Box

Open the **Signon Security** dialog window from the **Security** menu. Use this dialog to designate:

1. an optional SignOn DLL field specifying your company's DLL file, which is used to validate user IDs and passwords. It is used with the database connection, not in place of it.

2. the SignOn criteria that Control uses to specify database access, establish and change user passwords, and respond to access activity.

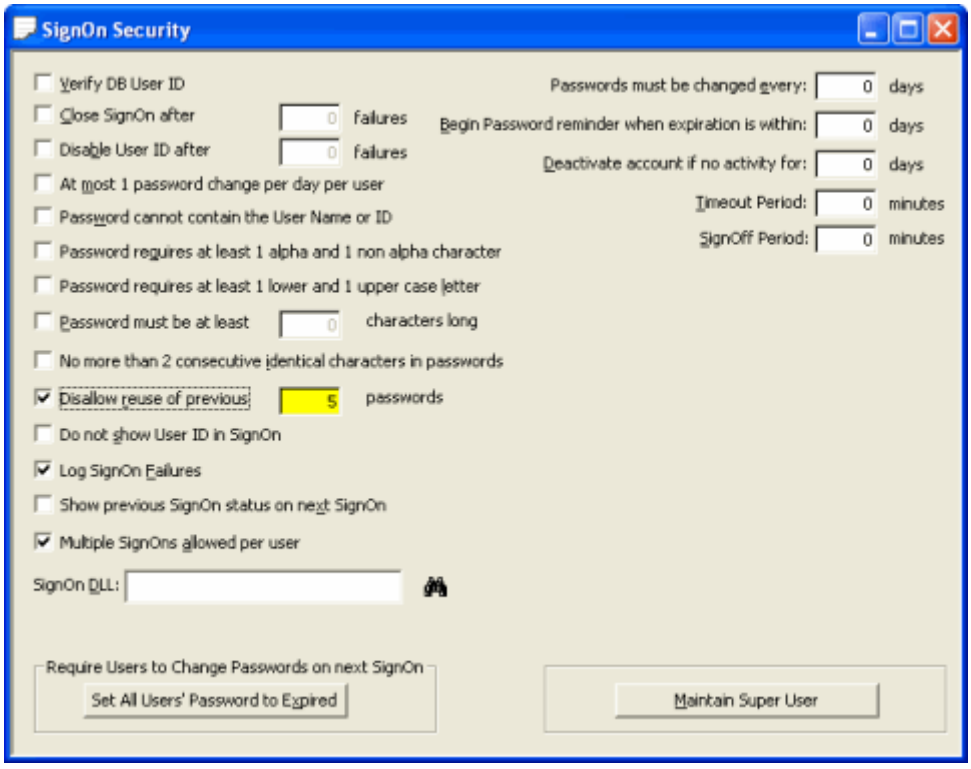
3. the password parameters that specify if and when passwords must change, and the idle time before Control suspends and/or closes an application.

SignOn Security Dialog Window

This dialog allows the security administrator to define global settings for user passwords that will apply to ALL users. The system will use these settings to determine how to validate user passwords, based on the security policy, regardless of User Type.

To access the SignOn Security dialog window:

Select the **Control** tab. In the **Security** group, select **SignOn**. The SignOn Security dialog window appears.



When a user connects via a directory service (Network Authentication), the system will bypass the password settings from the SignOn Security window. In this case, the network the user is logged on to controls and validates the password information.

Among the available password options is a setting to designate a number of **days before the password expiration by which you want the system to begin prompting the user to change the password**. There also is a setting to designate the **number of days after which you want the system to deactivate an account if it has no activity**.

If you select the **Password cannot contain the User Name or ID** check box, you will not be able to create a new user on the Users dialog box if the password has part of the same characters as the User ID or User Name. For example, if the User Name is DEL39214 and you attempt to create a password of 39214, you will not be able to create this new user.

In addition to the password options, there is an action button that allows you to **set all users passwords to expired**. This forces all users to change their passwords the next time they sign in. The system will prompt you with a message to confirm this setting. This setting will **NOT** affect users who have been defined with the “password does not expire” option (set in the Users Definition Window) or users connecting via a directory service network.

The **Multiple SignOns allowed per user** check box works in conjunction with the **Multiple Signons allowed** check box on the Users Definition Window. The following table explains the functionality of these two check boxes. If you make a change to these check boxes, you will need to save your changes, log off, and then log back on for the changes to take effect.

SignOn Security Dialog Window	User Definition Window	Functionality
Check box selected	Check box automatically selected and disabled; user can't change the setting	All users are permitted to sign on from multiple workstations using the same user ID
Check box **not** selected	Check box **not** selected	User is not permitted to sign on more than once
Check box **not** selected	Check box selected	User is permitted to sign on from multiple workstations

When changes occur in personnel, the System Administrator may want to change the Super User password. This password can be changed by clicking the Maintain Super User button. Only users with System Administrative privileges can access this screen; otherwise this button is disabled.

Verify Database User ID

Requires database authorization for all users. Because of the severe limits on access to the database, this specification should be used with caution.

Close SignOn after ___ failures

Closes the SignOn process if the User Code fails to gain access after the specified number of consecutive attempts.

Disable User ID after ___ failures

Disables the User Code if the code fails to gain access after the specified number of consecutive attempts.

At most one password change per day per user

Allows a user to change his or her password no more than once per calendar day.

Password cannot contain the User Name or User ID

Does not allow a password that is the same as the User Name or User ID.

Passwords require at least 1 letter and 1 non-alpha character

Every password must contain at least one alphabetical character (a-z, A-Z) and one non-alpha character (such as a number or punctuation mark. Do not use spaces.)

Passwords require at least 1 lower case and 1 upper case character

Every password must contain at least one lower case alphabetical character (a-z) and one upper case alphabetical character (A-Z.).

Passwords must be at least ___ characters long

A valid password must contain at least the specified number of characters. This requirement does not specify the nature of the characters.

No more than 2 consecutive, identical characters in passwords

A password can have only two identical, consecutive characters (upper and lower case letters are the same). (LOGG is acceptable but LOGGG and LoGgG are not.)

Disallow the re-use of previous passwords.

This setting will mandate that users cannot change their passwords back to previously used passwords. You can designate the specific number of prior passwords that canbe re-used.

Don't show previous User ID in SignOn

The most recently accepted User ID will not be displayed in the **SignOn** dialog box as the default entry. The User ID field will be blank.

Log SignOn failures

Logs each SignOn failure and the addition, deletion and/or modification of Users in the USRM table.

Show previous SignOn status on next SignOn

Displays the User ID, date of the last successful signon, and the number of failed attempts in the – Previous SignOns dialog box after successfully signing on.

Passwords must be changed every ___ days

The number of days allowed before a user is required to change their password.

Timeout Period

Maximum number of minutes of inactivity a workstation is allowed before SignOn suspends the application and returns the workstation to the SignOn dialog box. Any work in progress is saved, because application is only suspended. A limit does not apply if you specify “Ø.”

Sign-Off Period

The maximum number of additional idle minutes that can pass before SignOn terminates the application. Work in progress is not saved when this parameter is selected. A limit does not apply if you specify “Ø.”

SignOn DLL

Your company's SignOn DLL checks the validity of user IDs and passwords instead of the system software doing this. There is no change, however, in the user interface during the signon process.

Your company's DLL file must be coded to specifications. The following are skeleton C files that are available:

--CHKUSER16.H

--CHKUSER16.C

--CHKUSER32.H

--THUNK.C

--FCRPTUSR.LIB

The CHKUSER16 files are for 16 bit DLL files. THUNK.C has the specifications for loading the 32 bit CHKUSER32.H specifications. FCRPTUSR.LIB is the encryption file.

User Interface with a SignOn DLL

Your SignOn DLL does not change what the user sees during signon. After a user enters their sign on information, your SignOn DLL validates the ID and password, and security validates the processing set, database name, database DLL, and other security features.

Setting Up SignOn Security: Recommendations

The following steps are general, so be sure to consult with your support specialists before making any final decisions or selections.

Step / Action

1. Follow the steps to encrypt your database.

2. Define a Database User ID and User ID, but do **not** associate the User ID with a Control Security Group.

3. Select Security, SignOn Security to open the **SignOn Security** dialog box.

4. Type the Database User ID in the Database SignOn ID field of the SignOn Security dialog box. Type its password in the Database SignOn Password field of the SignOn Security dialog box.

5. Select the SignOn criteria and password parameters that you want. Optionally, select your company's SignOn DLL file so that it appears in the SignOn DLL field.

6. Use Control to define a FLXBATCH User ID. Do not create a Database ID for this user and do not associate the user with a Control Security Group.

7. Assign the Administrator and a limited number of qualified database specialists to a security group that is the only one to have access to Control tasks. No one should signon with the FLXADM User ID, including the Administrator, for routine activities. SignOn with the FLXADM User ID should be reserved for activities requiring access to the back end of the database (direct access to the tables).

8. Limit access to the Control “executable” file (fct000.exe) to the Administrator, and optionally, a back-up and/or department administrators.

9. Be sure that the DBMaint button on the SignOn box IS NOT available to your users. Only selected Administrators should have this button.

10. Select the appropriate SignOn Security checkboxes. It is not recommended that you select the Verify DB User ID checkbox, because it is not necessary and it is very high maintenance.

11. Periodically examine and purge the USRM table if you selected the Log SignOn failures checkbox in the SignOn Security dialog box.

USRM Table

This table accumulates the details of every signon failure, and the addition, modification and deletion of users. Be sure that you review the table regularly and delete rows with out-of-date or inconsequential information. Cleaning up this table must be done from the back-end of the database with a transactional query language for your databaseenvironment (e.g., ISQL for SQL) as there is no GUI in Control to do this. The following describes the columns in the USRM table:

USER_CODE The value in the **User ID** field of the **SignOn** box when a SignOn failure occurred.

MESS_NO A number that identifies the type of SignOn failure.

MESS_TEXT A description of the failure.

MESS_LEVEL This column stores the port setting from the FLEXI.INI file of the person who fails to signon, or who adds, modifies or deletes a User ID.

MESS_DATE_TIME The date and time of the failure.

MESS_EXP_DATE Not used.

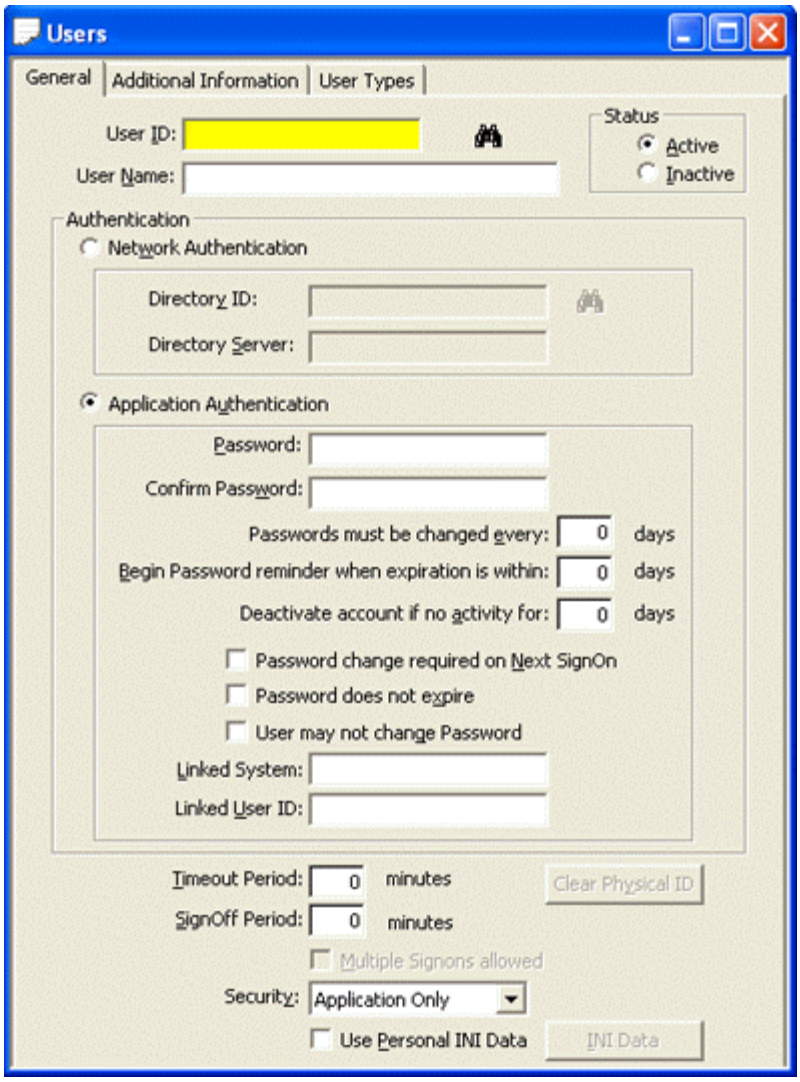
FLXUPDATE_USER If a password is being changed, this is the User ID of the Administrator who is changing the password.

Users Definition Window

The **Users Definition Window** allows you to create users as well as define access and security for those users. This dialog box allows you to create users based on specific network security principals. In other words, you can set up users that can access the Control system via their network login user name and password (no other password needed) (Network Authentication), and/or you can set up users and define security access just for a specific application (Application Authentication).

To access the Users Definition Window:

Select the **Control** tab. In the **Security** group, click **Users**. The Users dialog window appears.



As indicated above, you have two security options when setting up users. Click the links below to learn more about setting up users using **Network Authentication** and **Application Authentication**.

a.) Network Authentication is a LDAP-based authentication that is more secure than the Application Authentication. With Network Authentication, the user is authenticated with their Windows network password. In other words, after logging into Windows, if a user is set up with Network Authentication and is a valid user, there are no other passwords to type to access the Control system.

b.) Application Authentication uses passwords, a unique code, that in combination with the User ID, gives the user access to the processing set.

Important Note: Once users are created, you cannot change their authentication levels.

The **Multiple Signons allowed** check box works in conjunction with the **Multiple SignOns allowed per user** check box on the SignOn Security Dialog Window. The following table

explains the functionality of these two check boxes. If you make a change to these check boxes, you will need to save your changes, log off, and then log back on for the changes to take effect.

SignOn Security Dialog Window	Users Definition Window	Functionality
Check box selected	Check box automatically selected and disabled; user can't change the setting	All users are permitted to sign on from multiple workstations using the same user ID
Check box **not** selected	Check box **not** selected	User is not permitted to sign on more than once
Check box **not** selected	Check box selected	User is permitted to sign on from multiple workstations

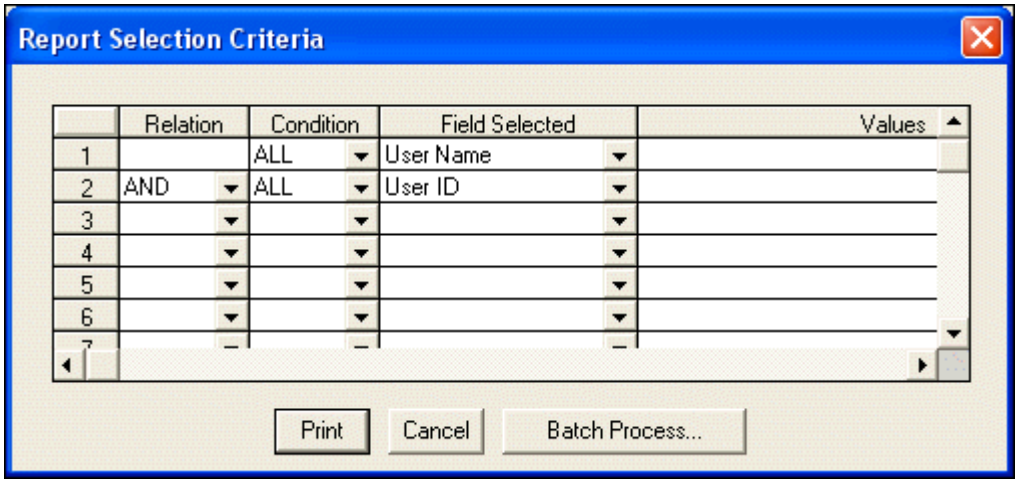
LDAP

Lightweight Directory Access Protocol - a software protocol used to locate files and devices in a network.

User Report

You can run a report of user information while you have the Users dialog window opened. Use the **print** icon in the application toolbar to launch a selection criteria window for the report. You can choose the type of data you want to include in the results from the spreadsheet column menus. Choose specific **user IDs**, **user names**, **user types**, and/or **statuses** for the report.

Then, use the **print** button in the selection criteria window to generate the user listing to your computer. Or, use the **batch process** button to send the report to a queue to print at a later time. The system will group the report results by status and then user ID.

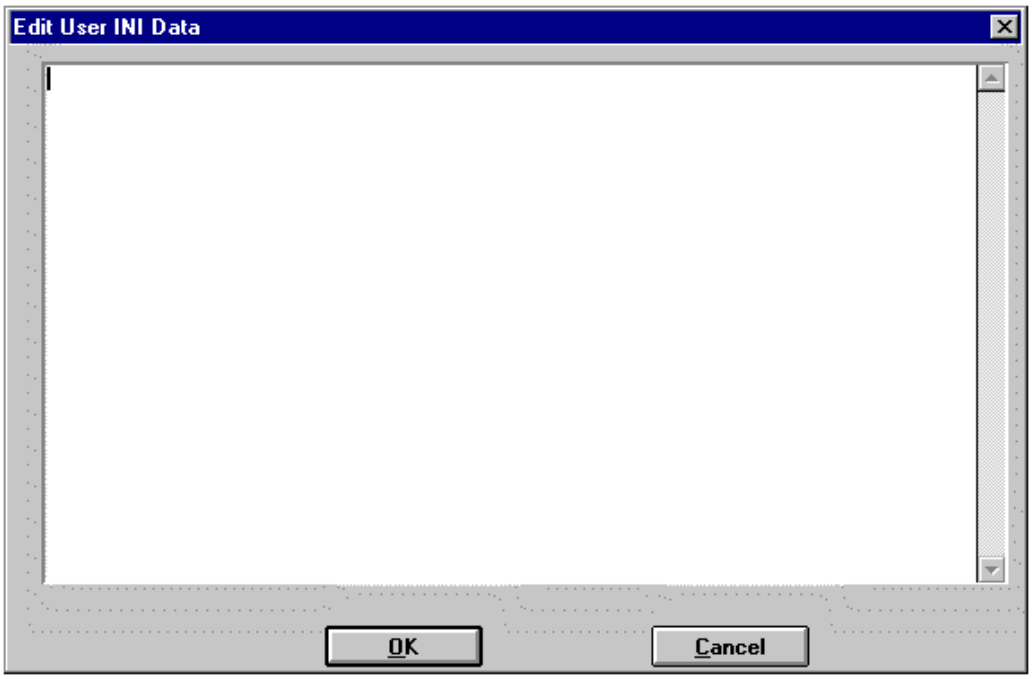


Personal INI Data

Personal INI data, like group INI data, specifies an applicationINI file settings so that the INI file does not have to be stored on a userPC. Personal INI data is stored in the STKN table. Starting an application reads the INI information stored in the STKN table for either a user or a usergroup.

Personal INI data overrides the INI data of any group to which it belongs. It is recommended that Group INI Data dialog box be copied to the Create or Edit User INI Data dialog box, and then edited for an individual.

The **Create or Edit User INI Data** dialog window is a large text entry box that has basic text editing capabilities. Open the **Edit Processing Set INI Data** dialog to copy and paste the group INI data here. You must use the keyboard shortcuts (Ctrl+C to copy and Ctrl+V to paste) to do this. Edit the user's INI data to meet that person's exceptions to the Group INI Data.



To Edit User INI Data

Step / Action

1. Select **Security**, **Users** to open the Users dialog box.

2. Select the **Use personal INI data** check box. The INI data. . . button becomes available.

3. Select the **INI data …** button. The **Edit User INI Data** dialog window opens.

4. Now to copy and paste the Group INI data. Select **System**, **INI Groups** to open the **INI Data Group** dialog box:

--Select the **INI data …** button. The **Edit Processing Set INI Data** dialog box opens. (If this dialog box is empty you may need to copy from the IN1 file on the server or type the INI file settings. See Chapter 3 of the Installation Guide for more information.)

--Click to the left of the first character in the dialog box.

--Scroll down until you can see the last character in the dialog box.

--Shift+Click to the right of the last character. This should select the entire block of text.

--Press **Ctrl+C** to copy the selected text to the Clipboard.

5. Select the **Cancel** button to close the **Edit Processing Set INI Data** dialog box, and then close the **INI Data Group** dialog box.

6. Click in the **Edit User INI Data** dialog box, and then Press **Ctrl+V** to paste the text from the Clipboard into this dialog box.

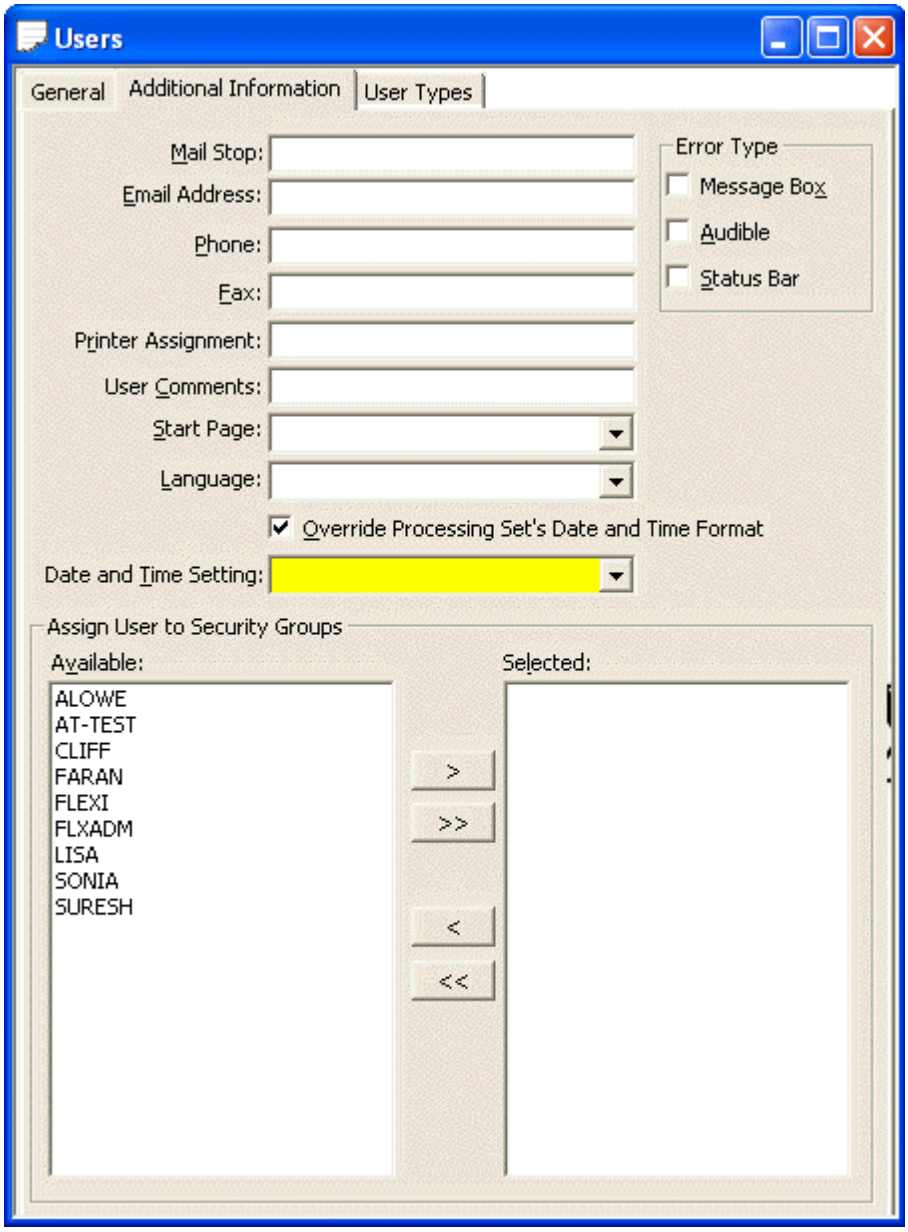
7. Edit the INI data text for this one user.

8. Select the **OK** button to close the **Edit User INI Data** dialog box.

Important! The system will save this information to the database after you have completed creating the new user and have used the **Add Row** icon to save all the Users dialog window data.

Additional User Information

This tab of the Users dialog window enables you to define security options for the user you are defining. The purpose of this tab is to define which application groups a user belongs to, and subsequently which screens the user can access.



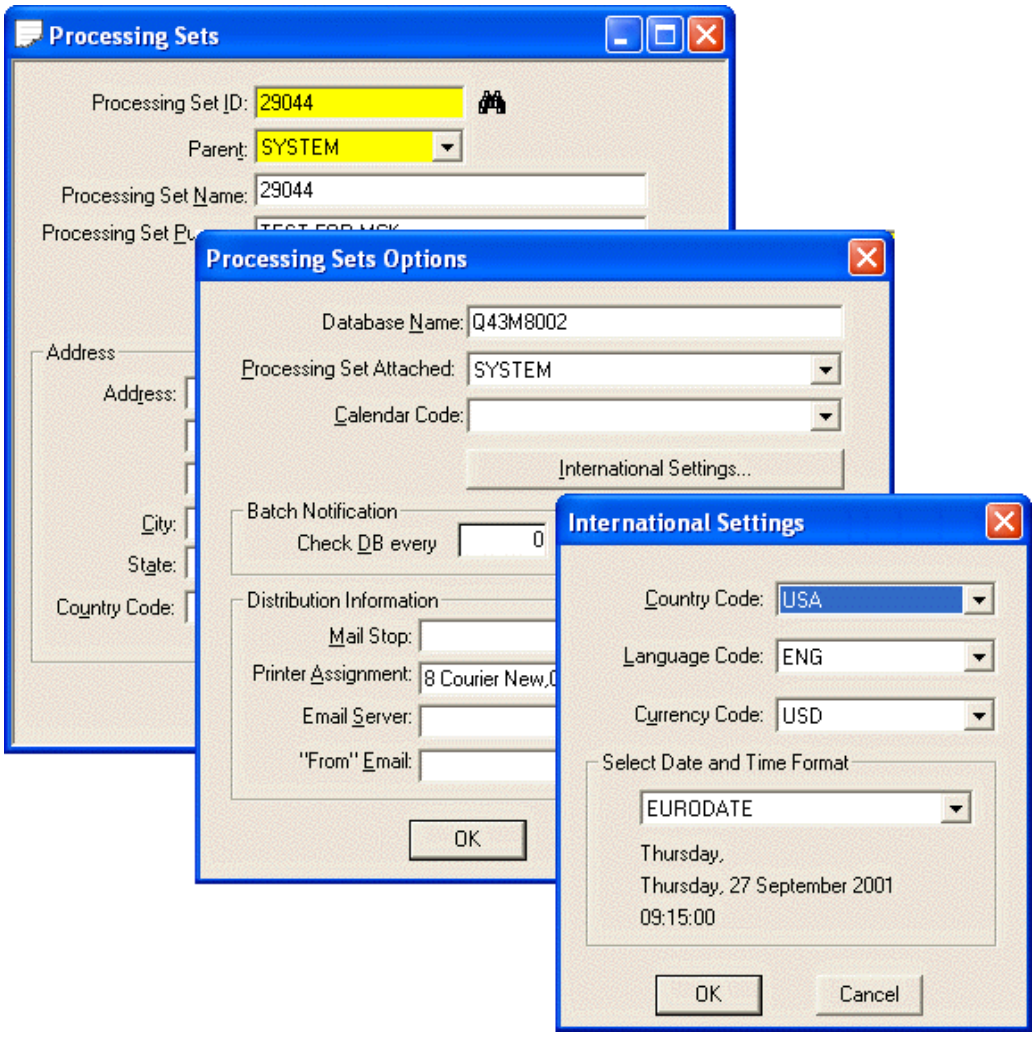
Enter identifying information about the user such as **Language** and **Phone**. **Mail Stop** is for the userlocation or e-mail address. Optionally, it may also be a fax number.

The **Printer Assignment** field reflects the printing specifications for default type settings and report processing mode. If this field is blank, you use the printing specifications for your processing set. Information entered here overrides the printing specifications in the processing set, or that the administrator specified for your user ID. It is recommended that you match the exact font size and font name from Notepad to be sure that it is a valid font. A six- to eight-point, fixed space font is recommended. The report processing designates where reports are sent. The “immediate” option processes reports immediately on the user's computer. These reports never appear in the SignOn window. “Queued” sends reports to a print queue on the

server and displays them in the SignOn window. “Screen” sends reports to a print queue on the server, and displays a copy of the report on the user's monitor.

You can also designate a customized **Start** (home) **page** for the user if that user is signing in through a portal (future functionality).

If you select the **Override Processing Set Date and Time Format** check box, the **Date and Time Setting** drop-box is enabled allowing you to select a desired format that is different from what is selected in the Processing Sets. When this check box is not selected, the system uses the date and time format from the International Settings in the Processing Sets:



Typically the Process Set is for a locale or country and thus the default date and time formats are applicable to all Users. However, a specific User may want to override the Processing Set setting to always use their desired format.

You must select an **Error Type** option to specify how the system communicates errors to the user. Instruct the system to open a **Message Box**, display the error message in the **Status Bar** of the application window, and/or generate an **Audible** sound to indicate an error. The user's computer must have a sound card to hear the beep and/or voice message. The fields of the Additional Information page are stored in the **USRA** table.

To assign a user to a security group, select a group from the **Available** list and click the **right arrow** button to move the group to the **Selected** list.

Tip: Users may edit their own options by selecting **Options** under the **File** menu in the **SignOn** application window, which stays open after successfully signing on. Users can enter and/or maintain their own user comments, mail stop, phone, printer assignment, and error type.

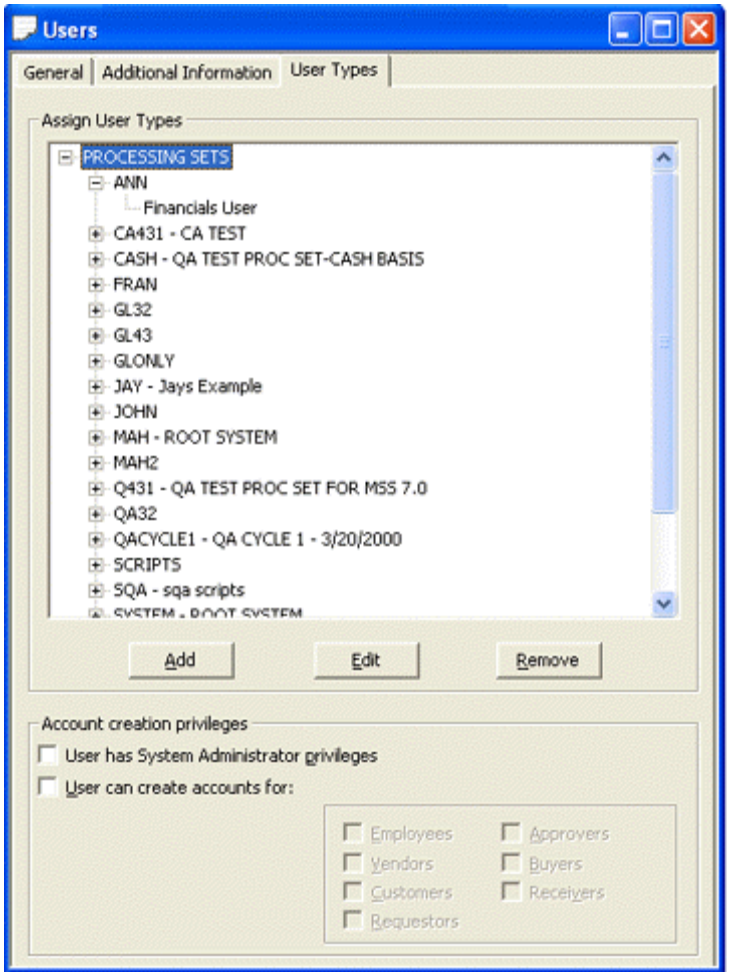
User Types

This tab of the Users window lets you assign account and/or processing set privileges to the user you are defining. When you assign the user to a processing set and user type, you are enabling the user to perform tasks associated with—and reserved for—those particular types of identities, or roles, in an application.

You'll choose the **account creation privileges** for the user, if applicable, specifying the administrative tasks the user may need. Grant the user **system administrator privileges** if the user needs the ability to define other users (as you are doing in this process) and have access to all other user accounts. You can further restrict these privileges by enabling the **create accounts** option; this allows the user to create accounts for only specific types of users; for example, you are defining a human resources user and need to allow this user to create accounts for employees only. In this case, you would select only the "**employee**" type option. You need to select the specific types allowed for the user.

Use the action buttons to assign or remove processing set and user types to or from the user's definition. After you have assigned this information, the system displays the new—or updated—selections in the text area of the User Types page.

Note: You can assign only the user types that have already been defined in an application.



Processing Set and User Type Assignments

This dialog window allows you to assign a user to a processing set and to specific types of roles for that user within an application. This window adds an additional layer of security by tying user IDs to specific roles within applications. You open this window from the User Types page of the Users dialog.

You must choose a **processing set** for the user you are defining. This assignment will allow the user access to a particular default work environment. If you are editing an existing user definition, the system displays the processing set in read-only mode; it cannot be changed at this point.

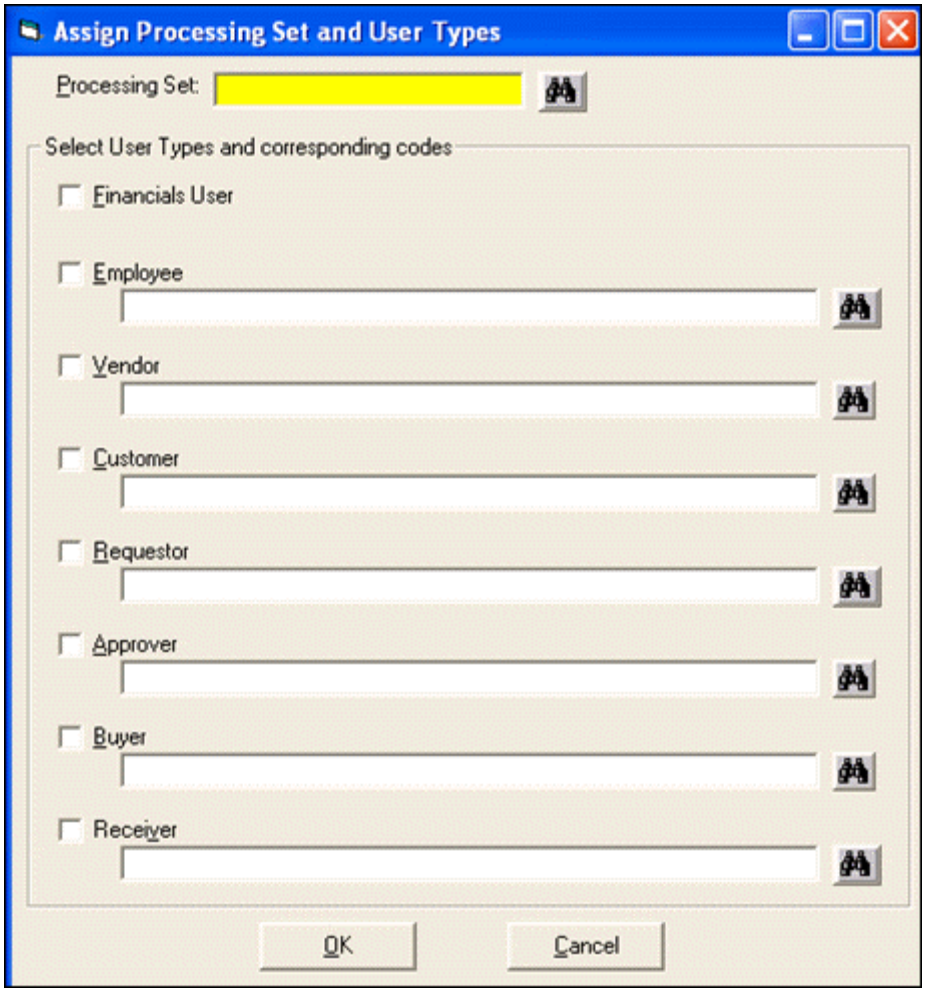
You will also choose the general **type** of roles you want the user to have and the specific user type codes that have been defined for an application, which allows the user certain permissions in that application. Use the **look-up** () icon to search for and select the user type codes. The processing set you choose limits the available user type codes; the system

displays only those codes that are defined under—and unique to—that processing set. The system will prompt you with a warning if you try to assign a buyer, requestor, or approver user type code that's already been assigned to another user. The system will enable you, however, to reassign the code at that point so that you can apply it to the user you are defining. System administrators who are defining users must enable the **Financials** user type for each user and processing set combination that should be allowed to sign into the Financials application suite.

Whenever a change is made to a **buyer**, **requestor**, or **approver** user ID from this dialog, the system will automatically update your Purchasing application to reflect the change. Conversely, the system will update this dialog if the change to any of these IDs is made from your Purchasing application. What is nice about the Assign Processing Set and User Types window is that as you set up new users and assign roles, such as “Approver,” you can associate the user type to the role directly on this window. There's no need to go into Purchasing to associate the user to the approver role. The approver in Purchasing becomes linked to a user ID.

Note: The employee, **receiver**, **vendor**,and **customer** type options are NOT available at this time. They are planned for future functionality. The user with a “vendor” role will be able to log in to a self service and look at the account history and accounting information only for that particular vendor.

Use the **OK** button to save the processing set and user type assignments. The system will automatically update the User Types page with this information.



Create a User

Follow these steps to define a new user.

Step / Action

1. Open the Users dialog window from the **Security** menu.

2. Enter a unique **user I**D that represents the user. **Required**.

3. Select the user's **authentication** type. **Required**.

4. Enter a **user name**.

5. If you are setting up a user with application native authentication, enter a unique **password** for the user. **Required for application native authentication.**

6. If applicable, set options for the password, account, and session.

7. Use the action button and other pages of this dialog window to enter any other applicable additional user information such as personal INI data, user types, and processing sets.

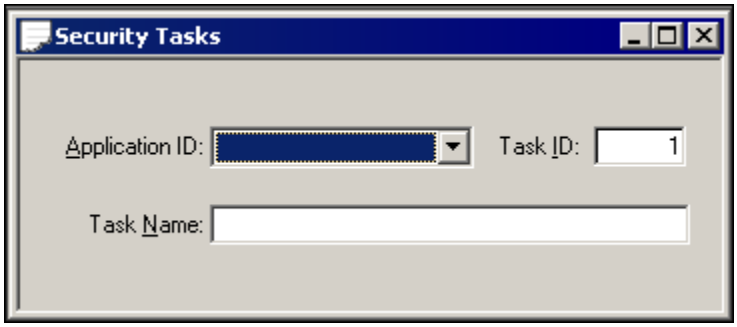
Reminder: The system won't save any information you enter in these other areas of the Users dialog until you have used the Add Row icon in the final step.

8. Use the **Add Row** icon in the application toolbar, and then the **OK** button in the Confirmation message, to save the new user information.

Security Tasks Dialog Box

A “task” is a set of rules and procedures to accomplish a particular, well-defined goal. During the installation of your Control system, tasks are defined for each application module.

Select **Security**, **Tasks** to open the Security Tasks dialog box and review all the Control tasks — or those for a single application. **DO NOT ALTER THE INFORMATION IN THIS DIALOG BOX — Close the dialog box and discard the changes if you should accidentally change the information**.



Application ID

A drop-down list of the applications that are part of the processing set.

The value for this field is the numeric for the Application ID and the Task ID that is stored in the Task Code column of the Task Definitions (**FLAC**) table. Type: Char (4)

60 = CT Control

61 = GL Ledger

62 = AP Payables

64 = AR Receivables

65 = FA Assets

66 = PO Purchasing

69 = DB FlexiDB

73 = PR Capital Projects

90 = Custom

Task ID

The identifying number assigned to a task. The value for this field is the last two digits of the Task Code column of the Task Definitions (**FLAC**) table. Type: Char (4)

Task Name

The name that has been assigned to a task. The value for this field is stored in the Task Code column of the Task Definitions (**FLAC**) table. Type: Char (20)

To View Tasks

Step / Action

1. Select Security, Tasks to open the **Security Tasks** dialog box.

2. Place your cursor in the Task Name field and select the Select button on the Control toolbar. The Security Tasks Select search dialog box opens with a list of tasks associated with the current signon processing set.

3. Select a task and Click on the OK button to view the task's identifying and descriptive information in the Security Tasks dialog box.

A Word of Caution...

A Word of Caution...

You SHOULD NOT create a new task or change the rules and procedures of a current task. Use the Security Tasks dialog box only to view task information.

Programmers and developers are the only people who should create a new task.

Introduction to Security Groups

Applications cannot function until you have defined and created the processing set's Security Groups. A Security Group is a combination of:

Only those tasks necessary for a job function, such as AR Invoice processing, that is done by a group of people. The complete list of tasks from which to choose is compiled from the tasks of each application that has been identified with the processing set.

Users who are responsible for carrying out these tasks.

Keep these guidelines in mind when creating a Security Group:

1. A user can be assigned to more than one Security Group.

2. A task can be assigned to more than one Security Group.

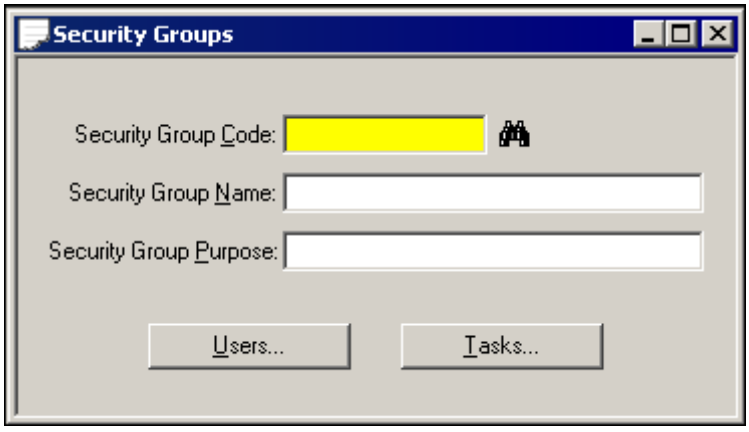
3. A Security Group can contain tasks from more than one application.

There are three actions that must be completed to create a Security Group:

1. Security Group Definition
2. User Assignments
3. Task Assignments.

Security Groups Dialog Box

Naming and describing a Security Group is the first **Step** / Action in creating a Security Group. Select **Security**, **Groups** to open the **Security Groups** dialog box.



Security Group Code

A unique code which you assign to represent the Security Group. Size: 8, alphanumeric. The value for this field is stored in the SecGroupCode column of the SCGM table. Type: Char (8)

Required Field

Security Group Name

The name that you give to the Security Group. Size: 30, alphanumeric. The value for this field is stored in the SecGroupName column of the SCGM table. Type: Char (30)

Security Group Purpose

A brief description of the role of the Security Group. Size: 34, alphanumeric. The value for this field is stored in the SecGrouPurp column of the SCGM table. Type: Char (60)

Users button

Opens the Assign Users to Security Group dialog box. Youuse this dialog box in Step / Action 2.

Tasks button

Opens the Assign Tasks to Security Group dialog box. You'll use this dialog box in Step / Action 3.

To Define A Security Group

Step / Action

1. Select Security, Groups to open the **Security Groups** dialog box.

2. Type a **Security Group Code**. Required.

3. Type a **Security Group Name**.

4. Type a **Security Group Purpose**.

5. Select the **Add Row** button and then select the **OK** button to close the Message Pad.

To Open and Review a Security Group Definition

Take these Step / Actions to review the components and attributes of a Security Group that you have defined and added to a processing set:

Step / Action

1. Select **Security**, **Groups** to open the **Security Groups** dialog box.

2. Click in the **Security Group Code** field and select the **Select** button to open the **Security Group Select** dialog box.

3. Scroll until you see the Security Group you want and then Click on it to highlight it.

4. Select the **OK** button to open the **Security Groups** dialog box with complete information for the selected group.

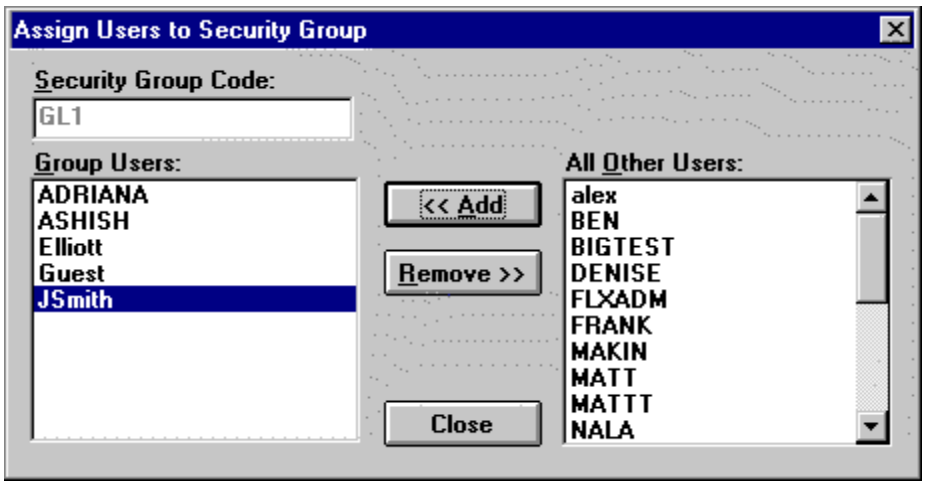
5. Review the data and make any changes.

6. Select the **Change Row** button and then select the **OK** button at the bottom of the Message Pad.

Assign Users to Security Group Dialog Box

Assigning users to the Security Group is the second Step / Action in creating a Security Group. Individuals **must** be valid Users before their IDs may be assigned to a Security Group.

Select the **Users** button in the **Security Groups** dialog box to open the **Assign Users to Security Group** dialog box.



Security Group Code

The security groupidentifying code. This field displays the value in the **Security Group Code** field of the **Security Groups** dialog box. The value for this field is stored in the SecGroupCode column of the **SCGU** table. Type: Char (8)

Group Users

A list of User Codes representing users whom you have assigned to this Security Group. In the example, the Administrator has assigned five users to GL1 Security Group. The value for this field is stored in the User Code column of the **SCGU** table. Type: Char (20)

All Other Users

A list of User Codes representing those users with active User Security Records whom have not been assigned to the Security Group. The values for this field reference the UserCode column of the **USRC** table. Type: Char (20)

<<Add button

Transfers a User Code from the **All Other Users** field to the **Group Users** field. This action assigns the user to the Security Group.

Remove >> button

Deletes a User Code from the **Group Users** field and transfers it to the **All Other Users** field. This action removes the user from the Security Group.

Close button

Updates the membership of the Security Group to reflect the list in the **Group Users** field and returns you to the **Security Groups** dialog box.

To Assign Users to a Security Group

Step / Action

1. Select Security, Groups to open the Security Groups dialog box.

2. Define a new Security Group or use the Security Groups Select search dialog box to select an active Security Group.

3. Select the Users button to open the Assign Users to Security Group dialog box.

4. Scroll through the User Codes in the All Other Users field until you find the code of a user who is to be part of the Security Group.

5. Select the User Code.

6. Select the << Add button. Control moves the User Code to the Group Users field and adds the user to the Security Group.

7. Move other User Codes to the Group Users field until the Security Group's membership is complete.

8. Select the Close button to return to the Security Groups dialog box.

To Remove Users from a Security Group

Step / Action

1. Select Security, Groups to open the Security Groups dialog box.

2. Use the Security Groups Select search dialog box to retrieve data on an active Security Group.

3. Select the Users button to open the Assign Users to Security Group dialog box.

4. Review the User Codes in the Group Users field until you find the User Code of the user who is to be removed from the Security Group.

5. Select the User Code.

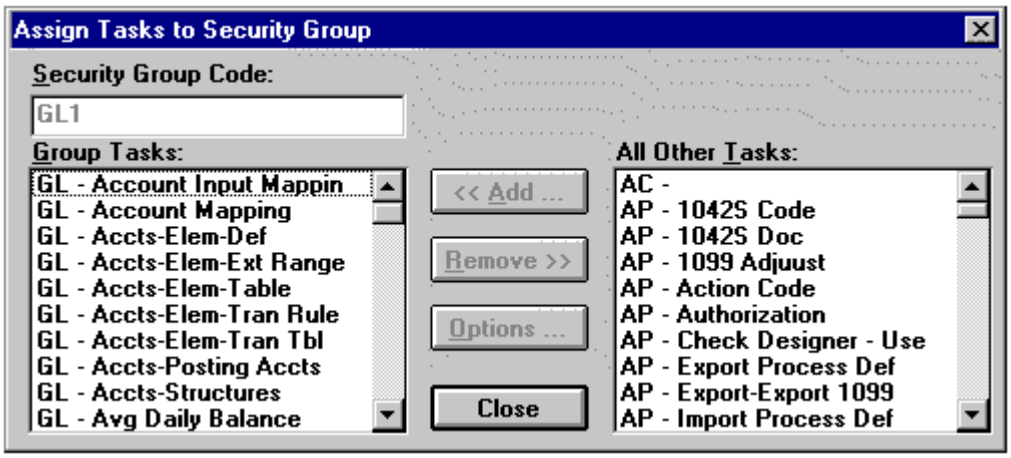
6. Select the Remove >> button. Control moves the User Code to the All Other Users field and withdraws the user from the Security Group.

7. Select the Close button to save these changes and return to the Security Group entry dialog box.

Assign Tasks to Security Group Dialog Box

Specifying the tasks that members of the Security Group may perform is the third and final Step / Action in creating Security Groups.

Select the **Tasks** button at the bottom of the **Security Groups** dialog box to open the **Assign Tasks to Security Group** dialog box.



Group Tasks

A list of Task ID's representing those tasks that you are assigning to this Security Group. In the example, the Administrator is assigning certain tasks associated with the Ledger application to the GL1 Security Group. The value for this field is stored in the Task Code column of the Task Definitions (**SCGD**) table. Type: Char (4)

All Other Tasks

A list of Task ID's representing all tasks that are part of the processing set. The value for this field is from the Task Code column of the Task Definitions (**FLAC**) table that are not assigned to the current Security Group.

<<Add button

Transfers a Task ID from the **All Other Tasks** field to the **Group Tasks** field. This action assigns the task to the Security Group.

Remove >> button

Deletes a Task ID from the **Group Tasks** field and transfers it to the **All Other Tasks** field. This action removes the task from the Security Group.

Options button

Opens the **Security Options** dialog box. Youuse this dialog box to specify the ways in which a Security Groupmembers can carry out a particular task

Close button

Updates the list of tasks that can be conducted by members of the Security Group and returns you to the **Security Groups** dialog box.

To Assign Tasks to a Security Group

Step / Action

1. Select **Security**, **Groups** to open the **Security Groups** dialog box.

2. Create a new Security Group or use the **Security Groups Select** search dialog box to retrieve an active Security Group.

3. Select the **Tasks** button to open the **Assign Tasks to Security Group** dialog box.

4. Scroll through the Task IDin the **Group Tasks** field until you find a task to assign to the Security Group.

5. Select one or more Task IDs.

6. Select the <<Add button. The **Security Options** dialog box opens. Set the security options for the selected task(s).

7. Select the OK button after selecting and clearing the security options check boxes. The selected task(s) appears in the Group Tasks list box of the Assign Tasks to Security Group dialog box.

8. Repeat Step / Actions 4 through 7 until you have assigned tasks with the necessary security options to the Security Group.

9. Select the Close button to return to the Security Group dialog box.

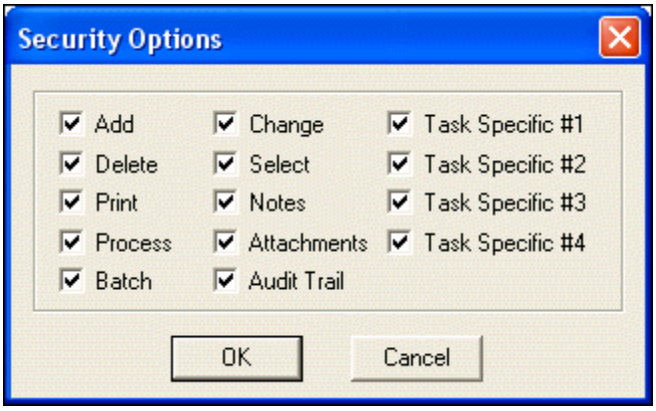
Security Options Dialog Window

Selecting the **Add** button to assign a task to a security group opens the **Security Options** dialog window. This dialog window defines and limits the ways in which a group uses a task. You **must** select the security options for each task that you assign to a security group. While it is easy to select all the tasks that you want to assign to a security group, you may need to assign them one at a time because each one requires different security options. You may modify the security options after assigning a task to the group. Each option allows members of the security group to perform a certain action:

1. **add** data generated by this task to the processing set's database.
2. **delete** data that has been generated by this task.
3. **print** information associated with this task.
4. **process** transactions that are part of the task.
5. submit individual transactions for **batch** (deferred) processing at a later time.
6. **change** data that has been generated by this task.
7. use the application's search functions to find and **select** the task's records.
8. add **notes** to records generated by this task.
9. add file **attachments** to records generated by this task.
10. view **audit trail** tracking on modifications to records generated by this task.
11. use additional **task-specific** functions that have been defined.

The value for each field is the sum of the selected check boxes and is stored in the SecMode column of the **SCGD** table.

Add=1, Change=2, Delete=4, Select=8, Print=16, Notes=32, Process=64, Batch=128, Attachments=4096, Audit Trail=8192, Task Specific #1=256, Task Specific #2=512, Task Specific #3=1024, Task Specific #4=2048.



To Set Security Options for One or More Selected Task(s)

Step / Action

1. Select **Groups** under the **Security** menu to open the Security Groups dialog window.

2. Use the **Security Group Code Search** dialog window to retrieve an active **security group**.

3. Use the **Tasks** button to open the Assign Tasks to Security Group dialog window.

4. Select one of the **group tasks**.

5. Use the **Options** button to open the Security Options dialog window.

6. Select the security options that the security group's members may perform as part of the selected task or tasks.

7. Review your selections.

8. Use the **OK** button to close the Security Options dialog window.

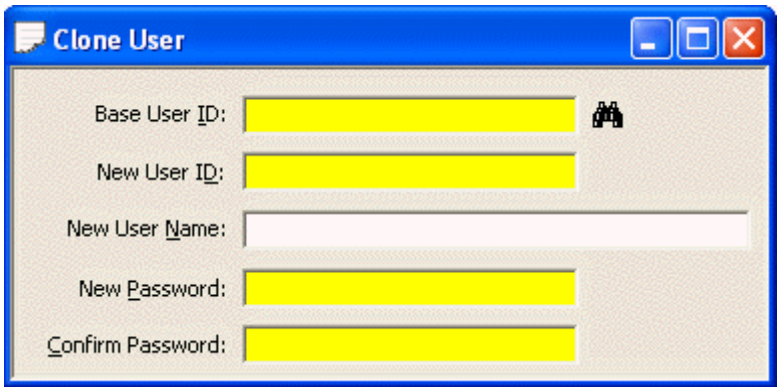
Clone User Dialog Box

There are several steps involved in setting up one user, which becomes tedious when it is the same group membership and options for several users. Control lets you create one user, which you may then clone to create other users — a new User ID, name and password are all that are required.

You must first create a User who becomes the Base User ID for the clones you want to create. Create a User who has the group memberships, security options and optionally, Personal INI Data that is common to a department, group, or function. Leave the information that varies from user to user, such as mail stop, blank. Enter the information that is common to most of the users, such as printer assignment. You can edit any cloned User ID after it is created to enter the specific user's information that was left blank in the Base User ID.

To access the Clone User dialog box:

1. From the **Security** menu, select **Clone User**. The Clone User dialog box appears.



2. In the **Base User ID** field, either type the user ID that you want to copy or use the look-up icon () to search for an existing user name and ID. The Base User ID should have been previously defined with the group membership, options, and Personal INI data, as this is the basis for the New User ID that you want to create. It does not have to be a real user ID that someone uses. Think of the **Base User ID** as a template to create new users for a department, function, or other group that has the same user requirements. The value for this field is stored in the UserCode column of the **USRC** table. Type: Char (20)

Required Field

3. In the **New User ID** field, enter a unique code that represents the new user that you creating. Size: 30, alphanumeric. The value for this field is stored in the UserCode column of the **USRC** table. Type: Char (20)

Required Field

4. Enter a **New User Name**. . Size: 30, alphanumeric. The value for this field is stored in the UserName column of the **USRC** table. Type: Char (30)

5. Enter the **New Password**, which is a unique code that combines with the User ID to give a user access to a processing set. The password is case sensitive. This field is blank after creating a user so that the number of positions is not available. Size: 14, alphanumeric. The value for this field is stored in the UserPass column of the **USRC** table. Type: VarChar (200)

Required Field

6. **Confirm** the new password. The confirmed password must match the new password.

Required Field

7. Select the **Add Row** icon and select **OK** in the Confirmation Message Pad. After clicking **Add Row**, the newly cloned user information appears on the Users Definition dialog window, which allows you to further define security information for the user, such as security groups and user types.

Note: If the Base User ID you are attempting to clone has been set up for Network Authentication, you will not be able to clone the new user. Only Base Users that have been previously set up with Application Authentication can be cloned.

8. Repeat Steps 3 through 7 to clone additional users for the same **Base User ID**. Repeat Steps 2 through 7 to close users for a different **Base User ID**.

To Encrypt the Database

Encryption of the database encrypts users password so that they are unintelligible to anyone who can read the database table that stores them. The following paragraphs outline encryption Step / Actions and the impact of encryption on the SignOn process.

Step / Action

1. Open your FLEXI.INI file. (For a thorough review of .INI file settings, see the Installation Guide covering the release with which you are working.)

2. In the Resource.DLL section, verify this setting: Signon=fsneng.dll

3. Verify this specification in the FlexiWare32 section of the FLEXI.INI file: DBMaintID=FLEXIPOWER

4. The FLEXIPOWER setting makes the USER SQL button available in the **Database Maintenance** dialog box.

5. SignOn to open the SignOn dialog box. Type the User ID, Password and Processing Set in the SignOn dialog box, and select the DB Maint button to open the Database Maintenance dialog box.

6. Select the User SQL button to open the Run User SQL dialog box.

7. In the Enter SQL Command area, type the following: ENCRYPT FLEXI DB K=<encryption key>

8. Select the OK button to start the encryption process. This encrypts all passwords in the SYTB and USRC tables, and will displays status and completion messages in the SQL Messages area.

9. Run FlexiDB.

10. Select Generation, Import Knowledge to import the knowledge base. (See the FlexiDB AdministratorGuide for a detailed explanation.)

11. Select Definition, Column to open the Column Definition dialog box.

12. Select these check boxes in the Encryption group box: Encrypt, User Pass, UserInterPass, DbaPass, PriorPass.

13. Select the OK button on the Run User SQL dialog box to start the encryption process. This encrypts all passwords in the SYTB and USRC tables, and displays status and completion messages in the SQL Messages area.

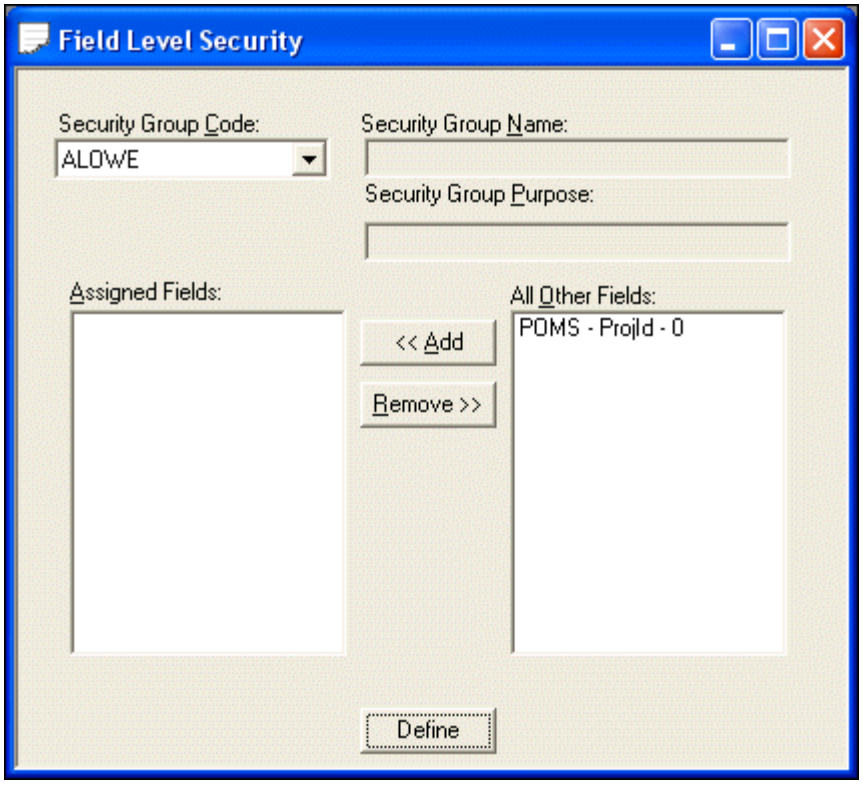
14. Close FlexiDB.

15. Follow the procedures in Chapter 2 of the Control Installation Guide to generate a new Data Dictionary (FARY) table.

16. Export the Data Dictionary (FARY) table to a file for safekeeping.

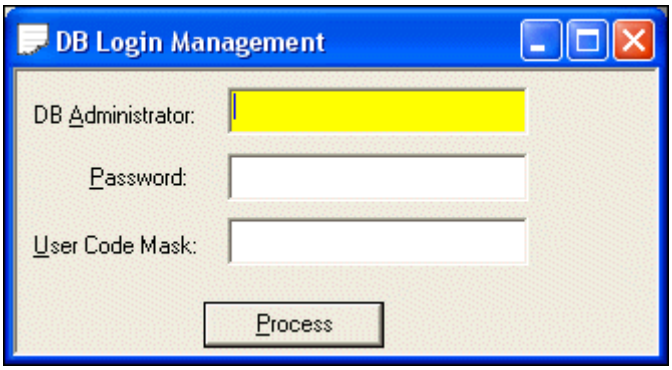
Field Level Security

As the administrator, you need to assign user permission to various fields within each application database. Use the **Field Level Security** dialog window to assign these rights. Users cannot access fields that you do not select for them. You can open the permissions window from the **Security** menu.



DB Log In Management

As the administrator, you also have the ability to change user passwords. The **DB Login Management** dialog window enables you to make these changes. You can access the dialog from the **Security** menu.



Security Assignment Reporting

The Control system allows you, the Administrator, to run reports for viewing user security assignments that are associated with security groups for various applications.

All reports display the permissions users have as part of the security groups to which they are assigned within a processing set of an application. The data includes tasks—and task options—associated with each group and permitted for each user. You can filter the report by processing set, group code, user ID, task, and application. The “in list” filter option further allows you to select multiple values if you don't want to run a report for “all” values or just one.

In addition, you have options to show 1) permissions of users who are currently inactive in the system and 2) company security data, meaning the particular companies for which a user is allowed to view information with their security assignments.

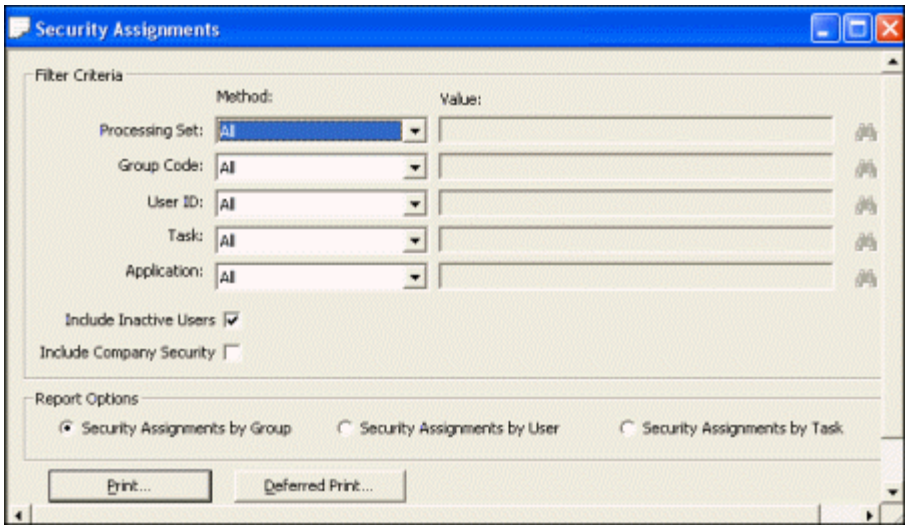
You can run three types of reports that will include security assignment information. The system allows you to group the report data by group, user, or task:

1. By “**group**” allows you to organize the report by security group. It displays the security tasks—including task options—permitted to each of those groups, as well as the users who have permissions for those group and tasks.

2. By “**user**” allows you to organize the report by users who have security permissions. It displays the security groups to which each of those users is assigned, as well as the security tasks and options the users have permissions for within those groups.

3. By “**task**” allows you to organize the report by security tasks. It displays the security options permitted with each of those tasks, as well as the users and groups who have permissions for those tasks and options.

Use the Security Assignments dialog window to run this report. You can access this window under the Reports menu by choosing “Security Assignments.” Simply select the type of security data you want to include…and the type of report you want to run. Then, use the Print button to generate the report.

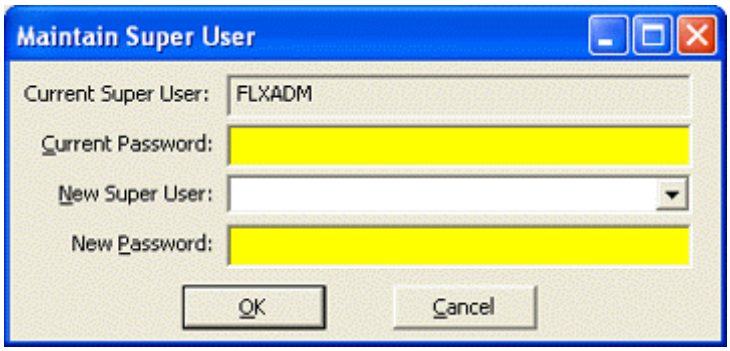


Maintain Super User

This window allows the System Administrator to modify the Super User when changes occur in personnel. Additionally, if the password changes on the network for the Super User, the System Administrator will need to change the Super User password on the Maintain Super User dialog window.

To access the Maintain Super User window:

1. From the **Security** menu, select **Signon Security**. Click the **Maintain Super User** button at the bottom of the dialog window.



The system displays the current Super User.

Note: If the existing Super User no longer exists, the Current Super User field will be empty and disabled.

2. Enter the **Current Password** for the Super User. If the current stored password does not match the current Super User password, the system will update Control to match the Super User password. If the password is invalid, an error message will appear. The System Administrator can reenter the password or click **Cancel** without saving changes.

3. In the **New Super User** drop-down list, the system provides a list of database users that have Security Administrator privileges and credentials. The System Administrator has a couple of options:

a.) **Synchronize Passwords** - If the System Administrator wants to just change the password for the existing Super User (password may have been modified on database server and System Administrator wants to change Super User password to match the database server password), leave the **New Super User** field blank and enter the database server password in the **New Password** field. The system will compare the current Super User ID and password against system table values (SYTB).

b.) **New Super User** – If the System Administrator wants to change the Super User ID and password from the existing Super User and password, select a new Super User from the **New Super User** drop-down list and enter a **New Password**.

c.) **Existing Super User no longer exists; insufficient permissions** – If the existing Super User ID no longer exists in the database or the existing Super User does not

have sufficient permissions, the System Administrator will need to select a **New Super User** from the drop-down list and enter a **New Password**.

4. Click **OK** to accept the information or click **Cancel** to exit the window without saving changes.

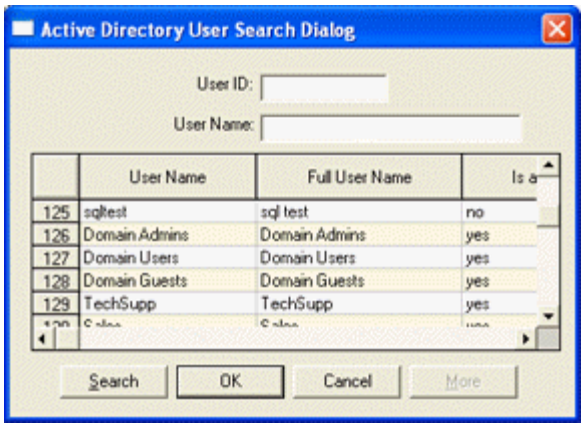
Network Authentication

Network Authentication is a LDAP-based authentication that is more secure than the Application Authentication. With Network Authentication, the user is authenticated with their Windows network password. In other words, after logging into Windows, if a user is set up with Network Authentication and is a valid user, there are no other passwords to type to access the Control system.

To set up a user with Network Authentication:

1. On the Users dialog window, **General** tab, select **Network Authentication**.

2. In the **Directory ID** field, click the look-up icon (). The Active Directory User Search dialog window appears. Select from the list of network users names that you would like to grant access to the Control system. The User ID field, Directory ID, and Directory Server fields automatically populate with the user information. The **Directory Server** is an LDAP server that maintains the security IDs.



You will use the various tabs of this dialog window to enter additional information for each user, such as the security groups, as well as the processing set and type(s) of roles or functions to which the user should be assigned. You can also generate a report of specific information from this dialog window.

Note: You must set up at least one user type per User ID.

3. From the toolbar, click the **Add Row** icon to save the user information.

Application Authentication

Application Authentication uses passwords, a unique code, that in combination with the User ID, gives the user access to the processing set.

To set up a user with Application Authentication:

1. On the Users dialog window, **General** tab, select **Application Authentication**.

2. Enter a **password**. To prevent others from determining the number of positions in a password, this field will appear with asterisks (******) after you have assigned the password.

You can set the number of days for how often the password must be changed and how long the account can remain inactive before it is disabled, as well as how long an individual session can remain inactive before the system prompts the user to log in again. There also are settings to force the user to change his or her password during the next sign on attempt and to designate the number of **days before the password expiration by which you want the system to begin prompting the user to change the password**. In addition, you can enable options to make sure the user's **password does not expire** and to specify that this **user may not change the password**.

3. You can also designate **security** for how the user will be allowed to access the system—for example, through the application only—as well as the **linked system** the user is in and the **ID** with which that user signed in. The screen features multiple options for setting **password**, **account**, and **session** limitations.

4. Select an appropriate **status** for the user. The system automatically defaults to **Active**. The value for this field is stored in the TBStatus column of the USRC table. The system automatically activates the inactive option if a user attempts to sign on exceed the allowed number of sign on failures. The user cannot sign on until you clear this option. Enabling the **Use personal INI data** option overrides the INI Data Groups settings for this user, and makes the **INI Data** button available. The value for this field is stored in the IniDataKey column of the USRC table. The value is “Ø” until Personal INI Data is entered, even if this option is selected, until there is Personal INI data attached to the user in the STKN table. The value for the IniDataKey is the next consecutive number for the NoteId column in the STKN table.

The **multiple signons allowed** option allows more than one signon with the same ID when you select this option for a user ID. It is available if the **Only one signon allowed per user** option is selected in the SignOn Security dialog window. The “multiple signon” option overrides the SignOn Security setting. It is useful for guest IDs or other similar situations when more than one person needs to use the same user ID. The value for this field is stored in the

MultipleLogins column of the USRC table. The value is “Ø” when the check box is not selected or disabled, and “1” when the check box is selected.

Use the action buttons to personalize the **INI data** for this user and **clear the physical ID**. Clearing the physical ID allows other users to sign on, when the “multiple signons” option is disabled and when a user is signed on with an ID that someone else wants to use. The physical ID is the user's port, as assigned in the System Setup dialog window. The value for this field is stored in the PhysicalId column of the USRC table.

You will use the various tabs of this dialog window to enter additional information for each user, such as the security groups as well as the processing set and type(s) of roles or functions to which the user should be assigned. You can also generate a report of specific information from this dialog window.

5. From the toolbar, click the **Add Row** icon to save the user information.

Chapter 5 Special Functions

Special Functions

These additional functions are available in the Specials menu from Control:

Connections Dialog Window

Locks Dialog Box

Auto Numbering Dialog Window

Auto Numbering Example

Generic Tables

The Generic Table Header Dialog Window

The Generic Table Detail Dialog Window

Defining a Generic Table

Populating a Generic Table with Values

Query Overview

MS Access Considerations for Query

Query Configuration

Configure a Query Report

Using Query

Report Maintenance

Importing Files

Exporting Files

Reviewing the Audit Log

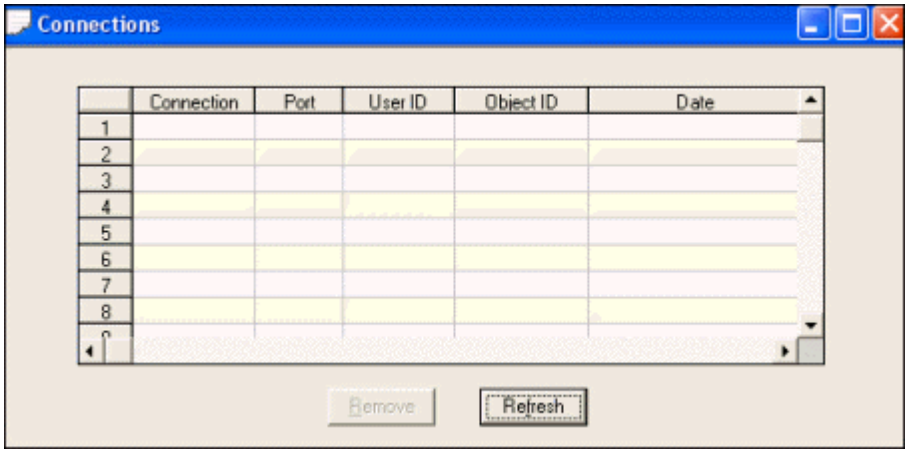
Generating an Audit Log

Printing the Audit Logging Report

Email Template

Connections Dialog Window

The **Connections** dialog box displays information about current connections between your network of users and the objects that are part of an application. Select **Specials**, **Connections** to open the **Connections** dialog box.



Select the **Refresh** button to update the Connections listing. Select a row and then select the **Remove** button to terminate a connection.

The following are fields and buttons in this dialog window.

Connection

Port

User ID

Object ID

Remove Button

Refresh Button

Connection

A code that identifies a current connection between a user, a port on a client workstation, and an application object. This is a reference code that is generated by the Control system. The value for this field is stored in the PhysicalId column of FATV table.

Port

The identifying number of the client port that is connected to the application object. This number is specified in the **Flexi.ini** file of the client. The value for this field is stored in the InternalId column of FATV table.

User ID

The code that identifies the individual who signed-on at the client port. The value for this field is stored in the UserCode column of PIPQ table, and it is a foreign key that references the USRC table.

Object ID

A code that identifies the application and object to which the user is connected. The value for this field is stored in the ObjectId column of PIPQ table.

Remove button

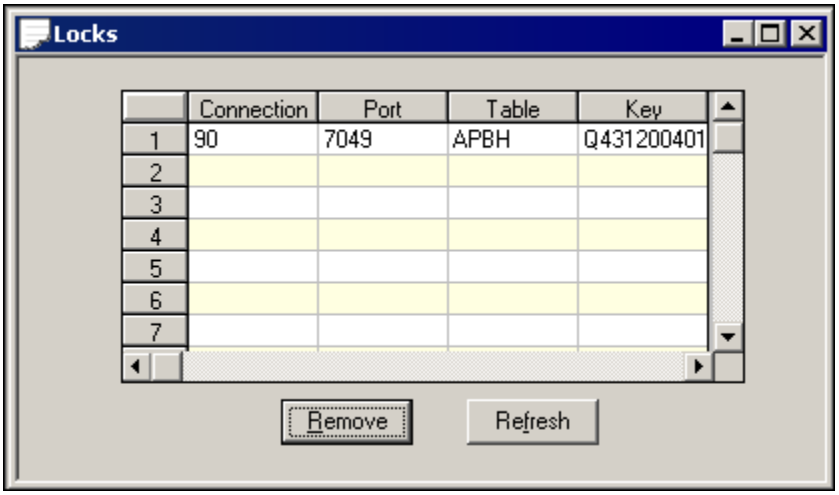
Removes a connection from the table but has no functional impact.

Refresh button

Reviews and confirms all existing connections.

Locks Dialog Window

The Locks dialog box lists any “locked” connections that have occurred and that have not been resolved. Select Specials, Locks to open the Locks dialog box.



Select the **Refresh** button to update the list of locked connections. Select a row and select the Remove button to terminate a locked connection.

Connection

A code that identifies a connection between a user, a port on a client workstation, an application table, and one of the tableprimary keys. The presence of a code in this field indicates that the connection has suffered a disabling lock. The value for this field is stored in the PhysicalId column of **FLOK** table.

Port

The identifying number of the client port that is connected to the application object. This number is specified in the **FLEXI.INI** file of the client. The value for this field is stored in the InternalId column of **FLOK** table.

Table

A code representing the table that is part of the locked connection. The value for this field is stored in the TableId column of **FLOK** table.

Key

A code representing the primary key involved in the locked connection. The value for this field is stored in the TableKey column of **FLOK** table.

Remove button

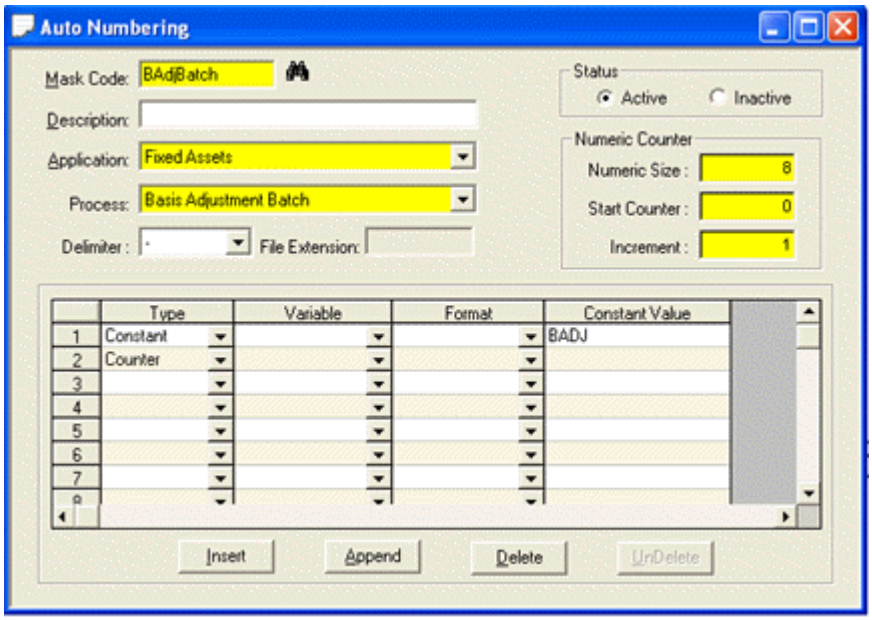
Removes the locked connection.

Refresh Button

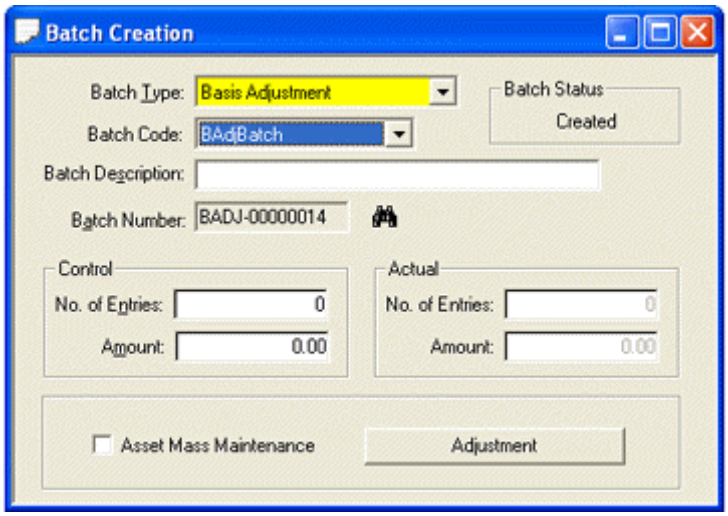
Reviews connections and confirms existing locks.

Auto Numbering Dialog Window

The auto numbering feature allows you to set up an automatic numbering rule for a specific function in an application such as check, invoice, or amortized prepaid generation, and batch processing. In other words, you have control over how certain fields display in other applications. For example, in Control, you can set up an Auto Numbering Mask Code of “BadjBatch” for Basis Adjustments Batches. You can define a **Constant Value** of “BADJ” for the Batch Number. You can also define the size of the Batch Number field and how the next Batch Number will increment as shown in the example below:



Notice in the example below when you create a Basis Adjustment Batch in Assets, the Batch Code matches the Mask Code you defined in Control and the Batch Number has a Constant Value of “BADJ” followed by eight characters.



System Administrators can even create auto numbering schemes for Pre-Asset Batches when the Application selected is “Fixed Assets.” Once the auto numbering functions have been defined, you can use them in the respective application. Use the **Auto Numbering** dialog window to identify:

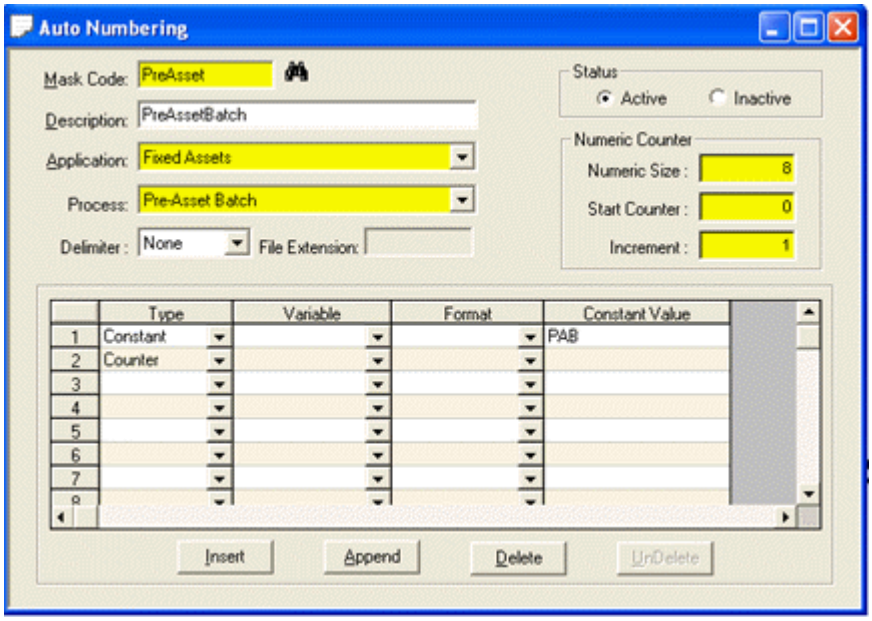
1. A particular application,

2. Functions within the application that can take advantage of automatic numbering, and

3. Numbering parameters for each function.

To access the Auto Numbering dialog window:

Select the **Control** tab. In the **Specials** group, click **Other** and then select **Auto Numbering**. The Auto Numbering dialog window appears.



The following are the areas within this dialog window where you will enter information for the auto numbering rule.

Auto Number Rule Information

Auto Number Mask Settings

Auto Number Rule Information

Assign a **mask code** to uniquely identify this auto numbering rule. In most cases, this code will be an acronym identifying both the application and the function. There is also a field for entering a brief **description** of the auto numbering scheme, as well as an area to set the **status** for the rule. The action buttons at the bottom of the window allow you to edit the spreadsheet by adding or deleting rows.

Choose an **application** in which you will use the mask. Options now also include selections for General Ledger, Fixed Assets, and Projects applications. Together, the designation of an application and a process determines the identity of the auto numbering scheme. The Control system identifies each application by a value: GL=61, AP=62, AR=64, FA=65, PO=66, and PR=73.

Select a **process** within the application for which you will use the mask. Options now also include selections for functions within the General Ledger, Fixed Assets, and Projects applications. Youchoose the “General Ledger” application to create rules for amortized prepaids and multicompany close and re-open period requests. For the “Payables” application, options are available for creating ACH file and process definition rules. Here are some of the other available processes for particular applications:

Batch (AP, FA, GL, OE, PO)

Pay Control (AP)

Cash Batch (AR)

Invoice Batch (AR)

Invoice ID (AR)

Adhoc Stock Adjustment (IC)

Cyclic ID. (IC)

Issue No. (IC)

Physical Id. (IC)

Receiver No. (IC)

Return No. (IC)

Transfer No. (IC)

The Mask Code, Application, and Process fields are all required.

Auto Number Mask Settings

These settings and fields define the way in which the process will use the auto numbering feature.

Use the spreadsheet area to define the **type** of values for the mask. If you choose a **constant**, you must enter a **constant value**. This value—letters or numbers—represents a prefix or suffix. You can also choose a **delimiter** to designate the punctuation mark that can separate a prefix or suffix from the main body of the number.

If you choose a **counter**, you must define the values in the **numeric counter** group area. These values define the identifying number. You can use multiple constants but only one counter per mask code. You need to enter constants and/or counters in the order you want them to appear in the mask.

If you are defining numeric counter data, youenter a **numeric size** for the number of positions in the identifying number; a **start counter** to indicate the number at which the application will begin to enter numbers automatically; and the **Increment** by which new numbers in the series will be generated.

The **data** type represents a data element from the transaction that you may want to include in the auto number to indicate where the system is pulling the information (for example, from the Processing Set). This type, however, is available only for ACH file naming, and import or export copy file naming process options. If you choose a data type, you **must** enter a **variable** and **format** in the spreadsheet. Additionally, you must enter a **file extension** if youchosen a file for the process.

As the system administrator, youwork with the receiving bank to determine the file naming convention—including the delimiter and file extension""—required for ACH auto numbering rules.

Define an Auto Numbering Mask

Use these steps to create a code for an auto numbering or naming rule.

Step / Action

1. Select **Specials**, then **Auto Numbering** from the application menu bar to open the Auto Numbering dialog window.

2. Type a unique code to identify this scheme in the **Mask Code** field. **Required**.

3. Type a brief **Description** of the scheme.

4. Select the **Application**. **Required**.

5. Select a **Process** to identify the function. **Required**.

6. Choose the **Type** of data to appear for the rule.

7. Take one of the following steps, depending on the type you chose:

a. If you selected a **Constant**, enter a **Constant Value** to appear before or after each auto-generated number. **Required**. Also, select a **Delimiter** to separate the suffix or prefix from the number.

or

b. If you selected a **Counter**, enter **Numeric Counter** information for the number. **Required**.

or

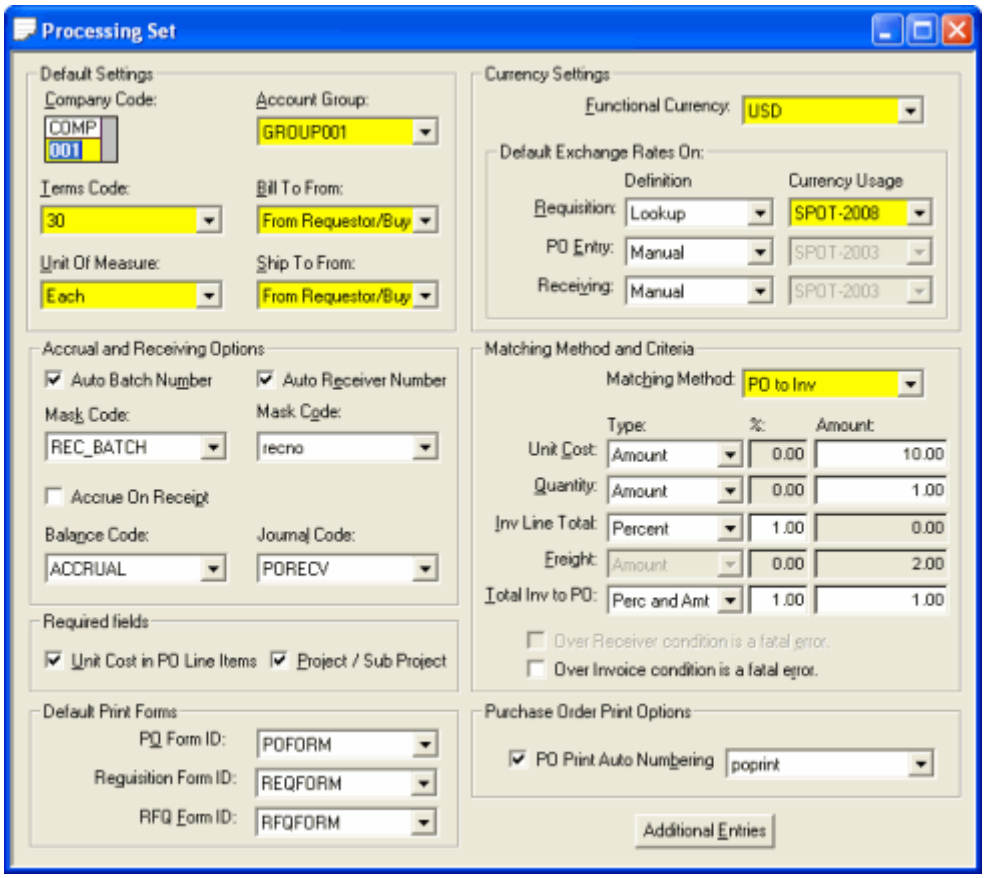
c. If you selected **Data**, enter a **Variable** and **Format**. **Required**. Additionally, enter a **File Extension** if you chose a file for the process.

8. Review your information.

9. Use the **Add Row** icon in the application toolbar to save your information in the database.

Auto Numbering Example

When the Administrator of an application is defining properties and defaults, he or she can select an Auto Numbering Mask for the processing set of the application. The following shows Processing Set dialog box in your Purchasing application. All the drop-down lists for the Mask Codes are defined in the Control application Auto Numbering dialog box.



Generic Information Tables

The Generic Information option in the Specials menu allows the Administration to create tables that can be used with an application. These tables may be used:

1. to convert or validate a field's content before importing it, with the FlexiImport Wizard, and

2. to create custom tables of information that can be used by an application, provided there is a concurrent change in the program's code to do so.

The Generic Information feature has two dialog boxes — a Generic Table Header and a Generic Table **Detail**. You define the table in the **Generic Table Header** dialog box, and then type the values in the **Generic Table Detail** dialog box.

Tip: See the Appendix for specific information about completing the Generic Information dialog boxes to Transform and/or Validate information as part of importing information.

Generic Table Header Dialog Window

Select **Specials**, **Generic Information** to open the Generic Table Header dialog box to define a table.

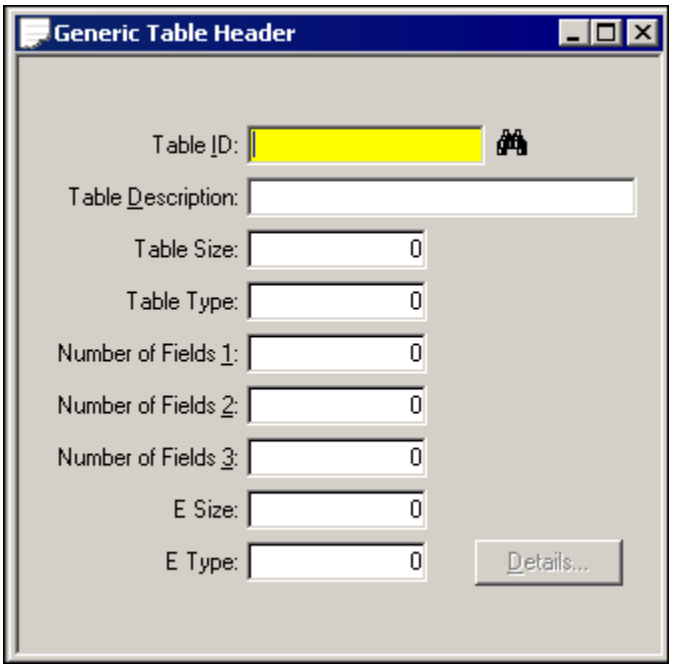


Table ID

A unique, four-digit (alphanumeric) identifier for the table. This is the primary key for the table. The values entered in the **Generic Table Detail** dialog box are linked to the Header with this field. Up to 4 alphanumeric characters are allowed. The value for this field is stored in the GenTableId column of the **FGTH** table.

Required Field

Table Description

An optional, 30-digit (alphanumeric) description of the table and/or its purpose. The value for this field is stored in the GenTableDesc column of the **FGTH** table.

Table Size

An optional, numeric field that is not used. It is informational only. Up to 10 numbers may be typed, but the highest allowed value is 722. The value for this field is stored in the GenTableSize column of the **FGTH** table.

Table Type

An optional, numeric field that is not used. It is informational only. Up to 10 numbers may be typed, but the highest allowed value is 722. The value for this field is stored in the GenTableType column of the **FGTH** table.

Number of Fields 1

An optional, numeric field that is not used. It is informational only. Up to 10 numbers may be typed, but the highest allowed value is 722. The value for this field is stored in the GenTableNoFld1 column of the **FGTH** table.

Number of Fields 2

An optional, numeric field that is not used. It is informational only. Up to 10 numbers may be typed, but the highest allowed value is 722. The value for this field is stored in the GenTableNoFld2 column of the **FGTH** table.

Number of Fields 3

An optional, numeric field that is not used. It is informational only. Up to 10 numbers may be typed, but the highest allowed value is 722. The value for this field is stored in the GenTableNoFld3 column of the **FGTH** table.

E Size

An optional, numeric field that is not used. It is informational only. Up to 10 numbers may be typed, but the highest allowed value is 722. The value for this field is stored in the GenTableESize column of the **FGTH** table.

E Type

An optional, numeric field that is not used. It is informational only. Up to 10 numbers may be typed, but the highest allowed value is 722. The value for this field is stored in the GenTableEType column of the **FGTH** table.

Details button

The button is available after adding a table's header by adding a **Table ID**, or by selecting an existing **Table ID**. This button opens the **Generic Table Detail** dialog box.

Generic Table Detail Dialog Window

The **Generic Table Detail** dialog box populates a generic table with values that are converted or validated as part of the import function, or new values in a custom table and a value in a table to which the generic table is related. Select the **Details** button in the **Generic Table Header** dialog box to open this dialog box.

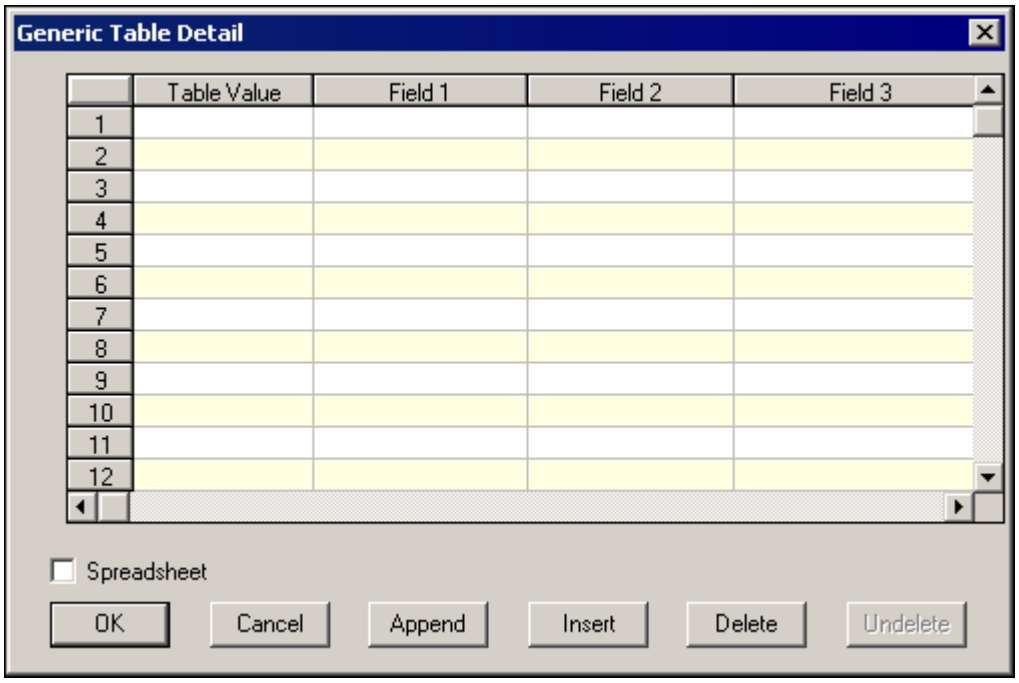


Table Value

This column is usually the value of the source data, if you are importing, or a valid value, if you are validating data. The value for this field is stored in the GenTableValue column of the **FGTD** table.

Field 1

The value in the source that you want to convert to the value in the **Table Value** on the same row. This value changes for custom tables to whatever the programmer would like it to be. The value for this field is stored in the GenTableEval2 column of the **FGTH** table.

Field 2

An optional value for custom tables. The value for this field is stored in the GenTableEval2 column of the **FGTH** table.

Field 3

An optional value for custom tables. The value for this field is stored in the GenTableEval3 column of the **FGTH** table.

Spreadsheet

Selecting this checkbox allows you to copy and paste the values from a spreadsheet file, such as Excel or Lotus 1-2-3, into this dialog box.

Select this checkbox, open the spreadsheet program, select the values to copy, and then copy the data to the Clipboard. Return to the Control application, and click in the first cell of the Generic Table Detail dialog box where you want to paste the data. Press CTRL-V to paste the spreadsheet data into this dialog box.

OK button

Saves the values in the Generic Table Detail dialog box and returns to the **Generic Table Header** dialog box.

Cancel button

Closes the Generic Table Detail dialog box without saving any changes made to the values since it was lasted opened.

Append button

Adds a blank row to the bottom of the table.

Insert button

Inserts a blank row above the row with the insertion point.

Delete button

Deletes the row with the insertion point. Deleted rows remain, but are gray, so that it is easy to determine which rows may be undeleted.

Undelete button

The button is available after a row has been deleted, or when there are gray rows in the dialog box. Selecting this button puts the deleted row with the insertion point back in the table (changes the color of the row from gray to black).

A dialog box asking which deleted row to undelete opens if the insertion point is not in a deleted row. Use the spinner box to specify a row number to undelete, or type the row number and select the OK button to undelete a row.

Reports Menu Item

The Reports menu has options to categorize stored reports, and to create Security Groups

Configure a Query Report

Take the following steps to configure Query to use a report or file that you have created in another application:

Step / Action

1. Create your report or file in another application. Be sure that MS Access reports, which have an .MDB file extension, are stored in the same local directory as the SYSTEM.MDB file.

2. Double click on the Query icon or select it from the application toolbar to open the Query application window.

3. Select Query, Store Query to open the Store Report File dialog box.

4. Select the Select File button. The standard Open dialog box appears.

5. Use the features of the Open dialog box to display and select the report file that you want to use with Query.

6. Select the OK button to return to the Store Report File dialog box.

7. Select the Store button. Select the OK button in the Message Pad that states that the report was stored.

8. Repeat Steps 4 through 7 to store additional reports. Select the Close button when you are finished storing reports. Now to be sure that you have a Security Group that you can assign to use the stored reports.

9. Select Reports, Security Groups to open the Security Groups dialog box. Use the LookUp button to search through the existing groups. Follow the steps in Chapter 6 to create a new group and assign users, if necessary.

--Now to categorize the stored report file, and assign security groups who are allowed to use it.

10. Select Reports, Category to open the Report Category dialog box. All of the stored reports appear in the Reports list box in this dialog box, but not in the Query list dialog box. A + box next to a report means that it has, or has had, categorized reports stored in it. Clicking on the + box expands the category to display any categorized reports that are stored in it.

11. You must create a category for your report so that it appears in the Query list dialog box. You may also want to create a category "folder" in which to group your reports. Create the folder first, create a second category for your report, and then you will categorize the report by putting it in the folder.

12. Select the Add Category button to open the Category Details dialog box, and complete the fields in this dialog box as follows:

--Type a unique name in Category Id field. It must begin with a letter, but may include numbers.

--Type the name of the report as you want it you want to appear in the Query list dialog box.

--Select the OK button.

13. Categorize your report ONLY if you want it to appear as a sub-category under another category. Otherwise it appears in the top level of the Report list box.

--Select a categorized report in the Reports list box of the Report Category dialog box and then select the Categorize button to open the Category dialog box. The name of the report category is displayed at the top, with the Categories List in the left list box, and Selected Categories in the right list box.

--Select a parent category in the Categories List box and click on the Select>> button to display the parent category in the Selected Categories list box.

You may select more than one category in which to list your report.

--Select the OK button to close the Category dialog box. The categorized report now appears under the selected categories in the Report Category dialog box (but not in the Query list dialog box).

14. Finally to assign Security Groups to your categorized reports:

--Select the categorized report in the Reports list box of the Report Category dialog box, and select the Security Assignments button to open the Security Assignments dialog box.

The name of the report category is displayed at the top, with the Security Group List in the left list box, and Assigned Security Groups in the right list box.

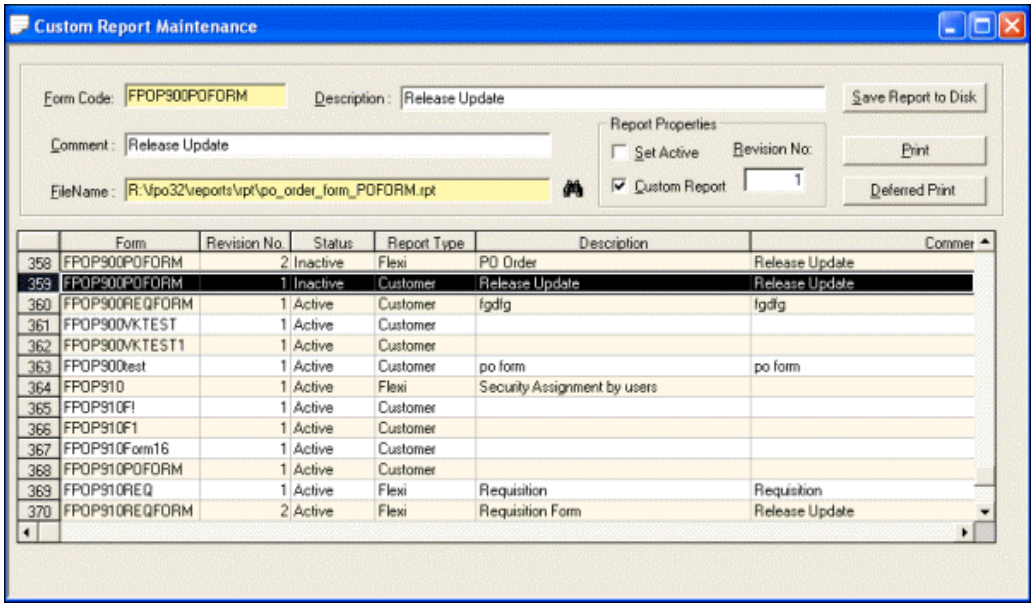
--Select a security group name in the Security Group List box and click on the Assign>> button to display the group in the Assigned Security Groups list box.

You may select more than one security group to assign to your report.

--Select the OK button to close the Security Assignments dialog box. The categorized report now appears under the selected categories in the Report Category dialog box and in the Query list dialog box (if your SignOn User ID is in at least one of the groups assigned to use the report). You may need to open and close the Query list dialog box to see the most recent changes.

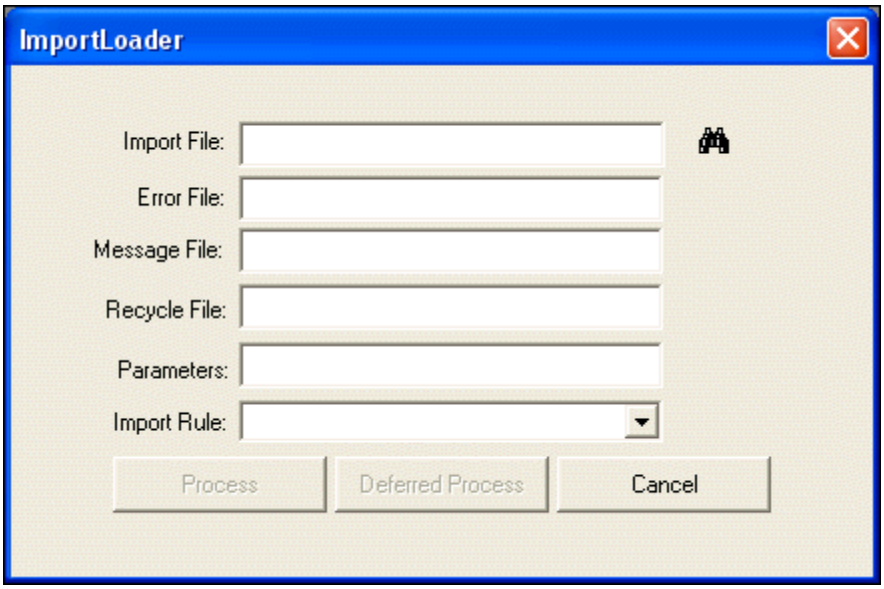
Report Maintenance

Loading new reports will not overwrite any custom reports you already have loaded into your system. By designating a report “custom”—meaning, you have enabled the **Custom Report** option—you allow the system to preserve it as the “active” report…and recognize any subsequent additions as “inactive.” If you want to use standard reports supplied with the system rather than a custom report, simply enable the **Set Active** option on the latest revision of the report and save your changes.



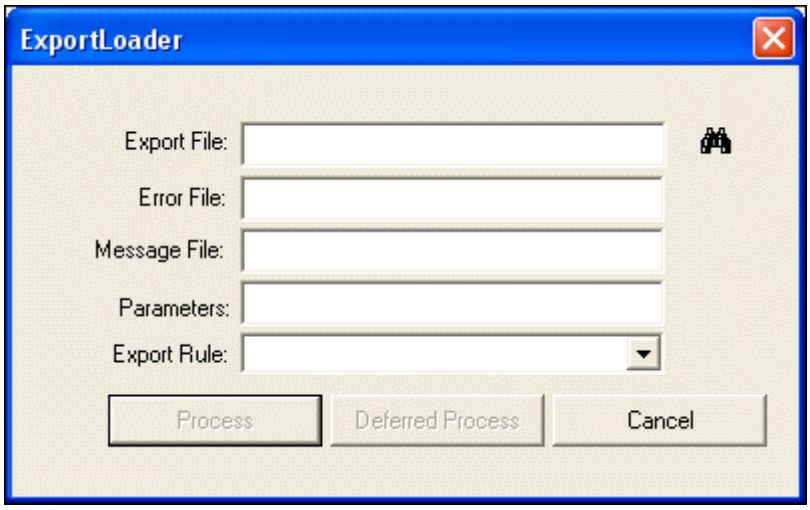
Importing Files

The **Import Loader** dialog window launches the ability to import to a file. You can access this window under the **Special Functions** menu. For more information about formats, see your **Import/Export** documentation.



Exporting Files

The **Export Loader** dialog window launches the ability to export to a file. You can access this window under the **Special Functions** menu. For more information about formats, see your **Import/Export** documentation.

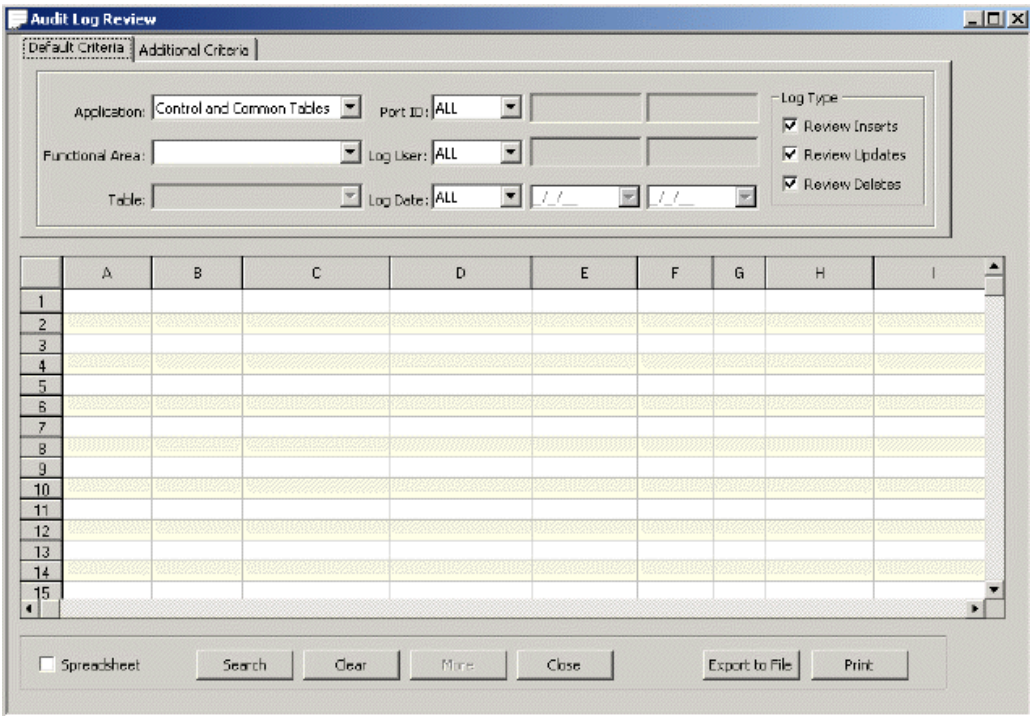


Reviewing the Audit Log

After you activate the Audit Logging feature, the system creates a log each time you make an applicable addition, deletion, or change in an application.

You can generate and review the logs in any application using the Audit Log Review dialog window. To access this window, you use the Audit Log Review menu selection, normally found under the Utilities menu.

To access the Audit Log Review dialog window in this application, select Specials from the main menu, and then Audit Log Review.



The following is a list of fields and buttons in the Audit Log Review, Default Criteria tab dialog window.

Application

Functional Area

Table

Port ID

Log User

Log Date

Log Type Group Box

Spreadsheet Area

Spreadsheet

Search

Clear

Export to File

Print

Application

This field contains a list of all the applications used in Audit Logging. Select from the list provided.

Functional Area

This field contains one or more areas within the application that use Audit Logging. Select from the list provided.

Table

This field contains a list of Tables used to store the data. Select from the list provided.

Port ID

The Port ID indicates the machine and / or user responsible for the log entry. You can use this as a search filter.

Log User

Identifies the user. You can use this as a search filter.

Log Date

The date you make the entry. You can use this as a search filter.

Log Type Group Box

From the list provided, select one or more of the following to use as a search filter: Review Inserts, Review Updates, Review Deletes.

Spreadsheet Area

The area of the dialog window where the Audit Log Review information appears.

Spreadsheet

Select this checkbox to enable the copy feature of the spreadsheet.

Search

Select to activate the filters and create the Audit Log.

Clear

Select to clear the Audit Log.

Export to File

Click to create and export a *.csv file that you can then use to create, save, and print a spreadsheet.

Print

Click to print a copy of the Audit Log Review from the application.

Generating an Audit Log

To generate and review an Audit Log, you enter the search parameters on the Default Criteria tab and the Additional Criteria tab located in the Audit Log Review dialog window. The search parameters that appear on the Additional Criteria tab dialog box are specific to the application.

To generate an Audit Log, take the following steps.

Step / Action

1. From the main menu, select Specials and then select Audit Log Review.

2. The Audit Log Review, Default Criteria tab dialog window appears.

3. From the list provided, select the criteria to filter the following search information.

--Application

--Functional Area

--Table

--Port ID

--Log User

--Log Date

4. From the list provided, select the Log Type(s) to include.

5 Choose the Additional Criteria tab and select from the list(s) provided, then click **Search**.

Note: The fields and information on this tab vary according to the selections made on the Default Criteria tab.

6. The system populates the spreadsheet area with the information contained in the database table.

Printing the Audit Logging Report

To print the Audit Logging report, use one of the following methods:

a. **Export the Spreadsheet**

You can export the spreadsheet and save it as a *.csv file. To export the spreadsheet, click **Export to File**. When prompted, save the file as a *.csv. You can then open the file using a spreadsheet application.

b. **Copy and Paste the Spreadsheet**

Copy and paste the spreadsheet information into an application. To copy the spreadsheet, select the spreadsheet checkbox on the Default Criteria dialog window, and then click the upper left blank cell to select the Spreadsheet information. On the main menu, select Edit, and then select Copy.

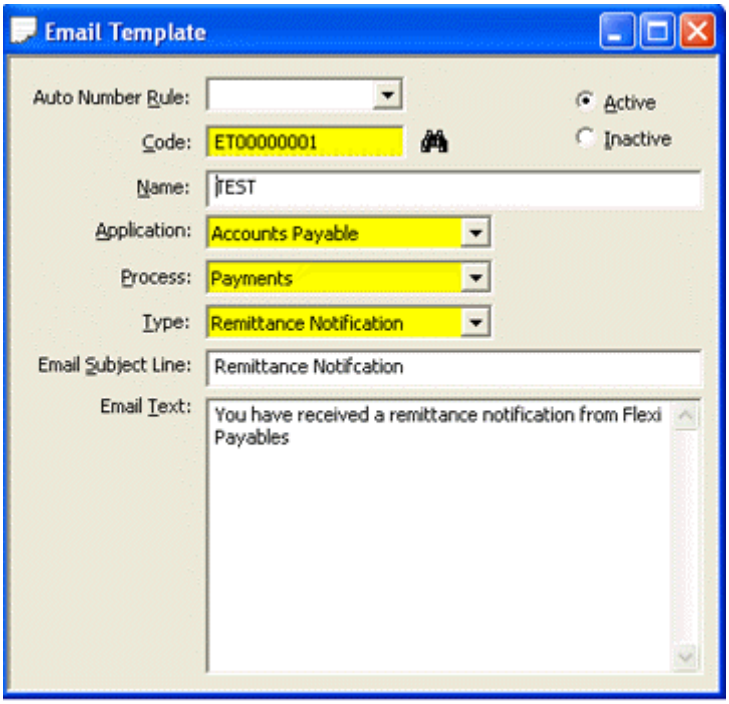
c. **Print Button**

Click Print on the Default Criteria dialog window, and then click Print again.

Email Template

Email Templates save you time by allowing you to customize the template with email text that can be reused and distributed automatically. By creating one email template, you can ensure your email content is consistent for repetitive communications. Email Templates can be set up for various processes throughout the suite of applications. You determine the **Email Subject Line** and the **Email Text** (e.g., Plain text only, not HTML, etc.). You can set up several **Types** of email templates, such as “Remittance Notification.” You can also create templates for specific **Applications** (e.g. , Payables) or **Processes** (e.g., Payments).

To access the Email Template dialog box, from the **Specials** menu, select **Email Template**.



Chapter 6 System Setup

System SetUp

This Help Sequence contains the following topics:

Overview of the System SetUp

Application Processing Sets

Installation Overview

System SetUp Dialog Box

To Set Up a Financials System

To Define a Country

To Define a Language

Audit Log Maintenance

Activate Audit Logging

Overview of the System SetUp

Control tightly integrates the processing sets and application modules. The system functions according to rules that govern the system and rules governing each application.

Simply defined, a processing set is an electronic bookshelf that holds volumes of data about a particular Control activity."

Your Control system relies on a number of processing sets — each serving a different purpose:

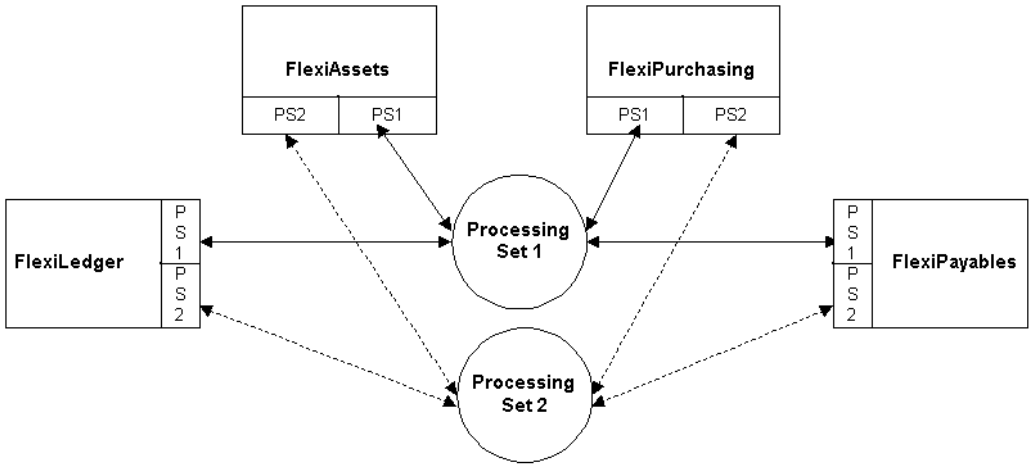
A System processing set that has networking procedures and database information is defined midway through the installation procedures. Control applications cannot function until the System processing set has been created.

In the next stages of installation, one or more Application processing sets are defined with information and procedures for one or more application modules. The processing set for every Control application that posts to the General Ledger, for example, defines the rules for the application to interact with Ledger.

At this point, you can define additional processing sets to support the activities of individual applications.

Application Processing Sets

The foundation of each processing set — other than System — is information from some or all of the application modules. This information from the applications' database is tied directly to the processing set. The processing set has "permission" to access and use this information. The following shows how two processing sets allow different tasks to be performed, have different permissions, and use different rule from four applications.



Both Processing Sets 1 and 2 include the same four applications: Control, Assets, Purchasing, and Payables. However, the tasks that each processing set is allowed to perform are different, so that each processing set can view and/or edit different data. For example, Processing Set 1 may be able to enter invoices in Payables, while Processing Set 2 may only be able to approve invoices in Payables.

Installation Overview

Step / Action

1. The initialization of the Control database.

2. The definition of specifications for the FLEXI.INI file. This file designates server, database, client and network DLL settings.

3. The installation of a database schema that includes tables, stored procedures, triggers, views, and indices (FDP files).

4. Run your application scripts (SQL files).

5. Creation of the System processing set.

6. Installation of Data Dictionary (FARY) table that organizes data in all other tables in the Financials database.

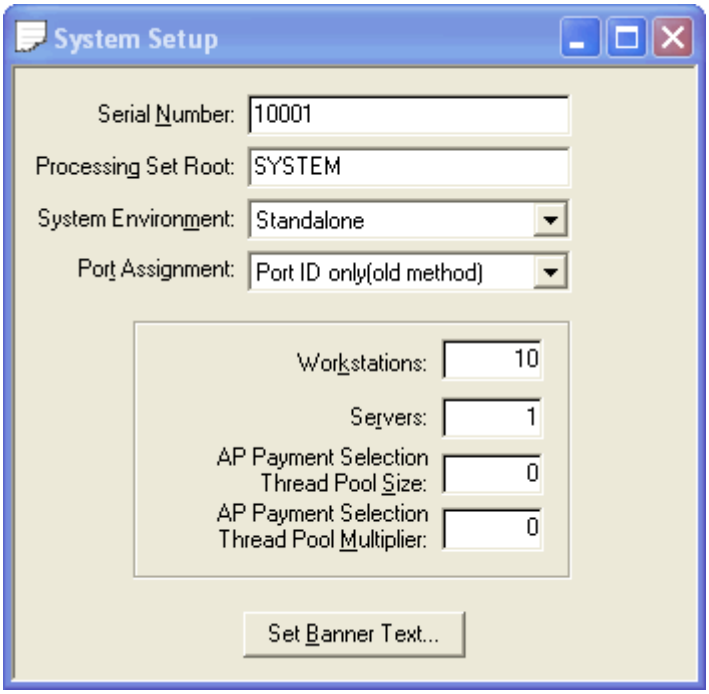
7. SignOn procedures to test connections between workstations and the database.

8. Creation of one or more Applications processing sets incorporating the tables and procedures of the application modules.

Control creates processing sets during Steps 5 and 8. It is also used to complete the System SetUp after installation.

System SetUp Dialog Box

Select **System** and then **SetUp** to open the System SetUp dialog box.



Serial Number

The identifying number that Control assigns to the system. The value for this field is stored in the SysSerial column of the SYTB table. Type: Integer (4)

Processing Set Root

The name of the System processing set. This name is assigned during the Installation Process. The value for this field is stored in the SysProcSetRt column of the SYTB table. Type: Char (8)

System Environment

A display field indicating that the Control system is to operate on a Standalone basis. The value for this field is stored in the SysEnvType column of the SYTB table. Type: Char (8)

Port Assignment

Ports uniquely identify a user's PC. This drop-down list has the following options:

Port ID only (old method) stores the port setting in each user's FLEXI.INI. Tools, such as Microsoft's SMS, may be used to push centrally managed configurations to network users.

The value for this field is stored in the PortAssignMeth column of the SYTB table. Type: Small Integer (2) 0=Port ID only (old method).

Workstations

The maximum number of clients that can be connected to the processing set’s server(s). This is a memo field to record the number of workstations, but it does not have a functional role. The value for this field is stored in the SysNoWorkStat column of the SYTB table. Type: Small Integer (2)

Servers

The maximum number of servers in the system. This is a memo field to record the number of servers, but it does not have a functional role. The value for this field is stored in the SysNoServers column of the SYTB table. Type: Small Integer (2)

Lines per Page

The number of lines that can print on a single report page. This is a memo field to record the number of lines per page, but it does not have a functional role. The value for this field is stored in the LinesPerPage column of the SYTB table. Type: Small Integer (2)

Query Buffer

The maximum number of records that can make up an Inquiry. This is a memo field to record the size of the query buffer, but it does not have a functional role. The value for this field is stored in the QueryBuffer column of the SYTB table. Type: Small Integer (2)

Set Banner Text button

This button opens the **Edit SignOn Banner Text** dialog box.

Text Entry

The Text Entry dialog box opens for the entry of Banner Text or INI Data. You'll use one of the following dialog windows to enter this type of data:

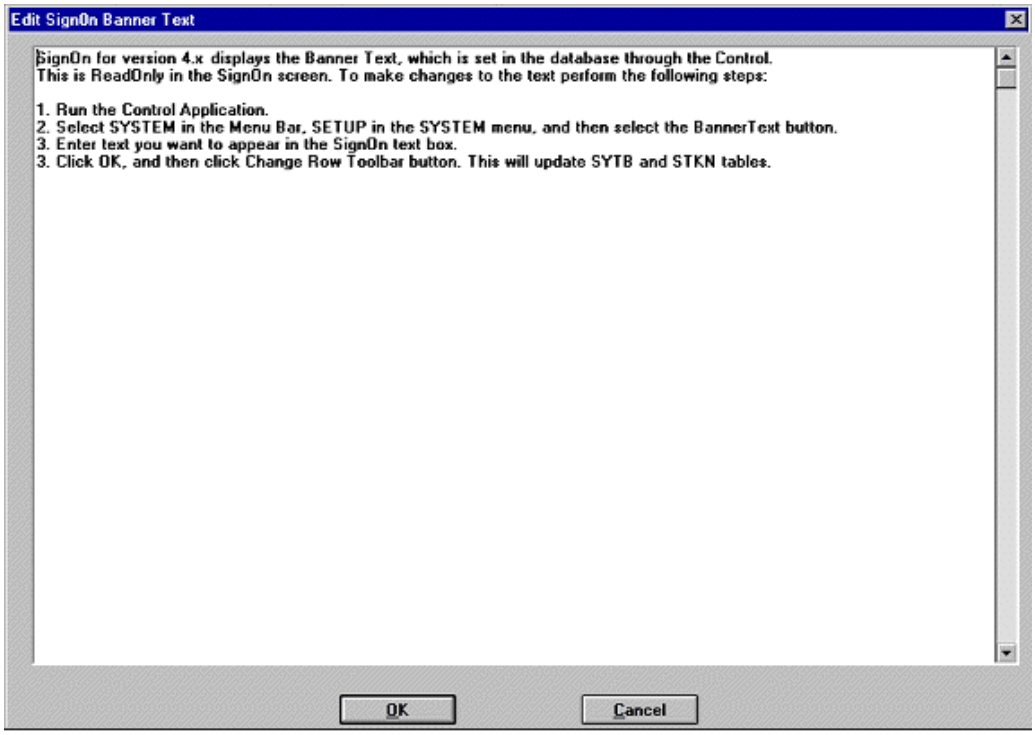
Edit SignOn Banner Text Dialog Box

Create INI Data for an INI Data Group

Create or Edit User INI Data

Edit SignOn Banner Text Dialog Box

Type the text (entry) that you want to appear whenever someone signs on to the same database as you are currently signed into. Banner text is associated with the database that is specified in the FLEXI.INI file. The following example has the steps to create Banner Text, and is not an example of text that should appear here.



To Set Up a Financials System

Take the following steps to view or change the operating parameters of your Control system specified during installation.

Setup Warning

Step / Action

1. Select System, SetUp to open the **System SetUp** dialog box.

2. Type the Serial Number that identifies the system. The default is 10001.

3. Type the name of the System processing set in the Processing Set Root field.

4. Verify that the System Environment field is Standalone.

5. Select a method in the Port Assignment drop-down list.

6. Indicate the maximum number of Workstations that will have access to the processing set's server(s). Remember this is only a memo field.

7. Indicate the maximum number of the system's Servers. Remember this is only a memo field.

8. Indicate the maximum number of Lines Per Page that can print in the processing set's reports. Remember this is only a memo field.

9. In the Query Buffer field, indicate the maximum number of records that can be returned as part of an Inquiry. Remember this is only a memo field.

10. Select the Set Banner Text button to open the **Edit SignOn Banner Text** dialog box.

11. Type the text that should appear in the **SignOn** dialog box.

12. Select the OK button to close the Edit SignOn Banner Text dialog box. Select the Change Row button, and then select the OK button in the Message Pad to save the banner text. The saved text appears in the SignOn dialog box at the next signon.

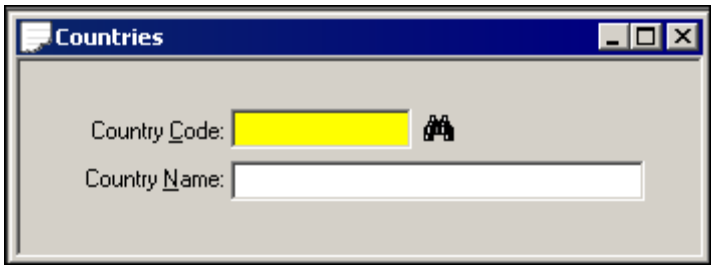
13. Close the System SetUp dialog box.

14. A Closing dialog box opens asking if you want to discard add, change, discard, or cancel changes. Select the Change (or Add) button to save the banner text that you just created.

SetUp Warning

System SetUp occurs only once in the history of the system. You **cannot delete or add** specifications. You can modify specifications by entering new data in the memo fields or the Port Assignment field. Select the **Change Row** button after you have altered any specifications.

Countries Dialog Box



Take the following steps to define the countries that are later assigned to individual processing sets.

Step / Action

1. Select System, Countries to open the Countries dialog box.

2. Enter Country Code, up to four characters or numbers, to represent the country. **Required**.

3. Enter the Country's Name, up to 20 characters.

4. Review your information.

5. Select the Delete Row button.

6. Select the OK button to close the Message Pad when, "Row has been Added," appears.

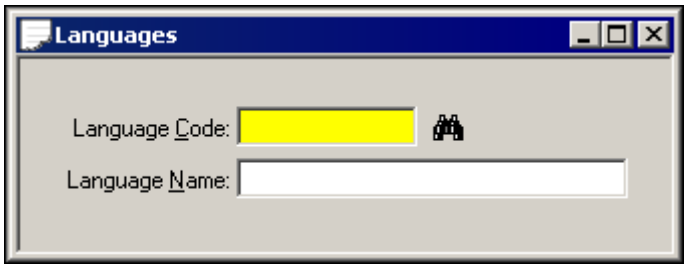
Country Code

This is the code for the country. The value for this field is stored in the CountryCode column of the CTRY table. Type: Char (4)

Country Name

The name of the country, and may be used in some reports. The value for this field is stored in the CountryName column of the CTRY table. Type: Char (20)

Languages Dialog Box



Take the following steps to define the languages that are later assigned to individual processing sets.

Step / Action

1. Select System, Languages to open the Languages dialog box.

2. Enter a Language Code, up to four characters or numbers that represents the language. **Required**.

3. Enter the Language Name, up to 20 characters or numbers.

4. Review your information.

5. Select the Add Row button.

6. Select the OK button to close the Message Pad when, "Row has been Added," appears.

Language Code

This is the code for the language. The value for this field is stored in the LangCode column of the **LANG** table. Type: Char (4)

Language Name

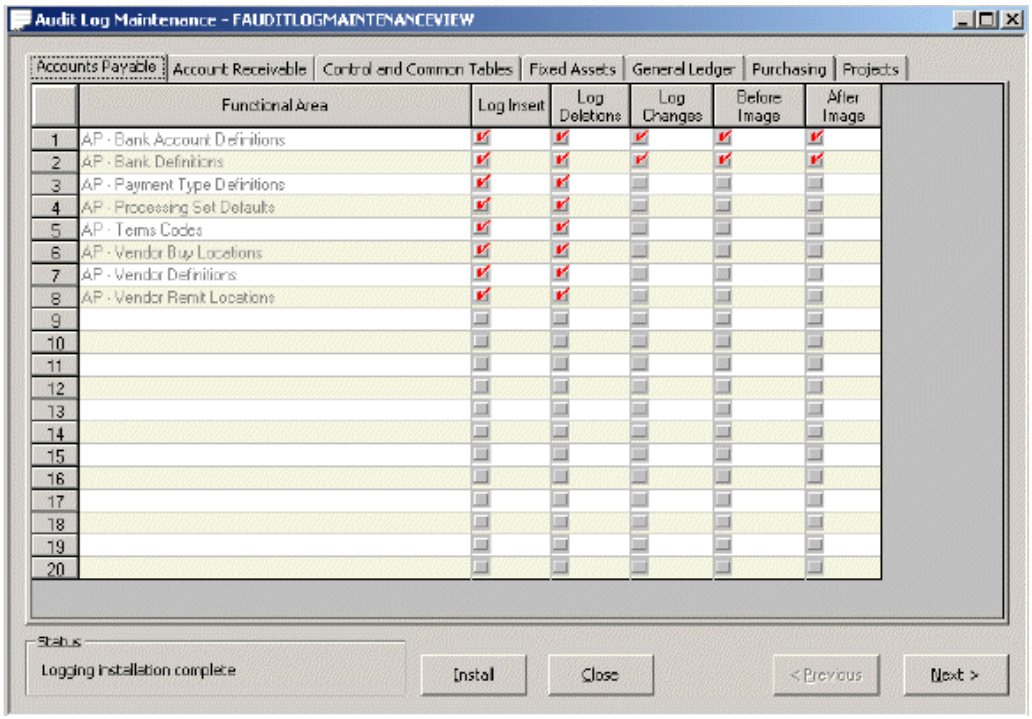
The name of the language. The value for this field is stored in the LangName column of the **CTRY** table. Type: Char (20)

Audit Log Maintenance

The Audit Logging feature is designed to assist customers in their compliance with the requirements of the Sarbanes-Oxley Act (SOX).

You use this feature to set-up the specific audit logging parameters for each functionality supported in an application in order to create a log of the changes, additions, or deletions made. You can then use this log to provide the support needed to maintain and document an accurate transaction audit trail.

You activate the Audit Logging feature using the Audit Log Maintenance dialog window. To access this window, select System from the main menu, and then select Audit Logging Maintenance. The following dialog window appears. To view the functional area of each application, select the applicable tab.



The following is a list of fields and buttons in the **Audit Log Maintenance** dialog window.

Tabs

Functional Area

Log Insert

Log Deletions

Log Changes

Before Changes

After Image

Status

Install

Close

Previous / Next

Tabs

Each tab represents a specific application.

Functional Area

This section contains a list of the functions available for audit logging.

Log Insert

Select this field to create a log entry when you insert a new record.

Log Deletions

Select this field to create a log entry when you delete a record.

Log Changes

Select this field to create a log entry when you make a change.

Before Changes

When you select the log changes field, you can also select this field to log the existing information, prior to the change.

After Image

When you select the log changes field, you can also select this field to log the new information after you make the change.

Status

Displays the current availability of the functions for a specific application.

Install

Click to activate the functionality for the parameters selected for a specific application.

Close

Click to exit this dialog window.

Previous / Next

Click to scroll through the application tabs.

Activate Audit Logging

You use the **Audit Log Maintenance** dialog window to activate the audit logging feature for each functionality, in each application. To activate Audit Logging, take the following steps:

Step / Action

1. From the main menu, select **System** and then select **Audit Logging Maintenance**. The Audit Log Maintenance dialog box appears.

2. In the functional area, select one or more of the following check box(es) for each item you want to activate:

--**Log Insert** - to create audit logging for items added

--**Log Deletions** - to create audit logging for items deleted

--**Log Changes** - to create audit logging for items that changed.

3. If you select the Log Changes check box, you must also select one or both of the following:

--Before Image - to create a log entry before you make the change.

--After Image - to create a log entry after you make the change.

Note: It is strongly recommended that you select both change options in order to easilty locate the change and to review the new information for accuracy.

4. Click **Install** to save your selections. Repeat the procedure for each application.

Chapter 7 Transforming Data

Transforming Data with Generic Tables

What Does "Transforming Data" Mean?

In the context of the FlexiImport Wizard, "transforming data," means taking data in a field and converting the field's contents to a different value before importing it into the Control database. In other words, when the field is imported into the database, the converted value will be imported, not the original value.

Why would you want to transform data? The answer to this question depends upon the nature of your organization's data. However, the following example illustrates the potential usefulness of this data transformation feature.

Suppose there is a field in an import file that contains data in a format that is incompatible with the target column in the Control database. For example, you might have an import file with currency codes in a numeric data type. However, in all Control tables, currency codes are stored in a character-based data type; the character-based data type allows you to use standard, easy-to-understand currency codes such as USD and YEN instead of cryptic numeric codes such as 101, 102, etc. So you could use the FlexiImport Wizard to set up an import rule that will have the FlexiImport engine automatically convert the numeric currency codes to their character-based equivalents at the time of importing.

To transform data, you'll define an import rule that contains knowledge on how the FlexiImport engine should transform data. More specifically, you'll define the import rule so that it contains the following types of knowledge:

1. The field in the import file(s) that will be transformed. You'll use the sample import file to specify this field.

2. The specific values of the data to be transformed. Consider the currency code example introduced above; you'd need to provide the import rule with knowledge on the character-based code to which the FlexiImport engine would convert each numeric code.

To provide the import rule with this knowledge, you'll create records that contain the data transformation values in the two "generic" tables that the FlexiImport Wizard package provides: the fgth and fgtd tables, using the Generic Table Header and Generic Table Detail dialog boxes. Then you'll reference these records from the import rule.

About the "Generic" FGTH and FGTD Tables

The FlexiImport Wizard package includes the fgth and fgtd tables. These tables are often referred to as the "generic" tables; they allow you to perform data transformations without having to use the FlexiDB application to define tables and columns. Control lets you create these tables by entering the information in dialog boxes instead of typing long ISQL statements to create the generic tables and then populate the table with values.

Tip: The generic tables can also be used for data validations. See Appendix B for information about using the generic tables to validate data.

The fgtd table, using the **Generic Table Detail** dialog box, is structured so that you can use it to create sets of records that function as transformation tables. In other words, the fgtd table contains columns in which you can place data to be transformed.

The fgtd table can contain multiple sets of data to be transformed. For example, you can have one set of records that function as a transformation table for one field in an import file, and another set of records that function as a transformation table for another field.

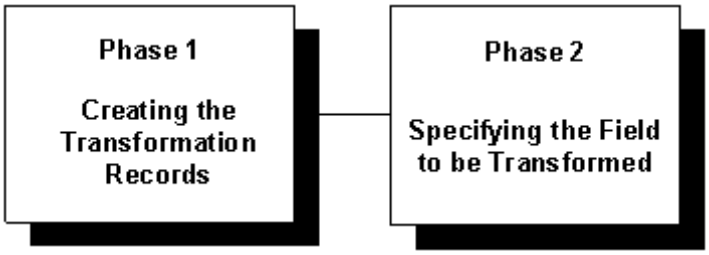
Terminology Tip: A set of FGTD records that function as a transformation table is referred to as a set of transformation records.

To allow you to identify and group together such sets of transformation records, each fgtd record must contain a code that identifies the set of transformation records to which it belongs. This identifying code is the Table ID entered in the Generic Table Header dialog box, and which is automatically included with each row in the Generic Table Detail dialog box, although you don't see it displayed in this dialog box.

You'll first use the Generic Table Header dialog box to create an fgth record containing the Table ID code that identifies the transformation records. You'll then use the Generic Table Detail dialog box to create the set of FGTD records that contain the data to be transformed. Control gives each record in this set of fgtd records has the same Table ID value entered in the Generic Table Header dialog box. You'll type the source data—the data that your import files will contain—in the Table Value column of the Generic Table Detail dialog box. You'll then type the target data — the transformed data — in the Field 1 column of the Generic Table **Detail** dialog box.

The Two Phases of Transforming Data with Generic Tables

Setting up an import rule to transform data with generic tables is a two-phase process:

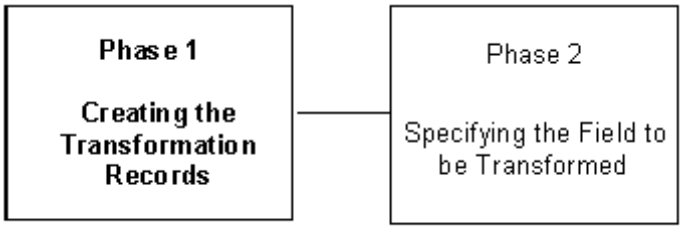


Phase 1: Creating the Transformation Records. You'll use Control Generic Information feature to create the fgth and fgtd records for the data that you want to transform. As described on the previous page, you'll first use the Generic Table Header dialog box to create an fgth record that identifies the transformation records. You'll then use the Generic Table Detail dialog box to create the fgtd records that reference the fgth record. The transformation-related data is stored in two columns of each detail record. The first column stores the source data that you want to transform. The second column has the target data, which is the new value into which you want the FlexiImport engine to convert the source data.

Phase 2: Specifying the Field to be Transformed. You'll use the Column Mapping dialog box to identify the sample import file field containing the data that you want to transform. When you identify this field, you'll also specify the set of fgtd records that you defined in Phase 1. Then, whenever the import rule is used, the FlexiImport engine will use the transformation records to transform the data in the field that you have specified.

Phase 1: Creating the Transformation Records

Before using the **FlexiImport Wizard** to add transformation functionality to an import rule, you'll need to use Control to create transformation records in the fgth and fgtd tables.



Creating Transformation Records: An Example

To show you how to set up a transformation table, we'll use the following example. Suppose that your old financial system used the following three numeric currency codes:

1. 101 for US dollars;

2. 102 for Canadian dollars, and

3. 103 for Japanese yen.

So when you export records from your old financial database, all of the "currency code" fields would be in a numeric format. In other words, the currency fields in any import file containing data from your old financial system would be in a numeric format.

To use the FlexiImport Wizard's generic tables to transform these numeric currency codes into character-based equivalents, you would first create a Generic Table Header record to define the code that will identify the transformation records.

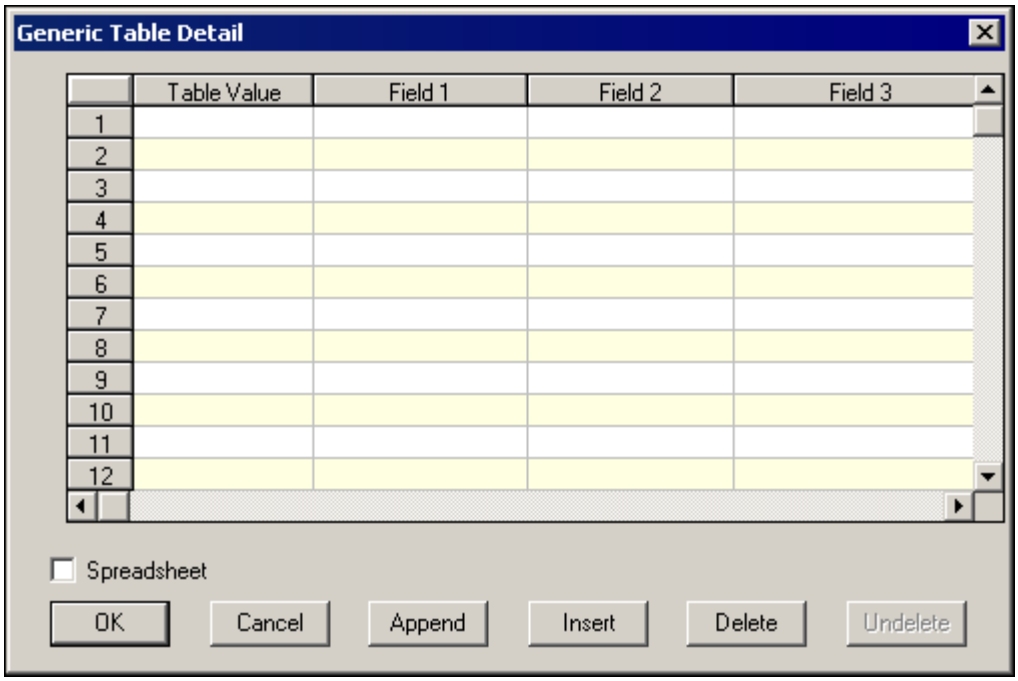
After creating the Generic Table Header record, you then have to create the Generic Table Detail records that contain the transformation data

To apply our currency code example to the Generic Table Detail record, the Table Value contains the old numeric currency codes, and the Field 1 column contains the character-based equivalents to which you'd want to convert these numeric codes.

In this example, suppose that you'll use a code named CurXform to identify the transformation records. This means that you would create a Generic Table Header record with a Table ID of CurXform.

You'd then create Generic Table Detail records that have the source and target data. In each of these records, the Table ID is the CurXform value, which is automatically created as a part of each detail record. This value groups these detail records together as a set of transformation records. In each detail record, you include the source data—the numeric currency code—in the Table Value field, and the target data—the text-based currency code—in the Field 1 column.

The Generic Table Detail dialog box would look like the following in this example:



To Create Generic Information for a Set of Transformation Records

Use Control to create the generic table header and detail:

Step / Action

1. Start Control. Select Generic Information from the Specials menu. The Generic Table Header dialog box opens.

2. Type the table identifier in the Table ID field (CurX using the previous currency example)

3. Complete the remaining optional fields in the Generic Table Header dialog box.

4. Select the Add Data button in the toolbar. Select OK in the Message Pad after the row is added.

5. Select the Details button to open the Generic Table Detail dialog box. (Search and select the new Table ID if the Details button is not immediately available.)

6. Type the following information in the Generic Table Details dialog box:

--Table Value Field 1

--USD

--CAD

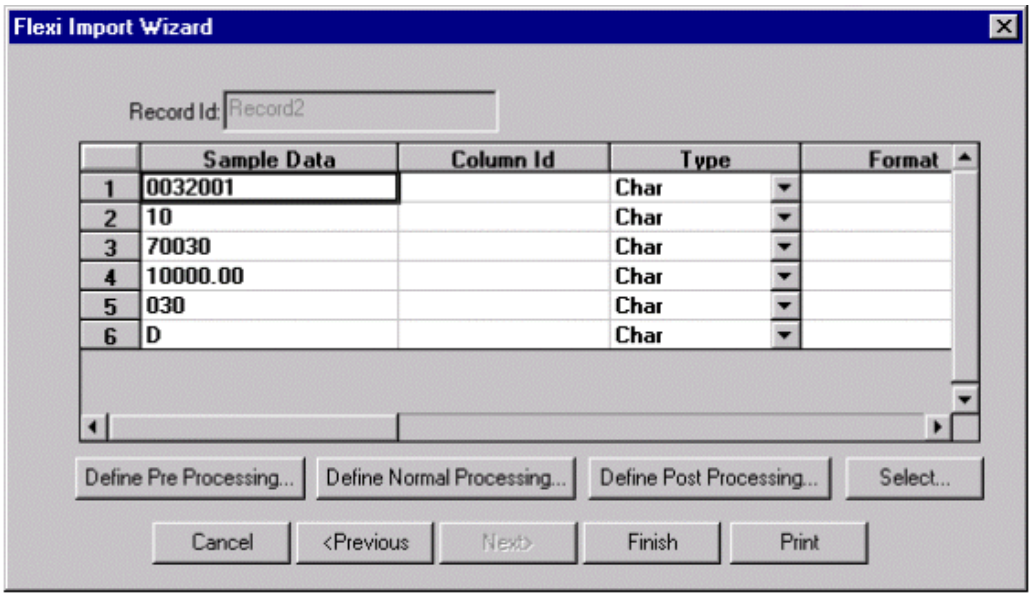
--YEN

7. Select the OK button to save and close the Generic Table Details dialog box.

Phase 2: Specifying the Field to be Transformed

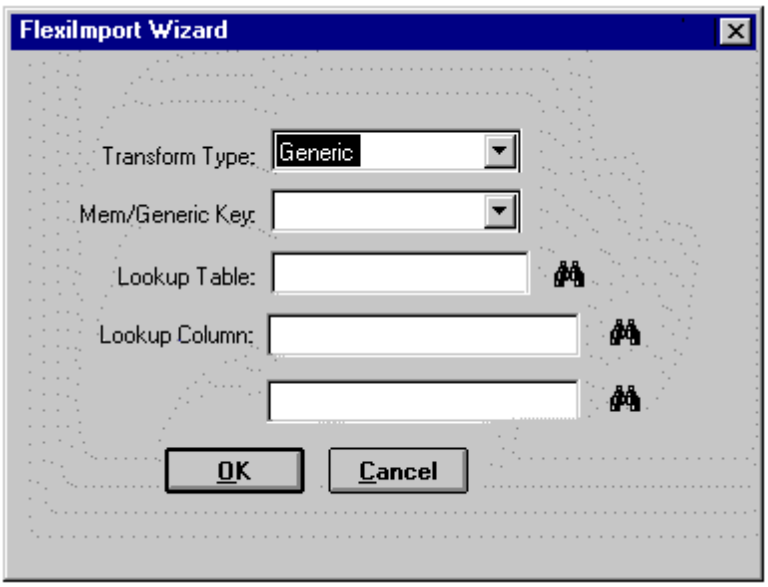
After you create the transformation records, you'll proceed through the FlexiImport Wizard's dialog boxes until you get to the Column Mapping dialog box. In this dialog box, you'll specify the sample import file field that contains the data that you want to transform. You'll also specify the transformation records to be used for this field.

To perform Phase 2, you'll use two dialog boxes. The following is the first dialog box, the Column Mapping dialog box:



You access the Column Mapping dialog box by clicking the Next button in the Sample Import File dialog box. The primary purpose of the Column Mapping dialog box is to map the data in your sample import file to the columns into which you want to import the data contained by these fields. However, you can also use the Column Mapping dialog box to transform the data that will be contained by any of these fields.

To specify the field with the data that you want to transform, you'll select the Transform option from the Validation drop-down list in the row that contains the field. When you select the Transform option, the second dialog box that you'll use—the Transform/Lookup dialog box— ill appear:



The following step-by-step procedure will explain how to use the Column Mapping dialog box and the Transform/Lookup dialog box to add transformation functionality to an import rule.

To Specify the Field to be Transformed

To specify the field that contains the data to be transformed, take the following steps. This procedure assumes that you have accessed the Column Mapping dialog box by clicking the Next button in the Sample Import File dialog box, and that you have already mapped the Sample Data field to the applicable Column Id.

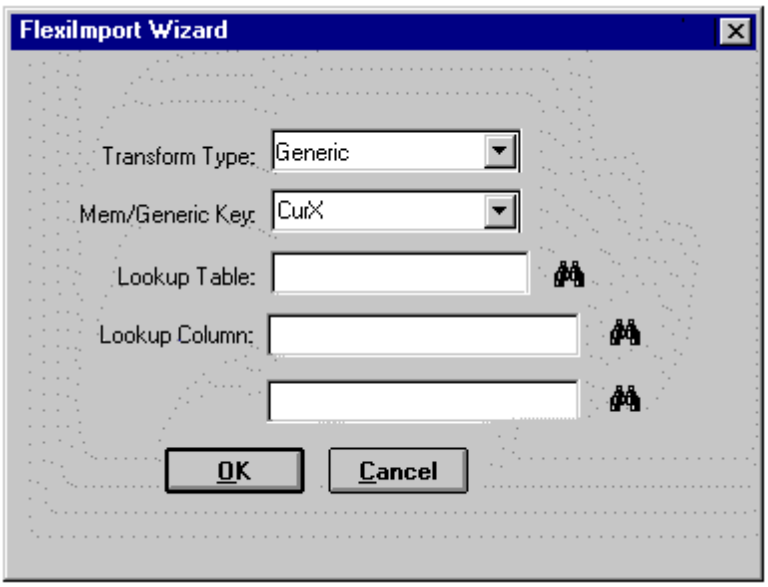
Step / Action

1. Select the Transform option from the Validation drop-down list in the row of the Column Mapping dialog box that contains the Sample Data field for which you want to transform data. The Transform/Lookup dialog box appears.

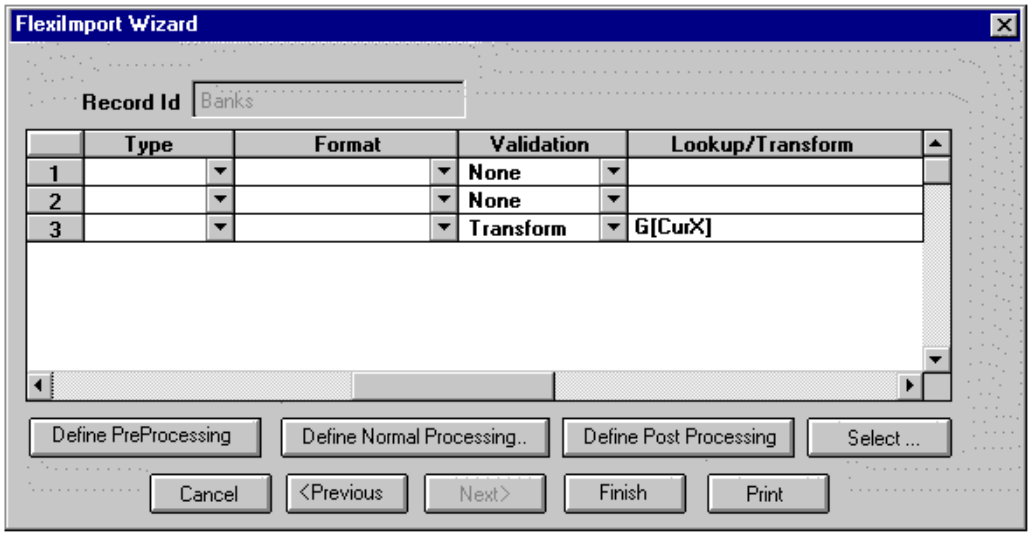
2. Select the Generic option from the Lookup Type drop-down list. The FlexiImport Wizard activates the Mem/Generic Key drop-down list.

Tip: If the Mem/Generic Key drop-down list does not activate, select a different option from the Lookup Type drop-down list, then once again select the Generic option. "Toggling" the drop-down list options in this way will cause the FlexiImport Wizard to activate the Mem/Generic Key drop-down list.

3. From the Mem/Generic Key drop-down list, select the code that you entered for the Table ID in the Generic Table Header dialog box during Phase 1.



4. Click the OK button to close the Transform/Lookup dialog box and return to the Column Mapping dialog box. In the Lookup/Transform field of the Column Mapping dialog box, the FlexiImport Wizard will insert the letter G and then the name of the code that you selected in Step 3; the code will be enclosed within brackets.



Let's complete the currency code example that we have been. In the screen snapshot pictured above, the Lookup/Transformation field in the Column Mapping dialog box indicates that the CurXform code has been selected from the Mem/Generic Key drop#down list of the Transform/Lookup dialog box. Please note that since the Transform option has been selected in the third row of the Column Mapping dialog box, the import rule will transform the data in the third field of the import file(s).

To convert this data, the import engine will refer to the data that you defined in Phase 1. In this example we used the data listed of 101 for USD, 102 for Canadian dollars, and 103 for Japanese yen. This means that if the third field in the import file has a value of 101, the import engine will import a USD currency code. Similarly, if the third field has a value of 102, the

import engine will import a CAD currency code; if the third field has a value of 103, the import engine will import a YEN currency code.

Summary of Transforming Generic Information

To define an import rule that will transform data with generic tables, you must first create a Generic Table Header record with a Table ID that identifies the transformation records to be used. You then create Generic Table Detail records that contain the source and target data for the transformation.

After creating records in these tables, you must then use the Column Mapping dialog box to specify the field in the import file(s) upon which the FlexiImport engine will perform the data transformation. When you do this, you will also use the Transform/Lookup dialog box to reference the transformation records that you defined in the generic tables.

Chapter 8 Validating Data

Validating Data with the Generic Tables

What Does "Validating Data" Mean?

In the context of the FlexiImport Wizard, "validating data," means taking data in an import file field and comparing it to a set of valid values stored in a column of a database table. If the field's value exists in this column, then the FlexiImport engine will import the record; otherwise the FlexiImport engine will not import the data.

For example, suppose that you only want to import records that contain certain currency codes. You could use the FlexiImport Wizard to set up an import rule that will have the FlexiImport engine automatically check the currency code in a field to ensure that it is one of these "valid" codes.

To validate data, you'll define an import rule that contains the following types of knowledge:

1. The field in the import file(s) that will be validated. You'll use the sample import file to specify this field.

2. The valid values for the field. Consider the currency code example introduced above; you'd need to provide the import rule with knowledge of these valid currency codes.

To provide the import rule with this knowledge, you'll create records that contain the data validation values in the two "generic" tables that the FlexiImport Wizard package provides: the fgth and fgtd tables, using the Generic Table Header and Generic Table Detail dialog boxes. You'll then reference these records from the import rule.

About the "Generic" FGTH and FGTD Tables

The FlexiImport Wizard package includes the fgth and fgtd tables. These tables are often referred to as the "generic" tables; they allow you to perform data validations without having to use the FlexiDB application to define tables and columns. Control lets you create these tables by entering the information in dialog boxes instead of typing long ISQL statements to create the generic tables and then populate the table with values.

Tip: The generic tables can also be used for data transformations. See Appendix A for information about using the generic tables to transform or convert data.

The fgtd table, using the Generic Table Detail dialog box, is structured so that you can use it to create sets of records that function as validation tables. In other words, the fgtd table contains a column in which you can place data to be validated.

The fgtd table can contain multiple sets of data to be validated. For example, you can have one set of records that function as a validation table for one field in an import file, and another set of records that function as a validation table for another field.

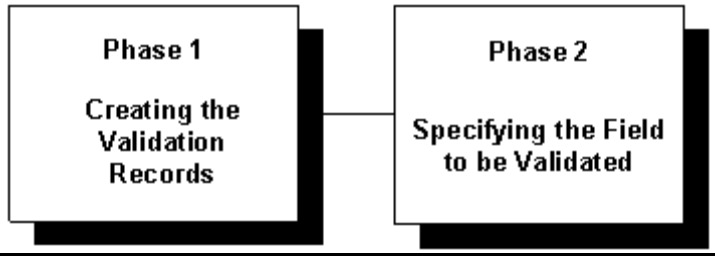
Terminology Tip: A set of FGTD records that function as a validation table is referred to as a set of validation records.

To allow you to identify and group together such sets of validation records, each fgtd record must contain a code that identifies the set of validation records to which it belongs. This identifying code the Table ID entered in the Generic Table Header dialog box, which is automatically included with each row in the Generic Table Detail dialog box, although you don't see it displayed in this dialog box.

You'll first use the Generic Table Header dialog box to create an fgth record containing the Table ID code that will identify the validation records. You'll then use the Generic Table Detail dialog box to create the set of **FGTD** records that contain the data to be validated. Control gives each record in this set of FGTD records the same Table ID value entered in the Generic Table Header dialog box. You'll put the valid data—the data against which the field to be validated will be compared—in the Table Value column of the Generic Table Detail dialog box.

The Two Phases of Validating Data with Generic Tables

Setting up an import rule to validate data with generic tables is a two-phase process:



Phase 1: Creating the Validation Records. You'll use Control's Generic Information feature to create the fgth and fgtd records for the data that you want to validate. As described on the previous page, you'll first use the Generic Table Header dialog box to create an fgth record that identifies the validation records. You'll then use the Generic Table Detail dialog box to create the fgtd records that reference the fgth record. In each row of the Generic Table Detail dialog box, you'll store the validation-related data in the Table Value column.

Phase 2: Specifying the Field to be Validated. You'll use the Column Mapping dialog box to identify the sample import file field containing the data that you want to validate. When you identify this field, you'll also specify the set of fgtd records that you defined in Phase 1. Then, whenever the import rule is used, the FlexiImport engine will use the validation records to validate the data in this field.

Phase 1: Creating the Validation Records

Before using the FlexiImport Wizard to add validation functionality to an import rule, you'll need to use a SQL data entry tool to create validation records in the fgth and fgtd tables.

Creating Validation Records: An Example

To show you how to set up a validation table, we'll continue with the same example that was used in Appendix A. Suppose that you are defining an import rule to import records that contain only the following three currency codes:

1. USD
2. CAD
3. YEN

To use the FlexiImport Wizard's generic tables to validate for these currency codes, you would first create a Generic Table Header record to define the code that will identify the validation records.

After creating the Generic Table Header record, you would then have to create the Generic Table Detail records that contain the validation data. The Generic Table Detail dialog box contains one column that you'll use for data validation:

Table Value: The valid values for the field, which are also the values to be validated against.

The Generic Table Detail dialog box contains several other columns, but you will not have to use any of these other columns.

To apply our currency code example to the Generic Table Detail dialog box, you would create three rows. The Table Value of each record would contain one of the three valid currency codes listed above. In this example, suppose that you'll use a code named CurV to identify the validation records. This means that you would create a Generic Table Header record with a value of CurV in the Table ID field.

You'd then create Generic Table Detail records that contain the valid currency codes. In each of these Generic Table Detail records, the Control system automatically includes CurV as the Table ID for each row, as this value groups these Generic Table Detail records together as a set of validation records. You would include the valid currency codes in the Table Value column of the Generic Table Detail dialog box.

To Create Generic Information for a Set of Validation Records

Use Control to create the generic table header and detail.

Step / Action

1. Start Control.

2. Select Specials, Generic Information to open the Generic Table Header dialog box.

3. Type the table identifier in the Table ID field (CurV using the previous currency example)

4. Complete the remaining optional fields in the Generic Table Header dialog box.

5. Select the Add Row button in the toolbar. Select OK in the Message Pad after the row is added.

6. Select the Details button to open the **Generic Table Detail** dialog box. (Search and select the new Table ID if the Details button is not immediately available.)

7. Type the following information in the Generic Table Details dialog box:

--Table Value

-- CAD

--USD

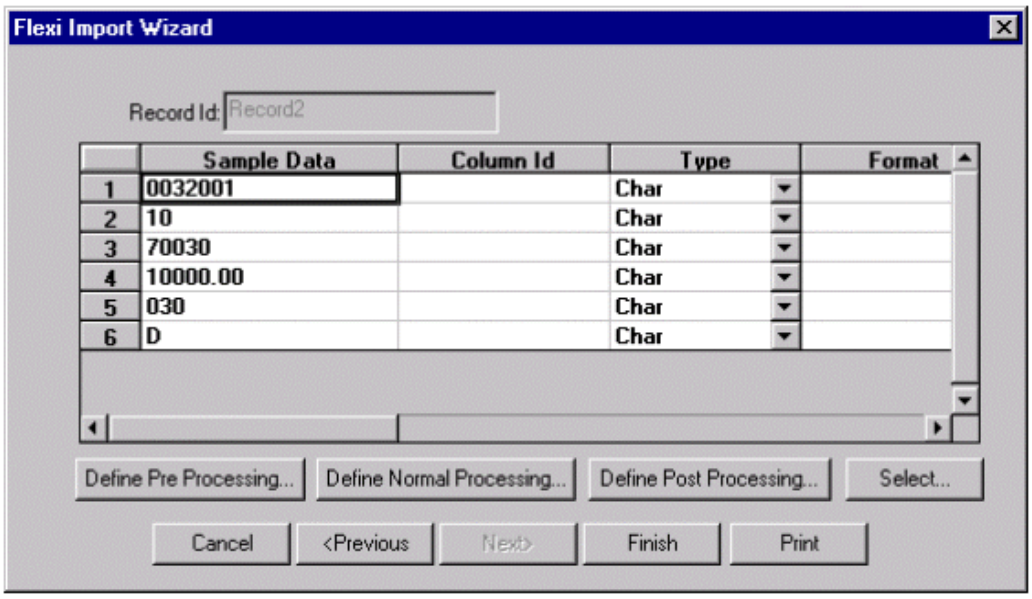
--YEN

8. Select the OK button to save and close the Generic Table Details dialog box.

Phase 2: Specifying the Field to be Validated

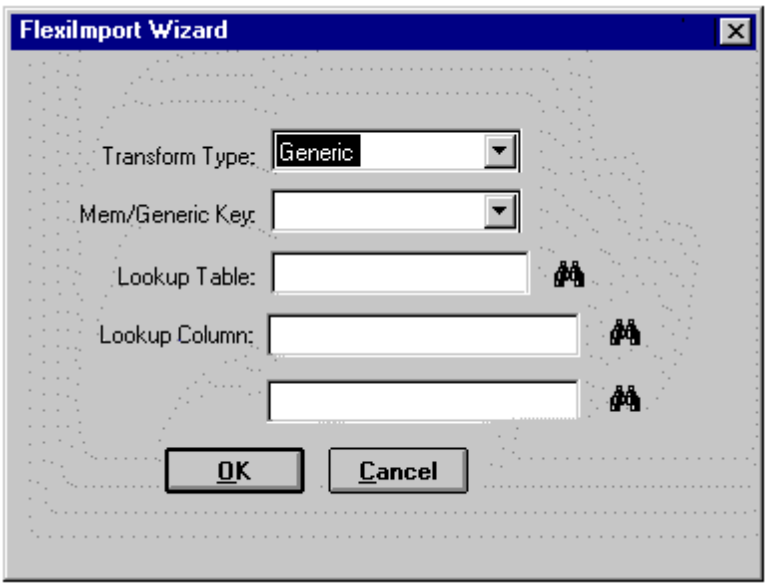
After you create the validation records, you'll proceed through the FlexiImport Wizard's dialog boxes until you get to the Column Mapping dialog box. In this dialog box, you'll specify the sample import file field that contains the data to be validated. When you do this, you'll also specify the validation records to be used for this field.

To perform Phase 2, you'll use two dialog boxes. The first dialog box is the Column Mapping dialog box, which is pictured below:



You access the Column Mapping dialog box by clicking the Next button in the Sample Import File dialog box. The primary purpose of the Column Mapping dialog box is to map the data in your sample import file to the columns into which you want to import the data contained by these fields. However, you can also use the Column Mapping dialog box to validate the data that will be contained by any of these fields.

To specify the field for which you want to validate data, select the Look-up option from the Validation drop-down list in the row that contains the field. When you select the Look-up option, the second dialog box that you'll use—the Transform/Lookup dialog box—will appear:



The following step-by-step procedure shows you how to use the Column Mapping dialog box and the Transform/Lookup dialog box to add validation functionality to an import rule.

To Specify the Field to be Validated

To specify the field that contains the data to be validated, take the following steps. This procedure assumes that you have accessed the Column Mapping dialog box by clicking the Next button in the Sample Import File dialog box, and that you have already mapped the Sample Data field to the applicable Column Id.

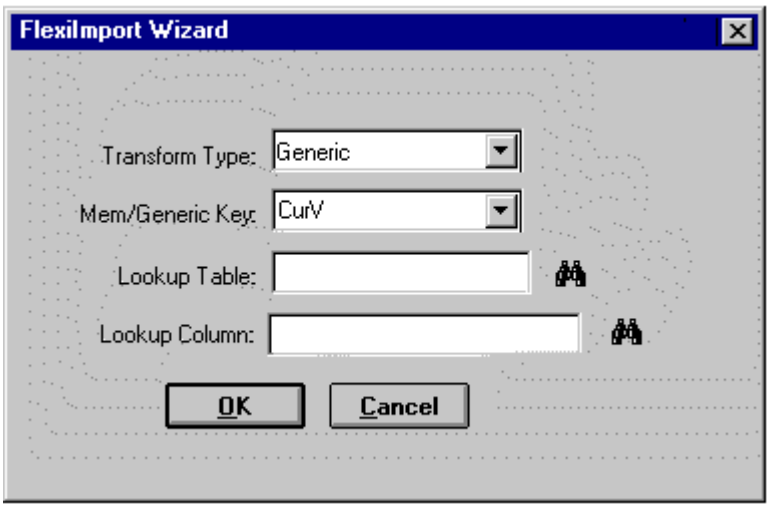
Step / Action

1. Select the Look-up option from the Validation drop-down list in the row of the Column Mapping dialog box that contains the Sample Data field for which you want to validate data. The Transform/Lookup dialog box appears.

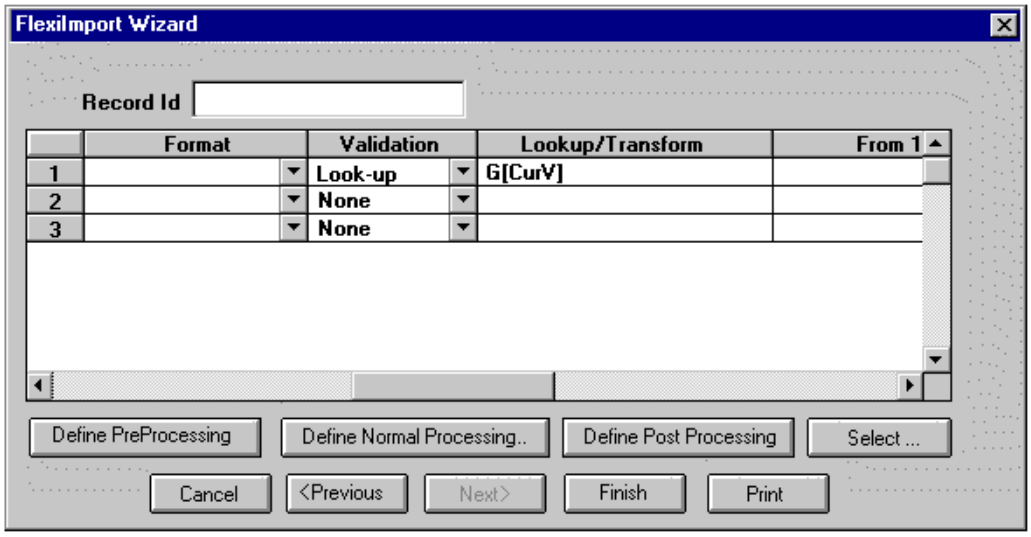
2. Select the Generic option from the Lookup Type drop-down list. The FlexiImport Wizard activates the Mem/Generic Key drop-down list.

Tip: If the Mem/Generic Key drop-down list does not activate, select a different option from the Lookup Type drop-down list, then once again select the Generic option. "Toggling" the drop-down list options in this way will cause the FlexiImport Wizard to activate the Mem/Generic Key drop-down list.

3. From the Mem/Generic Key drop-down list, select the code that you entered for the Table ID field in the Generic Table Header dialog box during Phase 1.



4. Click the OK button to close the Transform/Lookup dialog box and return to the Column Mapping dialog box. In the Lookup/Transform field of the Column Mapping dialog box, the FlexiImport Wizard will insert the letter G and then the name of the code that you selected in Step 3; the code will be enclosed within brackets.



5. Let's complete the currency code example that we have been using throughout this appendix. In the screen snapshot pictured above, the Lookup/Transformation field in the Column Mapping dialog box indicates that the CurV code has been selected from the Mem/Generic Key drop-down list of the Transform/Lookup dialog box. Please note that since the Look-up option has been selected in the first row of the Column Mapping dialog box, the import rule will validate the data in the first field of the import file(s).

To validate this data, the import engine will refer to the data that you defined in Phase 1; these are the currency codes used in the example. This means that if the first field in the import file contains a value of USD, CAD, or YEN, then the record contains a valid currency code and will be imported. However, if the first field of the import record contains a value other than these three currency codes, then the FlexiImport engine will not import the record.

Tip: Of course if you want to add additional valid values, you can simply create additional FGTD records. For example, if you decided that FF should also be a valid currency code, you would create an FGTD record with a value of FF in the Table Value column of the Generic Table Detail dialog box.

Summary of Validating Generic Information

To define an import rule that will validate data with generic tables, you must first create an fgth record containing the code that will identify the validation records to be used. You'll then create fgtd records that contain the valid values for the field.

After creating records in these tables, you must then use the Column Mapping dialog box to specify the field in the import file(s) upon which the FlexiImport engine will perform the data validation. When you do this, you will also use the Transform/Lookup dialog box to reference the validation records that you defined in the generic tables.

Chapter 9 Index